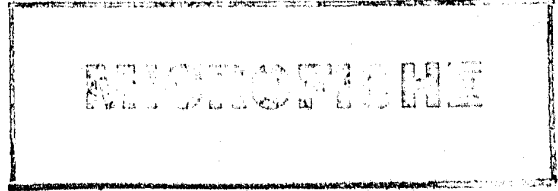


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*Drug  
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ACQUISITIONS

Drug Abuse Treatment Outcome Study

Prepared for:

Drug Abuse Program Office  
Los Angeles County Health Services  
Los Angeles, California

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FINAL REPORT

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## 1. INTRODUCTION

In April, 1976, the Drug Abuse Program Office of Los Angeles County Health Services issued a Request for Proposal (RFP) to conduct an outcome evaluation of drug abuse treatment programs. This chapter outlines the intended accomplishments of the project as an introduction to the detailed report of what was done, and learned.

### A. Project Goals and Objectives

The goal and objectives stated in the RFP were to measure program effectiveness in positively influencing client behavior over time subsequent to departure from treatment through assessment at a point one year post-discharge, with client behaviors in the areas of criminal activity, drug use, social productivity, and physiological health analyzed in comparison against baseline data for the time of program entry. The more specific objectives were to determine comparative levels of success yielded by various programs or modalities of treatment *vis a vis* differing client categories on such major variables as "primary drug of abuse, age, ethnicity, etc.," and to compare levels of success among treated clients with a matched sample of cases incarcerated by the criminal justice system for convictions related to abuse of illicit drugs. The Study was to include a cost-effectiveness analysis of the treatment modalities, specified as in-patient detoxification, outpatient detoxification, methadone and other maintenance, residential short-term, residential long-term, and outpatient drug-free counseling. Full adherence to all confidentiality regulations was to be maintained in all procedures for identifying clients to be included in the Study, subsequent approaches

to establish contact and obtain informed consent for interviews, and corroboration of interview responses by urinalyses and criminal justice records checks. The Study sample was designated as consisting of 1200 cases, constituting an estimated 15 to 20 percent sample of clients admitted during March through June of 1975, and subsequently terminating treatment for any reason.

The proposal prepared by Social Issues Research Associates (at that time known as Criminological Research Associates) in response to this request was heavily anchored in a rationale based in development and application of an empirical taxonomy to guide both sampling design and analysis. Rather lengthy excerpts of that rationale are presented here for the purpose of acquainting the reader with the perspective of SIRA at the inception of the project--a perspective rather severely buffeted by realities we would only later be in position to apprehend. Perhaps others, less naive, could have anticipated the difficulties which were to follow.

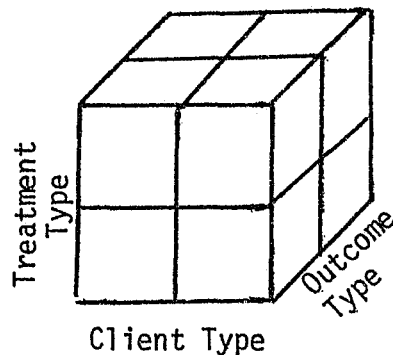
*"The problem facing both policy makers and program administrators in the field of drug treatment is similar to that for many other social agencies: It is relatively easy, given sufficient effort, to describe the results of various programs, but quite difficult to assess those results. In consequence, no ready means are at hand for assuring that decisions about funding allocations or program modifications are being made in any optimal manner. This problem arises most directly from the fact that numerous selection processes are operative in determining which clients are received by one program or another (or by none at all), and by an absence of any trustworthy index of the expected performance of a client (or non-client) against which to compare his/her actual performance. Since practical conditions do not ordinarily permit resort to experimental design or randomized assignment of clients to treatments as a means of balancing expected performances to arrive at clearer comparison and assessment possibilities, large field studies must ordinarily rely upon controls achieved through some variant of post hoc 'matching' of client sub-groups for the population to be compared. If the control being sought is upon expected performance, then the matching must proceed on outcome-related variables, yielding an actuarial classification device in which clients are categorized*



into various levels of 'risk' represented. This is typically achieved through multiple regression analysis producing weights for presence or absence of certain characteristics of clients, and client risk levels obtained by summing the score over items. The consequence of this approach is that a sample of clients all of whom are found in the same risk category is nevertheless a sample of quite heterogeneous composition, since, except at the upper and lower boundaries of the score range, alternate sets of characteristics may yield the same score. An actuarial instrument of the type described has prognostic utility appropriate to inter-program comparisons, but fails with respect to diagnostic utility, since clients with the same expected level of performance may have little else in common. What is needed in such a situation is a classification technique which yields both homogeneous subgroupings and variation between such subgroups in expected performance level, because it then becomes possible to compare levels of success of various programs and modalities in influencing (improving) post-treatment performances of clearly definable client types. Such comparisons, on four types of outcome criteria (criminal activity, drug use, social productivity, and psycho-physiological health), over programs in six treatment modalities and one punishment modality, are the objectives of the proposed evaluation project. Outcome data are to be obtained through follow-up procedures on discharged clients in the actual course of the evaluation project, necessitating that the basic framework for classification into client subgroups must proceed from baseline data already available. Criminological Research Associates will rely upon the existing client information system to generate a sampling model satisfying the specifications mentioned above and proceed to comparison of outcome performances in a manner which can yield policy-relevant findings."

## B. Sampling Design

The basic model for the proposed evaluation may be stated as types of client x types of treatment x types of outcome:



Such a model is in accord with general objectives to determine, for each type of client, the relative effectiveness of the available treatment modalities, and their relative efficiency (or cost per level of effect).

Two basic pre-conditions are necessary for the successful implementation of such a design. The first is that relatively homogeneous subgroups of clients be identified (i.e., clients sufficiently matched with one another on outcome-relevant variables to legitimate their comparison across treatment types). Failure to adequately satisfy this condition is a frequent source of misattribution of selection effects to treatment effects in program evaluation. The second is that, for each client type to be examined, a sufficient sample size is available within each treatment type compared to permit reasonable confidence in the reliability of outcome differences between treatments (i.e., assessment of statistical significance of findings). Where the second condition cannot be met for a given treatment type, it is not a satisfactory solution to inflate an insufficient sample by some weighting factor (i.e., allowing each case to be represented as several), because that yields an illegitimate underestimation of sampling error on the outcome measure. Because of this limitation, and because of the facts that reasonably well-specified types of clients are expected to be differentially distributed (i.e., more or less likely to appear) across treatment types, and that some treatment types will have relatively greater or lesser numbers of total clients, it is unlikely to prove either feasible or appropriate to compare performance of all client types over all treatment types. Two types of compromise are possible. The first, and the one more frequently adopted in practice, is to weaken the standard concerning homogeneous client subgroups by matching on one variable at a time, and to proceed with sequential comparisons across non-exclusive treatment types. The inadequacy of this solution is usually acknowledged in passing, its importance masked by presentation of a few tables showing that the aggregates being compared do not differ substantially on other variables (an inappropriately reassuring exercise even when these variables are outcome relevant, which they frequently are not), and the problem subsequently disregarded while inference proceeds. Often, even lesser precautions are taken, and the comparisons made more tenuous in their implications.

Criminological Research Associates believes that an alternate approach to solution is more in keeping with the expressed intent of the Request for Proposal, which is written in a way quite attentive to both the need for comparative evaluation and the attendant problems. It is evident that this task is not viewed as a simple matter of providing sequential comparisons by each single major variable, but a matter of establishing more homogeneous subgroups by taking variables in combination.

Two related types of approach appear suitable--Association Analysis, developed by Williams and Lambert for studies of plant ecology, and its derivative, Predictive Attributive Analysis, developed by MacNaughton-Smith for problems common in sociology and psychology. Both techniques apply a process of hierarchic subdivision to yield relatively homogeneous subgroups with respect to the characteristics under study (i.e., the subdivision process tends to minimize the variation, or individual differences within a subgroup, and to maximize variation between subgroups).

It is anticipated that some treatment modalities would yield only one or two client types in adequate number, or that they would necessitate re-combination of subgroups into a more heterogeneous entity to establish a sample. In each treatment type yielding larger-than-necessary samples of particular client types (e.g., a sample of 40 might be accepted as adequate), an examination of distribution of cases across agencies within that modality would be made, and the option of intra-modality comparisons considered. Actual samples would be drawn from any subgroup within modality by a random selection procedure.

The process described would not eventuate in an inviolate set of samples on which data collection with regard to post-discharge outcomes would automatically proceed, but a set of samples falling within a coherent framework or rationale permitting choices as to which samples, judged on additional grounds, most warranted inclusion in the outcome evaluation. Final decisions in this regard would be made in consultation with and mutually agreed upon by the Drug Abuse Program evaluation staff.

### C. Analysis

We have placed great emphasis upon a particular approach to non-randomized matching in the Sampling Size Section of this proposal because of the means that technique affords for reducing both the complexity of analysis and the ambiguity in interpretation of findings. The initial development of homogeneous subgroups by that sampling design would, as one by-product, incorporate and simultaneously control for some of the variables mentioned (e.g., primary drug of abuse, age, ethnicity, length of use, etc.), rendering the necessity for separate cross-tabulations against these variables a poor and unnecessary substitute. The second benefit of this approach is that it would lessen the necessity for reliance on multivariate analysis--a definite advantage since both multivariate analysis and cross-tabulation are highly vulnerable to the problem of multicollinearity. The source of statistical analyses such as regression and cross-tabulation is the controlled world of laboratory experiments--a fact responsible for long neglect of the problem of multicollinearity in non-experimental data. Regression analysis is, however, effective in assessing the precise contribution of

several explanatory variables only if the data are 'internally controlled' (i.e., if there is a good deal of independent variation among the explanatory variables), while it is a far more common actual situation that the explanatory variables are highly correlated.

Because the sampling design and analytic approach have been conceived as integral counterparts, because any sophisticated approach to sampling presupposes good familiarity with the distribution of characteristics among the target population to be drawn, because one type of expected output from the analyses undertaken is generalization of sample findings to the population, because many of the follow-up measures to be devised should be compatible with and comparable against measures taken at the point of intake or discharge on forms attached to the RFP, and, finally, to better ensure safeguards against the introduction of bias in drawing the study sample from the target population of eligible subjects, it appears that it would be highly desirable for the Admission and Discharge Report forms for all NIDA evaluation-eligible members to be keypunched 1/ and added to the local automated information base. Because the direct costs involved would not seem unnecessarily large, and because the value to the evaluation project in terms of improved sampling capability and savings in later manual search effort would be high, we hope this possibility can be seriously entertained, and would be prepared to contribute any share of direct project effort deemed by both parties to be appropriate. Among the secondary benefits, if such storage for the entire project population proves feasible, is the possibility of strengthened reliability of the predictive attribute analysis in that stage involving test of the findings from a construction sample upon a validation sample, and reduction in the potential contribution of non-response bias to faulty inference when subjects to be interviewed cannot be located or refuse interview, since greater controls are afforded in obtaining suitable replacements for missing subjects.

#### D. Cost-Benefit Analysis

Cost-benefit analysis is in considerable dispute among the experts. We join in this dispute on the side of the opponents. Our objections arise from the fact that the approach gives a patina of objective scientific rigor to a calculus which is inherently biased toward the better good of those who purchase it, and that the estimates are subject to such extreme errors that the resulting ratios are virtually meaningless--one author, for

1/ This need was eventually satisfied through acquisition by the Director of the Drug Abuse Program Office of relevant CODAP computer tapes containing much of the data required.

instance, reports that three evaluations of one program using essentially the same data yielded benefit cost ratios ranging from 0.3 to 5.0.

The problem at hand is to provide some grounds for allocating resources among the different kinds of programs. But even this cannot be done within the basic study design in that none of the program modalities is likely to be evaluated on the basis of a sample representative of all of its clients. However, this is not really a deficiency in that the experts seem to agree that the best utilization of cost-benefit analysis, if there is one, is to compare programs across subgroups of clients. Here, then, is a perfect match between the study design for the total project and the best utilization of cost-benefit analysis.

In the abstract, it is possible to figure the exact, total costs and benefits of any program, but not in reality. One reason is that the benefits and costs shift across different parties, so that there really is no one cost-benefit ratio. The other is that certain costs and benefits are of great importance, but are not translatable into money equivalents within the confines of any one study. Thus, the ratio can at best only give relative rankings of the entities being evaluated; it cannot show whether a program costs more than the benefits achieved (even though the resulting figure may seem to show that it does), or vice versa.

The unreality of the cost-benefit ratio is critically important to bear in mind. First because the analysis cannot be done unless one is willing to do it knowing full well that the results are going to be unreal. Second, if the ritual is taken for reality, then the consequences might be real rather than imaginary. The pity of science is that even avowedly imaginary numbers have utilitarian ends.

As indicated, the cost-benefit analysis will, and must, proceed along the lines of the study design. The study design calls for the evaluation of the effects of the program modes upon types of people. The cost-benefit ratios will be computed for each of the combinations of person types and program modes having a sufficient number of cases to merit data collection and analysis. The primary source of information will be the client interviews. However, the cost-benefit analysis will be done from the perspective of the Drug Abuse Program Office. For reasons which will be provided later, the costs and benefits will be limited to the period beginning with program admission and terminating with the end of the post-discharge follow-up period.

It is in the area of benefits that the assignment of dollar values becomes extremely difficult. For instance, how does one translate into dollars time spent with one's family and friends (instead of using or obtaining drugs), or gains in feelings of self-worth? Only one measurable benefit is reasonably clearly

includable as a measurable benefit; it is legitimate earnings. This measure will be included.

It would be possible to extrapolate additional schooling achieved as (an apparent) result of the treatment programs into future earnings, but such extrapolations are fraught with virtually unmeasurable error.

The assumption being made throughout this proposal is that the persons within any one client type who are exposed to different modalities are sufficiently similar to each other with respect to their expected behavior that post-treatment differences are not the result of pre-existing differences. Thus, the cost-benefit analysis is predicated on the assumption that the after-only comparisons will be equivalent in their relative rankings to comparisons across programs of changes from before to after treatment. This assumption is like all other assumptions--it cannot be absolutely defended. But, it (or some other assumption[s]) must be made in order to get on with the task at hand.

Aside from its necessity, the assumption has some real benefits. One is that it allows the analysis to escape the problem of determining the appropriate base (i.e., before treatment) period for measuring change. This is important for two reasons. First, it is apparently true that people who become involved in drug treatment programs are at or near a peak in their lives which means that their problems would be expected to diminish anyway. The problem which has not been theoretically or empirically solved is how to adjust for this effect in making estimates of change resulting from program involvement. The approach used herein solves this problem by circumventing it. The other advantage of this design is that the resulting cost-benefit ratios are far more tangible. By limiting the accumulation of costs and benefits to those actually experienced during the study period, the approach avoids such hypothetical or imaginary figures as dollars not spent on drugs, possible future earnings, and so-called opportunity costs. The disadvantage of this approach is that the cost-benefit ratios are almost certain to 'show' that costs exceeded benefits (during the follow-up period). But, as indicated earlier, cost-benefit ratios are always subject to gross errors of commission and omission in their design and estimation, so that one cannot ever determine which exceeded which anyway, and even if one could be rigorously accurate, the ratio obtained is always a function of the imagined interested party. And finally, the very nature of the project as put forth in the RFP makes a cost-benefit analysis suitable for decisions as to how much money to expend on drug treatment (as compared to other social services) impossible within the project itself. Thus, the proposed cost-benefit analysis need not and deliberately does not speak to decisions beyond the mandated scope of the project, while it does provide a tangible basis for comparing treatment modalities as to the costs and benefits actually experienced by different types of clients. The only requirement for such use of the ratios, beyond making the assumptions upon

*which the study is designed, is that the user of the cost-benefit ratios fully realize that the ratios are relative rather than absolute."*

These, then, were the contractor's aspirations. While difficulties were expected in pursuit of their fulfillment, the gravity of those difficulties was grossly underestimated, and this Final Report must stand as an index of the eventual realization of aims. While chastened by the experience, we are, all in all, satisfied with the accomplishment, and invite the reader now to follow a path more complex than we had intended, and make judgment of the result.

## 2. ESTABLISHING CLIENT CONTACT

This chapter identifies the agencies which became involved in the project, and the problems of agency-contractor cooperation. Agency cooperation was essential as they were to contact the clients to be interviewed. The contractor's cooperation was essential as project operations required some revelation of information about people who had been in treatment.<sup>1/</sup> The problems quickly came to be defined in terms of laws and regulations concerning the protection of clients' rights to confidentiality and anonymity. The separate, and important, question by the agencies as to why they should become involved in the project came to be dealt with mostly in terms of confidentiality and anonymity, and was never concretely resolved. The following discusses these problems in relation to the procedures which came to be established with respect to client contacts and information flow.

### A. Agency Cooperation

At the onset of the project we had very little actual information on the agencies, especially on the structure and content of their programs. Therefore, prior to commencement of the data collection phase senior staff

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<sup>1/</sup> We are here making an artificial or conceptual distinction between the project and the contractor. We (i.e., Criminological Research Associates, now Social Issues Research Associates) were the contractor, and we conducted the project (which became known as DATOS, or Drug Abuse Treatment Outcome Study). The project (i.e., DATOS) came to have life of its own, so to speak. Conduct of the project imposed demands upon us as the contractor which had to be executed in terms of laws, regulations and ethical standards. Thus we (CRA/SIRA) as the contractor had to cooperate with the project (DATOS), and it was DATOS with which the agencies were asked to cooperate. As will become clear, DATOS both won and lost in the process, as did the agencies, CRA, and the Drug Abuse Program Office.



personally contacted all of the programs assumed to be included in the project, to discuss both general and specific issues of the project and agency participation. With each contact it became increasingly apparent to us that little information had been circulated in the field concerning the study prior to these CRA-initiated contacts, and that any available information had not been adequately assimilated by the programs. On numerous occasions CRA staff were met with such questions as, "What study?... Who are you?... When was it decided to do this study?... Do we have to participate?... Who is paying for it?..." This was somewhat surprising to us, and, to the Drug Abuse Office, as such a study was requested by a committee of treatment program representatives, and they participated in the development of the request for proposal. The Drug Abuse Office circulated a notice reminding the agencies of the project, advising them that the project had been awarded to Criminological Research Associates, and encouraging their participation. This action was certainly helpful, especially in providing official authorization, but it did little to answer the more basic, implicit question of agency cooperation.

The Drug Abuse Office came to make the decision that involvement of the agencies in the project, while strongly encouraged, was voluntary. But as essential as a decision on this point was, it did not speak to the grounds for deciding whether or not to participate. An official committee of agency representatives and the County Drug Abuse Office had authorized the project, and the Board of Supervisors had authorized expenditure of the funds, but authorization is neither motive nor justification.

#### B. The Treatment Agencies

Eventually, 60 agencies came to be included in the project.

The following is a list of those agencies, by County Health Regions.<sup>2/</sup>

The methods by which the agencies were chosen are presented in Chapter 4.

Coastal

North Coastal - Casa de Hermandad (CEC)  
Los Angeles Psychiatric Services (LAPS)  
Neighborhood Youth Services (NYA) - VITA  
Principles, Inc. (Impact House)  
Santa Monica Bay Area Drug Abuse Coalition (New  
Start)  
Tu 'Um Est  
Via Avanta  
Venice Drug Coalition (VDC)  
West Los Angeles Drug Abuse Program

South Coastal - Behavioral Health Services  
City of Long Beach  
Family Service of Long Beach  
H.A.N.D.Y.  
Joint Efforts  
La Clinica Libre del Puerto  
Metropolitan State Hospital  
South Bay Drug Abuse Council  
Youth Development Project

Central

Asian American Drug Abuse Program (AADAP)  
Asian Joint Communication (AJC)  
Do It Now!  
Chabad House  
Narcotics Prevention Project (N.P.P.)  
Protestant Community Involvement Services  
(Castle Drug Program)  
Rancho Los Amigos  
Suicide Prevention Project (SPC)

<sup>2/</sup> The "County-wide Region" which includes agencies which serve clients from all over the County is ignored in this breakdown. The "County-wide" agencies were placed in the geographical division in which their major treatment facility was located. This was done because the interviewers were assigned by geographical area and they worked closely with the agencies in their area, regardless of where the agency's clients came from.

San Fernando Valley (Antelope Valley)

Antelope Valley District Hospital  
CRI-HELP  
El Proyecto del Barrio  
Free Men, Inc. (Tarzana Psychiatric Hospital)  
Glendale Guidance Clinic  
IADARP  
T.A.R.G.E.T.  
Valley Free Clinic  
Wilds of Freedom

San Gabriel Valley

Bassett Barrio Council (Casa de Ayuda, La Puente)  
Casa del Norte (Casa de Ayuda, Azusa)  
City of Pasadena Residence Inn  
Community Health Projects, Inc.  
Family Counseling Services of San Gabriel Valley  
Help Our Youth (HOY)  
La Verne-San Dimas Open Door  
Mid-Valley Community Mental Health Council  
Open Door Drug Clinic  
People's Coalition (Pomona Recovery Center)  
Rio Hondo Area Action Council Substance Abuse Program (RHAAC)  
Pomona Open Door

South East

Avalon-Carver Narcotic Prevention Project  
Central City Bricks/Kicks  
City of Compton Special Services  
House of Uhuru Substance Abuse Program  
JAMAA  
N.A.P.P. Drug Symposium

County of Los Angeles Methadone Clinics

Northeast Methadone Clinic  
Pacoima Methadone Clinic  
Pomona Methadone Clinic  
Southeast Methadone Clinic  
Venice Methadone Clinic  
West Hollywood Methadone Clinic  
Wilmington Methadone Clinic

### C. Client Contact Procedures

At a meeting held during the first project month between the contractor, sponsoring agency, and a screening committee responsible for oversight and liaison between the research project and operating treatment agencies, agreements were reached on several general principles and conditions:

1. Client contact will be established only when:
  - a. The program is able to determine the name of the client being sought.
  - b. The program indicates willingness to notify the client of opportunity to participate in the study.
  - c. The program succeeds in establishing contact with the client.
  - d. DATOS is notified of the client's willingness to participate.
2. While DATOS will not by-pass the treatment relationships to initiate client contact, DATOS will offer any and all assistance within its capability to facilitate or assist the program to re-establish client contact. Such assistance will consist, essentially, of supplying or suggesting additional locator techniques.
3. Arbitrary study numbers will be assigned to the records of the client population to further enhance the protection of client confidentiality.

After further preparatory work and negotiation, these guidelines were developed into a more detailed Preliminary Plan<sup>3/</sup> which served as the model actually employed apart from minor modifications, throughout the actual course of the project. The preliminary character of the plan was attributable to the necessity for continuous check and interpretation of recent and shifting regulations with regard to privacy.

3/ The Plan is given in appendix A; the following are key parts of it.

Preliminary Plan for Client Contact and Interview

The interview task of the DATOS project involves the following steps:

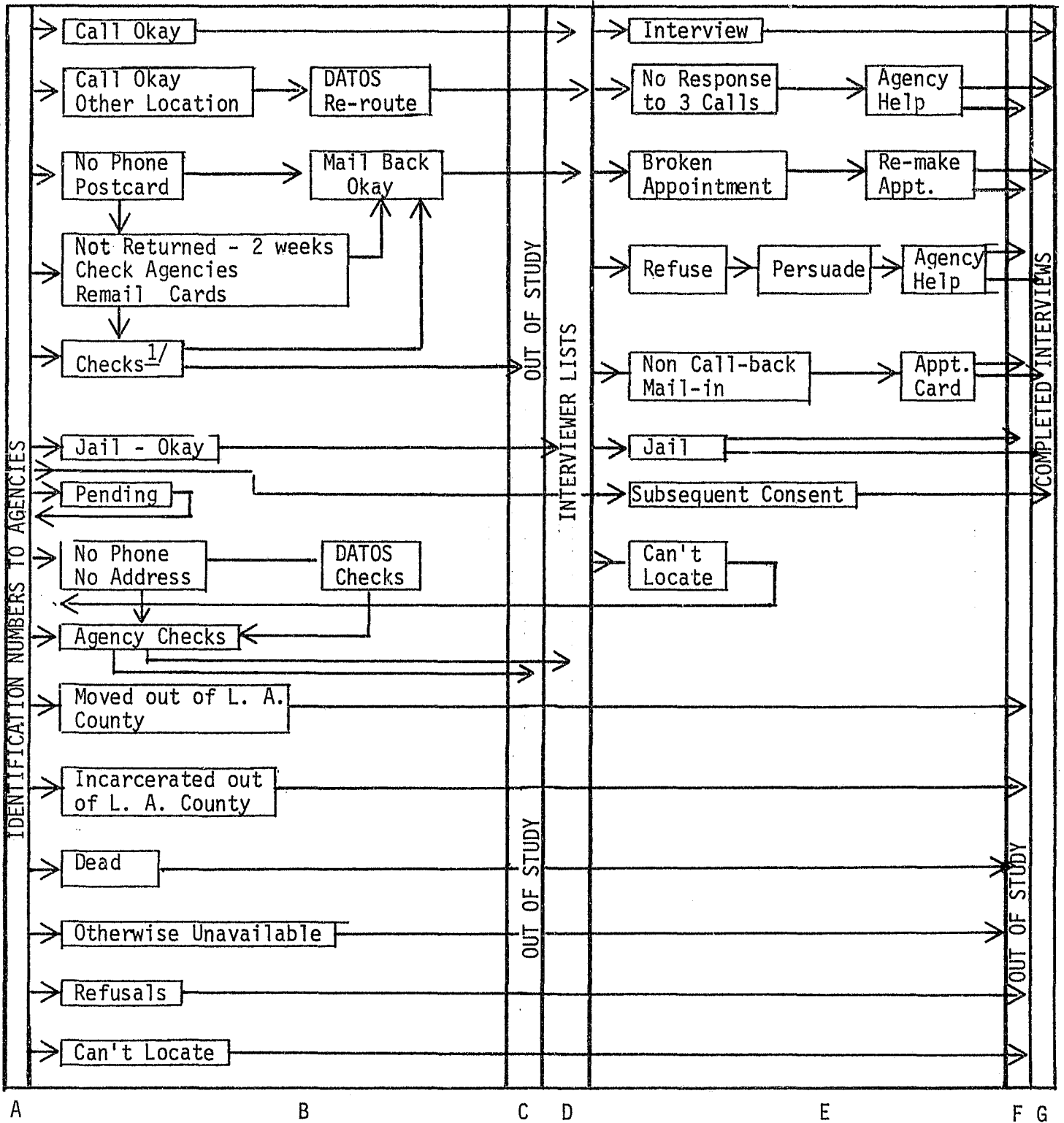
1. Locating clients in the sample and determining willingness to be interviewed.
2. Documenting reasons for unavailability of those clients with whom we are unable to obtain an interview.
3. Interviewing.
4. Confirmation of some client self-report data.
5. Payment to clients.

To successfully complete this process, DATOS needs assistance from the participating agencies. The study team is also sensitive to the fact that privacy must be respected and urges a procedure by which no client will be approached by us until after the agency has obtained client consent to the interview. The client is, of course, guaranteed that interview material will be handled in a way which masks individual identity.

The following chart [Figure 2.1] outlines the steps required in an "ideal" system of client locating, contacting, and interviewing. The model leans heavily on the agencies and is, of course, subject to change as we learn more about agency operations, resources, and interests. It is presented merely to give us a beginning point from which to discuss possibilities.

Point A. The members of the study sample are to be selected on the basis of information contained in records available through the Drug Abuse Office. In October, information necessary for a treatment program to determine the identity of a client will be forwarded to the agency which appears to have been in most recent contact.<sup>4/</sup> The number of persons to be sought will vary dependent upon the size of an agency, but efforts will be made to distribute such work so that no agency is overburdened.

<sup>4/</sup> The procedure actually used was different. The study period treatment program (SPTP) was asked to locate the client, not the program with which the person had had the most recent contact. This was the result of problems with the information systems. Common client identifiers were not available for a substantial proportion of the cases, and post-1975 client admissions/departures were available for only one of the two information systems. Subsequent admission/departure information was searched in the DAO system at a later stage in the project. The data-base problems are discussed more fully in Chapter 5; the later phases of the client contact procedures are discussed more fully in Chapter 3.



1/ Checks - Attempts to locate clients such as finding out if he/she is in jail, in prison, has died during period, etc.

Figure 2.1  
DATOS Preliminary Plan for Client Contact

Point B. Agencies will be requested to make contact with these clients by phone, mail, or in person, to explain the purpose of the study, the nature of the interview, and the \$10 payment, and to ask the clients if they will consent to be interviewed and, if so, at what location and during which time periods (e.g., week-ends only, etc.).

For clients not located through these procedures, there are two possibilities for attempting further search. Either the agency may check jails, DMV records, county coroner's records, et.c, or the agency may decide to release sufficient identifying information to enable DATOS to assist in the search. If the latter course is chosen, DATOS will return any leads about the client's whereabouts to the agency, in order that the agency may again attempt contact requesting consent to be interviewed.

Agencies are requested to record outcome of each of the above described contact attempts on the list provided by DATOS.

Points C and D. By the end of October, DATOS staff will have compiled:

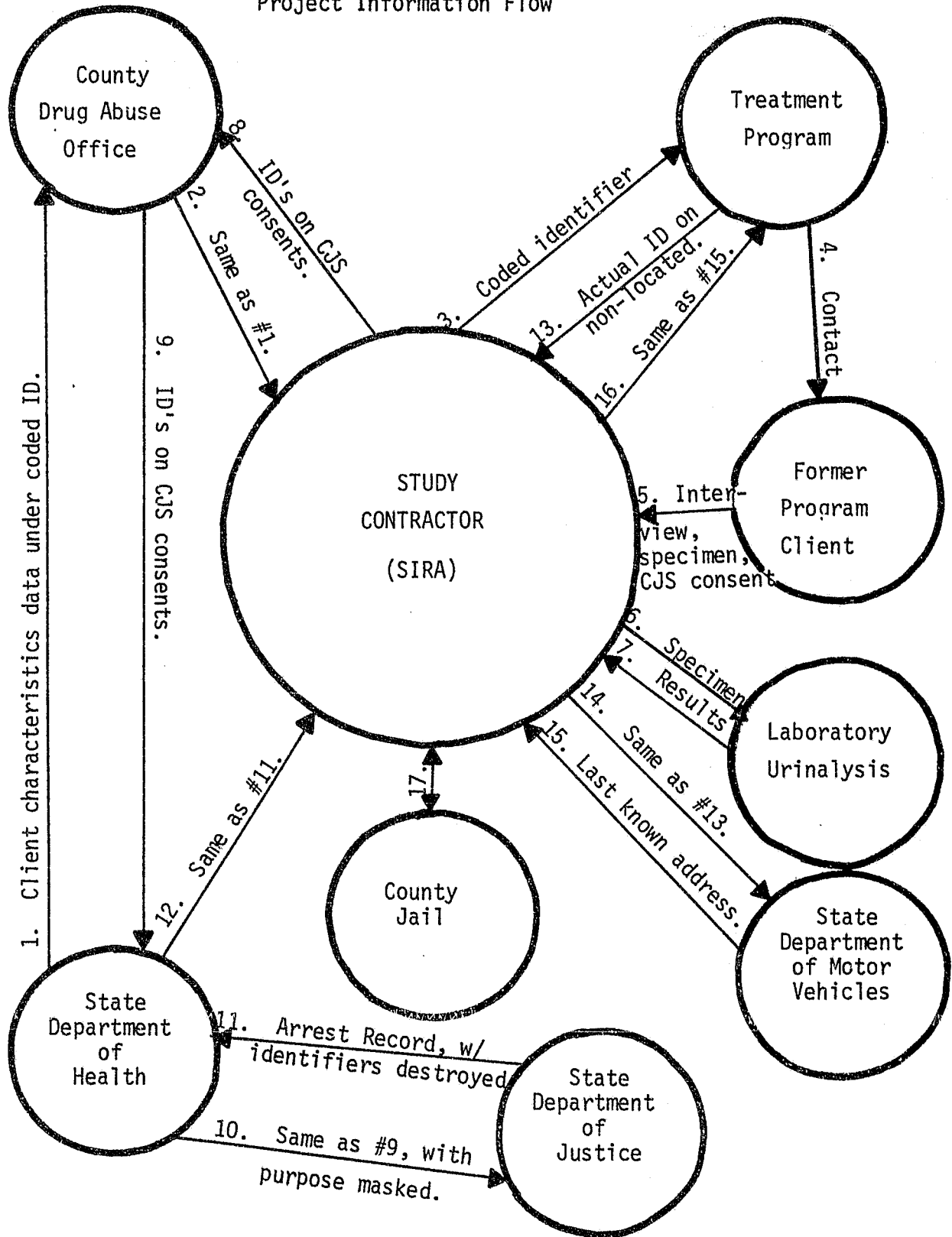
1. A list of names and phone number of clients who agreed to an interview for each interviewing location (individual agency, central location for a coalition, etc.).
2. Reason for unavailability of clients now determined to be in that category (e.g., refused, moved out of County, etc.).
3. A list of client ID numbers for those still in a pending category.

Point E. After a training period, the interviewers will go out in early November to an interview location, make appointments with the clients on the list for that location, interview them, and move to the next location. Interviews will continue through the end of February, 1977.

#### D. Varieties of Project Information Flow

In the following diagram (Figure 2.2), greatly over-simplified, we present the process of assembly of data for analysis in this outcome study.

Figure 2.2  
Project Information Flow





Arrow #1 represents the transfer of CODAP information necessary for construction of the target population, development of the taxonomy, and designation of members of the Study sample. Arrow #2 represents the transfer of that same data base, together with a partially overlapping (i.e., some shared identifiers and characteristics) local data base to the contractor. Arrow #3 represents the transmission to treatment programs of arbitrary identifiers for cases to be included in the Study sample and sought for interview. These codes, translatable to actual individual identities by a cross-reference key available only with the treatment program, yielded whereabouts information to permit attempted contact with the client by the program--an activity represented by Arrow #4. In the event of client consent and arrangement to be interviewed, Arrow #5 represents the passage of interview information from the respondent to the contractor, as well as, for those who consented to the procedure, a criminal records check and, for a subsample, a urine specimen. Arrows #6 and #7 represent the shipment of obtained specimens, using arbitrary identifiers to a laboratory, and the return of findings. Arrows #8, #9, and #10 track passage of actual identifiers through the State Department of Health where, after masking the purpose of inquiry, they were forwarded to Justice for an arrest record check. These records, batched and stripped of any form of identification which could permit data linkage at the level of an individual, were returned through the "screen," and to the contractor, as represented by Arrows #11 and #12. (A parallel procedure was followed for a sample of jailed drug offenders, whose identities had been obtained from public records.) Arrow #13 represents provision to the contractor from the treatment programs of actual identifiers on cases with whom attempts at contact had been unsuccessful and for whom whereabouts remained

unknown, and Arrow #14 the forwarding of this information (with purpose of inquiry masked) to the Department of Motor Vehicles for a search and return (via Arrows #15 and #16) of a last known address to be used by the treatment program as a lead to possible whereabouts. Arrow #17 represents utilization of program-supplied identifiers for check by the contractor against current jail census (an examination which did not require disclosure of identifiers to jail officials. Negotiations were also entered for a similar search within the records of the California Department of Corrections, but the request was, in the end, denied.) In addition, these identifiers were checked against the contractor's cross-reference file in an attempt to determine whether some other treatment program might yield a lead. Minimal opportunity was found for activating paths #13 through #17 for assistance to programs in determination of whereabouts, because of delays and reluctance on the part of programs to provide the necessary information. A considerable part of this problem must be attributed to reluctance to compromise privacy through risks attendant to disclosure despite the level of safeguards offered by the contractor.

E. Privacy Considerations: Anonymity and Confidentiality

As indicated in the foregoing, a high degree of strain existed between the tasks necessary to satisfaction of the terms of the Request for Proposal, and the increasingly stringent strictures against breach of privacy. Most of this strain centered on the issue of information leakage over the boundary between the drug treatment and criminal justice systems. The eventual accommodation was the result of a long period of inquiry about alternative solutions, and uncertainty regarding conflicting interpretations concerning both what legal possibilities existed and where ethical boundaries lay.

The Confidentiality Protocol which emerged from our understanding of the laws and regulations and the concerns of the treatment agencies is given in appendix B. It was reviewed by an attorney who specialized in the area and relevant governmental agencies who found it acceptable.<sup>5/</sup> It was intended to, and did, govern the operations of the contractor with regard to the client-contact and information-flow procedures presented in the two prior sections of this chapter. The most relevant parts of the statutes and regulations which guided the development of the Protocol follow.

Chapter I of Title 42 of the Code of Federal Regulations, in dealing with the topic of disclosures of patient identifying information without client consent, is quite unequivocal concerning re-disclosure prohibitions when treatment programs are under some coercion to participate in a study, and quite noncommittal when such participation is fully voluntary. Thus, with regard to obtaining client identities:

Program Evaluations (2.11 [g] [1] page 12)

*"...[A]n evaluation of the effectiveness, efficiency, compliance with applicable therapeutic, legal, or other standards, or other aspects of the performance, of a program as defined in paragraph (f) (1) of this section. The term 'program' when referring to an individual or organization means either an individual or an organization furnishing diagnosis, treatment, or referral for alcohol abuse or drug abuse."*

Rules governing disclosure in this category are found in Section 2.53 (c) (d) (1) (2), page 35:

<sup>5/</sup> It is perhaps worth noting that we were surprised at the limited familiarity with these laws and regulations among those whom we thought would have been expert.

"(c) Scientific research and long-term evaluation studies. No State and no agency or political subdivision of a State may require, as a condition to funding, licensing, or otherwise, that any program furnish patient identifying information for the purpose of conducting scientific research or long-term evaluation studies unless the recipient of such information is legally required to hold such information in confidence, is prohibited from taking any administrative, investigative, or other action with respect to any individual patient on the basis of such information, and is prohibited from identifying, directly or indirectly, any individual patient in any report of such research or evaluation, or otherwise disclosing patient identities in any manner.

(d) Opinion and description to be furnished program. Before any patient identifying information is required to be submitted by a program under the circumstances described in paragraph (c), the program shall be furnished:

(1) An opinion by the attorney general or other chief legal officer of the State to the effect that the conditions specified in paragraph (c) are fulfilled with respect to such program or with respect to all programs in such State similarly situated, and

(2) A description of the administrative procedures and physical limitations on access or other measures to provide for the security of the data, but such description shall not be in such detail as to furnish guidance for wrongful attempts to breach such security.

Scientific Research and Program Evaluation in Which Participation by Drug Treatment Agencies is Voluntary (2.11 [g] [2], page 12)

...[A]n evaluation of the validity, effectiveness, efficiency, practicability, or other aspects of the utility or success of a program in the sense defined in paragraph (f) (2) of this section. The term "program" when not used in the sense defined in paragraph (f) (1), means a plan or procedure, whether functional or organizational, and whether or not governmental, for dealing with alcohol abuse or drug abuse problems from either an individual or a social standpoint.

Section 2.52-1 [n], page 34, Scientific research and evaluation. Beyond the bare restatement of the authorizing legislation set forth in Section 2.52, these regulations are deliberately silent with respect to purely voluntary scientific research and program evaluation in the sense defined in Section 2.11 (g) (2).

...(p) The result of leaving the rule as it is in the statute, without attempting to sharpen its outlines or define its terms, will be to leave it for interpretation on a case-by-case basis by those who must apply it in practice: the researchers who seek the information, and the programs which supply it. This does not foreclose the possibility of amending the regulations on the basis of experience if it appears either that clinicians are becoming so cautious that research and evaluation studies are being choked off, or that abuses are occurring in the use of information disclosed. But until a need for more detailed regulation in this area is demonstrated, we think its imposition would do more harm than good.

State regulations also impose restrictions. Welfare and Institutions Code, Section 5328 states:

All information and records obtained in the course of providing services under Division 6 (commencing with Section 6000); or Division 7 (commencing with Section 7000), to either voluntary or involuntary recipients of services shall be confidential. Information and records may be disclosed only:

- (e) For research, provided that the Director of Health designates by regulation, rules for the conduct of research. Such rules shall include, but need not be limited to, the requirement that all researchers must sign an oath of confidentiality as follows:

\_\_\_\_\_  
(Date)

As a condition of doing research concerning persons who have received services from \_\_\_\_\_ (fill in the facility, agency, or person); I, \_\_\_\_\_, agree not to divulge any information obtained in the course of such research to unauthorized persons, and not to publish or otherwise make public any information regarding persons who have received services such that the person who received services is identifiable.

I recognize that unauthorized release of confidential information may make me subject to a civil action under provisions of the Welfare and Institutions Code.

\_\_\_\_\_  
(Signature)

Re-Disclosure of Client Identifiers in Order to Obtain Criminal Justice Data

Subpart D, Section 2.56, CFR, page 39, Prohibition on disclosure of patient identities from research, audit, or evaluation records--Rules.

Where the content of patient records has been disclosed pursuant to to this subpart for the purpose of conducting scientific research, management audits, financial audits, or program evaluation, information contained therein which would directly or indirectly identify any patient may not be disclosed by the recipient thereof either voluntarily or in response to any legal process whether Federal or State. This prohibition does not affect the accessibility of the original records under authority of a court order referred to in Subpart E.

Subpart E, Section 2.61, CFR, page 39, Legal effect of Order - Rules.

Subsection (b) (2) (C) of the sections which authorize this part (21 U.S.C. 1175 and 42 U.S.C. 4582) empowers the courts, in appropriate circumstances, to authorize disclosures which would otherwise be prohibited by subsection (a) of those sections. Subsection (b) (2) (C) operates only as a mechanism for the relief of the duty imposed by subsection (a) and not as an affirmative grant of jurisdiction to authorize or compel disclosures prohibited or privileged by other provisions of law, whether Federal or State. An order or provision of an order based on some other authority, or a subpoena, or other appropriate legal process, is required to compel disclosure. To illustrate, if a person who maintains records subject to this part is merely requested, or is even served with a subpoena, to disclose information contained therein in a manner prohibited in the absence of a court order, he must refuse such a request unless, and until, an order is issued under subsection (b) (2) (C). Such an order would remove the prohibition, but could not, of its own force, require disclosure. If there were no subpoena or other compulsory process, or a subpoena had been issued but had expired or been quashed, the custodian of the records would have discretion as to whether to disclose the information sought unless and until disclosure were ordered by means of appropriate legal or administrative process, the authority for which would have to be found in some source other than subsection (b) (2) (C) of the sections authorizing this part.

It is clear that the spirit of the regulations stands against redisclosure (and, one would assume, particularly redisclosure to criminal justice agencies), except under procedures which offer the most stringent

confidentiality and anonymity protections. Further, regulations covering agency behavior imply that information need only be provided if the agency is convinced that adequate precautions are being taken.

Again, both the Welfare and Institutions Code section quoted earlier and the following section of the California Administrative Code speak rather clearly against redisclosure.

California Administrative Code, Section 779:

*Confidential Nature of Information and Records. All personal data and information obtained from medical records in the course of research studies shall be confidential and may be disclosed only to qualified professional persons providing services to the patient or to other research personnel engaged in the study. No information obtained in the course of research may be released through publication or other research communication unless the person studied is unidentifiable.*

F. Release of Criminal Justice Information to DATOS

With respect to the question of releasing criminal history data by criminal justice agencies, Chapter I, Title II, California Administrative Code reads as follows:

*Section 703 (b) Criminal offender record information may be released, on a need-to-know basis, only to persons or agencies authorized by court order, statute, or decisional law to receive criminal offender record information.*

*(c) Each authorized agency shall keep a record of each release of California Department of Justice rap sheets or information derived therefrom.*

Given the extreme sensitivity concerning re-disclosure of client identifiers to criminal justice agencies, an agreement was arrived at that such re-disclosure would occur only when two conditions were met--client consent was obtained and access of the arrest record information would occur under conditions which did not identify the person as a former drug treatment client.

(While highly relevant to the issue of risk, the matter of personal consent is irrelevant with regard to obtaining release of the arrest record. For example, and most importantly to this project, the summary criminal histories (rap sheets) maintained by the Bureau of Criminal Identification and Investigation (CII) of the State Department of Justice may be revealed only under certain conditions. They may be revealed for licensing and certification purposes, and for certain, specified employment screening. The record may also be given to the person involved, provided it concerns a legal issue to be resolved in court or some other formalized proceeding, in which the information in the record is required. Otherwise, for all practical purposes, the "rap sheet" is not to be released except to another recognized criminal agency for use in the conduct of its official duties. The information released from Justice to Health for our Study contained no identifying information.)

The decisions involving consent deprived the project of opportunity to obtain follow-up information, even in aggregated form, on that (sizable) portion of the study sample with whom interview contact could not be made; nor of course, under the conditions of aggregated release, would arrest information have been of any use as a lead to whereabouts.

One alternative for such follow-up of the entire study sample, operating with partially damaged and thereby non-unique identifiers, was explored, but abandoned. The approach, involving the UNIMATCH program, would have provided ample safeguards against specific disclosure in either direction across the drug treatment--criminal justice boundary. It was found, however, that the available file contained only the arrest information, and the file included arrests only for FBI "Index" crimes. Index crimes are essentially felonies, and they constitute far less than one-half of all crimes known to the police.



Further, it was found that the UNIMATCH computer program which was to be used to access the file was not known to work for this type application. One attempt made some time ago did not work. Because the arrest file did not have the person's full name or other unique identifiers (done to protect the anonymity and confidentiality of those whose records are on the file) unfortunately, those who were working up this system do not know what the error rate would be in the use of partial identifiers to access records from the file. (The partial identifiers used are birthdate, sex, race, and four characters of the surname.) In other words, it was unknown what the rate of false matches and false non-matches would be; nor are there any measures of the severity of the errors or their distribution. Thus, the attractive solution to the problem of access to criminal record was effectively eliminated.

### 3. AGENCY INVOLVEMENT AND COOPERATION IN CLIENT CONTACT

The preceding chapter focussed on the more formal aspects of gaining agency cooperation, client contacts, and the laws and regulations concerning the client's rights to privacy. This chapter is more concerned with the ways in which these issues became activated, and the settlements obtained from the resultant efforts. In presenting these operations and outcomes some repetition is unavoidable.

#### A. Agency Involvement

The question of program involvement was taken up with the first DAO Project Officer, but handled gingerly. The blunt issue of mandatory as opposed to voluntary program participation was sidestepped on the grounds that the best approach would emphasize the endorsements which had been given the idea of such a study by the task force and the consortia, and the notion that it was strongly in the programs' interests to participate, rather than a question of whether they were obliged to participate.

In fact, the question was seldom directly raised and we attempted dutifully to avoid it when discussion veered in that direction. At a particular consortium meeting, however, a persistent program director demanded to know whether participation was voluntary or mandatory and refused to be put off with pleas that a relationship of willing cooperation was certainly preferred. Confronted with a demand for a "yes" or "no" answer, the senior staff member at the meeting conceded that it was her understanding that participation was mandatory. A telephone call to DAO by the chair confirmed this opinion.

The struggle with the applicable confidentiality statutes led us again into the question of the nature of participation. The federal regulations describe two different procedures for approval of the confidentiality protocol for the particular study depending upon whether program participation is voluntary or mandatory. If program participation is voluntary then the protocol need only be approved by the participating programs; if mandatory, approval of the protocol by the State Attorney General is required. When this distinction was pointed out to DAO, the Program Director agreed to seek the AG's approval of the protocol. The letter subsequently received from the AG stated that the protocol had been reviewed and no objection found to it. The letter could hardly be seen as an approval--more a plea for non-involvement of the AG's office. The matter, however, was never challenged.

A month following, it was discovered that while clearance for inclusion of NIDA funded programs had been obtained on an informal basis from Washington, the regional NIDA office had not been informed. The two NIDA programs which checked with the regional office were told that NIDA would forbid participation because no clearance had been sought. This was subsequently rectified by receipt of a letter authorizing participation from Washington. However, of the 18 programs in the Study funded solely through NIDA, two did not participate in any way in the Study.

1. Meetings with groups of program representatives

Initially it was the judgment of both CRA and DAO that preliminary introduction of the programs to the project could be accomplished through project staff attendance at drug abuse task-force meetings and at meetings of the five health-services regional consortia. Protocol required attendance first at the regular meeting of the drug abuse task-force steering committee.

"The Drug Abuse Task Force is a county-wide congress of all persons and agencies concerned with drug abuse prevention and treatment in Los Angeles County who establish a membership according to the by-laws."<sup>1/</sup> At the time of DATOS, membership was composed largely of drug abuse treatment agencies, representatives of various community program coalitions interested in drug abuse treatment, and other members with a specific interest in drug abuse. The task force had approved the allocation of funds for a long-term outcome evaluation and some members had assisted in writing the RFP which was also approved by the body. The 10 member steering committee headed by the task force chairperson is elected by the task force and functions to "...deliberate and make recommendations to the Task Force as a whole."

The project director attended the August steering committee meeting to discuss the plan for contacting clients and issues of confidentiality involved, as well as to request placement on the agenda for the next task force meeting. The discussion of the project evoked little comment from the steering committee and placement on the task force meeting agenda was granted for the following month.

Prior to that a project staff member attended meetings of four of the five health-services regional consortia (the consortium in the fifth region was in the midst of re-organization and had no regularly scheduled meeting at that time). The regional consortia are composed of regional planning staff and representatives of the programs in the region. Only one of these meetings was well enough attended by program representatives to serve as an effective vehicle for information dissemination. (The reason given for

<sup>1/</sup> County of Los Angeles, Department of Health Services, Plan for Drug Abuse Services, 1975-76, 1975-80.

poor attendance at the meetings was that since it was August, many people were on vacation.)

We began to receive advice from attendees at the meetings and from others that it would be more productive to meet with the various coalitions of programs which existed around the County. Accordingly we began to schedule these meetings as well. In early September, we made a presentation to the task force meeting. With few exceptions these meetings had in common a general lack of interest in the project whether our presentation was general or detailed, formal or informal. The best that could be said for this approach to involving the programs in the project was that we observed the formalities of protocol, we learned something about the interrelationships among the programs, and we made a few contacts with receptive program staff members. Some meetings had the negative result of embroiling the project in the existing conflicts among programs. In a number of cases we found that program representatives who had been vociferously anti-DATOS at a large meeting were quite cooperative in an individual context.

Typifying this was the last of these types of meetings which a project staff member attended in late November. It was a meeting with the Research, Evaluation, and Advisory Panel (REAP) of the task force. This meeting occurred well into the second stage of the contact process phase described below and was attended at the suggestion of one of the members following a discussion in which we expressed discouragement over the lack of cooperation on the part of many programs which we were then engaged in contacting on an individual basis. Again, the project staff member found that his presentation was the opening gun of a salvo directed against DAO (no representative was present), for having allocated monies to fund DATOS. Coming at the end of what we viewed as a four month public relations campaign the meeting

defined our efforts as less than successful. One interpretation of this lack of success is, of course, that project staff were less than competent at the public relations task. A second interpretation (ours) is that no technique of presentation could effectively counteract the long standing disagreements and conflicts of interest existing in the drug abuse treatment community or the understandable animosity of under-funded and under-staffed treatment programs toward being subjected to yet another research effort.

## 2. Meetings with individual programs

The project plan had always called for meetings with individual programs. The revision made following the disappointing outcome of the group meetings was to meet with each program to describe the study and request participation. The earlier assumption had been that the group meetings and written material would serve as sufficient introduction to the program. The schedule envisioned was that a project staff member would meet with the individual programs at the point that the client contact activity was scheduled to begin. Because of the difficulties described above it was decided that a preliminary meeting must be held with each program--a decision costly in time and money when one considers the number of programs and the geographic expanse of the County. As it turned out two meetings per program was a minimum involvement--project staff returned to some programs three and four times in an effort to negotiate a working agreement. (These contacts are exclusive of the project's interviewers' involvement with the programs, which in some cases was a daily occurrence during the data collection phase.)

Reaction of the programs to the individual meetings can be broken into the following categories:

- a. Programs which were reluctant to meet at all to discuss the project, the directors of some of which were remarkably persistent at not being available by phone or in person.
- b. Programs which expressed a great deal of hostility toward the project for various reasons and required a number of negotiating sessions before the nature of participation could be worked out.
- c. Programs which expressed willingness to participate but pleaded inability on the grounds of records disorganization, under-staffing, or felt incapacity to locate former clients.
- d. Programs which were willing to participate in the project while expressing apprehension about various aspects of the Study.
- e. Projects which were eager to fully participate.

Little correlation appears to have existed between the attitude of a program at study inception and the rate of successful contact efforts.

#### B. Time and Effort

Beginning in November, 1976, the project distributed information to some programs regarding which of their former clients had been designated members of the study sample so that they could initiate contact efforts to obtain consent for interview.<sup>2/</sup> However, owing to the numerous difficulties associated with isolation of the target population, it was mid-December before all programs were in possession of information necessary to initiate client contact procedures. Cumulative recording was begun at the close of December to keep track of progress on contact efforts, with entries at weekly intervals through mid-March, 1977, yielding 10 recording points.

All County methadone program clients for the study sample were sought

<sup>2/</sup> The methodology by which the sample clients were selected is given in Chapter 5.

starting in November, and nearly all consents that were to be eventually yielded from this subsample had been acquired by the end of the first of the 10 recording points. Consents for interview were obtained for 40 percent of the County methadone subsample by mid-March when search efforts were terminated, and 90 percent of the consents obtained had been acquired by the close of December. Similarly, little progress was made between the first and last recording points in determining whereabouts of clients from whom no consents could be obtained--the "can't locate" category contained 54 percent of the County methadone subsample at the close of December, and was reduced by 12 percentage points (to 42%) over the subsequent 12 weeks. Of the seven County methadone programs involved, consents secured ranged from zero percent of those sought for one program to 80 percent of those sought for another.

For clients whose membership in the study sample was on the basis of their admission to a program other than County methadone maintenance, efforts in locating and obtaining consents from the former clients were even less successful, with consents acquired for only 22 percent (of the cases not deleted) by the close of the data collection period.

Of the 60 programs included in the study two refused outright; two never got started and were eventually considered to have refused to participate. Another two formally agreed to participate, but they seemed to have done little else; one of these declared all 12 of its cases to be unlocatable, and the other failed to report on the status of 90 percent of its 21 cases. And four agencies obtained no consents. Of these 10 agencies, five were SB714 funded, three were NIDA funded, and two had funding from both sources. None were County funded.

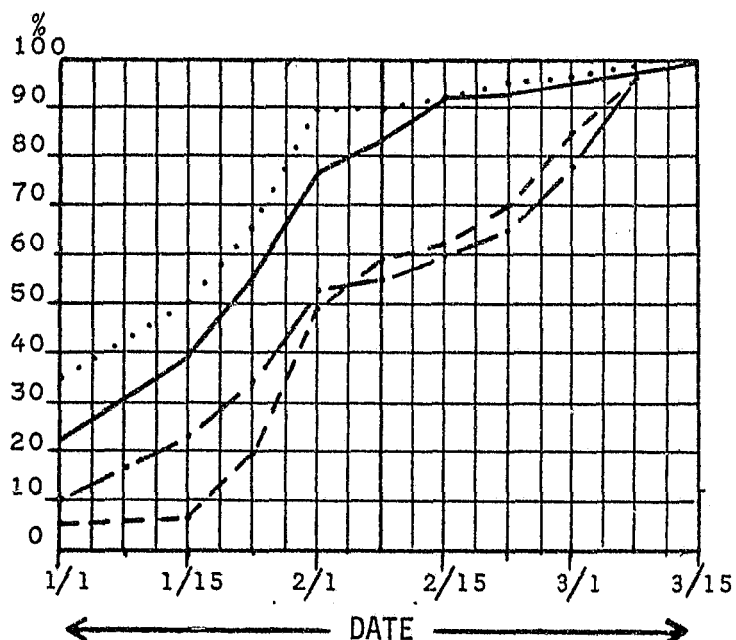
Chart 3.1 shows progress over time (for the period from January 1,



through March 15, 1977) for the agencies (other than the County methadone program) which yielded interview consents.

Chart 3.1

Cumulation, by Week, of Consents for Interview



Legend: Dotted line: Agencies producing  
Solid Line: Consents obtained  
Dashed line: Searches abandoned  
Dot-Dash Line: Whereabouts determined, no consent

The first of the four curves plotted on Chart 3.1 (as ..... ) represents merely the proportion of agencies which had yielded at least one consent for interview by each recording point in time, relative to all agencies which were to do so by the close of the data collection period. By January 1, one-third of all agencies which were to contribute any consents had begun to do so, and the charted curve shows a steep rise through February 1, by which time 90 percent of all contributing agencies had produced at least one consent. The second curve plotted (as ———) represents the proportion of total

consents produced by each point in time, and both the shape and level of that curve closely approximate the curve for contributing agencies. Thus, there is an acceleration in the rate of interview consents being yielded throughout the period January 1, through February 1, (22% by January 1; 45% by January 15; 77% by February 1), followed by a sluggish and decreasing rate of production thereafter, with only 7 percent of total consents obtained during the final month of attempted client locating activities. Further, this marked diminution in the rate of consents obtained occurred despite the initiation in early February of several new techniques intended to assist and facilitate the agencies' efforts to locate clients and acquire consents for interview. The overall pattern suggests that the agencies ordinarily are in possession of rather few leads for determining whereabouts of their former clients, and that opportunities to re-locate clients are rapidly exhausted by pursuit of those few leads.

The third and fourth curves on the chart represent indices of success (as .—.—.—) or failure (as -----) of the agencies in determining whereabouts of clients for whom no consents for interview were obtained. The successful location category includes clients who were contacted but refused to be interviewed plus those determined to be out of Los Angeles County, or in jail and not contacted, or dead, while the unsuccessful location category contains all clients for which the agencies could not determine whereabouts. Two hundred thirty cases were in the former category, and 1,000 in the latter. The curves for these two measures also show a common shape and level, but one which differs from those for contributing agencies and consents obtained, since each displays a phase of acceleration in rate subsequent to February 1. This phenomenon would seem in part attributable to intensification of contact effort but also, and more prominently, to delayed acknowledgement to the

research group concerning the search status on clients for whom leads had earlier been exhausted.

It had been speculated during the course of the project that the relative burden placed upon an agency, simply in terms of the number of former clients it was requested to locate for interview, and regardless of the agency's size or staff resources, affected compliance with the research. This appears, in retrospect, not to have been so. Roughly one-half of the agencies which participated by reporting their attempts at client contact had been asked to locate 25 or fewer cases. Compared to agencies asked to locate more than 25 cases, the agencies with less burden imposed were neither more successful at establishing the whereabouts of their former clients, nor in acquiring consents.

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Table 3.1

Size of Sample Sought and Success in Re-Location

|                          | CONSENTS          |                    | UNLOCATABLES      |                    |
|--------------------------|-------------------|--------------------|-------------------|--------------------|
|                          | <u>Low Burden</u> | <u>High Burden</u> | <u>Low Burden</u> | <u>High Burden</u> |
| Compliance <sup>1/</sup> |                   |                    |                   |                    |
| Successful Agencies      | 32%               | vs. 41%            | 39%               | vs. 39%            |
| Unsuccessful Agencies    | 68                | vs. 59             | 61                | vs. 61             |

1/ Compliance: High consent rate and low unlocatable rate = success.

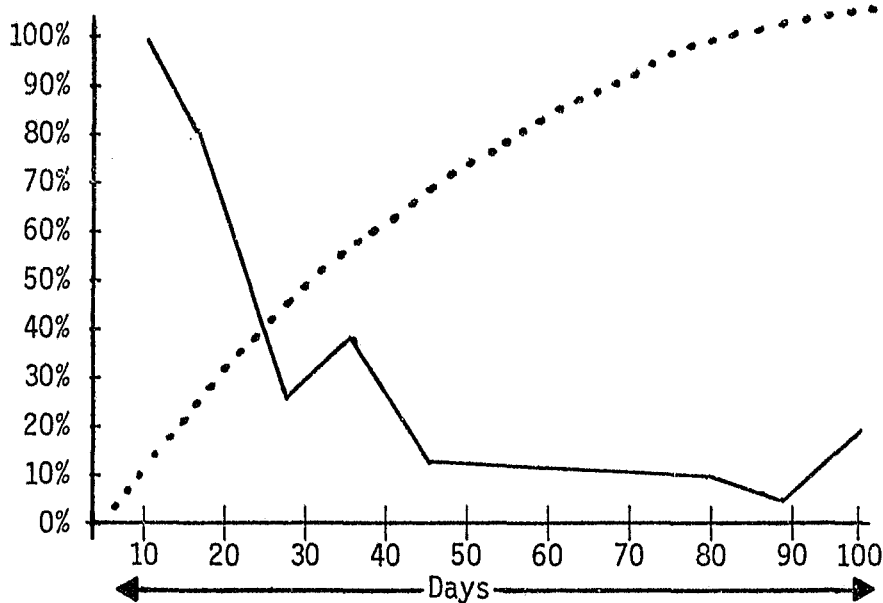
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Opportunity for agency search efforts to be carried out to locate any particular client was always (except for one agency) at least 75 days (mid-December through February) and frequently longer. Agencies were requested to record the date on which search was initiated on each case,

as well as the date of search termination whether successful or not. The following chart (Chart 3.2) displays duration of search in relation to declarations by the agencies that cases had been determined to be in Los Angeles County and not in custody--a location which usually resulted in direct contact with the client leading to consent or refusal for interview.

Chart 3.2

Search Duration and Outcome



Legend: determined to be in Los Angeles County, not in custody  
..... as a percent of all so determined  
—— as a percent of all concluded searches

From the dotted curve (.....), it may be observed that, of all cases determined by the agencies to be in residence within the county, 22 percent had been so located within 10 days of the initiation of search effort, 46 percent within 20 days of elapsed search, and 59 percent within 30 days. Thereafter, the steepness of the slope--or the rate of such locations--

declines and, by the sixtieth day of search, nearly 90 percent of those who will be located have been located. The solid line (—) charted displays the proportion of searches terminated within any elapsed period which resulted in positive determination that the former client was still resident in Los Angeles County; apart from a few clients determined by the agency to be in custody somewhere (about 5%) or to have moved outside Los Angeles County (about 3%), the whereabouts of the remaining cases could not be determined by the agencies. From the solid line, it may be seen that searches which extended beyond 20 days typically concluded without successful location of the client and that, after 40 days had elapsed, the rate of successful searches among searches concluded never rises above 15 percent.

While the treating agencies were repeatedly urged to make early determinations on their cases, including acknowledgement that whereabouts remained unknown, and to supply the research project with identifying information that could permit alternate techniques to determine clients whereabouts, these urgings went generally unheeded, with search status on fewer than 10 percent of cases reported to the project by the close of December, and fewer than one-third of cases by the end of January, even though a mailgram from the Drug Abuse Program Director and a letter from the research project to all agencies during the first week of January, plus numerous personal contacts, had urged that an initial status determination be reported on every case, in order that alternate search techniques could be implemented. Also, since those cases on which the agencies were prone to report promptly were the very cases for which alternative location efforts were unnecessary, the intent of the research team to facilitate location by undertaking a check of other records was stymied until the deadline for data collection was so near that the fresh record sources, even if explored,

could not yield information in time for return to the agency and utilization in the attempts at client contact. Thus, nearly three-quarters of all cases eventually declared to the research project in "whereabouts unknown" status were reported by the agencies to have occupied periods of search in excess of six weeks, and both the onset of search subsequent to original receipt of information by the agency, and report of the search outcome back to the research project, were frequently delayed.

### C. Availability of Client Locational Information

One central question which must be asked is whether the extremely low relocation and contact of clients by their former treating agencies arises from lack of effort on the part of the agencies, or from lack of capability to relocate clients regardless of the amount of effort expended. Several types of information are available which have bearing on this question, and the answer would seem to be "both, but mostly the latter." In January, 1977, when it had become evident that agencies were acquiring far fewer consents than would be required, an analysis of the discharged study sample was made in terms of the length of their treatment and the reason for their departure from treatment, as recorded in the CODAP and DAO information systems. While there was no strong evidence, on an agency-by-agency comparison, of relationship between these measures and the variable success of the agencies in relocating clients, the general distributions suggested that the familiarity and closeness of relationship between most clients and their treating agency were unlikely to promote successful relocation since, first, one-third of clients spent less than a month in treatment prior to discharge and since, second, one-half of those who remained in treatment for 30 days or longer left

treatment either by "splitting" on their own or by being kicked out by staff. Only one-third of the discharged members of the Study had managed to both stay in treatment for 30 days or longer and avoid discharge dispositions of "split" or "kicked out" (Table 3.2).

At the close of the Study, the research group talked with a staff person who had had direct responsibility for client contact efforts at 45 of the participating treatment agencies, and an inventory was taken of the search techniques employed. All agencies claimed to have employed phone calls and letters to the clients' residences, and a vast majority also claimed to have attempted location of clients via contacts with relatives, friends, and other clients. About one-half of the agencies claimed to have attempted location of clients by phone call to the county jail or to probation officers, and somewhat fewer had checked with other drug treatment programs, but relatively few (about 15%) had sought clients by physically leaving the premises of the agency to visit a client's expected residence or hang-out. When asked to recall a particular case on which heavy contact effort had been expended with eventual success, and one which had proved futile to contact despite such expenditure, no differences were found in the distributions of contact approaches mentioned. When asked what methods they believed would be most useful for locating clients for this type of follow-up study, the most frequent suggestion was that a shorter follow-up period subsequent to discharge be used, with the reasons being that the former clients were highly mobile and that staff turnover was sufficiently high that counselors who had been acquainted with the clients were no longer at the agency. Next most frequent were suggestions that better records be made by the treating agency while the client was still in treatment of the kinds of information, such as relatives'

Table 3.2

Time in Treatment, by Kind of Discharge  
for DATOS Sample<sup>1/</sup>

| <u>Time in Treatment</u> | KIND OF DISCHARGE |                  |             |                     |                   |              | <u>Total</u> |
|--------------------------|-------------------|------------------|-------------|---------------------|-------------------|--------------|--------------|
|                          | <u>Completed</u>  | <u>Continued</u> | <u>Died</u> | <u>Incarcerated</u> | <u>Kicked Out</u> | <u>Split</u> |              |
| 1 day or less            | 0                 | 30               | 0           | 0                   | 0                 | 9            | 39           |
|                          | 0.00              | 1.85             | 0.00        | 0.00                | 0.00              | 0.56         | 2.41         |
|                          | 0.00              | 76.92            | 0.00        | 0.00                | 0.00              | 23.08        |              |
|                          | 0.00              | 9.93             | 0.00        | 0.00                | 0.00              | 1.47         |              |
| 2 to 6 days              | 17                | 12               | 1           | 1                   | 20                | 116          | 167          |
|                          | 1.05              | 0.74             | 0.06        | 0.06                | 1.24              | 7.16         | 10.32        |
|                          | 10.18             | 7.19             | 0.60        | 0.60                | 11.98             | 65.46        |              |
|                          | 4.08              | 3.97             | 16.67       | 1.47                | 9.43              | 18.89        |              |
| 7 to 13 days             | 66                | 40               | 0           | 5                   | 8                 | 46           | 165          |
|                          | 4.08              | 2.47             | 0.00        | 0.31                | 0.49              | 2.84         | 10.19        |
|                          | 40.00             | 24.24            | 0.00        | 3.03                | 4.85              | 27.88        |              |
|                          | 15.83             | 13.25            | 0.00        | 7.35                | 3.77              | 7.49         |              |
| 14 to 29 days            | 13                | 54               | 2           | 11                  | 23                | 43           | 146          |
|                          | 0.80              | 3.34             | 0.12        | 0.68                | 1.42              | 2.66         | 9.02         |
|                          | 8.90              | 36.99            | 1.37        | 7.53                | 3.77              | 7.49         |              |
|                          | 3.12              | 17.88            | 33.33       | 16.18               | 10.85             | 7.00         |              |
| 30 days plus             | 321               | 166              | 3           | 51                  | 161               | 400          | 1102         |
|                          | 19.83             | 10.25            | 0.19        | 3.15                | 9.94              | 24.71        | 68.07        |
|                          | 29.13             | 15.06            | 0.27        | 4.63                | 14.61             | 36.30        |              |
|                          | 76.98             | 54.97            | 50.00       | 75.00               | 75.94             | 65.15        |              |
| TOTAL                    | 417               | 302              | 6           | 68                  | 212               | 614          | 1619         |
|                          | 25.76             | 18.65            | 0.37        | 4.20                | 13.09             | 37.92        | 100.00       |

<sup>1/</sup> This is the sample as it existed as of January 26, 1977, for which the information reported was relevant and known, with some duplicate cases removed.



phone numbers, which could facilitate relocation subsequent to discharge, and that more effort be directed toward verifying such information as the client's own reported address. Finally, it was often suggested that more tracking resources be brought to bear, either by hiring people who were "street-wise" to work full-time following leads along the "grapevine," or paying a higher bounty such as \$25 for success in making contact, or simply freeing more staff time from other duties to devote to the contact effort. Of 45 agency representatives from whom suggestions were elicited, only two ventured the opinion that a longer period of time for conduct of search would, in itself, have been helpful, and several concluded that the only way to substantially increase the number of interviews would be to double or triple the size of the study sample since they viewed it as inevitable that the proportion found among any number sought would be low.

#### D. Kinds of Location Efforts

Information on client contact efforts were recorded for nearly 1400 cases in the sample. Table 3.3 summarizes these efforts and takes into account search efforts by more than one agency for a single client, as well as additional efforts from original agencies on clients which were "re-routed" to them for further search after being declared unlocatable.

From Table 3.1 it may be noted that 672 of the cases, or approximately one-half, were sought by only one type of contact effort, and that this type was usually either mail or telephone. When only one type of effort was involved in the search, it is also evident that it was rarely attempted more than twice; 86 percent of these single-avenue approaches consisted of only a single attempt via that approach, and 35 percent of all study sample cases for whom these location-effort records were provided show

Table 3.3

Kinds of Contact Attempt,  
by Number of Attempts

| <u>Kind</u>           | <u>Number</u> |      |      |      |      |    |    |     |    | Total<br>Cases |
|-----------------------|---------------|------|------|------|------|----|----|-----|----|----------------|
|                       | 1             | 2    | 3    | 4    | 5    | 6  | 7  | 8   | 9+ |                |
| Mail only             | 236           | 63   | 14   | 4    |      |    | 1  |     |    | 318            |
| Phone only            | 162           | 39   | 18   | 10   | 8    | 1  | 1  | 3   | 2  | 244            |
| Face-to-face only     | 65            | 2    |      |      |      |    |    |     |    | 67             |
| Collateral only       | 12            | 8    | 9    | 3    | 1    |    |    |     |    | 33             |
| Jail check only       | 7             |      |      |      |      |    |    |     |    | 7              |
| Probation/parole only | 3             |      |      |      |      |    |    |     |    | 3              |
| Two kinds             |               | 298  | 150  | 57   | 16   | 12 | 4  | 3   | 8  | 548            |
| Three kinds           |               |      | 46   | 52   | 18   | 13 | 8  | 4   | 7  | 148            |
| Four or more kinds    |               |      |      | 8    | 7    | 6  | 2  | 4   | 0  | 27             |
| TOTALS                | 485           | 410  | 237  | 134  | 50   | 32 | 16 | 14  | 17 | 1395           |
| Cumulative Percent    | 34.8          | 64.2 | 81.1 | 90.8 | 94.3 |    |    | 5.7 |    |                |

only a single contact attempt. Further, it can be seen that search effort ceased after no more than five contact attempts for 95 percent of all cases; even for cases toward which multiple types of search effort were addressed, 90 percent of searches were abandoned after five or fewer attempts. Since most searches, it will be recalled, were terminated with the whereabouts of the former client still unknown, the question arises whether more dogged pursuit along the avenues of search which were available to the agencies would have provided significantly greater yield in terms of the number of clients located or consents obtained. Table 3.4 contains information which has indirect bearing on this matter.

Table 3.4

Number and Type of Contact Attempts by  
Percent of Cases Whose Whereabouts Remained Unknown

| <u>No. of Attempts</u> | <u>Types of Attempt</u> |              |                   |                |                |                 |
|------------------------|-------------------------|--------------|-------------------|----------------|----------------|-----------------|
|                        | <u>Mail</u>             | <u>Phone</u> | <u>Collateral</u> | <u>2 Kinds</u> | <u>3 Kinds</u> | <u>4+ Kinds</u> |
| 1                      | 78%                     | 28%          | 58%               |                |                |                 |
| 2                      | 87                      | 41           | 88                | 68%            |                |                 |
| 3                      | 57                      | 28           | 89                | 75             | 65%            |                 |
| 4                      | 75                      | 50           | 67                | 77             | 71             | 75%             |
| 5                      |                         | 75           | 100               | 50             | 61             | 57              |
| 6                      |                         | 100          |                   | 75             | 77             | 67              |
| 7                      | 100                     | 100          |                   | 50             | 50             | 50              |
| 8                      |                         | 67           |                   | 67             | 75             | 50              |
| 9                      |                         | 0            |                   | 75             | 43             |                 |
| TOTAL                  | 79%                     | 33%          | 76%               | 71%            | 66%            | 63%             |

In terms of reducing the proportion of clients remaining in unlocated status at the conclusion of search, attempts at establishing contact by phone and phone alone were apparently the most productive among those types of search employed; overall, only one-third of cases sought in this fashion remained in "whereabouts unknown" status, and the diminution of return on effort invested did not become substantial until after four or five attempts. No other single method or combination of approaches was successful in establishing the whereabouts of as many as two-fifths of the clients sought, and there was no demonstrated superiority in applying four or more types of effort as compared to three, or three types as compared to two, or for that matter, two types as compared to only mail or only collateral approaches. The apparent superiority of the telephone approach toward establishing

contact may, however, be in large part attributable to an artifact. Thus, the initial availability or easy accessibility of a valid or promising phone number would largely determine whether that path was followed, the acquisition of such a number through other search efforts might pose considerable difficulty, and the appropriate conclusion would be that clients with phone numbers known to the agency are more readily located by that convenient means, rather than that the telephone approach is an inherently more productive investment of search effort. This interpretation could also be plausibly invoked to account for the evident lack of superiority of the multiple search techniques exercised by the agencies; since we can presume that telephone attempts were frequently an element in these combined approaches, and one early exercised by virtue of the economy of effort involved, then resort to the alternate elements in the combined approaches would have tended to follow upon some indication that further telephone pursuit would be fruitless--an indication which in itself suggests that the general search might prove more difficult.

#### E. Special Client Locator Techniques

It became evident rather early during the data collection period that treatment programs were having extreme difficulty re-locating former clients to establish contact and invite interview participation. Further, it was generally impossible to render programs any assistance through provision of additional leads to possible whereabouts without identifying information about those clients, and there was considerable lag in delivery of such information to the contractor. In consequence, examination of the utility of a variety of techniques intended to facilitate client relocation was necessarily limited to rather small samples and with rather limited time for

a technique to demonstrate "workability" before cessation of the data collection phase. All in all, however, the results from these limited examinations were disheartening. For that reason, we will first summarize the results of these approaches, and then discuss their nature.

A comparison of the changes in status for a client (located, consented, and interviewed) subsequent to activation of any or all of the special techniques reveals that it was possible to shift only 4 percent of over one thousand cases from a category of unknown whereabouts to known general whereabouts (in custody anywhere; in Los Angeles County and not in custody; outside Los Angeles County and not in custody). Similarly, but even more discouragingly, these efforts yielded a shift of only one percent of cases from the no consent to the consent for interview category, and slightly less than one percent from not interviewed to interviewed (14 cases).

Since all these few "extra" interviews were yielded from the category of clients whose whereabouts had earlier been declared or presumed unknown, we may examine the separate techniques simply *vis a vis* their association, when applied, with shifts of client from whereabouts unknown to interviewed status.

For 595 cases, it was determined that no technique was applied other than reminder to the agency that the client was still sought and that an incentive payment of \$7.50 to the program was available if that client could be interviewed. (The "incentive" was applied retroactively and prospectively for every interview obtained, so there was nothing special about this sample other than notification that members of this sample were among those sought.) The technique yielded 10 interviews out of 595 cases, or less than a 2 percent "hit rate." Very few additional interviews were secured by application of one or more of the remaining techniques, which

were ordinarily examined on smaller samples. One such technique which, like the incentive plan, did not require that the contractor obtain actual client identity in order to activate was the alternate agency approach. It operated via a search of a Drug Abuse Office information system which employed coded identifiers one could construct from actual client identifying information. Thus, when the contractor was in possession of either the coded ID or the information from which to build one, search could be initiated to locate agencies with more recent treatment contact with the client, if it had occurred. However, in order to minimize the workload, confusion, and frustration to agencies involved in separate but simultaneous efforts to achieve contact, the technique was employed, until late in the study, only for clients on which the original agency had declared further search to be futile. Again, given the lag in acquiring such a determination, only limited applicability was possible. A "hit rate" of only one and one-half percent in some nearly 200 cases indicates the technique was unproductive, even when combined with payment of program incentive. (Further information on both the Incentive and Alternate Treating Agency approaches will be found in appendix C.)

A random sample of 100 cases for whom identities were known was drawn from among those designated by agencies as unlocatables, and several simultaneous avenues of search were explored. Only three interviews were yielded by this combination of efforts, but it is reasonable to assume that a few more could have been yielded from this sample except for the fact that data collection period was soon due to close. The "locator check" samples were searched in current jail census, court docket records, motor vehicle and drivers license records, and vital statistics, yielding the following results.

Only one of the random sample of 100 non-locatable cases was found in jail at the time the jail search was conducted. The same list was subsequently run through Department 95 Court docket records, to determine if anyone had been committed either as addict or under mental commitment from Los Angeles County during 1975 or 1976. It was found that of the 100, three were committed to the California Rehabilitation Center (CRC). Of these, two subsequently returned to court and were re-committed to State prison; the third inmate was still at CRC.

The locator sample was submitted to the Department of Motor Vehicles. Delineated in Figure 3.1 are the results of this procedure. Briefly, the check involved:

1. Submitting 100 names with birthdates to DMV.
2. Seventy-one cases were returned with addresses.
3. Thirty-seven cases having relatively current address information (1976-77) were checked for phone numbers through a reverse directory.
4. Eighteen cases were found to have phone numbers (in only two cases were these phones in the client's name).
5. The respective programs were provided these numbers and requested to attempt contact.
6. These calls resulted in three consents and one refusal, and the others unlocatable (wrong number, disconnected phone, etc.).
7. Closed cases were subtracted from the 71 cases with addresses and a modified mailing was sent to the balance of cases. Due to both time and confidentiality constraints the mailing consisted of sending empty envelopes. As DATOS was prevented from initiating client contact this method was an attempt to test the validity of DMV information, on the basis of returned or non-returned envelopes.
8. Eighteen envelopes were returned as undeliverable.

100 Names & DOB's  
sent to DMV,  
Sacramento

29 No record based on  
information submitted

71 Addresses returned  
from DMV

34 - 1975 or older  
addresses deleted  
from phone search

19 not listed

37 Addresses checked  
for phone number through  
reverse directory

18 phone numbers listed  
at address<sup>1/</sup>; number  
given to agencies

1 Refusal

3 Consents

14 Unlocated

66 Sent to respondents at  
address given

8 Moved, no forwarding address

7 Undeliverable

2 No such person

1 Refusal

48 No response

Figure 3.1

Results of DMV Record Search

<sup>1/</sup> Of those 18, two were listed under the respondent's own name.



We conclude that this check procedure, had it been done earlier as planned, might have slightly increased the client contact rate, and it is unfortunate that the agencies did not comply with directives that would have permitted this action.

The locator sample, minus those cases with whom contact had been established, was also checked with Vital Statistics Los Angeles County Recorder's Office to determine the number of deceased cases. One case was found.

#### F. Net Outcome of Client-Contact Effort

The net results of the client contact efforts may best be understood as consisting of five major steps. Depending on the stage of the project and the particular issue at hand, the number of cases in the categories varies somewhat. The final categorizations most suitable for the purpose of summarizing the net client-contact outcomes are shown in Table 3.5.

As explained in Chapter 5, about 15 percent of the sample cases were deleted for various reasons. Of the remaining cases, nearly two-thirds were not located. Among those located, over three-fourths were identified as being in Los Angeles County, and not in custody. One-seventh were in custody somewhere, and less than 10 percent were living out of the county.

Of those in Los Angeles or in custody anywhere, 71 percent consented to be interviewed (or agreed to talk to an interviewer before making a final decision). The remainder either refused to be interviewed (17.2%) or were not asked for a consent as a result of their being in custody (11.8%).

Table 3.5  
Summary of Net Results of Client-Contact Efforts

| <u>Client-Contact Outcomes</u> | <u>No.</u> | <u>Percent of</u> |                  |
|--------------------------------|------------|-------------------|------------------|
|                                |            | <u>Total</u>      | <u>Eligibles</u> |
| Total Sample                   | 1885       | 100.0             | 100.0            |
| Deleted                        | 298        | 15.8              | 15.8             |
| Not Deleted                    | 1587       | 84.2              | 84.2             |
| Not Deleted                    | 1587       | 84.2              | 100.0            |
| Located                        | 569        | 30.2              | 35.9             |
| Not Located                    | 1018       | 54.0              | 64.1             |
| Located                        | 569        | 30.2              | 100.0            |
| Los Angeles, Not in custody    | 441        | 23.4              | 77.5             |
| Custody Anywhere               | 84         | 4.5               | 14.8             |
| Out of County                  | 44         | 2.3               | 7.7              |
| In Los Angeles or Custody      | 524        | 27.8              | 100.0            |
| Consent Obtained               | 372        | 19.7              | 71.0             |
| Consent Refused                | 90         | 4.8               | 17.2             |
| In Custody without Consent     | 62         | 3.3               | 11.8             |
| Consent Obtained               | 372        | 19.7              | 100.0            |
| Interviewed                    | 310        | 16.4              | 83.3             |
| Not Interviewed                | 3          | 0.2               | 0.8              |
| Refused after Consent          | 32         | 1.7               | 8.6              |
| Did not Respond                | 27         | 1.4               | 7.3              |

Among those who gave a (provisional) consent, only three were simply not interviewed; these consents were made known too late in the project to arrange an interview. Another 8.6 percent effectively refused to be interviewed even though they had given a (provisional) consent, and 7.3 percent did not respond to the interviewers' multiple attempts to reach them. The division of cases into these two latter categories was often rather judgmental. Combining them, it may be said that 15.9 percent of those who had given a (provisional) consent were not interviewed for reasons varying from a final reported decision to not be interviewed

through inability of the interviewer to reach the person for the conduct of the interview. Most importantly, 310 people were interviewed. They represented 83.3 percent of those who had given a consent, and 19.7 percent of the original total sample.

The major client-contact categories may be highlighted (from Table 3.5) as shown in Table 3.6.

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Table 3.6

| <u>Outcome</u> | <u>Percent of<br/>Total Sample</u> | <u>Percent of<br/>"Eligibles"</u> |
|----------------|------------------------------------|-----------------------------------|
| Not deleted    | 84.2%                              | 84.2%                             |
| Located        | 30.2                               | 35.9                              |
| Consented      | 19.7                               | 71.0                              |
| Interviewed    | 16.4                               | 83.3                              |

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These represented acceptable levels of performance, except for the located category which is very low. As will be shown later in the report, this low rate was also associated with substantial sample bias.

#### 4. THE TARGET POPULATION, KINDS OF TREATMENT, AND CLIENT TYPOLOGIES

The purpose of this chapter is to present the steps which were taken in the development of the target population. This development was keyed to the kind of treatment received and the characteristics of the client, in compliance with the project plan. But, a number of practical problems which emerged in the actual conduct of the Study came to have a major influence on the development of the project as well.

##### A. The Target Population

The contract for this project defined the total target population as cases admitted to a drug abuse treatment program in Los Angeles County during the period from March 1, 1975 through July 31, 1975, which was followed by a discharge no later than December 31, 1975. The one exception was admission to outpatient methadone maintenance for which discharge was not a requirement. Various qualifications of this definition will be indicated in the process of presenting the steps taken in creating the target population file.

##### 1. Identification and definition of the agencies

One of the major problems was to define or identify the agencies. The listing which had been expected was eventually supplied; or rather, several were obtained. None turned out to be complete, and they applied to then current operations rather than to the admission period. And there were many inconsistencies. The reasons for these problems quickly became obvious. Drug abuse programs in the County may exist as singular entities, as components of larger mental health treatment units, or as complexes of multiple drug treatment services. They are tied together in administrative, geographical, reporting unit, interest group, and funding coalitions and

consortia, both formal and informal. The administrative unit with which an outside group should properly or productively deal varies and is seldom clearly defined in any given situation. The relationships among programs, program components, and affiliations of programs and program components is constantly shifting and often informed by difference of opinion and conflict.

Sufficient study could no doubt yield a picture of these interrelationships at any given point in time, but the problem for the project was to deal with the current structure while studying a structure which had existed a year previous. During that year programs had gone out of existence, shifted funding sources, changed radically in administrative or treatment structure, or changed names while remaining relatively the same. Staffing is also fluid with a considerable amount of movement among programs around the County.

Although an operationally defined list of which programs were to be included in the Study was developed, we could never claim a more than superficial grasp of the nature of the formal and informal levels of power and authority joining the programs in the multiplicity of associations in which all were involved, nor a sure knowledge of the relationship between program entity and DAO.

## 2. Selection of the agencies and clients

With the help of the project's consultant on drug treatment programs in Los Angeles County, the available agency lists were compared with each other and with the program and clinic codes appearing on the computer records of admissions during the study period. These comparisons, together with the study design, resulted in the development of the following criteria.

The first criterion was that the program reported to the Drug Abuse Office or Client Oriented Data Acquisition Process (CODAP) information systems during the study period. These information systems provided the required admission and discharge information as well as the necessary client characteristics data. Excluded by this criterion were all agencies whose only funding during the study period was from Revenue Sharing as they did not then report to the DAO information system. Bassett Outreach and Kedren Community Health Center were also excluded by this criterion as they too did not then report their admissions.

The second criterion was that the program had been in existence for at least six months at the time of the admission period. The intent here was to include only those programs which had had at least some time to work out the problems of getting organized. A record of the programs excluded by this criterion was not kept.

The third criterion was that the program was still in operation, or that a successor to or offshoot of the program which took responsibility for the clients was still in operation. This was necessary in that the agencies had the task of attempting to locate the people and obtain their consent to be interviewed. Excluded by this criterion were Trail Back and Florence-Firestone.

The fourth criterion was that the program be currently funded (at least in part) for drug abuse treatment by California's Short-Doyle Act or the National Institute on Drug Abuse (NIDA), or the County of Los Angeles. The authority for the project stemmed from the contract with the County's Drug Abuse Office. This meant that the project could work only with those programs coming under the purview of the Drug Abuse Office. As best as could be determined, it was such drug abuse treatment funding

which brought the programs into this status. Victory Outreach and Narconon were excluded by this criterion. So also, in effect, were other programs which were never considered for inclusion as they did not appear in the information systems or on the lists of programs with which we started.

Some programs which met the criteria were excluded from the project for special reasons. The methadone maintenance programs of the U.S. Veterans' Administration and the California Department of Corrections were not under the purview of the DAO. One of the programs of the Suicide Prevention Center should have also been excluded, but was not, as it too was not under the purview of DAO. This error was discovered at a later phase in the project, at which point it was excluded.

### 3. Exclusions

Implied by these criteria are other kinds of "exclusions" which should be made explicit. Prevention programs were not included as the purpose of the project was to evaluate treatment programs. Technically, they were also excluded because the people receiving these services are not reported to the information systems. Similarly, outreach programs such as "hotlines" and those which provided only referral services were not included as they are not treatment programs as such. Again, they were also excluded as the people who receive these kinds of service are not reported to the information systems.

Various exclusions were made when client contact efforts got underway. A presentation of amendments to the total and Study target populations is given in Chapter 5. Suffice it to say here that cases and agencies were added and dropped from the beginning to nearly the end of the project. A final, absolute determination of the population is probably impossible. For practical purposes, the total target population was eventually determined

to be 6,554 cases. The Study target population became 5,338. Eleven percent of the total was deleted due to the lack of client characteristics data used in the client typology. Four percent of the cases with client characteristics data were eliminated as having received rare kinds of treatment which were not included in the evaluation due to the lack of a sufficient number of cases. Another two percent were deleted because they were of the "wrong" type according to the research design (as explained in Chapter 5). And, finally, 0.3 percent were eliminated because they were of an extremely rare client type. The Study target population constituted 82.2 percent of the total target.

#### B. Kinds of Treatment

The classification of the treatments used for this Study grew out of those commonly used by County and State administrators, and in the CODAP information system. They included outpatient drug-free services, outpatient detoxification, outpatient methadone maintenance, short- and long-term residential drug-free treatment, residential methadone maintenance, in-patient detoxification, day care, and residential detoxification.

As measured by the number of admissions, the kinds of treatment varied tremendously in size, from a handful of cases in residential methadone maintenance and day care to two-thirds of the cases in outpatient drug-free treatment. Four kinds of treatment came to be included in the Study on the basis that there were enough cases for comparative evaluation; they were outpatient drug-free services, residential drug-free treatment, outpatient methadone maintenance, and in-patient detoxification. A decision was made to exclude the other kinds of treatment rather than to include them by combining them with the more common forms of treatment on



the basis that the resultant evaluation would be more precise.

### C. Client Typology

This section will present the rationale for the use of a client typology as an integral part of the project, the procedures used for this part of the project, and a description of the typology which was chosen for use.

#### 1. Rationale

The principles which underlie classical experimental designs are also essential for high quality program evaluations. For both, the ideal is for those exposed to the treatments being assessed to be similar except for the treatment exposure. This is normally approached in experimental designs by random assignments to the different treatments so that there are no systematic differences among them. Randomization is probably the optimal procedure in that it provides control over all variables which might be of importance. The researcher need not know which variables are important and measurements on all of the possibly important variables need not be obtained. This is because randomization, on the average and with but rare exception, produces groups which have similar distributions on all variables. But randomization is often not a feasible alternative for the evaluator, or administrator.

As indicated, the purpose of randomization is to achieve equality between those exposed to different treatments. In the absence of randomization, this is sometimes approached by matching; that is, people (or other objects of study) exposed to the different treatments are matched on those variables thought to be relevant. This approach is rather direct; if the people are supposed to be identical, then obtain it by choosing people who are identical (on the variables used, at some level of precision).

The major problem here is that many people could be "thrown out" because they cannot be matched. This can severely restrict the population to which the findings can be generalized. In addition, there is the problem of deciding on which variables to be used for the matching.

Another approach toward achieving identity among those given different kinds of treatment is to stratify the people on a number of variables simultaneously; e.g., on sex, race, and age. Comparisons are then made within each stratum. This approach has at least two problems. One is that the number of strata become quite large with even a few variables with but a few categories each. For example, four variables with but three categories each produce 81 different combinations. The sheer number of combinations becomes unwieldy. The other, related problem is that some of these strata are likely to have few people in them. Cross-classification with the treatment variable is quite likely to produce a number of combinations with no cases in them. As with the matching approach, the comparisons cannot be generalized to the population as treatment comparisons for the rare combinations cannot be made due to the small number of cases available.

Actually the matching and stratification approaches are quite similar. Indeed, matching can be achieved by stratification, and matching might be thought of as a special case of stratification in which a case is included only if at least one person in each stratum is exposed to each treatment. Case loss from non-matches can be minimized by using wide categories for the variables so that each category contains a high proportion of the people and by collapsing strata. But this kind of solution requires subjective judgment which detracts from the intended rigor and objectivity of the approach. This Study used a client typology to achieve the goal of

matching and stratification and avoid the problems just indicated.

## 2. Techniques for constructing typologies

A typology may be defined as a set of groupings of objects in which the members of any one group are more like themselves than they are like the members of any other group. Two approaches to typology construction may be distinguished. One is based on achieving identity across all defining variables within any one type. For example, if age and height were used in the construction of a typology, then all members of any one type (defined on these variables) would have to have one and only one value on these variables (such as young and short). The other approach is based on similarity on the defining variables within any one type rather than fixed category boundaries; identity is not required.

An advantage of the latter approach toward the construction of typologies is that it does not necessarily produce a large number of small groups when the variable categories have relatively small numbers of people in them. In the former approach, the upper limit on the size of any type is the size of the largest variable category.

The approach based on similarities also provides the opportunity to assign objects which might be members of small types (because of their rare combinations of characteristics) to larger types using the same procedures and criteria as used for the more common objects. Additional rules do not have to be invoked in order to engender this possibility.

A classification and brief exposition of approaches toward typology construction are provided by Williams and Lambert (1966). More recent works have added little to their presentation. However, Tryon and Bailey (1970) have presented an approach which might be conceived of as an amalgam of the approaches outlined by Williams and Lambert, or as a different one.

Tryon and Bailey were confronted with the problem that the approach toward constructing typologies which they had turned into a computerized technique was far too time consuming for certain kinds of situations, even with the tremendous increase in the processing speed of current computing machines. They developed a three-part alternative which was also programmed, but which was not available at the computer center used at this phase of the project. A variation which could be used without their special program was therefore developed.

Tryon and Bailey strongly recommend that the variables used to construct the typology be relatively independent of each other. They also recommend that the available measures which are highly intercorrelated be combined to form an index or scale. The argument for the first recommendation is that the use of interrelated measures to develop a typology adds a multitude of computations without a corresponding increase in information. This point seems well taken. The second recommendation is more dependent upon the particular situation.

Scales based on a combination of variables are probably desirable when some hypothetical variable such as intelligence or socio-economic status is being measured, but they are of much less value when the variable is more obvious and the measure more reliable, e.g., current age as measured by time from birth to the current date.

Tryon and Bailey also suggest that the number of variables used in the typology construction be small in that the number of computations required increases in a geometric fashion as the number of variables increases arithmetically. They suggest that all of these objectives be achieved by the use of item-cluster (or factor) analysis of the available measures. Such analyses show which measures are relatively independent of each other,

and provide a basis for the construction of composite scales or indices.

The next step in the procedure is to collapse the variables to be used so that each has but two or three categories. The objects to be typed are then distributed throughout the hyperspace created by simultaneous classification on each of the variables. For example, age might be divided into young, middle-aged, and older, and height might be divided into short and tall. The use of sex with these two collapsed variables would produce a three-dimensional space having 12 cells.

The next step is to return to the original variable values for each object before they were collapsed. Each object is then given a new value which is a function of "how far" each is from the ("trial") type in terms of differences on the variables used to construct the typology. Each object is then reassigned to the type to which it is the most similar in terms of the measures used. Most often this is the original type, but sometimes it is not. The averages for each type are then recomputed and the process is repeated. This process seems to converge on a stable typology within several repetitions, though as many as six to 12 such iterations may be required.

Another approach toward the construction of typologies was also used for this project. It is hierarchical and is based on typal similarity (as opposed to identity). This approach begins by putting each object into a unique type and proceeds to the point where all of the objects are classified into one type. It too is iterative, but once classified into a type a case is never changed. The first step combines objects which are the most similar into a type. The type may consist of any number of objects. The process is repeated, with the previously created type(s) treated as if they were an object so that the types may be combined. The objects and types are combined on the basis of the average differences (or

lack thereof) on the variables used in the analysis. The stopping point is to some extent subjective. This project used the technique developed by Johnson (1967) as computerized by Barr et al. (1976).

There are numerous other approaches and techniques for the construction of typologies, ranging from imaginative theoretical constructions to simple cross-tabulations, and other mathematical-statistical techniques. Available resources precluded additional analyses.

#### D. Project Client Typologies

##### 1. Preliminary analyses

Even though the number of variables available for the target population was not very large, using all of them in the construction of the client typologies would have been very expensive in computer-analysis time as the number of computations increases geometrically with unit increases in the number of variables. The techniques used were also dependent upon the number of cases subjected to analysis; again increasing geometrically as the number of cases increased algebraically. For these reasons, samples were used, and the variables were subjected to preliminary analyses designed to determine which ones had the most potential explanatory power.

One of the techniques used to build the typologies required that the number of cases be no larger than 250. Because the typologies resulting from this technique depended upon judgment, a decision was made to do the analyses twice on independent samples in order to check for consistency. Further, it was thought that the preliminary analysis of the variables ought to be done on a sample other than the ones used to construct the typologies. Thus, three samples from the target population (as it existed at the time) were randomly selected. Table 4.1 shows that these samples were

representative of the population from which they were drawn.

Table 4.1

Distribution of Three Random Samples from the Target Population  
(as it then existed) on Three Arbitrarily Selected Variables

| Variables  | Sample #1 |       | Sample #2 |       | Sample #3 |       | Other |       | Total |       |
|------------|-----------|-------|-----------|-------|-----------|-------|-------|-------|-------|-------|
|            | No.       | %     | No.       | %     | No.       | %     | No.   | %     | N.    | %     |
| Sex:       |           |       |           |       |           |       |       |       |       |       |
| Male       | 167       | 72.9  | 169       | 73.2  | 161       | 70.3  | 3989  | 71.5  | 4486  | 71.6  |
| Female     | 62        | 27.1  | 62        | 26.8  | 68        | 29.7  | 1589  | 28.5  | 1781  | 28.4  |
| TOTAL      | 229       | 100.0 | 231       | 100.0 | 220       | 100.0 | 5578  | 100.0 | 6267  | 100.0 |
| Volunteer: |           |       |           |       |           |       |       |       |       |       |
| Yes        | 177       | 78.0  | 173       | 75.5  | 176       | 77.9  | 4333  | 78.5  | 4859  | 78.4  |
| No         | 50        | 22.0  | 56        | 24.5  | 50        | 22.1  | 1185  | 21.5  | 1341  | 21.6  |
| TOTAL      | 227       | 100.0 | 229       | 100.0 | 226       | 100.0 | 5518  | 100.0 | 6200  | 100.0 |
| Treatment: |           |       |           |       |           |       |       |       |       |       |
| IPD        | 49        | 21.4  | 50        | 21.6  | 70        | 30.6  | 1506  | 27.0  | 1675  | 26.7  |
| ODF        | 146       | 63.8  | 138       | 59.7  | 128       | 55.9  | 3160  | 56.6  | 3572  | 57.0  |
| OPM        | 5         | 2.2   | 6         | 2.6   | 4         | 1.7   | 117   | 2.1   | 132   | 2.1   |
| RDF        | 14        | 6.1   | 25        | 10.8  | 16        | 7.0   | 526   | 9.4   | 581   | 9.3   |
| Other      | 15        | 6.6   | 12        | 5.2   | 11        | 4.8   | 272   | 4.9   | 310   | 4.9   |
| TOTAL      | 229       | 100.0 | 231       | 100.0 | 229       | 100.0 | 5581  | 100.0 | 6270  | 100.0 |

Sample #3 was arbitrarily chosen for a "principal axis" factor analysis of the client variables, with "quartimax" rotation of the (five) factors which were retained using the criteria of a minimum "eigenvalue" of 1.0. The resultant factor pattern is shown in Table 4.2.

Table 4.2

Rotated Factor Pattern of Random Sample #3  
(Decimal points omitted)

| <u>Variables</u>                              | <u>Rotated Factors</u> |     |     |     |     | <u>Commonality Estimate</u> |
|---|------------------------|-----|-----|-----|-----|-----------------------------|
|   | 1                      | 2   | 3   | 4   | 5   |                             |
| Heroin problem                                | 89                     | 03  | -01 | -11 | -06 | 81                          |
| Marijuana problem                             | -83                    | -12 | -10 | 01  | 11  | 72                          |
| Months since last treatment                   | -58                    | 07  | 00  | 00  | -28 | 41                          |
| Age in 1975                                   | 46                     | 48  | -18 | 02  | 14  | 49                          |
| Age first continuing use of PDA <sup>1/</sup> | 28                     | 93  | 03  | 00  | 24  | 1.00                        |
| Age first used PDA                            | 22                     | 92  | 01  | -04 | -28 | 97                          |
| In school                                     | -40                    | -26 | -04 | -05 | -03 | 22                          |
| White   | -04                    | -17 | 83  | 46  | -02 | 93                          |
| Chicano                                       | 25                     | 04  | -83 | 39  | 03  | 91                          |
| Educational level                             | -03                    | 07  | 37  | -14 | 04  | 16                          |
| Amphetamine problem                           | -13                    | 07  | 27  | 14  | -15 | 14                          |
| Black   | -23                    | 15  | -06 | -93 | -01 | 95                          |
| Cocaine problem                               | 04                     | -05 | 02  | -39 | -02 | 15                          |
| Years to first continuing use of PDA          | 16                     | 13  | 00  | 06  | 60  | 41                          |
| Number of prior treatments                    | 41                     | 00  | -03 | 05  | 35  | 29                          |
| Volunteer                                     | 42                     | 10  | -10 | 03  | -03 | 19                          |
| Frequency of use of PDA                       | 41                     | 02  | -13 | -02 | 04  | 19                          |
| Employment status                             | -26                    | 18  | 10  | -09 | 06  | 12                          |
| Alcohol problem                               | -16                    | -06 | -05 | -04 | 18  | 07                          |
| Barbiturate problem                           | -03                    | -06 | 16  | -02 | -03 | 03                          |
| Male  | 01                     | -06 | -21 | -08 | -05 | 06                          |

<sup>1/</sup> PDA = Primary Drug of Abuse



The first factor is clearly capturing the degree to which heroin use was (reported as) a problem. Drug use problems were scored by giving a value of 3 for the drug listed as the "primary" drug problem, a score of 2 for the drug listed as "secondary" (if any), and a score of 1 for the drug listed as the "tertiary" problem (if any were). If the drug was not listed as a problem, it was given a score of 0 (zero). The heroin and marijuana problem scores were very highly negatively related; a high score on one was associated with a low score on the other. For this reason, marijuana has a high negative loading on the first factor. In general, the first factor seems to be capturing heroin use as a problem; it is associated with more prior treatments and a shorter time since the last treatment, a higher frequency of use, a greater tendency to be in treatment without coercion from the criminal justice system or its agents, and being older. The heroin problem score was consequently chosen as one of the variables to be used in the construction of the client typologies.

The second factor is clearly capturing the age at which the clients began to use drugs; specifically, the age of first use of the primary drug of abuse, and the age of first continuing or regular use of the primary drug of abuse. It is also picking up the clients' current age, as does the first factor. Age of first use of the primary drug was chosen over the age of first continuing use as they are highly intercorrelated, and age of first use was less strongly correlated with another variable which was selected. Because of its moderate loading on two factors, and because the Drug Abuse Office was especially interested in sampling younger and older clients, current age was also selected as a variable for use in constructing the client types.

The third and fourth factors reflect the clients' racial-ethnic group.

Racial-ethnic group was therefore, selected for use in building the client typologies. The third factor might be thought of as reflecting "whiteness." Aside from race-ethnicity, the next two highest loadings on this factor are for educational level and the amphetamine problem score. The fourth factor might be thought of as capturing "blackness." Aside from race-ethnicity, its second highest loading is on the cocaine problem score.

The fifth factor has a moderately high loading on only one variable; years to first continuing use of the primary drug of abuse. The pattern for this factor is not very clear, perhaps because this variable is a function of two other variables--age of first use and age of first continuing use. But whatever the interrelationships might be, they are very weak. Years to first continuing use of the primary drug of abuse was nonetheless chosen for use in building the client typology which was finally chosen for the Study.

The five variables chosen for use in building the client typologies were the heroin problem score, age of first use of the primary drug of abuse, age in 1975, racial-ethnic group, and years to first continuing use of the primary drug of abuse.

## 2. Cluster analysis types

The first attempt to construct the client typology used a form of cluster analysis (computerized by Barr et al., 1976: 72-79). The goal was to achieve a relatively small number of client clusters. Separate analyses were conducted on Random Samples 1 and 2. Table 4.3 shows the results of these efforts. The values shown (other than the sample numbers and the number of cases in the clusters) are the means or proportions of the members of the clusters on the variables indicated. The clusters (or client types) from the two samples which seemed the most similar to each

are shown next to each other; those which seemed unique are shown separately.

Table 4.3

Client Types Built by Cluster Analysis on Two Random Samples,  
with Similar Types Between the Two Samples Grouped Together

| <u>Sample</u> | <u>Heroin Problem</u> | <u>Age First Used PDA</u> | <u>Proportion Chicano</u> | <u>Black</u> | <u>YTFCUPDA<sup>1/</sup></u> | <u>Age in 1975</u> | <u>No. of Cases</u> |
|---------------|-----------------------|---------------------------|---------------------------|--------------|------------------------------|--------------------|---------------------|
| 1             | 2.3                   | 19.4                      | 0.3                       | 0.2          | 1.1                          | 24.2               | 82                  |
| 2             | 1.8                   | 17.3                      | 0.2                       | 0.2          | 1.1                          | 22.3               | 67                  |
| 1             | 0.2                   | 14.5                      | 0.1                       | 0.2          | 0.6                          | 17.8               | 36                  |
| 2             | 0.1                   | 13.2                      | 0.2                       | 0.4          | 0.5                          | 16.8               | 26                  |
| 1             | 2.6                   | 18.5                      | 0.5                       | 0.2          | 0.7                          | 33.3               | 32                  |
| 2             | 2.5                   | 17.9                      | 0.4                       | 0.1          | 0.8                          | 29.8               | 37                  |
| 1             | 2.8                   | 26.3                      | 0.1                       | 0.3          | 0.7                          | 30.1               | 15                  |
| 2             | 2.6                   | 25.4                      | 0.3                       | 0.3          | 0.5                          | 30.3               | 48                  |
| 1             | 2.9                   | 17.3                      | 0.5                       | 0.2          | 0.8                          | 45.3               | 16                  |
| 2             | 2.6                   | 16.9                      | 0.6                       | 0.1          | 0.9                          | 39.4               | 15                  |
| 1             | 3.0                   | 15.6                      | 0.8                       | 0.0          | 9.8                          | 31.4               | 5                   |
| 1             | 1.7                   | 31.0                      | 0.1                       | 0.5          | 0.7                          | 36.5               | 12                  |
| 1             | 3.0                   | 20.0                      | 0.8                       | 0.0          | 19.4                         | 42.6               | 5                   |
| 2             | 3.0                   | 27.3                      | 0.0                       | 0.7          | 0.7                          | 59.0               | 3                   |
| 2             | 1.2                   | 37.7                      | 0.7                       | 0.2          | 0.0                          | 41.7               | 6                   |
| 2             | 3.0                   | 21.0                      | 0.2                       | 0.4          | 9.2                          | 37.4               | 5                   |

1/ Years from first use of the primary drug of abuse to first continuing use of the primary drug of abuse.

The first line of the table may be read as follows. Sample #1 yielded a cluster of clients which had a mean heroin problem score of 2.3, and they first used their primary drug of abuse at the average age of 19.4 years. Three-tenths were Chicano, two-tenths were black, and by implication, one-half were white or other. On the average, it was 1.1 years from their

first use of their primary drug of abuse to their first continuing or regular use of that drug. As of the end of the year in which they were admitted to treatment (i.e., in 1975), their average age was 24.2. There were 82 cases in this type. The second line would be read similarly. It shows the average characteristics of a cluster which emerged from Sample #2 which was seen as being similar to the cluster from Sample #1 which was just described. There follows four more pairs of clusters which seem similar to each other drawn from the two samples. Next shown are three client clusters all drawn from Sample #1 which are different from all other clusters from Sample #1, and from all clusters in Sample #2. The last three lines show the three unique clusters from Sample #2.

Inspection of the statistical properties of these types gave the impression that the technique was sensitive to the range of values which the defining variables might take. This led to the speculation that the types might be different if the variables were transformed in such a way as to have similar means and variances. An approximation to this condition was sought by standardizing the variables so that they each had a mean of 50 and a standard deviation of 10. Samples 1 and 2 were again cluster analyzed, using these standardized variables. The two samples then produced quite different sets of clusters. This approach was therefore abandoned on the basis that it failed to meet the test of stability.

### 3. O-Type analysis types

This approach was adopted from Tryon and Bailey's (1970) O-Type analysis. This approach may be conceived of in geometric terms. From this perspective, it begins by putting the objects to be typed into a geometric space. For instance, men and women heroin and non-heroin addicts might be put in the typical two-way table shown below:

|       |                |                    |
|-------|----------------|--------------------|
|       | Heroin Addicts | Non-Heroin Addicts |
| Men   | a              | b                  |
| Women | c              | d                  |

This would be a four-part typology. The letters in the cells are simply convenient labels for each combination of the two variables. This typology (for reasons which will be shortly given) would be called a trial typology. Such trial typologies can be expanded by adding more variables. For instance, four variables would produce a four-dimensional space; five would produce a five-dimensional space, and so forth. Unfortunately, it is virtually impossible to visualize more than a three-dimensional space.

Although it may be counter-intuitive to the reader, it so happens that variables such as age which have many values can be grouped into two or three categories without losing very much information. For instance, age might be grouped into under 18, 18 to 25, and over 25. Such grouping is necessary when objects are simultaneously classified on more than two variables having more than a few values. Three of the variables used for building the client typology have a large number of values; for example, age in 1975 and years to first continuing use of the primary drug of abuse. Simultaneous classification of the cases on these variables without grouping them would produce thousands of cells. This would in turn result in most cells having no cases in them, and the remaining cells having no more than a few. The procedure to be used would not work with such a distribution. And, as just indicated, it is not necessary.

The variables chosen for use in building the typology were therefore categorized as follows. Heroin was grouped so that those for whom it was listed as the primary drug of abuse were put into one category, and all

others were put into another. Age of first use was grouped into less than 16, 16 to 25, and over 25. Racial-ethnic group was grouped into black, Chicano, and white including other. Years to first continuing use of the primary drug of abuse was grouped into a year or less and more than a year. And age in 1975 was grouped into under 21, 21 to 35, and over 35.<sup>1/</sup> There are 108 possible combinations of these groupings. Random Samples #1 and #2 were simultaneously distributed on these combinations of the five variables to produce a five-dimensional space. One can now conceive a five-dimensional space of these categorized variables with the cases distributed within it. It is relatively easy to imagine "swarms" of cases in this space. This is what happened; most of the cases were found in but a relatively few of the possible combinations of the variable categories.

Now the problem may be seen as one of determining which of these swarms might be combined, and if the cases which might be thought of as being at the edges of these swarms might be better classified with some other swarm. After all, the cases were put in these cells on the basis of categories rather than on the basis of their precise values on the variables. It could be, for instance, that most of the people in the age category of 21 through 35 who were also heroin users were actually close to 21 and that they are not therefore much different from the heroin users in the age category of less than 21 who were also actually close to 21. This distribution of the clients into the combinations of the categorized variables is then called a trial typology in that it represents a starting place, with the clients to

<sup>1/</sup> The divisions for age in 1975 and age of first use were determined by trichotomizing at one standard deviation or more below their respective means, within one standard deviation of the mean, and one or more standard deviations above the mean.

be redistributed on the basis of their actual values on the classificatory variables. A form of discriminant-function analysis was used to achieve these re-classifications (Barr, et al., 1976: 184-189).

Discriminant-function analysis is a procedure for placing objects into pre-determined types on the basis of the object's characteristics in comparison to the average of the objects in the types on these same variables. For instance, people could be classified as to sex by comparing their height and weight to the average height and weight of men and women. The classification would not be perfect, but it would probably be better than by chance alone. After all, women do tend to be less tall and to weigh less than men.

The procedure used for this analysis began by putting the cases into the trial types. The cases were then given their original values on the variables used to construct the trial typology and these original values were used to construct averages and variances on every variable for each trial type. Each case was then compared to the five trial types with the most similar average values on the Study variables. The person was assigned to that type which was the most similar. Sometimes this type was different than the original trial type. When this occurred, the person was re-classified. This constituted the first iteration. The same procedure was again applied, this time to the new classification of the cases. Obviously this changed the averages and variances of the types. The second iteration produced another (smaller) set of re-classifications. The process was repeated until there were no more changes. Stability was achieved in nine iterations. The resultant typology is shown in Table 4.4.

Table 4.4

Characteristics of Client O-Types on Classificatory Variables,  
for Random Samples #1 and #2 Combined

| <u>Types</u>                 | <u>Heroin Problem</u> | <u>Age at First Use</u> | <u>Years to 1st con. Use PDA</u> | <u>Age in 1975</u> | <u>N</u> |
|------------------------------|-----------------------|-------------------------|----------------------------------|--------------------|----------|
| <u>Non-Heroin</u>            |                       |                         |                                  |                    |          |
| Younger at first use         |                       |                         |                                  |                    |          |
| White and other              | 0.0                   | 13.7                    | 0.6                              | 17.6               | 34       |
| Chicano                      | 0.0                   | 13.2                    | 0.5                              | 16.0               | 6        |
| Black (1)                    | 0.0                   | 12.3                    | 0.7                              | 14.2               | 7        |
| Black (2)                    | 0.0                   | 14.3                    | 0.2                              | 19.5               | 6        |
| Older at first use           |                       |                         |                                  |                    |          |
| White and other              | 0.0                   | 19.9                    | 0.3                              | 25.7               | 42       |
| Chicano                      | 0.0                   | 17.0                    | 0.6                              | 21.8               | 8        |
| Black (1)                    | 0.0                   | 16.6                    | 0.4                              | 18.6               | 5        |
| Black (2)                    | 0.0                   | 22.0                    | 0.4                              | 27.4               | 20       |
| <u>Heroin</u>                |                       |                         |                                  |                    |          |
| White and Other              |                       |                         |                                  |                    |          |
| Short time to continuing use | 2.8                   | 19.9                    | 0.1                              | 30.5               | 86       |
| Long time to continuing use  | 2.9                   | 19.4                    | 3.5                              | 26.9               | 53       |
| Chicano                      | 2.9                   | 20.5                    | 2.1                              | 31.8               | 106      |
| Black                        | 3.0                   | 21.8                    | 0.7                              | 30.4               | 58       |

As a test of the stability of the typal structure, the classification results of the analysis of Samples 1 and 2 were used to classify Sample 3. The nearest neighbor technique was then applied to Sample 3 to determine how many of the cases would change their membership. Only 5 percent changed. On the basis of this result and Tryon and Bailey's expert opinion that this form of typology construction produces very stable results, it was concluded that the resultant was sufficiently stable.

The three typologies then available were run against the treatment



outcome variable then available--reason for discharge. The 0-type typology was chosen as it had the strongest relationship with reason for discharge, and it left the fewest cases unclassified.

Once this typology was developed a way had to be found to classify the target population. Unfortunately, the computer program did not have the option to assign codes to the types; the type for each case had to be assigned manually. This was not impractical for the sample, and was a necessary part of the development of the typology. But it was impractical for classification of the target population. The solution chosen was to use a different form of discriminant function analysis (Barr, et al., 1976: 98-108). This technique was used on the final client types for the samples to develop a formula for classifying the cases. The formula reproduced the types quite well. The same formula was then applied to the target population to assign the types. In the process, there was some loss. One of the types (which the typology construction procedures had shown to be poorly defined) became merged with others. But all of the types which could be reproduced on the target population were quite similar to those in the samples, with the divergences being as statistically expected; that is, the final types tended to have mean values on the variables which were slightly closer to the overall averages.

#### 4. A description of the types

Although the method used to derive the typology was simultaneous, it is convenient to present the results sequentially. The first division may be taken as one between heroin users and others. Heroin was the primary drug problem for better than 90 percent of the heroin types, and it was the secondary problem for the remainder. For the non-heroin types, heroin was not given as a problem for better than 95 percent, and it was listed as

a tertiary problem by the remainder. In part, this clear demarcation is the result of the fact that heroin use is typically reported as being the primary problem or not listed at all. This may mean that when heroin is used it becomes the primary problem; if so, the typology captures this process quite well.

The non-heroin users may be next divided on current age, or age of first use of the primary drug of abuse. The average age for the younger group was 17.7 years; for the older group it was 26.6 years. Age of first use for the younger group averaged out to 13.9 years; and at 20.7 years for the older group.

The age divisions are strong, though not absolute. With respect to current age (as of 1975), less than one percent of the older types were under 19 and nearly 90 percent were over 21 years old. For the younger types, over 60 percent were under 19 years, and less than 10 percent were over 21 years old. The greatest overlap was in the 19 through 21 age group; about 30 percent of the younger types were in this range, compared to about 10 percent of the older types. The division on age of first use of the primary drug of abuse was somewhat less strong. Less than 5 percent of the younger types began use after age 16, and less than 5 percent of the older types began use under the age of 14. Nearly 60 percent of the younger types began use when they were in the 14 through 16 age group, but a substantial minority (over 15%) of the older types also began use in that age group.

Both the older and younger non-heroin users were next divided on race, using the categories of black, Chicano, and white plus others. Nearly two-thirds of the younger group were white (or other); for the older group, less than one-half were white (or other). A fourth of the younger group

were black, and one-tenth were Chicano. The proportion of blacks and Chicanos was about 10 percentage points higher among the older group (35.3% and 17.9% respectively). For both the younger and older groups, marijuana was most often the primary problem, but it ranked higher for the younger group. For the younger types, the average rank was 2.6 and among the older types it was 2.0 (on a scale ranging from 3 for the primary problem through one for the tertiary problem, and zero for when the drug was not listed as a problem). Table 4.5 describes the six non-heroin types in the Study target population, using the variables upon which the typology was constructed.

Table 4.5

Description of Non-Heroin Users

| <u>Types</u>                              | <u>Heroin Rank</u> | <u>Age First used PDA</u> | <u>Years to 1st Cont. use PDA</u> | <u>Age as of 1975</u> | <u>No. in Study Target</u> |
|---|--------------------|---------------------------|-----------------------------------|-----------------------|----------------------------|
| White and other, younger non-heroin users | 0.0                | 14.1                      | 0.8                               | 18.2                  | 496                        |
| Chicano, younger non-heroin users         | 0.0                | 13.8                      | 1.0                               | 18.1                  | 88                         |
| Black, younger non-heroin users           | 0.0                | 13.6                      | 0.4                               | 16.4                  | 211                        |
| White and other, older non-heroin users   | 0.0                | 21.1                      | 0.8                               | 27.0                  | 398                        |
| Chicano, older non-heroin users           | 0.0                | 20.9                      | 0.9                               | 26.8                  | 161                        |
| Black, older non-heroin users             | 0.0                | 20.0                      | 1.0                               | 26.0                  | 324                        |

The heroin users were also next divided on racial group into black, Chicano, and white plus other. This distribution differed clearly from non-heroin types. The proportion of Chicanos was much higher (at nearly

40%), and the proportion of blacks and whites and others decreased to about 20 and 40 percent respectively. Among the white and others, years to the first continuing use of the primary drug of abuse distinguished between two types. In one type, the average number of years was 0.4; in the other it was 4.6 years. Put differently, over 70 percent began regular use within the same year for the rapid onset type compared to less than one percent for the slow onset type. And over 90 percent of the rapid onset type began regular use with no more than two years of first use; among the slow onset type, over 80 percent did not begin regular until at least the second year after they first used heroin. No other type was distinguished on years to first continuing use of the primary drug of abuse. The heroin types are named and described in Table 4.6.

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Table 4.6  
Description of the Heroin Users

| <u>Name</u>                                      | <u>Heroin Rank</u> | <u>Age First used PDA</u> | <u>Years to 1st cont. use PDA</u> | <u>Age as of 1975</u> | <u>No. in Study Target</u> |
|--|--------------------|---------------------------|-----------------------------------|-----------------------|----------------------------|
| White and other, older heroin users, rapid onset | 3.0                | 20.2                      | 0.4                               | 28.4                  | 1105                       |
| White and other, older heroin users, slow onset  | 3.0                | 17.8                      | 4.6                               | 25.9                  | 440                        |
| Chicano, older heroin users                      | 3.0                | 19.7                      | 1.7                               | 31.4                  | 1415                       |
| Black, older heroin users                        | 3.0                | 22.4                      | 1.0                               | 31.1                  | 750                        |

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One type was deleted from the study at the stage of defining the study target population as less than one-half of one percent of the Study target population were so classified. The extreme rarity of this type meant that

it could not be used in the evaluation, and that the deletion would have virtually no effect upon any of the findings.

Table 4.7 shows some additional information for the 10 client types in the Study target population. The percentage of males varied by nearly 20 points, from a low of 63.4 to a high of 82.7. No clear pattern in these differences emerges. Rather, it appears that the proportion of men and women in each type varies with age, race, and primary drug used. As would be expected, the number of years of education (10.3 years, on the average) was somewhat lower for the younger (non-heroin) types. Among the older types, the non-heroin users of a given racial-ethnic group had slightly more education than the corresponding heroin user types. In other words, when racial-ethnic group is controlled, older non-heroin users are slightly more educated than are heroin users.

Table 4.7

## Additional Descriptors of Client Types

| <u>Client Types</u>                      | <u>% Male</u> | <u>Mean Years of Education</u> | <u>Percent Volunteers</u> | <u>Mean Number of Prior Treatments</u> | <u>Mean Number of Drug Problems</u> | <u>Mean Rank-Order of Problem</u> |                     |                     |
|--|---------------|--------------------------------|---------------------------|--|-------------------------------------|-----------------------------------|---------------------|---------------------|
|  |               |                                |                           |  |                                     | <u>Marijuana</u>                  | <u>Amphetamines</u> | <u>Barbiturates</u> |
| Younger, White+, non-heroin users        | 69.0          | 10.5                           | 52.0                      | 0.2                                    | 1.8                                 | 2.5                               | 0.4                 | 0.5                 |
| Younger, Chicano, non-heroin users       | 75.0          | 10.3                           | 65.5                      | 0.1                                    | 1.7                                 | 2.4                               | 0.2                 | 0.5                 |
| Younger, Black, non-heroin users         | 63.5          | 9.8                            | 72.9                      | 0.0                                    | 1.4                                 | 2.7                               | 0.2                 | 0.4                 |
| Older, White+, non-heroin users          | 68.6          | 12.4                           | 56.1                      | 0.3                                    | 1.7                                 | 1.8                               | 0.8                 | 0.5                 |
| Older, Chicano, non-heroin users         | 68.9          | 11.3                           | 66.0                      | 0.3                                    | 1.5                                 | 1.9                               | 0.5                 | 0.7                 |
| Older, Black, non-heroin users           | 76.9          | 11.9                           | 40.4                      | 0.2                                    | 1.6                                 | 2.2                               | 0.3                 | 0.7                 |
| Older, White+, heroin users, slow onset  | 63.4          | 11.5                           | 89.9                      | 1.7                                    | 1.8                                 | 0.2                               | 0.1                 | 0.5                 |
| Older, White+, heroin users, rapid onset | 63.4          | 11.6                           | 88.0                      | 1.5                                    | 1.8                                 | 0.2                               | 0.1                 | 0.5                 |
| Older, Chicano, heroin users             | 82.7          | 10.5                           | 90.0                      | 1.6                                    | 1.3                                 | 0.1                               | 0.0                 | 0.1                 |
| Older, Black, heroin users               | 70.8          | 11.5                           | 77.3                      | 0.9                                    | 1.8                                 | 0.4                               | 0.1                 | 0.3                 |
| TOTALS                                   | 71.6          | 11.2                           | 77.2                      | 1.1                                    | 1.6                                 | 0.8                               | 0.2                 | 0.4                 |

Admission to treatment as reported in the DAO information system was classified as voluntary if the reporting agency did not indicate that any criminal justice agency or allied professional referred the person to the program for treatment; for the CODAP system, the admission was classified as voluntary if the person's legal status was so denoted. This variable varied by 50 percent from a low of 40.4 to a high of 90.0. The older heroin users were more likely to be volunteers (87.2%) than the older non-heroin users (52.1%) and the younger non-heroin users (59.0%). Among the non-heroin users, racial-ethnic group was of more importance than age. Nearly one-half of the white-and-other non-heroin users were not volunteers-- 48.0 percent of those who were younger and 43.9 percent of those who were older. Nearly two-thirds of the younger and older Chicano non-heroin users were volunteers. Blacks showed the greatest deviations from these patterns. Among the younger non-heroin users, blacks were most likely to be volunteers (72.9%), but among the older non-heroin users, they were the least likely by far (40.4%). Among the older heroin users, they were also less likely to be volunteers, but to a lesser degree (77.3%, as compared to 89.7% for the others).

The mean number of prior drug treatments was far lower for the non-heroin users (ranging from 0.0 to 0.3) than for heroin users (ranging from 0.9 to 1.7). Among the non-heroin users, the mean number of prior treatments was slightly lower for the younger types (0.1) than for the older types (0.3). Blacks tended to have fewer prior treatments. For younger non-heroin users, blacks had 0.0 prior treatments on the average, compared to 0.2 for the others. Among the older non-heroin users, the means were 0.2 for blacks and 0.3 for the others. And for the older heroin users, the mean was 0.9 for blacks compared to 1.6 for the others.

The mean number of drug problems listed at admission varied slightly among the 10 types, ranging only from 1.3 to 1.8. But the kinds of drugs used varied markedly, as would be expected. The primary drug problem was given a value of three; the secondary problem was given a value of two; the tertiary problem was given a value of one, and a value of zero (0) was given when the drug was not listed as a problem. Marijuana ranked as the primary or secondary problem on the average (2.5) for the younger non-heroin users, and as the secondary problem for the older non-heroin users (2.0). For the heroin users, marijuana was seldom listed as a major problem; the mean rank was 0.2. Although seldom listed as a problem, amphetamine use was a greater problem for the older non-heroin users (0.6) than for the younger non-heroin users (0.1). Barbiturate use as a problem did not vary much among the types, except for a somewhat lower mean rank among Chicano and black heroin users.

There is no consistent pattern of differences among the types on these additional descriptive variables. This is as was expected. The basic idea behind the use and construction of the typology was that the effects of the key variables would be different depending upon their particular combination and that the effects would be different depending on which other variable was being examined. And it was expected that some variables would not be related to the typology. Thus, the above findings are consistent with expectations and they confirm the correctness of the decision to use a client typology. Our only regret is that the typology was not a more powerful discriminator on other variables.

One treatment outcome measure was available--kind of discharge. Excluding those in OPM who were not discharged by the cut-off date, kind of discharge was clearly related to the client typology--especially with regard



to the categories "treatment completed" and "split." The range for treatment completed (Table 4.8) was from 14.0 percent for older black heroin users to 46.0 percent for older Chicano non-heroin users. In general, older heroin users were less likely to be discharged as having completed treatment (23.9%) and the older non-heroin users were most likely to be so discharged (41.7%). Evidently, heroin use was the key variable as the younger non-heroin users also had a relatively high rate of treatment completed (36.8%). Among the younger non-heroin users, the older non-heroin users, and the older heroin users, blacks had the lowest discharge rates for treatment completed. But, given the moderate to strong tendency for programs to draw their clients from one racial-ethnic group (due at least to some extent to the concentration of different racial-ethnic groups in different parts of the County), this tendency may be the result of differences in how discharges are recorded by different programs.

Table 4.8

Kind of Discharge by Client Type for Study Target Population<sup>1/</sup>

| Client Type                                 | Completed |      | Transferred |      | Died |     | Incarcerated |     | Kicked Out |      | Split |      | Total |       |
|---|-----------|------|-------------|------|------|-----|--------------|-----|------------|------|-------|------|-------|-------|
|   | No.       | %    | No.         | %    | No.  | %   | No.          | %   | No.        | %    | No.   | %    | No.   | %     |
| Younger, White+,<br>heroin users            | 206       | 41.5 | 67          | 13.5 | 1    | 0.2 | 5            | 1.0 | 42         | 8.5  | 175   | 35.3 | 496   | 100.0 |
| Younger, Chicano, non-<br>heroin users      | 33        | 37.5 | 6           | 6.8  | 0    | 0.0 | 1            | 1.1 | 10         | 11.4 | 38    | 43.2 | 88    | 100.0 |
| Younger, Black, non-<br>heroin users        | 54        | 25.6 | 13          | 6.2  | 0    | 0.0 | 1            | 0.5 | 16         | 7.6  | 127   | 60.2 | 211   | 100.0 |
| Older, White+, non-<br>heroin users         | 175       | 44.0 | 52          | 13.1 | 1    | 0.2 | 5            | 1.3 | 24         | 6.0  | 141   | 35.4 | 398   | 100.0 |
| Older, Chicano, non-<br>heroin users        | 74        | 46.0 | 15          | 9.3  | 1    | 0.6 | 8            | 5.0 | 15         | 9.3  | 48    | 29.8 | 161   | 100.0 |
| Older, Black, non-<br>heroin users          | 119       | 36.7 | 50          | 15.4 | 1    | 0.3 | 2            | 0.6 | 26         | 8.0  | 126   | 38.9 | 324   | 100.0 |
| Older, White+, heroin<br>users, slow onset  | 229       | 21.9 | 137         | 13.1 | 4    | 0.4 | 33           | 3.2 | 141        | 13.5 | 500   | 47.9 | 1044  | 100.0 |
| Older, White+, heroin<br>users, rapid onset | 89        | 21.2 | 48          | 11.4 | 1    | 0.2 | 13           | 3.1 | 60         | 14.3 | 209   | 49.8 | 420   | 100.0 |
| Older, Chicano,<br>heroin users             | 426       | 31.8 | 119         | 8.9  | 3    | 0.2 | 73           | 5.5 | 145        | 10.8 | 573   | 42.8 | 1339  | 100.0 |
| Older, Black,<br>heroin users               | 103       | 14.0 | 216         | 29.3 | 2    | 0.3 | 37           | 5.0 | 60         | 8.2  | 318   | 43.2 | 736   | 100.0 |
| TOTALS                                      | 1508      | 28.9 | 723         | 13.9 | 14   | 0.3 | 178          | 3.4 | 539        | 10.3 | 2255  | 43.2 | 5217  | 100.0 |

<sup>1/</sup> Excludes OPM cases not discharged by cut-off date.

Thirty percent of the older Chicano non-heroin users split compared to 60 percent of the younger black non-heroin users. The older heroin users were more likely to split (45.2%) than the older non-heroin users (35.7%). The split rate among the younger non-heroin users ranged from 35.3 percent for white and other through 43.2 percent for Chicanos to 60.2 percent for blacks.

Some of these differences are no doubt due to the fact that the heroin types were involved in different kinds of treatment while the non-heroin users were limited to ODF only. Separate tabulations not shown here also indicate that kind of discharge is dependent upon the particular agency. To take some extreme examples, Metropolitan State Hospital classifies virtually all of its discharges as referred to another agency. The thinking behind this practice is that Metro receives all of its cases on referral from other agencies and does no follow-up or community-based treatment; it thus refers its cases back to the referral agency for final disposition. The City of Compton program for reasons which are unknown did not classify any of its 74 discharges in the Study target population as having split. El Proyecto del Barrio classified nearly 20 percent of its 103 discharges as having been incarcerated, compared to less than 5 percent for all discharges in the Study target population, probably reflecting better knowledge of what happens to their clients. The Rio Hondo Area Action Council program would seem to be rather strict in its operations, kicking out nearly 90 percent of its 21 cases, while the House of Uhuru seldom kicked out anyone (21.2%)--letting them instead split (81.2%). Clearly, kind of discharge reflects the agency's reporting styles to a substantial degree. The relationship of the client typology to kind of discharge may be a reflection of differences in the programs which the clients entered, at least to some degree.

In one sense this typology is disappointing. Essentially, it boils down to dividing people in drug treatment programs up on the basis of whether or not they were heroin users, their age now or when they first started using drugs, and their racial-ethnic group. And among the white and other heroin users, it pays attention to how fast they became addicted. Anyone who knew anything about drug treatment programs would make divisions of this kind. On the other hand, the typology is not simply a cross-classification of the population on these variables, and it avoids the problem of having but a few people in some of the logically possible combinations of these variables. This was done without throwing out many cases. In addition, the cutting points on the measured variables would seem to have been determined more by the actual distribution of the cases and the associations among the variables than by arbitrary decisions. And its rather pedestrian character may be more of a tribute to the "ability" of the statistical techniques used in its construction to render a natural ordering of the phenomena than it is a failure to produce a fancy picture. And, as will be shown shortly, it is strongly related to the most critical variable of the Study--kind of treatment. The client types differ markedly with respect to the kinds of treatment in which they become involved. It was the necessity of controlling for just this process which motivated the construction of the typology.

## 5. SAMPLE SELECTION AND EXCLUSIONS

The basic study design called for comparisons on the various criteria of different kinds of treatment on similar types of clients. At the time the sample was drawn, the intent was to also compare kinds of treatment for each type of client. The sampling goal then was to achieve equal size samples for each combination of client type and treatment modality. The actual steps taken to draw the sample were influenced by a number of other factors, however; many had little to do with the basic research design.

### A. Time and Data Limits

A number of conditions led to the selection of three special samples in order to initiate client contact efforts as close as possible to the scheduled starting date. This decision substantially affected the sampling design; its bases and consequences will therefore be presented.

Approximately one-half of the admissions-departures included in the Study were reported to the National Institute on Drug Abuse (via the California Department of Health) on the Client Oriented Data Acquisition Process (CODAP) forms. Substantial delay was experienced in receiving the necessary computer tape files from the California Department of Health. Fortunately--as a result of close monitoring by the Division of Substance Abuse of the Department of Health and a firm policy of full reporting--the information in the records was very complete.

The CODAP files were approached in two ways. Discharge records for the programs in Los Angeles County, as identified by the Division of Substance Abuse, were first screened to remove those which did not meet the criteria for inclusion in the target population. The remaining records were then put in chronological order of the date of admission for that discharge

(which is reported on the CODAP discharge forms). The discharge record for a given client in a given program with the earliest admission date within the Study period was chosen. These discharges were then matched with admission records for the Study period on program client identifier and date of admission. The absence of a match was checked by the appropriate program. There was an appreciable number of unmatched discharge records. There were two primary reasons. One was a lack of exact agreement on day of admission; the date match was therefore limited to year and month. The other major reason for non-matches was the non-standard practice by one program of using a different last character of the client identifier on admission and discharge records. This was resolved by dropping this character for this program.

A substantial number of non-matched records remained for some programs. Intensive inspection of the records failed to provide a clue as to the cause(s). These programs and the numbers of cases are shown in Table 5.1. A small proportion of the remaining non-matches were due to inconsistencies or errors in coding. Due to severe time limitations, the resulting non-matches were allowed to stand; i.e., the cases for which a matching discharge was not found were deleted (except for methadone maintenance).

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Table 5.1  
Agencies Reporting on CODAP with a  
High Proportion of Unmatched Records

| <u>Agency</u>                 | <u>No. of Discharges</u> | <u>No. with No Match</u> | <u>Pct. not Matched</u> |
|-------------------------------|--------------------------|--------------------------|-------------------------|
| Concentrated Employment Ctr.  | 34                       | 17                       | 50.0                    |
| Family Services of Long Beach | 21                       | 6                        | 28.6                    |
| L. A. Psychiatric Services    | 54                       | 28                       | 51.9                    |
| Neighborhood Youth Assoc.     | 33                       | 8                        | 24.2                    |
| TUUM EST                      | 36                       | 17                       | 47.2                    |

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By design, the discharge criterion was not applied to admissions to outpatient methadone maintenance. The CODAP reported study-period admissions for this program were therefore selected by taking the chronologically first for a given client in a given program. A search was made, however, for matching discharge record (by the Study cut-off date of December 31, 1975).

The DAO computerized information system presented a different, far more serious set of problems. One problem was in matching admission and discharge records. The DAO discharge record did not show the corresponding admission date, and the record used to report discharges was actually a multi-purpose form. During the early part of the Study period, it was also used to make monthly status reports. Throughout the Study period the form was sometimes used to report re-admissions within a given program. These practices produced problems for the project as the DAO did not produce the file of matched admissions and discharges which had been expected. Once it became clear that the file would not be provided in time, solutions to these problems had to be devised and implemented.

The DAO did provide a copy of all its computerized records of admissions and discharges for every person admitted to any program reporting to DAO during the Study period. These records were placed in chronological order of the date of admission/departure for each client ID within each program. "Discharge" forms used for re-admission or status reports were excluded. The first 1975 discharge record subsequent to an admission record falling within the Study period was linked to the admission record, and the resultant file became the initial DAO target population. As a result of the procedure which had to be used, it is impossible to determine how many erroneous non-matches (or matches) there were.

By DAO approved policy, Metropolitan State Hospital completed only a

few of the items on the admission record; specifically, it did not report most of the client characteristics data. The initial plan was to obtain the characteristics data from the admission for the referral program, as Metropolitan State Hospital accepts clients only on referral (from other programs). However, it was discovered that one of the referral programs reported a substantial proportion of these admissions to CODAP using a different client identifier than that used to report to DAO which could not be linked to the Metro admission. And the other referral program reported only to CODAP, also using a different identifier.

It was then decided to pick up admissions to Metro from the referral programs, thereby by-passing the need to obtain the client characteristics data for the Metro admissions. However, the DAO objected to one aspect of this solution. The Metropolitan State Hospital provided two kinds of treatment; in-patient detoxification and the "Family" program. The "Family" program was entered after in-patient detoxification; it consisted of residential treatment featuring intensive psychological confrontation for a scheduled period of at least several months. The DAO was concerned that the planned procedure of picking up admissions to Metro from admissions to the referral agencies for in-patient detoxification would produce too few admissions to the "Family" program as it was relatively small. Involvement in the "Family" program was not specifically recorded in the computer records. A number of items which might have indicated involvement in the program were investigated. One of these was whether or not the person had received "Accelerated Character Restructuring." This item seemed to provide the most valid indicant of exposure to the "Family" program.

Only admissions/discharges for the Metro "Family" program were included in the Study target population. Admissions/discharges from the in-patient



detoxification program were included in the total target population, but not in the Study target population as the information needed to classify the cases in the client typology was not available. And, these cases were to be obtained from the referral agencies.

At the time the samples were drawn, one of the referral agencies (the City of Long Beach Drug Clinic) informed the project that the cases they admitted for referral to Metropolitan State Hospital were reported on CODAP forms, with an indication that the client was being so referred. Toward the end of the project when an attempt was made to gather the client characteristics data for the Metro "Family" program cases referred from the City of Long Beach Drug Clinic, it was discovered that the Clinic had not implemented the practice mentioned above until a later date. Thus, the sampled cases from the City of Long Beach Drug Clinic did not contain cases to be referred to the Metro in-patient detoxification program. But the sample did contain the total number of admissions to in-patient detoxification called for by the Study design. This happened because the Drug Clinic did not report any admissions for in-patient detoxification, with the result being that all such admissions were selected from other agencies. (The reader may note an inconsistency in this paragraph. It is the result of an even more intricate situation than is being presented. Clarification of the inconsistency would require more explanation than it is worth. What is said is sufficient for a general overview of the sampling procedures.)

The other exception to the basic procedure for building the target population from the DAO record system was mandated by the fact that its own outpatient methadone maintenance program did not report to the DAO information system, and its own reporting system was not automated. Various manually maintained logs and lists were utilized to build a target population for this

program. Again, client characteristics data were not available at the time.

The codes used in the DAO admission form to record kind of treatment were not sufficient in themselves to identify treatment modality as used for this Study; it was therefore necessary to use the available data and independently obtained information about the programs to construct a treatment-modality variable. The codes used in the CODAP and DAO information systems also had to be made compatible. Efforts were also made to identify other patterns of missing or incorrect data in the DAO system in order to fix them where possible, or design means to alleviate their consequences. And determinations had to be made as to which programs had closed and/or merged since the Study period in order to route the cases to the appropriate agency for client contact efforts, or drop them if the agency had closed without merging with a currently operating program.

There was one other major situation which caused substantial delay in getting the target population together. The DAO requested that the target population be defined in terms of treatment episodes so that people admitted to more than one agency as a part of a continuous program of treatment would be so identified and the sample drawn on the basis of (common) kinds of episodes. Multiple admissions separated by less than two weeks or an admission within two weeks of a discharge were to be considered as part of a continuous program of treatment. This plan was premised on the understanding that the admissions/departures reported to CODAP used the same unique client identifier as was used for the DAO system. With this identifier, it was possible for DAO to trace clients from one program to another, within its information system. When the CODAP file was finally received, it turned out that only about one-fourth of the admissions were reported with this identifier. The others were reported using program-specific identifiers which

could not be linked across programs or with the DAO records. The plan was therefore dropped, after considerable loss of time and wasted effort.

## B. Special Samples

All of these problems, and others, caused substantial delay in getting the target population together in sufficient time to draw the sample on schedule. In order to begin the client contact and interview procedures as close as possible to the scheduled date, three special samples were drawn. The choices were largely determined by the problems just presented.

### 1. County outpatient methadone maintenance program

There were 123 admissions to the County outpatient methadone maintenance program during the Study period. Because it was anticipated that the client characteristics for these admissions could not be obtained in time to draw the sample, a decision was made to sample them independently of client type. For the want of any other rationale, and because the total number of admissions to outpatient maintenance was small, a decision was made to sample them all.

### 2. "Family" type residential drug-free programs

A similar situation existed for the Metropolitan State Hospital "Family" program. All 76 of these cases were also selected.

A general principle of research and evaluation design is that the assessment of a treatment factor should not be limited to but one case of that kind of treatment, as the one case may be atypical. The County outpatient maintenance program actually consisted of seven relatively independent clinics thereby providing a number of cases of this kind of treatment. In order to meet this standard for the "Family" program, it was necessary to find another case of this kind of treatment. The Free Men

agency also provided a "Family" program of about the same size as the Metropolitan State Hospital's. The 72 cases from Free Men were therefore chosen; again, independently of the yet to be developed client typology.

3. "Narcotics Anonymous" residential drug-free programs

Given the scheduling problems at the time, it was decided that the size of the special samples should be increased in order to provide enough cases for the interviewers to keep busy. A unique kind of treatment offered by but a few programs to a relatively small number of cases was again sought. It was decided that the "Narcotics Anonymous" residential programs offered by Cri-Help and Principles were relatively well structured and small enough (110 in total) to merit a special sample. Again, they were all chosen (independently of the yet to be developed client typology).

The three special samples produced a total of 381 cases. With the scheduling problem temporarily alleviated, attention was turned to developing the client typology to be used in drawing the basic study sample. The development and typology were discussed in the prior chapter.

C. Selection of the Basic Sample

Once the target population was created and the client typology was developed and applied to it, a distribution of client types by treatment modality was made. Table 5.2 shows this distribution. At the time the basic sample was drawn it was thought that nearly 40 percent of the sample would be unlocatable, refuse to be interviewed, be the same person admitted to more than one agency, and so forth. And it was thought that about 50 cases in any one combination of client type and treatment modality would be sufficient for comparative purposes. On these bases, it was determined that there would have to be at least 80 cases in a given combination for it

to be included in the basic sample. As can be seen from Table 5.2 this condition could be met for only certain combinations.

Table 5.2  
Client Type by Kind of Treatment for Total Population

| <u>Client Type</u>                   | <u>Kind of Treatment</u> |            |            |            |            | <u>Total<sup>1/</sup></u> |
|--------------------------------------|--------------------------|------------|------------|------------|------------|---------------------------|
|                                      | <u>IPD</u>               | <u>ODF</u> | <u>OPM</u> | <u>RDF</u> | <u>OTH</u> |                           |
| Unclassified                         | 415                      | 265        | 2          | 23         | 24         |                           |
| Younger, non-heroin,<br>White+       | 6                        | 496        | 2          | 28         | 9          | 541                       |
|                                      | 1.11                     | 91.68      | 0.37       | 5.18       | 1.66       |                           |
| Younger, non-heroin,<br>Chicano      | 2                        | 88         | 0          | 3          | 0          | 93                        |
|                                      | 2.15                     | 94.62      | 0.00       | 3.23       | 0.00       |                           |
| Younger, non-heroin,<br>Black        | 0                        | 211        | 0          | 6          | 2          | 219                       |
|                                      | 0.00                     | 96.35      | 0.00       | 2.74       | 0.91       |                           |
| Older, non-heroin,<br>White+         | 18                       | 398        | 1          | 31         | 8          | 456                       |
|                                      | 3.95                     | 87.28      | 0.22       | 6.80       | 1.75       |                           |
| Older, non-heroin,<br>Chicano        | 10                       | 161        | 2          | 1          | 0          | 174                       |
|                                      | 5.75                     | 92.53      | 1.15       | 0.57       | 0.00       |                           |
| Type Deleted<br>as to Rare           | 0                        | 17         | 0          | 0          | 0          | 17                        |
|                                      | 0.00                     | 100.00     | 0.00       | 0.00       | 0.00       |                           |
| Older, non-heroin,<br>Black          | 3                        | 324        | 0          | 16         | 1          | 344                       |
|                                      | 0.87                     | 94.19      | 0.00       | 4.65       | 0.29       |                           |
| Older, heroin, White+<br>Rapid Onset | 367                      | 516        | 86         | 136        | 68         | 1173                      |
|                                      | 31.29                    | 43.99      | 7.33       | 11.59      | 5.80       |                           |
| Older, heroin, White+,<br>Slow Onset | 158                      | 184        | 27         | 71         | 24         | 464                       |
|                                      | 34.05                    | 39.66      | 5.82       | 15.30      | 5.17       |                           |
| Older, heroin,<br>Chicano            | 586                      | 587        | 111        | 131        | 61         | 1476                      |
|                                      | 39.70                    | 39.77      | 7.52       | 8.88       | 4.13       |                           |
| Older, heroin,<br>Black              | 110                      | 468        | 24         | 148        | 118        | 868                       |
|                                      | 12.67                    | 53.92      | 2.76       | 17.05      | 13.59      |                           |
| <u>TOTALS<sup>1/</sup></u>           | 1260                     | 3450       | 253        | 571        | 291        | 5825                      |

<sup>1/</sup> Excluding unclassified cases (N=729). Total with unclassified cases is 6554.

The six client types for which heroin was not the major problem were seldom admitted to any modality other than outpatient drug-free; the largest number was 31, "older, white and other, non-heroin" types admitted to residential drug-free treatment. The four types of client for which heroin was the major problem were admitted to outpatient drug-free and other kinds of treatment in sufficient numbers to allow a sample of at least 80 cases for almost every combination. The other kinds of treatment were in-patient detoxification, outpatient maintenance and residential drug-free.

At the time the basic sample was drawn (i.e., before the information needed to type all of the clients in the special samples was available), it seemed potentially possible that there would be enough clients in the special samples to make the combined samples have at least 80 clients in virtually every combination of these four modalities and client types. A decision was therefore made to sample from every combination of the four heroin client types and the four kinds of treatment mentioned in the prior paragraph. A sample of no more than 80 cases from each of these combinations, plus 80 each from the six non-heroin client types in outpatient drug-free treatment and the special samples would produce a total sample of over 1800 cases. A successful completion rate of approximately two-thirds would produce about 1200 interviews (as called for in the contract). For these reasons, a decision was made to draw the basic sample from the non-heroin types in outpatient drug-free treatment and the heroin types in in-patient detoxification, outpatient drug-free, outpatient maintenance, and residential drug-free treatment. This is the Study target population as seen in Table 5.3.

Table 5.3

Client Type by Kind of Treatment for Study Target Population

| <u>Client Type</u>                    | <u>Kind of Treatment</u> |               |             |              | <u>Total</u> |
|---------------------------------------|--------------------------|---------------|-------------|--------------|--------------|
|                                       | <u>IPD</u>               | <u>ODF</u>    | <u>OPM</u>  | <u>RDF</u>   |              |
| Younger, non-heroin,<br>White+        | 0<br>0.00                | 496<br>100.00 | 0<br>0.00   | 0<br>0.00    | 496          |
| Younger, non-heroin,<br>Chicano       | 0<br>0.00                | 88<br>100.00  | 0<br>0.00   | 0<br>0.00    | 88           |
| Younger, non-heroin,<br>Black         | 0<br>0.00                | 211<br>100.00 | 0<br>0.00   | 0<br>0.00    | 211          |
| Older, non-heroin,<br>White+          | 0<br>0.00                | 398<br>100.00 | 0<br>0.00   | 0<br>0.00    | 398          |
| Older, non-heroin,<br>Chicano         | 0<br>0.00                | 161<br>100.00 | 0<br>0.00   | 0<br>0.00    | 161          |
| Older, non-heroin,<br>Black           | 0<br>0.00                | 324<br>100.00 | 0<br>0.00   | 0<br>0.00    | 324          |
| Older, heroin, White+,<br>Rapid onset | 367<br>33.21             | 516<br>46.70  | 86<br>7.78  | 136<br>12.31 | 1105         |
| Older, heroin, White+,<br>Slow onset  | 158<br>35.91             | 184<br>41.82  | 27<br>6.14  | 71<br>16.14  | 440          |
| Older, heroin,<br>Chicano             | 586<br>41.41             | 587<br>41.48  | 111<br>7.84 | 131<br>9.26  | 1415         |
| Older, heroin,<br>Black               | 110<br>14.67             | 468<br>62.40  | 24<br>3.20  | 148<br>19.73 | 750          |
| TOTALS                                | 1221                     | 3433          | 248         | 486          | 5388         |

D. Maximum Program Representation

Selection of the basic sample was also based on program. As was just stated, the six non-heroin client types were almost all admitted to outpatient drug-free treatment, making comparisons across kinds of treatment for these types of clients impossible. A decision was therefore made to classify the outpatient drug-free programs in various ways at the point of analysis (i.e., after the sample was drawn, using information then yet to be collected). The non-heroin type clients would then be compared across different kinds of

outpatient drug-free programs. Such comparisons would be impossible if all the clients came from but one program, or if all (or virtually all) came from but a few programs which were not much different from each other. Because this classification of programs was to be developed as the project went on, a decision was made to optimize the potential number of comparisons by maximizing the number of outpatient drug-free programs from which the non-heroin types were selected. The optimum number of comparisons would be made possible by an even distribution of any one client type over as many different programs as possible.

A few of the programs accounted for a majority of the cases in the target population. Random selection would have resulted in a majority of the client types being selected from these large programs. The following procedure was developed and implemented in order to overcome this condition. In order to keep the sampling design as consistent as possible, the procedure was used for all combinations of client type and treatment modality.

The cases of a given type of client in a given kind of treatment in a given program were put in a random sequence. The "first" case in the random sequence was given a value of one (1); the "second," if there was one, was given a value of two (2), and so forth, for as many cases as there were of that client type in that kind of treatment for that program. The cases were then arranged by this count and then randomly within each count. Thus, the designation of a client as the "first" was random and the order of the "first" (and "second" and so forth) clients was random. The basic sample was then drawn by pulling the "first" clients within a given combination of client type and kind of treatment, and then the "second," and so forth until there were no more than 80 such cases. In addition to maximizing program representation, the procedure tended to select fewer cases



from the larger programs. This was desired for the client contact procedures as it was thought that a large number of cases for any program, no matter how large the program, would result in less intensive location efforts by the program. But, this was a side benefit rather than a reason.

The net result of these various sampling procedures was a combined, total sample of 1862 cases. As was the case for virtually every aspect of the project, the sampling procedure was again re-opened; this time for a problem discovered in the process of reviewing the basic sample. One of the programs which reported to DAO had only three cases in the target population; two of which could be typed and were included in the sample. The DAO Director thought that this was too small for a program of its size. She also indicated that this could well be the result of the program's slowness in reporting admissions and discharges, and its tendency to keep cases open. A manual search of paper records and checking with the County billing office revealed that the small number of cases in the target population was indeed due to these conditions. The checking produced 23 more cases for the Glendale Guidance Clinic. Because the basic sample had already been drawn by the time these cases were identified, and for the lack of any compelling alternative rationale, they were all included. This increased the sample size to 1885. Because it was an outpatient drug-free program, the total sample of outpatient drug-free cases exceeds the number determined by the sampling design. The other special samplings also caused the total sample to deviate from the designed distribution.

#### E. Composition of the Sample

The composition of the sample may be presented in three parts. The first part (Table 5.4) shows the distribution of the special samples (after

elimination of the cases which were later excluded as being non-heroin types in those treatments other than outpatient drug-free).

Table 5.4

Distribution of Special Samples by Client Type and Kind of Treatment

| <u>Client Types</u>                               | <u>County Operated outpatient maintenance program</u> | <u>"Family" model residential drug-free</u> | <u>"Narcotics Anonymous" residential drug-free program</u> |
|---|---|---|--|
| White and other, older, heroin users, rapid onset | 41  | 37  | 38   |
| White and other, older, heroin users, slow onset  | 14  | 22  | 24   |
| Chicano, older, heroin users                      | 59  | 43  | 18   |
| Black, older, heroin users                        | 9   | 16  | 4  |
| TOTAL   | 123   | 118   | 84   |

The following two tables (Tables 5.5 and 5.6) show the basic sample, and the total sample (which consists of the basic and special samples combined, with the appropriate exclusions just noted). In the basic sample table, the outpatient drug-free cells with more than 80 cases are the result of the addition of the Glendale Guidance Clinic cases after the basic sample was drawn. The cells with more than 80 cases in the total sample table resulted from the special samples. The total sample table also shows that the goal of achieving 80 (or more) cases in the 22 combinations of client type and kind of treatment included in the Study was achieved for all but three of the cells.

Table 5.5  
 Distribution of Basic Sample  
 by Client Type and Kind of Treatment

| <u>Client Types</u>                   | <u>Kind of Treatment</u> |                         |             |             | <u>TOTAL</u> |
|---------------------------------------|--------------------------|-------------------------|-------------|-------------|--------------|
|                                       | <u>IPD</u>               | <u>ODF<sup>1/</sup></u> | <u>OPM</u>  | <u>RDF</u>  |              |
| Younger, non-heroin<br>White+         | 0<br>0.00                | 87<br>100.00            | 0<br>0.00   | 0<br>0.00   | 87           |
| Younger, non-heroin,<br>Chicano       | 0<br>0.00                | 81<br>100.00            | 0<br>0.00   | 0<br>0.00   | 81           |
| Younger, non-heroin,<br>Black         | 0<br>0.00                | 80<br>100.00            | 0<br>0.00   | 0<br>0.00   | 80           |
| Older, non-heroin,<br>White+          | 0<br>0.00                | 89<br>100.00            | 0<br>0.00   | 0<br>0.00   | 89           |
| Older, non-heroin,<br>Chicano         | 0<br>0.00                | 82<br>100.00            | 0<br>0.00   | 0<br>0.00   | 82           |
| Older, non-heroin,<br>Black           | 0<br>0.00                | 80<br>100.00            | 0<br>0.00   | 0<br>0.00   | 80           |
| Older, heroin, White+,<br>Rapid onset | 80<br>29.74              | 83<br>30.86             | 45<br>16.73 | 61<br>22.68 | 269          |
| Older, heroin, White+,<br>Slow onset  | 80<br>40.40              | 80<br>40.40             | 13<br>6.57  | 25<br>12.63 | 198          |
| Older, heroin,<br>Chicano             | 80<br>28.27              | 81<br>28.62             | 52<br>18.37 | 70<br>24.73 | 283          |
| Older, heroin,<br>Black               | 80<br>31.37              | 80<br>31.37             | 15<br>5.88  | 80<br>31.37 | 255          |
| TOTALS                                | 320                      | 823                     | 125         | 236         | 1504         |

<sup>1/</sup> The added Glendale Guidance Clinic (ODF) cases were added to the "Basic Sample" rather than creating yet another special sample category. It is for this reason that some of the client types in ODF have more than 80 cases.

Table 5.6

Distribution of Total Sample by Client Type and Kind of Treatment

| <u>Client Types</u>                | <u>Kind of Treatment</u> |              |              |              | <u>TOTAL</u> |
|------------------------------------|--------------------------|--------------|--------------|--------------|--------------|
|                                    | <u>IPD</u>               | <u>ODF</u>   | <u>OPM</u>   | <u>RDF</u>   |              |
| Younger, non-heroin, White+        | 0<br>0.00                | 87<br>100.00 | 0<br>0.00    | 0<br>0.00    | 87           |
| Younger, non-heroin, Chicano       | 0<br>0.00                | 81<br>100.00 | 0<br>0.00    | 0<br>0.00    | 81           |
| Younger, non-heroin, Black         | 0<br>0.00                | 80<br>100.00 | 0<br>0.00    | 0<br>0.00    | 80           |
| Older, non-heroin, White+          | 0<br>0.00                | 89<br>100.00 | 0<br>0.00    | 0<br>0.00    | 89           |
| Older, non-heroin, Chicano         | 0<br>0.00                | 82<br>100.00 | 0<br>0.00    | 0<br>0.00    | 82           |
| Older, non-heroin, Black           | 0<br>0.00                | 80<br>100.00 | 0<br>0.00    | 0<br>0.00    | 80           |
| Older, heroin, White+, Rapid onset | 80<br>20.78              | 83<br>21.56  | 86<br>22.34  | 136<br>35.32 | 385          |
| Older, heroin, White+, Slow onset  | 80<br>31.01              | 80<br>31.01  | 27<br>10.47  | 71<br>27.52  | 258          |
| Older, heroin, Chicano             | 80<br>19.85              | 81<br>20.10  | 111<br>27.54 | 131<br>32.51 | 403          |
| Older, heroin, Black               | 80<br>28.17              | 80<br>28.17  | 24<br>8.45   | 100<br>35.21 | 284          |
| <b>TOTAL</b>                       | <b>320</b>               | <b>823</b>   | <b>248</b>   | <b>438</b>   | <b>1829</b>  |

It is virtually impossible to show a comprehensive distribution of the total sample on all of the elements which went into its construction. This is partly because the agency providing the treatment was included in the sampling design, and there are about 60 agencies. But since agency was a critical variable, the next tables shows a distribution of the total sample by agency and kind of treatment (Table 5.7). Keeping in mind that the proportion of cases sampled varied from all or nearly all for outpatient

maintenance and residential drug-free modalities, to approximately one-fourth for in-patient detoxification and outpatient drug-free treatments, and that the number of agencies providing the different kinds of treatment varied markedly, this table confirms that the sampling procedures produced optimal program representation for the different kinds of treatment (and type of client, which is not shown).

Table 5.7 shows the distribution of the study target population by agency for each of the three samples, and those not sampled. Again, the goal of achieving optimal program representation is revealed, this time by the fact that the proportion of cases not sampled is higher for the larger agencies, and low or zero for the smaller agencies. The exceptions are due to an agency providing but one kind of treatment to but one or just a few client types.

In sum, the sampling procedures came very close to achieving the goal of the sampling design (as modified to fit the conditions imposed by the phenomena to be investigated and the practical problems encountered in carrying out the project). This accomplishment, and the minor shortcomings, were soon far overshadowed by problems encountered in locating the people in the sample.

Table 5.7

Distribution of Study Target Population by  
Treatment Agency and Sampling Category

| <u>Agency</u>      | <u>Sampling Category</u>          |                           |                          |                         |                        | <u>TOTAL</u> |
|--------------------|-----------------------------------|---------------------------|--------------------------|-------------------------|------------------------|--------------|
|                    | <u>County<br/>Metha-<br/>done</u> | <u>Family<br/>Program</u> | <u>"N. A."<br/>Model</u> | <u>Basic<br/>Sample</u> | <u>Not<br/>Sampled</u> |              |
| Antelope           | 0<br>0.00                         | 0<br>0.00                 | 0<br>0.00                | 5<br>100.00             | 0<br>0.00              | 5            |
| Asian-Amer DAP     | 0<br>0.00                         | 0<br>0.00                 | 0<br>0.00                | 32<br>65.31             | 17<br>34.69            | 49           |
| Asian-Amer JNT     | 0<br>0.00                         | 0<br>0.00                 | 0<br>0.00                | 5<br>100.00             | 0<br>0.00              | 5            |
| Avalon Carver      | 0<br>0.00                         | 0<br>0.00                 | 0<br>0.00                | 12<br>54.55             | 10<br>45.45            | 22           |
| Behavioral Health  | 0<br>0.00                         | 0<br>0.00                 | 0<br>0.00                | 47<br>13.62             | 298<br>86.38           | 345          |
| Bricks/Kicks       | 0<br>0.00                         | 0<br>0.00                 | 0<br>0.00                | 45<br>18.60             | 197<br>81.40           | 242          |
| Bridge Back        | 0<br>0.00                         | 0<br>0.00                 | 0<br>0.00                | 51<br>34.93             | 95<br>65.07            | 146          |
| C.E.C.             | 0<br>0.00                         | 0<br>0.00                 | 0<br>0.00                | 8<br>100.00             | 0<br>0.00              | 8            |
| Casa del Norte     | 0<br>0.00                         | 0<br>0.00                 | 0<br>0.00                | 21<br>100.00            | 0<br>0.00              | 21           |
| City of Compton    | 0<br>0.00                         | 0<br>0.00                 | 0<br>0.00                | 27<br>36.49             | 47<br>63.51            | 74           |
| City of Long Beach | 0<br>0.00                         | 0<br>0.00                 | 0<br>0.00                | 30<br>18.18             | 135<br>81.82           | 165          |
| City of Pasadena   | 0<br>0.00                         | 0<br>0.00                 | 0<br>0.00                | 28<br>65.12             | 15<br>34.88            | 43           |
| Co. LA Northeast   | 6<br>100.00                       | 0<br>0.00                 | 0<br>0.00                | 0<br>0.00               | 0<br>0.00              | 6            |
| Co. LA Pacoima MM  | 28<br>100.00                      | 0<br>0.00                 | 0<br>0.00                | 0<br>0.00               | 0<br>0.00              | 28           |

Continued-----

Table 5.7 (Continued)

| Agency                                      | Sampling Category     |                |                  |              |              | TOTAL |
|---|-----------------------|----------------|------------------|--------------|--------------|-------|
|   | County Metha-<br>done | Family Program | "N. A."<br>Model | Basic Sample | Not Sampled  |       |
| Co. LA Pomona MM                            | 36<br>100.00          | 0<br>0.00      | 0<br>0.00        | 0<br>0.00    | 0<br>0.00    | 36    |
| Co. LA Southeast MM                         | 2<br>100.00           | 0<br>0.00      | 0<br>0.00        | 0<br>0.00    | 0<br>0.00    | 2     |
| Co. LA Venice MM                            | 28<br>100.00          | 0<br>0.00      | 0<br>0.00        | 0<br>0.00    | 0<br>0.00    | 28    |
| Co. LA West<br>Hollywood MM                 | 13<br>100.00          | 0<br>0.00      | 0<br>0.00        | 0<br>0.00    | 0<br>0.00    | 13    |
| Co. LA Wilmington MM                        | 10<br>100.00          | 0<br>0.00      | 0<br>0.00        | 0<br>0.00    | 0<br>0.00    | 10    |
| Community Health                            | 0<br>0.00             | 0<br>0.00      | 0<br>0.00        | 15<br>71.43  | 6<br>28.57   | 21    |
| Cri-Help                                    | 0<br>0.00             | 0<br>0.00      | 42<br>56.76      | 9<br>12.16   | 23<br>31.08  | 74    |
| Do It Now                                   | 0<br>0.00             | 0<br>0.00      | 0<br>0.00        | 25<br>60.98  | 16<br>39.02  | 41    |
| El Proyecto                                 | 0<br>0.00             | 0<br>0.00      | 0<br>0.00        | 57<br>55.34  | 46<br>44.66  | 103   |
| Family Services<br>of Long Beach            | 0<br>0.00             | 0<br>0.00      | 0<br>0.00        | 12<br>85.71  | 2<br>14.29   | 14    |
| Family Coun. Svcs.<br>W. San Gabriel Valley | 0<br>0.00             | 0<br>0.00      | 0<br>0.00        | 6<br>50.00   | 6<br>50.00   | 12    |
| Free Men                                    | 0<br>0.00             | 48<br>8.35     | 0<br>0.00        | 106<br>18.43 | 421<br>73.22 | 575   |
| Friends of Lubav                            | 0<br>0.00             | 0<br>0.00      | 0<br>0.00        | 11<br>100.00 | 0<br>0.00    | 11    |
| Glendale Guidance<br>Clinic                 | 0<br>0.00             | 0<br>0.00      | 0<br>0.00        | 25<br>100.00 | 0<br>0.00    | 25    |
| Help Our Youth                              | 0<br>0.00             | 0<br>0.00      | 0<br>0.00        | 6<br>20.00   | 24<br>80.00  | 30    |
| Handy                                       | 0<br>0.00             | 0<br>0.00      | 0<br>0.00        | 22<br>95.65  | 1<br>4.35    | 23    |

Continued-----

Table 5.7 (Continued)

| <u>Agency</u>               | <u>Sampling Category</u>      |                       |                          |                     |                    | <u>TOTAL</u> |
|-----------------------------|-------------------------------|-----------------------|--------------------------|---------------------|--------------------|--------------|
|                             | <u>County Metha-<br/>done</u> | <u>Family Program</u> | <u>"N. A."<br/>Model</u> | <u>Basic Sample</u> | <u>Not Sampled</u> |              |
| House of Uhuru              | 0<br>0.00                     | 0<br>0.00             | 0<br>0.00                | 25<br>17.36         | 119<br>82.64       | 144          |
| I-ADARP                     | 0<br>0.00                     | 0<br>0.00             | 0<br>0.00                | 23<br>53.49         | 20<br>46.51        | 43           |
| JAMAA                       | 0<br>0.00                     | 0<br>0.00             | 0<br>0.00                | 29<br>26.61         | 80<br>73.39        | 109          |
| Joint Efforts               | 0<br>0.00                     | 0<br>0.00             | 0<br>0.00                | 47<br>85.45         | 8<br>14.55         | 55           |
| LA Psych Services           | 0<br>0.00                     | 0<br>0.00             | 0<br>0.00                | 24<br>100.00        | 0<br>0.00          | 24           |
| La Clinica Libre            | 0<br>0.00                     | 0<br>0.00             | 0<br>0.00                | 19<br>90.48         | 2<br>9.52          | 21           |
| La Verne-San Dim            | 0<br>0.00                     | 0<br>0.00             | 0<br>0.00                | 7<br>77.78          | 2<br>22.22         | 9            |
| Metropolitan State Hospital | 0<br>0.00                     | 70<br>100.00          | 0<br>0.00                | 0<br>0.00           | 0<br>0.00          | 70           |
| Mid-Valley                  | 0<br>0.00                     | 0<br>0.00             | 0<br>0.00                | 26<br>78.79         | 7<br>21.21         | 33           |
| N.A.P.P.                    | 0<br>0.00                     | 0<br>0.00             | 0<br>0.00                | 40<br>36.36         | 70<br>63.64        | 110          |
| N.P.P.                      | 0<br>0.00                     | 0<br>0.00             | 0<br>0.00                | 135<br>12.53        | 942<br>87.47       | 1077         |
| N.Y.A.                      | 0<br>0.00                     | 0<br>0.00             | 0<br>0.00                | 22<br>61.11         | 14<br>38.89        | 36           |
| Open Door DC                | 0<br>0.00                     | 0<br>0.00             | 0<br>0.00                | 39<br>24.07         | 123<br>75.93       | 162          |
| Peoples Coalition           | 0<br>0.00                     | 0<br>0.00             | 0<br>0.00                | 13<br>100.00        | 0<br>0.00          | 13           |
| Pomona OD                   | 0<br>0.00                     | 0<br>0.00             | 0<br>0.00                | 12<br>70.59         | 5<br>29.41         | 17           |

Continued-----



Table 5.7 (Continued)

| Agency                        | Sampling Category |                |               |              |              | TOTAL |
|-------------------------------|-------------------|----------------|---------------|--------------|--------------|-------|
|                               | County Methadone  | Family Program | "N. A." Model | Basic Sample | Not Sampled  |       |
| Principles                    | 0<br>0.00         | 0<br>0.00      | 42<br>100.00  | 0<br>0.00    | 0<br>0.00    | 42    |
| Protestant Community Services | 0<br>0.00         | 0<br>0.00      | 0<br>0.00     | 39<br>25.16  | 116<br>74.84 | 155   |
| Rancho Los Amigos             | 0<br>0.00         | 0<br>0.00      | 0<br>0.00     | 31<br>96.88  | 1<br>3.13    | 32    |
| Rio Hondo                     | 0<br>0.00         | 0<br>0.00      | 0<br>0.00     | 21<br>100.00 | 0<br>0.00    | 21    |
| Santa Monica BAY              | 0<br>0.00         | 0<br>0.00      | 0<br>0.00     | 40<br>11.33  | 313<br>88.67 | 353   |
| South Bay DAC                 | 0<br>0.00         | 0<br>0.00      | 0<br>0.00     | 11<br>42.31  | 15<br>57.69  | 26    |
| Suicide Prevention            | 0<br>0.00         | 0<br>0.00      | 0<br>0.00     | 81<br>95.29  | 4<br>4.71    | 85    |
| TARGET                        | 0<br>0.00         | 0<br>0.00      | 0<br>0.00     | 33<br>36.26  | 58<br>63.74  | 91    |
| Tu'um Est                     | 0<br>0.00         | 0<br>0.00      | 0<br>0.00     | 17<br>100.0  | 0<br>0.00    | 17    |
| Valley Free Clinic            | 0<br>0.00         | 0<br>0.00      | 0<br>0.00     | 21<br>18.92  | 90<br>81.08  | 111   |
| Venice Drug Coalt.            | 0<br>0.00         | 0<br>0.00      | 0<br>0.00     | 34<br>18.28  | 152<br>81.72 | 186   |
| Via Avanta                    | 0<br>0.00         | 0<br>0.00      | 0<br>0.00     | 11<br>100.00 | 0<br>0.00    | 11    |
| West LA DTP                   | 0<br>0.00         | 0<br>0.00      | 0<br>0.00     | 75<br>100.00 | 0<br>0.00    | 75    |
| Wilds of Freedom              | 0<br>0.00         | 0<br>0.00      | 0<br>0.00     | 13<br>20.63  | 50<br>79.37  | 63    |
| Youth Dev. Project            | 0<br>0.00         | 0<br>0.00      | 0<br>0.00     | 11<br>55.00  | 9<br>45.00   | 20    |
| TOTALS                        | 123               | 118            | 84            | 1504         | 3559         | 5388  |

## F. Exclusions

Cases came to be excluded from the sample for various sorts of reasons. Some were technical, having to do with the mesh between the emerging study design and the practical problems of keeping counts. Others were the result of practical problems experienced by the agencies. And still others were due to a few agencies deciding not to participate in the project after the sample was drawn. In essence, the case deletions about to be presented are further adjustments to the study target population. Deletion of these cases produce what might be termed the final Study target population. It is the population to which substantive findings of the Study might be generalized (were it not for the serious problems encountered in locating the clients which are discussed in another chapter).

### 1. Agencies which did not participate

Some of the agencies were straight-forward in their refusal to participate in the project by attempting to locate their former clients to obtain their consent (or refusal) to be interviewed. Other agencies were less direct; they simply did not initiate client contact efforts. Table 5.8 shows the cases excluded for these reasons as "Agency withdrew" and "Agency dropped" respectively. Just over 4 percent of the total sample was thus deleted; nearly one-fourth of the deletions were the result of agency non-participation.

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Table 5.8  
Deletions from Study Target Population

| <u>Kind of Deletion</u> | <u>No.</u> | <u>Percent of Total</u> | <u>Percent of Deletions</u> |
|-------------------------|------------|-------------------------|-----------------------------|
| Wrong treatment         | 56         | 2.0%                    | 16.2%                       |
| Other referral          | 3          | .2                      | .9                          |
| Agency withdrew         | 50         | 2.7                     | 14.5                        |
| Agency dropped          | 26         | 1.4                     | 7.5                         |
| Agency disclaims        | 42         | 2.2                     | 12.2                        |
| Agency no file          | 50         | 2.7                     | 14.5                        |
| Routed duplicate        | 69         | 3.7                     | 19.9                        |
| Unrouted duplicate      | 32         | 1.7                     | 9.2                         |
| Deceased                | 18         | 1.0                     | 5.2                         |
| Not deleted             | 1539       | 81.6                    | N/A                         |

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## 2. Ineligibles

Somehow cases admitted to one of the agencies under a Federal Bureau of Prisons Program for probationers and parolees were included in the CODAP file used to build the target population; they should not have been included. When these cases were given to the agency to initiate client contact efforts, the agency discovered the error and a decision was made to exclude the cases. The basis was that the Drug Abuse Office had no purview over this part of the agency's program.

A number of agencies were undergoing reorganizations during the Study period. Cases in the target population were deleted or re-assigned to reflect these changes, as appropriate. Somehow three of the cases admitted to one agency which should have been re-assigned to another were not. When the agency received these cases it discovered the error and disclaimed

responsibility for contacting them. They could just as well have been counted as "Agency dropped" as the agency to which they should have been assigned did not participate in the Study.

These two sets of deletions are labelled "Agency disclaims" in Table 5.8. They account for about 2 percent of the total sample, and 12 percent of the deletions.

As was indicated earlier, Metropolitan State Hospital is supposed to receive its cases upon referral from two agencies. After the special sample of "Family" program cases was selected it was discovered that three were referred from some other agency, or the referral agency was not recorded. Client contact efforts could therefore not be initiated for them. They are labelled as "other referral" and account for a miniscule proportion of the sample and deletions.

As will be recalled, the special samples were drawn without regard to client type because the information needed to put these cases into types was not available for most of them and the typology had not yet been developed. It was anticipated that a few of these cases would have to be deleted as being ineligible due to their combination of client type and kind of treatment. These cases are labelled as "Wrong treatment" in the table. They constituted 3 percent of the total sample, and just over 15 percent of the deletions.

All told, the ineligible cases accounted for nearly 5 percent of the sample, and 30 percent of the deletions.

### 3. No case records

For some cases the agencies knew the cases to be theirs, but they had no file. The files had been lost, destroyed in a fire, mislaid, stolen, and so forth. Without their files, the agencies could not initiate client

contact efforts. Table 5.8 shows these as "Agency no file." Three percent of the total sample and 15 percent of the deletions were so classified.

#### 4. Duplicates

Some cases were excluded because they were one of two kinds of duplicates. When the basic sample was drawn, the cases drawn from the DAO information system were checked for duplicates. Those which were discovered were pulled (without replacement). They were not routed to the agencies to initiate client contact efforts. They are shown as "Unrouted duplicate." They constituted 2 percent of the sample and 10 percent of the deletions.

A few programs reported their cases to both the CODAP and the DAO information systems. Because of the lack of unique identifiers common to all agencies and both reporting systems, it was impossible to identify these kinds of duplicates before the sample was distributed to the agencies. Other duplicates were the result of the same person being admitted to more than one agency, and the inability to identify the cases as being for the same person due to lack of a common identifier.

Each agency was asked to supply the project on a confidential basis the client's name, sex, date of birth, and racial-ethnic status. It was to be used solely for the purpose of identifying duplicates, and was not to be re-disclosed. A few of the programs refused to provide the information on the basis that it would violate their obligation to protect the anonymity and confidentiality rights of their clients. They would provide the information only for those clients who they were able to find and who consented to be interviewed. Neither would they provide the information needed to build a unique client identifier (which did not require the client's name). Other agencies simply did not provide the information. For these reasons, a unique identifier could not be built for about one-half of the cases in

the sample. But those which could be built were used to identify duplicates.

When duplicates were discovered by the project or the agencies, one case was chosen for the Study. Two rules were used. One was to select the special sample case. This was necessary in that the special samples were pulled first. By the time the basic sample was pulled and the cases were being identified, those in the special samples had already been routed to the field, contacts had been attempted or made, and interviews conducted. The special case had then to be the Study case. When the duplicate was also from a special sample, preference was given in the following order: County methadone, "Family" model, and "Narcotics Anonymous" model programs. When a special sample case was not involved, the rule was to select the case with the earliest admission. This rule was also used if the duplicate involved two cases within the same special sample. In a few cases, these rules were not applied. This was typically the result of the late discovery of a duplicate involving a person who had already been interviewed. The duplicates identified by the agencies and the project are shown in Table 5.8 as "Routed duplicate." They account for 4 percent of the total sample and 20 percent of the deletions.

All told, just over 5 percent of the total sample were identified as duplicates, and just under 30 percent of the deletions were the result of removing duplicates.

#### 5. Death

The agencies identified one percent of the sampled cases as being dead. They accounted for 5 percent of the deletions.

#### 6. Summary

Eighteen percent of the total sample cases were deleted for the reasons given above. No one reason dominated the exclusions, and no one of

the exclusions accounted for more than 4 percent of the total sample. The net result was a shrinkage of the sample from 1885 to 1539 cases. The size of the study target population corresponding to the adjusted sample is unknown and could not be determined by actual enumeration (within available resources). However, it can be estimated by application of the sampling weights to the non-excluded cases. This provides an estimated study population of about 4600. The adjusted sample size was 1539. The adjusted sample constitutes one-third of the adjusted study target population. It would have been necessary to locate, get a consent from, and interview over 75 percent of the adjusted sample in order to come up with the desired 1200 interviews. This level was not even approximated.

#### G. The Problems of Bias

Any study based on a sample must deal with the question of bias; does the sample represent the population from which it was drawn and to which the conclusions from the sample are to be projected? This is a problem in a technical and operational sense. This section deals with both of these problems of bias.

##### 1. Effects of the sampling design on bias

As described elsewhere herein, the sample was based on a very complex design incorporating client type, kind of treatment, and the agency providing the treatment (either directly, or by referral), as well as the use of several special samples. Even the most true believer in stratified random sampling, let alone those who know nothing of sampling, might doubt the adequacy of the results. Table 5.9 is offered as confirmation of the correctness of the sampling design. (It does not prove that the sampling design was correct in that it could have provided true conclusions about the

population without being correct.)

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Table 5.9

Estimated Population Values from Weighted  
Sample Compared to Actual Study Target Population Values

| <u>Variable</u>                          | <u>Actual</u> | <u>Estimated</u> |
|--|---------------|------------------|
| Percent black                            | 23.8%         | 23.8%            |
| Percent Chicano                          | 30.9          | 30.9             |
| Percent white and other                  | 45.3          | 45.3             |
| Age first used PDA <sup>1/</sup>         | 19.3          | 19.1             |
| Years to first continuing<br>use of PDA  | 1.3           | 1.4              |
| Age as of December 31, 1975              | 27.5          | 27.8             |
| Percent male                             | 71.6          | 72.8             |
| Average rank order of drug as a problem: |               |                  |
| Heroin                                   | 2.1           | 2.1              |
| Marijuana, hashish                       | 0.8           | 0.9              |
| Amphetamines                             | 0.2           | 0.2              |
| Barbiturates                             | 0.4           | 0.4              |

1/ Primary Drug of Abuse

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Without doubt, the (weighted) sample gives an accurate picture of the population from which it was drawn. No sampling biases seemed to have been introduced by the rather complex design, or in the actual mechanics of drawing the sample. Findings from the sample can be safely generalized to the population.

2. Effects of the study's operation on bias

The operations of the project from the point at which the sample was drawn to the conduct of the interviews may be presented (i.e., simplified) as four sequential dichotomies.



1. Case deleted versus not deleted
2. Client located versus not located
3. Consent obtained versus not obtained
4. Interviewed versus not interviewed

Any bias resulting from any one of these steps would effect the results of the subsequent steps. But it would be desirable to analyze the results of each step independently of all prior steps. An example may help to make this point more clear. Suppose that the clients who consented to participate in the Study were older. From this finding we would conclude that those who consented represented a biased sample of those located (and those in the sample, and the target population). Obviously then, those actually interviewed would be a biased sample too in that they would have to be drawn from those who consented (who were found to be older). Staying with age, the next question is not whether those interviewed represent a biased sample of the beginning sample (or total target population), in terms of age, as the bias has already been proven (i.e., inferred). Such a question would be redundant; it would add no new information. New information would be added by determining whether those who were interviewed differed from those who were not, among those who consented. This information would not be redundant because it would lead to a new conclusion. If those interviewed did not differ (with respect to age, for this example), then the conclusion would be that the information obtained from those interviewed could be used to make inferences about those who consented (but not about those who did not or any other prior part of the sample or population as it would have already been shown, in this example, that those who consented were a biased sample, at least with respect to age). If those interviewed differed from those

not interviewed (among the consented sample), then the conclusion would be that the information obtained from the interviewees could not be inferred to those who consented (or any other part of the population).

For those more technically inclined, the following analyses are based upon one-way analysis of variance with orthogonal, planned comparisons. Because the sample was complexly stratified, ordinary tests of statistical significance are inappropriate. Indeed, at least according to Andrews, et al. (1974), no general solutions to the problem exist and specific solutions would be extremely difficult for even the most skilled statistical expert. In the absence of a solution, we have decided to use ordinary statistical significance tests. We have, however, introduced two kinds of adjustments which are designed to eliminate other sources of error. One of these was to adjust the sampling ratios so as to make the number of weighted cases equal to the number of cases in the sample. Without this adjustment, the degrees of freedom used (by the computer program) to test the significance of the differences would have been too large.

The variables chosen for analysis were, of course, limited to those available for the Study target population. The ones chosen were intended to cover a spectrum of relevant dimensions (while avoiding redundancy so as to minimize costs). The client's age, years from first to continuing use of the primary drug of abuse, and claimed years of education were used to tap the characteristics of the clients. The rank order of heroin as a problem, the calendar year in which the client first used the primary drug of abuse, and number of prior treatments for drug use were chosen to reflect the environment from which the agencies drew their clients. And time to discharge was used to reflect the treatment dimension.

The comparisons are shown in Table 5.10. The means for each category

Table 5.10

## Selected Characteristics of Weighted Study Sample by Client-Contact Outcome Categories

| <u>Characteristics</u>                                | <u>Deleted</u>  |                              | <u>Located</u>  |                                | <u>Consented</u> |                               | <u>Interviewed</u> |                           |
|---|-----------------|------------------------------|-----------------|--------------------------------|------------------|-------------------------------|--------------------|---------------------------|
|   | <u>Yes</u>      | <u>No</u>                    | <u>Yes</u>      | <u>No</u>                      | <u>Yes</u>       | <u>No</u>                     | <u>Yes</u>         | <u>No</u>                 |
| Age as of December 31, 1975                           | 26.7<br>(255)   | 27.0<br>(1571)               | 26.6<br>(491)   | 28.3 <sup>1/</sup><br>(1080)   | 27.8<br>(314)    | 25.5<br>(177)                 | 28.3<br>(240)      | 27.3<br>(74)              |
| Years to first continuing<br>use of PDA <sup>2/</sup> | 2.4<br>(255)    | 1.0 <sup>1/</sup><br>(1571)  | 1.0<br>(491)    | 1.3 <sup>1/</sup><br>(1080)    | 0.9<br>(314)     | 1.0<br>(177)                  | 0.9<br>(240)       | 0.9<br>(74)               |
| Rank order of heroin as a<br>problem (3 = high)       | 1.8<br>(255)    | 2.0<br>(1571)                | 1.8<br>(491)    | 2.2 <sup>1/</sup><br>(1080)    | 1.8<br>(314)     | 1.8<br>(177)                  | 2.0<br>(240)       | 1.6<br>(74)               |
| Days in treatment, at<br>discharge                    | 83.4<br>(252)   | 75.4 <sup>1/</sup><br>(1513) | 77.9<br>(456)   | 65.5<br>(1057)                 | 76.4<br>(287)    | 79.3<br>(169)                 | 76.7<br>(215)      | 76.2<br>(72)              |
| Number of prior drug-use treat-<br>ments at admission | 1.0<br>(255)    | 1.0<br>(1569)                | 1.0<br>(490)    | 1.1<br>(1079)                  | 1.1<br>(313)     | 0.9<br>(177)                  | 1.3<br>(239)       | 0.9 <sup>1/</sup><br>(74) |
| Calendar Year of first use<br>of PDA                  | 1966.8<br>(255) | 1967.1<br>(1571)             | 1967.4<br>(491) | 1965.9 <sup>1/</sup><br>(1080) | 1965.9<br>(314)  | 1968.9 <sup>1/</sup><br>(177) | 1965.6<br>(240)    | 1966.0<br>(74)            |
| Claimed years of schooling<br>at admission            | 10.7<br>(254)   | 11.1 <sup>1/</sup><br>(1565) | 11.1<br>(489)   | 11.3 <sup>1/</sup><br>(1076)   | 11.1<br>(312)    | 11.0<br>(177)                 | 11.2<br>(238)      | 10.9<br>(74)              |

<sup>1/</sup> Statistically significant at the 0.05 level or better, using the "separate variance estimate" procedure provided by Nie, et al. (1975: 425-26), and assuming a "fixed effects" model.

<sup>2/</sup> Primary Drug of Abuse

are based upon the unweighted averages of the means for each client-contact outcome group contained within the category. For example, the mean age of those not deleted (27.0) is the mean of the means for "interviewed" (28.3), "not interviewed" (27.3), "refused" (23.9), "no consent" (27.1), and "un-locatable" (28.3); the mean for "deleted" (26.7) is based on that group alone as it is the only group within the category. As indicated, the two categories of "located" excludes those deleted; "consented" includes only those located, and "interviewed" includes only those who consented. The number in parenthesis is the total number of cases in the category on which the information was available.

In general, Table 5.11 shows that biases were introduced at each major step of the client contact operations, beginning at the point at which the agencies began (or did not begin) to look for the clients to the conduct of the interviews. Using the magnitude of the differences at each step and the rough significance level estimates as guides, the following (Table 5.11) summarizes the important differences at each stage.

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Table 5.11

Summary of Important Biases at Each Contact Step

| <u>Variable</u>               | <u>Deleted vs.<br/>Not Deleted</u> | <u>Located vs.<br/>Not Located</u> | <u>Consented vs.<br/>No Consent</u> | <u>Interviewed vs.<br/>Not Interviewed</u> |
|-------------------------------|------------------------------------|------------------------------------|-------------------------------------|--|
| Age in 1975                   |                                    | Yes                                | Yes                                 |  |
| Years to first continuing use | Yes                                | Yes                                |                                     |  |
| Years of education            | Yes                                | Yes                                |                                     |  |
| Heroin problem                |                                    | Yes                                |                                     |  |
| Year of first use of PDA      |                                    | Yes                                | Yes                                 |  |
| Number prior treatments       |                                    |                                    |                                     | Yes  |
| Days in this treatment        |                                    | Yes                                |                                     |  |

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Clearly the greatest bias was introduced by the agencies' location efforts; those located (compared to the unlocated non-deleted cases) were nearly two years younger, began continuing use of their primary drug of abuse nearly four months sooner, had completed about two-tenths of a year less education, heroin use was ranked nearly one-half a rank lower, use of the primary drug of abuse was started about 1.5 calendar years later, and the length of their current treatment was nearly two weeks longer. The clients who were located were then a biased sample in terms of their personal characteristics, the environment from which the agencies drew their clients, and the treatment supplied. The deleted clients and those who consented differed in far fewer ways. The interviewed cases showed an appreciable difference of probable statistical significance on only one variable-- number of prior treatments for drug use.

### 3. Client type and kind of treatment

Given the importance of client type and kind of treatment to the study design, it is appropriate to determine the degree to which bias in the client contact process may have occurred with respect to these variables.<sup>1/</sup> Because of the categorical nature of these two variables, a different mode of statistical analysis must be used. Table 5.12 shows a detailed breakdown of the summary client-contact status variable by client type. The Chi-square value (167.59) is significant at beyond the 0.01 level (with 45 degrees of freedom). Client-contact outcomes were related to client type. But the way in which the data are presented in Table 5.12 is not very meaningful. As indicated in the prior analysis of the other variables with respect to client-

<sup>1/</sup> Given the complex relationship of the typology to the variables just analyzed individually with respect to sampling biases, the findings for client type (and kind of treatment) should not be considered as additional independent analyses.

Table 5.12

Distribution of Weighted Sample on Client-Contact Categories  
by Client Type

| <u>Client Type</u>                   | <u>Inter-<br/>viewed</u> | <u>Not Inter-<br/>viewed</u> | <u>Refused</u> | <u>No<br/>Consent</u> | <u>Unlo-<br/>cated</u> | <u>Deleted</u> | <u>TOTAL</u>  |
|--------------------------------------|--------------------------|------------------------------|----------------|-----------------------|------------------------|----------------|---------------|
| Younger, non-heroin,<br>White+       | 32<br>19.2               | 9<br>5.3                     | 7<br>4.1       | 19<br>11.2            | 71<br>42.3             | 30<br>17.9     | 168<br>9.2    |
| Younger, non-heroin,<br>Chicano      | 6<br>19.9                | 0<br>1.1                     | 1<br>4.5       | 1<br>4.5              | 15<br>50.6             | 6<br>19.3      | 30<br>1.6     |
| Younger, non-heroin,<br>Black        | 5<br>7.4                 | 9<br>12.6                    | 10<br>13.9     | 1<br>.9               | 32<br>44.0             | 15<br>21.1     | 72<br>3.9     |
| Older, non-heroin,<br>White+         | 17<br>12.2               | 12<br>8.7                    | 1<br>.8        | 1<br>.8               | 94<br>69.3             | 11<br>8.2      | 135<br>7.4    |
| Older, non-heroin,<br>Chicano        | 13<br>23.2               | 2<br>4.5                     | 7<br>12.7      | 2<br>3.9              | 26<br>47.8             | 4<br>8.0       | 55<br>3.0     |
| Older, non-heroin,<br>Black          | 10<br>9.3                | 3<br>2.5                     | 14<br>12.3     | 8<br>7.1              | 56<br>51.0             | 20<br>17.7     | 110<br>6.0    |
| Older, heroin, White+<br>Rapid Onset | 41<br>10.9               | 13<br>3.6                    | 10<br>2.7      | 17<br>4.6             | 258<br>68.7            | 36<br>9.6      | 375<br>20.5   |
| Older, heroin, White+<br>Slow Onset  | 23<br>15.3               | 3<br>1.7                     | 7<br>4.8       | 7<br>4.4              | 83<br>55.7             | 27<br>18.2     | 149<br>8.2    |
| Older, heroin,<br>Chicano            | 46<br>9.6                | 12<br>2.5                    | 14<br>2.9      | 28<br>5.7             | 315<br>65.6            | 66<br>13.7     | 480<br>26.3   |
| Older, heroin,<br>Black              | 47<br>18.5               | 12<br>4.6                    | 11<br>4.4      | 13<br>5.3             | 130<br>51.1            | 41<br>16.1     | 255<br>13.9   |
| TOTALS                               | 240<br>13.1              | 75<br>4.1                    | 82<br>4.5      | 96<br>5.3             | 1080<br>59.1           | 256<br>14.0    | 1829<br>100.0 |

indicated in the prior analysis of the other variables with respect to client-contact bias, meaningful comparisons require that the analysis of each step in the client-contact procedure be independent of the prior steps. Table 5.13 (which was constructed from the data in Table 5.12) provides such independent comparisons.

Table 5.13

Percentage of Weighted Cases in Each Summary Client-Contact Category by Client Type.  
(Numbers in parentheses are the number of cases eligible for placement in the contact category; they are the bases for the percentages shown immediately above them.)

| <u>Client Type</u>                                | <u>Deleted of Total</u> | <u>Located of Not Deleted</u> | <u>Consented of Located</u> | <u>Interviewed of Consented</u> |
|---|-------------------------|-------------------------------|-----------------------------|---------------------------------|
| Younger, White and Other, Non-Heroin Users        | 17.9%<br>(168)          | 48.5%<br>(138)                | 61.2%<br>(67)               | 78.0%<br>(41)                   |
| Younger, Chicano, Non-Heroin Users                | 19.3<br>(30)            | 37.5<br>(24)                  | 75.0<br>(8)                 | 100.0<br>(6)                    |
| Younger, Black, Non-Heroin Users                  | 21.1<br>(72)            | 43.9<br>(57)                  | 56.0<br>(25)                | 35.7<br>(14)                    |
| Older, White and Other, Non-Heroin Users          | 8.2<br>(135)            | 24.2<br>(124)                 | 93.5<br>(31)                | 58.6<br>(29)                    |
| Older, Chicano, Non-Heroin Users                  | 8.0<br>(55)             | 49.0<br>(51)                  | 62.5<br>(24)                | 86.7<br>(15)                    |
| Older, Black, Non-Heroin Users                    | 17.7<br>(110)           | 34.8<br>(90)                  | 37.1<br>(35)                | 76.9<br>(13)                    |
| Older, White and Other, Heroin Users, Short Onset | 9.6<br>(375)            | 23.9<br>(339)                 | 66.7<br>(81)                | 75.9<br>(54)                    |
| Older, White and Other, Heroin Users, Long Onset  | 18.2<br>(149)           | 32.0<br>(122)                 | 65.0<br>(40)                | 88.5<br>(26)                    |
| Older, Chicano, Heroin Users                      | 13.7<br>(480)           | 23.9<br>(414)                 | 58.0<br>(100)               | 79.3<br>(58)                    |
| Older, Black, Heroin Users                        | 16.1<br>(255)           | 39.2<br>(214)                 | 71.1<br>(83)                | 79.7<br>(59)                    |
| Total   | 14.0<br>(1829)          | 31.3<br>(1573)                | 63.9<br>(493)               | 76.2<br>(315)                   |
| -----   |                         |                               |                             |                                 |
| Chi-square for all types                          | 22.3                    | 61.1                          | 27.5                        | 23.5                            |
| Probability level                                 | <0.01                   | <0.01                         | <0.01                       | <0.01                           |
| Chi-square for heroin types                       | 9.1                     | 20.8                          | 3.6                         | 1.7                             |
| Probability level                                 | >0.05                   | <0.01                         | >0.05                       | >0.05                           |

The first column of Table 5.13 shows the percentage of the total cases deleted. This column is the same as shown in Table 5.12; all the others are different, however. The second column shows the percentage of cases which were located, among those not deleted. The third column shows the percentage of those located from whom a consent was obtained. And the fourth column shows the percentage interviewed, among those who consented. Please note that these percentages and numbers are different from those presented elsewhere in this report as they are based on the sample weighted to reflect the population from which it was drawn (with the weights adjusted so that the number of cases is equal to the actual number of cases in the sample, not the much larger number in the study population.

Ordinary contingency Chi-squares were computed for each of the columns of Table 5.13 (using the relevant detailed information shown in Table 5.12). As shown, the Chi-squares were all significant at better than the 0.01 level (with nine degrees of freedom each). Client type was clearly associated with each major phase of the client contact process. Most of the associations were for the non-heroin types. And, in general, if a particular (non-heroin) type had a high or low rate for any one of the contact categories, the other rates also deviated from the average. Only two of the non-heroin types were infrequently related to the contact categories; they were the "younger, white and other, non-heroin users" and the "older, black, non-heroin users."

Among the heroin-users, client type was significantly related with only one of the major contact steps--located versus not located. In particular, the older black heroin users were more likely to be located (39.2%) than all heroin types combined (27.8%). None of the other heroin types deviated by more than 5 percent from the overall average.<sup>2/</sup>

<sup>2/</sup> The Chi-squares for the heroin types which are shown in Table 5.13



A parallel analysis was done for the kind of treatment. Table 5.14 shows that the kind of treatment was associated with client-contact outcomes. The Chi-square of 77.198 (with 15 degrees of freedom) is significant at beyond the 0.01 level.

Table 5.14

Distribution of Weighted Sample on Client-Contact Categories by Kind of Treatment

| <u>Categories</u> | <u>Kind of Treatment</u> |            |            |             | <u>TOTAL</u>  |
|-------------------|--------------------------|------------|------------|-------------|---------------|
|                   | <u>ODF</u>               | <u>RDF</u> | <u>OPM</u> | <u>IPD</u>  |               |
| Interviewed       | 155<br>13.3              | 25<br>14.9 | 26<br>31.5 | 35<br>8.3   | 240<br>13.1   |
| Not Interviewed   | 53<br>4.6                | 6<br>3.6   | 3<br>3.6   | 13<br>3.0   | 75<br>4.1     |
| Refused           | 50<br>4.3                | 5<br>3.1   | 6<br>7.7   | 20<br>4.8   | 82<br>4.5     |
| No Consent        | 54<br>4.7                | 10<br>6.4  | 4<br>5.2   | 27<br>6.5   | 96<br>5.3     |
| Unlocatable       | 677<br>58.1              | 78<br>47.4 | 39<br>46.0 | 286<br>69.0 | 1080<br>59.1  |
| Deleted           | 176<br>15.1              | 41<br>24.6 | 5<br>6.0   | 34<br>8.3   | 256<br>14.0   |
| TOTALS            | 1165<br>63.7             | 165<br>9.0 | 84<br>4.6  | 414<br>22.7 | 1829<br>100.0 |

Table 5.15 rearranges this data to allow independent comparisons at each major contact stage. As shown, kind of treatment was related to each stage, except for the interview phase.

were computed for the heroin types only, excluding the non-heroin types. Each of the heroin-type Chi-squares has three degrees of freedom.

Table 5.15

Percentage of Weighted Cases in Each Summary Client-Contact Category by Kind of Treatment. (Numbers in parentheses are the number of cases eligible for placement in the contact category; they are the bases for the percentages shown immediately above them.)

| <u>Kind of Treatment</u>         | <u>Deleted of Total</u> | <u>Located of Not Deleted</u> | <u>Consented of Located</u> | <u>Interviewed of Consented</u> |
|----------------------------------|-------------------------|-------------------------------|-----------------------------|---------------------------------|
| Outpatient Drug Free             | 15.1%<br>(1165)         | 31.5%<br>(989)                | 66.7%<br>(312)              | 74.5%<br>(208)                  |
| Residential Drug Free            | 24.6<br>(165)           | 37.1<br>(124)                 | 67.4<br>(46)                | 80.6<br>(31)                    |
| Outpatient Methadone Maintenance | 6.0<br>(84)             | 50.6<br>(79)                  | 74.4<br>(39)                | 89.7<br>(29)                    |
| Inpatient Detoxification         | 8.3<br>(414)            | 24.7<br>(380)                 | 50.5<br>(95)                | 72.9<br>(48)                    |
| Total                            | 14.0<br>(1829)          | 31.3<br>(1573)                | 63.9<br>(493)               | 76.2<br>(315)                   |
| -----                            |                         |                               |                             |                                 |
| Chi-square Probability level     | 33.4<br><0.01           | 23.4<br><0.01                 | 10.5<br><0.05               | 3.8<br>>0.05                    |

A larger proportion of the RDF cases (24.6%) were deleted (compared to the overall average of 14.0%). Lower percentages were deleted from IPD (8.3%) and OPM (6.0%). ODF was about average (15.1%). Among those not deleted, the highest location rate was for OPM (50.6%). No doubt this is a result of the fact that the OPM sample included currently enrolled cases while the others did not. The low rate for IPD (24.7%) may be due to the relatively short and treatment-specific nature of this modality. IPD lasts for but a week or two, and many people seem to limit their contact to just the detoxification. Other treatments are usually longer lasting, and more numerous services over a longer time span are requested and provided.

Among those located, consent was obtained from only one-half of those who had been in IPD, compared to 63.9 percent for all cases. Unfortunately,

then, a low location rate for IPD was followed by a low consent rate. The consent rates for the other kinds of treatment were similar; over two-thirds for ODF and RDF, and less than three-fourths for OPM.

As indicated earlier, the proportion interviewed was not significantly related to kind of treatment. However, it may be noted that OPM had the lowest deletion rate, and the highest location, consent, and interview rates. And, although the deletion rate for IPD was low, IPD had the poorest record on all of the other three contact phases. Such a pattern would be consistent with the assertion that the OPM cases who were finally interviewed were more likely to have done well after their exposure to the study-period treatment program, and that the interviewed IPD cases were less likely to have done well.

Client type was then related to each of the major client-contact steps, but this was characteristic of only the non-heroin types. Among the heroin types, client type was related only to the location phase, with the major association being a higher location rate for older black heroin users. Kind of treatment was related to every stage of the contact process, except for the interview phase. We would infer from these findings that the non-heroin types who came to be interviewed were relatively less representative of the study population than the heroin types, and that among heroin types, those from OPM who were interviewed were more likely to have been selected from the more "successful" cases, while those from IPD who were interviewed were more likely to have been selected from the less "successful" cases.

#### 4. Summary

Returning now to the individual variables (as opposed to the client typology and kind of treatment), evidence of bias has been shown at each stage of the client-contact procedures; it must be concluded that those

interviewed are not representative of the Study target population. This conclusion is greatly reinforced by the fact that less than one-half of the sampled clients were located. Indeed, the unlocatables represented nearly 60 percent of the Study target population.

The evidence for bias at the consent and interview phases of the project is positive, but much weaker. The conclusion to be reached for these phases is much more a matter of judgment. The one significant difference for those interviewed could be dismissed as truly due to chance and as therefore not indicative of bias at this phase of the operation. The two significant differences at the consent phase could also be so dismissed. From this more judgmental basis, the conclusion would be that those interviewed are probably fairly representative of those located by the agencies, but not of the Study target population.

## 6.. RESEARCH DESIGN AND STATISTICAL ANALYSES

The various problems discussed in the prior chapters taken in combination necessitated a major restructuring of the research design, and the development of a strategy for statistical analyses keyed to the modified design. This chapter presents a discussion of these issues and how they were resolved.

### A. Research Design

The sampling design was compatible with many research designs. For economy of effort, one was chosen for the vast bulk of the analyses. It results from an attempt to approximate as closely as possible an experimental design. The arguments for an experimental design for this particular project are as follows.

This is the first long-term, comparative evaluation of drug abuse treatment approaches in California (and one of the few nationwide). Given this situation, the most fundamental question is also the most appropriate one for this project. It is, "Does treatment make a difference?" The obvious way to answer this question would be to compare a sample of people who received treatment with a sample who did not. But this is not the only way of answering the question. It is not even necessarily the most desirable. An equally legitimate approach is to compare alternative treatments. If no one shows a difference from the others, the conclusion is that treatment makes no difference, or that they are all equally effective. But equality of effectiveness is extremely unlikely, except in the null case of no effect, e.g., analogically, the likelihood of securing a photograph of four thoroughbreds exactly abreast with one another is high in the starting gate, but extremely low at the finish line.

Although drug abuse treatment can be meaningfully classified as to kind, the variations within a given kind can be quite large. Put somewhat

differently, kinds of treatment are organizational rationales. The actual treatment itself depends upon the implementation of the rationale by particular organizations. In the absence of any evidence or other reason to hold that a given organizational implementation of a particular kind of treatment (or set of such implementations) is superior (or inferior) to another, error in the assessment of the impact of a given kind of treatment is minimized by giving equal weight to each program.

Treatment programs (or agencies) are located in different geographical areas. Typically they are in areas of known high drug abuse, or they draw their clients from such areas. These areas are also quite likely to have high concentrations of particular racial-ethnic groups. There is no evidence or other reason to believe that a given kind of treatment is more or less effective with any one racial-ethnic group or another. Again, the degree of error in assessing the impact of a given kind of treatment would be minimized by giving equal weight to each racial-ethnic group. And, as just indicated, the actual meaning of a given kind of treatment is determined by the way it is implemented by different organizations. The logical implication of these facts and arguments is that the error in evaluating the relative effectiveness of different kinds of treatment would be minimized by achieving equal representation of racial-ethnic groups across kinds of treatment and equal representation of agencies within a given combination of kind of treatment and racial-ethnic group.

At least in Los Angeles County, among the programs included in this project, the agencies also seem to organize their services around the clients' age and primary drug of abuse. As shown in the earlier section on the development of the client typology, younger and older users of drugs other than heroin are rarely found in treatments other than outpatient drug-free. Put

somewhat differently, the vast bulk of the clients in residential drug-free, outpatient methadone maintenance, and in-patient detoxification treatments are older (adult) heroin users. An assessment of the impact of outpatient drug-free treatment in comparison to the other kinds of treatment would thus require that this comparison exclude those kinds of clients but rarely found in the other kinds of treatment (that is, older and younger non-heroin users).

As will be recalled, the basic sampling design sought, in effect, to achieve an equal number of clients of each type within a given kind of treatment, and an equal number of each kind of client from each kind of treatment. And within these constraints (or goals), an attempt was made to maximize agency representation by seeking (in so far as possible) to equalize the number of cases from each agency within a given combination of client type and kind of treatment. Thus, if all the cases from the (basic) sample had been located and interviewed, the resultant distribution of interviewed people would have come as close as possible to achieving the goals of the research design just outlined.

Unfortunately, most of the sampled cases were not located and interviewed. And, for reasons given elsewhere herein, special samples were drawn which resulted in additional deviations from the goal of achieving equal representation across client type, kind of treatment and agency. Equality of representation was achieved by mathematical adjustments (or weightings applied to those interviewed).

Eighteen of the interviews had to be omitted from the analyses. Ten of these were cases from the special "Family" and "Narcotics Anonymous" model samples who were later identified as not being heroin users. It will be remembered that the special samples were drawn independently of the client typology as it had not yet been developed, and the client characteristics

data was not then available for all cases in the Study target population. One case was omitted as the questionnaire had been linked to the wrong client characteristic record and the amount of work which would have been necessary to correct the error was too great. Two others were excluded because they had reported receiving their study period treatment from an agency other than that used in drawing the sample. Three more were omitted as they reported receiving a kind of study period treatment other than that included in the Study. And two more were omitted as they were selected as non-heroin types in ODF but they reported receiving another kind of treatment; they could not be included in the Study because they were non-heroin types in a treatment other than ODF.

Of the 292 remaining cases, 226 were from people in the four heroin types who had received one of the four kinds of treatment to be evaluated. Allocating the 226 cases across the 16 combinations of client type and kinds of treatment yielded just over 14 cases per cell. The number of interviews per cell was therefore set at 14, providing 224 weighted cases for this part of the analysis.

We chose to refer to the above weighting scheme as a "senate" model. The adjustments within each cell were so made as to give equal weight to the agencies represented by those interviewed within a given kind of treatment and client type. For instance, each case from an agency represented by three cases would receive one-third the weight which a case from an agency represented by but one case would receive. The actual weight received by each case was a function of this goal, and the total number of cases in the cell, and to the designated number of 14 cases per cell. By this process, each kind of treatment was evaluated by analysis of an equal number of (weighted) cases from each of the heroin types; and within a given



cell, no one agency was given any greater or lesser weight than any others.

One other model was developed; we called it the "house" model. It sought to come as close as possible to the original design of the Study. At the outset of this project, the goal was to compare different kinds of treatment for representative samples of each type of client. At that point, the design disregarded agency. That is, the plan was to sample clients of each type within kinds of treatment without regard to the agency providing the treatment. When it was discovered that six of the 10 client types developed for the Study were rarely found in treatments other than outpatient drug-free, a request was made to the Project to select the sample so as to allow for after-the-fact comparisons of agencies offering different versions of this kind of treatment. The classification of the agencies was to be developed as part of the project. This request required modification of the original research design in order to maximize the possibility of making the requested comparisons. That is, a means had to be developed which would ensure that whatever classification scheme(s) would be used for the agencies, there would be enough cases from the agencies in each classification to make comparisons. The solution was based on the principle that in the absence of any knowledge about how the objects to be classified will be distributed, the potential number of comparisons is maximized by an equal distribution of distinguishable objects. In this case the distinguishable objects to be classified were treatment agencies. The number of comparisons were therefore to be maximized by choosing an equal number of cases from each agency (to the degree possible, and for each non-heroin client type, as the intent was to make the agency comparisons within client type).

This goal was achieved by the means indicated in the section on the sampling design. In effect, the plan varied the ratio of cases sampled to

cases in the Study target population in order to equalize insofar as possible the number of cases in the sample from each agency, for each client type in outpatient drug-free treatment. The intent then was to weight the sampled cases at the analysis phase so as to provide unbiased estimates of the population from which they were drawn.

This sampling procedure was required only for the non-heroin types in outpatient drug-free treatment. It was used for the total basic sample (for reasons given in the sampling section). At this point in the development of the project, the plan was to weight the cases in both the special and basic samples so as to restore agency proportionality. At that time, the severe loss of cases as unlocatable was not anticipated. The design still called for comparisons of kinds of treatment within each client type.

The severe data loss required a major revision of the basic Study design, in order to have enough cases in each kind of treatment to allow for comparisons. The original design called for comparisons within client type so as to control for differences attributable to client variations (as captured by the typology) in order to provide more valid estimates of treatment effects. The revision to the Study design was intended to achieve the same objective by alternative means. The means chosen was to make the number of clients of each (heroin) type equal for each kind of treatment. This adjustment was to statistically remove the differences in outcome measure across treatments which were actually due to differences in the kinds of clients in the different treatments. Because this model did not include agency as a control variable (for the heroin types), the cases were to be weighted by the sampling ratios within each combination of client type and kind of treatment, so as to restore agency proportionality.

But restoration of agency proportionality required yet another

adjustment due to the severe and differential loss of cases. The adjustment was to multiply the sampling ratios by the ratio of the number of cases (of a given type in a given kind of treatment) in the sample from a given agency to the number of such cases found and interviewed. Finally, these weighted and adjusted cases were again weighted so as to achieve an equal number of each heroin client type in each kind of treatment (and each of the non-heroin types in outpatient drug-free treatment). This very complex procedure resulted in some cases being so heavily weighted that they accounted for nearly two-thirds of the cases in a given cell, and the weighting of others to the extent that they accounted for less than one-tenth of a case. This was typically the result of an agency with a relatively large number of cases in the sample finding but one or two of its cases and an agency with a relatively small number of cases finding many of them. Because the weighting had become so complex and severe, and the justification so fragile, this design was used for but a few comparisons.

These same two designs were used for the non-heroin types in outpatient drug-free treatment. There were 66 interviews from such clients, and six non-heroin types. For the first mentioned design, the cases of each type were so adjusted as to give equal weight to each of the agencies represented and 11 cases per client type. For the second mentioned design, the initial sampling ratios were adjusted to reflect the proportion of the sampled cases from the agency which were interviewed, again keeping the number of cases per client type at 11.

#### B. Statistical Analysis Design

Imagine the following properly weighted set of hypothetical comparisons (for heroin types in the four kinds of treatment).

Table 6.1

Properly Weighted Set of Hypothetical Comparisons

| <u>Key Variables</u>     | <u>Kind of Treatment</u> |            |            |            |
|--------------------------|--------------------------|------------|------------|------------|
|                          | <u>ODF</u>               | <u>RDF</u> | <u>OPM</u> | <u>IPD</u> |
| Weighted number of cases | 56                       | 56         | 56         | 56         |
| Criteria 1 (mean score)  | 45                       | 54         | 23         | 36         |
| Criteria 2               | 54                       | 48         | 46         | 80         |
| Criteria 3               | 65                       | 40         | 41         | 48         |
| Any criteria, in general | $X_1$                    | $X_2$      | $X_3$      | $X_4$      |

What are the comparisons which ought to be made? Some possible comparisons would be ODF versus OPM, or OPM versus IPD, or IPD versus ODF and RDF and OPM combined, or RDF and OPM combined versus ODF and IPD, or ODF and RDF and OPM compared against each other and combined in comparison with IPD. More generally, for any one criterion, singletons may be taken against singletons in twos (6 ways), threes (4 ways), or fours (1 way), singletons against pairs may be taken in 12 ways, and against triads 4 ways, and pairs may be taken against pairs 3 ways. This enumeration of potential comparisons for a single criterion measure shows that 30 could be made. Clearly some way of reducing the number of such comparisons to a manageable number is required. The most desirable solution would rest on some meaningful grounds, and minimize redundancy in the information provided. The following was chosen as coming very close to meeting these standards.

Although the choice of modalities for this project was based on the number of cases in the target population admitted to them, it so happens that they may be seen as representing two different (independent) ways of

classifying drug-abuse treatments. One such way is based on whether the treatments focus upon a socio-psychological perspective (outpatient and residential drug-free modalities, in this case), or the treatment of symptoms (outpatient methadone maintenance and in-patient detoxification, in this case). The other, independent way of classifying the modalities is on the basis of whether they are provided in an outpatient setting (outpatient drug-free and in-patient detoxification modalities). Because these two classifications are independent of each other, the two sets of comparisons (socio-psychological versus symptomatic treatment and outpatient versus in-patient setting) are also statistically independent. In other words, there is no logical necessary connection between the results of the two comparisons. More specifically, statistical tests of the significance of these two differences are independent of each other. And they are meaningful ways of classifying treatments.

The same sorts of comparisons may be made within each of the two classifications just mentioned. That is, within the treatments which are more socio-psychologically oriented and those which are more symptom oriented, independent comparisons may be made between those offered in an in-patient setting and those offered in an outpatient setting. All three of these comparisons would be independent of each other. That is, they would provide non-redundant answers to three separate questions: "Do treatments which focus on socio-psychological treatment have a different impact than those which center on symptomatic treatment; does the in-patient setting differ from the outpatient setting for those which center on socio-psychological treatment; and does the setting matter for those which focus on symptomatic treatment?"

The order of the comparisons may be reversed to achieve a different

set of independent comparisons. For this set, the questions would begin by asking whether or not the setting makes a difference, and then within each of the two settings, questions about the relative effectiveness of socio-psychological versus symptomatic treatment would be asked.

But these two sets of three comparisons each cannot be combined into six which are all independent of each other. Logically, the maximum number of independent comparisons which can be made among four objects is three. Thus, each set exhausts the maximum number of independent comparisons. We will return to this problem shortly.

Table 6.2 outlines the comparisons just presented. The numerical values shown opposite the indicated comparisons and under the modality names indicate how the criteria measures would be combined for each comparison. The four fractional values on the top row after the first treatment comparison indicates that it would be made by taking the average of the criteria for outpatient and residential drug-free modalities (i.e., the sum of one-half of the mean of each of the two modalities) and the average of the criteria for outpatient maintenance and in-patient detoxification, and subtracting one from the other. The values opposite the comparison labelled "Outpatient versus In-patient Setting" have a parallel meaning. These two comparisons are independent of each other. (The mathematical test for such independence is, by the way, that the sum of the products of the weights is equal to zero.)

Table 6.2  
Outline of Treatment Comparisons

| <u>Treatment and Setting Comparisons</u>               | <u>Modality</u> |            |            |            |
|--|-----------------|------------|------------|------------|
|  | <u>ODF</u>      | <u>RDF</u> | <u>OPM</u> | <u>IPD</u> |
| A. Psychological vs. Symptomatic Treatment             | +½              | +½         | -½         | -½         |
| A.1 Outpatient vs. In-patient Psychological Treatment  | +1              | -1         | 0          | 0          |
| A.2 Outpatient vs. In-patient Symptomatic Treatment    | 0               | 0          | +1         | -1         |
| B. Outpatient vs. In-patient Setting                   | +½              | -½         | +½         | -½         |
| B.1 Psychological vs. Symptomatic Outpatient Treatment | +1              | 0          | -1         | 0          |
| C.1 Psychological vs. Symptomatic In-patient Treatment | 0               | +1         | 0          | -1         |

The values in Table 6.2 under each of the two major comparisons just presented have a parallel meaning. For instance, the +1 under ODF and -1 under RDF for the comparison labelled "Outpatient versus In-patient Psychological Treatment" under the major heading labelled "Psychological versus Symptomatic Treatment" means that this comparison would be made by subtracting the mean score for the RDF cases from the mean score for the ODF cases. As is now probably apparent, an additional value of organizing the comparisons in this way is that they quickly lead to comparisons of specific modalities.

As mentioned earlier, the six comparisons shown in the table are not simultaneously independent of each other. The following procedure was developed to take advantage of the symmetry of these sets of comparisons without grossly violating the canons of logic. For each criterion, the

statistically independent differences between socio-psychological versus symptomatic treatment and outpatient versus in-patient setting will be examined. If only one of these shows a significant difference, the two pairwise comparisons shown under it in the table will be made to determine if the other factor (treatment orientation or setting) makes a difference within either of the two sets of modalities.

If both the kind of treatment and the setting show a significant relationship, we will tentatively assume that the effects of each are additive. This is not a necessary conclusion, but it is the conclusion most likely to produce such a result. The assumption will be rejected only if examination of the mean differences among the four treatments leaves little doubt that some other sort of effect is present. The most likely alternative is that one of the treatments is substantially different from the others which in turn causes both the kind and setting differences to become significant.

If neither the kind nor setting effect is significant, but the overall "F" test is, we will assume that the effects of kind and setting are interactive. Again, other conditions could produce such an effect, but the most likely explanation is that the effect of kind is dependent upon the setting, and the effect of setting is dependent upon kind.

Finally, if neither the kind of treatment nor the setting is significant and the overall "F" test is not significant, we will assume that there are no treatment effects. Again, this is not a logically necessary conclusion, and it will ignore some differences which might otherwise have been accepted as significant. The reason for this deliberate decision to ignore other possible differences is directly tied to the fundamental principle of the approach. That principle is to stipulate in advance the comparisons which are



to be made so that the probability of discovering significant differences is not inflated by looking for every possible difference there might be. Because of this, statistical rules effectively allow smaller differences to be declared to be significant.<sup>1/</sup>

Again, the technical specialist will recognize that we have bent, if not broken, the rules. The rules say that only three independent comparisons can be made among four units of analysis, plus an overall test. We have bent the rules by choosing among three sets of comparisons on the basis of the differences shown, and then following the rules within that set. On the other hand, the comparisons could have been approached as two-way analysis of variance model; it would have then been permissible to test each treatment factor (kind, and setting) and the interaction of the two, with the result of the interaction test determining which additional comparisons ought to be made, if any. From this point of view, the major fault of the approach we have used is that it is a rather cumbersome way of doing what could have been done more neatly by a two-way analysis of variance. The reason for taking the cumbersome path is that the statistical program for this kind of analysis of variance produces more convenient outputs and is far more efficient (in both computer time and preparation costs).

<sup>1/</sup> A variation on this approach which might have been "better" would have been to test for interaction effects directly. Referring to Table 6.2, this would have involved assigning the weights as follows: (+ $\frac{1}{2}$  ODF, - $\frac{1}{2}$  RDF, - $\frac{1}{2}$  OPM, + $\frac{1}{2}$  IPD). The "sub-comparisons" shown in Table 6.2 as A.1, A.2, B.1 and B.2 would then have been dropped to maintain orthogonality. But this design too would have led to some unanswered questions, so to speak. Given that interactive effects were not then expected to be frequent, this variation on the design was not used.

### C. Statistical Inference Tests

Statistical inference techniques may be divided in at least two ways. One is on whether they are suitable for measures which may be seen as having some sort of order such that objects with higher numerical values on the measure are higher (or lower) than all cases with a lower value with respect to some dimension reflected by that measure. Other statistical techniques are suitable for inferences about measures which do not have this property. The other way in which statistical inference techniques may be divided is on the basis of whether or not they allow independent comparisons among more than two groups created by classifying the objects under study on the independent variable (kinds of treatment, in this case). The dependent variables used in this Study are of both types, and this requires more than one comparison of kinds of treatment.

The analysis of variance design with planned, orthogonal comparisons is suitable for the analysis of dimensional variables and multiple comparisons across the independent variables. Chi-square is suitable for non-dimensional variables, and Chi-squares can be partitioned into independent components. These two sets of techniques were utilized for this Study, with one exception.

Statistical inference techniques may also be classified on another basis, which is not theoretical. It is whether or not the approach has been programmed for computer application. Given the exploratory nature of this project, it requires a vast number of statistical tests. They simply could not be done without the assistance of the computer. The analysis of variance with planned, orthogonal comparisons is available on computer, and was therefore used extensively.

Any reader of this report with but the slightest familiarity with the requirements of statistical inference techniques will immediately conclude

that the sampling design used for this Study violates the requirements of the techniques we have used. That reader will also quickly conclude that many of the measures used in the analyses of variance do not meet the requirement that they be interval scales. We have nonetheless proceeded to apply these tests on two premises. The first is that there are simply no statistical tests available for the kind of sampling design which we used. It would have to be tailor-made by the most competent statistician, if it could be. The other premise is that some sort of "objective" testing is preferable to none. The resultant probability estimates are without doubt in error, possibly even grossly. We will nonetheless use them as rough guides to the relative order of probability that the differences observed are due to chance, always keeping in mind the possible grossness of the errors and always paying attention to the relative magnitude of the differences. We would welcome any suggestions for viable alternatives. We would plead that most if not all applied research which makes use of statistical inference techniques commits numerous such statistical sins.

#### D. Adjusted "After" Measure

The controls on client type were intended to achieve statistical equality among clients exposed to the differing kinds of treatment. Nevertheless, such equality was not achieved on some before-treatment measures. Any after-treatment differences on these measures could then well be attributed to these pre-existing differences. One way of handling such a situation is to derive change measures by subtracting the after-treatment measures from the before-treatment measures. Unfortunately, this adjustment does not completely remove the possible effects of before-treatment differences on the after-treatment differences. Essentially, the reason is that those

with a very high or low value on the before measure cannot move beyond the "floor" or "ceiling" of the measure used. Bohrnstedt (1969) has recommended that this problem be overcome by using an adjustment which at first seems strange, but which can be quickly seen to be readily appropriate.

The adjustment is to subtract from the actual after value the expected after value determined by the relationship between the before and after measures, using linear regression analysis. The adjusted after measure is then the difference between the actual value and what it would have been expected to be based on the regression analysis. This adjusted measure is really a change measure. That is, it is a measure of the degree to which the variable being measured deviates from what would have been expected based solely on before-treatment conditions. If some other variable (such as kind of treatment) is associated with a higher or lower value on the adjusted after measure, then the conclusion is that the variable (kind of treatment, for this example) is making some degree of difference. And, this adjustment removes the correlation between the before and after measure.

This technique may seem to some to be rather mysterious and possibly even destructive of whatever real relationships there may be between treatment and the after measures. Table 6.3 is intended to provide some information which may help to dispel the mystery and build greater confidence in the results. The table presents the correlation between the before and after measures. Clearly, the two are correlated. The correlations of the before with the adjusted after measures are as close to zero as one is likely to find in any sample for any set of measures. Without doubt, the adjustment to the after measures has eliminated the correlations with the before measures. This means that any differences in the adjusted after measures associated with treatments (or other variables) are probably not due to

differences in the before measures. But, one might imagine that the adjusted measure no longer reflects the variable which it originally did. The last column of the table shows that this is definitely not the case. All of the correlations between the adjusted and original after measures are very high, with none being below 0.7 and many above 0.9. The technique seems to have worked very well.

Essentially, this is the same as the procedure used in the analysis of covariance. The covariate (before measure) is used to remove variations in the criterion (after measure) which are extraneous to the treatment factors in order to determine if any differences associated with the kinds of treatment remain. The assumption underlying this approach is that the relationship between any given before and after measure are constant across kinds of treatment. Again, this condition was assumed to hold, rather than tested.

Table 6.3

Correlations Among Selected Before, After,  
and Adjusted After Measures

| <u>Variable Measure</u>  | <u>Before<br/>with<br/>After</u> | <u>Before with<br/>Adjusted<br/>After</u> | <u>After with<br/>Adjusted<br/>After</u> |
|--|----------------------------------|---|--|
| Number of drug treatments  | .31                              | .00                                       | .95                                      |
| Number of drug problems  | .46                              | .00                                       | .89                                      |
| Rank order of marijuana as a problem   | .63                              | .00                                       | .78                                      |
| Rank order of oral amphetamines as<br>a problem  | .25                              | .00                                       | .97                                      |
| Rank order of barbiturates as a<br>problem   | .34                              | .00                                       | .94                                      |
| Rank order of heroin as a problem  | .53                              | .00                                       | .85                                      |
| Rank order of alcohol as a problem   | .49                              | .00                                       | .87                                      |
| Number of times arrested and charged   | .25                              | .00                                       | .97                                      |
| Rank order of wages or salary as<br>source of income   | .32                              | .00                                       | .95                                      |
| Rank order of support by parents,<br>mate, other family, friends or<br>loans, private charity as a<br>source of income   | .53                              | .00                                       | .85                                      |
| Rank order of welfare payments of<br>any kind or publicly supported<br>institutions as a source of<br>income   | .51                              | .00                                       | .86                                      |
| Rank order of illegal activities<br>(including dealing) as a source<br>of income   | .41                              | .00                                       | .91                                      |
| Coded frequency of burglary or<br>breaking and entering  | .41                              | .01                                       | .91                                      |
| Coded frequency of theft (shop-<br>lifting, stealing, receiving<br>or fencing stolen property,<br>checks, credit cards, forging,<br>prescriptions, auto theft) | .41                              | .01                                       | .91                                      |
| Coded frequency of dealing or<br>selling drugs   | .41                              | .00                                       | .91                                      |
| Yearly frequency of heroin use   | .32                              | .00                                       | .95                                      |
| Yearly frequency of marijuana use  | .41                              | .00                                       | .91                                      |

Continued-----

Table 6.3 (continued)

| <u>Variable Measure</u>                 | <u>Before with After</u> | <u>Before with Adjusted After</u> | <u>After with Adjusted After</u> |
|---|--------------------------|-----------------------------------|----------------------------------|
| Yearly frequency of alcohol use         | .20                      | .00                               | .98                              |
| Dollar value of each heroin use         | .49                      | .00                               | .87                              |
| Dollar value of each marijuana use      | .50                      | .00                               | .86                              |
| Dollar value of each alcohol use        | .38                      | .00                               | .92                              |
| Dollar spent on all drugs, total period | .29                      | .00                               | .96                              |
| Hourly wage of best job                 | .39                      | .00                               | .92                              |
| Months employed on best job             | .31                      | .00                               | .95                              |
| Months unemployed (looking for work)    | .43                      | .00                               | .90                              |
| Average monthly legal income            | .43                      | .00                               | .90                              |
| Average monthly illegal income          | .43                      | .00                               | .90                              |

#### E. Scale Construction

Several sets of multiple-choice items were especially designed for this project. In general, they sought to tap the more psychologically oriented aspects of treatment effects. Some of these items were from already developed scales; they were so analyzed. Others were included on the basis of highly general notions about important aspects of drug treatment. Inspection of the relationships between the responses to the items clearly indicated that the items did not form the patterns which had been expected. Because the number of these items was relatively large and the intended ordering was not revealed, a means for reducing and organizing the data had to be found. The means chosen was to do a simple factor analysis of each set, with the sole aim of revealing which sub-sets of items tended to have moderate degrees of correlation among them. Those sub-sets which tended to have moderate to high intercorrelations that made intuitive

sense were combined into scales, either by adding the number of items endorsed or by adding the response values when they were expressed in terms of frequencies. Adjustments were made, of course, for positively and negatively expressed items.

Two of the sets of items require some special comment. One set asked the respondents if they sought a series of services from the study period treatment program, and if they got the services. Each of these sets was separately analyzed. A composite set of items was created from them by giving a score of one (1) to the item if the person said that the service was both sought and received, a minus one (-1) if the service was sought but not received, and a score of zero (0) to all other response combinations for that item. The services sought versus received measures reported herein are based upon the simple algebraic addition of these scores. A positive score therefore means that the person sought and received more services than he sought and failed to get. A score of zero would mean that either no services of the kind were sought, or that the number received equalled the number not received (for those sought). In a sense, this method of handling the data tends to penalize those modalities in which the clients sought a larger number of services, and to produce zero scores for those kinds of treatments in which the clients did not seek many services. But, compensating for differences in the numbers of services sought would seem to be contrary to the basic idea which was that agencies which are more able to provide more services are probably better than those which cannot deliver or which are not requested to provide them.

Another series of questions asked the respondents whether an act or event being asked about was more true of the period before treatment or after, or if there was not much of a difference. The "before" responses



were scored as minus one (-1), the "after" as plus one (1), and "no difference" was scored as zero (0). A score greater than zero then means that the items in the scale were generally more true for the "after" period, and a negative score means that the items were generally more true of the "before" treatment.

With but one exception, the scales so constructed were well behaved, in a statistical sense. That is, the items had high correlations with the total scores. If the intent were to construct scales, proper procedures would have called the particular item being tested omitted from the total. This was not done in that the sole purpose of these scales was to reduce the number of treatment comparisons to be made by organizing these items. The resultant "scale" scores are not intended to reflect some theoretically derived and empirically tested construct, but are rather intended solely to give summary measures of the responses by the people interviewed for this Study.

Table 6.4 shows the "scales" which were constructed, and the items put into them, along with the correlation ( $\gamma$ ) of each item with the total score for the "scale."

Even though the number of scales produced was large (more than 20), the convenience afforded is great, since they were derived from nearly 100 separate items. Given that many of these items show responses highly correlated with one another, the reduction to a lesser number of scales serve to curb the redundancy among findings, while increasing the sensitivity of the analysis in terms of the capability of detecting more subtle differences among modalities. The first 12 scales are addressed to the problem of distinguishing among the types of services sought and received by clients, the next three scales to client depictions of the programs' characteristics, and the last 8 to clients' comparisons of events and feelings preceding and following treatment.

Table 6.4

Psycho-social Scales Constructed for Project

| Scale Name and Constituent Items              | Gamma |
|---|-------|
| Number of More-Effective-Self Services Sought |       |
| Sought techniques for dealing with system     | .77   |
| Sought relief from confusion                  | .86   |
| Sought a new life style                       | .92   |
| Sought more self confidence                   | .96   |
| Sought a new personality                      | .90   |
| Sought better work habits                     | .84   |
| Sought help with personal relationships       | .72   |
| Number of More-Effective-Self Services Got    |       |
| Got techniques for dealing with system        | .81   |
| Got relief from confusion                     | .82   |
| Got a new lifestyle                           | .93   |
| Got more self confidence                      | .95   |
| Got a new personality                         | .93   |
| Got better work habits                        | .90   |
| Got help with personal relationships          | .77   |
| More-Effective-Self Services Sought vs Got    |       |
| Techniques for dealing with the system        | .69   |
| Relief from a crisis                          | .74   |
| A new lifestyle                               | .81   |
| More self confidence                          | .83   |
| A new personality                             | .80   |
| Better work habits                            | .81   |
| Help with personal relationships              | .58   |
| Number of Employment Services Sought          |       |
| Sought better work habits                     | .93   |
| Sought training or education                  | .97   |
| Sought a job                                  | .98   |
| Sought a drug-program job                     | .84   |
| Number of Employment Services Got             |       |
| Got better work habits                        | .99   |
| Got training or education                     | .97   |
| Got a job                                     | .99   |
| Got a drug-program job                        | .94   |
| Number of Employment Services Sought vs Got   |       |
| Better work habits                            | .81   |
| Training or education                         | .86   |
| A job   | .86   |
| A drug-program job                            | .76   |

Continued-----

Table 6.4 (continued)

| Scale Name and Constituent Items              | Gamma |
|---|-------|
| Number of Survival-Assistance Services Sought |       |
| Sought a place to stay                        | .92   |
| Sought public assistance                      | .95   |
| Sought financial assistance                   | .96   |
| Sought general medical attention              | .93   |
| Sought legal aid                              | .88   |
| Number of Survival-Assistance Services Got    |       |
| Got a place to stay                           | .92   |
| Got public assistance                         | .94   |
| Got financial assistance                      | .94   |
| Got general medical attention                 | .94   |
| Got legal aid                                 | .89   |
| Survival-Assistance Services Sought vs Got    |       |
| A place to stay                               | .79   |
| Public assistance                             | .86   |
| Financial assistance                          | .77   |
| General medical attention                     | .85   |
| Legal aid                                     | .86   |
| Number of Drug-Use-Control Services Sought    |       |
| Sought methadone or detoxification            | .87   |
| Sought reduction in drug use                  | .93   |
| Sought elimination of drug use                | .96   |
| Sought relief from a crisis                   | .73   |
| Number of Drug-Use-Control Services Got       |       |
| Got methadone or detoxification               | .83   |
| Got reduction in drug use                     | .84   |
| Got elimination of drug use                   | .94   |
| Got relief from a crisis                      | .84   |
| Drug-Use-Control Services Sought vs Got       |       |
| Methadone or detoxification                   | .73   |
| Reduction in drug use                         | .76   |
| Elimination of drug use                       | .79   |
| Relief from a crisis                          | .77   |
| Number of Client Disrespect Items Endorsed    |       |
| Some staff liked pushing clients around       | .75   |
| Staff watched out for clients' rights         | .16   |
| Staff respected client's dignity              | -.31  |
| Staff treated you like a child                | .93   |
| Staff treated you like you were inferior      | .91   |
| Staff treated you like you were sick          | .87   |

Continued-----

Table 6.4 (Continued)

| Scale Name and Constituent Items                      | Gamma |
|---|-------|
| Number of Program-Helpfulness Items Endorsed          |       |
| Would recommend program to a friend, if needed help   | .92   |
| Program was really a shuck                            | -.90  |
| Staff really cared about you                          | .95   |
| Program was really out for the money                  | -.90  |
| Staff went out of their way to help the clients       | .91   |
| Would contact the program first, if needed help again | .96   |
| Number of Weak-Program Items Endorsed                 |       |
| The staff bent the rules for the clients they liked   | .98   |
| The program was a good place to score                 | .91   |
| The program was clean                                 | -.93  |
| Socially Desirable Changes Indicated                  |       |
| When did you feel the happiest                        | .74   |
| When did you have the closest friends                 | .73   |
| When did you have the most confidence in yourself     | .79   |
| When did you spend the most time with your family     | .70   |
| When did you spend the most time helping other people | .75   |
| When did you cause other people to suffer the most    | -.83  |
| When did you save the most money                      | .74   |
| When did you get hassled the most by other people     | -.76  |
| When did you try to help your friends the most        | .74   |
| When did you have the worst time                      | -.81  |
| When did you understand yourself the best             | .78   |
| Before vs After Work-Involvement Changes              |       |
| When did you work the hardest                         | .85   |
| When did you earn the most money                      | .81   |
| When did you like your job the most                   | .76   |
| When did you spend the most time working              | .88   |
| Before vs After Psychosocial Involvement              |       |
| When did you have the best time                       | .79   |
| When did you feel the most in love with someone       | .77   |
| When did you spend the most time helping other people | .83   |
| When did you learn the most about life                | .77   |
| When did you try to help your friends the most        | .78   |
| When did you understand yourself the best             | .85   |

Continued-----

Table 6.4 (Continued)

| Scale Name and Constituent Items                            | Gamma |
|---|-------|
| <b>Before vs After Bad Drug-Use Consequences</b>            |       |
| When did you worry the most                                 | .75   |
| When did you use the most drugs                             | .82   |
| When did you spend the most time in jail                    | .69   |
| When did you cause other people to suffer the most          | .88   |
| When did you spend the most money                           | .80   |
| When did you get hassled the most by other people           | .85   |
| When did you have the worst time                            | .81   |
| <b>Involvement-with-Other-Users Acts and Events</b>         |       |
| How often were you insulted by a policeman                  | .60   |
| How often did you see the police hurt someone physically    | .66   |
| How often were you offered stolen goods to buy              | .75   |
| How often did you urge someone to seek drug treatment       | .59   |
| How often did you help bail someone out of jail             | .68   |
| How often did you visit or write someone in jail or prison  | .68   |
| <b>Drug-Use Involvement Acts or Events</b>                  |       |
| How often did you get really stoned on any drug (not alco.) | .90   |
| How often did you sell anyone illegal drugs                 | .95   |
| How often did you buy illegal drugs from someone            | .93   |
| <b>Economic Hardship Events</b>                             |       |
| How often were you evicted by a landlord                    | .77   |
| How often did you have a car or belongings repossessed      | .82   |
| How often were you refused medical attention                | .80   |
| How many jobs did you lose                                  | .78   |
| How often did you have no place to stay                     | .87   |
| How often were you badly cheated by a company or store      | .76   |
| <b>Psychological Depression Acts or Events</b>              |       |
| How often did you have a supernatural experience            | .83   |
| How often did you cry                                       | .94   |
| How often did you attempt suicide                           | .86   |

NOTE: The wording of the items has been changed for this table. The exact wording is to be found in the questionnaire.

End of Table 6.4

## 7. OVERVIEW OF INFORMATION OBTAINED FROM THE INTERVIEWS

This chapter provides information derived from the total sample of interviewed cases (less those dropped because of insurmountable problems in essential information). These 292 cases were weighted by the initial sampling ratios (adjusted so as to make the number of weighted cases equal to 292 in order to avoid the impression that the results are based on more cases than there actually were). As indicated in the section on sampling bias, those interviewed are a biased sample of the Study target population; this bias is the result of the agencies' inability to locate their former clients. The results of this analysis may, then, be generalized only to those clients in the Study population which the agencies would be able to locate.

In addition to providing some basic and possibly interesting information, the purpose of this chapter is to bring to the reader's attention some of the ambiguities of the information which was collected in the interviews, and to set forth some cautions on interpretation which are best expressed in terms of actual data. A copy of the questionnaire is contained in appendix D, and excerpts from the interviewer's manual are given in appendix E.

### A. Assistance and Adjustments

#### 1. Treatment needs

One of the problems faced by treatment administrators is the determination of the demand for services. A rather sophisticated and different kind of study would be required to provide an answer to this kind of question. But, some of the information collected for this Study

is relevant. The clients were asked if they had ever tried to get into a program which would not admit them during the year before treatment, the period of treatment, or the year after. Just over 20 percent said "yes." These people were asked what kind of service they had wanted. Nearly 40 percent had sought outpatient maintenance, nearly 30 percent wanted drug-free residential treatment, and just over 20 percent had tried to get in-patient detoxification. They were also asked if they had ever been kept on a "waiting list" during this entire period; one-third said yes. Of those who had been, 45 percent reported that it was for outpatient maintenance and 30 percent said it was for in-patient detoxification. No other single category (except miscellaneous) accounted for more than 10 percent of the responses. If there are deficiencies in treatment opportunities, they would seem most likely for outpatient maintenance and in-patient detoxification. Nearly 45 percent of the clients reported that they were seeking one or both of these kinds of treatment from the "study period treatment program."

## 2. Treatment entry

About two-fifths of the clients interviewed (39%) claimed to have entered treatment under some form of duress--either "diverted" by a criminal justice agency (29%), or "pressured" (10%). Among the first, or diverted sub-group, 93 percent reported that treatment had been offered by the court as an alternative to confinement. Among the latter, or pressured sub-group, 86 percent reported the pressure as emanating from a criminal justice agency--predominantly the courts or probation/parole services. Among the clients who did not view themselves as either diverted or pressured into treatment, about one-third (33%) claimed that family members or friends had suggested they enter treatment.

3. Nature of help sought

Interviewees were asked what were the main sorts of help they had been seeking at the time they entered treatment, and whether the program had managed to provide them each kind of help. The types of help are listed in Table 7.1 in order of how frequently they were sought.

Table 7.1

| <u>Type of Help</u>                         | <u>Percent Sought<br/>(of clients)</u> | <u>Percent Obtained<br/>(of those seeking)</u> |
|---|--|--|
| 1. New lifestyle                            | 68%                                    | 64%  |
| 2. Reduction in drug use                    | 64                                     | 86   |
| 3. Elimination of drug use                  | 60                                     | 54   |
| 4. More self-confidence                     | 59                                     | 75   |
| 5. Relief from a crisis                     | 53                                     | 75   |
| 6. Relief from confusion                    | 51                                     | 77   |
| -----                                       |  |  |
| 7. Better work habits                       | 48                                     | 67   |
| 8. Techniques for coping with<br>the system | 46                                     | 71   |
| 9. Methadone or detox treatment             | 44                                     | 87   |
| 10. Alternative to incarceration            | 44                                     | 85   |
| 11. Breathing space                         | 42                                     | 78   |
| 12. Training or education                   | 41                                     | 51 <u>a/</u>                                   |
| 13. A job                                   | 41                                     | 50 <u>a/</u>                                   |
| 14. Help with personal<br>relationships     | 37                                     | 76   |
| 15. A new personality                       | 37                                     | 77   |
| 16. General medical attention               | 29                                     | 73   |
| 17. A drug program job                      | 26                                     | 38 <u>a/</u>                                   |
| 18. Public assistance                       | 25                                     | 68   |
| 19. Financial assistance                    | 24                                     | 56 <u>a/</u>                                   |
| 20. Legal aid                               | 18                                     | 51 <u>a/</u>                                   |
| 21. A place to stay                         | 14                                     | 53 <u>a/</u>                                   |
| 22. Rescue after an overdose                | 3                                      | 76   |

a/ Explained in text that follows.

For the majority of types of help sought, at least two-thirds of the clients seeking it believed that the treatment program had actually managed



to render them that form of assistance. The exceptions (a/) all lie within the economic sphere--items 12, 13, and 17 pertaining to training or jobs, and items 19, 20, and 21, pertaining to financial or legal aid, or a place to stay.

About two-fifths of the former clients did not list reduction or elimination of drug use among the main types of help they had sought. Of these, only 37 percent claimed the program had helped them reduce use, and 15 percent to eliminate it, compared to 86 percent and 54 percent, respectively, among those who had sought such help.

#### 4. Perceptions of the treatment program

The interviewees were asked a set of 55 true-false questions about their impressions of the study period treatment program, and were not pressured to respond if they had no ready opinion or were reluctant to offer one. The findings reported in Tables 7.2 through 7.6 are based on the percent of affirmative replies among those offering a response to a particular item. Whenever 10 percent or more of interviewees offered no response to an item, this fact is also noted. At least three-quarters of respondents agreed with the assertions listed in Table 7.2.

Table 7.2

Perceptions of Treatment Program  
("True" = 76-100%)

| <u>Statement</u>   | <u>Percent</u>   |
|--|------------------|
| The program was good for the community.  | 96 <sup>1/</sup> |
| The program was clean.   | 91               |
| I would recommend the program to a friend if he/she needed help.<br>needed help. | 84               |
| I liked most of the clients in the program.                                      | 90 <sup>2/</sup> |
| The important decisions were made by the staff.                                  | 80 <sup>3/</sup> |
| Have to want to change for program to help.                                      | 80               |
| Most of the clients stood up for their rights.                                   | 80               |
| The staff made it clear what was expected of you.                                | 78               |
| The staff really cared about you.  | 80               |
| The staff respected the clients' dignity   | 83               |
| The staff went out of their way to help the clients.                             | 79               |
| The staff watched out for the clients' rights.                                   | 81               |
| <u>1/</u> 10 percent offered no opinion  |                  |
| <u>2/</u> 16 percent offered no opinion  |                  |
| <u>3/</u> 13 percent offered no opinion  |                  |

Between three-fifths and three-fourths of respondents endorsed the statements given in Table 7.3 which follows.

---

Table 7.3  
Perceptions of Treatment Program  
("True" = 61-75%)

| <u>Statement</u>   | <u>Percent</u>   |
|--|------------------|
| I would contact this program first if I needed help again. | 70%              |
| I was friends with clients in the program.                 | 75               |
| The staff were really strict about the rules.              | 70               |
| Most of the clients in the program were criminals.         | 61 <sup>1/</sup> |
| Most of the staff came from the community.                 | 82 <sup>2/</sup> |
| Most of the staff were ex-drug users.                      | 65 <sup>3/</sup> |
| I was friends with the staff.                              | 68               |
| The program was involved in organizing the community.      | 67 <sup>4/</sup> |
| It was easy to get into the program.                       | 63               |
| The staff treated you like a member of their own family.   | 62               |
| <hr/>  |                  |
| <u>1/</u> 12 percent offered no opinion                    |                  |
| <u>2/</u> 29 percent offered no opinion                    |                  |
| <u>3/</u> 19 percent offered no opinion                    |                  |
| <u>4/</u> 22 percent offered no opinion                    |                  |

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Between two-fifths and three-fifths of respondents endorsed the statements listed in Table 7.4.

Table 7.4

Perceptions of Treatment Program  
("True" = 41-60%)

| <u>Statement</u>   | <u>Percent</u>   |
|--|------------------|
| Most of the clients got into the program just to cut down on their habits. | 59 <sup>1/</sup> |
| Most of the clients were running a game on the program.                    | 44 <sup>2/</sup> |
| Most of the clients in the program had lightweight drug problems.          | 57 <sup>3/</sup> |
| The people there left me alone.  | 59               |
| The program tried hard, but there was just not much it could do.           | 41               |
| The staff were underpaid and overworked.                                   | 56 <sup>4/</sup> |
| <u>1/</u> 19 percent offered no opinion                                    |                  |
| <u>2/</u> 23 percent offered no opinion                                    |                  |
| <u>3/</u> 26 percent offered no opinion                                    |                  |
| <u>4/</u> 26 percent offered no opinion                                    |                  |

Between one-quarter and two-fifths of the respondents agreed with the statements given in Table 7.5.

---

Table 7.5

Perceptions of Treatment Program  
("True" = 26-39%)

| <u>Statement</u>   | <u>Percent</u>   |
|--|------------------|
| A lot of people lied about their drug problems in order to get into the program. | 39 <sup>1/</sup> |
| The program helped me increase my earning power by at least \$50 per month.      | 35               |
| A program staff person became an important person in my life.                    | 36               |
| The staff tried to keep you in the program a lot longer than necessary.          | 30               |
| The staff forced you to earn their respect by working for it.                    | 30               |
| Most of the help I got was from other clients.                                   | 33               |
| Most of the help I got was from the medication offered.                          | 32               |
| <hr/> <sup>1/</sup> 29 percent offered no opinion                                |                  |

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No more than one-quarter of the respondents endorsed the assertions given in Table 7.6.

Table 7.6  
 Perceptions of Treatment Program  
 ("True" = 0-25%)

| <u>Statement</u>   | <u>Percent</u>   |
|--|------------------|
| The staff bent the rules for people they liked.                      | 24 <sup>1/</sup> |
| Some of the staff liked to push clients around.                      | 20               |
| The staff treated you like you were sick.                            | 18               |
| The staff treated you like you were a child.                         | 12               |
| The staff treated you like you were inferior.                        | 15               |
| The staff treated you like you were a criminal                       | 4                |
| The staff treated you like you were crazy.                           | 3                |
| You really had to have a heavy drug problem to get into the program. | 16               |
| The program dug into your private life too much.                     | 17               |
| The staff tried to get you out of the program as fast as they could. | 11               |
| The clients usually ran the place.                                   | 14               |
| The program was really out for the money.                            | 12 <sup>2/</sup> |
| The program was really a shuck.                                      | 16               |
| The program was a good place to score.                               | 12               |
| A lot of the staff used drugs.                                       | 11 <sup>3/</sup> |
| The police hassled the program.                                      | 16 <sup>4/</sup> |
| Some of the clients were police agents or informers.                 | 12 <sup>5/</sup> |
| The program was in-tight with the police.                            | 11 <sup>6/</sup> |
| Members of my family participated in my treatment at the program.    | 24               |
| I don't want people to know that I was in the program.               | 21               |
| The program was controlled by a powerful group of outsiders.         | 18 <sup>7/</sup> |
| <u>1/</u> 10 percent offered no opinion                              |                  |
| <u>2/</u> 17 percent offered no opinion                              |                  |
| <u>3/</u> 12 percent offered no opinion                              |                  |
| <u>4/</u> 10 percent offered no opinion                              |                  |
| <u>5/</u> 30 percent offered no opinion                              |                  |
| <u>6/</u> 24 percent offered no opinion                              |                  |
| <u>7/</u> 28 percent offered no opinion                              |                  |

A substantial majority of those interviewed endorsed generally favorable comments about the genuineness of the staff and program to which they had been exposed, together with a willingness to recommend the program to friends or to return there themselves if help were again needed. A small minority viewed their program as phony or infiltrated by law enforcement, or viewed the staff as denigrating clients. Least consensus appeared to exist in the characterization of other clients seen in the program, such as the severity of their problems and their sincerity toward treatment.

The former clients were near unanimous in the belief that their study period treatment program was good for the community (96%), in their liking for most other clients in that program (90%), in their willingness to recommend the program to a friend in need of help (84%), and in their belief that staff had "gone out of their way" to help clients (79%). A clear majority (70%) claimed they would contact this program first if they found themselves again in need of help. They were more evenly divided in assessment of other clients' drug problems, with 57 percent perceiving the majority of these as lightweight, and 44 percent looking upon most other clients as "running a game" on the program. Fully two-fifths viewed the power of their program to effect change as rather modest--41 percent agreed that, while "the program tried hard, there was just not much it could do. Only a minority (35%) believed that the study period treatment program had been of assistance in increasing earning power.

Few clients (24%) accused program staff of favoritism, or "bending rules for people they liked," and very few saw the program as intruding by "digging into your private life too much" (17%), or its staff denigrating clients by "treating you like you were inferior" (15%). Very few (16%) thought it was necessary to have a "heavy" drug problem to obtain admission

to the program.

A number of these items' response distributions varied by treatment modality--differences in perceptions of and sentiment toward particular modalities will be examined in the next chapter.

5. The milieu and circumstances of the clients

One set of questions asked of the interviewees was devised primarily to obtain information about their social setting and condition from their standpoint as observers and experiencers, and was not intended to determine whether change had occurred or whether treatment was to be credited--we asked merely how often certain kinds of events had occurred "during the last year or so." It should be noted that there is necessarily ambiguity in interpreting events which are contingent on occurrence of prior events about which no inquiry was made--an ambiguity we were prepared to accept in the interest of economy and simplicity. For example, 29 percent of the respondents claimed they had been denied credit, but we are not in position to determine how many others received credit or how many failed to apply for credit who would have been denied.

In other transactions with the business community, about one in four (28%) believed themselves to have "been badly cheated by a company or store," but less than 8 percent had "been evicted by a landlord" and less than 5 percent had "had a car or belongings repossessed;" 9 percent claimed they had "been refused medical attention" during the last year or so.

In terms of other misfortunes suffered, nearly two in five (39%) said their car had been damaged by an accident, 22 percent had been burglarized, and 20 percent physically injured by someone. Forty percent stated they had "seen police hurt someone physically," and an identical percent claimed they had themselves "been insulted by a policeman" during the past year or



so. Misfortunes befalling close acquaintances were claimed to be quite common, with 44 percent stating that they had in the recent past attended a young friend's funeral, and 32 percent recently hearing about a friend or relative getting injured at work. Nearly one-half (48%) had visited or written someone in jail or prison, and 42 percent helped bail someone out of jail. Almost three-quarters (70%) had found occasion to urge someone to seek drug treatment.

A majority (55%) of the respondents had "been completely broke" at least several times during the last year or so; only 33 percent had not been broke at least once. One-fourth had found it necessary to pawn personal belongings. One-half of the persons interviewed had managed to borrow "more than \$50 at one time," and 39 percent had been in a position where they loaned more than \$50 to someone. One-fourth had lost a job and one-fourth had found themselves at least once in a situation where they "had no place to stay."

Only one-fourth of the interviewees had not "been offered drugs for free" at least once during the last year or so, and nearly two-thirds had received repeated offers (i.e., three or more times). Two-thirds had "been offered stolen goods" to buy, and two-fifths of all interviewees had been repeatedly offered such opportunity. One-fourth acknowledged purchasing stolen goods. Three-fifths had "bought illegal drugs for someone else," and generally on at least several occasions. One-third denied that they had "gotten really drunk on alcohol," and two-fifths also denied they had "gotten really stoned on any drug other than alcohol;" about one-half the respondents claimed they had gotten repeatedly stoned during the last year or so.

Two-fifths of the persons interviewed admitted they had sold illegal

drugs, and those who made this admission usually said they had done so on at least several occasions. Six percent had either "sold or given away methadone." Five percent, also, claimed they had "sold sex as a pimp or prostitute." Only one percent stated that they had "sold information to the police." Two-fifths had engaged in gambling to an extent that they "had won or lost \$20 or more in gambling in one day."

As indicated at the beginning of this section, the main aim of this set of items was to obtain some description of the surroundings within which the former clients conducted their lives--features of their economic environment as much as of their attachment to a "drug culture." Norms against which to compare the treated clients against a general population, or against an economically impoverished sub-population are not readily available for these items. We are, consequently, not in a position to say whether these clients had an unusually high rate of suicide attempts (6% claimed such attempts in the past year or so), or occasions on which they cried (56% admitted crying, and 42% had cried at least several times), or proneness to "supernatural experience" (18%). Finally, of course, we are not in a position to assess what standard was involved in judgment such as eating in a "fancy" restaurant (two-thirds had done so repeatedly), or the reasons behind such actions as "taken a plane trip" (24%--business? pleasure?), or behind non-action--80 percent had donated neither time nor money to a political cause or candidate (owing to poverty, or apathy, or ?). Despite these qualifications, it seems apparent that a substantial proportion of clients exist in a vulnerable setting in which opportunity and temptation to drug use are high, the economic means to insulate oneself from the consequences of use are low, and the resolve to abstain likely to necessitate either substantial social talent or considerable determination.

6. Well-being and symptomatology

The interviewees were asked a series of items developed by Norman Bradburn (1969) for which some normative data exist and comparisons against a general population are possible. These items are focussed upon the "past few weeks" of an interviewee's life and the responses therefore reflect current (post-treatment, except for methadone) client status.

On a series of feeling-state items, the sample of interviewed clients is compared with a 1965 national probability sample of the general population. The results of this comparison are given in Table 7.7.

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Table 7.7

| Feeling-State Items<br>National Probability Compared with Clients Interviewed |                 |                |
|---|-----------------|----------------|
|   | <u>National</u> | <u>Clients</u> |
| <u>Positive</u>   |                 |                |
| Please about having accomplished something.                                   | 84%             | 89%            |
| Proud because someone had complimented you<br>on something you had done.      | 71              | 78             |
| (Feeling) that things were going your way.                                    | 71              | 66             |
| Particularly excited or interested in something.                              | 54              | 82             |
| (Feeling) on top of the world.  | 33              | 33             |
| <u>Negative</u>   |                 |                |
| Upset because someone criticized you.   | 18              | 19             |
| Very lonely or remote from other people.                                      | 26              | 34             |
| Depressed or very unhappy   | 30              | 39             |
| So restless that you couldn't sit long<br>in a chair.                         | 53              | 55             |
| Bored   | 34              | 54             |

---

On the positive feeling items, there are no major differences except for the substantially greater likelihood of excitement or interest among treated clients, as compared to national norms. The client sample is consistently more prone to the various negative feeling states, but markedly so only on boredom.

On a level of greater generality, clients were asked:

"Taken all together, how would you say things are these days; would you say that you are very happy, pretty happy, or not too happy."

The distribution of replies on this item showed our respondent sample less happy than a national sample, but almost identical to a Detroit inner-city sample surveyed in 1963. The results are given in Table 7.8.

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Table 7.8

Distribution of Replies on "Happy" Item:

|               | <u>Detroit<br/>Inner-<br/>city</u> | <u>Clients</u> |
|---------------|------------------------------------|----------------|
| Very happy    | 22%                                | 17%            |
| Pretty happy  | 63                                 | 60             |
| Not too happy | 15                                 | 22             |

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Tables 7.9 and 7.10 compare the treated clients against the national sample on two other measures of general satisfaction and desire for change.

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Table 7.9

General Satisfaction

|  | <u>National</u> | <u>Clients</u> |
|--|-----------------|----------------|
| "When you think of the things you want from life, would you say that you're: |                 |                |
| doing very well."  | 28%             | 14%            |
| doing pretty well.", or  | 59              | 52             |
| not doing too well now."   | 13              | 34             |

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Table 7.10  
Desire for Change

|   | <u>National</u> | <u>Clients</u> |
|---|-----------------|----------------|
| "Think of how your life is going now:<br>Do you want it to continue in much<br>the same way?" | 34%             | 15%            |
| Do you wish you could change some<br>parts of it?"  | 56              | 53             |
| Do you wish you could change many<br>parts of it?"  | 10              | 32             |

---

While the sample of former clients tends to a greater than usual general malaise, and appears substantially more likely than the general population to complain about recent sleeplessness (41% versus 21%), stomach upset (31% versus 23%), and sweaty hands (20% versus 15%), there is essentially no disadvantage on other symptoms, such as headache (37% in our sample versus 44%), dizziness (11% versus 16%), rapid heart beat (12% versus 13%), nervousness or tenseness (48% versus 57%), or feeling on the verge of a nervous breakdown (22% versus 22%).

The items taken from Bradburn include a dozen topics about which persons are asked whether they worried in the past few weeks. Norms are available only for a "worry index" derived from summation, rather than for the separate items; the individual topics are listed in Table 7.11 in the order which members of our sample were prone to acknowledge recent worries.

---

Table 7.11  
"Worry" Items

| <u>Items</u>  | <u>"YES"</u> |
|---|--------------|
| 1. Moving ahead in the world.                         | 73%          |
| 2. Not having enough money.                           | 63           |
| 3. Financial debts.                                   | 46           |
| 4. The world situation.                               | 46           |
| 5. Your children.                                     | 44           |
| 6. Getting along with spouse or lover.                | 37           |
| 7. Your health.                                       | 37           |
| 8. Things that happen in your neighborhood.           | 37           |
| 9. People you have trouble with.                      | 31           |
| 10. How things are going at work or at spouse's work. | 28           |
| 11. Growing old.                                      | 23           |
| 12. Sexual problems.                                  | 14           |

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7. Psycho-social change

Interviewees were asked to compare aspects of their life situation for the year preceding their admission with the year following their departure from treatment (except methadone clients still in treatment, whose "AFTER" period was the year preceding interview). On each of 33 aspects, clients were asked to judge whether it was more true for the "BEFORE" period or the "AFTER" period, or whether there was no difference. It should be noted that these items are addressed merely to whether change occurred and not to either the magnitude of change or whether such change is attributable to the treatment experience.

Of the vast majority of these items, between one-sixth and one-third of respondents claimed that there was no difference between the two time periods.

There were four exceptions to this pattern: a majority of clients said that they were "heaviest into religion" or "most involved in political issues" in neither the year before entering nor the year after leaving treatment (i.e., "no difference" = 52% and 50% for the items). Similarly, between one-third and two-fifths of respondents denied "drinking the heaviest" or "working the most with drug users" was more true of one period than of the other. Results are shown in Table 7.12.

On nearly every aspect of life on which inquiry was made, it appears that improvement in situation was more likely to be experienced than deterioration. The items as given in Table 7.12 have been ordered on the basis of the size of ratio of "AFTER" endorsements to "BEFORE" endorsements, with the percent replying "AFTER" also shown for each item. In illustration, for the first item listed 8.0 times as many respondents (66%) claimed that it was more true that "I understood myself the best" in the year after leaving treatment as claimed this was more true in the year prior to their entering treatment.

Table 7.12  
Aspects of Life

| <u>Statement</u>                                  | <u>AFTER / BEFORE<br/>(Ratio)</u> | <u>AFTER<br/>(%)</u> |
|---|-----------------------------------|----------------------|
| 1. Understood myself the best.                    | 8.0:1                             | 66%                  |
| 2. Had the most faith in drug treatment programs. | 5.4:1                             | 63                   |
| 3. Had the most confidence in myself.             | 4.7:1                             | 68                   |
| 4. Spent the most time helping other people.      | 4.3:1                             | 61                   |
| 5. Learned the most about life.                   | 4.2:1                             | 60                   |
| 6. Tried to help my friends the most.             | 4.1:1                             | 50                   |
| 7. Got the most involved with political issues.   | 4.0:1                             | 40                   |
| 8. Felt the happiest.                             | 3.8:1                             | 66                   |
| 9. Spent the most time with my family.            | 3.0:1                             | 57                   |
| 10. Saved the most money.                         | 2.8:1                             | 50                   |
| 11. Liked my job the best.                        | 2.8:1                             | 43                   |
| 12. Felt most in love with someone.               | 2.6:1                             | 45                   |
| 13. Had the best time.                            | 2.3:1                             | 57                   |
| 14. Was heaviest into religion.                   | 1.9:1                             | 31                   |
| 15. Took life the easiest.                        | 1.8:1                             | 50                   |
| 16. Spent the most time working.                  | 1.6:1                             | 46                   |
| 17. Had the closest friends.                      | 1.6:1                             | 39                   |
| 18. Had the most friends.                         | 1.3:1                             | 39                   |
| 19. Felt the most indifferent about things.       | 1.3:1                             | 42                   |
| 20. Worked the hardest.                           | 1.2:1                             | 48                   |
| 21. Worked the most with drug users.              | 1.1:1                             | 30                   |
| 22. Earned the most money.                        | 1:1.3                             | 38                   |
| 23. Went to the most parties.                     | 1:1.3                             | 31                   |
| 24. Went deepest into debt.                       | 1:1.5                             | 29                   |
| 25. Drank the heaviest.                           | 1:1.6                             | 21                   |
| 26. Felt the loneliest.                           | 1:2.0                             | 24                   |
| 27. Had the worst time.                           | 1:2.2                             | 25                   |
| 28. Got hassled the most by other people          | 1:2.6                             | 22                   |
| 29. Worried the most.                             | 1:3.4                             | 17                   |
| 30. Spent the most money                          | 1:3.6                             | 17                   |
| 31. Spent the most time in jail.                  | 1:4.3                             | 13                   |
| 32. Used the most drugs.                          | 1:5.8                             | 12                   |
| 33. Caused other people to suffer the most.       | 1:6.8                             | 9                    |



In the economic sphere, respondents were several times more likely to claim their spendings were higher before treatment, and several times more likely to claim their savings were greater after treatment, but earnings seemed almost equally likely to shift upward or downward, and indebtedness was only slightly more likely to decrease than to increase. In the areas of personal well-being, interpersonal involvements, and social responsibility, shifts appear substantially more likely to occur in a favorable rather than an unfavorable direction, and, in part, these may be credited to treatment. However, it should also be kept in mind that treatment entry is likely to correspond with a period of unusual crisis and that, for this reason alone, measures taken from a subsequent period may reflect recovery trends or return toward normal regardless of whether treatment is administered (i.e., spontaneous recovery or regression toward the mean effects). Thus, while the findings are encouraging about the presence of improvement (e.g., clients are six times more likely to claim reduction rather than increase in drug use subsequent to treatment), some caution should be exercised in developing interpretations about the sources or causes of that improvement. While further analyses are necessary to better isolate effects, the findings in an earlier section (3. Nature of help sought) are indirectly supportive, indicating that clients perceived the types of assistance they sought from treatment as being provided by the treatment they received. Also, when the respondents were asked to assess the magnitude of overall assistance from the treatment ("How much help did you get from the program?") most judged themselves to have received substantial help. Overall, nearly two-thirds of respondents claimed they had received a great or moderate amount of help.

8. Increases in educational attainment

The former clients were asked what highest grade in school had been completed as of one year preceding their entry into treatment and as of the close of their follow-up period. Their replies were then coded by the interviewer into one of six categories of educational level, representing significant transition points. This procedure is not sensitive to minor increases in educational attainment unless these result in transition over a category boundary and it does not distinguish whether some part of increase in educational level occurred during the year preceding admission to treatment. The distributions are shown in Table 7.13.

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Table 7.13

Distribution of Educational Category  
Between BEFORE and AFTER Treatment Periods

| <u>Highest Grade Completed</u>   | <u>One Year BEFORE<br/>Treatment</u> | <u>One Year AFTER<br/>Treatment</u> |
|----------------------------------|--------------------------------------|-------------------------------------|
| More than 4 years college        |                                      | 0.1%                                |
| Four years college (B.A.)        | 0.1%                                 | 0.4                                 |
| 1 through 3 years college        | 15.5                                 | 21.2                                |
| 12th grade (H.S. diploma or GED) | 43.3                                 | 35.3                                |
| 9th through 11th grades          | 36.3                                 | 34.4                                |
| Kindergarten through 8th grade   | <u>4.8</u>                           | <u>3.6</u>                          |
|                                  | 100.0                                | 100.0                               |

---

Eighty-six percent of the former clients showed no shift in educational category over the full period of inquiry. The two most sizeable categories--both before and after treatment--were high school drop-outs and high school graduates. Those who started the period with a high school education were three times as likely as the high school drop-outs to show some further gain by the end of the period (23% versus 8%).

9. Change in drug use

Levels of drug use were estimated in several ways, for particular kinds of drugs and drug use in general. Measures for particular drugs were limited to heroin, marijuana (or hashish) and alcohol as they were the most common. Frequency of use was estimated from the questions which asked how many times per day, week, month, or year the drug was used during the period, and the length of such use. By appropriate multiplications these responses were used to compute the total number of times the person used the particular drug during the before and after periods. An overall indicant of drug use was obtained by computing the dollars spent on all drugs during the period on the basis of the client's responses to questions on weekly expenditures for each drug used and the length of time the drug was used. These expenditures were then summed across all of the drugs reported as having been used. Because of the greater frequency of heroin use and its higher cost, this measure is strongly related to the frequency of heroin use.

Another measure of drug use was based on a simple count of the number of different kinds of drugs the person reported having used during the period; clients were asked about 14 kinds of drugs. A value of zero was assigned to those who reported no use of any (of the drugs about which information was obtained). A value of five was assigned if the person reported the use of five or more different kinds of drugs. A related measure was obtained by assigning a rank order number to the order in which the person reported use of the drug. The order was established by asking the person to report first on the drug used "most heavily" during the period, and then moving on to the next most "heavy" and so on, to a maximum of five kinds of drugs. A value of five was assigned to the drug for the person if it was reported as being the most heavy, a value of four was assigned for the next heaviest,

and so on down to one for the fifth most heavily used drug, if reported. If no use of the drug was reported, it was given a value of zero.

Table 7.14 shows these values for the before and after period expressed as averages, along with the correlation coefficient for the before and after measures, along with a t-Test of the mean difference (appropriate for correlated measures).

Tabl 7.14

Various Measures of Drug Use  
for the Periods BEFORE and AFTER Treatment

| <u>Drug Use Measure</u>    | <u>MEAN</u>   |              | <u>STD. DEV.</u> |              | <u>Corr.</u> | <u>t-Test</u>      |
|----------------------------|---------------|--------------|------------------|--------------|--------------|--------------------|
|                            | <u>Before</u> | <u>After</u> | <u>Before</u>    | <u>After</u> |              |                    |
| Yearly frequency of:       |               |              |                  |              |              |                    |
| Heroin use                 | 510           | 211          | 680              | 435          | 0.35         | 7.67 <sup>a/</sup> |
| Marijuana or Hashish       | 223           | 144          | 509              | 346          | 0.49         | 2.95 <sup>a/</sup> |
| Alcohol                    | 129           | 113          | 283              | 311          | 0.37         | 0.84               |
| Rank-Order of Use (5=High) |               |              |                  |              |              |                    |
| Heroin                     | 2.9           | 2.4          | 2.4              | 2.5          | 0.73         | 6.06 <sup>a/</sup> |
| Marijuana or Hashish       | 1.7           | 1.6          | 2.2              | 2.2          | 0.70         | 0.83               |
| Alcohol                    | 1.6           | 1.3          | 2.0              | 2.0          | 0.60         | 1.80               |
| No. kinds of drugs used    | 2.1           | 1.5          | 1.3              | 1.1          | 0.60         | 9.05 <sup>a/</sup> |
| Spent on all drugs         | \$9868        | \$5121       | \$12985          | \$9707       | 0.29         | 5.89 <sup>a/</sup> |

<sup>a/</sup> Statistically significant at the 0.5 level or better. Weighted number of cases is 292.

Clearly drug use was lower in the after period. The largest differences were with respect to heroin use. All of the correlations between the before and after measures are statistically significant at better than the .001 level. The correlations between the rank-order measures and for the number of kinds of drugs used are relatively high. This may be due in some part to the fact

that non-users were scored as zero on these measures, and the fact that heroin is typically reported as the primary drug or not reported at all. In addition, even the more modest correlations may be partly the result of the fact that both measures were obtained at the same time, and based on the client's retrospection.

10. Changes in illegal activities

Given the association between drug use, especially for heroin, and illegal activities, it was expected that treatment effects, should they be found on drug use, would be reflected in criminal activities. But, it is also known that the criminal justice system does not become aware of many of the crimes committed by drug users, and others. And it was anticipated that the official records might well be unavailable, in addition to being incomplete. The clients were therefore asked to report the frequency with which they had engaged in different kinds of illegal activities. The response categories were made rather broad and open-ended in order to minimize the effort needed to answer the questions. People have no great difficulty in recalling whether or not they have performed forbidden acts, but the exact number is often hard to recall. In addition, we wished to avoid giving the impression that we were prying into the details of their former criminal activities. The categories were then kept few and simple:

- (0) Never
- (1) Once during the period
- (2) Once every few months
- (3) Once a month
- (4) Two or three times a month
- (5) Once a week or more.

In general, the coding values for these response categories are probably not a bad transformation for a measure based on the frequency of events during a fixed period of time. Such measures are often skewed and

peaked. The coded values were therefore used in the analyses.

The interviewees were given a list of activities and asked how often they had done them during the before and after periods. Table 7.15 shows these comparisons, using the coding category value as the frequency measure.

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Table 7.15

Coded Frequencies of Illegal Activities  
for the Periods BEFORE and AFTER Treatment

| <u>Illegal Activities</u>           | MEAN          |              | STD. DEV.     |              | <u>Corr.</u> | <u>t-Test</u>      |
|-------------------------------------|---------------|--------------|---------------|--------------|--------------|--------------------|
|                                     | <u>Before</u> | <u>After</u> | <u>Before</u> | <u>After</u> |              |                    |
| Dealing or selling drugs            | 2.4           | 1.6          | 2.3           | 2.2          | 0.50         | 6.07 <sup>a/</sup> |
| "Other" kinds of theft              | 1.3           | 0.6          | 1.9           | 1.5          | 0.54         | 6.89 <sup>a/</sup> |
| Burglaries or breaking and entering | 0.8           | 0.2          | .16           | 0.9          | 0.42         | 6.46 <sup>a/</sup> |

a/ Statistically significant at better than the .001 level.

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These were more frequent forms of illegal activities reported. Clearly, illegal activities were less frequent after treatment. Although the mean values for the before period varied markedly from a low of 0.8 (corresponding to the category of only once during the period) to a high of 2.4 (corresponding to the category of once every few months), the differences between the before and after means are relatively constant, being 0.8, 0.7, and 0.6. This is of importance in that the statistical analyses to be used for the bulk of the comparative analyses are based on the assumption that "treatment" effects are linear and additive in the measures used. These differences are consistent with such an assumption. Thus, the use of these values may be seen as appropriate, rather than just convenient or as improper.

11. Income changes

Given the lower level of drug use during the post-treatment period and the lower self-reported rate of criminal activities, a lower arrest rate would be expected, especially given the higher risk of arrest associated with heroin use and the kinds of illegal activities most frequently reported in the interview--dealing and selling drugs, burglary or breaking and entering, and ordinary thefts. These differences also imply a decrease in illegal income. Table 7.16 confirms this conclusion.

Table 7.16

Number of Arrests and Illegal Income  
for the Periods BEFORE and AFTER Treatment

| <u>Arrest and Illegal Income</u>     | <u>MEAN</u>   |              | <u>STD. DEV.</u> |              | <u>Corr.</u> | <u>t-Test</u>      |
|--------------------------------------|---------------|--------------|------------------|--------------|--------------|--------------------|
|                                      | <u>Before</u> | <u>After</u> | <u>Before</u>    | <u>After</u> |              |                    |
| Number of times arrested and charged | 1.4           | 0.6          | 1.5              | 1.0          | 0.22         | 8.22 <sup>a/</sup> |
| Average monthly illegal income       | \$469         | \$223        | \$561            | \$424        | 0.46         | 8.04 <sup>a/</sup> |

a/ Statistically significant at better than the .001 level.

The mean number of arrests declined by more than one-half, as did the average monthly income from illegal activities. A decrease of \$250 per month amounts to about \$3,000 per year. The earlier analysis of drug-use expenditures showed a decrease of nearly five thousand dollars per year. The discrepancy between these two values might be explained as resulting from the practice of supplying one own's heroin from that obtained in dealing and selling, but the questions used for the computation of the expenditures on drugs asked about actual expenditures, not the value of the drugs used.

An alternative explanation would be that legal earnings were being used. This explanation seems unlikely in that the combined total of legal and illegal earnings during the before period would just barely cover the estimated cost of the drugs used. In addition, the combined total legal and illegal income for the after period was about \$6,700 and the estimated cost of the drugs used was about \$5,100. But setting these discrepancies aside, it would appear that there was a change in the basis of economic support.

The interviewees were shown a list of income sources and then asked to indicate the one which provided the most income during the period, the next most, and so forth. These ranks were converted so that the one which provided the greatest income was given a value of 6. If the person reported that no income was received from a source, it was given a value of zero. In this way, higher ranks denote higher incomes from the source. Table 7.17 shows these values for four sources providing the most income.

Table 7.17

Rank-Order of Support from Various Sources  
for the Periods BEFORE and AFTER Treatment

| <u>Income Source</u>                | <u>MEAN</u>   |              | <u>STD. DEV.</u> |              | <u>Corr.</u> | <u>t-Test</u>      |
|-------------------------------------|---------------|--------------|------------------|--------------|--------------|--------------------|
|                                     | <u>Before</u> | <u>After</u> | <u>Before</u>    | <u>After</u> |              |                    |
| Illegal Activities                  | 2.2           | 1.5          | 2.6              | 2.4          | 0.55         | 4.94 <sup>a/</sup> |
| Wages or Salary                     | 3.4           | 3.5          | 2.8              | 2.8          | 0.47         | 0.56               |
| Family, friends, private<br>charity | 2.4           | 2.0          | 2.6              | 2.6          | 0.62         | 2.88               |
| Public Welfare                      | 1.0           | 1.3          | 2.1              | 2.3          | 0.63         | 2.69 <sup>a/</sup> |

a/ Statistically significant at the 0.01 level or better.



Own wages and salary remained the primary source of income, but the rank-order did not increase. Support from illegal activities and family, friends, or private charity decreased. Perhaps as a result of these decreases, public welfare became a more important source of income. The lack of change in the rank-order of the person's own wages and salary as a source of support is confirmed by the small change in the average legal monthly income. Before treatment, the mean was \$363 (with a standard deviation of 309); after, it was \$398 (with a standard deviation of 337). In general, those who had a higher income before treatment also had a higher income after; the correlation was 0.50. This relatively small difference of about \$35 per month was significant at better than 0.10 level. Legal income probably increased, but the difference was relatively small, especially when considered in the light of inflation.

Extreme care must be taken in interpreting the results of these before and after comparisons. Clearly, there were differences. They were of sufficient magnitude and frequency to conclude changes did occur. But these changes cannot be simply attributed to treatment effects. Some sort of control group would be needed to even begin to make such inferences. This issue will be more fully discussed in a later chapter.

As stated in the introduction to this chapter, its purpose was to provide an overall description of what was learned from the interviews<sup>1/</sup> in order to provide a backdrop for the detailed analyses of treatment effects. The analyses conducted in this chapter were also done to provide

<sup>1/</sup> Time in treatment was not analyzed for its relationship with the treatment and outcome measures. Given that such analyses are somewhat conventional, it is perhaps appropriate to comment on why they were not done for this project. One reason was that accurate measures were not available. Given the necessity of this measure to the cost-benefit analysis, the best possible estimates were made; the problems of assessing time in treatment are described in that section. Another, more important reason was that the

the most statistically proper description of the total useful sample of interviewed cases. The cases were weighted by the sampling ratios. Given acceptance of the conclusion reached in the chapter on the technical aspects of the Study, these findings may be generalized to the potentially locatable population. The bulk of the analyses in this report were based on case weightings designed to provide comparisons of the different kinds of treatment. The case weightings used for these comparative analyses do not provide statistically proper estimates of the locatable population.

Since all the findings discussed in this chapter are based on responses obtained during interviews, it may be appropriate at this point to next provide some information about the circumstances in which interviews were conducted, the credibility of respondents from the interviewer's standpoint, and corroboration of self-reported current drug use by urinalysis.

meaning of time in treatment varied so greatly with kind of treatment. To take the two most extreme cases for this Study, the vast preponderance of the people in treatment for a longer period of time would be those in outpatient methadone maintenance and the vast proportion of those in treatment for a short period would have been those in in-patient detoxification. Time in treatment would then have been strongly confounded with kind of treatment. This problem could have been overcome by taking time in treatment relative to kind of treatment, but this would have raised another sort of problem. For instance, a relatively short period of time in in-patient detoxification would probably reflect, to a large degree, failure to complete treatment, while a relatively short period of time in outpatient drug-free services would be much more likely to reflect the fact that such services can often be provided in but a short period of time. At yet another level, a division on time in treatment for residential drug-free treatment would be confounded by the fact that some such treatments are designed to be completed in a relatively short period of time, while others are designed to last for longer periods. In addition, with the exception of outpatient methadone maintenance, the design of the Study put an arbitrary limit of no more than 10 months in treatment which was markedly less for those admitted to treatment later in the admission period. For all of these reasons, analyses based on time in treatment were not conducted.

B. The Interview Conditions

1. The interview process from consent to completion

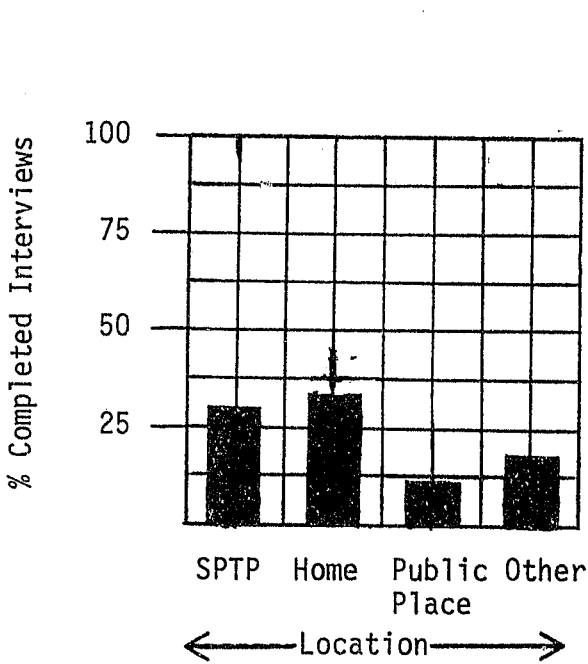
Upon receipt of a client's consent to be interviewed an interviewer was assigned the case. The interviewer would then attempt to recontact the client and schedule an appointment. If recontact was successful, the interviewer would schedule and complete an interview. Unfortunately, on a number of occasions located clients refused after the interviewer contacted them or they did not show up for scheduled appointments; thus, initial consents did not always result in interviews. Moreover, at times the interviewer was unable to recontact the client due to incorrect information supplied by the agency (e.g., no such phone number, number disconnected, client unknown at address, mail returned, etc.). In these cases the agency involved was requested to recontact the client, correct the information, or supply a new lead. Once again if the program was unable to do any of the these, chances were that the initial consent did not result in a completed interview.

The duration of interviews, and the locations in which they were conducted are shown on the charts which follow. While it had been anticipated that most interviews would take place at a treatment program site, one-half the former clients preferred that interview take place in another setting-- usually their own home. The major factor affecting interview length was the number of drugs which the client acknowledged using before, during, and after treatment, since detailed inquiry was made about each such drug.

2. Respondents' attitudes toward the questionnaire

At the close of the interview, the respondents were asked a couple of specific questions concerning their impressions of the questionnaire. In response to the question, "Do you think that the questions you've been

Chart 7.1: Location of Completed Interviews



Location Percent (Adjusted)

SPTP 33.7%

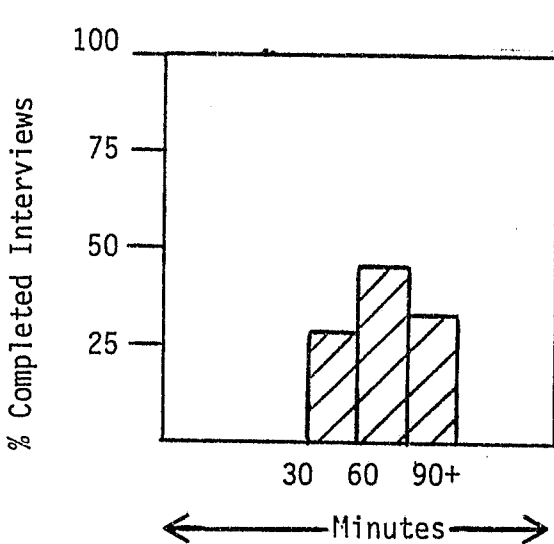
Respondent's Home 39.5%

Public Place (park, restaurant, etc.) 9.4%

Other\* (other drug programs, jail, etc.) 17.5%

\*Approximately 50 percent of these interviews were conducted at drug programs other than respondent's SPTP.

Chart 7.2: Length of Completed Interviews



Length of Interview Percent (Adjusted)

31 - 60 minutes 26.1%

61 - 90 minutes 45.3%

91 or more minutes 28.7%

asked about (the study period treatment program) will make it possible for us to get a fair impression of that program's effect on your life," 85 percent of the respondents answered in the affirmative. This question was followed by a request for any questions the respondent felt should have been included, to which we received 73 percent responding that they felt no other questions needed to be asked.

3. The interviewer-respondent relationship

The interviewers completed at the conclusion of each interview a report concerning the interviewee's response to the interview. In answer to the question, "How would you rate the respondent's manner?" roughly 91 percent of the clients were seen as at ease compared to 9 percent who were considered uncomfortable. Ratings of the respondent's attitude yielded the distributions given in Table 7.18.

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Table 7.18

Respondent's Manner to the Interview

|                           | <u>Percent<br/>(Adjusted)</u> |
|---------------------------|-------------------------------|
| Open, direct, honest      | 86.3%                         |
| Evasive, deceitful        | .7                            |
| Confused, but cooperative | 9.5                           |
| Hostile, stubborn         | 2.3                           |
| None of the above         | 1.3                           |

---

Early in the Study we had anticipated the potential difficulty of conducting an hour and a half interview with persons who may not have considered English their primary language, or others who may have had problems with the language of the questionnaire. To gauge the frequency of such

difficulty, interviewers were asked to judge if they encountered a language problem serious enough to impair the reliability or validity of the data acquired. In 97 percent of the cases interviewed no such problem was reported.

C. Client Situation at the Time of Interview

1. Current drug use: self-report and urinalysis

Interviewers were asked to record at the close of each interview their own impression of whether the client was under the influence of alcohol or any drug during the interview. In the judgment of interviewers, the interviewees were rated as follows:

|                          |          |
|--------------------------|----------|
| under no influence       | 84%      |
| under slight influence   | 8        |
| under moderate influence | 6        |
| under strong influence   | <u>2</u> |
|                          | 100%     |

One-third of adult interviewees, randomly selected, were offered an additional \$5 fee if at the close of their interview they would consent to provide an unobserved sample of urine, and 94 percent to whom this offer was made accepted. For those from whom a consent was obtained, inquiry was made about which drugs they had used during the past five days, and their urine specimen was submitted to a laboratory for analysis. It is thus possible to compare self-reported use with laboratory evidence of use (Table 7.19), but such comparison should be made with acknowledgment that laboratory tests would be unlikely to capture traces of drugs administered several days prior to urinalysis.

Table 7.19  
Self-Reported Use vs. Laboratory Analysis

| <u>Drug</u>  | <u>Affirmative Self-report</u> | <u>Indication Lab.</u> | <u>Agreement Between Indicators</u> |
|--------------|--------------------------------|------------------------|-------------------------------------|
| Heroin       | 20%                            | 20%                    | 90%                                 |
| Methadone    | 25                             | 25                     | 98                                  |
| Amphetamines | 8                              | 4                      | 90                                  |
| Barbiturates | 7                              | 5                      | 93                                  |
| Other drug   | 25                             | 8                      | 74                                  |

For no drug did the urinalysis results indicate a higher rate of use within this sample of cases than the results obtained by self-report. For heroin, 75 percent of those sampled denied use and showed no urinalysis trace of morphine, while 15 percent acknowledged use which was corroborated by the laboratory results, yielding agreement between the two indicators for 90 percent of the cases. The remaining 10 percent were evenly divided between cases who acknowledged use that was not detected and cases who denied use but were detected.

There are several different perspectives from which such results may be viewed. If "the past five days" is accepted as a reasonable definition of current use, and if the primary research aim is to establish an estimate of prevalence for a particular group, then self-report would appear quite adequate as a technique, since it yields estimates at least as high as those from urinalysis, and with a high overall level of concordance with that technique.

If the primary purpose was, instead, to get an authoritative estimate based upon "hard" data, then it would be more reasonable to redefine current

to mean "the past two or three days," or the span within which urinalysis may be better expected to detect use; this approach, however, accommodates an aim to a technique, rather than a technique to an aim; moreover, since drugs other than opiates may cease to leave detectable traces after even shorter periods, and some drugs are simply not verifiable by urinalysis, the scope of inquiry is sacrificed.

If the primary aim is to test the verity of self-report, by "validation" against urinalysis, there are several choices of perspective. Taking heroin as the example, one might point to the fact that 24 percent of the detected users had denied use, casting doubt upon the general credibility of respondents, or to the fact that only six percent of those who denied use were detected to have used, prompting faith in credibility. The fact that 24 percent who acknowledged use were not detected can be accepted as an artifact of the extended retrospective period for which inquiry was made, but such use would nevertheless appear relevant in terms of prevalence estimation. There is, finally, the "grey area," consisting of that 6 percent of cases who declined, whether out of fear and suspicion, or simply for reasons of dignity, to submit to urinalysis. If we assumed, as a worst case, that all these were concealing use, and also were to accept either acknowledgment or positive urine as evidence for use, then, for heroin, current use could range as high as 30 percent for the sample.

By omitting those who declined testing, the joint indicators would suggest that 25 percent of the remaining sample had used heroin in the past five days. Applying this same standard (i.e., evidence of use from either acknowledgment or urinalysis), 26 percent of those sampled had very recently used methadone, 10 percent had used amphetamines, 9 percent used barbiturates, and 30 percent had used some other drug, including marijuana.



While the emphasis in the DATOS study was upon the period opening one year prior to entry into the Study period treatment program and closing one year subsequent to departure from that program (except for methadone admissions), interviews nevertheless ended with brief inquiry about several areas of the former client's current adjustment. While only that sample of interviewees from whom urinalysis were requested were asked about all drugs used in the days shortly preceding interview, all cases interviewed were asked "Are you currently using any drugs (other than clinic methadone)?", and, when the reply was affirmative, "What is the main drug you're using?" With respondents weighted on the basis of the sampling ratio on which they had been drawn from the population, two-fifths (43%) acknowledged "current" use of some drug (Table 7.20). Among those making such acknowledgment, the majority (55%) claimed the main drug being used was marijuana or hashish, with one-fourth (26%) stating the main drug to be heroin, and fewer than 10 percent mentioning any other particular drug, including alcohol.

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Table 7.20

Main Drug Currently Being Used

| <u>Drug</u>          | <u>Percent</u>             |
|----------------------|----------------------------|
| Marijuana or hashish | 55.1%                      |
| Heroin               | 26.2                       |
| Alcohol              | 6.9                        |
| Hallucinogens        | 5.2                        |
| Oral amphetamine     | 2.9                        |
| Barbiturates         | 1.1                        |
| Other opiates        | .7                         |
| Cocaine              | .6                         |
| Tranquilizers        | .4                         |
| Non-classifiable     | 1.0                        |
|                      | <hr/> 100.0% <sup>1/</sup> |

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<sup>1/</sup> Of that 43 percent acknowledging any drug use.

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The disparity in results yielded by the several forms of inquiry deserves comment. One in five clients who consented to urinalysis acknowledged use of heroin within five days preceding interview, but only one in ten clients reported heroin as the "main" drug they were "currently" using, and this proportion was identical for those who provided urine and those of whom no request for a urine specimen was made. The information which has most direct bearing on this disparity is that (1) only three-fifths of those cases who acknowledged heroin use within the past five days and were detected positive for opiates on urinalysis reported heroin to be the main drug they were currently using. In contrast (2) less than two percent of the cases who denied heroin use within the past five days reported it as their main drug of current use. Either clients are interpreting the meaning of current as being extremely restricted in time, or they are making discriminations which permit them to engage in use of heroin without perceiving it as occupying foremost position among their drugs of use. We are not in position, on the basis of the now-available findings, to ascribe the effect to one or the other of these two sources; further research would be necessary to determine whether the clients are referring to subordinate or recreational use of heroin (discounting it with reference to the word "main") or are delimiting the meaning of "current" (to include only today and, perhaps, yesterday).

## 2. Current status on other self-report measures

Inquiry regarding current legal status indicated that a majority (55%) were not under jurisdiction at time of interview, but that nearly one-third (29%) were serving probation sentences and that 7 percent were on parole. Five percent of the weighted sample members were awaiting disposition on new charges, and 4 percent were confined and serving sentences

at the time of interview.

A majority (53%) of the cases stated that, at the time of interview, they had no employment. Even were we to remove those incarcerated and recompute this proportion, a near-majority of those free in the community would still be found to be unemployed. Forty percent claimed that they were currently seeking work.

Fully one-third of the weighted cases were in treatment at the time of interview and, although a sizable portion of these consisted of cases which had been continuously in outpatient methadone maintenance, almost two-thirds consisted of clients who had returned to treatment subsequent to the termination from treatment which had established their eligibility as a member of the Study sample.

In summary, while the basic orientation of this Study was to examine the degree of alleviation of problems during the year immediately following treatment as compared to the year preceding treatment, and to search for differential treatment modalities, client status at time of interview remains of interest, and it is evident that obstacles to employment are a serious continuing problem, and that return for further attention from a treatment program for help in coping with drug problems is a frequently exercised option.

## 8. COMPARATIVE ANALYSES OF TREATMENT MODALITIES

This chapter presents the findings of the comparative analyses of treatment modalities. It is divided into four parts: (1) heroin users in outpatient drug-free services, residential drug-free treatment, outpatient methadone maintenance, and in-patient detoxification; (2) non-heroin users in outpatient drug-free services; (3) differential effects of the four kinds of treatment for different kinds of heroin users, and (4) cost-benefit analysis. Each section contains a brief summary.

Each of the four findings sections is based on the so-called senate weights which were discussed earlier. In essence, these weights give equal weight within a given treatment modality to each client type and to each treatment agency for a given combination of treatment and client type. As a result, the overall averages which may be derived from the means for each treatment are not a good estimate for the total sample; such estimates may be found in the preceding chapter.

Only those differences statistically significant at the 0.10 level or better are reported herein, unless otherwise indicated. See Chapter 6 for a detailed presentation of how these tests were conducted, and related issues. Summary tables are presented at the end of each of the sub-sections; detailed tables are presented in appendix F.

We must once again bring to the reader's attention the fact that the sample upon which these findings are based is not representative of the study target population due to the agencies' inability to locate their former clients for interview. At best the findings presented herein may be generalized to those clients whom the agencies would be able to locate should they try to locate all their former clients (who were a part of the

study target population). To constantly repeat this admonition in the presentation of the findings would lead to pervasive convolutions in the presentation. We will therefore not do so, and instead begin and end the presentation of the findings with the admonition that they cannot be generalized to the study target population.

The distribution of the study target population on kind of treatment and client type might also be recalled here for the sake of perspective. The next section compares heroin types in the four kinds of treatment, giving equal prominence, so to speak, to each kind of treatment, for the purpose of comparison. But, in the study target population, nearly two-thirds (63.7%) were in ODF, about two-fifths (22.7%) were in IPD, only one-tenth (9%) were in RDF, and just under one-twentieth (4.6%) were in OPM. The distribution across kinds of treatment was still far from equal for the heroin client types--47.3 percent in ODF, 32.9 percent in IPD, 13.1 percent in RDF, and 6.7 percent in OPM. Over two-thirds (68.9%) of the clients in the study target population were classified as heroin types. Put somewhat differently, as assessed by the number of clients admitted to treatment (in the study target population), the bulk of the treatment effort (86.4%) went into ODF for heroin users (32.6%), ODF for other than heroin users (31.1%), and IPD for heroin users (22.7%). The remainder (13.6%) went into RDF (9%) and OPM (4.6%) for heroin users.<sup>1/</sup>

<sup>1/</sup> These values were obtained from Table 5.3. They would be somewhat different if they were based on the total target population which included people who received less common kinds of treatment and some clients who could not be typed because of missing information. See Chapter 5 for further discussion of these exclusions.

## A. Treatment Modality Comparisons

This section will present an analysis of the outcomes of the four kinds of treatment included in the Study--outpatient drug-free services, residential drug-free treatment, outpatient methadone maintenance, and in-patient detoxification. Because heroin users were the only clients who were involved in all four kinds of treatment in sufficient numbers for statistical analysis, this section is limited to the four heroin types.

The outcome measures have been grouped into broad, somewhat overlapping areas. The presentation of the findings will be organized around these groupings. They are (1) services sought and received; (2) client evaluations of the treatment programs; (3) heroin use; (4) drug use in general; (5) use of drugs other than heroin; (6) illegal activities; (7) employment and legal support; and (8) psycho-social and psycho-physiological health. The section will close with a summary of the key findings.

### 1. Services sought and received

As would have been expected from the items used to construct the measures, Table 8.1 reveals that the clients who sought the more symptomatically oriented treatments tended to seek more drug-use control services with outpatient methadone maintenance (OPM) being higher than in-patient detoxification (IPD). This measure included methadone or detoxification, reduction in drug use, elimination of drug use, and relief from a crisis. Among the more psychologically and socially oriented treatments, those in outpatient drug-free (ODF) were less likely to have sought these sorts of services than those in residential settings (RDF). The same relationships hold when the modalities are compared on the measure of the degree to which the services sought were actually received.

With respect to services which might be thought of as reflecting a

desire to achieve a more effective self, the measure of achievement shows a different relationship. Those in OPM were far more likely to have seen treatment as having helped them to achieve techniques for dealing with the system, relief from confusion, a new lifestyle, more self-confidence, a new personality, better work habits, and help with personal relationships. But IPD fared very poorly. The drug-free treatments--ODF and RDF--fell in between and they did not differ from each other in the degree to which the clients saw themselves as having received the services they had sought.

The pattern was much the same for employment services. OPM was evidently able to help the clients achieve better work habits, training or education, a job, or a job with a drug program. Those in IPD actually got fewer than one-half of these services than they had sought, while ODF and RDF just broke even, obtaining one-half.

Considered in terms of services requested as a baseline, there were no significant differences among the modalities with regard to survival assistance, or their ability to provide a place to stay, public assistance financial assistance, general medical attention, and legal aid.

Table 8.1 summarizes the comparisons of treatment services received considered in relationship to those sought.

Table 8.1

Degree to Which Services Sought Were Received, by Treatment Modality

| Modality | Drug-Use Control |      | More Effective Self |      | Employment Services |      | Survival Assistance |      |
|----------|------------------|------|---------------------|------|---------------------|------|---------------------|------|
|          | Mean             | S.D. | Mean                | S.D. | Mean                | S.D. | Mean                | S.D. |
| ODF      | 1.5              | 1.3  | 1.5                 | 3.0  | 0.0                 | 1.5  | 0.3                 | 1.1  |
| RDF      | 2.6              | 1.0  | 1.7                 | 3.1  | 0.0                 | 1.8  | 0.6                 | 1.9  |
| OPM      | 3.3              | 0.9  | 3.5                 | 3.2  | 0.8                 | 1.8  | 0.2                 | 1.4  |
| IPD      | 2.7              | 1.1  | 0.5                 | 3.2  | -0.3                | 1.0  | 0.5                 | 1.7  |

2. Client evaluations of treatment programs

The clients were asked to give an overall assessment of the degree to which they saw the treatment program as being helpful to them. The responses ranged from "a great amount" scored as one (1) through "moderate" and "slight" to "none at all" and "harmful" which was scored as five (5). Table 8.2 shows that relatively longer term outpatient symptomatic treatment (OPM) was seen as more helpful than such services provided on brief in-patient basis (IPD), but psychosocially oriented outpatient services (ODF) were seen as less helpful than in-patient (RDF). Although not planned and therefore not tested for statistical significance, it would appear that RDF and OPM were seen as equally helpful and more helpful than either ODF or IPD which were similarly evaluated.

The pattern of evaluations is different on the measure of the number of program helpfulness items endorsed. Those in IPD were less likely to recommend the program to someone else, more likely to call it a "shuck," less likely to believe that the staff really cared about them, more likely to believe that the program was really out for the money, less likely to believe that the staff went out of their way to help the clients, and less



likely to contact the program if they needed help again. There was little variation on this measure for the other modalities.

On the other hand, there were no statistically significant differences on the measure of the degree to which the clients saw the treatment programs as being weak. This measure included items on whether or not the staff bent the rules for those clients they liked; the program was clean; a good place to score drugs; and really out for the money.

Finally, the clients were asked a series of questions which tapped the degree to which the staff treated them with disrespect. These were: whether or not the staff liked pushing clients around; respected the clients dignity; treated the clients like children, inferiors, or sick persons. Also included in this measure was a question on whether or not the staff watched out for the clients' rights; unfortunately, it turned out to have a very low correlation with the measure (and in the wrong direction). The greatest amount of disrespect was reported by those in in-patient treatments, with the psychosocial modality (RDF) scoring higher than the symptomatic modality (IPD). Perceived disrespect for clients is lower for the outpatient modalities, which did differ from each other, with disrespect least in ODF. Table 8.2 summarizes the clients' perceptions of the treatment programs.

Table 8.2

Client Evaluations of Treatment Programs by Modality

| <u>Modality</u> | <u>Treatment Helpfulness</u> <sup>1/</sup> |             | <u>Program Helpfulness</u> |             | <u>Program Weakness</u> |             | <u>Disrespect for Clients</u> |             |
|-----------------|--|-------------|----------------------------|-------------|-------------------------|-------------|-------------------------------|-------------|
|                 | <u>Mean</u>                                | <u>S.D.</u> | <u>Mean</u>                | <u>S.D.</u> | <u>Mean</u>             | <u>S.D.</u> | <u>Mean</u>                   | <u>S.D.</u> |
| ODF             | 2.2  | 1.1         | 4.7                        | 1.7         | 0.5                     | 0.8         | 1.8                           | 0.7         |
| RDF             | 1.8  | 1.2         | 4.5                        | 2.0         | 0.8                     | 1.1         | 2.7                           | 1.1         |
| OPM             | 1.6  | 0.8         | 4.8                        | 1.3         | 0.6                     | 0.9         | 2.0                           | 1.1         |
| IPD             | 2.5  | 1.1         | 4.0                        | 2.2         | 0.5                     | 0.9         | 2.4                           | 0.7         |

<sup>1/</sup> Lower value means greater perceived helpfulness.

There is certainly no simple pattern of relationships across these evaluations by the clients. The first two measures consistently place IPD low on helpfulness, and although the remaining differences for the second measure are not statistically significant, it does rank OPM as the most helpful, as does the first measure. Perhaps the greater contact with staff produces more opportunities for making assessments of staff attitudes toward the clients, which produces greater perceived disrespect among in-patient programs thereby appearing to show that greater disrespect is associated with both low and high degrees of perceived treatment helpfulness, and similarly for outpatient programs. But perceived staff disrespect among those in OPM was lower than for those in IPD and RDF, while the frequency and duration of contacts with staff was probably higher (given the much longer period of treatment). And while the psycho-social approach was associated with greater disrespect for in-patient treatments it was associated with lower disrespect among outpatient treatments. But, institutional programs do engender disrespect. If the comparisons are then made separately for in-patient and outpatient treatments, treatments

perceived as showing greater disrespect are seen as more helpful. Examined in this way, the greater disrespect for RDF compared to IPD, and for OPM compared to ODF may be due to the greater degree of contact which may in turn produce more opportunities for disrespect to be seen and a greater willingness on the part of the clients to endorse the statements on which the disrespect measure was built.<sup>2/</sup> The failure of the program helpfulness measure to distinguish any modality but IPD may mean that it is a poor measure. The lack of any differences on the program weakness measure could also mean that it is a poor measure, or that the modality is not related to program weakness. However, it was moderately correlated with the program helpfulness measure ( $r = 0.49$ ), although the correlation with disrespect was low ( $r = 0.21$ ).<sup>3/</sup>

### 3. Heroin use

The number of times heroin was used during the year before treatment was higher for in-patient modalities, and lower for ODF than OPM. This means that the yearly frequency of heroin use after treatment cannot be compared across treatments as they differed initially. Comparison on the after measure would be misleading as the after differences could be a reflection of differences before treatment, differential treatment effects, or both. This problem was resolved by use of the adjusted after measure which was discussed in the technical aspects chapter. The meaning

<sup>2/</sup> The questions on which the disrespect measure was developed yielded relatively high non-response rates which we suspect were due to the unwillingness of the clients to express an opinion in the absence of sufficient information. For this measure (and the two preceding measures in Table 8.2), non-responses were treated as if the person had given an answer, and the answer was effectively scored as a zero (0) for these measures, tending to move modalities toward a neutral mid-point and, probably thereby, dampening variation among treatments.

<sup>3/</sup> The correlation with the treatment helpfulness measure was not computed.

of this adjusted measure in this context takes on more relevance.

For the total, unweighted sample (which was used for computing the adjusted "after" measures), the mean of the adjusted after measure is zero (0). Deviations from zero reflect the degree to which the person's use of heroin after treatment deviated from the expected frequency of use based on the frequency of use before treatment. A positive difference means that the frequency of use was higher than expected, and a negative difference means that the frequency of use was lower. If treatment modalities are differentially related to heroin use after treatment, then the average deviations for the clients in the different modalities on the adjusted after measure should vary significantly from the overall expected value of zero. That is what was found. Those in IPD used heroin about 278 times more often during the after-treatment period of one year than would have been expected on the basis of their frequency of use before treatment (Table 8.3). Those in OPM used heroin less often after treatment than would have been expected--over one hundred fewer uses. The differences for ODF and RDF were nearly zero, and not statistically different from each other.

These adjusted after measures must be carefully interpreted. The adjusted value of 278 for IPD does not mean that this treatment increased the yearly frequency of heroin use. The frequency of use actually declined for those in IPD from 781 times per year before treatment to 501 times per year after treatment. Rather, it means that for those in IPD, the difference in the frequency of use of heroin after treatment and the expected frequency of use disregarding treatment modality was 278. Or, there were 278 more uses of heroin among those in IPD than would have been expected based solely on their frequency of use before treatment and the overall change in the frequency of heroin use from before to after treatment.

Similarly, the negative value of 113 for OPM means 113 less uses of heroin for OPM clients than would have been expected based solely on their frequency of use before, and assuming no differential treatment modality effect. For ODF and RDF, the differences are so close to zero as to infer that these two treatments had no differential effect. But, it should be noted that the actual frequency of heroin use did decrease for these two kinds of treatment (from 431 to 122 for ODF, and from 788 to 212 for RDF). The lack of a control group makes it impossible to determine how much, if any, of this reduction was due to the effects of these treatments.

Another measure of heroin use was the dollar value of the heroin used each time that the person used it, on the average. During the before period, the dollar value of each heroin use was lower for those in ODF, and about the same for the other treatments. Again, this means that the after value must be adjusted for pre-treatment differences. When this was done, the treatment differences showed a similar pattern to that for the yearly frequency of use. For IPD, the dollar value per occasion of use was higher than expected, and for OPM it was lower; for ODF and RDF, the differences were quite close to zero. Finally, heroin use after treatment was assessed by using a measure based on how "heavy" the use was. The person was asked to report the different kinds of drugs he/she was using starting with the one used most "heavily," and then the next most "heavily" used, and so forth for up to five different drugs. If heroin was listed as the most heavy, it was given a score of 5. If reported as the second most heavy, a score of 4 was assigned, and so on down to one (1) if heroin was reported as the least heavily used drug, or a score of zero (0) if heroin was not reported as a problem. The pattern was similar to that for the prior two measures. By this measure, heroin use was heavier than expected for

those in IPD and lower for OPM, with RDF and ODF being different from the other two, but similar to each other.

These three measures of heroin use are shown for each treatment modality in Table 8.3.

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Table 8.3

Adjusted Measures of Heroin Use by Treatment Modality

| Modality | Yearly Frequency of Use |       | Dollar Value of Each Use |      | Rank-Order Heavy Use |      |
|----------|-------------------------|-------|--------------------------|------|----------------------|------|
|          | Mean                    | S.D.  | Mean                     | S.D. | Mean                 | S.D. |
| ODF      | -33                     | 175.6 | \$0.51                   | 9.7  | 0.6                  | 1.9  |
| RDF      | -12                     | 439.1 | -0.11                    | 11.1 | 0.0                  | 2.3  |
| OPM      | -113                    | 303.3 | -1.65                    | 13.0 | -0.6                 | 2.5  |
| IPD      | 278                     | 577.1 | 5.87                     | 9.6  | 1.4                  | 1.6  |

---

By all three of the adjusted after measures, it is symptomatic treatment which makes the difference, with outpatient maintenance being associated with improved performance and in-patient detoxification being related to poorer performance, and psycho-socially oriented treatments having no differential effect.

4. Drug use in general

The following measures are based on drug use in general, rather than any specific kind of drug. However, due to the much more frequent use of heroin and its greater costs, and given the fact that this set of analyses is for heroin users, these measures are correlated with heroin use. The findings are summarized in Table 8.5.

As will be recalled from the prior section, the clients were asked about each of the kinds of drugs they used before and after treatment, with provision for recording up to five different kinds of drugs. One general measure of drug use is simply the number of different kinds of

drugs used. Before treatment, those in RDF used more different kinds of drugs than did those in the other kinds of treatment, among which there were no significant differences. After treatment, using the before measure to adjust pre-treatment differences, IPD was associated with a greater than expected number of drugs used after treatment, and RDF showed the smallest number. Between these two differences, OPM also showed a smaller number and ODF a larger number. The proportion of abstainers roughly paralleled these differences. Twenty-six percent of those in RDF were abstinent after treatment while only 6 percent were abstinent following IPD. Nearly one-fourth of those in OPM abstained from the use of any drugs, compared to 10 percent for ODF.

The interviewees were asked to indicate the number of times (ranging from none to three or more) they got really stoned on any drug other than alcohol, sold anyone illegal drugs, and bought illegal drugs from anyone during the period following treatment. The greatest difference was associated with the symptomatic treatments; the frequency of such activities was lower for OPM and high for IPD. The psycho-socially oriented treatments fell between these two extremes, with the difference between ODF and RDF not being statistically significant; given consideration of the nature of pre-existing differences on other relevant variables, the absence of a final RDF-ODF difference here suggests relatively more favorable benefits from RDF.

The respondents were also asked a series of questions about the negative consequences of drug use. They were asked to indicate whether each of the following statements was more true of themselves before or after treatment, or whether there was not much a difference: worry the most, use the most drugs, spend the most time in jail, cause other people to suffer the most,

spend the most money, get hassled the most by other people, and have the worst time. The overall mean score on this measure was negative, and indicates that the negative consequences before treatment outnumbered by several the negative consequences following treatment. That is on the average, they saw the negative consequences of their drug use as being less after treatment. Those in OPM reported the greatest number of such negative consequences as occurring before treatment, and the other modalities did not differ much from each other in their tendency to report such negative consequences as being more true for the before period.

Based on the differences in drug use and the consequences thereof associated with treatment modalities, a difference in the number of drug-use treatments following treatment or re-entries might have been expected. However, there were none, with or without adjustment for the number of drug-use treatments before.

The proportion of those in OPM who "entered" into treatment again was higher, nearly 90 percent compared to 40 to 60 percent for the others. During the year before the study period treatment, approximately three-fourths of those in OPM had been in treatment, while about one-half of the other others had been. For the analysis of the OPM modality, in which the majority of the clients had remained in continuous treatment, "re-entry" has a different substantive meaning than for the other modalities examined, and is a purely formal device indicating that treatment occurred in the so-called "after" or follow-up period; it is, thereby, a purely formal equivalent to post-discharge treatment for clients of the other treatment modalities, but a necessary formalism for proceeding with the comparative analyses. In this case, the use of average number of re-entries would be misleading; so percentage distributions are used in Table 8.4.



Table 8.4

Percentage of Interviewees Re-Entering Treatment  
During the After Period, by Modality,  
and Number of Post-Treatment Entries

| Modality | # OF POST-TREATMENT RE-ENTRIES |       |      |        | N = |
|----------|--------------------------------|-------|------|--------|-----|
|          | None                           | One   | Two  | Three+ |     |
| ODF      | 54.6%                          | 24.0% | 9.8% | 8.8%   | 56  |
| RDF      | 39.2                           | 45.3  | 8.2  | 7.3    | 56  |
| OPM      | 8.8                            | 84.3  | 1.2  | 5.7    | 56  |
| IPD      | 42.2                           | 35.3  | 17.3 | 5.1    | 56  |
| TOTALS   | 36.6                           | 47.3  | 9.1  | 7.0    | 224 |

The differences among the study-period treatment modalities on drug use and the consequences thereof would also imply differences in expenditures on drugs. The measure used was the estimated dollars spent on all drugs during the entire after period (and the before period). On the average, expenditures on drugs during the after period were about \$5,000 higher for those in IPD than would have been expected based solely on their expenditures before and assuming no differential treatment effects. This difference is highly significant in the statistical sense as well as substantial in actual magnitude. The dollar expenditures were lower for each of the other modalities, but the difference between ODF and RDF was not significant. It would thus appear that although OPM was associated with lower drug expenditures during the after period, they were not significantly lower than for those receiving ODF when the differences in pre-treatment expenditures are taken into account.

As is well known, heroin users often deal in or sell drugs, especially heroin, to fully or partly obtain their own supply, and to obtain money. One of the questions asked the clients how often they dealt or sold drugs,

with the response alternatives being scored as follows: (0) never; (1) once during the period; (2) once every few months; (3) once a month; (4) two or three times a month; and (5) once a week or more. There were no statistically significant differences on this measure for the before period. On the average, dealing or selling drugs was more common among those who received in-patient treatment, IPD being higher than RDF. For IPD, the average was between once every few months and once a month; for RDF, it was between once during the period and once every few months. The measure was significantly lower for those in outpatient treatments. But the degree of involvement among those in methadone maintenance was not significantly lower than that for ODF. Table 8.5 presents a summary of these measures.

Table 8.5

Mean Measures of Drug Use (Predominantly Heroin) in General  
by Treatment Modality

| <u>Modality</u> | <u>No. of<br/>Drugs <sup>1/</sup><br/>Used</u> | <u>Drug-use<br/>Involve-<br/>ment</u> | <u>Negative<br/>Conse-<br/>quences</u> | <u>Subsequent<br/>Drug<br/>Treatments</u> | <u>Drug<br/>Expen-<br/>ditures<sup>1/</sup></u> | <u>Dealing<br/>or<br/>Selling</u> |
|-----------------|--|---------------------------------------|--|---|---|-----------------------------------|
| ODF             | 0.2  | 4.6                                   | -2.4                                   | 0.1                                       | \$ - 850  | 1.3                               |
| RDF             | -0.3   | 4.1                                   | -3.2                                   | 0.1                                       | - 462   | 1.4                               |
| OPM             | -0.1   | 3.6                                   | -5.5                                   | 0.3                                       | -1572   | 0.9                               |
| IPD             | 0.4  | 5.4                                   | -3.0                                   | 0.2                                       | 5367  | 2.4                               |

<sup>1/</sup> Denotes adjusted after measure.

In general, the performance of those clients who received IPD is poorer on these measures of drug use in general (which are correlated with heroin use). The performance of those in OPM is superior to those who received IPD, as were ODF, and RDF. And although OPM clients generally had better

performance measures, they were not always significantly better than ODF.

The treatment outcome measures thus far presented were either directly or indirectly tied to heroin use. The measures about to be presented are for other kinds of drugs, and they are less correlated with heroin use.

5. Drug use, other than heroin

The two most commonly used drugs other than heroin were marijuana and alcohol. Use of each of these two drugs was assessed in three ways. One was the yearly frequency of use, another was the dollar value of the drugs used each time, and the third was the rank-order of the drug in terms of how "heavy" the use was as perceived by the clients. The results are shown in Table 8.6

The yearly frequency of marijuana use after treatment (and before) did not differ by modality, nor did the adjusted yearly frequency. There were also no statistically significant differences for the dollar value of each marijuana use. There was a difference in the rank-order of marijuana use after treatment, but when this measure was adjusted on the pre-treatment measure, the difference was no longer statistically significant.

The yearly frequency of alcohol use was different for the before period, but not for the after period, nor were there any statistically significant differences on the adjusted after measure. Similarly, the dollar value of each alcohol use did differ among the treatment modalities before treatment, but not after, nor when the after measure was adjusted on the before measure.

The treatment modalities did differ on the rank-order of alcohol use before treatment, but not after. However, when the after measure was adjusted on the before measure, a statistically significant difference did occur (at the 10% confidence level). The rank-order was slightly higher for outpatient treatments than for in-patient treatments, but there were no

differences between the two kinds of in-patient and outpatient treatment. However, the difference was small--less than one-half a rank on a scale ranging from zero through five. Further, the overall F-test was not statistically significant. Given that the other two measures of alcohol use did not show a significant relationship with treatment modality, we conclude that the relationship in question was either the result of chance or spurious.

There was also no difference on the rank-order measure for barbiturates, before or after treatment, or for the adjusted after measure. A test of oral amphetamines was not conducted as only 5 percent of the interviewees reported it as a problem.

The conclusion, then, is that treatment modalities do not have a differential effect on the use of drugs other than heroin (among heroin users who constitute nearly all of the clients in modalities other than outpatient drug-free). The following table presents the measures upon which this conclusion was reached.

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Table 8.6  
Mean Adjusted Measures on Drug Use Other than Heroin  
by Treatment Modality

| Modality | MARIJUANA    |              |            | ALCOHOL      |              |            | BARB's     |
|----------|--------------|--------------|------------|--------------|--------------|------------|------------|
|          | Yearly Freq. | Dollar Value | Rank-Order | Yearly Freq. | Dollar Value | Rank-Order | Rank-Order |
| ODF      | -50          | -0.05        | 0.1        | 26           | -0.30        | 0.0        | 0.0        |
| RDF      | -60          | -0.17        | -0.4       | -36          | -0.58        | -0.3       | 0.1        |
| OPM      | 15           | -0.15        | -0.2       | -38          | 0.01         | 0.2        | -0.1       |
| IPD      | -17          | -0.21        | -0.3       | 0            | -0.26        | -0.3       | -0.1       |

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6. Illegal activities

One of the major purposes of drug-use treatment programs is to control illegal activities, by controlling drug use and by the provision of other services. Again, given the apparent differential relationship of treatment modality to heroin use, we would expect illegal activities to also be differentially related, especially given the close connection between heroin use and crime in the United States. Several measures were used in order to tap various dimensions of illegal activities. One of these measures was presented in the earlier section on drug use in general--dealing or selling drugs; the remainder are shown in Table 8.7.

The interviewees were asked to report how many times they engaged in various kinds of illegal activities, using the same response categories given in the earlier discussion of dealing or selling drugs. Only two other kinds of illegal activities were reported with sufficient frequency to merit analysis; they were burglary or breaking and entering, and "other theft," not including armed robbery or hold-ups. Included in the category of "other theft" were shoplifting, stealing, receiving or fencing stolen property, check crimes, credit card crimes, forgery, forging prescriptions, and auto theft.

Because there were some differences for the before period, the after period measures of burglary or breaking and entering was adjusted on the before measure. The adjusted after measure did not vary significantly by treatment modality. There were no differences on the "other theft" measure for the before or after period, or for the adjusted after measure.

Those who entered the more psycho-socially oriented treatments had more arrests during the one year period preceding treatment than did those who entered the symptomatic treatments. But for the after treatment period,

more arrests were experienced by those who entered in-patient programs. The adjusted after measure also showed a higher number of arrests for those who entered in-patient treatments (RDF and IPD). Because the mean number of arrests has sometimes shown a different relationship than the distribution of the actual number of arrests (including none), the distributions of arrests by modality were inspected. The relationships were the same as for the means. Given the lack of differences in self-reported property crimes and the previously presented relationships with dealing or selling drugs, plus the differential relationships with subsequent heroin use, these differences in arrests are probably for drug use.

A more comprehensive measure of illegal activities was obtained by asking the clients to estimate their average monthly illegal income. This figure represents the total illegal income during the entire period, divided by the length of the period (typically 12 months). In this way, people who obtained illegal incomes for only part of the period (owing either to choice or to confinement) would tend to have a lower average monthly illegal income, and monthly illegal income could be used to estimate the annual illegal income (for other purposes). There were differences among the modalities for both the before and after periods on this measure. On the adjusted after measure, those in IPD were different from the others--being higher--and the others did not differ among themselves. IPD is associated with a higher average monthly illegal income than would be expected on the basis of the level of each income prior to treatment.

Yet another measure of illegal activities is the degree to which the clients supported themselves from illegal sources of income. They were shown a list of six sources of income and asked to rank them as to the amount of income received from each. The source providing the greatest

income was given a score of one, the second most a score of 2, and so forth. There were differences on this measure for both the before and after periods. And there were differences on the adjusted after measure. For IPD, illegal activities provided a greater source of income after treatment than would have been expected. The other treatments did not differ among themselves. This measure and the other adjusted after measures discussed in this section are shown in Table 8.7.

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Table 8.7

Mean Adjusted After Measures of Illegal Activities  
by Treatment Modality

| Modality | Burglary<br>or B. & E. | "Other"<br>Theft | No. of<br>Arrests | Monthly<br>Illegal<br>Income | Support<br>Illegal<br>Activities <sup>1/</sup> |
|----------|------------------------|------------------|-------------------|------------------------------|--|
| ODF      | 0.2                    | 0.2              | 0.0               | \$ 1                         | 0.0  |
| RDF      | 0.0                    | 0.2              | 0.1               | - 8                          | 0.1  |
| OPM      | -0.1                   | -0.2             | -0.2              | - 62                         | 0.5  |
| IPD      | 0.1                    | 0.1              | 0.3               | 139                          | -0.8   |

<sup>1/</sup> Rank-order of support from illegal activities; primary ranked 1, secondary 2, etc.

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These findings indicate that people who enter in-patient detoxification are subsequently more likely to support themselves from illegal activities which probably results in their being arrested more often, and that the higher rate of illegal activities is probably associated with dealing or selling drugs (as presented in the earlier section on heroin use). The other treatments do not differ much among themselves on these measures, but there is a tendency for those in OPM to be somewhat less criminally involved.

7. Employment and legal support

In addition to controlling drug use and its attendant illegal activities, drug treatment programs seek to help the person to improve his/her employment situation and other legitimate means of support. Several measures were taken to tap this area; the findings are shown in Table 8.8. One set of questions sought to determine the clients' perceptions of their involvement with work before and after treatment. Each person was given a "score" of one for each of the following items which he/she said was more true of him/her for the after period; a "score" of minus one when the person said it was more true of the before period, and a "score" of zero if it was seen as being more or less equally true for both periods. The items were: when did you work the hardest; earn the most money; like your job the most; and spend the most time working. There were no statistically significant differences among the modalities on this measure.

It is not uncommon for people who come to be in drug treatment programs to have more than one job during a given year. But obtaining information on each and every job would be very time consuming and the results would be difficult to analyze. The approach used for this Study was to ask the person about the best job he/she had during the before and after periods. The best job was defined as the one which provided the most earnings during the period. Among other questions, they were asked about the length of that job in months, and the hourly wage. There were differences in the length of the best job before treatment with OPM being the highest and RDF the lowest. However, there were no differences after treatment, and there were no differences when the length of the best job before treatment was introduced as a control for pre-treatment differences. The same pattern



held for the hourly wage of the best job. There were differences before treatment, but none after for either the unadjusted or adjusted after measures.

But the best job may not be a satisfactory measuring point in that it does cover only one of the several jobs which the person might have had. A more comprehensive measure was obtained by asking the clients to report their average monthly legal income during the period. This measure was obtained by dividing the total legal income during the period by the length of the period (typically 12 months). Again there were differences in the before period, with RDF being the lowest and OPM the highest. But the differences after were not statistically significant, for either the adjusted or unadjusted measures.

Given the differences reported earlier for monthly illegal income and the rank-order of support from illegal activities, and the differential decrease in heroin use, a change in the basis of legal support would be expected. As mentioned earlier, each interviewee was given a list of sources of support and then asked to rank them in terms of how much support they received during the period from each source. The source which provided the most income was given a "score" of one, the one which provided the next highest level of support was given a "score" of 2, and so forth. The three sources (other than illegal activities, which was presented earlier) were own wages or salary, and parents, mate, other family, friends, loans, or private charity, and welfare or a publicly supported institution. As expected, differences were found.

The rank order of support from own wages or salary before treatment differed, with those in OPM having earned a greater amount of their income from this source, and those in RDF having been lower. Both the adjusted

and unadjusted measure differed for the after period as well. Those in the more psycho-socially oriented treatments tended to receive a higher level of support from their own wages and salary than would have been expected, and those in in-patient treatments received a lower proportion of their support from this source. There were no statistically significant differences on this measure for the two kinds of symptomatic treatments.

The rank-order of support from other people and private charity did not differ for the before period, but it did for both the adjusted and unadjusted after measure, with those in RDF and IPD coming to rely less on other people and charity. The differences among the treatment modalities for the rank order of support from welfare and government institutions were not statistically significant for the before, after, or adjusted after measure.

At best, then, there were moderate shifts in the degree of support received from legal sources, probably as a result of decline in rank of illegal income as a source of support.

Given the--at best--modest differences among the treatments with respect to employment and legal sources of income, it would be expected that they would not be differentially related to another measure of the client's perceived economic well-being--economic hardships. As a part of the same set of questions discussed earlier in the context of drug use involvement during the follow-up period, the clients were asked how many times they had experienced the following events (with the response categories ranging from never during the period through once, twice, or three times or more): being evicted by a landlord, having a car or belongings repossessed, being refused medical attention, losing a job, having no place to stay, and being badly cheated by a company or store. The differences among the treatments

were not statistically significant. This is not surprising in light of the extremely weak associations between treatment modality and employment or legal sources of support. These measures are summarized in Table 8.8.

Table 8.8

Means of Measures of Adjusted and After-only Measures of Employment and Legal Support by Treatment Modality

| Modality | Work<br>Involve-<br>ment | BEST JOB <sup>1/</sup><br>Length<br>(Mos.) | Hourly<br>Wage | Monthly<br>Legal<br>Income | RANK OF SUPPORT <sup>1/</sup><br>Wages,<br>Salary | Others,<br>Charity | Welf.<br>Insts. | Economic<br>Hardships |
|----------|--------------------------|--|----------------|----------------------------|---|--------------------|-----------------|-----------------------|
| ODF      | 1.2                      | 0.1  | \$-0.16        | \$ - 6                     | -0.3  | -0.3               | -0.5            | 1.2                   |
| RDF      | 0.9                      | 0.4  | 0.05           | 40                         | -0.3  | 0.6                | 0.2             | 1.8                   |
| OPM      | 0.8                      | 0.2  | -0.33          | - 4                        | 0.4   | -0.2               | -0.2            | 1.5                   |
| IPD      | 0.3                      | -0.8                                       | -0.39          | - 64                       | 0.9   | 0.0                | -0.1            | 1.3                   |

<sup>1/</sup> Measures adjusted on before period. For rank of support items, primary ranked 1, secondary ranked 2, etc.

Although some additional statistical analysis would be needed to fully document the claim, the conclusion to be drawn from this analysis of differential treatment effects upon employment and legal sources of income is that treatment modality does not make a difference.

#### 8. Psycho-social and psycho-physiological health

Drug use may be seen as a consequence or cause of mental illness, or as essentially unrelated. But mental illness may itself be seen as but one side of the coin of mental health. Certainly, the goal of treatment for what might be called physical illness is to make or help the person feel better. Were it not for the inherent moral base of drug use control and treatment, and the fact that drugs are themselves sometimes taken to make oneself feel better, it might also be simply asserted that the purpose of drug use treatment is to make people feel better, among other things. One

might even say that the goal of treatment is to make people happy, but this would probably grate on some people who see drug use as evil and users as sinners who are too happy already in their vices. Nonetheless, it has been shown that mental health is associated with a sense of well-being which is experienced as happiness, and that this sense of well-being is produced by the absence of illness and the presence of positive life experiences. It was this theoretical orientation (Bradburn, 1969), which guided the assessment of psycho-physiological and psycho-social health.

Psycho-physiological illness was assessed by three commonly used indices. They are based on the number of items endorsed. One is a count of the number of symptoms the person reported as having experienced. Another is a count of the number of anxiety responses reported. And the third is the number of things about which the person worried. Indicators of positive psycho-social health have not been widely used. Two of those suggested by Bradburn were used. Essentially they are indicators of social involvement; one counted the number of contacts with friends, and the other counted the number of novel experiences reported.

The psychological well-being measure is composed of two parts; one assesses negative affect--in keeping with conventional mental illness concepts--and the other assesses positive affect--in keeping with the less conventional view that mental health is something more than the absence of mental illness. The psychological well-being measure is obtained by subtracting the negative affect measure from the positive affect measure (and adding a constant to eliminate negative values). Bradburn has shown, as the theory would predict, that this "affect balance scale" is positively correlated with self-reported happiness, satisfaction with how the person's life is going, and getting what one wants out of life. These three

indicants may then be used to assess the validity of the psychological well-being measure (i.e., the "affect balance scale").

Table 8.9 shows the correlations among the measures used. With one unfortunate exception, the data support the model. The psycho-physiological ill-health measures are positively intercorrelated, positively correlated with the negative affect scale, and virtually uncorrelated with the positive affect scale. Unfortunately, the two measures of social involvement are only weakly correlated with the positive affect scale, and they are even more weakly correlated with the well-being scale. But, this is not surprising as prior research has also shown weak correlations in this area. The positive and negative affect scales are only slightly (and negatively) intercorrelated. These two scales are strongly correlated with the psychological well-being scale, in the appropriate directions. And the validity of the well-being scale and its two parts is supported by their correlations with self-reported happiness, satisfaction with life as it is going, and the degree to which the respondents see themselves as achieving what they want from life. The model seems to apply to this sample.

Table 8.9

Intercorrelations Among Key Psycho-Physiological Measures,  
Unweighted Interview Sample (N = 292, Pearson Correlation)

|  | <u>Symptoms</u> | <u>Anxiety</u> | <u>Worries</u> | <u>Friends</u> | <u>Novelty</u> | <u>Positive<br/>Affect</u> | <u>Negative<br/>Affect</u> | <u>Well-<br/>Being</u> | <u>Happiness</u> | <u>Continue</u> | <u>Wants</u> |
|--|-----------------|----------------|----------------|----------------|----------------|----------------------------|----------------------------|------------------------|------------------|-----------------|--------------|
| Psycho-physiological<br>ill-health measures: |                 |                |                |                |                |                            |                            |                        |                  |                 |              |
| Symptoms                                     |                 | .68            | .35            | -.04           | .00            | -.09                       | .46                        | -.37                   | -.32             | -.37            | -.28         |
| Anxiety                                      | .68             |                | .26            | -.03           | .04            | -.22                       | .48                        | -.47                   | -.35             | -.32            | -.28         |
| Worries                                      | .35             | .26            |                | .09            | .17            | .03                        | .43                        | -.28                   | -.36             | -.30            | -.14         |
| Social involvement:                          |                 |                |                |                |                |                            |                            |                        |                  |                 |              |
| Contacts with friends                        | -.04            | -.03           | .09            |                | .27            | .23                        | -.05                       | .17                    | .05              | .03             | -.01         |
| Novel experiences                            | .00             | .04            | .17            | .27            |                | .23                        | .06                        | .10                    | .06              | .02             | .13          |
| Affect scales:                               |                 |                |                |                |                |                            |                            |                        |                  |                 |              |
| Positive                                     | -.09            | -.22           | .03            | .23            | .23            |                            | -.18                       | .74                    | .38              | .24             | .34          |
| Negative                                     | .46             | .48            | .43            | -.05           | .06            | -.18                       |                            | -.80                   | -.47             | -.41            | -.30         |
| Well-being                                   | -.37            | -.47           | -.28           | .17            | .10            | .74                        | -.80                       |                        | .55              | .45             | .41          |
| Validation:                                  |                 |                |                |                |                |                            |                            |                        |                  |                 |              |
| Self-reported<br>happiness                   | -.32            | -.35           | -.36           | .05            | .06            | .38                        | -.47                       | .55                    |                  | .50             | .50          |
| Continue life<br>as is                       | -.37            | -.32           | -.30           | .03            | .02            | .24                        | -.41                       | .43                    | .50              |                 | .59          |
| Getting what<br>want from life               | -.28            | -.28           | -.14           | -.01           | .13            | .34                        | -.30                       | .41                    | .50              | .59             |              |

A critically important aspect of the theory being utilized is that psychological well-being is not a fixed state, but is rather responsive to current circumstances, and otherwise subject to change. If the circumstances change or are different, well-being will be different, according to the theory. It is from this perspective that the wording of the questions used for assessing well-being arise. As indicated by the abbreviated questions in Table 8.10, they are keyed to experiences more than states. For treatment to impact these measures, it would have to have an effect on current circumstances. For the impact to be detected by this Study, the treatments would also have to have different effects. And, the impacts would probably have to be strong, both for the effects to be sustained over the long period of time from when they were received to the time at which the assessments were made, and to impact circumstances enough to produce an effect on well-being.

Table 8.10

Intercorrelations Among Affect Balance Scale  
on Unweighted Interview Sample (N = 292, Pearson Correlation)

|                              | POSITIVE AFFECT |      |      |      |      | NEGATIVE AFFECT |      |      |      |      |
|------------------------------|-----------------|------|------|------|------|-----------------|------|------|------|------|
|                              | 1.              | 2.   | 3.   | 4.   | 5.   | 6.              | 7.   | 8.   | 9.   | 10.  |
| <u>Positive Affect:</u>      |                 |      |      |      |      |                 |      |      |      |      |
| 1. Excited, interested       |                 | .31  | .38  | .26  | .19  | .09             | .00  | -.04 | -.03 | .03  |
| 2. Proud of compliment       | .31             |      | .43  | .14  | .25  | -.04            | -.12 | -.13 | -.07 | .00  |
| 3. Pleased at accomplishment | .38             | .43  |      | .22  | .24  | -.07            | -.13 | -.20 | -.11 | -.05 |
| 4. On top of the world       | .26             | .14  | .22  |      | .39  | .00             | -.09 | -.14 | -.10 | -.04 |
| 5. Things going your way     | .19             | .25  | .24  | .39  |      | -.12            | -.20 | -.26 | -.23 | -.10 |
| <u>Negative Affect:</u>      |                 |      |      |      |      |                 |      |      |      |      |
| 6. Too restless sit in chair | .09             | -.04 | -.07 | .00  | -.12 |                 | .24  | .36  | .35  | .311 |
| 7. Lonely or remote          | .00             | -.12 | -.13 | -.09 | -.20 | .24             |      | .43  | .58  | .38  |
| 8. Bored                     | -.04            | -.13 | -.20 | -.14 | -.26 | .36             | .43  |      | .49  | .27  |
| 9. Depressed or very unhappy | -.03            | -.07 | -.11 | -.10 | -.23 | .35             | .58  | .49  |      | .36  |
| 10. Upset at criticism       | .03             | .00  | -.05 | -.04 | -.10 | .31             | .38  | .27  | .36  |      |



Treatment could have an effect on health by influencing psycho-physiological symptoms. The modalities did not differ on the symptoms index (Table 8.11). Nor did they differ on the anxiety index. However, those in outpatient treatments worried more than those who had been in in-patient treatment. But, this difference, though statistically significant, was small.

There were no differences on the index of contacts with friends. The novelty index showed a small difference for in-patient versus outpatient modalities, with those who had been in outpatient treatments experiencing a slightly smaller number of novel events.

As would be expected from the above results, the treatment modalities were not differentially related to either the negative or positive affect scales. Obviously, then, they also had no effect upon the psychological well-being measure.

The overall impression from these statistical tests and the means presented in Table 8.11 is that treatment modalities do not differentially affect psycho-physiological health or well-being, at least as measured.

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Table 8.11

Mean Measures of Psycho-Physiological Health and Psychological Well-Being by Treatment Modality

| <u>Modality</u> | <u>Symp-<br/>toms<br/>Index</u> | <u>Anxiety<br/>Index</u> | <u>Worry<br/>Index</u> | <u>Contact<br/>Friends</u> | <u>Novelty<br/>Index</u> | <u>Positive<br/>Affect</u> | <u>Negative<br/>Affect</u> | <u>Well-<br/>Being</u> |
|-----------------|---------------------------------|--------------------------|------------------------|----------------------------|--------------------------|----------------------------|----------------------------|------------------------|
| ODF             | 3.1                             | 1.3                      | 4.3                    | 4.5                        | 1.6                      | 3.1                        | 2.0                        | 5.1                    |
| RDF             | 3.5                             | 1.3                      | 4.1                    | 5.1                        | 1.9                      | 3.3                        | 2.3                        | 5.0                    |
| OPM             | 3.3                             | 1.3                      | 4.9                    | 4.5                        | 1.4                      | 3.4                        | 2.3                        | 5.0                    |
| IPD             | 2.8                             | 1.0                      | 3.7                    | 4.5                        | 1.8                      | 3.2                        | 2.2                        | 5.1                    |

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Four other psycho-social measures were developed from items especially designed for the questionnaire. One set of items seems to have tapped the degree to which the clients saw themselves as having changed from before to after treatment in ways which are generally seen as socially desirable. Each person was given a "score" of one for each item which he/she said was more true of him/her for the after period, a "score" of minus one for each one reported as being more true of the before period, and a "score" of zero if the person reported no difference. The items asked: when did you feel the happiest, have the closest friends, have the most confidence in yourself, spend the most time with your family, spend the most time helping other people, save the most money, try to help friends the most, understand yourself the best. "Scored" in the reverse direction because of their wording were answers to items which asked when they caused other people to suffer the most, got hassled the most by other people, had the worst time. On the average, those in outpatient treatments reported more socially desirable changes, with OPM being reater than ODF (Table 8.12). For in-patient treatments, IPD was lower than RDF. It seems clear that these statistically significant differences arise from the relatively high mean for OPM and the relatively low mean for IPD. The other two modalities fall in between and are similar.

The meaning of these differences is not clear. There is a very strong element of social desirability to them, but this alone does not account for the differences. For whatever reasons, it would appear that people who stay in methadone treatment see it as very helpful to them. More generally, people who stay in any sort of treatment are probably more likely than others to see that treatment as beneficial; that is, as helping them to achieve desirable changes. By study design, and as a result of the agencies' low ability to contact their former clients, most of the people

who received methadone treatment were still in the program, while all the others had been discharged. This would partially account for the high mean on this measure for OPM. But the conclusion to be drawn is still ambiguous. Perhaps OPM clients give more favorable responses because the treatment is more effective, or perhaps they just see it that way. The most prudent conclusion would be that people who receive OPM see themselves as having changed in more socially desirable ways than do people who received other kinds of treatment.

The relatively low mean on this measure of socially desirable changes for those in IPD is also not clear in its meaning. In-patient detoxification is probably seen by most people as essential when needed, but not as a "cure" in itself. In addition, it lasts but a week or two, and probably comes to have less and less significance to the person as it becomes more distant. A year after treatment, it is probably no longer an anchoring point in one's life. But, as indicated in the prior paragraph, entry into methadone treatment probably is. Thus, the lower score on this measure for IPD may mean nothing more than the fact that entering IPD was not a major anchoring point in their life. Under this set of conditions, those who had been in IPD would be more likely to report that they could not say whether the socially desirable item was more true of themselves before or after treatment. This would lower their score on this measure, as this response to an item was scored as zero.

But, if a single IPD treatment is supposed to achieve as many socially desirable changes as does a regular, long-term regimen of methadone maintenance, then the clients are telling us that this did not happen. From this perspective, the difference between OPM and IPD on this measure is not terribly large. On the average, those in OPM said that more than 7 of 11

items in the socially desirable changes "scale" were more true of themselves after treatment, while those who had received IPD said that four were.

To be somewhat redundant to make a point, the interviewees were asked to "compare your life in the year before you got into" the study period treatment program "with how your life was in the year after you left the program." For each of the items read to them they were asked to tell the interviewer "if it was more true of you before you got into the program, after you got into it, or if there is really not much of a difference." The questions were of the form, "When did you feel the happiest?" For most adults, there is a tendency to see life as getting better. This measure may well be tapping this phenomenon as much as it does any treatment effect as such.

Suffice is to say that people who received outpatient methadone maintenance are more likely than others to say that their life got better, and that those who received in-patient detoxification are less likely to say so, but both saw their life as improving following treatment.

The questions on the clients' life before and after treatment contained another subset of intercorrelated items. They seemed to be reflecting what might be thought of as changes in psycho-social involvement. The items asked were: when did you have the best time, feel the most in love with someone, spend the most time helping other people, learn the most about life, try to help your friends the most, and understand yourself the best. As would be expected, both on the basis that they have items in common and the basis of their manifest content, the last measure and this one are highly intercorrelated. The Pearson correlation coefficient was 0.77. Again, there were statistically significant variations across treatment modalities on this measure, but they were weaker than for the socially desirable changes

measure. And again, it was the symptomatic dimension of the treatments which made the difference, with OPM being highest, IPD lowest, and the other two treatments in between. The conclusions to be drawn for this measure are the same as those given for the socially desirable changes measure.

Another measure derived from the item correlations may be called psycho-social depression. It was obtained by adding up the number of times during the year prior to the interview (scored from zero to 3 or more) that the person said he/she had cried, attempted suicide, or had a supernatural experience. By this measure, those who had been in in-patient treatment were more depressed than those who had been in outpatient treatments; the differences between the two in-patient treatments and the two outpatient treatments were not statistically significant. The differences among the means were quite small, ranging from 1.7 to 2.5 on a scale which ranged from zero to 9.

The last psycho-social measure was based on a series of questions which were also found to be intercorrelated. The meaning of the resultant "scale" is also open to question, but it seems to be capturing the degree to which the clients were involved with drug users in a helping way. It was obtained by adding up the number of times during the year before the interview (scored from zero to 3 or more) that the person reported being insulted by a policeman, seeing police hurting someone physically, being offered stolen goods to buy, urging anyone to seek drug treatment, helping to bail someone out of jail, visiting or writing to someone in jail or prison. What seems common to these items is association with drug users, and many of the items involve helping other people. It might also be reflecting hardship. It is weakly to moderately correlated with the psycho-social measures of drug use ( $r = 0.36$ ) and economic hardship ( $r = 0.29$ ) which were discussed in

earlier sections of this chapter. But whatever its meaning, it is not related to the kind of treatment received.

Table 8.12 summarizes the findings for the last four psycho-social measures.

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Table 8.12

Mean Measures on Four Psycho-Social Measures  
by Treatment Modality

| <u>Modality</u> | <u>Social Desir-<br/>able Changes</u> | <u>Psycho-social<br/>Involvement</u> | <u>Psycho-social<br/>Depression</u> | <u>Involvement<br/>with Drug Users</u> |
|-----------------|---------------------------------------|--------------------------------------|-------------------------------------|--|
| ODF             | 5.5                                   | 2.9                                  | 1.9                                 | 7.6                                    |
| RDF             | 6.0                                   | 3.1                                  | 2.5                                 | 8.0                                    |
| OPM             | 7.6                                   | 3.6                                  | 1.7                                 | 7.4                                    |
| IPD             | 4.2                                   | 2.1                                  | 2.2                                 | 8.2                                    |

---

Certainly the measures of psycho-physiological and psycho-social health and change do not show a clear differential treatment effect. Most of the measures show no statistically significant differences among the modalities, and those few which do are very weakly related. And among these weaker relationships, the two measures which show the stronger relationships are ambiguous in their meaning and highly intercorrelated. Our judgment is that there probably were no differences among the treatments in their effect upon psycho-physiological and psycho-social health and that the few statistically significant differences were either the result of pre-existing differences (which could not be controlled due to the impossibility of obtaining pre-treatment measures), coupled with the tendency for long-term programs (such as OPM) to engender faith in effectiveness among their members and the tendency for short-term programs (such as IPD) not to engender such faith.

9. Toward a partial explanation of some of the findings

Examination of the relationships between heroin use after treatment and the other variables which seemed to differ by treatment modality gave a strong impression that many of these differences were due to variations in heroin use. For instance, average monthly illegal income was related to treatment (even with adjustments made for differences on this measure in the before period), but this measure was also related to differences in heroin use after treatment. It seemed possible that some of the adjusted after differences were a consequence of differences in drug use after treatment. This possibility was examined by what we have called "twice adjusted measures."

Two of the after treatment measures of heroin use generally showed moderate correlations with many of the other after measures; they were yearly frequency of heroin use and the average dollar value of each heroin use. As might have been expected, the yearly frequency of use and the dollar value of each use were moderately or highly correlated (depending on the perspective taken). During the after period, the Pearson correlation coefficient was 0.50. However, inspection of the intercorrelations of these items with the other measures gave the impression that they might well be independently correlated with the other measures. This turned out to be the case. In general, as well, the correlations of these two after measures of heroin use with the before measures on other variables were lower than they were for the corresponding other after measures.

These interrelationships seemed to justify a set of analyses designed to determine if the variations among treatment modalities on other after measures might be due to variations in heroin use after treatment. The after measures chosen were those for which before measures were also available and which showed significant relationships with treatment modalities with

adjustments for the corresponding before measure.

The first step of the statistical analysis was to compute multiple linear regressions of the after measure with the corresponding before measure, and then, as the second step in the regression, to add the yearly frequency of heroin use and average dollar value of each heroin use for the after period (Nie, et al., 1965: 344-345). In every case, these measures accounted for significant increases in the multiple correlations with the after measure. Put somewhat differently, the yearly frequency of heroin use and the dollar value of each use after treatment had a moderate partial correlation with the other after measure controlling for the corresponding before measure. The partial correlations were significant in every case.

Table 8.13 summarizes the correlations and shows the variables used in these analyses. As can be readily seen, the measures of heroin use produced substantial increases in the explained variation in nearly every case; all of the increases were statistically significant.



Table 8.13

Relationships Between After Measures and Corresponding Before Measures,  
with Two Measures of Heroin Use After Added  
(Total Interview Sample, Unweighted, N = 292)

| <u>After Measure</u>                             | CORRELATIONS WITH AFTER MEASURE |                          |                         |                 |
|--|---------------------------------|--------------------------|-------------------------|-----------------|
|  | Zero-<br>Order<br>Before        | PARTIAL                  |                         |                 |
|  |                                 | <u>AYFH<sup>1/</sup></u> | <u>AVH<sup>2/</sup></u> | <u>Multiple</u> |
| Number of kinds of drugs used                    | .46                             | .44                      | .34                     | .55             |
| Number of times arrested and<br>charged          | .25                             | .24                      | .29                     | .39             |
| Rank-order of support from<br>wages and salary   | .32                             | -.23                     | -.22                    | .40             |
| Rank-order of support from<br>illegal activities | .41                             | .35                      | .34                     | .55             |
| Coded frequency of dealing/<br>selling drugs     | .41                             | .36                      | .36                     | .56             |
| Dollars spent on all drugs,<br>all periods       | .29                             | .84                      | .46                     | .85             |
| Average monthly illegal income                   | .43                             | .41                      | .44                     | .62             |

1/ AYFH - after yearly frequency of heroin use.

2/ AVH - after value of each heroin use.

As will be recalled, these after measures were chosen because they were associated with treatment differences (with adjustments made on before values) and because they were seen by the analyst as measures which might well be influenced by differences in heroin use after treatment. The results of the multiple regression analyses were therefore used to construct "twice adjusted" after measures. This was done by subtracting from the actual after measure the expected after measure based on the corresponding before measure and yearly frequency of heroin use and average dollar value of each heroin use after treatment. These twice adjusted after measures were then subjected to the one-way analysis of variance model developed for this project. The twice adjusted after measures were the number of kinds of

drugs used, dollars spent on all drugs during the entire period, coded frequency of dealing or selling drugs, rank-order of support from illegal activities, illegal monthly income, number of times arrested and charged, and rank-order of support from own wages or salary. Of these seven twice adjusted measures, only two still showed a significant relationship with treatment modality. The two were the number of kinds of drugs used and the rank-order of support from own wages or salary after treatment. In sum, the conclusion is that many of the differences among treatment modalities are due to differences in heroin use. This is especially true for illegal activities. And, it reaffirms the impression that most of the measures based on drug use which did show a difference were reflecting differences in heroin use.

The conclusions from this twice adjusted method must be carefully considered. The analyses do not mean that the treatments had no effects on these measures; rather, they support the argument that any differences associated with treatment modalities in the areas of drug use and illegal activities are probably due to whatever effects treatment programs might have upon subsequent use of heroin by heroin users in these kinds of treatments. This would be no mean accomplishment, in itself.

#### B. Non-Heroin Types in Outpatient Drug-Free Treatments

A basic dimension of the client typology upon which the analyses presented in this report were done was whether or not the person was a heroin user. The bulk of the clients were heroin users, and most of them received one of four kinds of treatment. Virtually all of those clients who were not heroin users received but one kind of treatment--outpatient drug-free. Given the rather pervasive and substantial differences associated with heroin use,

it would be grossly misleading to compare the non-heroin users with the heroin users in this kind of treatment. And it would be inappropriate in that the purpose of the project was to compare the relative effectiveness of different kinds of treatment. But this kind of analysis could not be done for the non-heroin types in that they received only one kind of treatment. On the other hand, to make no treatment comparisons for these kinds of clients would be to ignore a substantial minority of the people receiving drug treatment. Some sort of comparison seemed essential.

The first attempt to build a basis for comparison ended in failure for the want of a sufficient number of cases. This approach divided outpatient drug-free (and the other kinds of) treatment as provided by each of the programs in the Study on three variables. They were the rationale or philosophy underlying the treatment, the size of the program, and stability.<sup>4/</sup> Unfortunately, due to the small number of cases available for analysis, the distribution of non-heroin types in outpatient drug-free treatment on these variables was such that comparisons could not be made. The distributions were not sufficiently concentrated to provide enough cases for analysis. The second attempt was successful, from a very technical point of view.

The second approach was based on whether or not the treatment resulted

<sup>4/</sup> In order to develop and apply a system for classifying, a small panel of experts--each familiar with many programs on the basis of several years responsibility for administration of contracts, monitoring, and evaluation--was assembled. A number of possible dimensions on which classification might proceed were discussed, and the panel decided upon a system involving classification of each program on three variables which seemed relevant to considerations of program effectiveness. One of these was size, categorized as small, medium, and large on the basis of funding level, and a second was stability, determined by source and continuity of funding support. The third variable--treatment philosophy--required subjective judgment on the part of panel members, who categorized each program into one of four categories on the basis of the conceptual model which appeared to guide it: "mental health/clinical," "social oppression/survival skills," "youth/awareness expansion," or "multi-causal/comprehensive." Raters first proceeded independently, then met to arrive at a consensus for programs on which a disagreement had occurred.

from diversion. For this variable, the cases were equally divided into two groups--diverted and not diverted. From a statistical point of view, this was ideal in that there were only 66 non-heroin type cases available for analysis.

Especially during the Study period, 1975, diversion into drug treatment was a common practice in the criminal justice system. At least for the clients included in this Study, diversion typically occurred at the point of sentencing. The court gave the client the option of entering a drug treatment program or receiving a traditional criminal sentence. Also at this time programs were specializing in the provision of diversionary treatment, and the Drug Abuse Office was writing contracts for diversion programs. It would seem, then, that this is a meaningful way of categorizing out-patient drug-free treatment.

Diversion is also of theoretical and political interest as it is related to the issue of coercion. Many clinicians and social theorists would assert that coerced treatment is a contradiction. The clinicians who hold this point of view would argue that treatment can be successful only if the person chooses to engage in it out of a desire to change. And they would argue that people who are forced into treatment for the purpose of bringing about change will not change (unless it so happens that the coercion coincides with their own desires). The social theorists would argue that coerced treatment is really punishment under a different name. To the degree that these social theorists hold that punishment is ineffective, they would also hold that coerced treatment is ineffective. Although this study was not designed to examine these issues, the analyses about to be presented may be of some relevance.

1. Pre-treatment comparability

The basic analytical approach used for the heroin types was also used for the comparisons of non-heroin types diverted and not diverted into treatment. In particular, the "senate" weights were used, and the after treatment measures were adjusted for pre-treatment differences (for those variables on which both before and after measures were obtained). But, because only two groups were being compared, t-Test rather than the analysis of variance was used to test for statistical significance. Appendix G contains copies of the computer outputs upon which the analyses presented in this section were based.

Because the "senate" weights were computed for the non-heroin types without regard to the diversion variable, the distributions of client types for the diverted and non-diverted are not quite equal. A somewhat high proportion of the clients who were diverted into treatment were classified as younger, non-heroin types. The racial-ethnic distribution was about the same. The two groups were also compared, using the "senate" weights on a number of before treatment measures (as obtained from the questionnaire). Only three of the more than 25 such comparisons showed statistically significant differences (at the 10% level of confidence). They are shown in Table 8.14.

The diverted clients had higher legal incomes and had held their (best) job longer. And marijuana (or hashish) was more likely to be listed as a more serious problem. These differences are not surprising. In general, people who are diverted by the criminal justice system tend to be better off economically, and the diverted clients were somewhat younger. (People with no income were given a value of zero on this measure, and those who had not been employed were also given a value of zero on the length of the best

Table 8.14

Comparison of Diverted and Non-Diverted Non-Heroin Types  
in Outpatient Drug-Free Treatment for those Variables Showing  
Statistically Significant Differences for the BEFORE Period

| <u>Variable</u>                       | <u>MEAN</u>     |                         | <u>STD. DEV.</u> |                         | <u>t-Test</u> |
|---------------------------------------|-----------------|-------------------------|------------------|-------------------------|---------------|
|                                       | <u>Diverted</u> | <u>Not<br/>Diverted</u> | <u>Diverted</u>  | <u>Not<br/>Diverted</u> |               |
| Months employed on best job           | 6.8             | 4.2                     | 4.8              | 3.9                     | 2.46          |
| Average monthly legal income          | \$351           | \$288                   | 288              | 193                     | 2.00          |
| Rank-order of marijuana or<br>hashish | 4.1             | 2.8                     | 1.7              | 2.3                     | 2.51          |

job.) The higher rank-order of marijuana as a problem is probably due to the tendency for courts to divert those people whose primary problem is marijuana use.

The more important conclusion to be drawn from this comparison of those who were diverted into treatment versus those who were not is that they were roughly comparable before entering treatment with respect to the yearly frequency of marijuana use, yearly frequency of alcohol use, the dollar value of each marijuana use, the dollar value of each alcohol use, dollars spent on all drugs, hourly wage of best job, months looking for work, average monthly illegal income, number of kinds of drugs used, rank-order of support from wages or salary and charity, welfare and illegal activities, frequency of burglaries or breaking and entering and theft, frequency of dealing or selling drugs, rank-order of use of oral amphetamines and barbiturates and alcohol as a problem, number of drug treatments. There were also no differences on the measures of heroin use, but this was because it was very rare among these clients.

One before measure requires special attention. The mean number of arrests before treatment was 1.5 for the diverted cases and 1.3 for the others; this difference was not statistically significant. But the two groups did clearly differ on whether or not they had been arrested. All but two of the diverted cases reported that they had been arrested, and the information was not available for the two who did not report an arrest. More than one-half of those who were not diverted reported no arrest during the before period. But less than 10 percent of the diverted cases reported four or more arrests, while one-fourth of the non-diverted cases reported four or more. And 60 percent of those diverted reported but one arrest while only 10 percent of the others reported but one arrest. This markedly different distribution of arrests happens to produce means which are quite similar. At least one arrest among the diverted cases was to be expected; the arrest record of the others could not have been predicted with any degree of accuracy.

## 2. Treatment comparisons

As might have been expected given their different mode of entry into treatment, those diverted differed from those not in terms of the services sought from the treatment programs. They were less likely to seek self-improvement, employment and survival assistance services, but they did not differ in terms of drug-use control services sought. With respect to services received, having sought fewer, they got fewer, except for drug-use control services. Table 8.15 shows results of these comparisons.

Table 8.15

Treatment Services Sought and Received  
by Diverted and Non-Diverted Non-Heroin Client Types

| <u>Treatment Services</u> | <u>MEAN</u>     |                     | <u>STD. DEV.</u> |                     | <u>t-Test</u>      |
|---------------------------|-----------------|---------------------|------------------|---------------------|--------------------|
|                           | <u>Diverted</u> | <u>Not Diverted</u> | <u>Diverted</u>  | <u>Not Diverted</u> |                    |
| <u>Sought:</u>            |                 |                     |                  |                     |                    |
| More effective self       | 2.1             | 4.2                 | 2.2              | 2.3                 | 3.96 <sup>1/</sup> |
| Employment                | 1.0             | 1.7                 | 1.3              | 1.5                 | 2.04 <sup>1/</sup> |
| Survival assistance       | 0.6             | 1.3                 | 1.2              | 1.5                 | 1.87 <sup>1/</sup> |
| Drug-use control          | 1.0             | 1.2                 | 1.1              | 1.1                 | 0.73               |
| <u>Received:</u>          |                 |                     |                  |                     |                    |
| More effective self       | 2.1             | 3.7                 | 2.2              | 2.0                 | 3.12 <sup>1/</sup> |
| Employment                | 0.7             | 1.1                 | 1.0              | 1.2                 | 1.28               |
| Survival assistance       | 0.4             | 1.1                 | 0.9              | 1.5                 | 2.18 <sup>1/</sup> |
| Drug-use control          | 1.0             | 1.2                 | 1.1              | 1.1                 | 0.36               |

<sup>1/</sup> Significant at the 0.10 level or better.

These patterns are as would be expected; people who are diverted into treatment do not expect as much from the programs as do those whose entry is more responsive to their own choice. Approximately two-thirds of those who were not diverted reported that they were not pressured into treatment either.

The groups did not differ very much in their assessments of the treatment programs as measured by the number of items which they endorsed concerning staff disrespect for clients, program helpfulness, and program weakness (Table 8.16). Two of these measures showed a statistically significant difference at the 0.10 level, but the differences were small in magnitude. Nonetheless, all three of these measures reflected a more positive assessment by those who had been diverted.



Table 8.16

Assessment of Treatment Programs by  
Diverted and Non-Diverted Non-Heroin Client Types

| <u>Client Assessments</u>                    | <u>MEAN</u>     |                     | <u>STD. DEV.</u> |                     | <u>t-Test</u>      |
|--|-----------------|---------------------|------------------|---------------------|--------------------|
|  | <u>Diverted</u> | <u>Not Diverted</u> | <u>Diverted</u>  | <u>Not Diverted</u> |                    |
| Number of client-disrespect items endorsed   | 1.9             | 2.1                 | 0.38             | 0.59                | 1.68 <sup>1/</sup> |
| Number of program-helpfulness items endorsed | 5.3             | 5.1                 | 1.34             | 1.32                | 0.54               |
| Number of weak-program items endorsed        | 0.3             | 0.6                 | 0.69             | 0.93                | 1.77 <sup>1/</sup> |

<sup>1/</sup> Significant at the 0.10 level or better, with 64 degrees of freedom, using two-tail probabilities.

But, there was an exception to this modest trend, which is itself but slight. In response to the question, "How much help did you get from the program?", the answers were as follows:

|                              | <u>Diverted<br/>(N = 32)</u> | <u>Non-Diverted<br/>(N = 34)</u> |
|------------------------------|------------------------------|----------------------------------|
| "a great amount"             | 28%                          | 39%                              |
| "a moderate amount"          | 27                           | 37                               |
| "a slight amount"            | 28                           | 17                               |
| "none at all"                | 14                           | 7                                |
| "or was the program harmful" | 3                            | 0                                |

The chi-square value for this table was 3.98, which with four degrees of freedom is not significant. But, if these responses are given values ranging from one (1) for "a great amount" to five (5) for "harmful," and a t-Test is done on the corresponding means of 2.4 for the diverted cases and 1.9 for the others, the difference is statistically significant at the 0.10 level. The conclusions must be that the lower expectations of people diverted into treatment produce a slightly more positive evaluation of the

programs themselves, and that these lower expectations result in perception of less help being received.

### 3. Treatment outcomes

Eighteen of the outcome measures may be classified as psycho-social or psycho-physiological. Statistically significant differences were found on five of these measures (with two of these being highly inter-correlated with each other), but none of these differences were very large. The most statistically significant difference was on the index of psycho-physiological symptoms. On the average, those who were diverted reported 1.8 of the 11 symptoms listed, while the others reported 3.3 (with standard deviations of 1.63 and 2.18, respectively). The resulting t-Test of 3.13 is significant at the 0.01 level. Although the differences are small in magnitude and most are not statistically significant, they all favor those who were diverted. Given that the people diverted into treatment sought and consequently received fewer services and that they reported less benefit from the programs, it seems most likely that these modest differences after treatment reflect both the somewhat better socio-economic status of those diverted into treatment and the probable greater degree of psycho-social disturbance of those who sought treatment on their own which persisted after treatment.

The remaining post-treatment measures are presented in Table 8.17, in groups derived from their manifest meaning. The table shows only the actual after measures. The adjusted after measures were used to guide the interpretation.

Table 8.17

Comparisons of Non-Heroin Types  
 Diverted and Not Diverted into Outpatient Drug-Free Treatment  
 on Post-Treatment Measures  
 of Socio-Economic and Drug-Related Variables

| Variable   | MEAN     |              | STD. DEV. |              | t-Test             |
|--|----------|--------------|-----------|--------------|--------------------|
|  | Diverted | Not Diverted | Diverted  | Not Diverted |                    |
| Yearly frequency of marijuana use                        | 315      | 233          | 121       | 66           | 0.59               |
| Yearly frequency of alcohol use                          | 46       | 108          | 91        | 238          | 1.39               |
| Dollar value of each marijuana use                       | \$1.49   | \$ .96       | 1.77      | 1.32         | 1.35               |
| Dollar value of each alcohol use                         | \$0.86   | \$2.53       | 1.45      | 3.78         | 2.38 <sup>1/</sup> |
| Total dollars spent on all drugs                         | \$756    | \$679        | 998       | 1210         | 0.28               |
| Hourly wage of best job                                  | \$3.39   | \$2.15       | 2.19      | 1.90         | 2.47 <sup>1/</sup> |
| Months in best job                                       | 6.6      | 4.2          | 4.4       | 4.3          | 2.25 <sup>1/</sup> |
| Monthly legal income                                     | \$427    | \$301        | 342       | 285          | 1.62               |
| Rank-order of support from own wages or salary           | 5.2      | 4.0          | 1.8       | 2.7          | 2.18 <sup>1/</sup> |
| Number of kinds of drugs used                            | 1.4      | 1.6          | 1.1       | 1.3          | 0.77               |
| Rank-order of drug as problem:                           |          |              |           |              |                    |
| Marijuana, hashish                                       | 3.4      | 2.4          | 2.4       | 2.4          | 1.71 <sup>1/</sup> |
| Oral amphetamines  | 0.1      | 0.1          | 0.4       | 0.7          | 0.56               |
| Barbiturates   | 0.1      | 0.5          | 0.6       | 1.5          | 1.46               |
| Alcohol  | 1.5      | 2.3          | 2.1       | 2.2          | 0.43               |
| Coded frequency of thefts other than robbery or burglary | 0.1      | 0.4          | 0.4       | 1.1          | 1.20               |
| Coded frequency of dealing or selling drugs              | 0.8      | 0.8          | 1.7       | 1.7          | 0.06               |
| Number of times arrested and charged                     | 0.4      | 0.7          | 0.7       | 1.1          | 1.44               |
| Monthly illegal income                                   | \$ 57    | \$ 51        | 129       | 170          | 0.17               |

<sup>1/</sup> Significant at the 0.10 level, or better.

There were no statistically significant differences on frequency of alcohol or marijuana use, but the dollar value of the alcohol used was higher for those who were not diverted. This difference remained significant when controlled for differences before treatment. For both measures, the difference in the averages was about \$1.50. Heroin use among these clients was so rare as to make any comparisons on its use meaningless.

The number of different kinds of drugs used after treatment was quite similar for those diverted into treatment and those not, with the mean number being slightly higher for those not diverted. But, before treatment, those diverted were more likely to have used more drugs. When the after treatment measure is adjusted on the pre-treatment measure, the resulting difference between the diverted and non-diverted groups becomes statistically significant at the 0.10 level. Those diverted tended to use fewer drugs.

After treatment, one-fourth of both groups used no kinds of drugs, and one-half used one or two--typically marijuana and/or alcohol. Less than 10 percent used any other one drug after treatment. The questionnaire allowed for the recording of up to five different kinds of drugs. The rank-order of each kind of drug was assigned in such a way as to give the highest value (5) to the primary drug, the next highest value (4) to the secondary drug, and so on down to one for the lowest ranked drug, and a value of zero when use of the drug was not reported at all. By this measure, marijuana (or hashish) was a more serious problem for those who had been diverted into treatment. But marijuana was a more serious problem for these people before treatment. When the after measure was adjusted for this pre-treatment difference, the post-treatment difference became statistically insignificant. There were no rank-order differences for oral amphetamines, barbiturates, or alcohol.

With respect to drug use after treatment, those who entered into treatment as a result of being diverted by the criminal justice system did not seem to differ much from those who sought treatment more or less on their own.

There are some rather clear differences on the measures of post-treatment employment. In general, those diverted into treatment earned more money from higher paying jobs which they held longer and they consequently were more likely to support themselves by their own wages or salary. And these differences remained when the measures were adjusted for pre-treatment differences, although they did become somewhat smaller and less statistically significant.

Criminal activity following treatment was not very common, and what there was was largely limited to minor thefts and dealing or selling drugs-- most likely marijuana. But the small differences in the mean number of arrests and the proportion arrested must be considered in light of the clear difference between the two groups before treatment. As will be recalled, all of those diverted into treatment had been arrested before treatment, while about one-half of those not diverted had been arrested. But the diverted people were more likely to have been arrested but once. The lack of substantial differences in the actual number of arrests after treatment leads to the conclusion that those diverted experienced fewer arrests than would have been expected. And although the tendency was less strong, those who were not diverted experienced more arrests than would have been expected. As a consequence of these variations, the adjusted number of arrests following treatment was significantly lower for those diverted into treatment. The difference of about four-tenths of an arrest was significant at the 0.10 level (for a t-Test value of 1.88).

Among those not diverted, about 45 percent were arrested before treatment and about 40 percent were arrested after treatment. About 30 percent of the diverted cases were arrested after treatment. The lower arrest rate of the diverted cases is probably an artifact of the study design. In effect, inclusion in the diverted group required that the person be arrested. One might think of the criminal justice system--typically the court--as a screening device waiting for people to be arrested (for marijuana use, most likely) and then sending them over to be treated. Quite by design and intent, then, the courts were picking up people right at the point where they had been arrested. Obviously, it would be expected that the "screen" of the year following treatment would pick a lower proportion with arrests as there is nothing about this "screen" which is keyed to the occurrence of an arrest. Similarly, the pre- and post-treatment screens for the non-diverted cases were not keyed to the occurrence of an arrest. It is not surprising then that the post-treatment follow-up period, or "screen" picked up nearly equal arrest experiences for the diverted and non-diverted cases. On this basis, the conclusion would be that those diverted into treatment do not differ from those not diverted with respect to arrests following treatment. Coupled with the lack of difference on the other measures of illegal activities, the conclusion would be that diversion is not associated with a greater or lesser likelihood of subsequent illegal behavior.

In sum, whether or not a person is diverted into treatment probably does not make much of a difference in terms of events and situations subsequent to the treatment. Those diverted into treatment expect and receive less from the programs which they do not hold against the programs, and they see themselves as having received somewhat less help. The only clear differences following treatment are for employment. Those diverted had a better

record. It seems likely that these differences would account for the slightly more positive measures on psycho-physiological health, and that both are probably due to pre-treatment differences which the statistical analyses did not fully account for.

### C. Treatment Effects by Kind of Treatment and Type of Client

A recurrent interest among treatment professionals is whether different kinds of treatment may have different effects for different kinds of clients. The following scheme was devised to investigate this issue.

The number of cases in a given combination of client type and kind of treatment varied from a low of 7 to a high of 35, with the average being 13.3 cases per cell. Extensive comparisons of performance measures for cells based on such small numbers would run a high risk of resulting in uninterpretable findings due to the unreliability of the cell values. But disregarding this problem for the moment, it may be that there are some differences across the combinations. Assuming that there are, the problem becomes one of making reliable discriminations among the combinations of client type and kind of treatment. Statistical theory (Guilford, 1954: 360) leads to the conclusion that reliable discrimination among objects of study is maximized by combining indices which are highly correlated.<sup>5/</sup> Assuming that measurement errors (i.e., unreliability) across the candidate variables are uncorrelated, the theory holds that combination of the measures accumulates the reliable distinctions being made among the objects of study, but not the unreliable distinctions. In a sense, this is the theory which underlies the national ranking of football teams by sports writers.

<sup>5/</sup> Validity is maximized by combining indices which are uncorrelated (with each other, but highly correlated with that which is being measured).

and basing course grades on the average of several tests.

For the problem at hand, this approach leads to a search for clusters of measures which tend to distinguish among the combinations of client type and kind of treatment in a similar way. Those measures which do so may then be combined to more reliably distinguish among the combinations. As might have been expected on the basis of analyses already presented, one set of measures which ranked the 22 combinations of kind of treatment and client type in a similar way were adjusted yearly frequency of heroin use, dollars spent on all drugs, illegal monthly income and frequency of dealing/selling drugs in the after period (Table 8.18). The Kendall coefficient of concordance was 0.86 (Siegel, 1956: 229-238). This measure takes on a value of 1.0 when there is complete agreement among the rank orderings, and a value of 0.0 when there is no agreement. The combinations of client type and kind of treatment were then given a "score" or "index" by taking the average of the rank-orders on these four variables.<sup>6/</sup> It may be taken as an indicant of change in heroin use.

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<sup>6/</sup> For an argument on the propriety of taking the mean (rather than the median) of a set of ranks, see Labovitz (1970: 515-524).



Table 8.18

Mean Rank of Heroin Use Measures  
by Client Type and Kind of Treatment<sup>1/</sup>

|     | <u>Client Type</u>                                      | <u>Kind of Treatment</u> |            |            |            | <u>MEAN</u> |
|-----|---|--------------------------|------------|------------|------------|-------------|
|     |   | <u>ODF</u>               | <u>RDF</u> | <u>OPM</u> | <u>IPD</u> |             |
| 1.  | Younger, non-heroin,<br>white and other                 | 13.25                    | --         | --         | --         | 13.25       |
| 2.  | Younger, non-heroin,<br>Chicano                         | 12.50                    | --         | --         | --         | 12.50       |
| 3.  | Younger, non-heroin,<br>black                           | 12.25                    | --         | --         | --         | 12.25       |
| 4.  | Older, non-heroin,<br>white and other                   | 11.00                    | --         | --         | --         | 11.00       |
| 5.  | Older, non-heroin,<br>Chicano                           | 7.25                     | --         | --         | --         | 7.25        |
| 6.  | Older, non-heroin,<br>black                             | 6.75                     | --         | --         | --         | 6.75        |
| 7.  | Older, white and other,<br>heroin users, short<br>onset | 11.50                    | 13.75      | 10.75      | 20.00      | 14.00       |
| 8.  | Older, white and other,<br>heroin users, long<br>onset  | 18.00                    | 1.75       | 3.75       | 21.00      | 11.12       |
| 9.  | Older, chicano, heroin<br>users                         | 14.00                    | 16.75      | 6.00       | 21.75      | 14.62       |
| 10. | Older, black, heroin<br>users                           | 3.25                     | 4.25       | 6.25       | 17.25      | 7.75        |
|     | Mean Heroin Types                                       | 11.69                    | 9.12       | 6.69       | 20.00      | 11.88       |
|     | Mean all types  | 10.98                    | 9.12       | 6.69       | 20.00      | 11.50       |

<sup>1/</sup> Lower values mean lower use.

For drugs other than heroin, the only set of measures which produced highly intercorrelated rank-orders of the combinations of client type and kind of treatment were those for alcohol use (Table 8.19). The three measures were therefore combined as above. They were adjusted yearly frequency of alcohol use, the average dollar value of the alcohol used each time, and the rank-order of alcohol use during the after period.

The coefficient of concordance for these three rank-orders was 0.69. This index may be taken as an indicant of change in alcohol use.

Table 8.19

Mean Rank of Alcohol Use Measures<sup>1/</sup>  
by Client Type and Kind of Treatment

| Client Type  | Kind of Treatment |      |       |       | MEAN  |
|--|-------------------|------|-------|-------|-------|
|  | ODF               | RDF  | OPM   | IPD   |       |
| 1. Younger, non-heroin, white and other              | 17.3              | --   | --    | --    | 17.3  |
| 2. Younger, non-heroin, Chicano                      | 17.7              | --   | --    | --    | 17.7  |
| 3. Younger, non-heroin, black                        | 3.3               | --   | --    | --    | 3.3   |
| 4. Older, non-heroin, white and other                | 6.3               | --   | --    | --    | 6.3   |
| 5. Older, non-heroin, Chicano                        | 20.0              | --   | --    | --    | 20.0  |
| 6. Older, non-heroin, black                          | 9.3               | --   | --    | --    | 9.3   |
| 7. Older, white and other, heroin users, short onset | 6.3               | 9.0  | 16.7  | 18.3  | 12.58 |
| 8. Older, white and other, heroin users, long onset  | 17.0              | 9.3  | 8.3   | 15.7  | 12.58 |
| 9. Older, Chicano, heroin users                      | 15.0              | 8.0  | 17.0  | 7.3   | 11.82 |
| 10. Older, black, heroin users                       | 11.0              | 2.0  | 11.3  | 12.3  | 9.15  |
| Mean, heroin types                                   | 12.32             | 7.08 | 13.32 | 13.40 | 11.53 |
| Mean, all types                                      | 12.32             | 7.09 | 13.32 | 13.40 | 11.75 |

<sup>1/</sup> Lower values mean lower use.

The most strongly intercorrelated measures of employment were the adjusted average hourly wage of the best job, the length of the best job, and legal monthly income during the after period (Table 8.20). The coefficient of concordance for these measures was 0.75. This index may be taken as an indicant of change in employment.

Table 8.20

Mean Rank on Employment Measures  
by Client Type and Kind of Treatment<sup>1/</sup>

| <u>Type of Client</u>                                | <u>Kind of Treatment</u> |            |            |            | <u>MEAN</u> |
|--|--------------------------|------------|------------|------------|-------------|
|  | <u>ODF</u>               | <u>RDF</u> | <u>OPM</u> | <u>IPD</u> |             |
| 1. Younger, non-heroin, white and other              | 11.7                     | --         | --         | --         | 11.7        |
| 2. Younger, non-heroin, Chicano                      | 8.3                      | --         | --         | --         | 8.3         |
| 3. Younger, non-heroin, black                        | 18.3                     | --         | --         | --         | 18.3        |
| 4. Older, non-heroin, white and other                | 7.7                      | --         | --         | --         | 7.7         |
| 5. Older, non-heroin, Chicano                        | 3.3                      | --         | --         | --         | 3.3         |
| 6. Older, non-heroin, black                          | 10.7                     | --         | --         | --         | 10.7        |
| 7. Older, white and other, heroin users, short onset | 3.7                      | 7.7        | 14.0       | 15.0       | 10.10       |
| 8. Older, white and other, heroin users, long onset  | 21.7                     | 5.7        | 9.0        | 19.3       | 13.92       |
| 9. Older, Chicano, heroin users                      | 14.3                     | 13.0       | 8.3        | 20.3       | 13.98       |
| 10. Older, black, heroin users                       | 17.3                     | 2.3        | 8.7        | 12.7       | 10.25       |
| Mean, heroin types                                   | 14.25                    | 7.18       | 10.00      | 16.82      | 12.06       |
| Mean, all types                                      | 11.70                    | 7.18       | 10.00      | 16.82      | 11.50       |

<sup>1/</sup> Lower values mean better employment record.

The clients' evaluations of the treatment programs produced one set of intercorrelated measures (Table 8.21). They were the degree to which the treatment program provided the more-effective-self services sought by the clients, the degree to which the treatment program provided the employment services the clients had sought, the degree to which the treatment program provided the drug use control services which were sought, and the clients' evaluations of the degree of helpfulness of the treatment program. The coefficient of concordance for the rank-orderings produced by these four measures was 0.68. This index may be taken as an indicant of the clients' evaluations of the treatment programs.

Table 8.21

Mean Rank on Client Evaluation of Treatment Program  
by Client Type and Kind of Treatment<sup>1/</sup>

| <u>Client Type</u>                                   | <u>Kind of Treatment</u> |            |            |            | <u>MEAN</u> |
|--|--------------------------|------------|------------|------------|-------------|
|  | <u>ODF</u>               | <u>RDF</u> | <u>OPM</u> | <u>IPD</u> |             |
| 1. Younger, non-heroin, white and other              | 17.25                    | --         | --         | --         | 17.25       |
| 2. Younger, non-heroin, Chicano                      | 10.25                    | --         | --         | --         | 10.25       |
| 3. Younger, non-heroin, black                        | 17.75                    | --         | --         | --         | 17.75       |
| 4. Older, non-heroin, white and other                | 13.25                    | --         | --         | --         | 13.25       |
| 5. Older, non-heroin, Chicano                        | 4.75                     | --         | --         | --         | 4.75        |
| 6. Older, non-heroin, black                          | 17.25                    | --         | --         | --         | 17.25       |
| 7. Older, white and other, heroin users, short onset | 12.00                    | 17.00      | 2.75       | 15.75      | 11.88       |
| 8. Older, white and other, heroin users, long onset  | 15.50                    | 9.50       | 3.75       | 18.25      | 11.75       |
| 9. Older, Chicano, heroin users                      | 17.25                    | 7.50       | 3.75       | 14.50      | 10.75       |
| 10. Older, black, heroin users                       | 14.25                    | 7.75       | 4.50       | 8.50       | 8.75        |
| Mean, heroin types                                   | 14.75                    | 10.44      | 3.69       | 14.25      | 10.78       |
| Mean, all types                                      | 13.95                    | 10.44      | 3.69       | 14.25      | 11.50       |

<sup>1/</sup> Lower values mean more positive evaluation.

Among the psycho-social and psycho-physiological measures, only three produced highly intercorrelated rank-orderings of the 22 combinations of client type and kind of treatment (Table 8.22). They were the self-reported before versus after measures called socially desirable changes, psycho-social involvement, and negative drug use consequences. The coefficient of concordance for these rank orderings was 0.91. This index may be taken as an indicant of self-reported client change.

Table 8.22

Mean Rank on Self-Reported Client-Change Measures  
by Client Type and Kind of Treatment<sup>1/</sup>

| <u>Client Type</u>                                   | <u>Kind of Treatment</u> |            |            |            | <u>MEAN</u> |
|--|--------------------------|------------|------------|------------|-------------|
|  | <u>ODF</u>               | <u>RDF</u> | <u>OPM</u> | <u>IPD</u> |             |
| 1. Younger, non-heroin, white and other              | 18.0                     | --         | --         | --         | 18.0        |
| 2. Younger, non-heroin, Chicano                      | 10.7                     | --         | --         | --         | 10.7        |
| 3. Younger, non-heroin, black                        | 19.7                     | --         | --         | --         | 19.7        |
| 4. Older, non-heroin, white and other                | 8.3                      | --         | --         | --         | 8.3         |
| 5. Older, non-heroin, Chicano                        | 6.3                      | --         | --         | --         | 6.3         |
| 6. Older, non-heroin, black                          | 20.0                     | --         | --         | --         | 20.0        |
| 7. Older, white and other, heroin users, short onset | 6.3                      | 16.0       | 7.0        | 12.0       | 10.32       |
| 8. Older, white and other, heroin users, long onset  | 8.0                      | 5.0        | 2.3        | 21.7       | 9.25        |
| 9. Older, Chicano, heroin users                      | 20.0                     | 16.0       | 10.3       | 14.0       | 15.08       |
| 10. Older, black, heroin users                       | 12.7                     | 3.3        | 1.3        | 14.0       | 7.82        |
| Mean, heroin types                                   | 11.75                    | 10.08      | 5.22       | 15.42      | 10.62       |
| Mean, all types                                      | 13.00                    | 10.08      | 5.22       | 15.42      | 11.50       |

<sup>1/</sup> Lower values means more positive self-change.

The criminal involvement measures were not well correlated across the combinations of client type and kind of treatment. Four of the five indicators were moderately to strongly intercorrelated. As shown in Table 8.23 alcohol use was not correlated with the other measures to a substantial degree, but the other four were, ranging from 0.49 to 0.74. Again, given the earlier reported analyses, this is not surprising. It seems clear that the key variable is heroin use, but the design of the Study and the data do not allow us to come to a conclusion as to the direction of the effects. It could be for instance, that the client's evaluation of the treatment program is reflecting the effectiveness of the treatment received and that

it is correlated with the change in heroin use and employment as a result of treatment effects. Or, it could be that the self-change measure is reflecting the client's commitment to change which in turn causes a correlation with treatment evaluation and heroin use as well as employment. And so on. About all that seems reasonably clear is that alcohol use is related in a different way to whatever it is that is causing the variations in the other measures, or that it is related to some other variable(s).

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Table 8.23

Intercorrelations of Various Measures  
Across 22 Combinations of Client Type  
and Kind of Treatment

|                 | <u>Heroin<br/>Use</u> | <u>Alcohol<br/>Use</u> | <u>Employ-<br/>ment</u> | <u>Self-<br/>Change</u> | <u>Treatment<br/>Evaluation</u> |
|-----------------|-----------------------|------------------------|-------------------------|-------------------------|---------------------------------|
| Heroin Use      | --                    | 0.23                   | 0.62                    | 0.54                    | 0.49                            |
| Alcohol Use     | 0.23                  | --                     | 0.18                    | 0.09                    | -0.08                           |
| Employment      | 0.62                  | 0.18                   | --                      | 0.54                    | 0.49                            |
| Self-change     | 0.54                  | 0.09                   | 0.54                    | --                      | 0.74                            |
| Treatment Eval. | 0.49                  | -0.08                  | 0.49                    | 0.74                    | --                              |

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1. Older, white and other, short onset, heroin users

Compared to all other client types in all kinds of treatment, change in heroin use for this client type was about average for all treatments but IPD (which was also relatively poor for all of the heroin client types). As can be seen from Figure 8.1, the best performance for this client type was in ODF. Although this client type evaluated OPM rather positively, change in heroin and alcohol use as well as employment was not very positive, and the high evaluation of OPM was characteristic of all

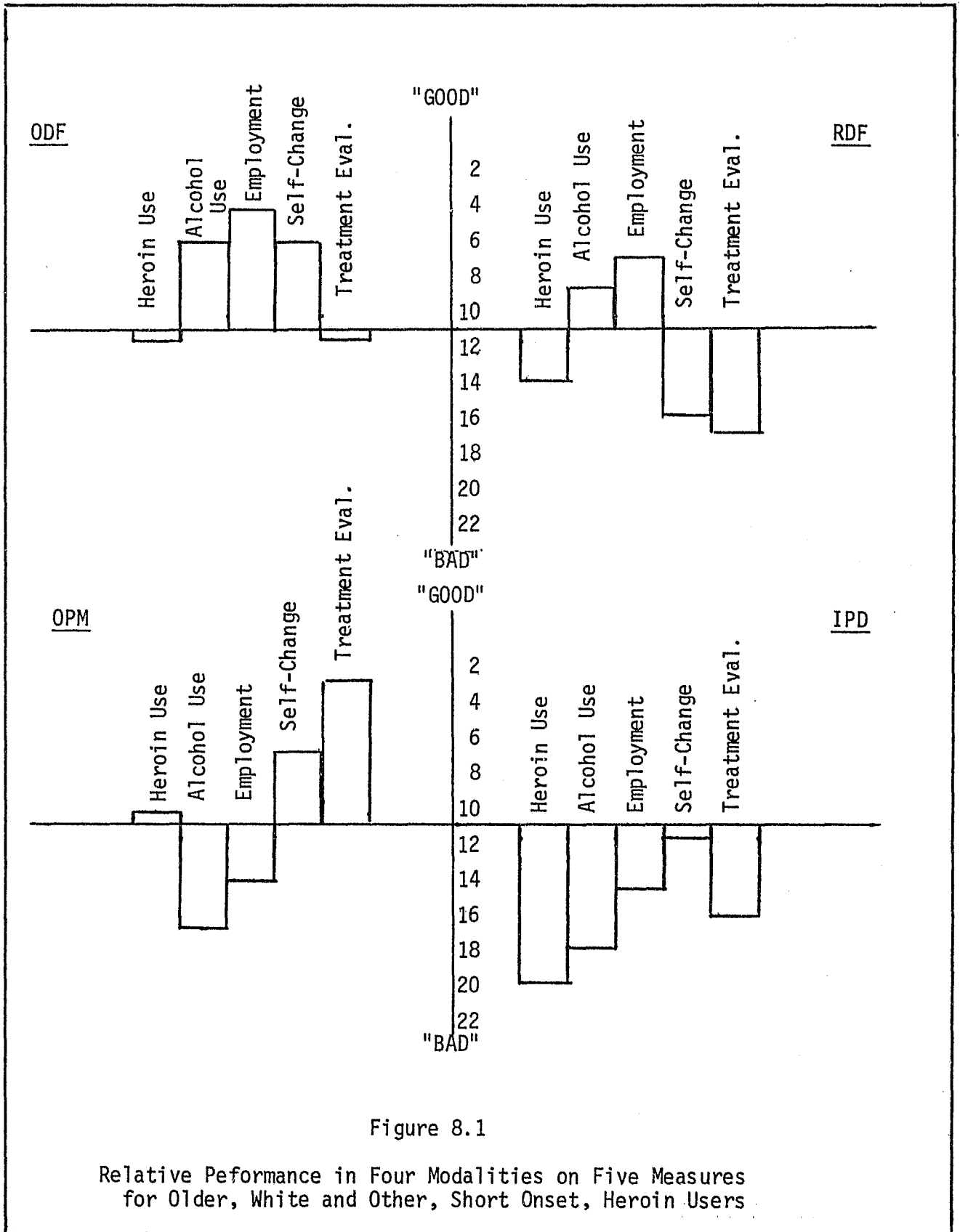


Figure 8.1

Relative Performance in Four Modalities on Five Measures for Older, White and Other, Short Onset, Heroin Users

of the heroin client types. This type of client in RDF gave relatively low ratings with respect to self-change and the value of the treatment received, although heroin and alcohol use as well as employment were about average. IPD did not show a good record for this client type, but this was true for all client types.

On balance, ODF would seem to be the preferred modality for this client type, with either RDF or OPM the next best. RDF placement would yield a slight relative gain in change in alcohol use and employment at a slight relative loss in self-change and treatment evaluation. OPM placement would yield a slight relative loss in change in alcohol use and employment, with a relative gain in self-change and treatment evaluation.

2. Older, white and other, long onset, heroin users

For this client type (Figure 8.2), ODF is associated with relatively poor performance on all but the self-change measure (which is only slightly higher than the average). Either RDF or OPM would seem to be the best for this client type. The only substantial difference between these two modalities is on treatment evaluation, but OPM received relatively high evaluations from all of the heroin client types. And as with all of the heroin client types, IPD showed a relatively poor record.



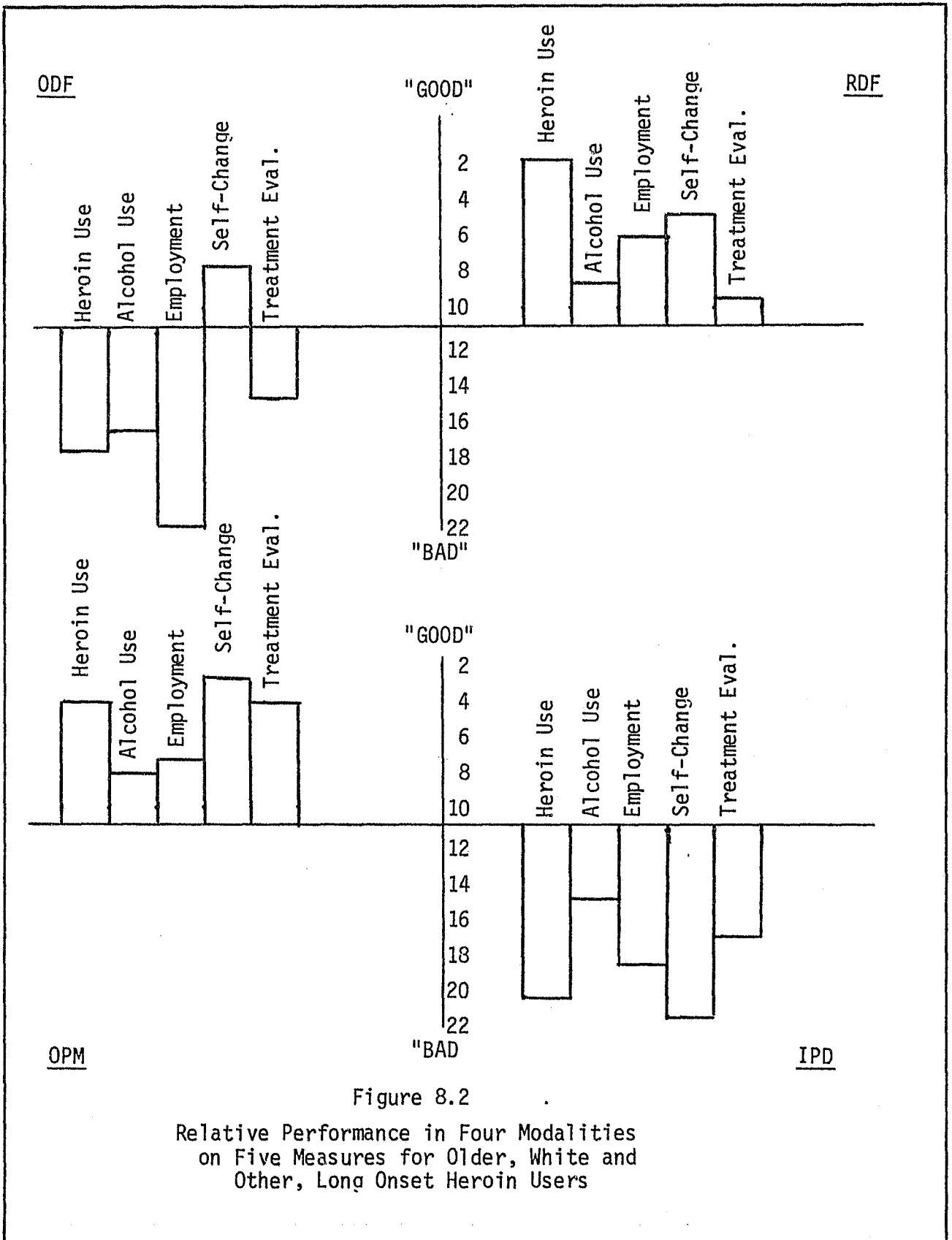


Figure 8.2

Relative Performance in Four Modalities on Five Measures for Older, White and Other, Long Onset Heroin Users

3. Older, Chicano, heroin users

OPM showed the best record for this client type, with the only poor performance being change in alcohol use (Figure 8.3). Change in alcohol use was more positive for IPD (but, as with all client types, the other measures were relatively poor) and RDF (which also showed a slightly more positive treatment evaluation, but a relatively poor performance on heroin use change and self-change).

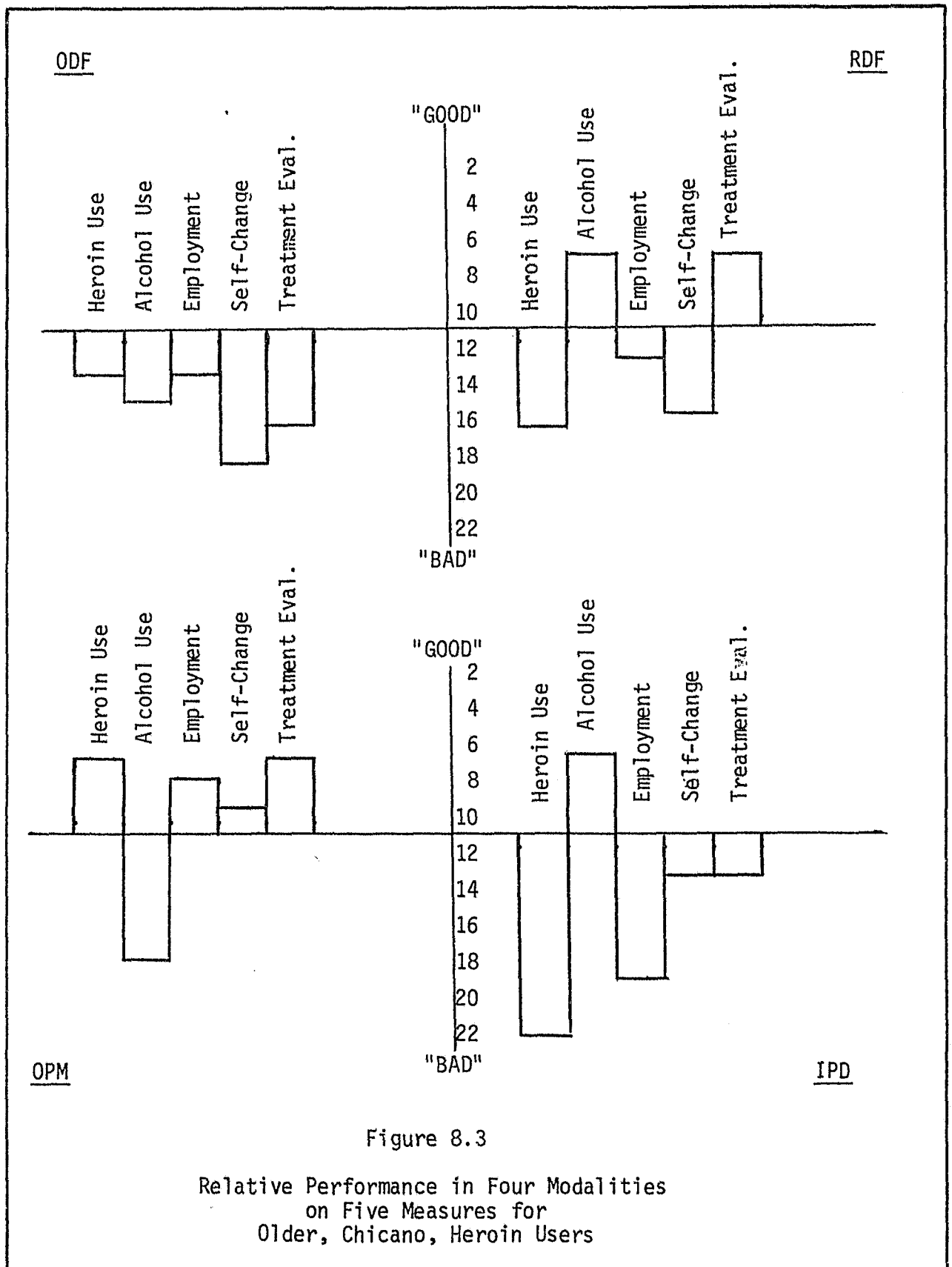


Figure 8.3

Relative Performance in Four Modalities  
on Five Measures for  
Older, Chicano, Heroin Users

4. Older, black, heroin users

RDF fairedwell for this client type on all measures but treatment evaluation which was also above average, but only slightly so (Figure 8.4). Change in heroin use was also above average for this client type in ODF and OPM, but the other measures were relatively better for OPM. As with all of the client types, the IPD record was relatively poor. However, the poor performance of IPD was relatively less poor for this client type.

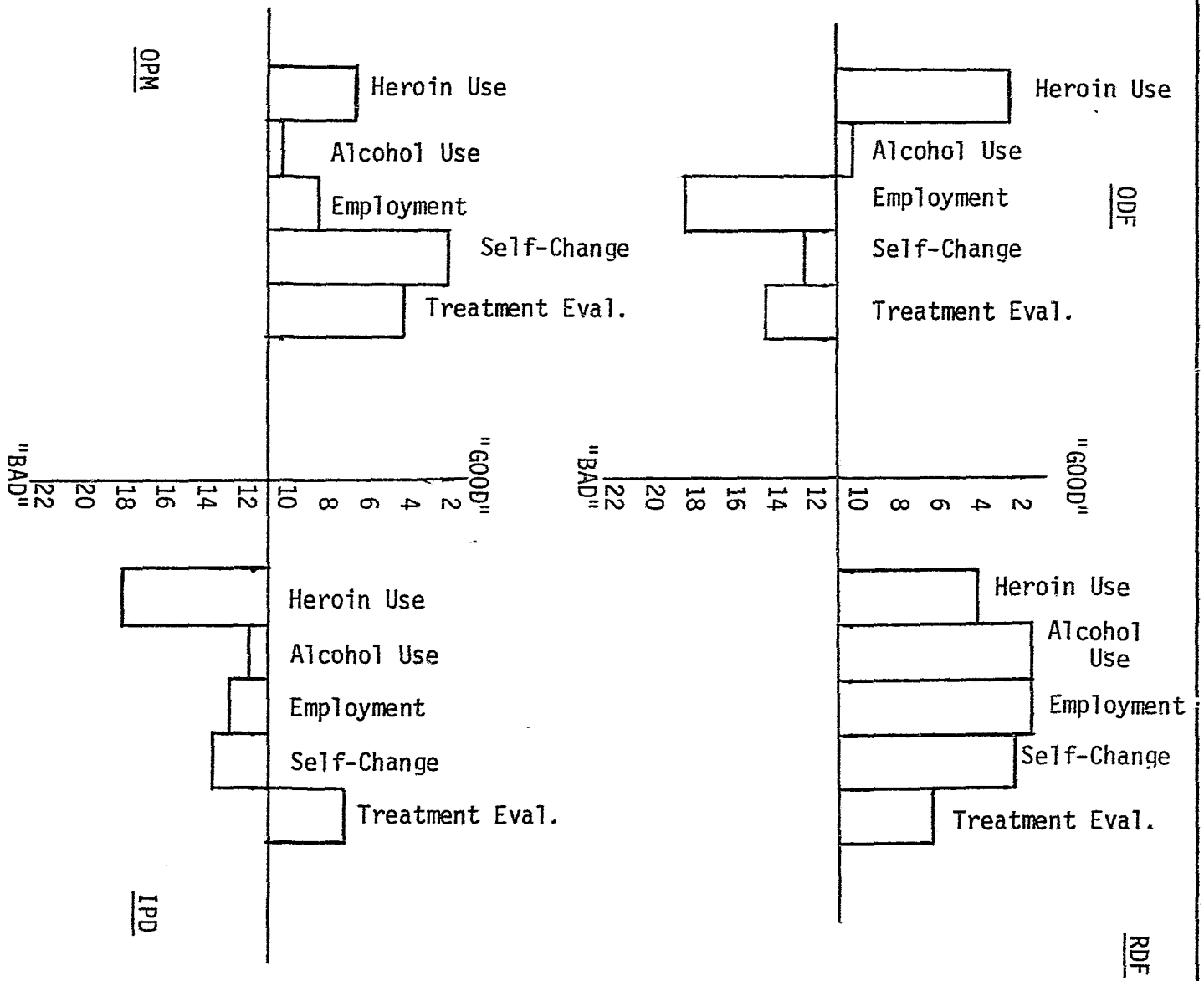


Figure 8.4  
Relative Performance in Four Modalities  
on Five Measures for  
Older, Black, Heroin Users

5. Non-heroin types

As would be expected, change in heroin use was about average for all of the non-heroin types, no doubt reflecting no change from no use before treatment to no use after treatment.

In general, the older non-heroin types in ODF had a relatively better record than those who were younger (Figure 8.5). However, change in alcohol use was relatively poor for older Chicano non-heroin users (and for younger Chicano non-heroin users as well). And older black non-heroin users reported relatively less self-change and gave relatively lower treatment evaluations than did Chicanos and white and others. Among the younger non-heroin users, both blacks and white and others reported relatively less self-change and they gave relatively lower treatment evaluations.

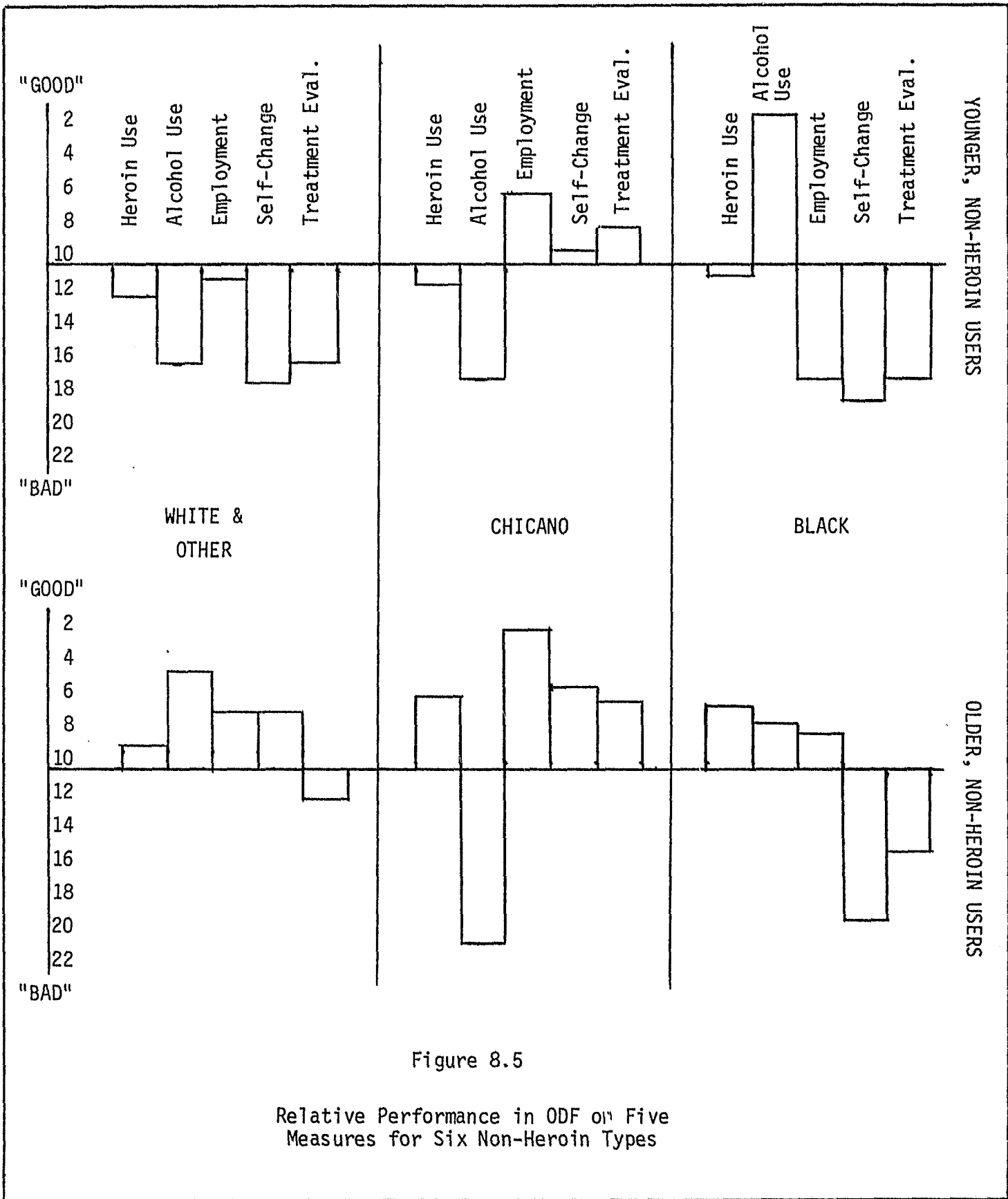


Figure 8.5

Relative Performance in ODF on Five Measures for Six Non-Heroin Types

6. A note on the profile comparisons

If all measures for a given client type in a particular kind of treatment were relatively positive, than the choice of that kind of treatment would be reasonable regardless of the client's specific "needs." But, if a specific client of a given type was most interested in improving his or her employment situation, for instance, another kind of treatment which had a good record in that area (but not so good a record in other areas) might be chosen.

From this point of view, the meaning of the profiles is dependent upon the goals of the clients involved. With but five areas of concern and four kinds of treatment, there are a multitude of possible combinations. If a particular person of a given type were to be classified as being interested or not interested in a given area (with no gradation in between), he or she could be interested in but one of the five areas, one of the ten combinations of two areas, one of the ten combinations of three areas, one of the five combinations of four areas, all five areas, or even none of them. Each modality could then be considered with respect to the 32 combinations of client interest. And this would have to be done separately for each of the four heroin client types. But even as complex as this would be it is not adequate, as it does not include any consideration of the availability of treatment slots. As desirable as it would certainly be to base the kind of treatment to be provided on the client's informed choice, it might well be that doing so would create a serious imbalance between treatment choice and treatment resources. Further, there is no reason to expect that the clients would choose the kind of treatment which has the best record with respect to the clients goals, nor is there a sound basis for forcing such a choice. The lack of a sound basis for presuming or forcing such choices



is due to several conditions.

One reason why a client of a given type might not choose the modality with the best record in the areas of concern to the client is that the record might not hold for the specific person. The records are based on averages. This means that some did better, and some did worse. If the average could be guaranteed, a clear choice might be made, but there can be no such guarantee. Thus the "rational man" posited by such a decision process would also have to be an odds maker. People are known to differ in the way they make decisions in the absence of complete knowledge, and knowledge is far from complete in virtually all real-world situations.

Another reason is that the analysis excludes information on client input resources and efforts. It might well be, for instance, that a particular modality would be preferred for a client of a given type on the basis that it showed the greatest benefit in terms of what was wanted, but the person might not be willing or able to expend the necessary effort, e.g., frequent clinic visits for methadone. And, the effort required is very subjective. To take another example, several months in a residential setting might be a major expenditure of effort for some people, but a minor commitment for others.

The third problem is that the kind of rational decision-making posited above is imaginary. Even when dealing with economic issues, where precise and reliable measures are available, people simply do not make choices which follow the implied rules. Yet the classical "rational man" persists as some sort of ideal. Although there is probably no need to do so, we would caution that "rational man" decision rules should not be imposed upon people seeking drug treatment.

## 7. Summary

There is some evidence that client type and kind of treatment interact in their relationships with the criterion measures, but the patterns across the criteria are not consistent. The only firm conclusions to be drawn from the analysis are that IPD is associated with higher levels of heroin use regardless of client type, and that OPM is highly evaluated by the clients regardless of client type. It would then appear that although the net effects of different kinds of treatment are different for many measures--especially heroin use--these overall effects conceal apparently irregular effects across different client types.

On a global level, one or two kinds of treatment seem to be associated with better overall performance for a given type of client, and they are not the same for each and every type of client. But, the best use of the profiles showing the relative performance of each client type on each performance index over the different kinds of treatment would be as a guide to probable rational choice. Such choices would be based on the specific goals of the particular client of a given type. But given that this sort of so-called rational decision-making is a poor prediction of human behavior and has no moral force, the choices which would be predicated upon such a decision model should not be used as a basis for predicting or controlling the clients' decisions.

### D. Cost-Benefit Analysis

This section presents the rationale underlying the conduct of the cost-benefit analysis, the specific procedures which were used, and the results of the analysis.

1. Rationale

Cost-benefit analysis is an appealing, deceptively simple concept. A major problem with it is that costs and benefits depend on the imagined interested party. To take an example, diminished drug use would be a cost to the suppliers, a benefit to those who compete for funds on the promise of controlling drug use, and a benefit or a cost to the user depending upon his/her current desires. As a matter of public policy, diminished use is a benefit to that thing called society.

A more technical problem arises from the requirement that the benefits and costs be put in terms of dollars. Many costs and benefits are difficult, if not impossible, to so assess. For instance, most people would probably consider increased happiness as a benefit, but there is no way of putting a dollar value on happiness. Other costs and benefits are more amenable to such measurement, but the actual mechanics are very difficult. For instance, the costs of theft could be estimated from the replacement value of the items stolen, but doing so requires enumeration of the items stolen and the computation of their replacement costs. This would be very time consuming.

Finally, there is the problem of what is meant by cost and benefit. Linguistically, the terms imply that the things included in these categories are to be somehow attributed to that which is being evaluated. For this study, the study period treatment is clearly a cost, but is subsequent drug use a cost, and is subsequent legal income a benefit? That is, should the dollar value of these things be attributed to the treatment? In essence, and by one means or another, the cost-benefit model resolves this problem by what amounts to a fiat. The attributions are made and the costs thereby assigned in order to perform the analysis. Particular applications of this kind of analysis may be distinguished on the basis of the means used in

making the attributions.

Putting a dollar value on treatment benefits is much more difficult than it would appear. The costs of drug use may be taken as an example. Clearly, treatment programs are predicated on the notion that they will reduce drug use. One way of putting a dollar value on drug use is to obtain information on the amount of money spent on drugs. This was done, for both the year before and the year after treatment. But, how are these measures to be used? One way would be to subtract the amount of money spent on drugs after treatment from the amount spent on drugs before treatment. The difference could then be attributed to treatment. That is, a reduction could be taken as a treatment benefit. But, the amount of money spent on drugs after treatment might have declined anyway, or it might have stayed the same, or it might even have increased. If a control group (receiving no treatment) had been available, it would have been possible to use change in the cost of drug use for the control group as the standard against which to compare the change among those treated. To take a hypothetical example, the cost of drug use might have decreased in a control group by say one thousand dollars per year. If those treated had experienced a reduction of twelve hundred dollars per year, the benefit attributable to treatment would have been two hundred dollars. Lacking such a standard, another basis for comparison was used.

If treatment were totally successful, drug use would be eliminated. If use were eliminated, the cost of drug use after treatment would, of course, be zero. This provides a standard for comparison. The degree to which the amount of money spent on drugs after treatment exceeds zero represents the degree to which treatment did not meet the standard of comparison.

The same rationale was used for the costs of criminal justice involvement

and illegal income. Totally effective treatment would reduce these costs to zero as well; deviations from zero were used as the measure.

The next problem is how to use these measures in the cost-benefit analysis. Given that the objective is to control drug use and criminal involvement, values in excess of zero on these measures would certainly not be measures of treatment benefit. They must then be measures of treatment costs. This may seem somewhat strange as treatment costs are usually thought of as those expenditures associated with the provision of the treatment services themselves. On the other hand, had treatment been totally successful, these costs would not have occurred. They may then be taken to be measures of the cost of less than totally successful treatment. That is, they are a measure of the cost of treatment.

Using the dollar value of post-treatment drug use and criminal involvement as a measure of treatment cost reduces the measures available for treatment benefits. One measure would involve legal earnings. Certainly, one objective of treatment programs is to effect legal earnings, by reducing the need for illegal earnings to support the high costs of drug use (especially heroin) and by freeing for gainful employment the time which would have otherwise been expended in obtaining and using drugs. Again, the lack of a standard for comparison becomes a problem; we do not know what the post-treatment earnings would have been in the absence of treatment.

There was a basis in reason for the earlier choice of no expenditures on drug use as a basis for comparison of post-treatment drug use costs. If the goal of treatment is to eliminate drug use, then money expended on drugs after treatment provides a measure of the degree to which treatment did not achieve maximum benefits. But there is no such absolute standard for legal income. No post-treatment legal income would certainly be

unfortunate; but the absence of drug use represents a goal of treatment while the absence of legal income would represent failure. And the amount of drug use costs in excess of none represents the degree to which treatment was less than successful regardless of pre-treatment expenditures, while legal income in excess of nothing subsequent to treatment seems less independent of pre-treatment income for its meaning.

Leaving aside the problem of legal income for the moment, the other benefits of treatment present an even more difficult problem. The clients generally reported that they had become more enriched; a few reported some gains in education; fewer hardships were reported; there was some indication that treatment had had a slight impact upon how much the clients worried, and so forth. But, it is impossible to put a dollar value on these changes. Likewise, it is impossible to put a dollar value on the clients' assessments of the treatments received.

The problems of assessing treatment benefits with regard to legal income and psycho-social change were resolved by making a decision to attribute total post-treatment income (in dollars) to treatment benefits. Without doubt, this gives more credit to the effects of treatment on legal income than is due; the excess may be taken as the dollar value of the unmeasured benefits.

The next section presents the details of the computational methods which were used. The following section presents the findings and conclusions.

## 2. Procedures

Table 8.24 shows the cost of each kind of treatment by agency. The column titled "rate" reflects the rate per client/month or client/day as appropriate. For NIDA funded programs, these costs reflect the cost-per-slot allowed by NIDA for different modalities:

|                                     |                   |
|-------------------------------------|-------------------|
| In-patient Detox                    | \$40,000 per year |
| Residential                         | 5,000 per year    |
| Outpatient Drug-free                | 1,700 per year    |
| Outpatient Methadone<br>Maintenance | 1,700 per year    |

County funded programs--methadone maintenance and Rancho Los Amigos-- were assigned costs as provided by the DAO methadone office, and as budgeted for Rancho.

Finally, the costs of drug treatment per client year for SB714-funded programs were calculated as follows. The number of clients who received services during each month of a four month sample of FY 1975-76 (September, December, March, and June), was obtained, for each such month and for each such agency. The amount billed the County for the total number of units of services was obtained (from the revised, year end rates), and was divided by the number of clients for whom services were provided during that month. Thus, a high individual and group rate per unit of services billed, combined with a relatively small number of actual clients (and a large number of units of counseling services delivered to each) would result in a relatively high cost-per-client-per-month. Conversely, a low rate per unit combined with a widely distributed delivery of those services among many clients would result in a relatively low rate per client/month.

Table 8.24

Treatment Program Costs

| <u>Program</u>                       | <u>Modality</u>   | <u>Rate</u> | <u>Adjustment</u> | <u>Adjusted Rate</u> |
|--------------------------------------|-------------------|-------------|-------------------|----------------------|
| Antelope Valley District Hospital    | IPD               | \$105/day   | 0%                | \$105/day            |
| Asian-American Drug Abuse            | RDF               | 14/day      | 10 <sup>1/</sup>  | 15/day               |
|                                      | ODF               | 140/mo.     | 10 <sup>1/</sup>  | 150/mo.              |
| Asian Joint Communications           | RDF               | 15/day      | 10 <sup>1/</sup>  | 16/day               |
| Avalon-Carver N.P.P.                 | RDF               | 14/day      | 0                 | 14/day               |
| Behavioral Health Services           | ODF               | 118/mo.     | 0                 | 118/mo.              |
| Bricks/Kicks                         | RDF               | 14/day      | 0                 | 14/day               |
|                                      | IPD               | 110/day     | 20                | 132/day              |
|                                      | ODF               | 140/mo.     | 20                | 168/mo.              |
| Bridge Back, Inc.                    | RDF               | 14/day      | 0                 | 14/day               |
|                                      | ODF               | 140/mo.     | 0                 | 140/mo.              |
| Casa de Hermandad                    | ODF               | 140/mo.     | 0                 | 140/mo.              |
| Casa del Norte                       | RDF               | 16/day      | 0                 | 16/day               |
| City of Compton Special Services     | ODF               | 94/mo.      | 0                 | 94/mo.               |
| City of Long Beach Drug Clinic       | ODF               | 140/mo.     | 30                | 180/mo.              |
| City of Pasadena, Residential Inn    | RDF               | 19/day      | 20                | 24/day               |
|                                      | ODF               | 40/mo.      | 20                | 48/mo.               |
| Community Health Projects, Inc.      | ODF               | 207/mo.     | 20                | 250/mo.              |
| County of L.A. Methadone Maintenance | OPM <sup>2/</sup> | 152/mo.     | 0                 | 152/mo.              |
| Cri-Help, Inc.                       | RDF               | 14/day      | 40                | 20/day               |
|                                      | ODF               | 66/mo.      | 40                | 90/mo.               |
| Do It Now Foundation                 | ODF               | 152/mo.     | 20                | 182/mo.              |
| El Proyecto del Barrio               | ODF               | 140/mo.     | 0                 | 140/mo.              |
|                                      | RDF               | 14/day      | 0                 | 14/day               |
| Family Counseling Services WSGV      | ODF               | 44/mo.      | 0                 | 44/mo.               |
| Family Services of Long Beach        | ODF               | 140/mo.     | 25                | 175/mo.              |
| Free Men, Inc.                       | RDF               | 14/day      | 0                 | 14/day               |
|                                      | IPD               | 110/day     | 0                 | 110/day              |
| Friends of Lubavitch                 | RDF               | 14/day      | 0                 | 14/day               |
|                                      | ODF               | 140/mo.     | 0                 | 140/mo.              |

<sup>1/</sup> Information not available, estimated.

<sup>2/</sup> Includes six clinics.

Continued.....



Table 8.24 (Continued)

| <u>Program</u>                               | <u>Modality</u> | <u>Rate</u> | <u>Adjust-<br/>ment</u> | <u>Adjusted<br/>Rate</u> |
|--|-----------------|-------------|-------------------------|--------------------------|
| Glendale Guidance Center                     | ODF             | \$ 86/mo.   | 0%                      | \$ 86/mo.                |
| Handy Regional Community<br>Health Center    | ODF             | 70/mo.      | 0                       | 70/mo.                   |
| Help Our Youth                               | ODF             | 48/mo.      | 30                      | 62/mo.                   |
| House of Uhuru, S.A.P.                       | ODF             | 140/mo.     | 0                       | 140/mo.                  |
|  | RDF             | 14/day      | 0                       | 14/day                   |
| I-ADARP                                      | ODF             | 140/mo.     | 1                       | 141/mo.                  |
| JAMAA  | IPD             | 110/day     | 20                      | 132/day                  |
|  | ODF             | 140/mo.     | 20                      | 168/mo.                  |
| Joint Efforts                                | ODF             | 140/mo.     | 0                       | 140/mo.                  |
| La Clinica Liebre<br>Del Puerto              | ODF             | 86/mo.      | 0                       | 86/mo.                   |
| La Verne-San Dimas<br>Open Door              | ODF             | 66/mo.      | 15                      | 76/mo.                   |
| Los Angeles Psychiatric<br>Services          | OPM             | 140/mo.     | 0                       | 140/mo.                  |
| Via Avanta                                   | RDF             | 15/day      | 0                       | 15/day                   |
| Metropolitan State Hospital                  | RDF             | 40/day      | 0                       | 40/day                   |
|  | IPD             | 40/day      | 0                       | 40/day                   |
| Mid Valley Community<br>Mental Health Center | ODF             | 36/mo.      | 0                       | 36/mo.                   |
| NPP  | IPD             | 110/day     | 0                       | 110/day                  |
|  | RDF             | 14/day      | 0                       | 14/day                   |
|  | ODF             | 85/mo.      | 0                       | 85/mo.                   |
| NAAP   | ODF             | 53/mo.      | 0                       | 53/mo.                   |
| NYA  | ODF             | 131/mo.     | 25                      | 164/mo.                  |
| Open Door Drug Clinic                        | ODF             | 45/mo.      | 12                      | 50/mo.                   |
| Peoples Coalition                            | RDF             | 16/day      | 0                       | 16/day                   |
| Pomona Open Door <sup>3/</sup>               | ODF             | 27/mo.      | 0                       | 27/day                   |
| Principles                                   | RDF             | 15/day      | 87                      | 28/day                   |
| Rancho Los Amigos<br>Hospital DAP            | IPD             | 193/day     | 0                       | 193/day                  |
| Rio Hondo AACSA                              | RDF             | 17/day      | 20                      | 20/day                   |
| Santa Monica Bay<br>Area DAC                 | ODF             | 39/mo.      | 30                      | 51/mo.                   |
| South Bay Drug Abuse<br>Coalition            | ODF             | 140/mo.     | 0                       | 140/mo.                  |
| Suicide Prevention                           | ODF             | 140/mo.     | 2                       | 143/mo.                  |
|  | RDF             | 14/day      | 2                       | 14/day                   |
|  | ODF             | 98/mo.      | 2                       | 100/mo.                  |
|  | OPM             | 140/mo.     | 2                       | 143/mo.                  |
| T.A.R.G.E.T.                                 | ODF             | 140/mo.     | 0                       | 140/mo.                  |
|  | RDF             | 14/day      | 0                       | 14/day                   |
| Tu'um Est                                    | RDF             | 14/day      | 67                      | 23/day                   |

<sup>3/</sup> Information not available, estimated

Continued.....

Table 8.24 (Continued)

| <u>Program</u>                 | <u>Modality</u> | <u>Rate</u> | <u>Adjust-<br/>ment</u> | <u>Adjusted<br/>Rate</u> |
|--------------------------------|-----------------|-------------|-------------------------|--------------------------|
| Valley Free Clinic             | ODF             | \$ 29/mo.   | 0%                      | \$ 29/mo.                |
| Venice Drug Coalition          | ODF             | 75/mo.      | 10                      | 83/mo.                   |
| WLA Drug Treatment<br>Program  | ODF             | 140/mo.     | 0                       | 140/mo.                  |
|                                | OPM             | 140/mo.     | 0                       | 140/mo.                  |
|                                | IPD             | 110/day     | 0                       | 110/day                  |
|                                | RDF             | 14/day      | 0                       | 14/day                   |
| Wilds of Freedom <sup>4/</sup> | ODF             | 121/mo.     | 0                       | 121/mo.                  |
| Youth Development Project      | ODF             | 74/mo.      | 0                       | 74/mo.                   |

4/ Information not available, estimated.

Many of the costs listed in the "rate" column are the same because many programs are NIDA-funded and therefore were assigned a NIDA cost figure appropriate to the modality of treatment dispensed. All Short-Doyle costs for outpatient counseling services were computed as described earlier; the rare exceptions involving SB714 programs (e.g., Antelope Valley District Hospital) are budgeted on a per slot basis, not on a unit of services basis. In other words, a special computation was performed only for SB714 outpatient counseling services so that these could conform to the dollars-per-time period figure characteristics of NIDA and other programs.

For those programs whose costs seemed to deviate markedly from the norm, a full, 12 month census was taken from all 12 months of FY 1975-76 data and all 12 were averaged. Pre-test had confirmed that the four month sample would reflect the whole year figures with reasonable accuracy.

Patient fees were included as part of the costs of treatment. These are typically subtracted from the amount of money paid for services, and varied from nothing or very little for several agencies to over \$4,300 for the year for one agency.

In a discussion of the SB714 funding arrangement with one agency, complaints were heard regarding the necessary services which are not paid for under the units-of-services procedure. Collateral contacts are an example of such services provided in the absence of the client. This agency reported that were it not for the "free money" available through a supplementary grant they would not be able to provide the level of services they do. These comments provided an insight which led to the revision of the rates for each agency, whatever its funding source.

Agency directors or other competent representatives were interviewed by phone and asked: "In addition to your (SB714) (NIDA) contract, do you receive any other supplemental funds which help pay for client treatment services?" Answers allowed for a revision of cost-per-day or month figures by including other, local funding sources, only if these were used for treatment services. (Money used for outreach efforts, gang work, prevention efforts and the like were not counted.) Non-monetary contributions (furniture, for example, and other merchandise) were rare but counted on a fractional basis when encountered.

Some agencies responded that other sources of funds were necessary as a match for NIDA funds. These were counted in the cost adjustment only if they were actual additional funds--such as might have been received from a United Way grant, or from a fund raising drive, but not from patient fees, as these are already figured into the costs of treatment.

Table 8.24 reflects revisions as reported by agencies, expressed as a percentage of the agencies' total treatment budget. The revised rate is shown in the right-hand column. These are the figures which will be used to compute the cost of treatment for each client. For example, if a client were in Bricks/Kicks residential program for five days the cost would be

figured as \$70 ( $\$14 \times 5$ ). If he later received outpatient counseling from Cri-Help for a period of 10 months, this cost would be computed as \$900. Treatment costs can be described as follows.

Residential programs (N = 22) ranged from \$14 to \$28 per day (not including Metro, which bills in-patient detoxification jointly with residential at a combined rate of \$40 per day). The mean cost for all residential programs was \$17.60; with a standard deviation of \$6.40.

Outpatient methadone maintenance is carried out primarily by the County, with six clinics, supplemented by three private clinics. The County's cost is \$152 per client per month; the privately operated clinics cost somewhat less (\$140, \$140, and \$143) making the average \$148 per client per month.

Six in-patient detox facilities (again, including Metro, which bills at a lower, combined rate) average \$111 per day, with one program costing \$193 per day.

Thirty-seven outpatient counseling programs average \$104 per client per month with a standard deviation of \$45. Costs ranged from \$27 to \$250 per client per month. It is noted that because NIDA funding is for \$140 per month (unadjusted) that SB714 programs are clearly less. The average adjusted monthly client cost of the 16 agencies whose outpatient services are funded exclusively by SB714 funding was \$61; the range was between \$27 and \$94. (Costs for agencies who received both NIDA and SB714 outpatient funds were averaged.)

The combined billing rate of \$40 per day for in-patient detoxification and residential drug-free utilized by Metropolitan State Hospital may be appropriate if applied to all clients served over a year's period. But, as will be recalled from the section on sampling, the Study target population does not reflect this population. For the reasons given, the sampling includes

all cases deemed to have been involved in the residential drug-free program of this agency, and admissions to its detoxification program (which did not eventuate in placement in the "Family" program) were to have been obtained on referral from other agencies. Use of their combined \$40 per day rate for the cost-benefit analysis would have introduced a serious bias. We therefore decided to use the average rate across agencies for these two modalities for Metropolitan State Hospital--\$18 per day for residential drug-free, and \$111 per day for in-patient detoxification.

The general rule for computing the cost of the Study period treatment was to multiply the number of days in treatment as recorded in the computer records by cost per day of the kind of treatment received by the person at the agency providing it. Special rules had to be used for approximately 40 percent of the cases, and one case was treated as an exception to the general and special rules. The special rules were made necessary by the fact that treatment episodes were too infrequent to allow the separate analyses which had been planned. An episode was defined as a combination of treatments with one following the other, at the same agency or in different agencies. The time recording did not distinguish the time in each part of an episode. With the decision to ignore treatment episodes in the analysis due to the lack of a sufficient number of cases, a way had to be found to obtain the appropriate time estimates. This was complicated by the fact that the special sample cases which went into residential drug-free treatment following a period of in-patient detoxification were analyzed for the residential drug-free treatment, while others who began an episode with in-patient detoxification were analyzed for this treatment regardless of what followed. A minor problem was created by the fact that some of the clients reported admission to one agency for referral to in-patient detoxification or

residential drug-free treatment which they received at some other agency.

In a few cases, the computer record showed less than one day in treatment (probably as a result of the computer record showing admission and departure on the same day, or a recording error), while the client reported at least one day of treatment.

A different sort of problem was created by the fact that the outpatient methadone maintenance cases did not have to meet the discharge criterion to be included in the sample. Approximately two-thirds of these cases had not been discharged at the time of the interview. The original plan was to use the actual time in treatment for those who had been discharged by the cut-off date (December 31, 1975), and to use a hypothetical discharge date of 12 months prior to the interview for those who were still in treatment. This is how the data were recorded. But, subsequent reconsideration led to the conclusion that this was not a satisfactory convention. With two-thirds of the methadone cases not yet discharged at the time of the interview, it simply does not make sense to disregard the total time in treatment. Although the reasons for the (apparent) success of methadone maintenance (with some people) cannot be exactly determined, it seems highly likely that one of the reasons is the continuous (virtually daily) support provided by the treatment. Certainly, the total time in treatment to the date of the interview must be considered in assessing the performance of this modality. And, it also seems likely that performance of the clients who were still in treatment at the time of the interview is a function of selection effects. That is, it seems reasonable to assume that people who stay in treatment for an extended period of time are committed to changing their life, and their performance may reflect this commitment perhaps as much as the treatment itself, if not more. For these reasons, a decision was made to use the total time in

methadone maintenance to date, rather than the originally planned time measure.

These problems and changes in planned procedures made it necessary to develop a set of rules for computing time in treatment and the cost thereof. Two general principles were used in establishing the rules. The first was that the computer record of time in treatment would be used, unless clearly contraindicated. The notion was that this time estimate is probably closer to the treatment costs claimed by the agencies than the time in treatment reported by the clients. The second principle was that costs of treatment episodes should stop with the completion of that treatment into which the case was classified for the outcomes analysis.

In-patient detoxification is much more costly than other treatments; it costs about six times as much as residential drug-free and about 50 times as much as outpatient drug-free treatment, on a daily basis. Errors of but a few days in estimating time in treatment would have a drastic effect on the computed cost of in-patient detoxification. For this reason, special attention was paid to this treatment in estimating time in treatment.

In-patient detoxification is normally scheduled for a period of one or two weeks. It sometimes lasts longer, but this is rare. The mean time in treatment as recorded in the computer records for those who reported that they received in-patient detoxification only was about seven days, with six cases excluded from this computation. In each of these six cases, the person had received the treatment in a program which offered other kinds of treatment as well, or the study period treatment program had referred them to some other agency for the in-patient detoxification. The time in treatment as reported in the computer record for these six cases averaged more than 60 days, ranging from a low of 27 to a high of 112. Clearly, the computer

record for these cases is not reflecting time in in-patient detoxification only. Time in in-patient detoxification for these cases was therefore set at the above mentioned average of seven days. Failure to have done so would have increased the net cost of in-patient detoxification by around \$40,000. (A similar error for outpatient detoxification, by the way, would have introduced an error of only around \$700.)

When in-patient detoxification was a part of an episode, another problem was introduced. For treatment episodes, the client was asked to give the total time in treatment for all parts of the episode combined. Likewise, if the episode was within one agency, the computer record would normally show the total time in treatment, with no breakdown for the in-patient detoxification and the other part(s) of the episode. In addition, episodes starting with in-patient detoxification were handled in two different ways depending upon whether or not the person was selected for the special residential drug-free sample or the basic study sample. If the person was chosen for the special sample, and he/she reported an episode of in-patient detoxification followed by residential drug-free treatment, the treatment was classified as residential drug-free for the purpose of the outcomes analysis. For all other cases in which the person reported a treatment episode, the first treatment in the episode was used to classify the person for the outcomes analysis. For both of these kinds of cases, an estimate of time in in-patient detoxification was needed, but not available from the computer records or the client's report (as recorded in the questionnaire). The solution chosen was to set the time in in-patient detoxification at two weeks for these cases. The principle behind this solution was that episodes of treatment are likely to involve completion of the first part of the treatment, and in-patient detoxification is normally scheduled for a period of



one to two weeks.

The cost of treatment for those in the special residential drug-free sample who reported their treatment as an episode starting with in-patient detoxification was computed by the above rule for the first part of the episode. The duration of the residential part was computed by subtracting 14 days from the computer record of the time in treatment; the cost was computed by multiplying this value by the cost per day rate established for the agency for this kind of treatment. The principle here was that a treatment episode consisting of in-patient detoxification followed by residential drug-free treatment is the normal regimen for this kind of treatment. In addition, this special sample was the only one which was not based on the treatment to which admitted.

The cost of treatment for those who reported an episode starting with in-patient detoxification and who were classified as receiving this treatment for the outcomes analysis was computed by multiplying the cost of this kind of treatment at that agency by 14 days. The principle here was that the outcomes analysis attributed the treatment effects, if any, to this treatment, not to the other treatments which followed.

Some people reported that they went to an agency which then referred them to the treatment which they got. In all but one case, this involved being referred for in-patient detoxification. The referral involved an expenditure of resources; how much is not known. Because the referral preceded the actual treatment but was a part of the cost of the treatment, a way had to be found to estimate this cost. It was estimated by multiplying agency's daily cost for outpatient drug-free services by two and adding this to the cost of the actual treatment for that person. The notion here was that outpatient drug-free treatment includes referral as a service and

referral ought to require no more than two days for most cases.

The kinds of problems which arose in estimating time in treatment for the study period treatment were made worse for subsequent treatments by the fact that computer records of these subsequent treatments were not available to the project. The computer record was of critical importance in discovering problems and in computing days in treatment.

Both the simple before-after comparisons for the total sample and the treatment comparisons for the heroin and non-heroin types indicated that there were no differences in the number of treatments received, across treatments or from before to after.<sup>7/</sup> Given the sensitivity of the treatment costs to errors in estimating time in treatment, the grossness of the measures of time in treatment for the after period, and the lack of any differences in the number of such treatments, a decision was made to exclude the cost of subsequent treatments from the cost-benefit analysis.

The cost of drug use was obtained from responses to the questions, "About how much did you spend on the drug each week that you used it?" and "About how many months during the period were you using at this rate?" The expenditures were coded into dollar intervals; the mid-points of these intervals were used, with the open-ended upper interval of \$701.00 and over treated as if the interval were from \$701.00 to \$900.00. More than 9 months

<sup>7/</sup> As will be recalled from an earlier part of this chapter, those who were still in OPM during their follow-up period were counted as having at least one treatment during the follow-up period. Although this might seem strange, it is certainly more accurate than not doing so. After all, by study design, they did receive drug treatment during their follow-up period. If this convention had not been used, those in OPM would have shown fewer treatments in the follow-up period. By ignoring treatments in the follow-up period but including time in OPM for the OPM cases during the follow-up period in the computation of the treatment costs, double counting of the treatment costs for the OPM cases was avoided. Given the lack of adequate data for computing treatment costs for the other modalities, this seemed to be the most satisfactory solution.

of use was lumped in the coding; the mid-point of 11 months was used for this category. The weekly expenditures for each kind of drug was multiplied by 4.33 and this product was multiplied by the number of months of use, and these expenditures were summed over all the kinds of drugs which the person reported as having used. This procedure probably underestimates the actual value of the drugs used, but the potentially more accurate procedure of counting the cost of each drug use is not terribly meaningful for drugs such as alcohol and marijuana.

Criminal justice system costs were based on the following figures:

Arrest - \$9 each

County jail detention (either pre-trial  
or sentenced) - male \$28/day (\$840 per month)  
female - \$42/day (\$1,260 per month)

Prosecution - \$38 each

State prison confinement - \$19 per day; \$570 per month

County probation adult supervision - \$18 per month

Arrest costs were computed by multiplying the number of arrests (up to four or more) by the figure shown above (\$9). If the person was convicted of at least one crime, a prosecution cost of \$28 was added.

Probation costs were obtained from the question on the sentence imposed for the most serious conviction. If the person received probation without a jail sentence, probation for less than one year was computed at one-half year; for one year or longer, it was computed at one year. This was done in order to limit the costs to the duration of the follow-up period in order to achieve a constant base for all cost and benefit measures, to the degree possible. Obviously an argument could be made that the costs for a probation sentence or more than one year were incurred during the follow-up period

(though not yet fully expended) and therefore ought to be included. And, of course, the procedure we used was inaccurate in that it effectively assumes that the sentence was received at the start of the one-year follow-up period.

Those who received probation and a jail sentence were coded for the length of the jail sentence, ignoring the length of probation. The period of probation for these cases was set at one year (in keeping with the decision to not carry the post-treatment costs beyond the one year follow-up period).

This procedure captures probation costs only if it was a part of the sentence for the most serious crime committed by the person during the period. If the person had a conviction for a lesser crime which resulted in a probation sentence and the sentence for the most serious offense did not involve probation, then it loses the costs of probation for such a person.

Jail costs were obtained from the question on jail time actually served on the sentence for the most serious crime. For the interval of from one through 30 days, the mid-point of 15.5 was used. For the 31 through 89 day interval, the mid-point of 60 days was used. The interval 90 days or more presented a problem. As the maximum sentence is one year, the actual mid-point of this interval would be 227.5 days, or about 7.5 months. This figure seemed too extreme in that the distribution of jail sentences is skewed; that is, longer sentences are less frequently imposed than shorter sentences. Somewhat arbitrarily, the interval for this open-ended category was set at 90 to 180 days, and the mid-point of this interval, 135 days, was used.

A prison sentence for the most serious crime presented another problem. All that was coded was that the person received such a sentence. California has a special program for heroin addicts which is operated by the State prison

system. The median length of time served at the institution on a new commitment is several months; ordinary commitments result in a prison term of several years. As for the probation cost computations, an attempt was made to make the estimate apply to the follow-up year only and to provide a reasonable estimate of the length of time spent on this kind of sentence. The choice was to take the interval from three months to one year; it is 7.5 months or 228.1 days. Although this solution seems reasonable, so would many others.

People who were convicted of any crime during the follow-up period were asked if they had spent any time in prison or jail other than that served on the sentence for the most serious crime. All others were asked if they had spent any time in jail or prison. If both prison and jail time had been served, the prison time was recorded. The following mid-points were used for the (same) intervals used to code the jail and prison time; 60.8 days for four months or less, 197.7 days for five through eight months, and 319.4 days for nine months to one year.

These probation, jail, and prison durations were multiplied by the appropriate daily cost figures and summed and the resulting figure was added to the arrest and prosecution costs to produce the estimated criminal justice system costs expended during the follow-up period.

The benefits of legal employment were obtained by multiplying the average monthly legal income by 12, using the mid-points of the coded intervals. The open-ended interval of \$1,601 and over was treated as if it were from \$1,601 through \$1,800.

The cost of criminal justice activity, in addition to that for arrest, prosecution and so forth, was estimated using the client's reported average monthly illegal income.

In summary, the cost-benefit analysis is based on:

- the cost of the study-period treatment
- negative outcomes during the follow-up period:
  - illegal drug use
  - criminal justice system costs
  - illegally obtained income
- legal income during the follow-up period.

### 3. Results

The costs and benefits were analyzed using four different case-weighting procedures described elsewhere herein; unweighted, the original sampling ratio, and the "senate" and "house" weights. The results were similar. The following is based on the "senate" weights as they again achieve the most desirable effect. In essence, to the degree possible, they provide estimates which are comparable across treatments in that they hold client type constant and distribute the cases as evenly as possible across agencies within any given type of client and kind of treatment. However, the overall average costs and benefits computed in this way are misleading in that the number of clients in each kind of treatment when these weights are used is substantially different from the distribution of the population. But, as was indicated in the prior chapter, those interviewed are not representative of the total study target population; they represent only those clients who are locatable. This population may be estimated by applying the initial sampling ratios to those interviewed. This was done (again adjusting it so that the number of weighted cases equalled the number being analyzed in order to avoid giving the impression that the analysis is based on far more people than were actually interviewed).

Table 8.25 shows the results of kind of treatment for the heroin types,

the non-heroin types and the total sample.

Table 8.25

Treatment and Post-Treatment Costs and Benefits  
in Dollars Per Person

| <u>Sources</u>               | <u>ODF</u> | <u>HEROIN TYPES</u> |            |            | <u>OTHERS</u> | <u>All</u> |
|------------------------------|------------|---------------------|------------|------------|---------------|------------|
|                              |            | <u>RDF</u>          | <u>OPM</u> | <u>IPD</u> | <u>ODF</u>    |            |
| Study-Period Treatment Costs | 412        | 1703                | 2362       | 1171       | 356           | 807        |
| Drug Use Costs               | 2768       | 3672                | 1781       | 9933       | 717           | 5121       |
| Criminal Justice             | 1146       | 1539                | 421        | 2168       | 378           | 857        |
| Illegal Income               | 2769       | 3249                | 1297       | 5401       | 645           | 2676       |
| Post-Treatment Sub-Total     | 6683       | 8460                | 3499       | 17502      | 1740          | 8654       |
| Total Costs                  | 7095       | 10163               | 5861       | 18673      | 2096          | 9461       |
| Legal Income                 | 4592       | 4402                | 5884       | 4381       | 4358          | 4780       |
| Cost-Benefit Difference      | -2503      | -5761               | + 23       | -14292     | +2262         | -4681      |

All told, it would appear, at least among those locatable clients who were interviewed, and as measured, the post-treatment legal earnings of the treated clients are far less than the costs of their treatment and subsequent costs associated with the purchase of drugs, processing by the criminal justice system, and income from illegal activities. But, the results differ greatly by kind of treatment.

Outpatient methadone maintenance is rather costly, being three times the overall average, but the subsequent costs are only one-half as great while legal income is greater. The net result is that measured treatment and subsequent costs for those in outpatient maintenance was about equal to their legal earnings.

As would have been expected, the least costly treatment is outpatient

drug-free. Whether for heroin or non-heroin types, it costs far less than the other kinds of treatment. But, treatment and subsequent costs sum to about one-half of the legal earnings of the non-heroin types and to something less than twice the legal earnings of heroin types. Given that the legal earnings of the heroin and non-heroin types in outpatient drug-free treatment were about equal, the difference is due to the expense of heroin use.

The treatment and subsequent costs for those in residential drug-free treatment are more than double their subsequent legal earnings. The difference between these costs and their legal earnings is twice as great as that for heroin types in outpatient drug-free. Again, their legal earnings are about the same. The greater excess of costs is due to both the treatment costs (which were about four times as high) and the subsequent costs which were 25 percent higher. But in absolute rather than relative terms, the higher excess of costs over legal earnings for residential drug-free versus outpatient drug-free treatment was due in nearly equal parts to treatment costs and the total of subsequent costs.

By far, the greatest excess of measured costs over legal earnings was for those in in-patient detoxification. Given that their treatment costs were less than those for residential drug-free and outpatient maintenance treatment and their legal earnings were about the same, the difference must come from subsequent costs. The bulk of this excess is due to the costs of heroin use, and the higher criminal justice costs and illegal earnings are probably also due to the higher rate of use of heroin by those who were in in-patient detoxification.

At least three conclusions emerge from this analysis of treatment costs and benefits. First, the cost of treatment (about \$800 per person) exceeds the modest increase in legal earnings following treatment (about



\$400 per person per year). And although drug use expenditures as well as illegal income decreased substantially (but might have anyway), the costs of subsequent drug use and criminal activity still far exceeded total legal income during the subsequent year. If the benefits of treatment are to be shown as exceeding the costs of treatments and subsequent drug use and illegal activities, the sources of benefit must be greatly expanded.

The second conclusion is that outpatient methadone maintenance comes closest to showing a net benefit, but the costs of treatment and subsequent drug use and illegal activities are barely offset by increased earnings. And despite the attempts to control for differences in the characteristics of people in the different kinds of treatment, we suspect much if not all of the apparent superiority of this modality. Finally, the fact that most of the interviewed clients from this modality were still in treatment while the others had been discharged cannot be discounted as the true cause of the apparent better performance of this modality.

The third conclusion is really a counter position. As measured and from this general approach, in-patient detoxification shows a far greater excess of costs over benefits, due largely to subsequent drug use and illegal activities. Again, despite the attempts to control for pre-existing differences in the characteristics of the clients in the different kinds of treatment by the use of the client typology, we were unable to achieve full control. We thus suspect that the poorer performance of this modality is partly due to uncontrolled client differences. But, more importantly, cost-benefit analysis may be inappropriate, especially for in-patient detoxification. For a myriad of political, economic and personal reasons, many people use heroin, and some of them continue to use it for an extended period of time. Under current policies which seem not likely to change

greatly, heroin use is debilitating. Heroin use is a disease. A humane social order is one in which people with a disease may seek and have provided comfort for that disease. To show that people who seek the treatment of in-patient detoxification subsequently produce greater social costs is not to show that the treatment ought not to be provided. This kind of treatment is a necessary part of current heroin use policies. To eliminate it, or even reduce it on the basis of this analysis could be done on only the most naive grounds.

Inherent in the cost-benefit model is the notion of the (old fashioned) economist's "rational man." Contemporary economists know that people are not like the "rational man." Neither individual nor organizational behavior is predicated on maximizing benefits and minimizing costs. Much is valued which cannot be priced and dollar values take on meaning only in context. The only way in which the results of this cost-benefit analysis could be used to eliminate or reduce in-patient detoxification would be to insist that the heroin user ought to (or does!) act like the "rational man." That is, such a decision would force heroin users to seek other kinds of treatment for their disease, or no treatment at all, thereby making them behave as the "rational man" who always chooses that course of action which minimizes costs and maximizes benefits.

But, in-patient detoxification is publicly supported, and it might be argued that this Study shows that the money expended on in-patient detoxification might be better spent on other forms of treatment for drug users. However, it is the policy of making heroin use subject to governmental control which in large part produces the disease of heroin users which in turn causes them to seek the treatment of in-patient detoxification. The public policy, then, produces a set of conditions which calls for "irrational" expenditures.

The reason for the high costs of in-patient detoxification is not the cost of the treatment itself; rather, it is the subsequent use of heroin. The reason for the better performance of outpatient methadone maintenance is not that the treatment costs are low--they are in fact the highest--rather, it is the lower rate of subsequent heroin use. But, the high treatment costs are due to the continuous and regular provision of another opiate, methadone.<sup>8/</sup> If the results of this analysis are taken as sufficiently "real" to guide public policy in the future (or even to recommend guidelines for public policy), then it might be argued that the analysis has shown that a public policy of providing regular and continuous supplies of opiates is preferable to a policy of criminalizing the supply as the attendant drug and criminal justice costs and illegal activities costs are much higher than are those associated with legitimate distribution in the form of methadone. If this argument is not accepted on the grounds that the people in the two kinds of treatment are really different, then the results of the analysis must be rejected as not being sufficiently "real" to guide public policy.

Finally, we must once more acknowledge that, despite the intractability of many varieties of personal or social benefit to conversion into dollar values, analysis which restricts recognized benefits to legal income is unduly constrained, and that income variations by modality are partly attributable to extraneous factors beyond differential treatment effects.

<sup>8/</sup> On a more conjectural level, this analysis implies that the costs and benefits of treatment might well be far different if the cost of heroin were made cheap. If methadone maintenance is viewed as nothing more than a program for the provision of an inexpensive opiate, and if IPD is seen as a non-curative treatment which is followed by regular use of opiates made expensive by policy, then it is clear that the provision of cheap opiates (methadone) is associated with less cost than the provision of expensive opiates (heroin).

## 9. TREATMENT VERSUS JAIL CONFINEMENT

One aim of the research project was to determine the comparative levels of success of community drug treatment programs and simple incarceration in influencing long-term client behavior. This was to be accomplished through attempts to establish a matched sample of non-treated cases who had been sentenced to serve jail sentences for drug offenses, with follow-up comparisons with the treated cases to be made on official records of subsequent criminal involvement. This task was made extremely arduous by confidentiality restrictions which, on the one hand, interfered with the degree of initial matching which could be attained and, on the other hand, eliminated the possibilities for subsequent disaggregation and thereby improved control over the follow-up comparisons.

In the paragraphs which follow, we will review several approaches, including those which we abandoned after exploratory effort, as well as those pursued until findings were yielded. The presentation is tedious, and the eventual results suffer from much remaining uncertainty and ambiguity, but we believe the material may be useful to future investigators by exposing problems of barriers to access, and of records accessed.

### A. Treatment Records

In view of the obstacles to accessing criminal history records on non-treated cases, which are discussed elsewhere herein, one approach considered was to use the Drug Abuse Office information system to identify a sample of jailed clients. The DAO discharge form allows for the recording of discharge for a crime committed before admission to the program, after admission to the program, or at an unknown time (relative to program

admission). The idea was to identify a sample of people discharged from a program due to incarceration for a crime (preferably committed before admission to the program), who had been in the program for such a short period of time as to have, in effect, received no treatment. One major advantage of this approach would have been the introduction of some control over selection effects. It is reasonably well established that people who decide to become involved in a program and/or who are selected for treatment are different from those who do not and that this difference is significantly related to subsequent behavior; thus, if we grant that prosecutors and/or judges have any competence to distinguish more amenable from less amenable treatment prospects, court-diverted cases, even when matched on other variables, may have initially better prognosis than court-sentenced cases. And it has been found that attempts to statistically control for this difference on the basis of other variables is not always successful in making them comparable. This can result in the erroneous attribution of what are actually selection effects to effects of treatment. Thus, comparing subsequent behavior of those incarcerated for a crime with those given drug treatment would be improved with respect to the attribution of treatment effects if those incarcerated were also people who had selected (or been selected for) treatment.

One problem with this approach is that discharge from treatment programs as a result of incarceration may not be reported because the programs do not know that the person was incarcerated; they may instead be recorded as having failed to appear. Related to this is the problem of the criteria used by the programs for recording such discharges. It might be that anyone who is incarcerated is discharged (from some agencies but not from others), or it may be that such a discharge is made only when the person is

incarcerated for a substantial amount of time (perhaps a few weeks or months or longer). Both of these problems raise questions about the "kinds" of people who would be identified by picking those discharged from treatment as a result of incarceration on the basis of such a discharge being recorded on the discharge forms.

Given a sufficient number of such, it would have been possible to incorporate this sub-study into the interview part of the Study. That is, we would have included these cases in the sample of people to be interviewed for the treatment evaluation and obtain from them consent to undertake a criminal record check. This would have provided much more information on the jail sample and allowed many more comparisons between those given treatment and those incarcerated. It would also have allowed a more refined assessment of the impact of incarceration in that it would be possible in the interview setting to determine if the people put in jail had also received treatment in some drug program subsequent to their incarceration.

The rationale, then, was to create a "treatment modality" which would have consisted of people admitted to a drug treatment program (regardless of admission date) who were discharged within a week (or so) as a result of being put in jail and who were released from jail during the same time period that the rest of the study population (and sample) was admitted and discharged from treatment--that time period being from March 1, 1975 through December 31, 1975.

Apart from the shortcomings associated with this approach, and the objections which might be raised with regard to its application, it was found to be impossible to implement, since a search of the information system yielded only 12 suitable cases during the appropriate time period, and extension of the search far beyond the boundaries of the specified study

period for the purpose of accumulating a larger sample would have spoiled the comparability of follow-up periods. The approach was consequently abandoned.

#### B. Sheriff's Bookings

An alternative approach was explored with the cooperation of the Los Angeles County Sheriff's office. It called for the selection of a sample of people released from the county jails in the Fall and Summer of 1975 who had been booked for violation of Section Number 11550 of the Health and Safety Code or Section Number 647F of the Penal Code. These two sections were chosen after consultation with a captain and a sergeant of the narcotics office of the County Sheriff. The argument was that people booked under other drug sections could well be involved in more serious crimes such as sales and that people in drug treatment programs are by and large not involved in such serious crimes. The original plan was to select people who were incarcerated for any crime as a result of drug use. The Sheriff's office advised us that their records do not allow this to be done as the drug use status of the people booked is not reliably checked or recorded. The Sheriff's office also indicated that the files which would be used to draw the sample are not normally open to research firms not connected with law enforcement agencies. Furthermore, the Sheriff's office thought it would be more expeditious and legally feasible for them to request and process the information from their records and the "rap sheets," than for us to seek clearance to gain access to the records. We therefore requested that they investigate the feasibility and cost of this approach, with the additional feature that they provide us with information known to them about persons released from jail and copies of the "rap sheets" with

both sets stripped of information by which the identities of the people could be realistically learned (using code numbers to link up the two sets of records).

The request to provide us with the data (stripped of identifying information) was predicated on the contract provision which called for a comparison of the jail sample with the treatment sample, statistically controlling for possible differences in age, sex, etc. These kinds of comparisons are very complex and virtually require that one be able to do the analyses on the basis of individual cases (as opposed to analyses of aggregated data). We were subsequently contacted by a lieutenant concerning the request, and we met with him in his office at the Central Jail.

In sum it was his opinion that the Sheriff's office would not be able to draw the sample, regardless of whether release were in the form of aggregated, or masked individual data. The records for people released from jail are sent to a designated place for a period of 90 days following release. After this the records are stripped and sent to a central archives. Because of the immense number of files in storage, their belief was that it would be virtually impossible to use these files as a basis for sample selection.

The lieutenant then suggested that we might be able to use a sample of cases they had pulled for a study of people sentenced to at least 15 days in jail. Upon further discussion, it was discovered that the sample was for people sentenced around August 1974 which was about a year earlier than what we desired. Further, the file does not have a CII number which means the the number would have to be otherwise obtained if rap sheets were to be acquired. This sample source was rejected.

The Sheriff's Department continued to explore alternative possibilities, but determined that only one of those remaining was potentially feasible. It



would involve accessing "history" computer tapes for the relevant period to select and provide identifiers for the Study. But, it was possible that the history tapes no longer existed. Further, they thought that the selection and identification would probably require a special computer program. If it did, the Sheriff's office would have to reimburse the computer system agency for the service. We offered to pay for this, but were informed that this would not restore the money to the Sheriff's limited data processing budget as the reimbursement from us would go into the "general fund" rather than the Sheriff's budget. These issues became moot after a deputy of that Department advised us that the computer history tapes from which such a sample could be drawn are only retained for 72 hours--only as a safeguard against computer breakdown.

### C. Court Records

A third major avenue toward construction of a comparable jail sample was next taken, involving reliance on public records to access identities for construction of a sample of jailed drug offenders. A visit and trial run made at the Los Angeles County Municipal Court Records Office indicated that such a sample might be pulled by hand, but not without problems. In a search for cases charged with violations of Section 11550 Health and Safety Code (prohibited using, or being under the influence of, controlled substance) an index book provided docket numbers and offense categories (e.g., 5 = narcotic offenses). Court records could then be pulled; some narcotic offenders so listed were charged with the violation in question. However, only rarely were these persons given straight jail sentences. Of about 15 cases pulled, about one-half were for violations of Health and Safety 11550. Many of these were given probation, and none was given a

straight jail term. It was learned that this happens only rarely. The entire process was time consuming and would not be feasible if only convicted cases receiving straight jail terms were selected. (Moreover, such cases would run the risk of being highly atypical.) Cases receiving probation could be selected and a sample drawn; however, in this event one alleged treatment disposition would be compared with another. This might not be a bad comparison were it assured that probationers received only probation supervision and not referral to other types of treatment. In view of the lack of assured exclusiveness of the two groups, that alternative did not appear reasonable.

At the suggestion of the Drug Abuse Office, a person in the Los Angeles County District Attorney's office was contacted. She advised that in her experience with superior court, very few narcotic offenders were sentenced to a straight jail sentence. She also indicated that this only happened when other treatment alternatives had failed and a California Rehabilitation Center or state prison sentence was not possible. She guessed that straight jail sentences are even rarer from municipal court.

It had been learned from a report produced by the Los Angeles County Regional Criminal Justice Planning Board that about one-half of all misdemeanor and felony drug convictions result in some kind of jail sentence. However, it was also learned, both from the District Attorney's office and from the Public Defenders, that very seldom do judges impose a straight jail sentence on a drug offender. A representative of the Public Defender's office stated that it was his policy--and one generally concurred in by other members of his office--never to recommend straight jail time to a convicted felony drug offender. He supposed that the practice might be somewhat more common among misdemeanor drug offenders, but doubted that

many there would be given straight jail sentences either.

A sample of defendants convicted of 11550 Health and Safety (under the influence) were drawn from Los Angeles Municipal Court records. (These records do not reflect actions in any of the many municipal courts from outlying areas.) About one-half of all complaints filed during the month of March 1975 were searched through indexes to court record dockets. Of the 395 cases examined, we included only those which had received a straight jail sentence, or summary probation with a jail sentence of 30 days or more. Other rules observed in the selection of cases were: if a companion drug offense was being charged, to include, and if the charge was reduced to a lesser offense--a frequent occurrence in the course of plea bargaining--to include the case again. Such lesser offenses were often 4143 B&P (possession of hypodermic syringe and needle) or 647F P.C. (public intoxication).

Eighty-five cases were selected in this manner. Of these, seven received straight jail sentences and the balance were sentenced to summary probation (usually for 24 months) with a jail sentence of 30 days or more. The mean jail sentence was 83 days, the modal sentence was 90 days.

Although the very small proportion of those receiving straight jail sentences from municipal court (less than 2% of the 395 misdemeanor narcotic convictions examined) made it impractical to attempt to build a sample on that disposition alone; the use of summary probation coupled with a jail sentence should, however, qualify adequately as a punitive disposition. No case of formal probation was included. Because summary probation is essentially a suspended sentence, it was felt that when coupled with a jail sentence this qualified as a punitive disposition--the rationale being to compare punitive and treatment dispositions in terms of outcome. Moreover, because far more cases are given summary probation plus jail than jail

alone, including the former should provide a more representative sample of convicted drug users. (Straight jail sentences were apparently frequently imposed on those who had absconded, a pattern reflected in their unusually long time span between conviction and sentencing.)

Court records personnel advised that further identifying information on cases pulled would be available to representatives of the Los Angeles County Health Department. These included date of birth or booking number and in some cases the CII number itself.

#### D. Criminal History Records

It was next necessary for someone representing the Health Department to search other court record files for these descriptors, and upon finding them, to request the record check for CII. Such cases could then, presumably, be matched on variables including age, sex, ethnicity, and presumed primary drug of abuse (heroin) for purposes of comparison; that is, a subsample of all treated cases on whom CII "rap sheets" were obtained was to be assembled on the basis of possession of characteristics which most closely represented those for the sample of jailed drug offenders.<sup>1/</sup> However, despite extensive negotiations and compromises which eventually resulted in arrangements for exchange of information between the State Departments of Health and Justice, it proved impossible for either "side" in this exchange

<sup>1/</sup> This procedure was a necessary compromise between logic and feasibility, with resource availability and scheduling requiring that steps which it would have been preferable to undertake sequentially be pursued, instead, simultaneously. Thus, comparison was dependent on rap sheet availability, and the characteristics defining that sample of treated cases who would (1) be interviewed, (2) consent to record check, and (3) be found on file in CII could be determined only at a later point, and thereby could not guide the initial selection of a best-matching jail sample. Winnowing from both jailed and treated samples, for the purpose of improving the degree of match among those remaining, would have to occur after the fact of rap sheet retrieval.

to provide the other sufficient information to construct articulated tables which incorporated controls on characteristics: Justice could not do so because the purpose of the request from Health was disguised, and Health could not do so because all unique identifiers or even arbitrary codes permitting data linkage were stripped from the individual rap sheets in Justice prior to release, leaving us with just two undifferentiated "batches"<sup>2/</sup>--the jail sample and the treatment sample.

The known distribution of characteristics on these two requested batches differed to a sufficient degree to rule out straightforward comparison of follow-up performances. The treated sample included, of course, some members whose drug of abuse was not heroin. The youngest members of the jail sample were age 20 and, although requests for consent<sup>3/</sup> to obtain rap sheets were made only of those interviewed treated cases who were at least 18 years old, the overall age distributions for the two samples of rap sheets requested were substantially different, as shown below:

|                | <u>25 Years<br/>or less</u> | <u>26-35<br/>years</u> | <u>36 years<br/>or more</u> | <u>Total</u> |
|----------------|-----------------------------|------------------------|-----------------------------|--------------|
| Treated sample | 45%                         | 37%                    | 18%                         | 100%         |
| Jailed Sample  | 18                          | 49                     | 33                          | 100          |

Similarly, the two gross samples differed markedly in terms of ethnic background, as shown below:

<sup>2/</sup> The batching of cases and stripping of identifiers also spoiled the opportunity for individual validation from official records of the interviewed clients' self-report data on criminal justice system involvements.

<sup>3/</sup> The treated clients were considerably more reluctant to consent to a criminal records check than to a urinalysis, and only 230 consents, or 77 percent of those requested were obtained.

|                | <u>Black</u> | <u>Chicano</u> | <u>White<br/>and<br/>other</u> | <u>Total</u> |
|----------------|--------------|----------------|--------------------------------|--------------|
| Treated Sample | 22%          | 33%            | 45%                            | 100%         |
| Jailed Sample  | 54           | 31             | 15                             | 100          |

Only on gender were the two requested samples equivalently distributed, with 26 percent of the members in the treated sample, and 25 percent of those in the jailed sample being women.

Further, the sets of rap sheets obtained from the Department of Justice were not the entirety of those requested, and there is no way of determining what biases of attrition may have been introduced. Rather surprisingly, a higher proportion of records requested on the treated sample were acquired than of those requested on the jailed sample--84 percent versus 80 percent. This is surprising because it is entirely reasonable to assume that some members of the treated sample would have had no criminal justice encounter resulting in a rap sheet being palced on file, whereas the jail sample was defined on the basis of such encounter. The existence of about one-half the rap sheets not delivered on the jail sample was acknowledged by notations such as "out," "not in file," or "destroyed," but the notations for the remaining one-half were "no record." The incompleteness of reporting was further belied by the fact that 10 percent of the rap sheets which were supplied for members of the jailed sample, although revealing other arrests and dispositions, failed to show any evidence of a drug-related charge. Of the remaining cases where such charge was recorded, dispositional recording was erratic--occasionally entirely absent, sometimes indicating dismissal or release on all charges, but usually indicating a jail and probation sentence as expected.<sup>4/</sup> No information is available with regard to how much

<sup>4/</sup> A representative of the State Bureau of Criminal Investigation and Identification explains that the volume of misdemeanor events processed is simply too great for audit or systematic check, that human error in the transposition

of the jail time initially imposed was actually served. Processing almost invariably originated with a charge of Section 11350, Health and Safety Code for possession "...did willfully and unlawfully have in his possession a controlled substance" (a felony) which was then reduced either to H&S 11550 "...did willfully and unlawfully use and be under the influence of a controlled substance" (a misdemeanor) or the Business and Professions Code Section 4143--unauthorized possession of a hypodermic needle or syringe (also a misdemeanor). Disposition was ordinarily swift and the jail sentence imposed rarely exceeded 90 days.

#### E. Performance Comparisons and Equivalence Problems

For the sake of better specification of a sample for follow-up, a subset of the rap sheets for members of the jailed sample was defined as consisting of those cases originally charged in February or March, 1975 with felony narcotic or dangerous drug possession (H&S 11350) and exposed to risk of rearrest during the full year beginning August, 1975, and ending July, 1976. Given this definition, it was necessary to delete seven of the 66 cases for whom rap sheets had been obtained because the original possession arrest could not be corroborated, and to delete four additional cases which had received either long sentences, delayed dispositions, or additional sentences prior to August, 1975 which would have incapacitated them from the opportunity of re-offending during some part of the follow-up period. This

of dispositional data before forwarding accounts for disagreement among record sources, while failure to transmit disposition is one reason for its absence in the CII depository. Neither disposition nor charge are accepted for inclusion on an individual's rap sheet unless the booking information was accompanied by a fingerprint card, and it is not uncommon for no fingerprint card to have been prepared if the police were already familiar with the identity of the person processed.

screening left 55 cases in the jailed sample, which met all criteria and a search was next made of the sample of rap sheets for treated and interviewed cases to identify a subset of those charged with H&S 11350 during the first 7 months of 1975. This period was chosen as one which led up to and included the months (March through July) during which these cases had entered treatment.

The attempt to develop a sample of treated cases "matched" with a similar sample of jailed cases in the sense of experiencing an arrest in early 1975 for possession of a controlled substance (usually further specified as heroin on the rap sheet) yielded so few cases (20) that it was decided to relax the eligibility criterion to include, as well, all treated cases who had experienced such an arrest during 1974; this yielded 17 additional cases, or a total of 37.<sup>5/</sup> The follow-up comparison during the one year period of exposure to risk by opportunity for re-arrest is presented in Table 9.1.

<sup>5/</sup> Examination of the dispositions accorded on these arrests revealed only 5 percent of the cases recorded as diverted (under Penal Code Section 1000); disposition was unrecorded for 22 percent; probation sentences, sometimes accompanied by fine or suspended jail terms were received by 19 percent; 27 percent were either detained and released, rejected by the prosecutor, or dismissed by the court (with notation such as furtherance of justice, insufficient evidence, or lack of probable cause); 27 percent received jail sentences--usually 90 days in length--and most of these jailed cases were from the 1975 arrest sample. The aim of improving initial match between the treated and jailed samples for purpose of more controlled follow-up comparison suffers a further blow, since the records suggest that charges could simply not be sustained to conviction among at least one-quarter, and that at least another quarter were given jail sentences as serious as those in the jail comparison sample. This erodes the intent of comparing those treated in lieu of jail with those jailed; thus, jail occurs in addition to treatment among some in the treated sample, and apparently could not occur instead of treatment among others. Further compounding the problem is the fact that we have no way of determining, and therefore no way of assuring ourselves that some members in the counterpart sample of jailed cases were not, themselves, also enrolled in treatment programs afterwards.



Table 9.1

One Year Follow-Up Comparison for Persons Charged  
with Possession of a Controlled Substance  
(Usually Heroin)

| Arrest Status<br>During Period<br><u>8/75 - 7/76</u> | Jailed<br>Sample      | Treated<br>Sample    | TREATED SUBSAMPLES           |                    |
|--|-----------------------|----------------------|------------------------------|--------------------|
|  |                       |                      | <u>Early<br/>1975 Arrest</u> | <u>1974 Arrest</u> |
| Arrest free  | 33%                   | 32%                  | 30%                          | 35%                |
| Person or property<br>offense only                   | 36 {<br>13<br>23 } 54 | 19 {<br>8<br>11 } 60 | 5                            | 12                 |
| Drug plus person or<br>property offense              |                       |                      | 10                           | 12                 |
| Drug offense only                                    |                       |                      | 55                           | 41                 |
| TOTAL  | 100%                  | 100%                 | 100%                         | 100%               |
| Cases in Sample                                      | 55                    | 37                   | 20                           | 17                 |

It may be noted, from Table 9.1, that the proportion of cases re-arrested after treatment is almost identical to that for cases re-arrested after jail sentence. While the overall arrest likelihoods are quite similar (68% for the treated versus 67% for the jailed), the offense compositions for the samples differ, with members of the treated sample substantially more likely to be arrested only for a drug offense, and members of the jailed sample more likely to be arrested for a property offense only or property combined with a drug offense. Within the treated sample, as might be expected, those who sustained a possession arrest in early 1975 were more prone than those whose most recent previous possession arrest was in 1974 to be re-arrested for a drug offense during the follow-up period, but even the latter group was as susceptible as the jailed sample to re-arrest for drugs (53% versus

54%). The nature of drug offenses resulting in re-arrest was also similarly distributed for the jailed and the treated samples, with possession charges accounting for the majority, followed by under the influence or sales/transport charges, and nearly all of these being in connection with controlled substances other than marijuana (Table 9.2).

Table 9.2  
Nature of Offenses Resulting in Re-Arrest

| <u>Drug Offenses</u>                               | <u>Jailed Sample<br/>(N=55)</u> | <u>Treated Sample<br/>(N=37)</u> |
|--|---------------------------------|----------------------------------|
| Possession of controlled substance                 | 21                              | 13                               |
| Sale or transport of controlled substance          | 3                               | 3                                |
| Under influence or driving under influence of drug | 5                               | 6                                |
| Cultivation or transport of marijuana              | 1                               | 0                                |
| Sale of marijuana                                  | 0                               | 0                                |
| Possession of marijuana                            | 0                               | 0                                |
|  | <u>30</u>                       | <u>22</u>                        |
| <u>Non-Drug Offenses</u>                           |                                 |                                  |
| Petty Theft  | 4                               | 2                                |
| Burglary   | 9                               | 1                                |
| Forgery or grand theft                             | 2                               | 2                                |
| Receiving stolen property                          | 1                               |                                  |
| Pimping or prostitution                            | 2                               |                                  |
| Attempted arson                                    | 1                               |                                  |
| Non-support  | 1                               |                                  |
| Assault with deadly weapon                         |                                 | 1                                |
| Felony hit and run                                 |                                 | 1                                |
|  | <u>20</u>                       | <u>7</u>                         |

On the basis of these findings, one might plausibly conclude that the subsequent performance of treated cases is clearly not superior to that of jailed cases in terms of overall re-arrest likelihood or for re-offense on drug charges, but that the treated sample does sustain a performance advantage in terms of lesser frequency of subsequent non-drug charges. Either

of these findings might, however, be challenged on the grounds that the procedures employed for initially selecting and matching the two samples were a less than adequate guarantee against selection bias. As a partial check for evidence of such bias, the samples were subjected to two additional types of comparison made possible from the rap sheet data. First, the arrest records for the two samples during calendar year 1973 were compared to determine whether their recent histories were reasonably equivalent. (Table 9.3); second, the two samples were compared in terms of year of earliest arrest.

Table 9.3

Control Check: Arrest Record During 1973

| <u>Arrest Status</u>                  | <u>Jail Sample</u> | <u>Treated Sample</u> |
|---------------------------------------|--------------------|-----------------------|
| Arrest-free                           | 31%                | 43%                   |
| Person or property offenses only      | 42 { 13            | 22 { 9                |
| Drug plus person or property offenses | 29 } 56            | 13 } 48               |
| Drug offense only                     | 27 }               | 35 }                  |
| TOTAL                                 | 100%               | 100%                  |

In the period of recent history preceding events which precipitated<sup>6/</sup> their entry into treatment or charges resulting in jail sentence the differences between the two samples tend, in every category except "drug offense only," to favor the treated sample. Consequently, it would be difficult to

<sup>6/</sup> Given the rare recording of a diversion disposition on rap sheets of member members of the treated sample, there are only weak grounds (i.e., proximity in time) for the speculation that it was the criminal justice encounter that was responsible for entry to treatment.

argue on the basis of these data that the initial bias favored the jail sample in such a way as to account for the failure of the treated sample to establish a re-arrest performance advantage during the follow-up period. Instead, the initial bias evident might be more plausibly invoked to account for the apparent superiority of performance among the treated sample on non-drug re-arrests during the follow-up period (i.e., the carry-through of a selection effect, rather than an attribution to treatment effects). The before-after differences are summarized in Table 9.4.

Table 9.4

Summary Comparison of Recent History  
versus Follow-Up Performances

| Arrest<br>Category            | TREATED |             | JAILED |            | TREATED-JAILED |        | Difference<br>Net Shift |
|-------------------------------|---------|-------------|--------|------------|----------------|--------|-------------------------|
|                               | Bef.    | Aft.        | Bef.   | Aft.       | Init.          | Subse. |                         |
| a. no arrest                  | 43%     | → 32% (-11) | 31%    | → 33% (+2) | +12%           | → - 1% | = -13%                  |
| b. any non-drug<br>(c or d)   | 22      | → 19 (+ 3)  | 42     | → 36 (+6)  | +20            | → +17  | = - 3                   |
| c. non-drug only              | 9       | → 8 (+ 1)   | 13     | → 13 ( 0)  | + 4            | → + 5  | = + 1                   |
| d. drug and non-<br>drug      | 13      | → 11 (+ 2)  | 29     | → 23 (+6)  | +16            | → +12  | = - 4                   |
| e. drug only                  | 35      | → 49 (-14)  | 27     | → 31 (-4)  | - 8            | → -18  | = -10                   |
| f. any drug<br>(d or e)       | 48      | → 60 (-12)  | 56     | → 54 (+2)  | + 8            | → - 6  | = -14                   |
| g. any arrest (c,<br>d, or e) | 57      | → 68 (-11)  | 69     | → 67 (+2)  | +12            | → - 1  | = -13                   |

Briefly, from row g above, which was the criterion "any arrest," the treated sample shows 57 percent arrested during the "before" period and 68 percent during the "after" period--a performance decrement of 11 percentage points. In contrast, the jailed sample show 69 percent arrested before and

and 67 percent arrested afterward--a two percentage point performance increment. Thus, the 12 percentage point initial advantage of the treated over the jailed sample is subsequently transformed into a one percentage point disadvantage, or a negative "net shift" of 13 percentage points. This overall phenomenon is attributable to several more isolable differences, but the most substantial of these is found in the "drug arrest only" category (row e): in both jailed and treated samples, the proportion arrested for only a drug offense increases from the before to the follow-up period, but the increase is slight for those jailed, and is more marked for those treated.

The second basis for examining the degree of initial equivalence for the two samples involved comparison of the earliest arrest entries on rap sheets. The two samples differed rather markedly in this regard, with the first arrest for members of the jailed sample more distant in time and less likely to have involved a drug charge. Sixty-five percent of the earliest recorded arrests for the treated sample involved drug charges, compared to only 31 percent for the jailed sample. Forty-two percent of the jailed sample showed their first recorded arrest prior to 1961, versus only 16 percent of the treated sample and, conversely, 38 percent of the treated sample were first arrested after 1970, compared to 11 percent of those jailed. In consequence, the jailed sample contained far more members with a history of numerous arrests and, by inference, must on the average have been substantially older.<sup>7/</sup> Thus, while the jailed sample was biased to contain members with worse records, the treated sample may have been biased to include younger and therefore perhaps, more criminally "active" members. (The hypothesis of "more active," however, when tested against recent history (1973) as shown in Table 9.3, is not substantiated.) Under 7/ It will be recalled that, among all those on whom rap sheets were requested, the jail sample contained proportionately fewer young members and more black persons than the treated sample.

these circumstances, inferences about the relative effectiveness of treatment versus punishment must be quite cautiously entertained, since the appropriateness of the samples used as comparison groups is suspect. Unfortunately, any further procedural steps for improving upon the degree of equivalence by matching members of the two samples on additional variables results in sample sizes too small to permit legitimate follow-up comparison.

The purpose of this substudy was to explore the consequences on recidivism of jail and treatment as alternative dispositions. It will be recalled that the comparisons made between the jailed and treated samples were limited to members for whom a recent arrest for narcotics possession could be established (during early 1975 among the jailed, and during 1974 or early 1975 for the treated). Relatively few of the members of the treated sample (37, or 16% of those for whom rap sheets were requested) met this criterion for inclusion, whereas over 80 percent of those jailed had been so charged. Among the 230 arrest history records requested for treated cases, it was impossible to establish a recorded arrest for any drug offense at any time on 25 percent of the members. Another 24 percent of the treated cases had sustained no recorded drug offense of any kind subsequent to 1973, or within one and one and one-half years prior to their entry into treatment.

Thus, for one-half the treated cases on which official criminal record inquiries were made, there is no documentary basis for construing the treatment admission to have occurred in temporal context with criminal justice system encounters, or somehow in lieu of punitive dispositions. This left 81 cases, or 35 percent of the membership of the treated sample who had sustained a drug arrest on some charge other than H&S 11350 during 1974 or early 1975. These cases, for whom it was impossible to establish any

comparison sample of jailed subjects, had generally been charged either with marijuana possession (H&S 11357) or with being under the influence of a controlled substance (H&S 11500), with about one-third in each of these categories, and the remaining one-third spread over a miscellany of drug charges in the Penal, Vehicle, or Business and Professions codes.

Since it was conceivable that these drug-related criminal justice system encounters were precipitating events influencing treatment entry, a follow-up for the period August, 1975 through July, 1976 was also conducted on this sample; and it was found to be far less vulnerable to re-arrest than the samples which had been charged with H&S 11350 (Table 9.5).

Table 9.5  
Follow-Up Comparisons for Two Treated Samples

| <u>Re-Arrest Charge</u>               | <u>ORIGINAL OFFENSE</u>           |                                |
|---------------------------------------|-----------------------------------|--------------------------------|
|                                       | <u>H&amp;S 11350<sup>1/</sup></u> | <u>All Other Drug Offenses</u> |
| Arrest-free                           | 32%                               | 64%                            |
| Person or property offenses only      | 8                                 | 10                             |
| Drug plus person or property offenses | 11                                | 9                              |
| Drug offenses only                    | 49                                | 17                             |
| TOTAL                                 | 100%                              | 100%                           |
| Cases in Sample                       | 37                                | 81                             |

<sup>1/</sup> Controlled substance possession

While the two groups are equally likely to sustain re-arrests for property offense, those originally charged on any other drug offense than

narcotics possession are far less likely to re-experience a drug charge and are, consequently only half as prone to subsequent arrest of any kind. The former group clearly contains the greater risks but it is impossible on the basis of the data to determine whether treatment is more effective with the latter group or whether, regardless of treatment, that group is simply less prone to re-arrest.

The two groups, combined, define a sample of cases experiencing a documentable drug-related arrest within a period of one and one-half years preceding their admission to the Study Period Treatment Program; the documentable re-arrest rate for this combined sample in the one year follow-up period is 46 percent, and the vast majority of re-arrested cases involve a manifestly drug-related offense. However, few of these cases can be proven, from the record, to have been originally accorded treatment instead of a punitive disposition. As mentioned earlier, only 5 percent of the rap sheets for that subsample originally arrested for controlled substance possession indicated "diversion" as the criminal justice system disposition; only 16 percent of the rap sheets for the subsample originally arrested for other drug offenses listed diversion as the disposition--23 percent of dispositions were un-recorded, 12 percent were jailed, 10 percent placed on probation, and 39 percent shown as released or dismissed ("illegal search," "insufficient evidence," "deemed not arrested," "DA rejected," etc.).

There are several by-products from this frustrating and, to a large extent unsatisfactory, exercise with arrest history records. First, if we combine the two treated samples who experienced any type of drug arrest during roughly the year to year and one-half preceding their entry into treatment, these constitute roughly one-half of those for whom rap sheets



were requested. Even were we to include arrests for non-drug offenses during that pre-treatment period, the proportion would undoubtedly fall considerably short of the 68 percent of all interviewed subjects who acknowledged that they had been arrested and charged during the year preceding entry to treatment. We think it more plausible that the disparity arises from incomplete documentation in official records sources rather than from exaggeration on the part of clients; in any event, self-report is obviously not biased toward concealment. Second, from the available sample of rap sheets for whom any documented drug arrest could be established during the "pre-treatment period," there is a documented re-arrest rate of 46 percent during the year of follow-up inquiry, which is a calendar period rather closely corresponding to the post-treatment period for which self-reported arrests were asked. Forty-nine percent of clients who had reported an arrest during the pre-treatment period acknowledged arrest during the post-treatment period. Thus, once more, reliance on self-report does not result in underestimation as compared to centrally available official records and, again, we do not feel this is attributable to overestimation or untruthfulness on the part of clients. Comparisons on self-reported versus officially documented arrests are limited to aggregate proportions because the Department of Justice obscured all identifying data that would have permitted individual record linkages. (In the report section on Current Drug Use, assessments of individual truthfulness are possible and, on these, the general level of client credibility also seems quite high.) Third, for that treated sample consisting of persons for whom a narcotics possession arrest was recorded in the pre-treatment period of 1974 through early 1975, comparison of their arrest record for the "pre-pre-treatment" period of 1973 with the post-treatment period of

late 1975 and early 1976 yields findings suggesting an increased level of difficulty with the criminal justice system, or absence of evidence of improvement attributable to treatment (comparison of pre-pre versus post is fairer than comparison of pre versus post because the basis of selection for sample membership guaranteed difficulty during the pre period). Finally, despite the admitted problem of securing an adequate initial match between the samples of persons treated and those confined subsequent to a narcotics possession arrest, there is no evidence that treatment yielded more effective intervention than jail in terms of subsequent arrest performance. It should be clearly noted that the analysis undertaken here was plagued by methodological difficulties, and that the appropriate conclusion is that we have been unable to prove that treatment intervention is more effective than jail, rather than interpretations suggesting that we have proved treatment to be no more effective than jail. The distinction is important.

#### F. Summary

Follow-up comparison of drug abusing persons treated with those jailed is rendered exceedingly difficult by problems of establishing a defensible initial match among the samples to be compared. The notion of treatment and punitive dispositions as alternatives depends upon some evidence that one occurred instead of the other, but we have managed to muster only the flimsiest of such evidence of comparability among our samples. The jailed cases were, of course, not diverted, but we are unable to say whether treatment for these was an unexercised option, or was never considered as a valid option. Further, we cannot be certain that they were not subsequently recipients of drug treatment. The treated cases were sometimes

exposed, in addition, to punitive dispositions, and sometimes it appears that the option of a punitive disposition was simply not an alternative because of absence of sufficient grounds; few of the treated cases were demonstrably diverted, and it is not at all clear that, had they not been diverted, the punitive alternative would have included jail confinement. Once we had refined the membership of the two samples to improve the degree of initial match and better legitimate follow-up comparisons between the samples, evidence of the superiority of either treatment or jail as affecting future arrest likelihood could not be found, but it is also true that our best efforts at achieving matched samples failed to establish an adequate equivalence and that, consequently, the follow-up comparisons between samples remained an inadequate procedure for testing differential effectiveness.

## 10. SUMMARY AND CONCLUSIONS

In April, 1976, the Drug Abuse Program Office of Los Angeles County Health Services issued a Request for Proposal to conduct an outcome evaluation of drug abuse treatment. Criminological Research Associates (now Social Issues Research Associates) was the successful bidder. The following is a summary of the report resulting from the project. It focusses on the major findings (as we saw them), and deliberately slights the operational problems and the technical aspects of the project.

### A. Major Purposes of the Project

The major purposes of the study were to provide information on the post-treatment behavior of the clients of those programs in Los Angeles County which came within the administrative or coordinative purview of the Drug Abuse Program Office. Essentially, these included all programs for the treatment of heroin and marijuana users, or users of other drugs (not including alcohol), which were funded by the National Institute on Drug Abuse, the California Short-Doyle program, or the County itself. Excluded were programs thus funded but operated directly by the State of California or the Federal government, or funded by the Bureau of Prisons.

The clients were to be interviewed at approximately one year following discharge from treatment, with regard to drug use, employment, criminal involvement, and psycho-physiological health. The analysis was to be keyed to treatment modality. Four were eventually chosen: (1) outpatient drug-free, (2) residential drug-free, (3) outpatient methadone maintenance, and (4) in-patient detoxification. The discharge criterion was waived for outpatient methadone maintenance.

In addition, there was to be a cost-benefit analysis of the different kinds of treatment, and those in the treated sample were to be compared with those given a jail sentence resulting from drug abuse.

#### B. Client Contacts

Federal and State regulations on the protection of client confidentiality and anonymity rights have become numerous and highly restrictive. The spirit of these regulations, if not the "letter," coupled with the extreme reluctance of the treatment programs to reveal information about their former clients made it very difficult to track the former clients. As a result, the agencies had the primary responsibility of trying to find their former clients and then obtaining a consent from them to be interviewed. The agencies relied almost totally on the telephone and mail. They were able to locate only about one-third of their former clients. Those located were a statistically biased sample of the study target population, based on comparisons of information obtained from computerized clinic records.

Among those located, an acceptable consent rate was obtained, and those who consented were not markedly different from those from whom a consent was not obtained. The proportion interviewed of those who consented was also acceptable, and they too did not differ greatly from those who could not be reached for interview despite earlier consent. The outcome measures (which were obtained from those interviewed) may then be generalized only to those former clients whom an agency would be able to locate. (The cases which the agencies sought to locate were a sample from the study target population; they thus did not try to locate all their former clients.)

The agencies varied greatly in their success at locating their former clients. Analysis of various quantitative variables failed to reveal any strong correlates of this variation. The observational impression was that those (few) agencies which were strongly committed to utilizing the resources needed to make contact were the most successful. Modest monetary incentives (introduced relatively late in the project) did not have much of an effect. Substantial reimbursements for extraordinary efforts built into the project from its very beginning might have produced an acceptable location rate.

### C. Some Overall Information

The study population consisted of those clients admitted to treatment during the period from March 1, 1975 through July 31, 1975, who had been discharged (for any reason, no matter how long in treatment) by December 31, 1975. The outpatient methadone maintenance program clients did not have to meet the discharge criterion. The clients were identified by the project from the computerized information systems of the Drug Abuse Program Office and the Client-Oriented Data-Acquisition Program (CODAP) information system of the National Institute on Drug Abuse.

The sample of clients to be located and interviewed was drawn from strata formed by client type and kind of treatment. The client typology was developed for the project. It utilized information on the client's age of first illicit drug use, years to first continuing or regular use of the drug, age at admission to treatment, primary drug of abuse (heroin versus other, primarily marijuana), and racial-ethnic group. The original intent was to compare the different kinds of treatment for each client type in order to statistically control for the fact that different kinds of clients become involved in different kinds of treatment. Due to the

unexpectedly high loss rate resulting from the agencies inability to locate most of their former clients, this plan had to be all but abandoned. Instead, for the vast bulk of the comparisons, the client types were used to equate the interviewed cases in each of the four kinds of treatment by making the distribution on client type equal for each kind of treatment.

A major variable in the client typology was heroin use. It turned out that virtually none of the non-heroin users were in any kind of treatment other than outpatient drug-free. The high loss rate again crippled the intended analysis of non-heroin users in outpatient drug-free treatment. For the want of any "better" basis for comparison for non-heroin cases, they were carried out on mode of entry into treatment--diverted into treatment by the criminal justice system versus not diverted.

As assessed by the number of clients admitted to treatment (in the study target population), the bulk of the treatment effort during the study period (86.4%) went into outpatient drug-free services for heroin users (32.6%), outpatient drug-free services for other than heroin users (31.1%), and in-patient detoxification for heroin users (22.7%). The remaining (13.6%) went into residential drug-free treatment (9%) and outpatient methadone maintenance (4.6%) for heroin users. (The study target population excluded even rarer forms of treatment and those clients which could not be placed in the client typology due to missing information).

Wherever possible, the questionnaire was designed to obtain information from the clients about the year preceding entry into treatment and the year following discharge (or the year preceding the interview for those in outpatient methadone maintenance who had not been discharged by the cut-off date). In particular, this was done for drug use, employment and criminal involvement. For these areas, the basic comparisons across kinds

of treatment were based on the degree of change from before treatment to after treatment.

#### D. Overview of Information Obtained from the Interviews

An indication of the kinds of treatment in short supply was obtained by asking the interviewees if they had been put on a waiting list or had been unable to gain admittance to a program at any time during the year before treatment, while in treatment, or during the year following discharge. The most frequently mentioned modalities were outpatient methadone maintenance and in-patient detoxification.

When asked about how they got into the study period treatment program, about two-fifths said that they were diverted or pressured into the program by a criminal justice agency or agent.

The former clients reported that they typically got the kinds of services which they wanted, except for those related to employment. A substantial majority endorsed generally favorable comments about the genuineness of the staff and programs. Most would return for further treatment should they need it, and they would recommend the programs to others should they want or need treatment.

A substantial proportion of the clients existed in a vulnerable setting in which opportunity and temptation to drug use are high, the economic means to insulate oneself from the consequences of use are low, and the resolve to abstain likely to necessitate either substantial social talent or considerable determination. With respect to what has been called a sense of psychological well-being, the results were not much different. They were more like a sample of Detroit inner-city residents than the residents of metropolitan areas in general. Nonetheless, the clients generally reported



that they were far better off than they were before treatment, and most reported that they received a great or moderate amount of help from the treatment received.

Drug use declined markedly, especially heroin, as did illegal activities, most likely as a result of the decline in heroin use. Legitimate employment improved, but average earnings increased only slightly.

The interviews typically lasted from one hour to one hour and one-half, and most were conducted at the study period treatment program or the client's residence. The interviewers reported that the clients were open, direct, and honest in their responses, and the interviewees thought that the interviews were comprehensive and capable of revealing the impact of treatment upon their lives.

A random subsample of the clients were asked to provide a urine sample for analysis to check on their current use of drugs. Few refused. There was very high agreement between self-reported current use and the results of the laboratory tests, with the few disagreements divided about equally between undetected self-reported use and unreported detected use. Tests were made for heroin, methadone, amphetamines, and barbiturates.

## E. Treatment Modality Comparisons

### 1. Heroin users

Outpatient methadone maintenance and in-patient detoxification may be classified as centering more upon the treatment of symptoms; outpatient drug-free and residential drug free center more upon psycho-social treatment in order to alleviate the conditions producing the symptoms. The four treatment modalities studied may also be classified with respect to the location of treatment. Outpatient methadone maintenance (OPM) and

outpatient drug-free (ODF) take place within the community while residential drug-free (RDF) and in-patient detoxification (IPD) take place in an in-patient setting. The four kinds of treatment may be uniquely identified by their treatment orientation (symptomatic versus psycho-social) and location (outpatient versus in-patient).

The clients who sought services to control their drug use were more likely to obtain such help from symptomatically oriented treatments, with OPM faring better than IPD. The psycho-socially oriented treatments did less well, with RDF faring better than ODF. With respect to services classified as oriented toward achieving a more effective self, including employment, OPM clients reported more success in getting what they wanted than did those who had been in IPD. The other two modalities (ODF and RDF) fell in between. With regard to survival services (such as a place to stay and legal aid), there were no statistically significant differences among the modalities in their ability to provide the services which had been sought.

Based on a global assessment of the amount of help received from the treatment program (ranging from "a great amount" through "none at all" to "harmful"), relatively long-term outpatient symptomatic treatment (OPM) was seen as more helpful than such treatment provided on a brief in-patient basis (IPD), but psycho-socially oriented outpatient treatment (ODF) was seen as less helpful than in-patient (RDF). Put differently, RDF and OPM were seen as equally helpful and more helpful than either ODF or IPD which were similarly evaluated. On the other hand, RDF compared to IPD, and OPM compared to ODF generate more perceived staff disrespect for clients perhaps due to longer term, more intensive client-staff contacts.

With respect to heroin use, it is symptomatic treatment which makes the difference, with OPM being associated with better performance and IPD being related to poorer performance (relative to the other kinds of treatment, taking heroin use prior to treatment into account); the psychosocially oriented treatments (ODF and RDF) were not different from one another (as measured and statistically tested), and, taken together, they were not statistically different from the symptomatically oriented treatments (in their combined effects).

Several more general measures of drug use were obtained; they included the number of different kinds of drug used after treatment, involvement with drug use, negative consequences of drug use, subsequent treatment for drug use, expenditures on drugs, and dealing or selling drugs. They are all strongly related to heroin use. In general, those who had received IPD did less well on these measures than did those in OPM. In general, ODF and RDF clients did better than those who had been in IPD, and somewhat less well than those who had been or still were in OPM. And although OPM had a better record overall, it was not always statistically better than ODF.

With respect to alcohol, marijuana, and barbiturate use (among heroin users), treatment modality does not seem to have had a differential effect.

Several measures of change in illegal activities were obtained; they included burglary or breaking and entering, other theft (not including robbery), number of arrests, illegal income, and rank-order of support from illegal income. Statistical analyses of these change measures indicated that people who had entered IPD were subsequently more likely (relative to other modalities), to support themselves by illegal activities which probably accounted for their being arrested more often; their

higher rate of illegal activities seems largely attributable to dealing or selling drugs. The other treatments did not differ much among themselves on these measures, although there was a tendency for those in OPM to be somewhat less criminally involved.

With regard to involvement with work, legal income, and economic hardships, it would appear that treatment modality had no differential impact. It would also appear that treatment modality was not differentially related to psycho-physiological health (as measured). Apparently, treatment modality is associated with differences in "self-perceived" psycho-social and socio-economic assistance received from treatment, and self-change, but not to differences in levels of "performance" subsequent to treatment. It would seem then that these "self-perception" and "performance" measures are not actually tapping similar variables, or the "performance" measures are inadequate.

A rather strong impression emerged from the analyses of the data. It was that many of the treatment modality differences (among the heroin users) in the more general measures of drug use, illegal activities and employment were due to differences in heroin use following treatment. A special statistical analysis confirmed these impressions. When heroin use after treatment was statistically controlled, most of the changes on these other measures were no longer related to treatment modality. Although other interpretations are certainly possible, and the one which emerged must be very carefully considered, it would appear that whatever differential effects treatment modality may have, they may be due mostly to differential effects upon heroin use. However, it may be, despite all the attempts to achieve adequate statistical controls on the comparisons, that the differences in heroin use associated with kind of treatment are not really due to treatment effects; they may be the result of residual client differences

(with respect to personal characteristics and social milieu) which remained despite every feasible effort made by application of highly advanced techniques to rule out the alternative explanation of pre-existing client differences across the modalities.

2. Non-heroin users in outpatient drug-free treatment

Whether or not a person is diverted into treatment probably does not make much of a difference in terms of events and situations subsequent to treatment. Those diverted into treatment report having received fewer services from the programs, and obtaining less overall benefit; however, since their initial expectations were relatively low, they apparently feel little disappointment or resentment toward the programs or about the results. The only clear differences following treatment were for employment. Those diverted had a better record. It seems most likely that these differences would account for the slightly more positive measures on psycho-physiological health, and that both are probably due to pre-treatment differences which the statistical analyses could not fully control.

3. Client type and kind of treatment in interaction

There is some evidence that client type and kind of treatment interact in their relationships with the criteria measures, but the patterns across the criteria are not consistent. The only firm conclusions to be drawn from the analysis are that IPD is associated with higher levels of heroin use regardless of client type and that OPM is highly evaluated by the clients regardless of client type. It would then appear that although the net effects of different kinds of treatment are different for many measures--especially heroin use--these overall effects conceal apparently irregular effects across different client types.

#### 4. Cost-benefit analysis

The cost of treatment (about \$800 per person) exceeded the modest increase in legal earnings following treatment (about \$400 per person in the first year). Although drug use expenditures as well as illegal income decreased substantially (but might have anyway), the costs of subsequent drug use and criminal activity still far exceeded total legal income during the subsequent year. If the benefits of treatment are to be shown as exceeding the costs of treatment and subsequent drug use and illegal activities, the sources of benefit must be greatly expanded. Given that set of variables which was transformed to dollar values for inclusion in the cost-benefit evaluation, it would be necessary that treatment effects be progressively greater over subsequent years beyond the first if net benefit were to accrue; if, instead, effects were either stable or transient, net loss, as calculated, would increase with the passage of years.

Outpatient methadone maintenance came closest to showing a net benefit (as measured), but the costs of treatment and subsequent drug use and criminal involvement were barely offset by earnings afterward. But, it must be remembered that most of those in OPM were still in treatment at the end of the follow-up period, thereby still receiving benefits (which continued past the follow-up period), and the fact that they were still in treatment while the others had been discharged must certainly be weighed in considering the performance for this modality.

In-patient detoxification did not fare well in terms of costs and benefits considered together. But this may not be a fair comparison for IPD as it is not seen as a curative treatment in and of itself. Rather, it is seen as a vehicle for preparing people for treatment. In addition,

current social policies virtually mandate the provision of detoxification services in order to relieve the personal hardships produced by these policies for people who come to use heroin. And finally, the findings are consistent with, although they certainly do not prove, the argument that the relative performance of OPM versus IPD is the result of the fact that social policy now supplies legitimate opiates at a low cost in the form of methadone and makes illegitimate opiates available at a high cost in the form of heroin. All else being equal, the provision of inexpensive heroin by legitimate means would greatly change the cost-benefit results for in-patient detoxification, but all else would not be equal.

#### F. The Jail Sample

Follow-up comparison of drug abusing persons treated with those jailed was rendered exceedingly difficult by problems of establishing a defensible initial match among the samples to be compared. Operationally, this was the result of rather severe restrictions on the release of criminal justice records with sufficient information, and the lack of sufficient information in these records. Conceptually, the notion of treatment and punitive dispositions as alternatives depends upon some evidence that one occurred instead of the other, but we managed to muster only the flimsiest of such evidence of comparability among our samples. The jailed cases were, of course, not diverted, but we were unable to say whether treatment for these cases was an unexercised option, or was never considered as a viable option. Further, we were unable to determine whether they were subsequently treated. The treated cases were sometimes exposed, in addition, to punitive dispositions, and sometimes it appears that the option of a punitive disposition was simply not an alternative because of absence of sufficient grounds; few

of the treated cases were demonstrably diverted, and it is not at all clear that, had they not been diverted, the punitive alternative would have included jail confinement. Once we had refined the membership of the two samples to improve the degree of initial match and to better legitimate follow-up comparisons between the samples, evidence of the superiority of either treatment or jail as affecting future arrest likelihood could not be found, but it is also true that our best efforts at achieving matched samples failed to establish an adequate equivalence and that, consequently, the follow-up comparisons between samples remained an inadequate procedure for testing differential effectiveness.



## 11. RECOMMENDATIONS

The following recommendations are keyed to the major findings and conclusions of the Study which were presented in the summary and earlier chapters. Some of the findings and conclusions presented in this chapter were not included in the prior chapters as they were not directly relevant to the assessment of treatment impact, but they are relevant to recommendations stemming from what we learned in the conduct of the project.

### A. The Information System of the Drug Abuse Program Office

#### 1. Findings and conclusions

The Drug Abuse Program Office has adopted the nationwide Client-Oriented Data-Acquisition Process (CODAP) client admission and departure forms, replacing its former overly detailed and poorly designed forms. Although this is a great improvement, the system as a whole has a number of serious deficiencies.

Not all publicly supported drug abuse treatment agencies report to the information system. The Drug Abuse Program Office has coordinative responsibilities which include these non-reporting agencies. This means that the information system does not provide complete coverage of the agencies.

The county-operated methadone maintenance clinics did not, at the time of this Study, report to the basic information system, and the separate methadone information system had not been automated. Similarly, a lack of client characteristics data on admissions to the Metropolitan State Hospital drug abuse program, at the time of this Study, introduced serious biases in reports of client characteristics. Both these problems have since been corrected.

There was a much higher rate of missing data in the Drug Abuse Program Office information system (as compared to the files obtained from the national information system for those agencies reporting to it), probably as a result of an inadequate number of staff for monitoring input data. Given the small number of staff positions devoted to the management and operation of the information system, it worked remarkably well. This was achieved by sacrificing system documentation. The lack of system documentation made utilization of the system by others difficult, and placed demands on staff time which could not be met. System documentation would greatly reduce the demands on staff time made by consultants, and provide greater opportunities for more extensive analysis of the data, but limitation in staff resources has continued to hinder both quality over input documents and handicap the completion of thorough system documentation.

At least at the time of this Study, the number of staff devoted to the information system was barely adequate to produce the necessary management information reports. Virtually no staff time was available for research using the extensive data base provided by the information system.

There appeared to be substantial variation in the ways in which the treatment agencies reported information. Kind of discharge from treatment, for instance, seemed to vary substantially across treatment agencies due to a lack of adequate standardization. Acceptable levels of standardization could be achieved by establishing statistical quality control procedures. Present staffing is not sufficient to take on this task.

If coded unique client identifiers were used by all publicly supported treatment agencies in the County to report all admissions and discharges to the information system, the power of the system would be greatly expanded. The system could then be used to study patterns of treatment involvement within and across treatment agencies, the proportion of people

who come back into treatment (after various periods of time), the number of people newly coming into publicly supported treatment in the County, the number and proportion of people no longer involved in treatment, patterns of drug use among people receiving treatment more than once, and more effective tracking of clients for long-term follow-up studies. There are, however, ethical problems raised whenever such data linkage solutions are contemplated.

## 2. Recommendations

a. Given that a management information system is seen as essential, staffing should be increased in order to develop and continuously update system documentation, and to more thoroughly monitor information input for completeness and consistency with standards.<sup>1/</sup>

b. A management and budget analysis of the information system should be done to determine what functions it is to perform. The analysis should focus on completeness of coverage of reporting agencies, minimal information needs, the kinds of research questions for which the system will be used, if any, the number and kind of staff needed to maintain the kind of system deemed necessary, the number and kind of staff needed to produce the products deemed necessary, and the computer facilities required.

## B. Official Criminal History Records

### 1. Findings and conclusions

In accordance with laws and regulations, many attempts were made to obtain the official crime records of those who had been in treatment and to build a comparative sample of drug users who had been put in jail (as opposed to being treated). All that could be obtained were batches of criminal record histories stripped of all identifying information.

<sup>1/</sup> Extending agency coverage and integrating the county-wide data system would undoubtedly prove both costly and logistically awkward, but much of this effort would be offset by benefits not now available under the arrangement of separate though overlapping jurisdictions at the federal, state, and local levels.

Self-reported criminal involvement by those interviewed could not be "validated" and it was impossible to conduct an adequate comparison of treatment versus incarceration. Nor was it possible to do a criminal record check of those who could not be interviewed (most often because they could not be located). The criminal records could also not be used as an aid in locating former clients for interviewing.

If the intent of the laws and regulations concerning the release of official criminal record histories is to prevent their release to private research firms for use in evaluating drug abuse treatment, then the laws and regulations were effective, in this case. If not, the laws and regulations are overly restrictive in their application.

The Bureau of Criminal Statistics of the California Department of Justice has the technical and legal capabilities to do the required analyses, but this would have required either the release of additional information about clients who had been in drug abuse treatment to a law enforcement agency and this is prohibited by laws and regulations on privacy, or required a complex and sensitive arrangement for producing disaggregated tables with Justice unapprised or misled about the eligibility conditions for an individual's inclusion in the sample, and the meaning of sample membership.

## 2. Recommendations

a. Treatment agencies and county and state coordinators should bring to the attention of federal and state legislatures the problems of obtaining official criminal record histories for use in treatment evaluations so that they may decide if such records should be released, and if so, under what conditions.

b. If the release of official criminal record histories is not authorized, future treatment impact studies should not be required to

include measures of the effects of treatment on official recorded criminal involvement.

### C. Treatment Agencies' Objections to the Study

#### 1. Findings and conclusions

In addition to the lack of any cogent reasons for participating in this project, the problems associated with the protection of the clients' rights to privacy, and the work involved in trying to locate their former clients, the treatment agencies objected to the project on the following grounds:

a. Participation in the Study would cause a drain on already scarce treatment staff time and generally disrupt program operations.

b. A great deal of research has already been done, much of it reflecting negatively on treatment efforts because of the incompetence of the researcher or because of the recalcitrant nature of the problem which would not be remedied by further research.

c. Treatment staff is already overwhelmed by an abundance of repetitive paperwork which is apparently useless to each new research effort and certainly of little consequence to the treatment effort.

d. Money devoted to research could be much more productively channeled into the always under-funded treatment effort.

Given that administrators and other control agencies still want treatment impact studies, the following recommended administrative actions might lessen the present level of opposition in these areas.

#### 2. Recommendations

a. Because studies of this kind require major one-time expenditures which are not a normal part of program operations, the agencies

expected to participate should be reimbursed as a part of the project budget for their total project expenditures.

b. Administrative and other control agencies should be required to stipulate as a pre-condition for funding treatment impact studies the actions which they would take on the basis of the probable study findings and conclusions.

c. Routine data collection for management information systems should be severely limited to the absolutely essential items which will definitely be used for administrative action or definitely planned research; information not used will be (and is being) reported in an unreliable and invalid fashion.

d. The administrative and other control agencies which fund research projects (including impact studies) should at least occasionally take actions which are a direct result of the studies, and the basis of such action should be made known to the treatment agencies. Research done on routinely collected information should be shared with all treatment agencies.

#### D. Client Location

##### 1. Findings and conclusions

Only one-third of the former clients included in the study population sample were located by the treatment agencies. The contacts were attempted many months after discharge. The bulk of the attempts were by mail and telephone.

The project was not budgeted for client contact efforts by the agencies. Very modest agency reimbursements were obtained by budget modifications when the low consent rate became clear, but reimbursement had only a slight impact.

Effective client tracking was greatly hindered by federal and state laws and regulations concerning the clients' rights to privacy. The major hindrance was the prohibition against sharing information from various sources.

The Study was designed on the premise that the treatment agencies would be able to locate a high proportion of their former clients. On this basis a sample of about 1,800 cases was drawn with the objective of obtaining 1,200 completed interviews. The actual location rate was very low, and those located were a statistically biased sample of those sought, but those interviewed were reasonably representative of those located. As a result, the findings and conclusions from this Study cannot be safely generalized to the total Study population. A good study does not require a large number of interviews, but it does require a representative sample. A more representative sample of interviews might have been obtained had the agencies been asked to try to locate a much smaller number of people.

## 2. Recommendations

a. Treatment agencies and county and state coordinators should bring to the attention of federal and state legislatures the problem of the inherent conflict between the rights of clients to privacy and the social policy that drug abuse treatment be evaluated by the use of long-term follow-up interviews of those who have been treated. Current laws and regulations would appear to handle this conflict, but they do not.

b. Future treatment impact studies such as this one should be budgeted so as to include reimbursement to the agencies for their efforts to locate their former clients.

c. The sample size for impact studies should be made as small as possible, sacrificing precision of estimates for the sake of increasing

the likelihood of validity.

E. Outpatient Methadone Maintenance

1. Findings and conclusions

The outcome measures for outpatient methadone maintenance were at least as good as, and often better than, those for the other modalities examined. The clients gave it a high rating. Along with in-patient detoxification, it was most often mentioned as the kind of treatment not readily available. The demand may have been for maintenance programs in which the client did not have to pay fees; a small, short-term survey might confirm (or disconfirm) this possibility. The dollar benefits of outpatient methadone maintenance came closest to offsetting the dollar costs of treatment.

2. Recommendations

a. A small, short-term survey should be done to determine if the unmet "demand" is for outpatient methadone maintenance programs which do not charge a fee to the clients.

b. The availability of outpatient methadone maintenance should be adjusted in accordance with considerations of "demand" pressures for this type of service.

F. In-Patient Detoxification

1. Findings and conclusions

In-patient detoxification was the second most frequently utilized kind of treatment, and was almost tied with outpatient drug-free services for first place among heroin users (as measured by the number of admissions in the Study target population). Along with outpatient methadone maintenance, it was the most often mentioned as the kind of treatment not readily available.



For more than half a century, a key element of social policy on heroin use has been to make heroin unavailable from legitimate sources, very difficult to obtain by criminalization of its supply and possession, and very expensive. Coupled with its addictive character, this policy results in physical illness, social deprivation, and psychological problems for most people who use it. This may inhibit people from beginning to use heroin, and motivate users to stop, but those who nonetheless become addicted at any given time do suffer and the suffering can be alleviated by in-patient detoxification. Being keyed to the relief of problems which have become intense for the individual, long-term effects are not to be expected. The results of this Study are consistent with this expectation; in-patient detoxification showed the least favorable long-term effects of the four modalities compared. Because the Study was keyed to the assessment of long-term effects, it was not possible to gauge the short-term effects which in-patient detoxification would be expected to produce.

Because of the small number of people in the total target population who had received outpatient detoxification, it was not included in the evaluation. Given the obviously lower direct costs of outpatient detoxification, a comparison with in-patient detoxification would seem appropriate.

## 2. Recommendations

- a. Detoxification accompanied by some provision for 24-hour care and supervision should continue to be provided, at least at its present level.
- b. An evaluation of residential-linked and outpatient referrals to detoxification should be done focussing on more appropriate short-term treatment goals, such as completion rates, short-term reduction of heroin use, the degree to which the client's immediate treatment goals were met, client satisfaction

with the detoxification procedures, subsequent participation in other kinds of treatment, and so forth, with particular attention in the study design and analysis to the aims which differentiate the people who come into detoxification treatment.

G. Outpatient and Residential Drug-Free Treatment

1. Findings and conclusions

The contract for this Study did not call for any sort of a control group with which to determine a base line for comparison with those treated. In the absence of any information on what might have happened to those treated had they not received treatment, the changes which were observed cannot be attributed to the effects of treatment. They might have changed anyway. The best that could be done was to look for differential effects across the different kinds of treatment. The project, then, only allowed for the identification of those kinds of treatment which did better or worse than the others, if any.

The results might have shown no differences among the kinds of treatment and, in the event of such a set of findings, the most parsimonious conclusion, in the absence of actual knowledge of a no-treatment baseline, would be that the net performance by treatments was null and equivalent to that zero baseline of improvement represented by spontaneous remission or regression toward the mean. The actual results, however, yielded a pattern in which outpatient methadone maintenance produced a relatively better general record, in-patient detoxification a relatively worse record, and outpatient drug-free services and residential drug-free treatment occupied an intermediate position which deviated only slightly from the overall average of the four kinds of treatment. Under these circumstances, the

baseline question becomes one of whether it is more plausible to assume that the results for in-patient detoxification represent net performance at, above, or beneath a no-treatment or control baseline. Once more, parsimony suggests that we tentatively accept the first of these alternatives; since we have no evidence for belief that, on the average, in-patient detoxification is harmful or worse than nothing, and also no information to indicate how much better, if at all, in-patient detoxification may be in terms of affecting long-term outcomes, we may assume that it is at least as good as no treatment. From that standpoint, it then follows from the findings that outpatient drug-free services and residential drug-free programs are documented as producing some positive increment of treatment effect, and that the magnitude of such effects, until some more suitable baseline is established, may be considered to be the difference for performance of these modalities from that for in-patient detoxification. The burden of proof now devolves upon those who would declare the drug-free treatments to be useless or harmful, and the ultimate test of contentions remains one of obtaining a record of performance for untreated clients.

## 2. Recommendations

a. Outpatient drug-free services and residential drug-free treatment should continue to be provided at the present level if that supply remains reasonably commensurate with the level of continuing client demand for such programs.

b. If administrative and control agencies continue to insist upon comparative treatment impact and cost-benefit studies, procedures for estimating natural recovery rates in the absence of treatment should be developed and tested.

## H. Impact of Treatment on Heroin Use

### 1. Findings and conclusions

Government supported drug abuse treatment services are mostly directed toward the control of heroin use. Treatment (as contrasted with prevention and law enforcement) is intended to help the person who has become a user to reduce or eliminate heroin use. Public support for treatment is probably predicated on the belief that such help, if successful, will result in decreased criminal activity, with other personal and social benefits being of secondary importance. This study has provided some evidence that treatment may be related to reduction in heroin use, and that reduced use may result in reduced criminal involvement related to drug use. More rigorous studies are necessary to establish these associations as causal; drug abuse treatment might then be routinely and economically monitored by follow-up studies limited to drug use and related criminal involvement.

### 2. Recommendations

a. Funds and other resources should be made available to develop and then conduct a study especially designed to establish (to the degree possible) that treatment (as ordinarily provided) causes a reduction in heroin use which in turn results in a decrease in related criminal involvement.

b. Funds and other resources should be made available to develop and then implement a system for the routine monitoring of the impact of treatment by measures of drug use and related criminal involvement at or during one or more specified periods following admission and/or discharge (using small samples in order to optimize location rates and, thereby, validity).

## I. Employment

### 1. Findings and conclusions

Among the kinds of services sought by the clients, employment services were the least likely to be obtained. Although the clients reported greater work involvement following treatment, employment measures were at most only weakly related to the kind of treatment received, and legal earnings increased but slightly following treatment. There is thus very little evidence that the treatment programs had a substantial impact on employment.

It is possible that treatment did have a substantial impact upon employment for identifiable subgroups of people. An extensive amount of information is available from the interviews which could be used to search for those conditions under which employment was affected. Such additional research would be helpful in identifying what the agencies might do to improve the employment record of their clients.

### 2. Recommendations

a. Additional analysis of the interview data obtained by this project should be done to determine which conditions, if any, were associated with substantial changes in employment in order to provide information to help in improving the employment services provided by the treatment agencies.

b. The Drug Abuse Program Office and the treatment agencies should seek to strengthen the employment services offered to the clients.

## J. Appropriateness of the Impact Model of Treatment Evaluation

### 1. Findings and conclusions

In essence, this Study examined the people in treatment as objects upon which the forces of different kinds of treatment were applied with the aim of measuring the long-term effects of these forces upon these objects. This is the conventional approach to treatment evaluation. An alternative would have been to consider those treated as people who had chosen different kinds of treatment in response to where they were at the time with the aim of changing their lives in some way, or as a result of being somehow pushed into treatment, with or without any personal interest in change. Using this alternative approach would have greatly altered the Study design. Rather than trying to determine the net impact of different kinds of treatment on people who were otherwise made to be (statistically) similar with respect to their characteristics, the design would have focussed upon the place which treatment came to have in their lives. From this perspective, the analysis would have viewed treatment as a set of experiences partially created by people at different places in their development, with the impact of treatment being a function of where the person had been at the time of admission, what the person made of the treatment experience, the formal structure of the kind of treatment, and the person's place in the broader social structure. We are now inclined to believe that this sort of approach might be more appropriate than the now conventional treatment impact model upon which this project was based.

### 2. Recommendation

Recognizing that it is non-specific as to the actions required and diffuse as to objectives, we nonetheless recommend that the merits of conventional treatment impact studies be critically examined, and that an

intensive effort be made to explicate what it would mean to evaluate drug abuse treatment from a developmental perspective.

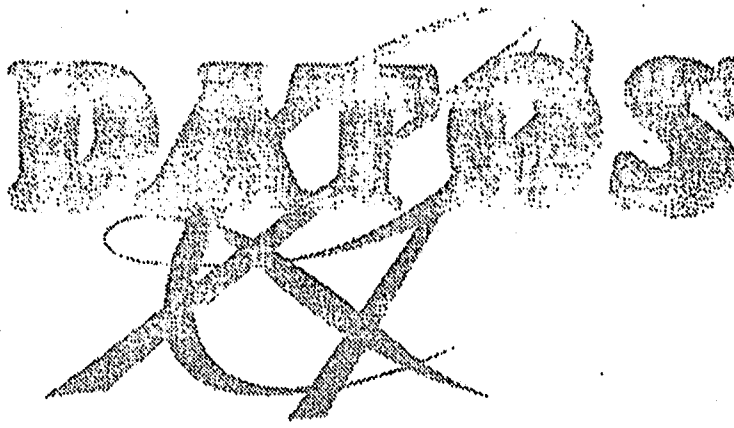
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APPENDIX A

Client Contact Procedures



## DRUG ABUSE TREATMENT OUTCOME STUDY

1736 Workman Street, Room 328  
Los Angeles, CA 90031 (213) 221-2756

Dear Program Director:

The Drug Abuse Treatment Outcome Study is ready to move into the client contact and interviewing phase. As you know your cooperation in this effort is vital in order to insure collection of sufficient data to legitimately assess the effectiveness of various types of treatment for different types of clients. If we are able to interview only those clients who are easily contactable, the study results could be badly skewed.

Our study sample is composed of clients admitted to the various programs between March 1 and July 31, 1975 and discharged by December 31, 1975 (except for Methadone Maintenance). The sample has been pulled from the target population on a random stratified basis to insure adequate representation of different client types and different modalities. We are attempting to obtain 1,200 completed interviews.

The interview schedule contains questions about treatment experience, drug use, criminal history, social productivity, and psychophysiological health. Thirty percent of the respondents will be asked if they are willing to consent to provide a urine sample. All respondents will be asked if they are willing to consent to a search of criminal history data. Both of these measures are to be used to validate client self report data in order to increase the credibility of the study.

All of the procedures for client contact and interviewing have been discussed in the Confidentiality Protocol sent to you earlier. Our interviewers, whom most of you have met by now, have been trained in these procedures.

Enclosed with this letter is the client contact package consisting of:

1. Agency Summary Data Sheet--listing by number all admissions to your agency who are in the study sample and with whom we would like you to attempt contact.
2. Respondent Data Sheets--there is one of these sheets for each admission listed on the Agency Data Sheet.
3. Contact and Recording Procedure Instructions.
4. A Statement of Explanation of the Study to clients contacted by phone or in person, and several copies of these Statements to hand to clients.
5. A sample letter explaining the study for clients reachable only by mail.
6. A sample letter to be sent to parents of juveniles requiring parental consent to be interviewed; also, the consent form to be used in these situations.
7. Four envelopes (addressed to a DATOS post office box) in which to return information to DATOS on a weekly basis.

If you require further explanation on any of this or more copies of letters, etc., please contact the office. Please keep a record of postage and phone expenditures and bill DATOS.

As you may recall, we had originally planned to deposit money in agency accounts and ask the agencies to disburse the fee for interview and urinalysis to clients. We have subsequently found a way to handle this activity ourselves while still maintaining confidentiality for the respondents, providing the interviewers with checks (negotiable for no more than \$10.00), which can be made out to cash or to any name the respondent wishes. Perhaps agencies may be able to cash these checks if the respondents wish them to.

Again, we realize that these activities place a burden on programs. We can only hope that you continue to believe that the study will prove valuable enough to make your efforts worthwhile.

Sincerely,

*Margo N. Robison*

Margo N. Robison  
Senior Researcher

*James L. Bull*      *Judy Rothchild*

James L. Bull      Judy Rothchild  
Senior Researcher      Senior Interviewer

## DRUG ABUSE TREATMENT OUTCOME STUDY (DATOS) STAFF LISTING

James O. Robison, Project Director

John E. Berecochea, Senior Researcher, Sample Selection

Margo N. Robison, Senior Researcher, Instrument Design

James L. Bull, Senior Researcher, Data Collection

Judy Rothschild, Senior Interviewer

Phyllis Sapenter, Office Manager

| Interviewers     | Area                         |
|------------------|------------------------------|
| Robert S. Garcia | South Coastal                |
| Wendy Friedman   | North Coastal & San Fernando |
| Rita Ledesma     | San Gabriel & NPP            |
| Benny Solis      | Central                      |
| Sam White        | Southeast                    |

Project Consultant: Welton Jones

Project Office: 1736 Workman Street, Room 328  
Los Angeles, CA 90031

Phone: 221-2756

Post Office Box: P.O. Box 3725, Terminal Annex  
Los Angeles, CA 90051

AGENCY SUMMARY DATA SHEET.

A-4

RETURN A COPY OF THIS FORM EACH WEEK WITH RESPONDENT DATA SHEET FOR EACH CASE CLOSED TO

CLOSED\*

DATOS, P.O. BOX 3725, TERMINAL ANNEX LOS ANGELES, CALIFORNIA 90051

AGENCY

#

DATOS #

--- PLEASE RECORD ALL CASES ---

19. DATOS ID# LA.CO.ID# PROG CLIENT ID#

NAME MAIDEN OR AKA

BIRTHDATE SEX M F RACE MA B W OT

20. DATOS ID# LA.CO.ID# PROG CLIENT ID#

NAME MAIDEN OR AKA

BIRTHDATE SEX M F RACE MA B W OT

21. DATOS ID# LA.CO.ID# PROG CLIENT ID#

NAME MAIDEN OR AKA

BIRTHDATE SEX M F RACE MA B W OT

22. DATOS ID# LA.CO.ID# PROG CLIENT ID#

NAME MAIDEN OR AKA

BIRTHDATE SEX M F RACE MA B W OT

23. DATOS ID# LA.CO.ID# PROG CLIENT ID#

NAME MAIDEN OR AKA

BIRTHDATE SEX M F RACE MA B W OT

24. DATOS ID# LA.CO.ID# PROG CLIENT ID#

NAME MAIDEN OR AKA

BIRTHDATE SEX M F RACE MA B W OT

25. DATOS ID# LA.CO.ID# PROG CLIENT ID#

NAME MAIDEN OR AKA

BIRTHDATE SEX M F RACE MA B W OT

26. DATOS ID# LA.CO.ID# PROG CLIENT ID#

NAME MAIDEN OR AKA

BIRTHDATE SEX M F RACE MA B W OT

27. DATOS ID# LA.CO.ID# PROG CLIENT ID#

NAME MAIDEN OR AKA

BIRTHDATE SEX M F RACE MA B W OT

\* RETURN A RESPONDENT DATA SHEET FOR EACH CASE CLOSED

PLEASE RETURN A COPY OF THIS FORM FOR EACH CASE CLOSED, TO DATOS, P.O. BOX 3725 TERMINAL ANNEX  
 LOS ANGELES CA 90051 TEL-221-2756

CO. ID # \_\_\_\_\_

PROGRAM CLIENT ID # \_\_\_\_\_

COUNTY RECORDS INDICATE CLIENT ENTERED & LEFT PROGRAMS AS FOLLOWS

| AGENCY NAME | AND | NUMBER | DATOS ID NUMBER | ADMISSION DATE | DISCHARGE DATE |    |    |
|-------------|-----|--------|-----------------|----------------|----------------|----|----|
|             |     |        |                 |                |                | 61 | 62 |

I. AGENCY CONTACT

DATE CONTACT ATTEMPTS BEGUN

| 1. RECORD #                   | PHONE | MAIL | PERSON | JAIL    | COLLATERAL |                  |    |        |
|-------------------------------|-------|------|--------|---------|------------|------------------|----|--------|
|                               |       |      |        |         |            | 63               | 64 | 65     |
| 2. CONSENT OBTAINED - DATE    |       |      |        | PHONE # | CALL-DA    | EV               | WK |        |
|                               |       |      |        |         |            | 66               | 67 |        |
| SPECIAL INSTRUCTIONS          |       |      |        |         |            | RETURN THIS FORM |    |        |
| 3. CONSENT NOT OBTAINED       |       |      |        |         |            | 68               | 69 | 70     |
| A. CONTACTED - REFUSED DATE   |       |      |        |         |            |                  |    | RETURN |
|                               |       |      |        |         |            |                  |    | 71     |
| B. NOT REACHABLE - EXPLAIN    |       |      |        |         |            |                  |    | THIS   |
|                               |       |      |        |         |            |                  |    | FORM   |
| C. CANNOT LOCATE - OTHER INFO |       |      |        |         |            |                  |    |        |

FOR DATOS USE ONLY -- DO NOT WRITE BELOW THIS LINE

II. SENT TO

DATE

ATTEMPTS

72

III. DATOS CHECKS-73

V. INTERVIEWER CONTACT-75,76

VI. OUTCOME-77

|                          |                         |                |          |
|--------------------------|-------------------------|----------------|----------|
| 1. JAIL                  | 1. APPOINTMENT DATE     | 1. INTERVIEWED |          |
| 2. OTHER                 | 2. BROKEN-REMADE        | VALIDATION     | 73       |
| 3. DMV                   | BROKEN                  | DATOS          |          |
| 4. VS                    | 3. NO RESPONSE TO PHONE | IV             |          |
| 5.                       | NO HELP                 | DATOS          |          |
|                          | 4. INTERVIEW IN JAIL    |                | 75 76    |
| IV. REROUTE TO AGENCY-74 | 5. REFUSALS             |                |          |
|                          |                         | DATOS          |          |
|                          | 6. LOCATING PROBLEMS    |                |          |
|                          |                         | AGENCY         |          |
|                          | NO HELP                 | DATOS          |          |
|                          | 7. OTHER                |                | 0 1 1    |
|                          |                         | AGENCY         | 78 79 80 |
|                          | NO HELP                 | DATOS          |          |

## CONTACT AND RECORDING PROCEDURE

## I. Identifying Clients

The first step in the procedure is to record on the Agency Data Summary Sheet (described below) the name, birthdate, sex, and race for each of the client ID numbers provided. Please note that this is the only record on which such information appears. Everything else will contain a DATOS respondent ID number, not a name.

## II. Attempting Contact

Please attempt to contact each client listed by phone, in person, or by mail.

1. If phone or in person--A statement is enclosed to provide a model of which points need to be covered.

2. If mail--A sample letter is enclosed.

Other methods of attempting contact might include:

1. Checking to see if the client might be in jail. (Los Angeles County Jail Public Information Number: 680-9600). The letter would serve to initiate contact in this situation as well.

2. Talking to friends or relatives of the client who are aware of the client's prior involvement with the program and might have information about his/her current whereabouts.

3. Posting a notice that you are looking for clients who were admitted to the program between March 1 and July 31, 1975 and who were discharged by December 31, 1975. The notice would state the purpose of the interview and the \$10.00 fee involved. It would not, of course, list the names of clients.

In the following cases, a special procedure needs to be followed:

1. Juveniles--The legal opinion we have on this is that juveniles who signed their own consent to treatment form may also sign the consent to interview form and that care should be taken not to reveal information to parents which may not have been revealed at the time of treatment. On the other hand, for those juveniles whose parents signed the consent to treatment form, consent to be interviewed must also be obtained from the parents.

In both cases, contact should be made with the juvenile first, requesting consent. If such consent is obtained, juveniles in the category requiring parental

consent to be interviewed should be told this.

We have enclosed a sample of a letter to be sent to parents, and the juvenile should be told that he/she must bring the signed consent form to the interview.

## 2. Alternate Location

Some clients may say they would prefer not to come to the agency for interview because it is too far away or because they are ill and prefer not to travel, etc. In these cases, record the preferred location on the Client ID Sheet and we will assign it to an interviewer in the appropriate location.

## III. Recording

Two forms have been provided for you to record and communicate to us progress on client contact. They are:

A. Agency Summary Data Sheet: This form lists by DATOS ID#, L.A.Co. ID# and/or Agency ID# the admissions to your program who are a part of the Study Sample.

1. Since we must first remove duplicate admissions from the Study Sample, it is important that you record the information requested on each admission in the first week you have the form.

2. Begin contact attempts and record progress on the Respondent Data Sheet (explained below).

3. Check off those cases which you are able to close on the Agency Data Sheet. A case is closed if:

a. You contact the client and he agrees to be interviewed.

b. You contact the client and he refuses to be interviewed.

c. You have definite information that the client cannot be contacted, i.e., that he has moved out of the county, is in prison, has died, etc.

d. You are unable to locate the client after having made various attempts to contact him.

4. Tear off the top copy of the form, and return it to DATOS in the enclosed envelope with filled out Respondent Data Sheets for all those cases you have checked as closed.

5. During the 2nd, 3rd, and 4th weeks, continue the contact procedure, returning the next sheet of the form each week with the appropriate number of Respondent Data Sheets.



6. Please mail this package to us on Thursday of each week.

B. Respondent Data Sheet

As you make contact attempts, please fill out the Respondent Data Sheet as outlined below.

Record Date Contact Attempt Begun

1. Record number of attempts by type

2. If consent obtained, record date, phone number, and whether reachable days (DA); evenings (EV); or weekends (WK).

Record Special Instructions, i.e. "don't leave phone message at home; prefers to be interviewed in another part of the county; currently in Wayside, etc."

(RETURN FORM)

3. If consent not obtained, record

a. date refused OR

b. reason not reachable, e.g. in prison out of state OR

c. can't locate--other information, e.g. referred to another agency (date), believed moved out of county, etc.

(RETURN FORM)

IV. Further Checks

For those clients you are unable to locate, we will make further attempts in accordance with the procedures outlined in the Confidentiality Protocol sent to you previously. These checks include routing the client number to another agency with which the person might have had contact, checking the jail, vital statistics, and DMV records. Any information obtained will be returned to you to attempt contact. DATOS will not initiate contact with any client.

V. Interviewing

Those clients who agree to an interview will be contacted and an appointment made to be interviewed in the agency.

There is a large study being done for Los Angeles County by an independent research firm to evaluate different kinds of counseling and treatment programs. The Study Staff (DATOS) would like to ask you about your experiences with this agency.

They will pay you \$10.00 for your time.

Participation in the interview is entirely voluntary. It will include questions about your employment experience, use of drugs, health, and criminal history. It will last about one and one half hours.

Every answer will be treated with strictest confidence. The replies will be treated statistically and there will be no way of tracing your statements to you.

If you want to participate, a DATOS interviewer will call you to set up an appointment at a time convenient to you to come into the agency for the interview.

A small group of those who are interviewed will be asked to provide a voluntary, unobserved urine sample. If you choose to do this you would be paid another \$5.00.

If you wish to be interviewed, please return this form to the agency where you got it.

I wish to participate in the Study.

My name is: \_\_\_\_\_

Please contact me by phone at \_\_\_\_\_. It is best to call during the day\_\_\_\_, during the evenings\_\_\_\_, on weekends\_\_\_\_\_.

I cannot be reached by phone. Write me at:  
\_\_\_\_\_

APPENDIX B

Confidentiality Protocol

## CONFIDENTIALITY PROTOCOL

### DRUG ABUSE TREATMENT OUTCOME STUDY (DATOS)

October 26, 1976

#### Introduction

The Drug Abuse Treatment Outcome Study (DATOS) is being done by a private research firm, Criminological Research Associates, under contract to the County of Los Angeles through the Department of Health Services Drug Abuse Office. Funding for the project is from SB 714 (Short/Doyle) drug abuse treatment monies.

The Statement of Work attachment to the contract states:

"The purpose of this study is to assess the effectiveness of drug treatment programs in positively influencing client behavior over time. Assessment of treatment effectiveness will be made by means of a follow-up of client behavior at an interval of one year or more post-discharge. At least four types of client behavior will be analyzed and compared with pre-entry baseline data:

- 1) criminal activity
- 2) drug use
- 3) social productivity
- 4) psychophysiological health."

In order to carry out the study DATOS requires access to client identifying information filed at the various treatment programs involved in the study. Such access is permitted under the Drug Abuse Office and Treatment Act of 1972 (Codified at 21 U.S.C. Section 1175 et seq.; Section 408 (a) (b) (2) (B)) provided that appropriate measures are taken to maintain confidentiality.

The purpose of the federal confidentiality regulations covering research, audit, and evaluation is:

"To facilitate the search for truth, whether in the context of scientific investigation, administrative management, or broad issues of public policy, while at the same time safeguarding the personal privacy of the individuals who are the intended beneficiaries of the process or program under investigation."

Criminological Research Associates has endeavored to set up procedures which will satisfy both the letter and the spirit of federal and state regulations safeguarding rights to privacy. The following sections will describe in detail provisions for protecting clients' rights to both confidentiality and anonymity; for separation of unique identifiers and data items; for insuring that initial direct client contact be made by treatment agency personnel; for field and office security; and for staff training in applicable confidentiality considerations.

## Detailed Procedures

### 1. Obtaining Client Identifying Information

The study target population is composed of admissions to drug treatment programs between March 1 and July 31, 1975 and discharged by December 31, 1975. The stratified, random sample pulled from this population must first be checked for duplicate admissions. In order to do this DATOS will supply treatment programs with lists of program clients by program and client ID number, on which agencies are requested to enter name and birthdate for each admission.

### 2. Contacting Clients

Treatment programs will initiate all contact with clients to ask for consent to interview. This rule will also apply to individuals found to be incarcerated. The agency will mail a letter into the jail requesting consent and only after this is obtained will DATOS make contact to interview.

### 3. Obtaining Client Consent Forms

A DATOS interviewer will re-contact those clients who have agreed to an interview. Following explanation of the study purpose and confidentiality provisions undertaken, the client will be asked to sign a consent form which will be filed at DATOS. (The exception to this sequence is juveniles whose parents signed their Consent to Treatment forms. They will be mailed a consent form and asked to bring it to the interview with a parent's signature.

#### 4. Location of Client Identifying Information

a. Interviewers will carry a single binder containing names of those clients who have agreed to interview. These lists and the consent forms obtained will be turned into the DATOS offices on a weekly basis to keep to a minimum the amount of such information out in the field.

b. Periodically, a DATOS Senior Researcher will take a list of client identifiers out of the office to run various locating checks (described below).

c. At all other times, all identifying information will be retained in a single locked file in the DATOS office. A limited number of DATOS personnel will have access to this file.

#### 5. Locator Checks

DATOS has investigated existing procedures at the California Department of Motor Vehicles, Los Angeles County Vital Statistics, and the Los Angeles County Sheriff's Office to ascertain methods of obtaining information on the sample (new address, death, incarcerated) while protecting client rights to confidentiality. In each case, the agency will keep no record of the names on which information is being sought. DATOS personnel will do the death record and jail check so that personnel in those agencies will not have access to client names.

#### 6. Obtain Data from Agency Files

In order to carry out the cost benefit segment of the study, it will be necessary to obtain data on client and insurance payments to agencies, and agency expenditure on clients. This is available only in the agency case record. DATOS has no interest in the medical and psychological data in the case file. We will agree to any procedure which agencies suggest to access the required cost data, for example, working with a stripped file, asking agency personnel to provide the interviewer with the data, etc.

#### 7. Urinalysis

Thirty percent of the interviewed sample will be asked to provide a sample for urinalysis. Arrangements have been made with a laboratory. Samples will be identified only by DATOS client identifier. The lab will code the sample with its own identifier so the sample will not be project identified throughout the screening process.

Interviewers will explain to clients that the sample is voluntary and will obtain a signature on a Consent to Urinalysis form if the client is willing.

## 8. Payment to Clients

Clients interviewed will be paid \$10 for the interview and an additional \$5 for the urine sample. Payment will be by check made out to "cash" or any name the client requests. The checks carry no identification, other than P.O. Box \_\_\_\_\_, Los Angeles.

## 9. Handling Interview Data

Interview schedules will be coded only with a DATOS client identifier. In the final report, data will be presented in aggregate form so that no individual respondent can be identified.

## 10. Disposition of Materials Collected

At project completion, all material will be turned over to the DAO - DATOS Project Officer for destruction. The master tape record, coded only by DATOS identifier, will be given to DAO to hold for the requisite number of years to insure availability of individual data, should the study findings be questioned. Criminological Research Associates (the research firm contracted to do DATOS) will maintain the translator key between the DATOS identifier and the county identifier in a safe deposit box for the requisite number of years.

## 11. DATOS Personnel

1. DATOS professional staff all have extensive research experience and are well versed in confidentiality constraints. An adequate amount of interviewer training will be devoted to instruction in the proper application of such constraints.

2. In signing the contract with the County, CRA acknowledged familiarity with and agreed to abide by Welfare and Institution Code Sections 5328 - 30; Title 9 of the California Administrative Code, Sections 779-80; and Chapter I, Title 42 of the Code of Federal Regulations as amended.

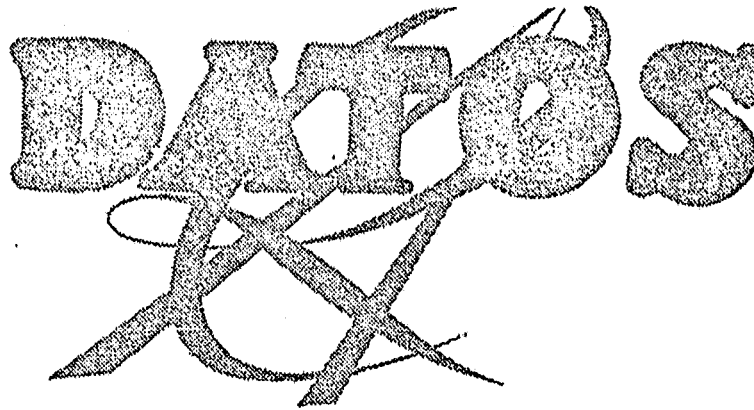
3. All DATOS personnel will sign an appropriately modified version of the oath of confidentiality in W & I Code Section 5328.

## 12. Accessing Criminal Justice Data

A search for Rap Sheet data will be made only in cases in which the client consents to this process. The interviewer will explain (and this explanation will be the content of the "Consent to Search Criminal Justice Records Form") that names of consenting clients will be sent to the Department of Health which will request a criminal records check on these names from the Department of Justice Bureau of Criminal Identification and Investigation. The list of names will not be identified to CII as part of a population of people who have had contact with drug treatment agencies. CII will, however, in accordance with statute, keep a record of the names on which the search was done.

Again, the search will only be done on clients who have consented and DATOS interviewers will be trained to make sure the client is cognizant of the implications of such consent.





DRUG ABUSE TREATMENT OUTCOME STUDY

1736 Workman Street, Room 328  
Los Angeles, CA 90031 (213) 221-2756

November 1, 1976

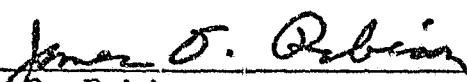
\_\_\_\_\_, is employed by the Drug Abuse Treatment Outcome Study to conduct field interviews. The study is being conducted by a private research firm under contract to the County of Los Angeles Drug Abuse Office.

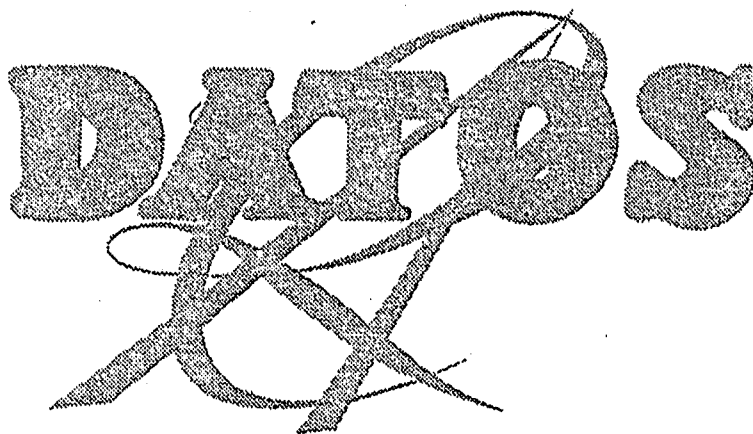
Questions concerning the study or an individual interviewer should be directed to:

Judy Rothschild, Senior Interviewer  
DATOS, 1736 Workman Street, Room 328  
Los Angeles, California 90031  
(213) 221-2756

or

Irma Strantz, Program Director  
Maria Nemeth, DATOS Project Officer  
Drug Abuse Office  
Department of Health Services  
County of Los Angeles  
1100 North Mission Road  
Los Angeles, California 90033  
(213) 226-4863

  
\_\_\_\_\_  
James O. Robison  
President, Criminological Research Associates  
Project Director, DATOS



DRUG ABUSE TREATMENT OUTCOME STUDY

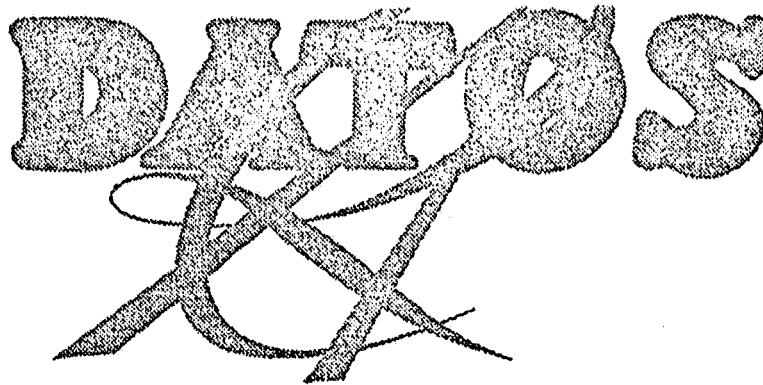
1736 Workman Street, Room 328  
Los Angeles, CA 90031 (213) 221-2756

As a condition of doing research on the Drug Abuse Treatment Outcome Study (DATOS) with information made available to me under the authority of the Los Angeles County Drug Abuse Office, I agree not to divulge any information obtained in the course of such research to unauthorized persons, and not to publish or otherwise make public any information regarding these records such that any individual found therein is identifiable.

I recognize that unauthorized release of confidential information may make me subject to a civil action under provisions of the California Welfare and Institutions Code.

Signature \_\_\_\_\_

Date \_\_\_\_\_



DRUG ABUSE TREATMENT OUTCOME STUDY

1736 Workman Street, Room 328  
Los Angeles, CA 90031 (213) 221-2756

Consent Form

I hereby give my consent to participate in the Drug Abuse Treatment Outcome Study (DATOS) being conducted by Criminological Research Associates under contract to the County of Los Angeles. The purpose of the Study has been explained to me by the interviewer, who read the Statement of Purpose printed on the questionnaire.

I understand that any information I provide during this interview will be completely confidential and used only for research purposes.

I further understand that I may refuse to answer any questions and that I may withdraw from the study at any time I wish.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Interviewer Signature

*James O. Robison*  
\_\_\_\_\_  
James O. Robison, Project Director  
Drug Abuse Treatment Outcome Study

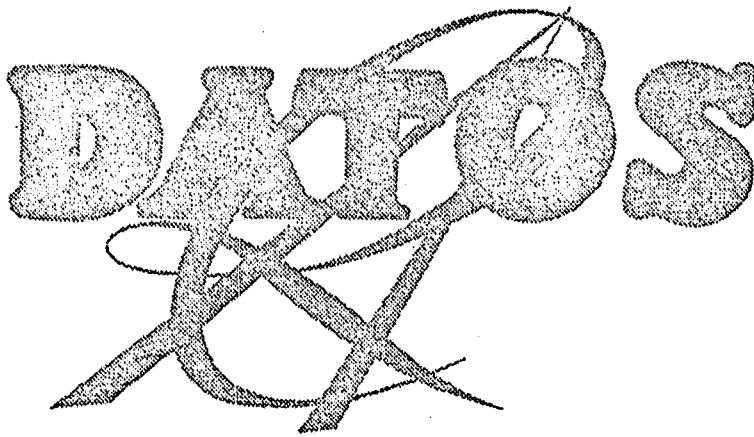
I acknowledge receipt of ten dollars (\$10.00) as reimbursement for my time.

\_\_\_\_\_  
Respondent Name

\_\_\_\_\_  
Date

\_\_\_\_\_  
Interviewer Name

\_\_\_\_\_  
Date



DRUG ABUSE TREATMENT OUTCOME STUDY

1736 Workman Street, Room 328  
Los Angeles, CA 90031 (213) 221-2756

Consent Form  
(For Parents of Juveniles  
Interviewed by DATOS)

I hereby give my consent for \_\_\_\_\_  
to participate in the Drug Abuse Treatment Outcome Study  
being conducted by Criminological Research Associates  
under contract to the County of Los Angeles. The purpose  
of the Study is to evaluate drug treatment programs.

I understand that any information provided will be  
completely confidential and will be used for research  
purposes only.

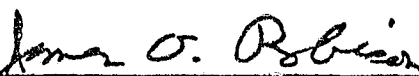
\_\_\_\_\_  
Signature/Parent or Guardian

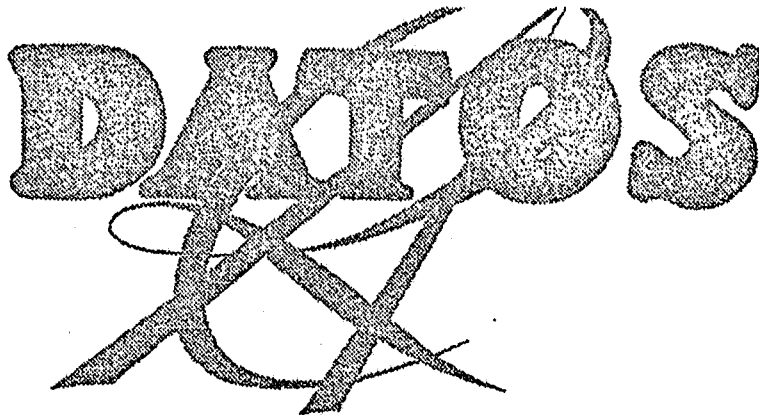
\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Interviewer Signature

\_\_\_\_\_  
Date

  
\_\_\_\_\_  
James O. Robison, Project Director  
Drug Abuse Treatment Outcome Study



DRUG ABUSE TREATMENT OUTCOME STUDY

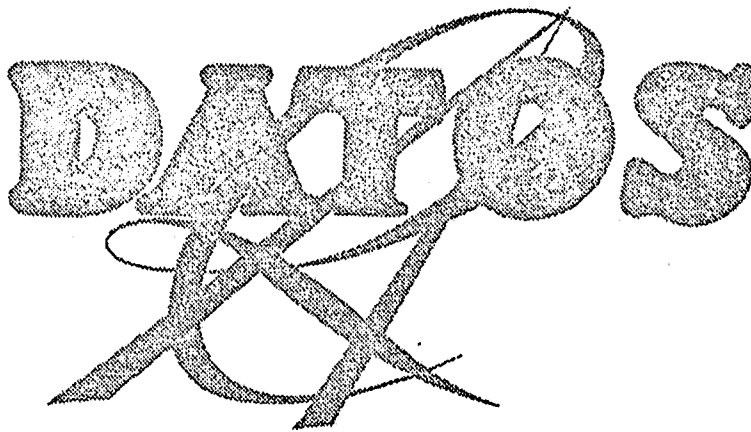
1736 Workman Street, Room 328  
Los Angeles, CA 90031 (213) 221-2756

Criminal History Search  
Consent Form

I agree to allow DATOS to request a criminal history (Rap Sheet) search from the California Department of Justice Bureau of Criminal Identification and Investigation. I understand that any name and birthdate will be submitted through the California Department of Health and that the California Department of Justice will not be told that I have had contact with drug treatment programs. I also understand that the Department of Justice is required by law to keep a record of the names for which criminal history searches are done.

|                       |           |
|-----------------------|-----------|
| _____                 | _____     |
| Name                  | Date      |
| _____                 | _____     |
| Printed Name          | Birthdate |
| _____                 | _____     |
| Sex                   | Race      |
| _____                 | _____     |
| Interviewer Signature | Date      |

James O. Robison  
James O. Robison, Project Director  
Drug Abuse Treatment Outcome Study



DRUG ABUSE TREATMENT OUTCOME STUDY

1736 Workman Street, Room 328  
Los Angeles, CA 90031 (213) 221-2756

Consent to Urinalysis

I agree to provide an unobserved urine sample which will be screened for evidence of drug use. I understand that the analysis results will be completely confidential, will be used only for research purposes, and will never be used against me in any way.

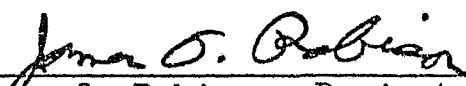
\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed name

\_\_\_\_\_  
Interviewer

\_\_\_\_\_  
Date

  
\_\_\_\_\_  
James O. Robison, Project Director  
Drug Abuse Treatment Outcome Study

I acknowledge receipt of \$5.00.

\_\_\_\_\_  
Respondent name

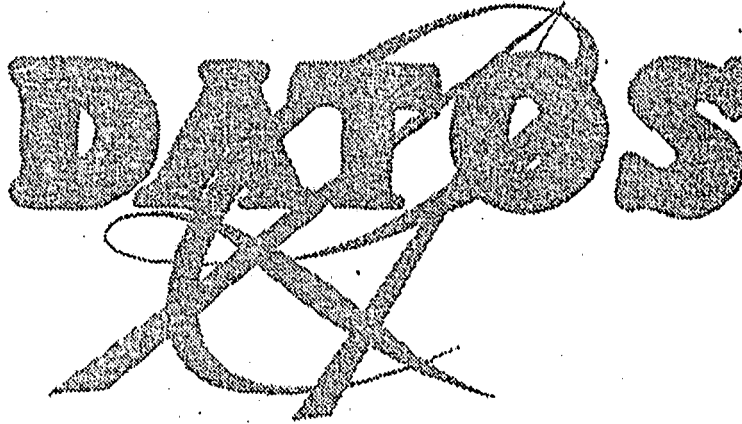
\_\_\_\_\_  
Date

\_\_\_\_\_  
Interviewer name

\_\_\_\_\_  
Date

APPENDIX C ,

Incentive Procedures



DRUG ABUSE TREATMENT OUTCOME STUDY

1736 Workman Street, Room 328  
Los Angeles, CA 90031 (213) 221-2756

January 4, 1977

Dear

As the DATOS project proceeds toward February 28, 1977, the date when interviewing is to be completed, we are concerned with the need to assess progress to date.

Accordingly, we are asking you to return to this office by Friday, January 14, 1977 all agency summary sheets with respondent data sheets for all closed cases. It is important that an attempt be made to contact all respondents by that time in order to allow six weeks to relocate and interview all those who are not locatable on a first contact attempt.

We realize that it may not be possible to finish all your contact attempts by the 14th, as it takes time to make a conscientious effort to locate clients by mail or otherwise. Please understand then, that we are not asking you to reduce your contact time, but are asking that you complete a first "run" on all cases by the 14th.

We realize that these forms were distributed during a holiday period and at the end of the year, and their completion places a burden on your staff. In view of these difficulties, we are especially appreciative of your efforts.

(With best wishes for the new year,

*Judy Rothschild*  
Judy Rothschild  
Senior Interviewer

*James A. Bill*  
James A. Bill, Ph.D.  
Senior Researcher, DATOS

JLB:ps




"MAILGRAM"

I VIGOROUSLY ENCOURAGE YOUR ACTIVE PARTICIPATION IN OUR COUNTY'S DRUG ABUSE TREATMENT OUTCOME STUDY (DATOS). YOU HOLD THE KEY TO ITS SUCCESSFUL COMPLETION, WHICH DEMANDS A HIGH RATE OF SUCCESSFULLY CONTACTED CLIENTS. YOUR AGENCY'S PROMPT AND EFFICIENT PARTICIPATION IN CONTACTING CLIENTS, ACCORDING TO DATOS PROCEDURES, IS URGENTLY REQUESTED.

DEMONSTRATED EFFECTIVENESS OF DRUG TREATMENT PROGRAMS IS ESSENTIAL FOR THE FUTURE PLANNING AND FUNDING OF DRUG PROGRAMS IN L. A. COUNTY. YOUR COOPERATION IS VITAL.

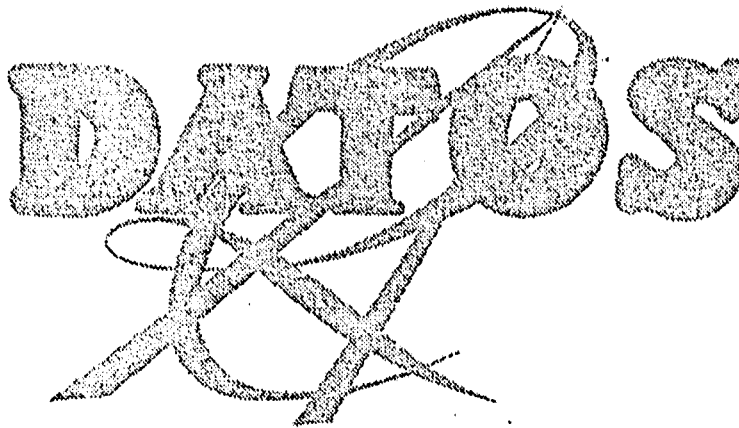
Irma H. Strantz, Dr.P.H.  
Drug Abuse Program Office

I hereby authorize that the above mailgram be sent under my name and affiliation. The same message is to be sent to each of the 43 individuals listed on the attached sheet.

  
\_\_\_\_\_

Irma H. Strantz, Dr.P.H.  
Drug Abuse Program Director  
Los Angeles County Department of Health Services

January 6, 1977



## DRUG ABUSE TREATMENT OUTCOME STUDY

1736 Workman Street, Room 328  
Los Angeles, CA 90031 (213) 221-2756

All agencies have been in possession for quite some time of two types of document supplied by DATOS--Agency Summary Data Sheets for listing the current status of search efforts on each client, and individual Client Data Sheets for indicating the final outcome of such effort (eg. consent, refusal, out-of-county.) The first of these documents is particularly valuable to enable DATOS to assist in locating clients whose whereabouts remain unknown after initial search effort (eg. by routing search request to another treatment program with which that client has been in contact, or obtaining and returning information to the original treatment program concerning possible whereabouts.) Despite the fact that the agency summary data sheets are now long overdue, and despite repeated request from both the Drug Abuse Office and DATOS, there remain a great number of clients for whom programs have not yet supplied any indication of the status of search efforts.

For each remaining case whom you have not yet supplied DATOS an individual "respondent data sheet", please submit at the earliest possible date a comment regarding the current status of your search effort on an "agency summary data sheet", including whenever appropriate, the client information necessary to enable DATOS to assist you in continued search effort.

For the immediate future, a small reimbursement of 50¢ will be made to the agency for each client on which sufficient information has been supplied to DATOS on the agency summary data sheet to permit classification of the client into any one of the following categories.

- a. Contacted and consented
- b. contacted and refused
- c. in jail in Los Angeles County
- d. dead
- e. out of county
- f. not locatable
- g. location effort still in process

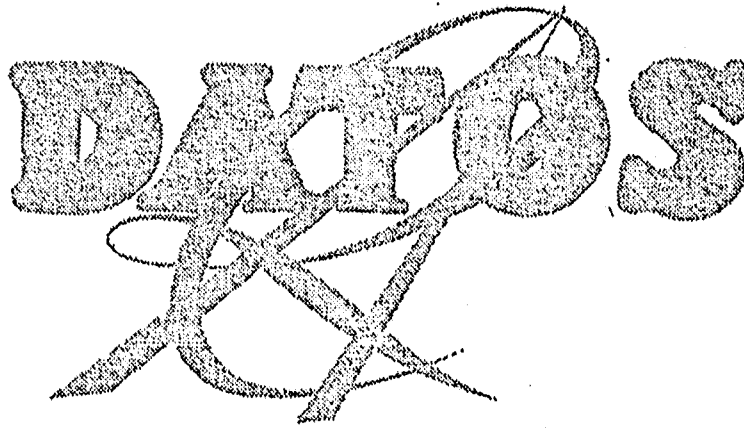
We ask that you review your summary data sheets at this time, put down some comment such as those above for each client remaining on your list, and return it to DATOS immediately. At some date in the near future, it will become necessary for us to assume that location effort was never undertaken by your agency on clients for whom we never received any information. If, after deeming a client not locatable, you should subsequently nevertheless achieve success in obtaining information, that status can be altered and interview fees paid when consent is obtained.

Sincerely,

James O. Robison, Ph.D.  
Project Director, DATOS

Judy H. Rothschild  
Senior Interviewer, DATOS

JOR:ps



DRUG ABUSE TREATMENT OUTCOME STUDY

1736 Workman Street, Room 328  
Los Angeles, CA 90031 (213) 221-2756

Dear

We are now moving into the next major step of the outcome study and instituting a significant change which we hope you will welcome, as it involves your being paid for your efforts.

Most of the agencies have now made an effort to contact the clients chosen from their agencies for the study. The next step in the study is to try again, for those who could not be contacted on the first round, for whatever reason. This step has become crucial to the study because so few of the clients were located on the first "round". Unless the number of successful case contacts can be substantially increased, all of our efforts to date to do this precedent setting and politically important study will be diminished by the currently low response rate.

A successful study is of critical importance to the future of drug-abuse treatment in Los Angeles County. It is so important that the Drug Abuse Office has obtained approval for reimbursement of client contacts; this fee will be issued not only for all interviews eventually completed by DATOS on new consents obtained, but will also be retroactive for all interviews already completed. Reimbursements will be forwarded by DATOS to the agencies at the end of February. In order that there be time available for DATOS

to efficiently schedule and thereby have opportunity to complete all interviews possible, it is extremely urgent that consents be forwarded from your agency to DATOS at the earliest possible date. Please attempt to have your client location efforts essentially completed by early February.

This renewed effort will place an additional workload on the agencies. In particular, it will be necessary for people in your agency to make an extra effort to find the people, perhaps even at odd hours and on their own time. Because the study requires extra efforts which must be made as soon as possible, we anticipate that some agencies may want to pull some staff off of regular duties for some periods of time or request that the staff work on their off hours on this task.

In order to compensate the staff for their extra efforts, Dr. Strantz of the Drug Abuse Office has found the money for DATOS to pay for successful client contacts at a rate of \$7.50 per consent to be interviewed. One possibility is that the payment would go to the staff person who obtained the consent to be interviewed to compensate for the extra efforts, but each agency is encouraged to operate fully within its own discretion to determine the most appropriate utilization of these funds.

Sincerely,

James O. Robison, Ph.D.  
Project Director, DATOS

Judy H. Rothschild  
Senior Interviewer, DATOS

JOR:ps

## PROCEDURES

Enclosed you will find Respondent Data Sheets (RDS) for all cases you previously returned to DATOS declared as "unlocatable". At this time we are asking that you renew your contact attempts, and remind you that as discussed in the attached letter, you will be paid \$7.50 for all consents you obtain resulting in completed interviews.

With some of these cases there are two RDS's stapled together; the top copy is for recording your new attempts, the second sheet is the original, showing information which may be helpful in contacting the person. For all the clients, we are requesting that you try as many of the following approaches as are appropriate and possible:

- \* Asking other staff members and clients about how contact might be established
- \* Checking with parole and probation officers for client location
- \* Check the jail. Call Los Angeles County Information Number 680-9600, and if the client is found ask for location and release date. Then send a sample letter (as provided) to the client with a pre-addressed stamped envelope as soon as possible so that the person can let you know immediately if they consent or refuse to be interviewed. REMEMBER we can interview them while they are in jail.
- \* Check with parents, spouse, friends, etc.
- \* Check with referral agency (county, police, parole, probation, private agency, etc.)
- \* Check with agency to whom client may have been referred
- \* Check "the grapevine" and use it, if possible

### Recording Procedures:

Begin by recording on the new RDS the date contact attempts are re-initiated, in the space marked: DATE CONTACT ATTEMPTS BEGUN (first line right corner of RDS)

1. Make tally marks (~~||||~~ll) for each type of attempt.
2. If consent is obtained:
  - A. enter date
  - B. enter how to re-contact client, phone number, hours to call, special instructions, etc.

DEADLINE FOR ALL RDS's. FURNISHED TO  
DATOS POSTMARKED BY FEBRUARY 25, 1977

3. If consent is not obtained enter why:
  - A. refusal date  
or
  - B. not reachable with explanation  
or
  - C. cannot locate, with reason.

IMMEDIATELY, upon receipt of consent, or refusals or as you again determine a person is unlocatable, send us the person's RDS with all the necessary information. It is absolutely crucial that if you acquire a person's consent you provide us with enough (and correct) information so that we can re-contact the individual and arrange for the interview.

Send all RDS's to:

DATOS  
P. O. Box 3725  
Terminal Annex  
Los Angeles, Ca. 90051 (envelopes enclosed)

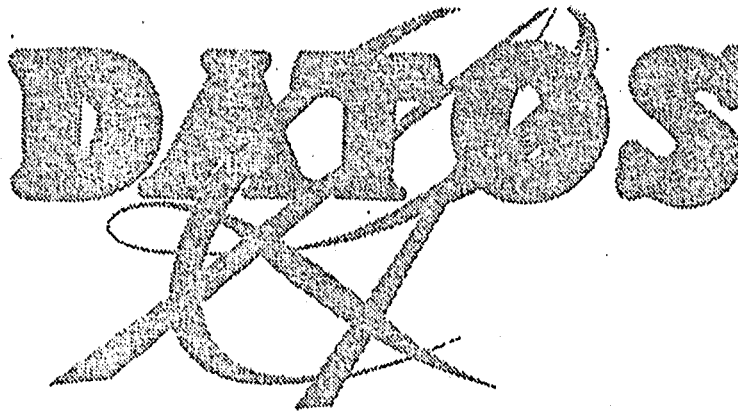
If you keep a record of costs, we will reimburse you once you return all RDS's completed.

Payments (for consents postmarked by February 25, 1977, resulting in completed interviews) will be made the end of February.

Please remember in order to be eligible to receive payments for consents, resulting in interviews, you must have returned all RDS's to DATOS postmarked by February 25, 1977. This is a serious deadline which must be met.

We wish you the best of luck in your efforts, and if we can be of any help do not hesitate to call.

DEADLINE FOR AL. RDS's. RETURNED TO  
DATOS POSTMARKED BY FEBRUARY 25, 1977



## DRUG ABUSE TREATMENT OUTCOME STUDY

1736 Workman Street, Room 328  
Los Angeles, CA 90031 (213) 221-2756

We will soon be instituting yet another procedure in an effort to increase the client contact rate for the Drug Abuse Treatment Outcome Study.. This step was made mandatory by the low contact rate on the first run.

For the purpose of efficiency, we would have preferred to notify the study-period treatment program of the other programs with which we knew the client to have had contact, but we thought that this would have been a violation on our part of client anonymity and confidentiality rights. We are legally authorized to be informed of the treatment programs to which a person has been admitted, but as a condition of this authorization, we were prohibited from re-releasing the information; we took this prohibition to apply to information obtained by us about a person's involvement in one program being released to another program. We believe that client confidentiality rights must be honored, and that the true test of this respect is when doing so is not easy. Thus, the procedures we are following.

You will find enclosed another set of Agency Summary Sheets and Client Data Sheets for people in the basic study sample. The Listing shows the client I.D. used by the Drug Abuse Office for people in the basic study sample from whom the study-period treatment program was not able to obtain a



consent to be interviewed (except for those who refused to be interviewed), typically because the agency could not contact the person. We are asking that your agency try to contact these people and gain their consent to be interviewed. While this task is extremely important, we wish to emphasize that it must in no way detract from continued effort to determine whereabouts and obtain consent for interview from any persons on the earlier list we provided you for whom search effort has not been initiated or led to resolution. Priority should, in fact, be given by each agency to any reasonable effort to "clean up" their original list if we are to maximize the value of these new search efforts.

We realize that this procedure will place an extra burden on the staff and your other resources, and some of this extra work is due to other agencies not doing their best to contact their clients. Recognizing the extra work called for, the Drug Abuse Office has come up with some money to reimburse you for your effort. With this money, DATOS can pay your agency \$7.50 for each person on this list from whom you can obtain a consent to be interviewed, and from whom an interview is actually obtained.

The \$7.50 reimbursement is applicable for cases on both the original and the new list from whom an interview is actually obtained. Should more than one agency obtain a consent to be interviewed from the same person--which is a possibility given the fact that some people come into contact with more than one agency--each agency will be reimbursed for the interview consent, even though only one interview is obtained.

Again, the Drug Abuse Office and DATOS wish to express sincere appreciation for your continued efforts toward a successful study. Once again, with your essential help, drug treatment programs in Los Angeles County are taking a leadership role; it is our great privilege to play a part in this difficult and challenging effort.

Sincerely,

James O. Robison, Ph.D.  
Project Director, DATOS

Judy H. Rothschild  
Senior Interviewer, DATOS

JOR:ps

APPENDIX D

Interview Schedule

DATOS INTERVIEW SCHEDULE

DATOS ID#

1 2 3 4

INTERVIEWER: (25) \_\_\_\_\_ AGENCY (26-27) \_\_\_\_\_

25 26 27

ALTERNATE LOCATION: (28) \_\_\_\_\_

28

DATE: (29-32) \_\_\_\_\_

29 30 31 32  
mo. da.

TIME-BEGUN \_\_\_\_\_ ENDED \_\_\_\_\_ T. MINUTES (33) \_\_\_\_\_

33

COMPLETED (34) \_\_\_\_\_ REASON NOT (34) \_\_\_\_\_

34

EDIT-INTERVIEWER: \_\_\_\_\_ OFFICE: \_\_\_\_\_

CONSENT FORM \_\_\_\_\_ PAID \_\_\_\_\_ RECEIPT \_\_\_\_\_

CH CONSENT FORM: (35) \_\_\_\_\_

35

VALIDATION REQUESTED: (36) \_\_\_\_\_ CONSENTED: (37) \_\_\_\_\_

36 37

VALIDATION FORM \_\_\_\_\_ PAID \_\_\_\_\_ RECEIPT \_\_\_\_\_

(READ THE FOLLOWING TO THE RESPONDENT)

Hello, I'm \_\_\_\_\_

This interview is part of a large study being done in Los Angeles County by an independent research firm. We're interviewing people who have had contact with drug treatment programs in order to find out whether and how such programs could be improved. Your name was selected at random from a list of past and present program clients.

The interview includes questions about your experiences before you entered a treatment program and your experiences since you have been in the program. There are questions about your employment experience, use of drugs, health, and criminal activity. The interview will last about 1½ hours.

Every answer will be treated with strictest confidence. The replies will be analyzed statistically so that no individual can be identified. You may refuse to answer any question that you find objectionable. We would rather you refuse to answer a question than give a false answer. You have the right to withdraw from the study at any time.

I'd like to emphasize that your participation is of the greatest importance to the success of the study, since we feel that the people who use certain kinds of services are in the best position to evaluate them.

At the end of the interview you will be paid \$10.00 for your help.

Before we begin, please read the Consent to Be Interviewed form which summarizes what I've just told you.

FACE SHEET CODING

- COL. 1 - 4 =
- COL. 25 = (1) GARCIA (2) FRIEDMAN (3) LEDESMA  
(4) SOLIS (5) WHITE (6) BULL (7) ROTHSCHILD
- COL. 26-27 = AGENCY CODE SHEET
- COL. 28 = (1) R. HOME (2) PUBLIC PLACE--BAR, etc.  
(3) OTHER
- COL. 29-32 = 2 DIGIT MONTH AND 2 DIGIT DAY
- COL. 33 = (0) NEVER BEGUN  
(1) 1 - 30 MINUTES (2) 31 - 60 MINUTES  
(3) 61-- 90 MINUTES (4) 91+ MINUTES
- COL. 34 = (1) COMPLETED (2) BREAK OFF BY RESPONDENT  
(3) INTERRUPTED FOR ANY OTHER REASON
- COL. 35 = (1) CRIMINAL HISTORY CONSENT FORM OBTAINED  
(0) NOT OBTAINED
- COL. 36 = (1) VALIDATION REQUESTED  
(0) VALIDATION NOT REQUESTED
- COL. 37 = (1) VALIDATION OBTAINED  
(0) VALIDATION NOT OBTAINED

## STATUS CHART

(SHOW R THE STATUS CHART. SAY:)

"According to the record we have, you were in \_\_\_\_\_ (SPTP)  
between \_\_\_\_\_ (ENTRY DATE) and \_\_\_\_\_ (DISCHARGE DATE).

Is that about what you remember?" (IF NO, FOLLOW INSTRUCTIONS IN  
MANUAL. IF YES, GO ON.)

"While we're going to talk a little about other programs you've  
been in, this is the primary one I'm interested in getting your  
opinions on. Throughout the interview, I'm going to ask you  
about things that happened during the time you were in the program,  
during the year before you went in, and during the year after  
you left.

The chart is for you and me to use so we can both keep track of  
what periods of time are being talked about. Are there any  
personal things, like getting married, that happened to you  
during this period that we could fill in on the chart to help  
you organize in your mind what was happening in your life at  
around this time?" (IF SO, FILL IN)

"Are there any other programs you were in during this period  
that are not on the chart?" (IF SO, FILL IN)

"I'm going to ask you about each of these beginning with  
\_\_\_\_\_ (FIRST BEFORE PROGRAM.)

(TURN TO TREATMENT CHART)

## T 1 - TREATMENT EXPERIENCE

(ASK FOR EACH PERIOD)

- a. "What was the name of the program?" (PROGRAM CODES)
- b. "What kind of service did you receive?" (MODALITY CODES)
- c. "How long were you in the program?"  
(0 = 1 DAY TO 2 WEEKS  
01 - 12 = 1,2,3,4,5,6,7,8,9,10,11,12 mos.;  
ROUND TO WHOLE MONTHS, i.e.  $1\frac{1}{4}$  = 1;  $1\frac{1}{2}$  = 2)
- d. "How much help did you get from the program?"  
(READ RESPONSES AND SHOWCARD 1)
- "(1) a great amount
  - (2) a moderate amount
  - (3) a slight amount
  - (4) none at all
  - (5) or was the program harmful"

T 1 - TREATMENT EXPERIENCE

|        | a            |  |  |  | b        |  | c     |  | d Degree of Helpfulness |      |        |      |         |
|--------|--------------|--|--|--|----------|--|-------|--|-------------------------|------|--------|------|---------|
|        | Program Name |  |  |  | Modality |  | Mos.  |  | Great                   | Mod. | Slight | None | Harmful |
| Before |              |  |  |  |          |  |       |  |                         |      |        |      |         |
|        | 5 6 7 8      |  |  |  | 9 10     |  | 11 12 |  | 13                      |      |        |      |         |
|        |              |  |  |  |          |  |       |  |                         |      |        |      |         |
|        | 14 15 16 17  |  |  |  | 18 19    |  | 20 21 |  | 22                      |      |        |      |         |
|        |              |  |  |  |          |  |       |  |                         |      |        |      |         |
|        | 23 24 25 26  |  |  |  | 27 28    |  | 29 30 |  | 31                      |      |        |      |         |

|        |                |  |  |  |       |  |       |  |    |  |  |  |  |
|--------|----------------|--|--|--|-------|--|-------|--|----|--|--|--|--|
| During | (SPTP)         |  |  |  |       |  |       |  |    |  |  |  |  |
|        | 9              |  |  |  |       |  |       |  |    |  |  |  |  |
|        | 32 33 34 35 36 |  |  |  | 37 38 |  | 39 40 |  | 41 |  |  |  |  |
|        |                |  |  |  |       |  |       |  |    |  |  |  |  |
|        | 42 43 44 45    |  |  |  | 46 47 |  | 48 49 |  | 50 |  |  |  |  |

|       |             |  |  |  |       |  |       |  |    |  |  |  |  |
|-------|-------------|--|--|--|-------|--|-------|--|----|--|--|--|--|
| After |             |  |  |  |       |  |       |  |    |  |  |  |  |
|       | 51 52 53 54 |  |  |  | 55 56 |  | 57 58 |  | 59 |  |  |  |  |
|       |             |  |  |  |       |  |       |  |    |  |  |  |  |
|       | 60 61 62 63 |  |  |  | 64 65 |  | 66 67 |  | 68 |  |  |  |  |
|       |             |  |  |  |       |  |       |  |    |  |  |  |  |
|       | 69 70 71 72 |  |  |  | 73 74 |  | 75 76 |  | 77 |  |  |  |  |

"Now I'm going to ask some questions about the program at \_\_\_\_\_ (SPTP).

T-2. "Were you diverted by a criminal justice agency or pressured in any way to get into the Program?" 5

- (1) Yes, pressured (ASK T-3)
- (2) Yes, diverted (SKIP TO T-4)
- (3) No (SKIP TO T - 5)

T-3. "By whom were you pressured?" 6

- (1) Court
- (2) Parole/Probation
- (3) District Attorney
- (4) Police
- (5) School
- (6) Employer
- (7) Public Agency
- (8) Private Attorney/  
Public Defender
- (9) Family/Friends
- (0) Other: \_\_\_\_\_

T-4. "What choice were you given and by whom?" 7

- (1) Police offered program as alternative to being arrested or charged
- (2) Probation Department offered program as alternative to trial
- (3) Court (Judge) offered program as an alternative to jail, prison, or civil commitment to mental hospital or California Rehabilitation Center (CRC)
- (4) Other: \_\_\_\_\_  
\_\_\_\_\_



T-5. "Who, if anyone, suggested you come into the Program?"

8

- (1) No one - came in on my own
- (2) Court
- (3) Probation/Parole
- (4) Police/District Attorney
- (5) School
- (6) Employer
- (7) Public Agency
- (8) Private Attorney/Public Defender
- (9) Family/Friends
- (0) Other: \_\_\_\_\_

T-6. "Try to think back to when you entered the Program, and about the main things you wanted to accomplish there. I'll read you a list of things people might be looking for. Say "yes" for each one you were seeking help with and "no" for each that didn't really concern you then. Remember, I'm not asking about whether you actually got such help. Were you seeking:"

(CODE (0) FOR NO, (1) FOR YES, AND (-) IF NOT ANSWERED,  
DOWN THE COLUMN UNDER T-6.)

T-7. "I'm going to repeat the list. This time I want you to answer "yes" for each kind of help you actually got from the program, even if it was something you hadn't gone there for. Did the program provide you:"

(CODE (0) FOR NO, (1) FOR YES, AND (-) IF NOT ANSWERED,  
DOWN THE COLUMN UNDER T-7.)

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| (READ RESPONSES)                         | T-6       | T-7       |
|--|-----------|-----------|
| 1. "Alternative to incarceration         | <u>9</u>  | <u>10</u> |
| 2. rescue after an overdose              | <u>11</u> | <u>12</u> |
| 3. methadone or detox treatment          | <u>13</u> | <u>14</u> |
| 4. reduction in drug use                 | <u>15</u> | <u>16</u> |
| 5. elimination of drug use               | <u>17</u> | <u>18</u> |
| 6. breathing space                       | <u>19</u> | <u>20</u> |
| 7. relief from a crisis                  | <u>21</u> | <u>22</u> |
| 8. techniques for coping with the system | <u>23</u> | <u>24</u> |
| 9. relief from confusion                 | <u>25</u> | <u>26</u> |
| 10. a new lifestyle                      | <u>27</u> | <u>28</u> |
| 11. more self-confidence                 | <u>29</u> | <u>30</u> |
| 12. a new personality                    | <u>31</u> | <u>32</u> |
| 13. better work habits                   | <u>33</u> | <u>34</u> |
| 14. training or education                | <u>35</u> | <u>36</u> |
| 15. a job                                | <u>37</u> | <u>38</u> |
| 16. a drug program job                   | <u>39</u> | <u>40</u> |
| 17. a place to stay                      | <u>41</u> | <u>42</u> |
| 18. public assistance                    | <u>43</u> | <u>44</u> |
| 19. financial assistance                 | <u>45</u> | <u>46</u> |
| 20. general medical attention            | <u>47</u> | <u>48</u> |
| 21. legal aid                            | <u>49</u> | <u>50</u> |
| 22. help with personal relationships"    | <u>51</u> | <u>52</u> |

T-8. "How were you discharged from the program?"

53

- (1) Still in program (APPLIES ONLY TO METHADONE MAINTENANCE PROGRAMS, UNLESS THERE WAS AN ERROR)
- (2) Completed treatment (Client and staff felt program had been successfully completed)
- (3) Left (Client did not feel anything worthwhile was being accomplished)
- (4) Left (Client went back to drug use and left of his/her own accord because of the return to drug use)
- (5) Left (For any other reason)
- (6) Dismissed (For drug use)
- (7) Dismissed (For any other reason)
- (8) Interrupted (Incarcerated)
- (9) Transferred (To other programs for different treatment or more convenient location)

T-9. (SHOW ENTIRE STUDY PERIOD ON STATUS CHART)

54

"During this entire period did you ever try to get into a program which would not admit you?"

- (0) No (SKIP TO T-11)
- (1) Yes

T-10. "What type of service did you want from that agency?" \_\_\_\_\_ (CODE MODALITY CODE)

55

56

T-11. "During this entire period, were you ever kept on a waiting list to get into a program?"

57

- (0) No (SKIP T-13)
- (1) Yes

T-12. "What kind of service did you want from that agency?" (CODE MODALITY CODE)

58

59

T.13. "Now I'm going to read you a long list of statements. Will you please tell me for each one if it is true or false about \_\_\_\_\_ . (STUDY PERIOD TREATMENT PROGRAM) Please respond right away, with your first thought, and don't worry if it sounds like I've said it before, just answer true or false."

(CODE: (0) FALSE (1) TRUE)

- 5. Most of the help I got was from other clients. 5
- 6. Most of the clients in the program were criminals. 6
- 7. The staff made it quite clear what was expected of you. 7
- 8. Some of the staff liked to push clients around. 8
- 9. If you're not ready to change, there's no way the program can help you. 9
- 10. Most of the clients stood up for their rights. 10
- 11. I was friends with the staff 11
- 12. The staff were underpaid and overworked. 12
- 13. A lot of people lied about their drug problems in order to get into the program. 13
- 14. Most of the clients were running a game on the program. 14
- 15. The staff watched out for the clients' rights. 15
- 16. I would recommend the program to a friend if he/she needed help. 16

## T.13. (CONTINUED)

17. The police hassled the program. 17
18. The program was good for the community. 18
19. I liked most of the clients in the program. 19
20. The program was controlled by a powerful group of outsiders. 20
21. Some of the clients were police agents or informers. 21
22. The staff tried to get you out of the program as fast as they could. 22
23. The program helped me increase my earning power by at least \$50 a month. 23
24. The staff treated you like a member of their own family. 24
25. The staff respected the clients' dignity. 25
26. The program was involved in organizing the community. 26
27. The staff bent the rules for people they liked. 27
28. You really had to have a heavy drug problem to get into the program. 28
29. The people there left me alone. 29
30. Most of the staff came from the community. 30
31. Most of the clients in the program had light-weight drug problems. 31

## T.13. (CONTINUED)

32. The program was really a shuck. 32
33. The staff really cared about you. 33
34. The program was a good place to score. 34
35. A lot of the staff used drugs. 35
36. The staff treated you like you were a child. 36
37. The program was clean. 37
38. The program was really out for the money. 38
39. It was easy to get into the program. 39
40. The staff treated you like you were a criminal. 40
41. The program was in tight with the police. 41
42. The important decisions were made by the staff. 42
43. The staff forced you to earn their respect by  
working for it. 43
44. Most of the staff were ex-drug users. 44
45. The staff were really strict about the rules. 45
46. The staff went out of their way to help the  
clients. 46
47. The staff tried to keep you in the program  
a lot longer than necessary. 47
48. I would contact this program first if I  
needed help again. 48
49. The program dug into your private life too  
much. 49
50. The clients usually ran the place. 50

## T.13. (CONTINUED)

51. The staff treated you like you were inferior. 51
52. Members of my family participated in my  
treatment at the program. 52
53. Most of the help I got was from the medication  
the program offered. 53
54. Most of the clients got into the program just  
to cut down on their habits. 54
55. The program tried hard, but there was just not  
much it could do. 55
56. The staff treated you like you were sick. 56
57. I don't want people to know that I was in  
the program. 57
58. The staff treated you like you were crazy. 58
59. I was friends with clients in the program. 59
60. A program staff person became an important  
person in my life. 60



"Now I'm going to ask some questions about people who are important to you."

T.14. "Of those involved in your drug treatment

A. Whose opinion do you value the most?

61

B. Whose opinion do you value the least?"

62

(CODE FROM LIST BELOW)

T.15. "Which two people that you know

A. Do you admire most?

63 64

B. Have the most influence over your life?

65 66

C. Are really trying to help you most?

67 68

D. Have helped you the most?

69 70

E. Have prevented you from getting help?

71 72

F. Most approve of your participation

at \_\_\_\_\_ SPTP?

73 74

G. Are most disapproving of your drug use?"

75 76

(CODE FROM LIST BELOW)

(IF PERSON IS IDENTIFIED BY NAME, ASK STATUS AND CODE)

CODE

CODE

(0) Mother

(6) Program staff

(1) Father

(7) Clergy

(2) Sibling

(8) Teacher

(3) Spouse

(9) Other

(4) Child

\_\_\_\_\_

(5) Friend

(Blank 77)

0 4 1  
78 79 80

## DRUG USE

(ASK FOR EACH PERIOD. RECORD ON APPROPRIATE CHART)

- a. "During this period, were you using any drugs--including alcohol, but not clinic methadone?" (IF NO, ASK ABOUT NEXT PERIOD)
- b. "What was the drug you used (next) most heavily during the period?" (CODE FROM DRUG LIST)
- c. "How were you using the drug?"  
 (1) Dropping and Swallowing; (2) Snorting/Sniffing;  
 (3) Skin Popping; (4) Mainlining; (5) Smoking
- d. "How often did you use the drug at your heaviest rate of use?"  
 (PROBE FOR BINGE AND CODE EITHER REGULAR OR BINGE PATTERN)  
 REGULAR - CODE TIMES PER DAY OR WEEK OR MONTH OR YEAR  
 BINGE - CODE NUMBER OF DAYS AND NUMBER OF TIMES DURING THE PERIOD  
 (1) (2) (3) (4)....etc. (0) 10, 11, 12+
- e. "How many dollars worth did you use EACH TIME you used it?"  
 (1) \$ .01 - \$ 1.00 (5) \$15.01 - \$20.00  
 (2) 1.01 - 5.00 (6) 20.01 - 25.00  
 (3) 5.01 - 10.00 (7) 25.01 - 30.00  
 (4) 10.01 - 15.00 (8) 30.01 and over
- f. "About how many months during the period were you using at this rate?"  
 (CODE: (1) 1 mo.; (2) 2 mos.; etc....(0) 10, 11, 12 mos.)
- g. "How did you usually get the drug?"  
 (1) Bought (2) dealing/delivering (3) gifts (4) stole
- h. "About how much money did you spend on the drug each week that you used it?"  
 (0) None (4) \$101.00 - \$300.00  
 (1) Less than \$5.00 (5) 301.00 - 500.00  
 (2) \$6.00 -- 25.00 (6) 501.00 - 700.00  
 (3) 26.00 - 100.00 (7) 701.00 and over
- i. "Do you consider this rate of use  
 (1) light, (2) moderate, or (3) heavy?"

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BEFORE

D 1 - DRUG USE

0.50-0.0000

| DRUG USED | HOW | FREQUENCY |      |     |      |       |             | AMT. IN \$ | LGT. USED | OBT. | # \$ WEEK | L-M-H |
|-----------|-----|-----------|------|-----|------|-------|-------------|------------|-----------|------|-----------|-------|
|           |     | REGULAR   |      |     |      | BINGE |             |            |           |      |           |       |
|           |     | DAY       | WEEK | MO. | YEAR | DAYS  | TIMES PERMO |            |           |      |           |       |
| b         | c   |           |      |     |      |       |             | e          | f         | g    | h         | i     |
|           |     |           |      |     |      |       |             |            |           |      |           |       |
|           |     |           |      |     |      |       |             |            |           | a    | v         |       |
| 5 6       | 7   | 8         | 9    | 10  | 11   | 12    | 13          | 14         | 15        | 16   | 17        | 18    |

| Drug  | How | d Regular |      |     |      | d Binge |       | Amt. | Lgt. | OBT | \$Wk | L-M-H |
|-------|-----|-----------|------|-----|------|---------|-------|------|------|-----|------|-------|
| b     | c   | Day       | Week | Mo. | Year | Days    | Times | e    | f    | g   | h    | i     |
|       |     |           |      |     |      |         |       |      |      |     |      |       |
|       |     |           |      |     |      |         |       |      |      |     |      |       |
| 19 20 | 21  | 22        | 23   | 24  | 25   | 26      | 27    | 28   | 29   | 30  | 31   | 32    |

| Drug  | How | d Regular |      |     |      | d Binge |       | Amt. | Lgt. | OBT | \$Wk | L-M-H |
|-------|-----|-----------|------|-----|------|---------|-------|------|------|-----|------|-------|
| b     | c   | Day       | Week | Mo. | Year | Days    | Times | e    | f    | g   | h    | i     |
|       |     |           |      |     |      |         |       |      |      |     |      |       |
|       |     |           |      |     |      |         |       |      |      |     |      |       |
| 33 34 | 35  | 36        | 37   | 38  | 39   | 40      | 41    | 42   | 43   | 44  | 45   | 46    |

| Drug  | How | d Regular |      |     |      | d Binge |       | Amt. | Lgt. | OBT | \$Wk | L-M-H |
|-------|-----|-----------|------|-----|------|---------|-------|------|------|-----|------|-------|
| b     | c   | Day       | Week | Mo. | Year | Days    | Times | e    | f    | g   | h    | i     |
|       |     |           |      |     |      |         |       |      |      |     |      |       |
|       |     |           |      |     |      |         |       |      |      |     |      |       |
| 47 48 | 49  | 50        | 51   | 52  | 53   | 54      | 55    | 56   | 57   | 58  | 59   | 60    |

| Drug  | How | d Regular |      |     |      | d Binge |       | Amt. | Lgt. | OBT | \$Wk | L-M-H |
|-------|-----|-----------|------|-----|------|---------|-------|------|------|-----|------|-------|
| b     | c   | Day       | Week | Mo. | Year | Days    | Times | e    | f    | g   | h    | i     |
|       |     |           |      |     |      |         |       |      |      |     |      |       |
|       |     |           |      |     |      |         |       |      |      |     |      |       |
| 61 62 | 63  | 64        | 65   | 66  | 67   | 68      | 69    | 70   | 71   | 72  | 73   | 74    |

## DRUG USE

(ASK FOR EACH PERIOD. RECORD ON APPROPRIATE CHART)

- a. "During this period, were you using any drugs--including alcohol, but not clinic methadone?" (IF NO, ASK ABOUT NEXT PERIOD)
- b. "What was the drug you used (next) most heavily during the period?" (CODE FROM DRUG LIST)
- c. "How were you using the drug?"  
 (1) Dropping and Swallowing; (2) Snorting/Sniffing;  
 (3) Skin Popping; (4) Mainlining; (5) Smoking
- d. "How often did you use the drug at your heaviest rate of use?"  
 (PROBE FOR BINGE AND CODE EITHER REGULAR OR BINGE PATTERN)  
 REGULAR - CODE TIMES PER DAY OR WEEK OR MONTH OR YEAR  
 BINGE - CODE NUMBER OF DAYS AND NUMBER OF TIMES DURING THE PERIOD  
 (1) (2) (3) (4)...etc. (0) 10, 11, 12+
- e. "How many dollars worth did you use EACH TIME you used it?"  
 (1) \$ .01 - \$ 1.00 (5) \$15.01 - \$20.00  
 (2) 1.01 - 5.00 (6) 20.01 - 25.00  
 (3) 5.01 - 10.00 (7) 25.01 - 30.00  
 (4) 10.01 - 15.00 (8) 30.01 and over
- f. "About how many months during the period were you using at this rate?"  
 (CODE: (1) 1 mo.; (2) 2 mos.; etc....(0) 10, 11, 12 mos.)
- g. "How did you usually get the drug?"  
 (1) Bought (2) dealing/delivering (3) gifts (4) stole
- h. "About how much money did you spend on the drug each week that you used it?"  
 (0) None (4) \$101.00 - \$300.00  
 (1) Less than \$5.00 (5) 301.00 - 500.00  
 (2) \$6.00 -- 25.00 (6) 501.00 - 700.00  
 (3) 26.00 - 100.00 (7) 701.00 and over
- i. "Do you consider this rate of use  
 (1) light, (2) moderate, or (3) heavy?"

DURING  
D 2 - DRUG USE

| DRUG USED         | HOW      | d FREQUENCY |          |           |           |           |             | AMT. IN \$ | LGT. USED | OBT. #    | \$ WEEK   | L-M-H     |
|-------------------|----------|-------------|----------|-----------|-----------|-----------|-------------|------------|-----------|-----------|-----------|-----------|
|                   |          | REGULAR     |          |           |           | BINGE     |             |            |           |           |           |           |
|                   |          | DAY         | WEEK     | MO.       | YEAR      | DAYS      | TIMES PERMO |            |           |           |           |           |
| b                 | c        |             |          |           |           |           |             | e          | f         | g         | h         | i         |
|                   |          |             |          |           |           |           |             |            |           |           |           |           |
|                   |          |             |          |           |           |           |             |            |           |           |           |           |
| <u>5</u> <u>6</u> | <u>7</u> | <u>8</u>    | <u>9</u> | <u>10</u> | <u>11</u> | <u>12</u> | <u>13</u>   | <u>14</u>  | <u>15</u> | <u>16</u> | <u>17</u> | <u>18</u> |

| Drug                | How       | d Regular |           |           |           | d Binge   |           | Amt.      | Lgt.      | OBT       | \$Wk      | L-M-H     |
|---------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| b                   | c         | Day       | Week      | Mo.       | Year      | Days      | Times     | e         | f         | g         | h         | i         |
|                     |           |           |           |           |           |           |           |           |           |           |           |           |
|                     |           |           |           |           |           |           |           |           |           |           |           |           |
| <u>19</u> <u>20</u> | <u>21</u> | <u>22</u> | <u>23</u> | <u>24</u> | <u>25</u> | <u>26</u> | <u>27</u> | <u>28</u> | <u>29</u> | <u>30</u> | <u>31</u> | <u>32</u> |

| Drug                | How       | d Regular |           |           |           | d Binge   |           | Amt.      | Lgt.      | OBT       | \$Wk      | L-M-H     |
|---------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| b                   | c         | Day       | Week      | Mo.       | Year      | Days      | Times     | e         | f         | g         | h         | i         |
|                     |           |           |           |           |           |           |           |           |           |           |           |           |
|                     |           |           |           |           |           |           |           |           |           |           |           |           |
| <u>33</u> <u>34</u> | <u>35</u> | <u>36</u> | <u>37</u> | <u>38</u> | <u>39</u> | <u>40</u> | <u>41</u> | <u>42</u> | <u>43</u> | <u>44</u> | <u>45</u> | <u>46</u> |

| Drug                | How       | d Regular |           |           |           | d Binge   |           | Amt.      | Lgt.      | OBT       | \$Wk      | L-M-H     |
|---------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| b                   | c         | Day       | Week      | Mo.       | Year      | Days      | Times     | e         | f         | g         | h         | i         |
|                     |           |           |           |           |           |           |           |           |           |           |           |           |
|                     |           |           |           |           |           |           |           |           |           |           |           |           |
| <u>47</u> <u>48</u> | <u>49</u> | <u>50</u> | <u>51</u> | <u>52</u> | <u>53</u> | <u>54</u> | <u>55</u> | <u>56</u> | <u>57</u> | <u>58</u> | <u>59</u> | <u>60</u> |

| Drug                | How       | d Regular |           |           |           | d Binge   |           | Amt.      | Lgt.      | OBT       | \$Wk      | L-M-H     |
|---------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| b                   | c         | Day       | Week      | Mo.       | Year      | Days      | Times     | e         | f         | g         | h         | i         |
|                     |           |           |           |           |           |           |           |           |           |           |           |           |
|                     |           |           |           |           |           |           |           |           |           |           |           |           |
| <u>61</u> <u>62</u> | <u>63</u> | <u>64</u> | <u>65</u> | <u>66</u> | <u>67</u> | <u>68</u> | <u>69</u> | <u>70</u> | <u>71</u> | <u>72</u> | <u>73</u> | <u>74</u> |

## DRUG USE

(ASK FOR EACH PERIOD. RECORD ON APPROPRIATE CHART)

- a. "During this period, were you using any drugs--including alcohol but not clinic methadone?" (IF NO, ASK ABOUT NEXT PERIOD)
- b. "What was the drug you used (next) most heavily during the period?" (CODE FROM DRUG LIST)
- c. "How were you using the drug?"  
 (1) Dropping and Swallowing; (2) Snorting/Sniffing;  
 (3) Skin Popping; (4) Mainlining; (5) Smoking
- d. "How often did you use the drug at your heaviest rate of use?"  
 (PROBE FOR BINGE AND CODE EITHER REGULAR OR BINGE PATTERN)  
 REGULAR - CODE TIMES PER DAY OR WEEK OR MONTH OR YEAR  
 BINGE - CODE NUMBER OF DAYS AND NUMBER OF TIMES DURING THE PERIOD  
 (1) (2) (3) (4)...etc. (0) 10, 11, 12+
- e. "How many dollars worth did you use EACH TIME you used it?"  
 (1) \$ .01 - \$ 1.00 (5) \$15.01 - \$20.00  
 (2) 1.01 - 5.00 (6) 20.01 - 25.00  
 (3) 5.01 - 10.00 (7) 25.01 - 30.00  
 (4) 10.01 - 15.00 (8) 30.01 and over
- f. "About how many months during the period were you using at this rate?"  
 (CODE: (1) 1 mo.; (2) 2 mos.; etc....(0) 10, 11, 12 mos.)
- g. "How did you usually get the drug?"  
 (1) Bought (2) dealing/delivering (3) gifts (4) stole
- h. "About how much money did you spend on the drug each week that you used it?"  
 (0) None (4) \$101.00 - \$300.00  
 (1) Less than \$5.00 (5) 301.00 - 500.00  
 (2) \$6.00 -- 25.00 (6) 501.00 - 700.00  
 (3) 26.00 - 100.00 (7) 701.00 and over
- i. "Do you consider this rate of use  
 (1) light, (2) moderate, or (3) heavy?"

AFTER

D - DRUG USE

| DRUG USED | HOW | d FREQUENCY |      |     |      |       |             | AMT. IN \$ | LGT. USED | OBT. g | # \$ WEEK | L-M-H |    |
|-----------|-----|-------------|------|-----|------|-------|-------------|------------|-----------|--------|-----------|-------|----|
|           |     | REGULAR     |      |     |      | BINGE |             |            |           |        |           |       |    |
|           |     | DAY         | WEEK | MO. | YEAR | DAYS  | TIMES PERMO |            |           |        |           |       |    |
| b         | c   |             |      |     |      |       |             | e          | f         | g      | h         | i     |    |
|           |     |             |      |     |      |       |             |            |           |        |           |       |    |
|           |     |             |      |     |      |       |             |            |           |        |           |       |    |
| 5         | 6   | 7           | 8    | 9   | 10   | 11    | 12          | 13         | 14        | 15     | 16        | 17    | 18 |

| Drug | How | d Regular |      |     |      | d Binge |       | Amt. | Lgt. | OBT | \$Wk | L-M-H |    |
|------|-----|-----------|------|-----|------|---------|-------|------|------|-----|------|-------|----|
| b    | c   | Day       | Week | Mo. | Year | Days    | Times | e    | f    | g   | h    | i     |    |
|      |     |           |      |     |      |         |       |      |      |     |      |       |    |
|      |     |           |      |     |      |         |       |      |      |     |      |       |    |
| 19   | 20  | 21        | 22   | 23  | 24   | 25      | 26    | 27   | 28   | 29  | 30   | 31    | 32 |

| Drug | How | d Regular |      |     |      | d Binge |       | Amt. | Lgt. | OBT | \$Wk | L-M-H |    |
|------|-----|-----------|------|-----|------|---------|-------|------|------|-----|------|-------|----|
| b    | c   | Day       | Week | Mo. | Year | Days    | Times | e    | f    | g   | h    | i     |    |
|      |     |           |      |     |      |         |       |      |      |     |      |       |    |
|      |     |           |      |     |      |         |       |      |      |     |      |       |    |
| 33   | 34  | 35        | 36   | 37  | 38   | 39      | 40    | 41   | 42   | 43  | 44   | 45    | 46 |

| Drug | How | d Regular |      |     |      | d Binge |       | Amt. | Lgt. | OBT | \$Wk | L-M-H |    |
|------|-----|-----------|------|-----|------|---------|-------|------|------|-----|------|-------|----|
| b    | c   | Day       | Week | Mo. | Year | Days    | Times | e    | f    | g   | h    | i     |    |
|      |     |           |      |     |      |         |       |      |      |     |      |       |    |
|      |     |           |      |     |      |         |       |      |      |     |      |       |    |
| 47   | 48  | 49        | 50   | 51  | 52   | 53      | 54    | 55   | 56   | 57  | 58   | 59    | 60 |

| Drug | How | d Regular |      |     |      | d Binge |       | Amt. | Lgt. | OBT | \$Wk | L-M-H |    |
|------|-----|-----------|------|-----|------|---------|-------|------|------|-----|------|-------|----|
| b    | c   | Day       | Week | Mo. | Year | Days    | Times | e    | f    | g   | h    | i     |    |
|      |     |           |      |     |      |         |       |      |      |     |      |       |    |
|      |     |           |      |     |      |         |       |      |      |     |      |       |    |
| 61   | 62  | 63        | 64   | 65  | 66   | 67      | 68    | 69   | 70   | 71  | 72   | 73    | 74 |

D.4. "Now I'm going to ask you some questions about drugs and drug use. After each question, just answer "true" or "false". (CODE: (0) FALSE (1) TRUE)

5. People who give up other drugs often become alcoholics. 5
6. If anyone were given morphine or heroin a few times, he would probably become addicted. 6
7. Most problems that people who use drugs have result from the high cost of their drug habit. 7
8. Drugs are physically damaging and harmful to one's health. 8
9. Very few doctors who use drugs become really addicted. 9
10. People who like to use drugs would do okay if they weren't hassled by the police. 10
11. It is dangerous to administer narcotics to patients, for they might become addicted. 11
12. The biggest difference between drugs and alcohol is that alcohol use is more socially acceptable. 12
13. Most people who use drugs were involved in crime before they started using. 13
14. Drugs keep normal people from leading normal lives. 14
15. Some people are really alcoholics and addicts even though they do not consume very much alcohol or drugs. 15



## D.4. (CONTINUED)

16. Drug problems would largely disappear if drugs were legalized. 16
17. Nobody who uses drugs is safe from becoming addicted. 17
18. Many drug users are able to control their use, just as many social drinkers are able to control their alcohol use. 18
19. People who need to use drugs should receive psychiatric help. 19
20. Most people who use drugs are not involved in criminal activity. 20
21. Only people who already had other serious problems are likely to get hooked on drugs. 21
22. Most people who use drugs were law-abiding citizens before they started using. 22

(Blank 23-77)

$$\frac{0}{78} \frac{8}{79} \frac{1}{80}$$

## C 1 - CRIMINAL HISTORY

(ASK FOR EACH PERIOD)

- a. "During this period were you ever arrested and charged?"  
(1) Yes (0) No (SKIP TO k)
- b. "How many times?"  
(CODE 1,2,3, or 4 for 4 or more)
- c. "How many of these were misdemeanor charges?" (CODE NUMBER TO 4)
- d. "How many of these were felony charges?" (CODE NUMBER TO 4)
- e. "Were you convicted of any of these?" (FELONIES OR MISDEMEANORS)  
(1) Yes (0) No (SKIP TO k) (2) Pending\* (SKIP TO k)  
(\*USE SPECIAL PROCEDURE FOR "PENDING" IN MANUAL.)
- f. "What was the offense for which you received the most serious sentence?" (OFFENSE CODE)
- g. "What was the sentence?"  
(&) Fine only (5) Jail: 31-89 days  
(1) Probation: Less than 1 year (6) Jail: 90+ days  
(2) Probation: 1 - 4.9 years (7) Probation + 1-30 days jail  
(3) Probation: 5 or more years (8) Probation + 31-89 days jail  
(4) Jail: 1 - 30 days (9) Probation + 90+ days jail  
(0) Prison (including CRC and CYA)
- h. "Was any of the jail time suspended?"  
(0) No (1) Yes
- i. "How much jail time did you actually serve?"  
(USE CODE IN g)
- j. (ASK CONVICTED ONLY) "Beside this conviction, were you incarcerated for any other reason during the period?"  
(1) Yes (SKIP TO l) (0) No (SKIP TO m)
- k. (ASK THOSE WHO ANSWERED NO on a OR e OR PENDING ON e)  
"Were you incarcerated at any time during this period?"  
(1) Yes (ASK l) (0) No (SKIP TO m)

C 1 - CRIMINAL HISTORY

|        | A&C? | #  | #M | #F | CONV | OFFENSE | SENT | SUSP | JAIL | INC. | INC. | TIME | P.D. | PROG |
|--------|------|----|----|----|------|---------|------|------|------|------|------|------|------|------|
|        | a    | b  | c  | d  | e    | f       | g    | h    | i    | j    | k    | l    | m    | n    |
| BEFORE |      |    |    |    |      |         |      |      |      |      |      |      |      |      |
|        | 5    | 6  | 7  | 8  | 9    | 10 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   |
| DURING | a    | b  | c  | d  | e    | f       | g    | h    | i    | j    | k    | l    | m    | n    |
|        | 20   | 21 | 22 | 23 | 24   | 25 26   | 27   | 28   | 29   | 30   | 31   | 32   | 33   | 34   |
| AFTER  | a    | b  | c  | d  | e    | f       | g    | h    | i    | j    | k    | l    | m    | n    |
|        | 35   | 36 | 37 | 38 | 39   | 40 41   | 42   | 43   | 44   | 45   | 46   | 47   | 48   | 49   |

(Blank 50-77) 0/78 9/79 1/80

- l. "Where were you incarcerated and for how many months?"
  - (1) Jail: 0 - 4 mos.                      (4) Prison (CRC and CYA): 0 - 4 mos.
  - (2) Jail: 5 - 8 mos.                      (5) Prison: 5 - 8 mos.
  - (3) Jail: 9 - 12 mos.                    (6) Prison: 9 - 12 mos.
- m. "Did you have any (other) incidents with police during the period?"
  - (0) No\*    Yes (ASK:) "How many?" (CODE NUMBER)
- n. "Did any of these incidents occur around a drug program?"
  - (0) No\*    Yes (ASK:) "How many?" (CODE NUMBER)

\*(REPEAT SERIES OR GO ON TO NEXT SECTION)

CONFIDENTIAL

S 1 - SOCIAL PRODUCTIVITY

(ASK FOR EACH PERIOD)

a. "During this period, were you ever employed?"

(1) Yes (0) No (SKIP TO g)

b. "How many jobs did you have?"

(1) One (2) Two (3) Three (4) Four or more

(IF MORE THAN ONE, SAY...)

"I'm going to ask you about the one which provided you with the most earnings during the period."

c. "Was that job full time or part time?"

(1) Full time (35+ hrs.) (2) Part time (1-34 hrs.)

d. "What did you do?"

(PROBE UNTIL YOU FEEL ABLE TO CODE)

(1) Professional, technical, managerial, proprietors

(2) Clerical and sales

(3) Craftsman, foreman, etc.

(4) Operatives

(5) Service workers, including private household

(6) Laborers, including farm

e. "What was your hourly wage?"

(0) \$ .01 - \$1.30 (3) \$3.31 - \$4.30 (6) \$6.31 - \$7.30

(1) 1.31 - 2.30 (4) 4.31 - 5.30 (7) 7.31 - 8.30

(2) 2.31 - 3.30 (5) 5.31 - 6.30 (8) 8.31 and over

f. "How many months did you hold the job?"

(1) 0 - 3 mos. (2) 4 - 6 mos. (3) 7 - 9 mos. (4) 10 - 12 mos.

g. "How many months during the period were you looking for work?"

(1) 0 - 3 mos. (2) 4 - 6 mos. (3) 7 - 9 mos. (4) 10 - 12 mos.

S 1 - SOCIAL PRODUCTIVITY

BEFORE

| EMP<br>a | JOBS<br>b | P/F<br>c | OCCUPATION<br>d | WAGE<br>e | #MOS<br>f | LOOK<br>g | h Source of Income |           |           |           |           |           |
|----------|-----------|----------|-----------------|-----------|-----------|-----------|--------------------|-----------|-----------|-----------|-----------|-----------|
|          |           |          |                 |           |           |           | A                  | B         | C         | D         | E         | F         |
|          |           |          |                 |           |           |           |                    |           |           |           |           |           |
| <u>5</u> | <u>6</u>  | <u>7</u> | <u>8</u>        | <u>9</u>  | <u>10</u> | <u>11</u> | <u>12</u>          | <u>13</u> | <u>14</u> | <u>15</u> | <u>16</u> | <u>17</u> |

DURING

| a         | b         | c         | d         | e         | f         | g         | A         | B         | C         | D         | E         | F         |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|           |           |           |           |           |           |           |           |           |           |           |           |           |
| <u>18</u> | <u>19</u> | <u>20</u> | <u>21</u> | <u>22</u> | <u>23</u> | <u>24</u> | <u>25</u> | <u>26</u> | <u>27</u> | <u>28</u> | <u>29</u> | <u>30</u> |

AFTER

| a         | b         | c         | d         | e         | f         | g         | A         | B         | C         | D         | E         | F         |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|           |           |           |           |           |           |           |           |           |           |           |           |           |
| <u>31</u> | <u>32</u> | <u>33</u> | <u>34</u> | <u>35</u> | <u>36</u> | <u>37</u> | <u>38</u> | <u>39</u> | <u>40</u> | <u>41</u> | <u>42</u> | <u>43</u> |

h. "I'm going to show you a list of sources of income, please tell me from which one you received the most income, then the next most and so on." (SHOW CARD 2, WRITE RANK IN

Rank APPROPRIATE BOX, THEN CODE ON CHART)

| B | D | A |
|---|---|---|
|   |   |   |
|   |   |   |
|   |   |   |
|   |   |   |
|   |   |   |
|   |   |   |

- A. Wages or salary
- B. Supported by parents, mate, other family, friends or loans, private charity.
- C. Unemployment, social security, retirement, disability, savings, inheritance, other insurance, etc.
- D. Welfare payments of any kind or publicly supported institution
- E. Illegal activities (including dealing)
- F. Other, e.g., legal hustling, gambling, etc.

CONFIDENTIAL

S 2 - SOCIAL PRODUCTIVITY

(ASK FOR EACH PERIOD)

i. "I'm going to read you a list of illegal activities. Please tell me if you did any of them during this period; and if so, how often did you do them?"

(SHOW CARD 3. READ LIST OF ACTIVITIES AND CODE TIMES DONE IN APPROPRIATE BOX)

LIST OF ACTIVITIES

- A. Hold-up or armed robbery
- B. Burglary or breaking and entering
- C. Theft (shoplifting, stealing, receiving or fencing stolen property, checks, credit cards, forging, perscriptions, auto theft)
- D. Prostitution, pimping, running con games, illegal gambling, running numbers
- E. Dealing or selling drugs
- F. Any other illegal activities which produced income

CODES

- (0) Never
- (1) Once during the period
- (2) Once every few months
- (3) Once a month
- (4) Two or three times a month
- (5) Once a week or more

j. "Please give me a rough estimate of your average monthly income during the period from all LEGAL sources."

k. "Please give me a rough estimate of your average monthly income during the period from all ILLEGAL sources."

(CODE FOR j and k ON NEXT PAGE)

S 2 - SOCIAL PRODUCTIVITY

BEFORE

| A                               | B         | C         | D         | E         | F         | <sup>j</sup> AVG.MO.<br>LEGAL | <sup>k</sup> AVG.MO.<br>ILLEGAL | <sup>l</sup> NUMBER<br>DEPENDENTS |
|---------------------------------|-----------|-----------|-----------|-----------|-----------|-------------------------------|---------------------------------|-----------------------------------|
| <sup>i</sup> ILLEGAL ACTIVITIES |           |           |           |           |           |                               |                                 |                                   |
| 1                               | 2         | 3         | 4         | 5         | 6         |                               |                                 |                                   |
|                                 |           |           |           |           |           |                               |                                 |                                   |
| <u>44</u>                       | <u>45</u> | <u>46</u> | <u>47</u> | <u>48</u> | <u>49</u> | <u>50</u>                     | <u>51</u>                       | <u>52</u>                         |

DURING

| A         | B         | C         | D         | E         | F         | j         | k         | l         |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|           |           |           |           |           |           |           |           |           |
| <u>53</u> | <u>54</u> | <u>55</u> | <u>56</u> | <u>57</u> | <u>58</u> | <u>59</u> | <u>60</u> | <u>61</u> |

AFTER

| A         | B         | C         | D         | E         | F         | j         | k         | l         |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|           |           |           |           |           |           |           |           |           |
| <u>62</u> | <u>63</u> | <u>64</u> | <u>65</u> | <u>66</u> | <u>67</u> | <u>68</u> | <u>69</u> | <u>70</u> |

(Blank 71-77)

78 79 80

(CODE FOR j and k CONTINUED)

- |                 |                     |
|-----------------|---------------------|
| (0) None        | (5) 801 - 1000      |
| (1) Under \$200 | (6) 1001 - 1200     |
| (2) \$200 - 400 | (7) 1201 - 1400     |
| (3) 401 - 600   | (8) 1401 - 1600     |
| (4) 601 - 800   | (9) \$1601 and over |

1. "During the period how many other people depended on you for more than one-half of their support?"

(CODE: 0 - 8, 9 for 9 or more)

P 1 - PSYCHOPHYSIOLOGICAL HEALTH

P.1. "Now I would like to ask you some questions about possible changes in your life. I would like you to compare your life in the year before you got into \_\_\_\_\_ (SPTP) with how your life was in the year after you left that program."

For each of the things I will read to you, please tell me if it was more true of you before you got into the program, after you got out of it, or if there is really not much of a difference.

"If you like, you can just say "before" to mean that it was more true of you before you got into \_\_\_\_\_ (SPTP) "after" if it is more true of you since you left, or "no difference" if it didn't change all that much."

(CODE (1) BEFORE (2) AFTER (0) NO DIFFERENCE)

- (1) When did you feel the happiest? B ND A 5
- (2) When did you worry the most? B ND A 6
- (3) When did you work the hardest? B ND A 7
- (4) Have the most friends? B ND A 8
- (5) Have the closest friends? B ND A 9
- (6) Use the most drugs? B ND A 10
- (7) Have the most confidence in yourself? B ND A 11
- (8) Have the most faith in drug treatment programs? B ND A 12



P.1. (CONTINUED) (CODE (1) BEFORE (2) AFTER (0) NO DIFFERENCE)

|   |   |    |   |           |
|---|---|----|---|-----------|
| (9) Earn the most money?                          | B | ND | A | <u>13</u> |
| (10) Spend the most time in jail?                 | B | ND | A | <u>14</u> |
| (11) Have the best time?                          | B | ND | A | <u>15</u> |
| (12) Spend the most time with your family?        | B | ND | A | <u>16</u> |
| (13) Go to the most parties?                      | B | ND | A | <u>17</u> |
| (14) Feel most in love with someone?              | B | ND | A | <u>18</u> |
| (15) Like your job the most?                      | B | ND | A | <u>19</u> |
| (16) Feel the most indifferent about things?      | B | ND | A | <u>20</u> |
| (17) Spend the most time helping other<br>people? | B | ND | A | <u>21</u> |
| (18) Take life the easiest?                       | B | ND | A | <u>22</u> |
| (19) Learn the most about life?                   | B | ND | A | <u>23</u> |
| (20) Cause other people to suffer the most?       | B | ND | A | <u>24</u> |
| (21) Spend the most money?                        | B | ND | A | <u>25</u> |
| (22) Save the most money?                         | B | ND | A | <u>26</u> |
| (23) Spend the most time working?                 | B | ND | A | <u>27</u> |
| (24) Go deepest into debt?                        | B | ND | A | <u>28</u> |
| (25) Get hassled the most by other people?        | B | ND | A | <u>29</u> |
| (26) Drink the heaviest?                          | B | ND | A | <u>30</u> |
| (27) Get most involved with political<br>issues?  | B | ND | A | <u>31</u> |
| (28) Try to help my friends the most?             | B | ND | A | <u>32</u> |
| (29) Have the worst time?                         | B | ND | A | <u>33</u> |
| (30) Work the most with drug users?               | B | ND | A | <u>34</u> |
| (31) Been heaviest into religion?                 | B | ND | A | <u>35</u> |

P.1. (CONTINUED) (CODE (1) BEFORE (2) AFTER (0) NO DIFFERENCE)

- (32) Understood myself the best? B ND A 36
- (33) Felt the loneliest? B ND A 37

P.2. "Now I would like to ask you some questions about things you might have done during the last year or so. For each one, please tell me roughly how many times you have done them, if at all. If you have not done them at all during the last year or so, please say no or never."

(CODE: (0) NEVER OR NO , (1) ONCE , (2) TWICE , (3) THREE OR MORE)

- (1) During the last year or so, have you sold blood? 38
- (2) During the last year or so, have you pawned your own belongings? 39
- (3) Been evicted by a landlord? 40
- (4) Had a car or belongings repossessed? 41
- (5) Been physically injured by anyone? 42
- (6) Been insulted by a policeman? 43
- (7) Been refused medical attention? 44
- (8) Been denied credit? 45
- (9) Taken a plane trip? 46
- (10) Lost a job? 47
- (11) Borrowed more than \$50 at one time? 48
- (12) Loaned more than \$50 at one time? 49
- (13) Been burglarized? 50

P.2. (CONTINUED) (CODE:(0) NEVER OR NO,(1) ONCE,(2) TWICE,  
(3) THREE OR MORE)

- |   |    |
|---|----|
| (14) Had your car damaged by an accident?                         | 51 |
| (15) Eaten in a fancy restaurant?                                 | 52 |
| (16) Gotten really drunk on alcohol?                              | 53 |
| (17) Gotten really stoned on any drug other<br>than alcohol?      | 54 |
| (18) Sold information to the police?                              | 55 |
| (19) Sold sex as a pimp or prostitute?                            | 56 |
| (20) Sold anyone illegal drugs?                                   | 57 |
| (21) Bought illegal drugs for someone else?                       | 58 |
| (22) Seen police hurt someone physically?                         | 59 |
| (23) Been offered drugs for free?                                 | 60 |
| (24) Bought stolen goods?   | 61 |
| (25) Been offered stolen goods to buy?                            | 62 |
| (26) Sold or given away methadone?                                | 63 |
| (27) Won or lost \$20 or more in gambling in one day?             | 64 |
| (28) Urged anyone to seek drug treatment?                         | 65 |
| (29) Had a supernatural experience?                               | 66 |
| (30) Helped bail someone out of jail?                             | 67 |
| (31) Had no place to stay?  | 68 |
| (32) Been completely broke?                                       | 69 |
| (33) Cried?   | 70 |
| (34) Attempted suicide?   | 71 |
| (35) Gone to a young friend's funeral?                            | 72 |
| (36) Heard about a friend or relative getting<br>injured at work? | 73 |

P.2. (CONTINUED) (CODE:(0) NEVER OR NO,(1) ONCE,(2) TWICE,  
(3) THREE OR MORE)

(37) Visited or written someone in jail or prison? 74

(38) Been badly cheated by a company or store? 75

(39) Donated time or money to a political cause  
or candidate? 76

(Blank 77)  $\frac{1}{78} \frac{1}{79} \frac{1}{80}$

P.3. "Now I would like to ask you some questions about how things have been over the last two weeks or so.

"Thinking of visits, telephone calls, or letters, were you in touch with any relatives during the past two weeks (not counting any who live with you)?"

(1) Yes (0) No

5

P.4. "Now how about friends other than relatives? During the past two weeks, how many times did you get together with friends--I mean things like going out together or visiting in each other's homes?"

(0) Not at all (3) Three times  
(1) Once (4) Four times  
(2) Twice (5) Five or more times

6

P.5. "On the average during the past two weeks, how many times a day did you talk with friends on the telephone?"

(0) None (2) Twice a day  
(1) Less than once a day (3) Three times a day  
(1) Once a day (4) Four or more times

7

P.6. "In recent months, have you made any friends?"

(1) Yes (0) No

8

P.7. "Did you meet any people during the past few weeks, other than in the course of your work, that you never met before?"

(1) Yes (0) No

9

P.8. "How many organizations such as church and school groups, labor unions, or social, civic, and other kinds of clubs do you belong to?"

- (0) None
- (1) One
- (2) Two
- (3) Three
- (4) Four or more

10

P.9. "Thinking back over the things you have done during the past few weeks, was there anything that you had never done before, or hadn't done in a long time?"

- (1) Yes
- (0) No

11

P.10. "During the past few weeks, have you gone any place you have never been before?"

- (1) Yes
- (0) No

12

P.11. "Everybody these days has some things they worry about--some big and some small. During the past few weeks, have you worried about--"

(CODE (1) YES (0) NO) (READ RESPONSES)

- A. Not having enough money?
- B. How about--financial debts?
- C. How things are going at (work/your husband's work)?
- D. Getting along with your (wife/husband/boy friend/girl friend)?
- E. Moving ahead in the world?
- F. Your children?
- G. Sexual problems?

13

14

15

16

17

18

19

## P.11. (CONTINUED)

- |   |    |
|---|----|
| H. People you have trouble with             | 20 |
| I. Your health?                             | 21 |
| J. Things that happen in your neighborhood? | 22 |
| K. The world situation?                     | 23 |
| L. Growing old?                             | 24 |

P.12. "I'm going to ask you some questions about how you're feeling these days. For each phrase I read, just answer yes if you felt that way & no if you didn't.

During the past few weeks, did you ever feel--"

(CODE (1) YES (0) NO (READ RESPONSES)

- |   |    |
|---|----|
| A. Particularly excited or interested in something?                     | 25 |
| B. Did you ever feel so restless that you couldn't sit long in a chair? | 26 |
| C. Proud because someone complimented you on something you had done?    | 27 |
| D. Very lonely or remote from other people?                             | 28 |
| E. Pleased about having accomplished something?                         | 29 |
| F. Bored  | 30 |
| G. On top of the world?   | 31 |
| H. Depressed or very unhappy?   | 32 |
| I. That things were going your way?                                     | 33 |
| J. Upset because someone criticized you?                                | 34 |

P.13. "Taken all together, how would you say things are these days, would you say that you are very happy, pretty happy, or not too happy?

- (1) Very happy (2) Pretty happy (3) Not too happy
- 35

P.14. "Think of how your life is going now. Do you want it to continue in much the same way it is now; do you wish you could change some parts of it; or do you wish you could change many parts of it?"

---

36

- (1) Continue much the same way
- (2) Change some parts
- (3) Change many parts

P.15. "When you think of the things you want from life, would you say that you're doing very well, doing pretty well, or not doing too well now in getting the things you want?"

---

37

- (1) Doing very well
- (2) Doing pretty well
- (3) Not doing too well now

P.16. "Now I am going to read you a list of different troubles or complaints people sometimes have. For each one, please tell me whether or not you were bothered by such a complaint during the last few weeks."

(CODE: (1) YES, (0) NO)

- A. Common cold or flu
- B. Dizziness
- C. General aches and pains
- D. Hands sweat and feel damp and slimy
- E. Headache

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38

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39

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40

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41

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42



P.16. (CONTINUED) (CODE:(1) YES, (0) NO)

- |  |           |
|--|-----------|
| F. Muscle twitches or trembling            | <u>43</u> |
| G. Nervousness or tenseness                | <u>44</u> |
| H. Rapid heart beat                        | <u>45</u> |
| I. Shortness of breath when not exercising | <u>46</u> |
| J. Skin rashes                             | <u>47</u> |
| K. Upset stomach                           | <u>48</u> |

P.17. "During the past few weeks did you have any trouble  
in getting to sleep at night?" 49  
(1) Yes (0) No

P.18. "In general do you have enough energy to do the  
things that you would like to do?" 50  
(1) Yes (0) No

P.19. "Have you ever felt that you were going to have a  
nervous breakdown?" 51  
(1) Yes (ASK QUESTION P.20.)  
(0) No (STOP)

P.20. "Have you felt this more than once?" 52  
(1) Yes (0) No

D I - DEMOGRAPHIC INFORMATION

"What is your

1. Birthdate?" \_\_\_\_\_

(CODE: 2 DIGIT YEAR, 2 DIGIT MONTH, and 2 DIGIT DAY)

53 54  
Year

55 56  
Month

57 58  
Day

2. Sex: \_\_\_\_\_ (CODE: (1) MALE , (2) FEMALE)

59  
Sex

3. Race/Ethnic Group?

- (1) White
- (2) Black
- (3) American Indian
- (4) Japanese
- (5) Chinese
- (6) Other Asian
- (7) Puerto Rican
- (8) Mexican American
- (9) Cuban
- (0) Other \_\_\_\_\_

60  
Race

4. "What was your marital status at the beginning of this (BEFORE) period and what was it at the end of this (AFTER) period?"

- (1) Never married
- (2) Married
- (3) Separated
- (4) Divorced
- (5) Widowed

61 62  
B A  
Marital

## D.I. (CONTINUED)

5. "What was your living arrangement at the beginning of this (BEFORE) period and what was it at the end of this (AFTER) period?"

- (1) Alone
- (2) With spouse or mate only
- (3) With parents or extended family
- (4) With friends (with or without mate)
- (5) Institution

|        |    |
|--------|----|
| 63     | 64 |
| B      | A  |
| Living |    |

6. "What was the highest grade in school you had completed at the beginning of this (BEFORE) period and what was it at the end of this (AFTER) period?"  
(CODE 1 - 6)  
(CODE: 12th GRADE ONLY IF R HAS DIPLOMA OR GED AND  
4 YEARS COLLEGE ONLY IF R HAS DEGREE)

- (1) K through 8th grade
- (2) 9th grade through 11th grade
- (3) 12th grade (Diploma or GED)
- (4) 1 through 3 years college
- (5) 4 years college (BA)
- (6) More than 4 years college

|        |    |
|--------|----|
| 65     | 66 |
| School |    |
| B      | A  |

7. "Please show me on this map approximately where you lived at the beginning of this (BEFORE) period and where you lived at the end of this (AFTER) period."  
(SHOW MAP. CODE)

|        |    |
|--------|----|
| 67     | 68 |
| Before |    |

|       |    |
|-------|----|
| 69    | 70 |
| After |    |

C I - CURRENT INFORMATION

"I'm going to ask a few short questions about your life right now."

1. "Are you employed?"

2. (1) Yes (0) No

71

2. "Are you looking for work?"

(1) Yes (0) No

72

3. "What is your current legal status?"

(1) Incarcerated (convicted)

(2) Parole

(3) Probation

(4) Pending (including jailed awaiting trial)

(5) None of the above

73

4. "Are you currently using any drugs?"

(1) Yes (0) No (SKIP TO 6)

74

5. "What is the main drug you're using?"

(CODE DRUG CODES)

75 76

6. "Are you currently in any treatment program?"

(1) Yes (0) No

77

1 2 1  
78 79 80

RESPONDENT IMPRESSION

1. "As you know, the main purpose of these interviews is to learn something about the effects of drug programs are making in people's lives. All in all, do you think such programs have made much difference in your own life?"

38

- (0) No
- (1) Yes, made it much better
- (2) Yes, made it much worse

2. "Do you think that the questions you've been asked about \_\_\_\_\_ (SPTP) will make it possible for us to get a fair impression of that program's effect on your life?"

39

- (0) No (1) Yes

3. "Is there some other really important question you think we should have asked?"

40

- (0) No (1) Yes (ASK 4)

4. "What?" \_\_\_\_\_

41 42

5. "Besides the programs we've talked about, what other drug programs do you know about?"

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6. "How did you learn about them?"

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CONCLUDING THE INTERVIEW

1. Criminal History Search Consent Form

"The people doing the study would like to verify the information you gave me on criminal record by checking official records. This is not done because I don't believe what you've said, but to make people reading the study confident that the information is accurate. Let me read you the Consent to Search Form. (READ FORM) Don't feel under any obligation to sign it--it's up to you."

2. Validation Procedure, if Appropriate

3. "That's the end of the interview. Thank you very much for your participation."

(1) Ask R how he would like the check (s) made out. "CASH" is one option. Write R one check for \$10 for the interview and one for \$5 for the validation (if appropriate).

(2) Ask R to sign the receipt appropriate form (s).

-----  
1. Fill out Interview Impressions Sheet

2. Go back to the Face Sheet and fill in and code the appropriate information.

3. Go through the questionnaire coding and editing.

4. Put the Status Sheet and the various Consent Forms in your binder behind the appropriate Client ID Sheet.

5. Collect agency file data on R.

6. Fill out Time, Mileage, and Expense Forms.

7. Turn in everything at next Friday DATOS meeting.

INTERVIEWER REPORT

1. Did the respondent seem to be under the influence of drugs or alcohol during the interview?

43

- (0) No
- (1) Slightly
- (2) Moderately
- (3) Strongly

2. How would you rate the respondent's manner?

44 45

Col. 44

Col. 45

- |                   |                               |
|-------------------|-------------------------------|
| (1) Comfortable   | (1) Open, direct, honest      |
| (2) Uncomfortable | (2) Evasive, deceitful        |
|                   | (3) Confused, but cooperative |
|                   | (4) Hostile, stubborn         |
|                   | (5) None of the above         |

3. Was there a language problem serious enough to make you feel the validity or reliability of the interview might be impaired?

46

- (0) No (1) Yes

4. List particular problems on this interview that you feel should be reviewed at Friday meeting.

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VALIDATION

We are asking a random sample of those we interview whether they would be willing to provide an unobserved urine sample. As in the case of the interview, it would only be identified by number and the analysis results would be completely confidential and could never be used against you in any way. If you do feel you can agree to give the sample I am authorized to give you another \$5.00.

(IF R REFUSES, CONCLUDE INTERVIEW. IF R AGREES, ASK...)

A. Have you taken the following drugs during the past 5 days?

| <u>DRUG</u>     | <u>YES</u> | <u>NO</u> |
|-----------------|------------|-----------|
| (1) Heroin      | 1          | 0         |
| (2) Methadone   | 1          | 0         |
| (3) Amphetamine | 1          | 0         |
| (4) Barbiturate | 1          | 0         |
| (5) Other Drug  | 1          | 0         |

Specify \_\_\_\_\_

B. (SIGN AND DATE ONE COPY OF CONSENT FORM III AND GIVE TO R. ALSO WRITE DATE AND R'S NUMBER ON URINE SAMPLE WITH SPECIAL FELT PEN.)

Date of Sample: \_\_\_\_\_

52 53 54 55  
mo da

C. Test Results

56  
57  
58  
59  
60



APPENDIX E

Interviewer Manual  
(Excerpts)

## 2. Making Decisions and Telling the Truth

Sometimes interviewers worry about things that are mostly beyond their control, like whether an interviewee is telling the truth or whether some questionnaire items are impossible to answer in any meaningful way. Conscientious data analysts, research report writers, critics, and some interviewees worry about these same issues. (ie. are lies and distortions being manufactured and delivered by the evaluation process?)

When interviewees give us answers that we don't believe, whether out of deliberately falsifying, or being duped or self-deluded, our obligation is, of course, to set their answer down rather than to set the person straight, even if we don't think what he said is what he meant. The reason is not just that no oath has been sworn to tell the truth and that no oath can be sworn to know the truth, but that interviewees are sociable folks, who like to please interviewers and give them the answer they want if only the interviewer will give them some hint about what is wanted. That means that interviewers will sometimes go home with a pack of their own answers, rather than those of interviewees.

Being casual is one of the best ways to lessen this problem-- if you can help make the interviewee comfortable with the idea that the answers aren't of overwhelming importance, he can better afford to give his own answer rather than seek the "right" answer to offer you. If he has trouble, for instance, making up his mind between true and false (maybe he wants to say "both" or "neither"), try not to give him any extra information or explanation; you can re-read the question if he wants to hear it, but that's about all. Then sit quietly, and he'll usually choose one or the other just to get on with things. If he tries, instead, to engage you in philosophical discussion to help him arrive at an answer, try to move him on, instead, with something like "Pick the one you think is most true--it's not that important."

Sometimes, it is quite obvious that the problem is more difficult or insoluble—for example, you've asked him to remember what his hourly wage was some months ago, and he simply can't. While it is possible that if the two of you really put your heads together, you might somehow be able to figure it out, the chances are that all that figuring would lead you into an answer not a hell of a lot more accurate than if you had simply asked him, in the first place, to just guess. The truth is--and we might as well accept it--that inquiry about one's past is partly a guessing game. If that truth is one which the interviewee finds terribly discomfoting to deal with on a few items, accept non-response, but if it gets to be a habit, say, e.g., "others are registering their opinions, and we'd like yours, too."

There are, undoubtedly, some stupid questions in the questionnaire that, when asked, will get us stupid answers. Those which an interviewer is finding most troublesome should be brought to the attention of the rest of the interviewer team at the weekly meetings. The reason is to develop and agree upon some consistent or reliable way to cope with the problem, rather than have the interviewers heading off on divergent paths and coming up with unique solutions. These steps will also alert those who are to conduct the statistical analysis about items and variables which need to be treated with greater-than-normal skepticism.

The aim of consistency in approach among interviewers applies in general, and the training sessions and weekly meetings, as well as the interviewer manual, are the major means by which this important aim may be accomplished. While interviewers are not machines, there simply must be sufficient standardization in interviewing routine that bias is reduced, and reasonable expectation that different interviewers would bring back essentially the same set of responses from any particular interviewer.

Any interviewer is likely to come up doing interviews with exciting and important information that the questionnaire wasn't designed to capture, or to discover interviewee problems

for which they feel some assistance (counseling or whatever) ought to be provided. While these are worthwhile and noble interests and sentiments, it is important that these temptations to learn more or to render aid be resisted as much as possible until the questionnaire has been completed, so as not to show the responses by a journalistic or casework atmosphere. If time and inclination permits after questionnaire completion, then these less barbarous pursuits can be indulged. Even here, let use restraint be your motto: "Render to research that which is research's, and to casework....," etc.

### 3. Behavior in the Field

a. Your job as an Interviewer demands understanding and accepting the image of an "Interviewer" in professional terms. One of the Big rules is:

An interviewer is not a Counselor.

For the study as well as for yourselves you will be dealing with people in a personal yet standardized manner with regards to the questionnaire. You will be attempting to be objective with the R, not to feed them answers or imply what you feel a "proper" response is, AND you are not to give advise or personal comments about the R's life and experiences, Keep in mind that a professional interviewer strives to direct interviews uniformly to not bias: his/her findings.

The interviewer must follow the format of the questionnaire, and training instructions so that responses are made to questions asked in a uniform manner.

As an effective interviewer, you must also be sensitive to the person you are interviewing, while not projecting your feelings onto them. Not only are you not to give advise but you also must avoid implying to R what you think the best answer is, or actually feeding them answers.

For example you say:

I: "The staff at the program thought the clients were crazy." T or F

R: What do you mean Crazy? Crazy-good or Crazy-loony?

Correct:

I: Answer, the way you take crazy to mean. Here, I'll read it again and answer with your first thought, true or false.

Incorrect:

I: Well, crazy can mean both, but I think you should think of crazy as, you know, really nuts or spaced out, or you know--crazy.

b. Interviewer Behavior with Agency  
or Don't Put yourself in Jeopardy

Remember you are a professional interviewer and are required to act as such with all parties including agency personnel. This does not mean you can't be on friendly terms with agency personnel, in fact it is to your advantage to be personable and sensitive to them. But it also means, be cool, don't get into messy situations. Follow agency rules and if problems arise which cannot be solved between you and the agency notify Judy immediately. Avoid situations where you gossip about clients, staff, DAO, DATOS directors, etc. Don't get so involved that it interferes with your job (remember in four months it will be over, and you can do as you please). Don't put yourself and job in jeopardy. Above all, don't score at the programs or deal or become involved in any drug activity.

Remember be professional and respectful in ALL your interactions.

4. Confidentiality

Confidentiality issues involved with DATOS extend into many areas. As interviewers you will be directly involved with the confidentiality issues that surround contacting clients and gathering information on their lives.

As a county-contracted program we receive umbrella coverage which allows us to have access to R's names. However, to obtain consent for the interview we are working through the established relationship between the agencies and their clients. Once consent is given, you will be responsible for setting up appointments with R for the interview.

Once you begin to speak directly w/R you enter a new arena of confidentiality; you must guarantee that the information you collect will be held confidential and will not be released in a way whereby the R is identified without their consent.

b. Confidentiality and Consent Forms

1. Interviewer Agreement on Confidentiality.

This form explains your responsibilities in regards to adhering to regulations on confidentiality,  
(Filed at DATOS)

2. Consent to Interviewer Payment Receipt

This form is signed by the R prior to the interview and after payment for the interview. It documents R Consent for Interview and their receipt of payment  
(Filed at DATOS).

3. Consent to Criminal History Search

4. Consent for Urinalysis

### C. Interviewing Youth (Persons 17 years of age and under.)

For the most part you will be interviewing adults but in some situations you may be interviewing youth. There are approximately 5 programs in L.A. County which deal only with youths and a number of others which carry both youths and adults on their matrix. Youths who have signed their own Consent to Treatment are able to also sign our DATOS Consent to Interview; if their parent signed the Consent to Treatment and they are still under 18 years at the time of the DATOS Interview they will need to have a Parent's Consent for Interview in addition to their own Consent to Interview. In those cases where they were under 18 years during the SPTP (1975) but are now 18 years or older they will NOT need a Parent's Consent, their own Consent to Interview will be sufficient.

The agencies have been informed of these considerations, so hopefully there will be no problems, however in arranging and scheduling interviews with those R under 18 years, make sure that these bases are covered.

### III. INTERVIEW PROCEDURE

Upon receiving a set of data sheets for consenting clients, the interviewer will normally contact each client by phone to arrange a time and place (at agency) mutually agreeable for an interview

In the event the client has no phone, or in cases in which special problems exist, it may be necessary for the interviewer to meet the client in order to make an appointment.

Phone calls to clients will normally be made from an agency phone; interviewers will exercise care in not inadvertently charging toll calls to agency phones without their consent. It may be necessary to occasionally charge calls to the DATOS office phone, although normally it is expected that calls made from an agency will be local calls.

For a number of reasons, the respondent's presence at the agency may present problems. If the respondent is currently using drugs, or if evident friction exists for any reason between the respondent and agency personnel, it will be up to the interviewer to suggest they leave, so that the interview can be conducted at some other location (such as a nearby coffee shop, part, etc.)

The Interviewer may need to be discrete and ingenious in negotiating a suitable meeting place, BUT ALWAYS TRY TO SCHEDULE THE INTERVIEW TO TAKE PLACE IN THE AGENCY.

In cases in which respondents do not show for an appointed interview, or in other cases in which further search efforts are necessary to reach a client and establish an appointment, an agency will normally be expected to conduct such search efforts until the client is located or there seems to be a reasonable certainty that he cannot be. The interviewer should take no initiatives which would violate the agency's relationship with the client. Initially the interviewer's time will be consumed in making appointments and conducting interviews. During this period, the interviewer will only have data sheets on consenting clients in his possession in any case.

Because the interviewer will know the identity of the respondent at the time of interview, it will be important in every case to emphasize their knowledge of client's identity will go no further. Interviewers should display evidence of confidentiality precautions to the respondent and take whatever reasonable measures are necessary to assure the respondent of his anonymity to others.

#### A. PAYING THE RESPONDENT

##### 1. Payment Schedule:

|          |  |
|----------|--|
| \$ 10.00 | -- Completed Interview                                 |
| \$ 15.00 | -- Completed Interview (\$10)<br>plus Urinalysis (\$5) |

Procedure: At the Friday meetings each interviewer will be issued cheques for R payment for the upcoming week.

NOTE: The agencies have been notified of this procedure and in many cases will allow the R to cash the check at the agency, so mention this to the R.



~~It is ABSOLUTELY necessary to enter and record every check you make out. You do not need to record a BALANCE amount.~~

~~RECORD:~~

~~Check #, Day, Agency, DATOS R #, Amount.~~

## B. Aborted Interview Contingencies

After the agency contacts a R and obtains his consent to be interviewed, there are several ways in which the interview still may fail to reach completion. These will be discussed briefly.

1. The interviewer calls the phone number provided by the agency. but without success. The R seems to have disappeared between agency and interviewer contact. In such a case, the interviewer should be sure to call during different times of day and evening. He may also want to call back the agency to check on the number. If he still has no luck in contacting the R, the interviewer should turn the case back to the agency for their continued search efforts.

2. The client may change his mind before the interviewer calls, so that when contacted by phone, he refuses the interview. After being sure the issues of the interviewer (confidentiality, money) are understood, the interviewer should close the case.

3. The interviewer reached the R by phone and agrees to meet him at a specified time and place. However, the R fails to show for the interview. The interviewer might want to call his residence after only a few minutes in the event the R is still interested but simply forgot. If a sufficient time elapses and the R still does not show, a new appointment should be made. If the R fails to keep two appointments, the interviewer should make no further attempts under normal circumstances, but turn the case back to the agency. If the interviewer feels the R may be in jail, talk to Jim at the next Friday meeting. ( Make sure you have noted this info.)

4. The R may show up for the interview, but then refuse to sign the consent form. After making sure the R knows what he is doing, the interviewer should close the case. Do not pay R.

5. In still another contingency, the R may consent to and begin the interview, only to refuse for some reason part way through. If most of the schedule in the interviewer's judgment, was completed, he may consider it so. If not, it should be closed as a refusal. The interviewer, in this case, may want to consider calling the client back later in the event the client may reconsider. (for instance, intoxication may have been a factor in his refusal.) Do not pay, in any case, until interview is completed. (If the interview is interrupted by either interviewer or R and can be resumed later by mutual agreement, it of course should be. Client should not be payed until interview is completed.)

6. In the event that the interview cannot be conducted entirely in English and when the interviewer is not fluent in the respondent's language, and if an interpreter is not available, the interview will have to be cancelled. It should be re-scheduled and conducted by an appropriate bi-lingual interviewer, at which time the R can be payed.

7. A juvenile R may appear for an interview without a signed consent form which is required, (if he is still a juvenile and if his admission to the program was initially secured by parental consent). In this event, parental consent must be secured.

8. If the R has no phone, he may be contacted by letter by the agency. This letter will ask him to phone back the agency. In doing so, he would normally advise of some phone where he could be reached by DATOS. If, however, there is no phone where he can be reached (for reasons of anonymity or otherwise) the agency should instruct him to call DATOS on a Friday afternoon, when he could be expected to reach the interviewer. If he fails to call, the case can only be given back to the agency for their continued efforts.

### III. STATUS CHART

The Status Chart provides you with the design of the Study for each individual respondent. It is to be used as a tool throughout the interview for you and the R to orient yourselves in time. It is vitally important that you understand the time periods involved, which period is being asked about at various points in the interview, and that you make sure R understands. The chart will not be used for recording purposes. You may write anything on it that helps you and the R to establish a time orientation or you needn't fill it out at all. It depends on what works in the individual situation.

When you get the chart, it will show the program that the R entered between March 1 and July 31, 1975 and from which he was discharged by December 31, 1975. This program is the Study Period Treatment Program and will be referred to as SPTP throughout the Schedule. Two vertical lines will be drawn to mark off the "During" period. Two more vertical lines will be drawn to mark off the period 12 months before program entry ("Before") and the period between discharge from the SPTP and 12 months after ("After"). Depending on when R was discharged and when you do the interview, this period may be only 10 or 11 months long, ending at the present, or the 12 month period may have ended as much as 11 months before the present. Keep in mind that the chart may reflect patterns different from the basic one I've outlined. Methadone Maintenance people still in the program will have a standard 10-12 month follow-up period beginning in January, 1976. Some respondents may only have been in the program one day which constitutes their "during" period.

The other entries on the Status Chart when you get it will be the other treatment programs R has been in that we know about. The rules for these programs are:

- 1) Any program which started during the "Before" period is recorded as "Before" even if the person is not discharged until the During or After period.
- 2) Any program which started in the during period but ended in the after period as well as any program which started and ended in the after period is recorded as After.
- 3) Any program which started and ended in the During period is recorded as During, but it is NOT the SPTP.

It is thus entirely possible that you will interview people still in a program but no one you interview should still be in their SPTP (except for re-entries) and



methadone maintenance people).

The reason you need to review the programs with the respondent is that the records we have are not complete and may be in error in some cases. In most cases, the recording will be simple and obvious; we have alerted you to potential difficulties so you are prepared to handle them should they arise.

You will use the Chart during the interview in this way:

Show R the Status Chart. Say, "According to the record we have you were in \_\_\_\_\_ (SPTP) between \_\_\_\_\_ (Date) and \_\_\_\_\_ (Date). Is that about what you remember?"

1. If R Says NO, Find Out Why.

a. If the dates are wrong a couple of months in either direction, just change the lines for the Before, During, and After period.

b. If R says he wasn't in the program you named, check to see if he is using another name for the same program. (Check Program List.)

c. If the situation is still not resolved ask if he entered any treatment program between March 1 and July 31, 1975 from which he was discharged by December 21, 1975. (Methadone only--need not be discharged.) If he says yes and it is one of our programs, fill it in on the Status Chart and draw the lines.

d. If he says No or it is not one of our programs, go back to the ID Sheet and ask his name and birthdate. If both are correct, ask him to wait while you check with the agency staff (if you are interviewing in the SPTP) and with DATOS. If this does not resolve the situation, apologize, write NOT IN SAMPLE, NO INTERVIEW GIVEN across the Consent Form, pay him, ask him to sign the receipt form, and you sign it. Fill this information out on the ID Sheet, and the Face Sheet and turn everything in to DATOS.

2. If R Is In Agreement With The Program And Dates

Say, "While we're going to talk a little about other programs you've been in, this is the primary one I'm interested in. Throughout the interview, I'm going to ask you about things that happened during the period you were in the program, during the year before you entered the program, and during the year after you left." (POINT TO TIME PERIODS ON CHART). "The Chart is for you and me to use so we both know what periods of time are being talked about. Are there any personal things, like getting married,

that happened to you during the period which we could fill in on the chart to help you remember what was happening in your life at around this time?" (IF SO, FILL IN)

### 3. Other Treatment Experience

The Status Chart will also show all other treatment experiences known to us. Ask R if it is complete and fill in any other programs he says he was in during the Study Period (Before, During, and After). Then turn to T 1 treatment experience and begin to record the information.

#### IV. TREATMENT

##### A. T - 1: Treatment Experience

1. As you go over the Status Chart, fill out T-1 Treatment Experience. You will be provided with extra charts in case you interview someone who has been in more than three Before or After programs or more than two During programs. If you have more than that number in any category, record it on the second chart. Remember record Before programs only in the Before section, etc. The study period treatment program always goes in the same place as designated on the chart.

2. Single program vs. Treatment Episodes--In most cases R will tell you that he went to a single program for a single treatment (e.g. NAPP for out-patient counseling). You must be alert, however, for the occurrence of a treatment episode, that is, a program of treatment in which the R went through two or three modalities one right after the other in what was seen by himself and the agency as a unitary treatment. Such an episode may all take place in one agency or two may be involved. The important thing to remember is that all the components of an episode must be recorded on the same line of the chart. Episode codes are on your Modality Code Sheet, agency codes on your Agency Code Sheet. Note that the modalities involved in an episode can be coded by a two digit modality code, but two agencies are involved, two agency codes must be entered. (This is why there is space for two-two digit agency codes on each line of the Treatment Experience Chart.)

##### Examples:

NAPP for Out Patient, codes:

             4     5          0     6  

Metro for Detox, Residential and Out Patient, codes:

             4     2          1     0  

Metro for Detox, NPP for Out Patient, codes:

  4     9          4     1          1     2  

##### 3. Codes

a. Agencies--Your Agency or Program Code List is arranged alphabetically. A single agency is often known by a variety of names and the list shows many of these former names or aka's. Note that many agency names are similar--make sure you know which one R is talking about.

#### IV. Treatment (Con't.)

b. Modality Codes--Make sure you get ALL the information, i.e. in-patient or out-patient detox, long of short term residential. Code "Other Services" only if the experience R describes cannot be coded in any other way.

c. Month in program and rating codes as shown.

B. T - 2,3,4,5

The point of this series of questions is to find out how the person came into the program. Note that not all questions are asked of all respondents. Follow the instruction on the schedule. All these questions code in the right hand margin.

C. T - 6 and 7

This is a double question with an identical series of responses. Ask question T - 6 "What did you want to accomplish?", read the responses, and code the answer (0 = NO; 1 = YES) in the column marked T6. Repeat the procedure for T7.

D. T - 8,9 10,11,12

Code as shown. Watch SKIPS.

E. T - 13

Code directly as shown.



## V. DRUG USE

### A. D - 1,2,3 History Charts

You are provided with three charts to record the use of up to five different drugs for each period. (ASK ONLY UP TO FIVE. IF R HAS USED A SIXTH DRUG DURING ANY PERIOD, IGNORE IT.) Remember, code only drugs used during the Before period on the Before Chart, drugs used in the During period on the During Chart, and drugs used in the After period on the After Chart.

Again write the information on the chart during the interview and code it afterwards.

a. ASK FIRST IF R was using any drugs during the period (include alcohol, but not clinic methadone).

b. Drug Used--Code from Drug Code Sheet (#3).

c. Method--Codes shown on questionnaire.

d. Frequency--Code either Regular Use Pattern or Binge Use Pattern NOT BOTH for the same drug.

If coding Regular Use Pattern, code the times R says he is using in whatever time period he gives you, i.e., day, week, month, or year. NEVER CODE MORE THAN ONE OF THESE FOR ONE DRUG.

If coding Binge Use Pattern, code BOTH the number of days in the run and the frequency with which a run occurs.

e. What is being asked is the price of a single administration of the drug. If R has said he uses heroin five times a day, you want to know what it costs each time. If R says he doesn't buy the drugs, ask him to estimate the street value (what it would have cost him--not what he could have sold it for) of what he used each time. Code in categories shown on questionnaire.

f. Code number of months R was using drugs during the period.

g. In this question you want to know how much R spent on the drug each month. If he says nothing, code "None" and ask the next question.

h. For those who answered none on g, ask how they got the drug.

i. Ask R's estimate of this rate of use and code.

B. Drug Use T/F -- Same Format As In Treatment Section.

APPENDIX F

Statistical Tables for  
Treatment Modality Comparisons  
Among Heroin Users

The reasoning behind the statistical analyses presented in this appendix and the procedures used in their production are presented in Chapters 6 and 8. Although the output of the computerized program provides sufficient information to understand the meaning of the tables, it may be helpful to make more explicit the meaning of the individual "contrasts" (which are discussed in Chapter 6, but they are presented in a slightly different order).

| <u>Output Label</u> | <u>Meaning</u>  |
|---------------------|---|
| Contrast 1          | Comparison of psycho-socially versus symptomatically oriented treatments.           |
| Contrast 2          | Comparison of outpatient versus in-patient treatments.                              |
| Contrast 3          | Comparison of outpatient versus in-patient psycho-socially oriented treatment.      |
| Contrast 4          | Comparison of outpatient versus in-patient symptomatically oriented treatment.      |
| Contrast 5          | Comparison of psycho-socially versus symptomatically oriented outpatient treatment. |
| Contrast 6          | Comparison of psycho-socially versus symptomatically oriented in-patient treatment. |

The term "value" refers to the mean difference associated with the contrast, with a negative value indicating that the mean for the treatment (or treatment combination) listed after the term versus in the above was mathematically larger than the treatment listed before the term versus. The "T-Prob." value for the "Pooled variance estimate" was used as the test for statistical significance of the difference, unless one or more of "Tests for homogeneity of variances" was statistically significant, in which case the "Separate variance estimate" was used.

FILE PATH: 335 (FORMATION DATE = 08/20/77)

ONEWAY

VARIABLE INVOLVEMENT WITH OTHER USERS ACTS-EVENTS  
BY TREATMENT FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 19.4756        | 6.4919       | .328    | .805    |
| TOTAL GROUPS   | 220  | 4360.8935      | 19.8223      |         |         |
| TOTAL          | 223  | 4390.3751      |              |         |         |

| GROUP | COUNT | MEAN           | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|-------|-------|----------------|--------------------|----------------|---------|---------|--------------------------|
| ONE   | 56    | 7.5310         | 5.0012             | .6683          | 0       | 18.0000 | 6.2916 TO 8.9703         |
| TWO   | 56    | 8.0291         | 4.1231             | .5510          | 0       | 18.0000 | 6.9244 TO 9.1337         |
| THREE | 56    | 7.4216         | 4.4721             | .5976          | 0       | 18.0000 | 6.2240 TO 8.6193         |
| FOUR  | 56    | 8.1519         | 4.1567             | .5555          | 0       | 18.0000 | 7.0383 TO 9.2656         |
| TOTAL | 224   | 7.8094         |                    |                | 0       | 18.0000 |                          |
|       |       | UNGROUPED DATA | 4.4320             | .2961          |         |         | 7.2248 TO 8.3920         |

FILE DAT IS DE (CREATION DATE = 08/08/77)

----- ONE WAY -----

VARIABLE INVLV2 INVOLVEMENT-WITH-OTHER-USERS ACTS-EVENTS

CONTRAST COEFFICIENT MATRIX

DF D.F. D.F. D.F.

|            |     |      |      |      |
|------------|-----|------|------|------|
| CONTRAST 1 | .5  | .5   | -.5  | -.5  |
| CONTRAST 2 | .5  | -.5  | .5   | -.5  |
| CONTRAST 3 | 1.0 | -1.0 | 0    | 0    |
| CONTRAST 4 | 0   | 0    | 1.0  | -1.0 |
| CONTRAST 5 | 1.0 | 0    | -1.0 | 0    |
| CONTRAST 6 | 0   | 1.0  | 0    | -1.0 |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE  | S. ERROR | POOLED VARIANCE ESTIMATE |       |         | SEPARATE VARIANCE ESTIMATE |       |         |      |
|------------|--------|----------|--------------------------|-------|---------|----------------------------|-------|---------|------|
|            |        |          | T VALUE                  | D.F.  | T PROB. | T VALUE                    | D.F.  | T PROB. |      |
| CONTRAST 1 | .0432  | .5950    | .073                     | 220.0 | .942    | .5950                      | .073  | 214.4   | .942 |
| CONTRAST 2 | -.5642 | .5950    | -.948                    | 220.0 | .344    | .5950                      | -.948 | 214.4   | .344 |
| CONTRAST 3 | -.3291 | .8414    | -.473                    | 220.0 | .637    | .8661                      | -.460 | 106.1   | .647 |
| CONTRAST 4 | -.7303 | .8414    | -.868                    | 220.0 | .386    | .8154                      | -.895 | 109.4   | .373 |
| CONTRAST 5 | .2093  | .8414    | .249                     | 220.0 | .804    | .8965                      | .233  | 108.7   | .816 |
| CONTRAST 6 | -.1229 | .8414    | -.146                    | 220.0 | .884    | .7824                      | -.157 | 110.0   | .875 |

TESTS OF HOMOGENEITY OF VARIANCES

Cochran's C = MAX. VARIANCE/SUM(VARIANCES) = .3154, P = .185 (APPROX.)  
 Bartlett's KX F = .201, P = .440  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 1.421

F-1b

FILE STAT547 (CREATION DATE = 08/08/77)

ONE WAY

VARIABLE DEPRES PSYCHOLOGICAL DEPRESSION ACTS-EVENTS  
BY TITIME FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | P PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 21.9903        | 7.3268       | 1.078   | .134    |
| WITHIN GROUPS  | 220  | 858.2734       | 3.9012       |         |         |
| TOTAL          | 223  | 880.2637       |              |         |         |

| GROUP          | COUNT | MEAN   | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|----------------|-------|--------|--------------------|----------------|---------|---------|--------------------------|
| DDF            | 55    | 1.3481 | 1.8766             | .2508          | 0       | 7.0000  | 1.3855 TO 2.3907         |
| DDC            | 55    | 2.5231 | 2.0111             | .2687          | 0       | 7.0000  | 1.9844 TO 3.0619         |
| DDA            | 55    | 1.7954 | 1.8557             | .2494          | 0       | 6.0000  | 1.2053 TO 2.2053         |
| DDP            | 55    | 2.2180 | 2.1341             | .2852          | 0       | 9.0000  | 1.6463 TO 2.7897         |
| TOTAL          | 224   | 2.0337 |                    |                | 0       | 9.0000  |                          |
| UNGROUPED DATA |       |        | 1.9869             | .1327          |         |         | 1.8221 TO 2.3453         |

FILE RATIO: (COMPUTED DATE = 09/28/77)

----- ONE WAY -----

VARIABLE: JUDEN PSYCHOLOGICAL DEPRESSION ACTS-EVENTS

CONTRAST COEFFICIENT MATRIX

|            | 001 | 005 | 004 | 100  |
|------------|-----|-----|-----|------|
| CONTRAST 1 | 1   | .5  | -.5 | -.5  |
| CONTRAST 2 | 1   | .5  | .5  | -.5  |
| CONTRAST 3 | 1   | 1.0 | 0   | 0    |
| CONTRAST 4 | 1   | 0   | 0   | 1.0  |
| CONTRAST 5 | 1   | 1.0 | 0   | -1.0 |
| CONTRAST 6 | 1   | 0   | 1.0 | 0    |

|            | VALUE  | S. ERROR | POOLED VARIANCE ESTIMATE |       |         | SEPARATE VARIANCE ESTIMATE |         |       |         |
|------------|--------|----------|--------------------------|-------|---------|----------------------------|---------|-------|---------|
|            |        |          | T VALUE                  | D.F.  | T PROB. | S. ERROR                   | T VALUE | D.F.  | T PROB. |
| CONTRAST 1 | .2449  | .2633    | .924                     | 220.0 | .356    | .2639                      | .924    | 217.3 | .356    |
| CONTRAST 2 | -.5738 | .2639    | -2.174                   | 220.0 | .031    | .2639                      | -2.174  | 217.3 | .031    |
| CONTRAST 3 | -.6351 | .3733    | -1.701                   | 220.0 | .090    | .3676                      | -1.728  | 109.5 | .087    |
| CONTRAST 4 | -.5126 | .3733    | -1.373                   | 220.0 | .171    | .3789                      | -1.353  | 108.1 | .179    |
| CONTRAST 5 | .1927  | .3733    | .489                     | 220.0 | .625    | .3537                      | .516    | 110.0 | .607    |
| CONTRAST 6 | .3051  | .3733    | .817                     | 220.0 | .415    | .3913                      | .779    | 109.6 | .438    |

F-2b

TESTS FOR HOMOGENEITY OF VARIANCES

COCHRAN C = MAX. VARIANCE / SUM(VARIANCES) = .2918, P = .466 (APPROX.)  
 BARTLETT-10X = .445, P = .721  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 1.307

FILE DATED: (CORRECTION DATE = 08/08/77)

ONE WAY

VARIABLE INVOLVED BEFORE VS AFTER PSYCHOSOCIAL INVOLVEMENT  
BY TREATMENT FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 65.9381        | 21.9794      | 2.468   | .053    |
| WITHIN GROUPS  | 220  | 1959.0482      | 8.9048       |         |         |
| TOTAL          | 223  | 2024.9864      |              |         |         |

| GROUP | COUNT | MEAN           | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|-------|-------|----------------|--------------------|----------------|---------|---------|--------------------------|
| DDF   | 36    | 2.8595         | 2.1733             | .3973          | -6.0000 | 6.0000  | 2.0633 TO 3.6558         |
| DDF   | 36    | 3.1338         | 3.2467             | .4339          | -6.0000 | 6.0000  | 2.2640 TO 4.0036         |
| DDF   | 35    | 3.5308         | 2.5895             | .3434          | -6.0000 | 6.0000  | 2.9427 TO 4.3189         |
| DDF   | 35    | 2.1299         | 3.1041             | .4148          | -5.0000 | 8.0000  | 1.2983 TO 2.9615         |
| TOTAL | 224   | 2.9385         |                    |                | -6.0000 | 8.0000  |                          |
|       |       | UNGROUPED DATA | 3.0134             | .2013          |         |         | 2.5417 TO 3.3353         |

F-38



FILE JAT0526 (ORIGIN DATE = 08/08/77)

----- D N E W A Y -----

VARIABLE INVLOI BEFORE VS AFTER PSYCHOSOCIAL INVOLVEMENT

CONTRAST COEFFICIENT MATRIX

|            | DDP | DDT  | DDM  | IPD  |
|------------|-----|------|------|------|
| CONTRAST 1 | .5  | .5   | -.5  | -.5  |
| CONTRAST 2 | .5  | -.5  | .5   | -.5  |
| CONTRAST 3 | 1.0 | -1.0 | 0    | 0    |
| CONTRAST 4 | 0   | 0    | 1.0  | -1.0 |
| CONTRAST 5 | 1.0 | 0    | -1.0 | 0    |
| CONTRAST 6 | 0   | 1.0  | 0    | -1.0 |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE  | S. ERROR | T VALUE | D.F.  | T PROB. | S. ERROR | T VALUE | D.F.  | T PROB. |
|------------|--------|----------|---------|-------|---------|----------|---------|-------|---------|
| CONTRAST 1 | .1163  | .3989    | .292    | 220.0 | .771    | .3988    | .292    | 214.2 | .771    |
| CONTRAST 2 | .6133  | .3988    | 1.538   | 220.0 | .125    | .3988    | 1.538   | 214.2 | .126    |
| CONTRAST 3 | -.2743 | .5639    | -.486   | 220.0 | .627    | .5883    | -.466   | 109.2 | .642    |
| CONTRAST 4 | 1.5009 | .5639    | 2.661   | 220.0 | .008    | .5385    | 2.787   | 106.3 | .006    |
| CONTRAST 5 | -.7713 | .5639    | -1.368  | 220.0 | .173    | .5251    | -1.469  | 107.7 | .145    |
| CONTRAST 6 | 1.0039 | .5639    | 1.780   | 220.0 | .076    | .6002    | 1.672   | 109.8 | .097    |

F-3b

TESTS FOR HOMOGENEITY OF VARIANCES

COCHRAN'S C = MAX. VARIANCE/SUM(VARIANCES) = .2959, P = .403 (APPROX.)  
 BARTLETT'S K = 1.071, P = .350  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 1.527

FILE CATHY (CREATED DATE = 02/03/77)

ONE WAY

VARIABLE NO. 003  
 BY TREATM SPECIALTY OF STABLE CHANGES INDICATED  
 FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 338.8853       | 112.9618     | 4.183   | .007    |
| WITHIN GROUPS  | 220  | 5935.8376      | 26.9811      |         |         |
| TOTAL          | 223  | 6274.4229      |              |         |         |

| GROUP          | COUNT | MEAN   | STANDARD DEVIATION | STANDARD ERROR | MINIMUM  | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|----------------|-------|--------|--------------------|----------------|----------|---------|--------------------------|
| 03F            | 54    | 5.4327 | 5.0709             | .6776          | -11.0000 | 11.0000 | 4.1248 TO 6.8407         |
| 03G            | 54    | 5.0916 | 3.7721             | .5713          | -11.0000 | 11.0000 | 4.4552 TO 7.5490         |
| 03H            | 55    | 7.5470 | 3.9014             | .5213          | -4.0000  | 11.0000 | 6.6022 TO 8.6918         |
| 199            | 59    | 4.2192 | 5.8020             | .7754          | -11.0000 | 12.0000 | 2.6645 TO 5.7739         |
| TOTAL          | 224   | 5.3376 |                    |                | -11.0000 | 12.0000 |                          |
| UNGROUPED DATA |       |        | 5.3044             | .3544          |          |         | 5.1392 TO 6.5361         |

F-4a

FILE DATAS06 (OPERATION DATE = 08/08/77)

----- D N E R A Y -----

VARIABLE SDS SOCIALLY DESIRABLE CHANGES INDICATED

CONTRAST COEFFICIENT MATRIX

|            | DDF | DD   | DDM  | DDO  |
|------------|-----|------|------|------|
| CONTRAST 1 | .5  | .5   | -.5  | -.5  |
| CONTRAST 2 | .5  | -.5  | .5   | -.5  |
| CONTRAST 3 | 1.0 | -1.0 | 0    | 0    |
| CONTRAST 4 | 1   | 0    | 1.0  | -1.0 |
| CONTRAST 5 | 1.0 | 0    | -1.0 | 0    |
| CONTRAST 6 | 1   | 1.0  | 0    | -1.0 |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE   | S. ERROR | T VALUE | D.F.  | T PROB. | S. ERROR | T VALUE | D.F.  | T PROB. |
|------------|---------|----------|---------|-------|---------|----------|---------|-------|---------|
| CONTRAST 1 | -.1910  | .6941    | -.275   | 220.0 | .783    | .6941    | -.275   | 204.2 | .784    |
| CONTRAST 2 | 1.4855  | .6941    | 2.095   | 220.0 | .037    | .6941    | 2.095   | 204.2 | .037    |
| CONTRAST 3 | -.5188  | .9816    | -.529   | 220.0 | .598    | 1.0267   | -.505   | 108.2 | .614    |
| CONTRAST 4 | 1.4278  | .9816    | 3.492   | 220.0 | .001    | .9344    | 3.668   | 96.3  | .000    |
| CONTRAST 5 | -2.1643 | .9816    | -2.215  | 220.0 | .029    | .8550    | -2.531  | 103.2 | .013    |
| CONTRAST 6 | 1.7094  | .9816    | 1.816   | 220.0 | .071    | 1.0937   | 1.630   | 110.0 | .106    |

F14b

TESTS FOR HOMOGENEITY OF VARIANCES

COEFFICIENT OF MAX. VARIANCE / SUM(VARIANCES) = .3120, P = .214 (APPROX.)  
 MAXIMUM F = 3.423, P = .017  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 2.212

FILE TAT050 (CREATED DATE = 08/08/77)

ONEWAY

VARIABLE BY AFFECT BALANCE (PSYCH. WELL-BEING) SCALE  
 TREATMENT FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | .2166          | .0722        | .015    | .998    |
| WITHIN GROUPS  | 220  | 1075.8197      | 4.8902       |         |         |
| TOTAL          | 223  | 1076.0363      |              |         |         |

| GROUP          | COUNT | MEAN   | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|----------------|-------|--------|--------------------|----------------|---------|---------|--------------------------|
| DPF            | 56    | 5.0497 | 1.8569             | .2481          | 1.0000  | 8.0000  | 4.5926 TO 5.5872         |
| PDF            | 56    | 5.0146 | 2.5158             | .3367          | 1.0000  | 9.0000  | 4.3595 TO 5.7097         |
| DPH            | 56    | 5.3079 | 2.1676             | .2897          | 1.0000  | 9.0000  | 4.4274 TO 5.5883         |
| DPH            | 56    | 5.0663 | 2.2505             | .3007          | 1.0000  | 9.0000  | 4.4614 TO 5.6692         |
| TOTAL          | 224   | 5.0497 |                    |                | 1.0000  | 9.0000  |                          |
| UNGROUPED DATA |       |        | 2.1967             | .1468          |         |         | 4.7604 TO 5.3389         |

F-5a

FILE TAT055 (CREATION DATE = 08/03/77)

----- D N E W A Y -----

VARIABLE ANSCALE AFFECT BALANCE <PSYCH. WELL-BEING> SCALE

CONTRAST COEFFICIENT MATRIX

|            | DF  | 221  | 004  | 100  |
|------------|-----|------|------|------|
| CONTRAST 1 | .5  | .5   | -.5  | -.5  |
| CONTRAST 2 | .5  | -.5  | .5   | -.5  |
| CONTRAST 3 | 1.0 | -1.0 | 0    | 0    |
| CONTRAST 4 | 0   | 1    | 1.0  | -1.0 |
| CONTRAST 5 | 1.0 | 0    | -1.0 | 0    |
| CONTRAST 6 | 0   | 1.0  | 0    | -1.0 |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE  | S. ERROR | T VALUE | D.F.  | T PROB. | S. ERROR | T VALUE | D.F.  | T PROB. |
|------------|--------|----------|---------|-------|---------|----------|---------|-------|---------|
| CONTRAST 1 | .0252  | .2955    | .085    | 220.0 | .932    | .2955    | .085    | 210.6 | .932    |
| CONTRAST 2 | -.0016 | .2955    | -.005   | 220.0 | .996    | .2955    | -.005   | 210.6 | .996    |
| CONTRAST 3 | .0553  | .4179    | .132    | 220.0 | .895    | .4183    | .132    | 101.1 | .895    |
| CONTRAST 4 | -.0584 | .4179    | -.140   | 220.0 | .889    | .4175    | -.140   | 109.8 | .889    |
| CONTRAST 5 | .0820  | .4179    | .196    | 220.0 | .845    | .3814    | .215    | 107.5 | .830    |
| CONTRAST 6 | -.0417 | .4179    | -.076   | 220.0 | .940    | .4515    | -.070   | 108.6 | .944    |

TESTS FOR HOMOGENEITY OF VARIANCES

COCHRAN'S C = MAX. VARIANCE/SUM(VARIANCES) = .3246, P = .122 (APPROX.)  
 BARTLETT-BOX F = 1.696, P = .166  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 1.841

F-50

FILE DATE 08/23/77 (ESTIMATION DATE = 08/20/77)

ONEWAY

VARIABLE NAME: NEGATIVE AFFECT SCALE ITEMS ENDORSED  
BY TREATMENT: FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 4.1196         | 1.3732       | .587    | .624    |
| WITHIN GROUPS  | 220  | 514.9861       | 2.3408       |         |         |
| TOTAL          | 223  | 519.1056       |              |         |         |

| GROUP           | COUNT | MEAN   | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|-----------------|-------|--------|--------------------|----------------|---------|---------|--------------------------|
| DDF             | 56    | 1.3839 | 1.5077             | .2014          | 0       | 4.0000  | 1.5803 TO 2.3876         |
| RDF             | 56    | 2.2740 | 1.5822             | .2114          | 0       | 4.0000  | 1.8501 TO 2.6978         |
| DDM             | 56    | 2.3444 | 1.5857             | .2119          | 0       | 4.0000  | 1.9197 TO 2.7691         |
| IPD             | 55    | 2.1734 | 1.4400             | .1924          | 0       | 4.0000  | 1.7876 TO 2.5592         |
| TOTAL           | 223   | 2.1939 |                    |                | 0       | 4.0000  |                          |
| UNRECORDED DATA |       |        | 1.5257             | .1019          |         |         | 1.9930 TO 2.3948         |

F-6a

FILE TAD030 (CREATION DATE = 08/20/77)

ONE WAY

VARIABLE HAS NEGATIVE AFFECT SCALE ITEMS ENDORSED

CONTRAST COEFFICIENT MATRIX

|            | DDF | RDF  | DDM  | DDP  |
|------------|-----|------|------|------|
| CONTRAST 1 | .5  | .5   | -.5  | -.5  |
| CONTRAST 2 | .5  | -.5  | .5   | -.5  |
| CONTRAST 3 | 1.0 | -1.0 | 0    | 0    |
| CONTRAST 4 | 0   | 0    | 1.0  | -1.0 |
| CONTRAST 5 | 1.0 | 0    | -1.0 | 0    |
| CONTRAST 6 | 0   | 1.0  | 0    | -1.0 |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE  | S. ERROR | T VALUE | D.F.  | T PROB. | S. ERROR | T VALUE | D.F.  | T PROB. |
|------------|--------|----------|---------|-------|---------|----------|---------|-------|---------|
| CONTRAST 1 | -.1360 | .2045    | -.636   | 220.0 | .526    | .2045    | -.636   | 218.7 | .526    |
| CONTRAST 2 | -.0595 | .2045    | -.291   | 220.0 | .771    | .2045    | -.291   | 218.7 | .771    |
| CONTRAST 3 | -.2900 | .2891    | -1.003  | 220.0 | .317    | .2891    | -.993   | 109.7 | .323    |
| CONTRAST 4 | .1710  | .2891    | .591    | 220.0 | .555    | .2862    | .597    | 109.0 | .552    |
| CONTRAST 5 | -.3605 | .2891    | -1.247  | 220.0 | .214    | .2894    | -1.233  | 109.7 | .220    |
| CONTRAST 6 | .1095  | .2891    | .348    | 220.0 | .728    | .2859    | .352    | 109.0 | .726    |

F-66

TESTS FOR HOMOGENEITY OF VARIANCES

COCHRAN'S C = MAX. VARIANCE/SUM(VARIANCES) = .2695, P = .949 (APPROX.)  
 WELCH-BROWN F = .226, P = .878  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 1.213

FILE TABULAR (CREATION DATE = 09/29/77)

ONEWAY

VARIABLE BY TREAT POSITIVE AFFECT SCALE ITEMS ENDORSED  
FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 2.5128         | .8376        | .467    | .706    |
| WITHIN GROUPS  | 220  | 394.8739       | 1.7949       |         |         |
| TOTAL          | 223  | 397.3867       |              |         |         |

| GROUP           | COUNT | MEAN   | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|-----------------|-------|--------|--------------------|----------------|---------|---------|--------------------------|
| DDF             | 56    | 3.1738 | 1.2380             | .1654          | 1.0000  | 5.0000  | 2.7423 TO 3.4053         |
| DDF             | 56    | 3.3086 | 1.3599             | .1816          | 1.0000  | 5.0000  | 2.9445 TO 3.6726         |
| DDA             | 56    | 3.3523 | 1.3039             | .1742          | 1.0000  | 5.0000  | 3.0031 TO 3.7015         |
| DDP             | 56    | 3.2397 | 1.4492             | .1937          | 1.0000  | 5.0000  | 2.8515 TO 3.6280         |
| TOTAL           | 224   | 3.2436 |                    |                | 1.0000  | 5.0000  |                          |
| UNOBSERVED DATA |       |        | 1.3340             | .0892          |         |         | 3.0678 TO 3.4194         |

F-7a



FILE DAT0506 (OPERATION DATE = 08/09/77)

ONE WAY

VARIABLE HAS POSITIVE AFFECT SCALE ITEMS ENDORSED

CONTRAST COEFFICIENT MATRIX

|            | 101 | 102  | 103  | 104  | 105 |
|------------|-----|------|------|------|-----|
| CONTRAST 1 | .5  | .5   | -.5  | -.5  |     |
| CONTRAST 2 | .5  | -.5  | .5   | -.5  |     |
| CONTRAST 3 | 1.0 | -1.0 | 0    | 0    |     |
| CONTRAST 4 | 0   | 0    | 1.0  | -1.0 |     |
| CONTRAST 5 | 1.0 | 0    | -1.0 | 0    |     |
| CONTRAST 6 | 0   | 1.0  | 0    | -1.0 |     |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE  | S. ERROR | T VALUE | D.F.  | T PROB. | S. ERROR | T VALUE | D.F.  | T PROB. |
|------------|--------|----------|---------|-------|---------|----------|---------|-------|---------|
| CONTRAST 1 | -.1048 | .1790    | -.585   | 220.0 | .559    | .1790    | -.585   | 217.1 | .559    |
| CONTRAST 2 | -.0611 | .1790    | -.341   | 220.0 | .733    | .1790    | -.341   | 217.1 | .733    |
| CONTRAST 3 | -.2343 | .2532    | -.927   | 220.0 | .355    | .2456    | -.956   | 109.1 | .341    |
| CONTRAST 4 | .1125  | .2532    | .444    | 220.0 | .657    | .2605    | .432    | 108.8 | .667    |
| CONTRAST 5 | -.2785 | .2532    | -1.100  | 220.0 | .273    | .2403    | -1.159  | 109.7 | .249    |
| CONTRAST 6 | .0698  | .2532    | .272    | 220.0 | .786    | .2655    | .259    | 109.5 | .796    |

F-7b

TESTS FOR HOMOGENEITY OF VARIANCES

Cochran's C = MAX. VARIANCE/SUM(VARIANCES) = .2925, P = .455 (APPROX.)  
 Bartlett's Test F = .436, P = .692  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 1.170

FILE 087030 (OPERATION DATE = 08/20/77)

ONEWAY

VARIABLE NOVELTY NUMBER NOVEL ACTS-EVENTS EXPERIENCED  
BY TREATMENT FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 5.6520         | 1.8840       | 1.602   | .190    |
| WITHIN GROUPS  | 220  | 258.7868       | 1.1763       |         |         |
| TOTAL          | 223  | 264.4388       |              |         |         |

| GROUP           | COUNT | MEAN   | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|-----------------|-------|--------|--------------------|----------------|---------|---------|--------------------------|
| 000             | 50    | 1.5940 | .9967              | .1332          | 0       | 3.0000  | 1.3271 TO 1.8610         |
| 001             | 50    | 1.3538 | 1.0522             | .1406          | 0       | 3.0000  | 1.5719 TO 2.1357         |
| 004             | 50    | 1.4389 | 1.0683             | .1428          | 0       | 3.0000  | 1.1528 TO 1.7250         |
| 100             | 50    | 1.7607 | 1.2099             | .1617          | 0       | 3.0000  | 1.4366 TO 2.0848         |
| TOTAL           | 220   | 1.6619 |                    |                | 0       | 3.0000  |                          |
| UNRECORDED DATA |       |        | 1.0390             | .0728          |         |         | 1.5185 TO 1.8053         |

F-8a

FILE NO. 15289277 1

ONEWAY

VARIABLE NOVELTY NUMBER NOVEL ACTS-EVENTS EXPERIENCED

CONTRAST COEFFICIENT MATRIX

|            | CON | TR   | OPM  | IBO  |
|------------|-----|------|------|------|
| CONTRAST 1 | .5  | .5   | -.5  | -.5  |
| CONTRAST 2 | .5  | -.5  | .5   | -.5  |
| CONTRAST 3 | 1.0 | -1.0 | 0    | 0    |
| CONTRAST 4 | 0   | 0    | 1.0  | -1.0 |
| CONTRAST 5 | 1.0 | 0    | -1.0 | 0    |
| CONTRAST 6 | 0   | 0    | 1.0  | -1.0 |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE  | S. ERROR | T VALUE | D.F.  | T PROB. | S. ERROR | T VALUE | D.F.  | T PROB. |
|------------|--------|----------|---------|-------|---------|----------|---------|-------|---------|
| CONTRAST 1 | .1241  | .1449    | .856    | 220.0 | .393    | .1449    | .856    | 215.3 | .393    |
| CONTRAST 2 | -.2703 | .1449    | -2.036  | 220.0 | .046    | .1449    | -2.036  | 215.3 | .046    |
| CONTRAST 3 | -.2598 | .2050    | -1.267  | 220.0 | .206    | .1937    | -1.341  | 109.7 | .183    |
| CONTRAST 4 | -.3213 | .2050    | -1.570  | 220.0 | .118    | .2157    | -1.492  | 108.3 | .139    |
| CONTRAST 5 | .1581  | .2050    | .757    | 220.0 | .450    | .1952    | .795    | 109.5 | .429    |
| CONTRAST 6 | .2031  | .2050    | .984    | 220.0 | .650    | .2143    | .935    | 107.9 | .665    |

F18b

TESTS FOR HOMOGENEITY OF VARIANCES

COEFFICIENT = MAX. VARIANCE/SUM(VARIANCES) = .3110, P = .223 (APPROX.)  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 1.473

FILE VARIABLES (DATE=0820277)

ONEWAY

VARIABLE FRIENDS NUMBER CONTACTS WITH FRIENDS  
BY TREATMENT FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 14.7652        | 4.9217       | .408    | .748    |
| WITHIN GROUPS  | 220  | 2654.7735      | 12.0672      |         |         |
| TOTAL          | 223  | 2669.5387      |              |         |         |

| GROUP          | COUNT | MEAN   | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |           |
|----------------|-------|--------|--------------------|----------------|---------|---------|--------------------------|-----------|
| BYE            | 54    | 4.5125 | 2.9505             | .3943          | -2.0000 | 10.0000 | 3.7223                   | TO 5.3028 |
| DOE            | 54    | 5.1202 | 4.0027             | .5349          | -2.0000 | 10.0000 | 4.0478                   | TO 6.1925 |
| JOE            | 54    | 4.5250 | 2.7703             | .3702          | -2.0000 | 10.0000 | 3.7831                   | TO 5.2669 |
| LOE            | 54    | 4.5461 | 2.9831             | .3923          | -2.0000 | 10.0000 | 3.4790                   | TO 5.6133 |
| TOTAL          | 224   | 4.6760 |                    |                | -2.0000 | 10.0000 |                          |           |
| UNGROUPED DATA |       |        | 3.4599             | .2312          |         |         | 4.2204                   | TO 5.1315 |

F-9a

FILE DATASET (CREATION DATE = 08/08/77)

----- D N E W A Y -----

VARIABLE FRIENDS NUMBER CONTACTS WITH FRIENDS

CONTRAST COEFFICIENT MATRIX

DDF DDF DPM D'D

|            |     |      |      |      |
|------------|-----|------|------|------|
| CONTRAST 1 | .5  | .5   | -.5  | -.5  |
| CONTRAST 2 | .5  | -.5  | .5   | -.5  |
| CONTRAST 3 | 1.0 | -1.0 | 0    | 0    |
| CONTRAST 4 | 0   | 0    | 1.0  | -1.0 |
| CONTRAST 5 | 1.0 | 0    | -1.0 | 0    |
| CONTRAST 6 | 0   | 1.0  | 0    | -1.0 |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

| CONTRAST   | VALUE  | S. ERROR | POOLED VARIANCE ESTIMATE |       | T PROB. | S. ERROR | SEPARATE VARIANCE ESTIMATE |       | T PROB. |
|------------|--------|----------|--------------------------|-------|---------|----------|----------------------------|-------|---------|
|            |        |          | T VALUE                  | D.F.  |         |          | T VALUE                    | D.F.  |         |
| CONTRAST 1 | .2808  | .4642    | .605                     | 220.0 | .546    | .4642    | .605                       | 199.3 | .546    |
| CONTRAST 2 | -.3144 | .4642    | -.677                    | 220.0 | .499    | .4642    | -.677                      | 199.3 | .499    |
| CONTRAST 3 | -.6076 | .6565    | -.926                    | 220.0 | .356    | .6565    | -.914                      | 101.2 | .363    |
| CONTRAST 4 | -.0211 | .6565    | -.032                    | 220.0 | .974    | .6483    | -.033                      | 98.1  | .974    |
| CONTRAST 5 | -.0125 | .6565    | -.019                    | 220.0 | .985    | .5409    | -.023                      | 109.6 | .982    |
| CONTRAST 6 | .6740  | .6565    | .874                     | 220.0 | .383    | .7546    | .761                       | 110.0 | .448    |

F-9b

TEST FOR HOMOGENEITY OF VARIANCES

COEFFICIENT OF MAX. VARIANCE/SUM(VARIANCES) = .3319, P = .086 (APPROX.)  
 PARTIAL COEFFICIENT = .4076, P = .007  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 2.029



FILE DATABAS (CREATION DATE = 08/08/77)

UNIFY

VARIABLE MORRIES NUMBER OF THINGS WORRIED ABOUT

CONTRAST COEFFICIENT MATRIX

|            | CON | DDI  | DDM  | IDD  |
|------------|-----|------|------|------|
| CONTRAST 1 | .5  | .5   | -.5  | -.5  |
| CONTRAST 2 | .5  | -.5  | .5   | -.5  |
| CONTRAST 3 | 1.0 | -1.0 | 0    | 0    |
| CONTRAST 4 | 0   | 0    | 1.0  | -1.0 |
| CONTRAST 5 | 1.0 | 0    | -1.0 | 0    |
| CONTRAST 6 | 0   | 1.0  | 0    | -1.0 |

|            | VALUE  | S. ERROR | POOLED VARIANCE ESTIMATE |       |         | SEPARATE VARIANCE ESTIMATE |         |       |         |
|------------|--------|----------|--------------------------|-------|---------|----------------------------|---------|-------|---------|
|            |        |          | T VALUE                  | D.F.  | T PROB. | S. ERROR                   | T VALUE | D.F.  | T PROB. |
| CONTRAST 1 | -.0993 | .3213    | -.278                    | 220.0 | .781    | .3213                      | -.278   | 219.5 | .781    |
| CONTRAST 2 | .6874  | .3213    | 2.140                    | 220.0 | .033    | .3213                      | 2.140   | 219.5 | .033    |
| CONTRAST 3 | .2312  | .4543    | .524                     | 220.0 | .601    | .4551                      | .523    | 109.5 | .602    |
| CONTRAST 4 | 1.1365 | .4543    | 2.502                    | 220.0 | .013    | .4536                      | 2.506   | 109.9 | .014    |
| CONTRAST 5 | -.5384 | .4543    | -1.185                   | 220.0 | .237    | .4591                      | -1.173  | 109.8 | .243    |
| CONTRAST 6 | .1598  | .4543    | .792                     | 220.0 | .429    | .4495                      | .801    | 109.8 | .425    |

F-10b

TEST FOR HOMOGENEITY OF VARIANCES

COCHRAN'S C = MAX. VARIANCE/SUM(VARIANCES) = .2670, P = .989 (APPROX.)  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 1.138  
 BARTLETT'S K-S = .085, P = .969





FILE STATISTICS (CREATION DATE = 08/08/77)

----- ONE WAY -----

VARIABLE ANXIETY NUMBER OF ANXIETY ITEMS ENDORSED

CONTRAST COEFFICIENT MATRIX

|  | CONTRAST | COEFF | CONTRAST | COEFF | CONTRAST | COEFF |
|--|----------|-------|----------|-------|----------|-------|
|  | 1        | .5    | .5       | -.5   | -.5      |       |
|  | 2        | .5    | -.5      | .5    | -.5      |       |
|  | 3        | 1.0   | -1.0     | 0     | 0        |       |
|  | 4        | 0     | 0        | 1.0   | -1.0     |       |
|  | 5        | 1.0   | 0        | -1.0  | 0        |       |
|  | 6        | 0     | 1.0      | 0     | -1.0     |       |

| CONTRAST   | VALUE  | S. ERROR | POOLED VARIANCE ESTIMATE |       |         | SEPARATE VARIANCE ESTIMATE |         |       |         |
|------------|--------|----------|--------------------------|-------|---------|----------------------------|---------|-------|---------|
|            |        |          | T VALUE                  | D.F.  | T PROB. | S. ERROR                   | T VALUE | D.F.  | T PROB. |
| CONTRAST 1 | .1583  | .1361    | 1.163                    | 220.0 | .246    | .1361                      | 1.163   | 217.5 | .246    |
| CONTRAST 2 | .1428  | .1361    | 1.050                    | 220.0 | .295    | .1361                      | 1.050   | 217.5 | .295    |
| CONTRAST 3 | -.0224 | .1924    | -.116                    | 220.0 | .907    | .1880                      | -.119   | 107.8 | .905    |
| CONTRAST 4 | .3090  | .1924    | 1.601                    | 220.0 | .111    | .1967                      | 1.556   | 110.0 | .120    |
| CONTRAST 5 | -.0009 | .1924    | -.036                    | 220.0 | .971    | .1852                      | -.037   | 109.5 | .970    |
| CONTRAST 6 | .3035  | .1924    | 1.681                    | 220.0 | .094    | .1994                      | 1.622   | 110.0 | .108    |

TEST FOR HOMOGENEITY OF VARIANCES

COEFFICIENT OF VARIATION (MAX. VARIANCE/SUM(VARIANCES)) = .2728, P = .845 (APPROX.)  
 TEST STATISTIC = .451, P = .717  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 1.333

F-11D

111 - [unclear] ( [unclear] )

ANALYSIS

NUMBER OF PSYCHOLOGICAL SUBJECTS  
 FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE           | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|------------------|------|----------------|--------------|---------|---------|
| TREATMENT GROUPS | 3    | 16.2261        | 5.4087       | .653    | .582    |
| WITHIN GROUPS    | 220  | 1800.4815      | 8.1840       |         |         |
| TOTAL            | 223  | 1816.7076      |              |         |         |

| COUNT          | MEAN   | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|----------------|--------|--------------------|----------------|---------|---------|--------------------------|
| 007            | 2.1321 | 2.9171             | .4498          | 0       | 11.0000 | 2.3509 TO 3.9133         |
| 008            | 3.4843 | 3.2370             | .4327          | 0       | 10.0000 | 2.6158 TO 4.3517         |
| 009            | 3.2792 | 2.7137             | .3625          | 0       | 10.0000 | 2.5634 TO 4.0169         |
| 010            | 2.7557 | 2.5255             | .3375          | 0       | 9.0000  | 2.0791 TO 3.4323         |
| 011            | 3.1650 |                    |                | 0       | 11.0000 |                          |
| DISBURSED DATA |        | 2.8541             | .4007          |         |         | 2.7898 TO 3.5414         |

F-12a

FILE DATE 08/23/77 (OPERATION DATE = 08/23/77)

----- ONE WAY -----

VARIABLE SYMPTOMS NUMBER OF PSYCHOPHYSIOLOGICAL SYMPTOMS

PRINCIPAL COMPONENT MATRIX

|            | ONE | TWO  | THREE | FOUR |
|------------|-----|------|-------|------|
| CONTRAST 1 | .5  | .5   | -.5   | -.5  |
| CONTRAST 2 | -.5 | -.5  | .5    | -.5  |
| CONTRAST 3 | 1.0 | -1.0 | 0     | 0    |
| CONTRAST 4 | 0   | 0    | 1.0   | -1.0 |
| CONTRAST 5 | 1.0 | 0    | -1.0  | 0    |
| CONTRAST 6 | 0   | 1.0  | 0     | -1.0 |

|            | VALUE  | S. ERROR | POOLED VARIANCE ESTIMATE |       |         | SEPARATE VARIANCE ESTIMATE |         |       |         |
|------------|--------|----------|--------------------------|-------|---------|----------------------------|---------|-------|---------|
|            |        |          | T VALUE                  | D.F.  | T PROB. | S. ERROR                   | T VALUE | D.F.  | T PROB. |
| CONTRAST 1 | .2452  | .3823    | .746                     | 220.0 | .456    | .3823                      | .746    | 212.6 | .456    |
| CONTRAST 2 | .0712  | .3823    | .238                     | 220.0 | .812    | .3823                      | .238    | 212.6 | .812    |
| CONTRAST 3 | -.3521 | .5406    | -.651                    | 220.0 | .516    | .5824                      | -.605   | 108.8 | .547    |
| CONTRAST 4 | .5348  | .5406    | .989                     | 220.0 | .324    | .4954                      | 1.079   | 109.4 | .283    |
| CONTRAST 5 | -.1540 | .5406    | -.292                    | 220.0 | .770    | .5324                      | -.297   | 109.4 | .767    |
| CONTRAST 6 | .7235  | .5406    | 1.348                    | 220.0 | .179    | .5487                      | 1.328   | 103.8 | .187    |

TEST OF HOMOGENEITY OF VARIANCES

COEFFICIENT = MAX. VARIANCE/SUM(VARIANCES) = .3223, P = .149 (APPROX.)  
 COEFFICIENT = 1.240, P = .294  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 1.654

F-12b

FILE: BAH151 (OPERATION DATA) 08/23/77

ONE WAY

VARIABLE: HARDSHIP ECONOMIC HARDSHIP EVENTS  
BY: TREATMENT FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 12.3429        | 4.1146       | 1.147   | .331    |
| WITHIN GROUPS  | 220  | 789.2629       | 3.5876       |         |         |
| TOTAL          | 223  | 801.6068       |              |         |         |

| GROUP          | COUNT | MEAN   | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|----------------|-------|--------|--------------------|----------------|---------|---------|--------------------------|
| DJE            | 56    | 1.1583 | 1.6341             | .2184          | 0       | 5.0000  | .7207 TO 1.5959          |
| RDE            | 56    | 1.7925 | 2.0714             | .2768          | 0       | 13.0000 | 1.2375 TO 2.3474         |
| OP4            | 56    | 1.3195 | 2.7422             | .2996          | 0       | 10.0000 | .9186 TO 2.1195          |
| IP7            | 55    | 1.3447 | 1.5368             | .2054          | 0       | 7.0000  | .9229 TO 1.7464          |
| TOTAL          | 223   | 1.4511 |                    |                | 0       | 13.0000 |                          |
| UNGROUPED DATA |       |        | 1.8960             | .1267          |         |         | 1.2015 TO 1.7008         |

F-13a

FILE DATAS06 (COMPUTATION DATE = 08/08/77)

----- ONE WAY -----

VARIABLE HARDSHIP ECONOMIC HARDSHIP EVENTS

CONTRAST COEFFICIENT MATRIX

|            | DDF | DDF  | DDM  | IPD  |
|------------|-----|------|------|------|
| CONTRAST 1 | .5  | .5   | -.5  | -.5  |
| CONTRAST 2 | .5  | -.5  | .5   | -.5  |
| CONTRAST 3 | 1.0 | -1.0 | 0    | 0    |
| CONTRAST 4 | .0  | 1    | 1.0  | -1.0 |
| CONTRAST 5 | 1.0 | 0    | -1.0 | 0    |
| CONTRAST 6 | .0  | 1.0  | 0    | -1.0 |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE  | S. ERROR | T VALUE | D.F.  | T PROB. | S. ERROR | T VALUE | D.F.  | T PROB. |
|------------|--------|----------|---------|-------|---------|----------|---------|-------|---------|
| CONTRAST 1 | .0485  | .2531    | .192    | 220.0 | .848    | .2531    | .192    | 200.8 | .848    |
| CONTRAST 2 | -.2249 | .2531    | -.888   | 220.0 | .375    | .2531    | -.889   | 200.8 | .375    |
| CONTRAST 3 | -.6341 | .3579    | -1.772  | 220.0 | .078    | .3526    | -1.799  | 104.3 | .075    |
| CONTRAST 4 | .1944  | .3579    | .515    | 220.0 | .607    | .3633    | .508    | 97.3  | .613    |
| CONTRAST 5 | -.3607 | .3579    | -1.008  | 220.0 | .315    | .3708    | -.973   | 100.6 | .333    |
| CONTRAST 6 | .4578  | .3579    | 1.279   | 220.0 | .202    | .3447    | 1.328   | 101.5 | .187    |

F-13b

TESTS FOR HOMOGENEITY OF VARIANCES

COCHRAN'S C = MAX. VARIANCE / SUM(VARIANCES) = .3503, P = .032 (APPROX.)  
 BARTLETT'S K-S F = 3.583, P = .013  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 2.129

----- O N E W A Y -----

VARIABLE Y6JNF41 ADJUSTED RANK SUPPORT: WELFARE ETC. AFTR  
 BY TRTMT FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 12.5607        | 4.1869       | .963    | .411    |
| WITHIN GROUPS  | 220  | 956.2804       | 4.3467       |         |         |
| TOTAL          | 223  | 968.8411       |              |         |         |

| GROUP          | COUNT | MEAN   | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|----------------|-------|--------|--------------------|----------------|---------|---------|--------------------------|
| DDF            | 56    | -.4544 | 1.9153             | .2559          | -4.4835 | 3.5471  | -.9673 TO .0586          |
| DDC            | 56    | .1967  | 2.0749             | .2773          | -5.4935 | 3.5471  | -.3592 TO .7526          |
| DDY            | 56    | -.2325 | 2.3979             | .3204          | -5.4835 | 3.5471  | -.8747 TO .4096          |
| DDZ            | 56    | -.0304 | 1.9141             | .2558          | -5.4835 | 3.5471  | -.5932 TO .4324          |
| TOTAL          | 224   | -.1426 |                    |                | -5.4835 | 3.5471  |                          |
| UNGROUPED DATA |       |        | 2.0644             | .1393          |         |         | -.4171 TO .1318          |

F-14a

----- C N E W A Y -----

VARIABLE XSDNE41 ADJUSTED RANK SUPPORT: WELFARE ETC. AFTR

CONTRAST COEFFICIENT MATRIX

|            | DDF | DDF  | DDF  | DDF  |
|------------|-----|------|------|------|
| CONTRAST 1 | .5  | .5   | -.5  | -.5  |
| CONTRAST 2 | .5  | -.5  | .5   | -.5  |
| CONTRAST 3 | 1.0 | -1.0 | 0    | 0    |
| CONTRAST 4 | 0   | 0    | 1.0  | -1.0 |
| CONTRAST 5 | 1.0 | 0    | -1.0 | 0    |
| CONTRAST 6 | 0   | 1.0  | 0    | -1.0 |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE  | S: ERROR | T VALUE | D.F.  | T PROB. | S: ERROR | T VALUE | D.F.  | T PROB. |
|------------|--------|----------|---------|-------|---------|----------|---------|-------|---------|
| CONTRAST 1 | .0276  | .2786    | .099    | 220.0 | .921    | .2786    | .099    | 211.9 | .921    |
| CONTRAST 2 | -.4016 | .2786    | -1.442  | 220.0 | .151    | .2786    | -1.442  | 211.9 | .151    |
| CONTRAST 3 | -.6511 | .3940    | -1.652  | 220.0 | .100    | .3773    | -1.726  | 109.3 | .087    |
| CONTRAST 4 | -.1521 | .3940    | -.386   | 220.0 | .700    | .4100    | -.371   | 104.9 | .711    |
| CONTRAST 5 | -.2218 | .3940    | -.563   | 220.0 | .574    | .4101    | -.541   | 104.9 | .590    |
| CONTRAST 6 | .2771  | .3940    | .703    | 220.0 | .483    | .3772    | .735    | 109.3 | .464    |

F 14B

TESTS FOR HOMOGENEITY OF VARIANCES

COCHRAN'S C = MAX. VARIANCE/SUM(VARIANCES) = .3307, P = .091 (APPROX.)  
 BARTLETT-BOX F = 1.283, P = .279  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 1.569

----- O N E W A Y -----

VARIABLE SOURCE TO ADJUSTED RANK SUPPORT: OTHERS-CHPTX AFTER  
 BY TREATMENT FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 27.1145        | 9.0382       | 2.192   | .090    |
| WITHIN GROUPS  | 220  | 907.2975       | 4.1241       |         |         |
| TOTAL          | 223  | 934.4120       |              |         |         |

| GROUP | COUNT | MEAN           | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|-------|-------|----------------|--------------------|----------------|---------|---------|--------------------------|
| DDF   | 55    | -.2820         | 1.8330             | .2456          | -4.4433 | 3.6713  | -.7742 TO .2102          |
| DDF   | 55    | .5270          | 1.9414             | .2594          | -5.4433 | 3.6713  | -.0777 TO 1.1180         |
| DD4   | 36    | -.2204         | 2.2537             | .3812          | -5.4433 | 3.6713  | -.8239 TO .3832          |
| DD7   | 35    | -.0159         | 2.0664             | .2761          | -5.4433 | 3.1522  | -.5695 TO .5377          |
| TOTAL | 224   | .0192          |                    |                | -5.4433 | 3.6713  |                          |
|       |       | UNGROUPED DATA | 2.0470             | .1368          |         |         | -.2496 TO .2894          |



----- C N F W A Y -----

VARIABLE X31NC19 ADJUSTED BANK SUPPORT: OTHERS-CHDPT AFTER

CONTRAST COEFFICIENT MATRIX

|            | DOF | DOF  | DOF  | 190  |
|------------|-----|------|------|------|
| CONTRAST 1 | .5  | .5   | -.5  | -.5  |
| CONTRAST 2 | .5  | -.3  | .5   | -.5  |
| CONTRAST 3 | 1.0 | -1.0 | 0    | 0    |
| CONTRAST 4 | 0   | 0    | 1.0  | -1.0 |
| CONTRAST 5 | 1.0 | 0    | -1.0 | 0    |
| CONTRAST 6 | 0   | 1.0  | 0    | -1.0 |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE  | S. ERROR | T VALUE | D.F.  | T PROB. | S. ERROR | T VALUE | D.F.  | T PROB. |
|------------|--------|----------|---------|-------|---------|----------|---------|-------|---------|
| CONTRAST 1 | .2761  | .2714    | 1.017   | 220.0 | .310    | .2714    | 1.017   | 214.9 | .310    |
| CONTRAST 2 | -.5132 | .2714    | -1.998  | 220.0 | .047    | .2714    | -1.998  | 214.9 | .047    |
| CONTRAST 3 | -.1709 | .3839    | -2.293  | 220.0 | .023    | .3573    | -2.463  | 109.7 | .015    |
| CONTRAST 4 | -.2945 | .3839    | -.533   | 220.0 | .595    | .4086    | -.500   | 109.2 | .618    |
| CONTRAST 5 | -.0616 | .3839    | -.161   | 220.0 | .873    | .3835    | -.159   | 105.7 | .874    |
| CONTRAST 6 | .0138  | .3839    | 1.599   | 220.0 | .111    | .3789    | 1.620   | 109.6 | .108    |

TESTS FOR HOMOGENEITY OF VARIANCES

Cochran's C = MAX. VARIANCE/SUM(VARIANCES) = .3079, P = .254 (APPROX.)  
 Bartlett-Blox F = .845, P = .469  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 1.503

F-15b

----- ONE WAY -----

VARIABLE YOUNG IN ADJUSTED BANK SUPPORT: WAGES+SALARY AFTR  
 BY TREATMENT FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 59.5309        | 19.8636      | 2.678   | .048    |
| WITHIN GROUPS  | 220  | 1631.6560      | 7.4166       |         |         |
| TOTAL          | 223  | 1691.2408      |              |         |         |

| GROUP          | COUNT | MEAN   | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|----------------|-------|--------|--------------------|----------------|---------|---------|--------------------------|
| ODF            | 56    | -.2534 | 2.4285             | .3245          | -3.3025 | 4.5611  | -.9038 TO .3969          |
| ODF            | 56    | -.1342 | 2.5576             | .3252          | -3.3025 | 4.5611  | -1.1266 TO .4582         |
| ODM            | 56    | .4241  | 2.8950             | .3869          | -3.3025 | 4.5611  | -.3512 TO 1.1994         |
| ODD            | 56    | .9234  | 2.5768             | .3243          | -3.3025 | 4.5611  | .2331 TO 1.6138          |
| TOTAL          | 224   | .1900  |                    |                | -3.3025 | 4.5611  |                          |
| UNGROUPED DATA |       |        | 2.7539             | .1840          |         |         | -.1726 TO .5526          |

F-16a

----- O N E W A Y -----

VARIABLE X=CONET3 ADJUSTED RANK SUPPORT: WAGES+SALARY AFTR

CONTRAST COEFFICIENT MATRIX

|            | ONE | TWO | THREE | FOUR |
|------------|-----|-----|-------|------|
| CONTRAST 1 | 1   | 0   | 0     | 0    |
| CONTRAST 2 | 0   | 1   | 0     | 0    |
| CONTRAST 3 | 1   | 1   | 0     | 0    |
| CONTRAST 4 | 0   | 0   | 1     | 0    |
| CONTRAST 5 | 1   | 0   | 0     | 1    |
| CONTRAST 6 | 0   | 1   | 0     | 1    |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE   | S.E. ERROR | T VALUE | D.F.  | T PROB. | S.E. ERROR | T VALUE | D.F.  | T PROB. |
|------------|---------|------------|---------|-------|---------|------------|---------|-------|---------|
| CONTRAST 1 | -.2676  | .3639      | -2.659  | 220.0 | .008    | .3639      | -2.659  | 214.5 | .008    |
| CONTRAST 2 | -.2093  | .3639      | -.575   | 220.0 | .566    | .3639      | -.575   | 214.5 | .566    |
| CONTRAST 3 | .0308   | .5147      | .157    | 220.0 | .875    | .5114      | .158    | 106.0 | .875    |
| CONTRAST 4 | -.4993  | .5147      | -.970   | 220.0 | .333    | .5179      | -.964   | 106.5 | .333    |
| CONTRAST 5 | -.4775  | .5147      | -1.316  | 220.0 | .189    | .5050      | -1.342  | 106.8 | .183    |
| CONTRAST 6 | -1.2576 | .5147      | -2.444  | 220.0 | .015    | .5242      | -2.399  | 108.0 | .018    |

F-166

TESTS FOR HOMOGENEITY OF VARIANCES

COCHRAN'S C = MAX. VARIANCE/SUM(VARIANCES) = .2949, P = .418 (APPROX.)  
 BARTLETT-PEAK E = .954, P = .414  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 1.483

SQUARE WEIGHTED MEAN TYPES WITHOUT DELETED CASES  
 [X] VARIABLES ADJUSTED ON BEFORE VALUES. N.A. SET = 0.  
 FILE DATASET (CREATED DATE = 08/26/77)

----- ONEWAY -----

VARIABLE BY XST#15R ADJUSTED AVERAGE MONTHLY LEGAL INCM. AFT  
 BY TOTANT FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 304028.7630    | 101342.9210  | 1.106   | .347    |
| WITHIN GROUPS  | 220  | 20156479.3325  | 91620.3606   |         |         |
| TOTAL          | 223  | 20460508.0955  |              |         |         |

| GROUP | COUNT | MEAN           | STANDARD DEVIATION | STANDARD ERROR | MINIMUM   | MAXIMUM   | 95 PCT CONF INT FOR MEAN |             |
|-------|-------|----------------|--------------------|----------------|-----------|-----------|--------------------------|-------------|
| DDF   | 56    | -5.8873        | 247.2478           | 33.0399        | -609.5165 | 469.3097  | -72.1007                 | TO 60.3261  |
| RDF   | 56    | 39.7552        | 292.2547           | 37.7179        | -538.5765 | 1019.3195 | -35.8647                 | TO 115.3750 |
| DDY   | 56    | -4.0275        | 338.6202           | 45.2497        | -900.4965 | 1269.3097 | -94.7100                 | TO 86.6551  |
| IPD   | 56    | -63.9411       | 333.1932           | 44.5249        | -638.5765 | 1042.8835 | -153.2081                | TO 25.3260  |
| TOTAL | 224   | -9.5251        |                    |                | -900.4965 | 1269.3097 |                          |             |
|       |       | UNGROUPED DATA | 302.9043           | 20.2386        |           |           | -48.4085                 | TO 31.3583  |

F-17a

SENATE WEIGHTED HEROIN TYPES WITHOUT DELETED CASES  
 [X] VARIABLES ADJUSTED ON BEFORE VALUES, N.A. SET = 0.  
 FILE DAT506 (CREATION DATE = 08/08/77)

----- O N E W A Y -----

VARIABLE XSTW06# ADJUSTED AVERAGE MONTHLY LEGAL INCM. AFT

CONTRAST COEFFICIENT MATRIX

|            | DDF | RDF  | DPM  | IPD  |
|------------|-----|------|------|------|
| CONTRAST 1 | .5  | .5   | -.5  | -.5  |
| CONTRAST 2 | .5  | -.5  | .5   | -.5  |
| CONTRAST 3 | 1.0 | -1.0 | 0    | 0    |
| CONTRAST 4 | 0   | 0    | 1.0  | -1.0 |
| CONTRAST 5 | 1.0 | 0    | -1.0 | 0    |
| CONTRAST 6 | 0   | 1.0  | 0    | -1.0 |

F-17b

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE    | S. ERROR | T VALUE | D.F.  | T PROB. | S. ERROR | T VALUE | D.F.  | T PROB. |
|------------|----------|----------|---------|-------|---------|----------|---------|-------|---------|
| CONTRAST 1 | 57.9182  | 40.4484  | 1.259   | 220.0 | .209    | 40.4484  | 1.259   | 207.8 | .209    |
| CONTRAST 2 | 7.1356   | 40.4484  | .176    | 220.0 | .860    | 40.4484  | .176    | 207.8 | .860    |
| CONTRAST 3 | -45.6424 | 57.2028  | -.798   | 220.0 | .426    | 50.1425  | -.910   | 108.1 | .365    |
| CONTRAST 4 | 59.9136  | 57.2025  | 1.047   | 220.0 | .296    | 63.4823  | .944    | 110.0 | .347    |
| CONTRAST 5 | -1.8598  | 57.2026  | -.033   | 220.0 | .974    | 56.0283  | -.033   | 100.7 | .974    |
| CONTRAST 6 | 103.6962 | 57.2028  | 1.813   | 220.0 | .071    | 58.3533  | 1.777   | 107.1 | .078    |

TESTS FOR HOMOGENEITY OF VARIANCES

COCHRAN'S C = MAX. VARIANCE/SUM(VARIANCES) = .3129, P = .206 (APPROX.)  
 BARTLETT-BOX = 2.328, P = .073  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 1.876

----- ONEWAY -----

VARIABLE X53NE15 ADJUSTED HOURLY WAGE OF BEST JOB AFTER

CONTRAST COEFFICIENT MATRIX

|            | DPF | DDF  | DDM  | IPD  |
|------------|-----|------|------|------|
| CONTRAST 1 | .5  | .5   | -.5  | -.5  |
| CONTRAST 2 | .5  | -.5  | .5   | -.5  |
| CONTRAST 3 | 1.0 | -1.0 | 0    | 0    |
| CONTRAST 4 | 0   | 0    | 1.0  | -1.0 |
| CONTRAST 5 | 1.0 | 0    | -1.0 | 0    |
| CONTRAST 6 | 0   | 1.0  | 0    | -1.0 |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE  | S. ERROR | T VALUE | D.F.  | T PROB. | S. ERROR | T VALUE | D.F.  | T PROB. |
|------------|--------|----------|---------|-------|---------|----------|---------|-------|---------|
| CONTRAST 1 | .3009  | .3031    | .992    | 220.0 | .322    | .3031    | .992    | 214.0 | .322    |
| CONTRAST 2 | -.0767 | .3031    | -.251   | 220.0 | .800    | .3031    | -.253   | 214.0 | .800    |
| CONTRAST 3 | -.2131 | .4287    | -.497   | 220.0 | .620    | .3949    | -.540   | 108.5 | .591    |
| CONTRAST 4 | .0597  | .4287    | .139    | 220.0 | .889    | .4600    | .130    | 109.9 | .897    |
| CONTRAST 5 | .1644  | .4287    | .384    | 220.0 | .702    | .4210    | .391    | 104.8 | .697    |
| CONTRAST 6 | .4372  | .4287    | 1.020   | 220.0 | .309    | .4362    | 1.002   | 109.2 | .318    |

TESTS FOR HOMOGENEITY OF VARIANCES

COCHRAN'S C = MAX. VARIANCE/SUM(VARIANCES) = .2950, P = .416 (APPROX.)  
 BARTLETT-BOX F = 1.106, P = .346  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 1.576

F-18a

----- ONE WAY -----

VARIABLE XSJNE35 ADJUSTED HOURLY WAGE OF BEST JOB AFTER  
 BY TPTVNT FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 6.4356         | 2.1465       | .417    | .741    |
| WITHIN GROUPS  | 220  | 1132.0262      | 5.1456       |         |         |
| TOTAL          | 223  | 1138.4658      |              |         |         |

| GROUP          | COUNT | MEAN   | STANDARD<br>DEVIATION | STANDARD<br>ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|----------------|-------|--------|-----------------------|-------------------|---------|---------|--------------------------|
| DDF            | 56    | -.1674 | 1.9632                | .2623             | -3.5825 | 5.6369  | -.6931 TO .3584          |
| RJE            | 56    | .0458  | 2.2093                | .2952             | -3.5825 | 7.2137  | -.5461 TO .6377          |
| UPX            | 56    | -.3318 | 2.4642                | .3293             | -5.2401 | 7.2137  | -.9917 TO .3281          |
| TPD            | 56    | -.3915 | 2.4031                | .3211             | -3.9969 | 7.2137  | -1.0353 TO .2525         |
| TOTAL          | 224   | -.2112 |                       |                   | -5.2401 | 7.2137  |                          |
| UNGROUPED DATA |       |        | 2.2595                | .1510             |         |         | -.5087 TO .0863          |

ONE WAY

VARIABLE BY TREATMENT ADJUSTED MONTHS EMPLOYED BEST JOB AFTER FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 50.8402        | 16.9467      | .968    | .409    |
| WITHIN GROUPS  | 220  | 3850.9946      | 17.5045      |         |         |
| TOTAL          | 223  | 3901.8348      |              |         |         |

| GROUP          | COUNT | MEAN   | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |           |
|----------------|-------|--------|--------------------|----------------|---------|---------|--------------------------|-----------|
| DDF            | 56    | .1059  | 4.2583             | .5670          | -6.4023 | 8.1056  | -1.0345                  | TO 1.2463 |
| RDF            | 56    | .3928  | 4.2581             | .5690          | -6.4023 | 8.1056  | -.7480                   | TO 1.5337 |
| DDH            | 56    | .1593  | 4.5693             | .6106          | -6.4023 | 8.1056  | -1.0638                  | TO 1.3835 |
| DDI            | 56    | -.9521 | 3.5881             | .4795          | -5.4456 | 8.1056  | -1.9134                  | TO .1092  |
| TOTAL          | 224   | -.0484 |                    |                | -6.4023 | 8.1056  |                          |           |
| UNGROUPED DATA |       |        | 4.1829             | .2795          |         |         | -.5992                   | TO .5024  |



----- ONE WAY -----

VARIABLE XSONE IS ADJUSTED MONTHS EMPLOYED BEST JOB AFTER

CONTRAST COEFFICIENT MATRIX

|            | DDF | RDF  | DDM  | DDO  |
|------------|-----|------|------|------|
| CONTRAST 1 | .5  | .5   | -.5  | -.5  |
| CONTRAST 2 | .5  | -.5  | .5   | -.5  |
| CONTRAST 3 | 1.0 | -1.0 | 0    | 0    |
| CONTRAST 4 | 0   | 0    | 1.0  | -1.0 |
| CONTRAST 5 | 1.0 | 0    | -1.0 | 0    |
| CONTRAST 6 | 0   | 1.0  | 0    | -1.0 |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE  | S. ERROR | T VALUE | D.F.  | T PROB. | S. ERROR | T VALUE | D.F.  | T PROB. |
|------------|--------|----------|---------|-------|---------|----------|---------|-------|---------|
| CONTRAST 1 | .5955  | .5591    | 1.065   | 220.0 | .288    | .5591    | 1.065   | 214.1 | .288    |
| CONTRAST 2 | .3625  | .5591    | .648    | 220.0 | .517    | .5591    | .648    | 214.1 | .517    |
| CONTRAST 3 | -.2870 | .7907    | -.363   | 220.0 | .717    | .8047    | -.357   | 110.0 | .722    |
| CONTRAST 4 | 1.0120 | .7907    | 1.280   | 220.0 | .202    | .7764    | 1.304   | 104.1 | .195    |
| CONTRAST 5 | -.0540 | .7907    | -.068   | 220.0 | .946    | .8346    | -.065   | 109.5 | .949    |
| CONTRAST 6 | 1.2450 | .7907    | 1.575   | 220.0 | .117    | .7441    | 1.673   | 106.9 | .097    |

F-19b

TESTS FOR HOMOGENEITY OF VARIANCES

COCHRAN'S C = MAX. VARIANCE/SUM(VARIANCES) = .2942, P = .371 (APPROX.)  
 BARTLETT-BOX F = 1.100, P = .348  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 1.622

FILE NUMBER (OR ATTORNEY DATE #) 00753777 5

ONE WAY

VARIABLE BY GROUP BEFORE VS AFTER WORK-INVOLVEMENT CHANGES  
FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 23.7254        | 7.9085       | 1.291   | .278    |
| WITHIN GROUPS  | 220  | 1347.4743      | 6.1249       |         |         |
| TOTAL          | 223  | 1371.1997      |              |         |         |

| GROUP           | COUNT | MEAN   | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|-----------------|-------|--------|--------------------|----------------|---------|---------|--------------------------|
| DDF             | 56    | 1.1839 | 2.4525             | .3277          | -4.0000 | 4.0000  | .5271 TO 1.8407          |
| DDG             | 56    | .2254  | 2.6068             | .3493          | -4.0000 | 4.0000  | .2271 TO 1.6238          |
| DDH             | 56    | .3143  | 2.5698             | .3433          | -4.0000 | 4.0000  | .1264 TO 1.5022          |
| DDI             | 56    | .2897  | 2.2563             | .3015          | -4.0000 | 4.0000  | -.3148 TO .8942          |
| TOTAL           | 224   | .8034  |                    |                | -4.0000 | 4.0000  |                          |
| UNRECORDED DATA |       |        | 2.4797             | .1657          |         |         | .4769 TO 1.1299          |

F-20a

FILE STATUS (CREATION DATE = 08/08/77)

ONE WAY

VARIABLE WORK BEFORE VS AFTER WORK-INVOLVEMENT CHANGES

CONTRAST COEFFICIENT MATRIX

|            | DD  | DD   | DD   | DD   |
|------------|-----|------|------|------|
| CONTRAST 1 | .5  | .5   | -.5  | -.5  |
| CONTRAST 2 | .5  | -.5  | .5   | -.5  |
| CONTRAST 3 | 1.0 | -1.0 | 0    | 0    |
| CONTRAST 4 | 0   | 0    | 1.0  | -1.0 |
| CONTRAST 5 | 1.0 | 0    | -1.0 | 0    |
| CONTRAST 6 | 0   | 1.0  | 0    | -1.0 |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE | S. ERPR | T VALUE | D.F.  | T PROB. | S. ERPR | T VALUE | D.F.  | T PROB. |
|------------|-------|---------|---------|-------|---------|---------|---------|-------|---------|
| CONTRAST 1 | .5027 | .3307   | 1.520   | 220.0 | .130    | .3307   | 1.520   | 217.5 | .130    |
| CONTRAST 2 | .3715 | .3307   | 1.184   | 220.0 | .238    | .3307   | 1.184   | 217.5 | .238    |
| CONTRAST 3 | .2585 | .4677   | .553    | 220.0 | .581    | .4783   | .540    | 109.6 | .590    |
| CONTRAST 4 | .5246 | .4677   | 1.122   | 220.0 | .263    | .4569   | 1.148   | 108.2 | .253    |
| CONTRAST 5 | .3625 | .4677   | .770    | 220.0 | .430    | .4746   | .779    | 109.8 | .438    |
| CONTRAST 6 | .6387 | .4677   | 1.350   | 220.0 | .175    | .4607   | 1.380   | 107.8 | .170    |

F-20B

TESTS FOR HOMOGENEITY OF VARIANCES

COCHRAN'S C = MAX. VARIANCE / SUM(VARIANCES) = .2774, P = .742 (APPROX.)  
 BARTLETT-BOX F = .449, P = .718  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 1.335

----- C N E W A Y -----

VARIABLE YES/NO ADJUSTED RANK SUPPORT: ILLEGAL ACTS AFTR  
 BY TREATMENT FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 50.7143        | 15.9048      | 3.477   | .017    |
| WITHIN GROUPS  | 220  | 1069.7520      | 4.8625       |         |         |
| TOTAL          | 223  | 1120.4663      |              |         |         |

| GROUP           | COUNT | MEAN   | STANDARD<br>DEV IATION | STANDARD<br>ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|-----------------|-------|--------|------------------------|-------------------|---------|---------|--------------------------|
| 005             | 55    | -.0165 | 2.0599                 | .2753             | -5.4629 | 2.6599  | -.5681 TO .5352          |
| 015             | 55    | .1077  | 2.4919                 | .3370             | -5.4629 | 2.6599  | -.5600 TO .7753          |
| 025             | 55    | .4697  | 1.9199                 | .2432             | -5.4629 | 2.6599  | -.0177 TO .9570          |
| 120             | 58    | -.8315 | 2.3943                 | .3186             | -5.4629 | 2.6599  | -1.4704 TO -.1928        |
| TOTAL           | 224   | -.0677 |                        |                   | -5.4629 | 2.6599  |                          |
| UNRECORDED DATA |       |        | 2.2415                 | .1408             |         |         | -.3628 TO .2275          |

F-21a

----- C N F W A Y -----

VARIABLE XS1940 ADJUSTED RANK SUPPORT: ILLEGAL ACTS AFTR

CONTRAST COEFFICIENT MATRIX

|            | REF | DDF  | DDM  | DDP  |
|------------|-----|------|------|------|
| CONTRAST 1 | .5  | .5   | -.5  | -.5  |
| CONTRAST 2 | .5  | -.5  | .5   | -.5  |
| CONTRAST 3 | 1.0 | -1.0 | 0    | 0    |
| CONTRAST 4 | 0   | 0    | 1.0  | -1.0 |
| CONTRAST 5 | 1.0 | 0    | -1.0 | 0    |
| CONTRAST 6 | 0   | 1.0  | 0    | -1.0 |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE  | S. ERROR | T VALUE | D.F.  | T PROB. | S. ERROR | T VALUE | D.F.  | T PROB. |
|------------|--------|----------|---------|-------|---------|----------|---------|-------|---------|
| CONTRAST 1 | .2265  | .2947    | .769    | 220.0 | .443    | .2947    | .769    | 208.4 | .443    |
| CONTRAST 2 | .5986  | .2947    | 1.997   | 220.0 | .047    | .2947    | 1.997   | 208.4 | .047    |
| CONTRAST 3 | -.1241 | .4167    | -.298   | 220.0 | .766    | .4320    | -.287   | 106.2 | .774    |
| CONTRAST 4 | 1.3012 | .4167    | 3.122   | 220.0 | .002    | .4008    | 3.246   | 102.8 | .002    |
| CONTRAST 5 | -.4861 | .4167    | -1.166  | 220.0 | .245    | .3673    | -1.323  | 108.4 | .188    |
| CONTRAST 6 | .9392  | .4167    | 2.254   | 220.0 | .025    | .4609    | 2.038   | 109.8 | .044    |

F-21b

TESTS FOR HOMOGENEITY OF VARIANCES

COCHRAN'S C = MAX. VARIANCE/SUM(VARIANCES) = .3193, P = .156 (APPROX.)  
 BARTLETT-BOX F = 2.172, P = .090  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 1.875

----- O N E W A Y -----

VARIABLE XSTW09 ADJUSTED AVERAGE MONTHLY ILLEG INCM AFTR  
 BY TRTMT FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 1236128.9482   | 412042.9827  | 2.476   | .062    |
| WITHIN GROUPS  | 220  | 36609834.5234  | 166408.3387  |         |         |
| TOTAL          | 223  | 37845963.4716  |              |         |         |

| GROUP          | COUNT | MEAN     | STANDARD<br>DEVIATION | STANDARD<br>ERROR | MINIMUM   | MAXIMUM   | 95 PCT CONF INT FOR MEAN |             |
|----------------|-------|----------|-----------------------|-------------------|-----------|-----------|--------------------------|-------------|
| ODF            | 55    | .5528    | 326.1395              | 43.5822           | -557.8694 | 1142.6306 | -96.7880                 | TO 87.8935  |
| RD             | 56    | -7.9734  | 500.9785              | 66.9461           | -557.8694 | 1201.7706 | -142.1923                | TO 126.2455 |
| OPM            | 56    | -61.5834 | 244.8094              | 32.7139           | -557.8694 | 1142.6306 | -127.1434                | TO 3.9765   |
| IPD            | 56    | 139.4979 | 498.3532              | 66.5954           | -557.8694 | 1645.4684 | 5.9822                   | TO 273.0135 |
| TOTAL          | 224   | 17.6231  |                       |                   | -557.8694 | 1645.4684 |                          |             |
| UNGROUPED DATA |       |          | 411.9618              | 27.5253           |           |           | -36.6199                 | TO 71.8661  |

F-22A

----- ONE WAY -----

VARIABLE XSTW769 ADJUSTED AVERAGE MONTHLY ILLEG INCM AFTR

CONTRAST COEFFICIENT MATRIX

|            | DDF | RDF  | OPM  | IPD  |
|------------|-----|------|------|------|
| CONTRAST 1 | .5  | .5   | -.5  | -.5  |
| CONTRAST 2 | .5  | -.5  | .5   | -.5  |
| CONTRAST 3 | 1.0 | -1.0 | 0    | 0    |
| CONTRAST 4 | 0   | 0    | 1.0  | -1.0 |
| CONTRAST 5 | 1.0 | 0    | -1.0 | 0    |
| CONTRAST 6 | 0   | 1.0  | 0    | -1.0 |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE     | S. ERROR | T VALUE | D.F.  | T PROB. | S. ERROR | T VALUE | D.F.  | T PROB. |
|------------|-----------|----------|---------|-------|---------|----------|---------|-------|---------|
| CONTRAST 1 | -42.6675  | 54.5121  | -.783   | 220.0 | .435    | 54.5122  | -.783   | 174.6 | .435    |
| CONTRAST 2 | -95.2776  | 54.5121  | -1.766  | 220.0 | .079    | 54.5122  | -1.766  | 174.6 | .079    |
| CONTRAST 3 | 9.5262    | 77.0919  | .111    | 220.0 | .912    | 79.8824  | .107    | 94.5  | .915    |
| CONTRAST 4 | -201.0813 | 77.0917  | -2.608  | 220.0 | .010    | 74.1966  | -2.710  | 80.1  | .008    |
| CONTRAST 5 | 62.1362   | 77.0916  | .806    | 220.0 | .421    | 54.4941  | 1.140   | 102.0 | .257    |
| CONTRAST 6 | -147.4712 | 77.0920  | -1.913  | 220.0 | .057    | 94.4284  | -1.562  | 110.0 | .121    |

F-22b

TESTS FOR HOMOGENEITY OF VARIANCES

Cochran's C = MAX. VARIANCE/SUM(VARIANCES) = .3771, P = .006 (APPROX.)  
 Bartlett-Rox F = 11.966, P = .000  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 4.188

ONE WAY

VARIABLE XMAA ADJUSTED NO. TIMES ARBSTD+CHRGD AFTER  
 BY TOTMUT FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 9.5962         | 3.1987       | 2.785   | .042    |
| WITHIN GROUPS  | 217  | 249.2460       | 1.1486       |         |         |
| TOTAL          | 220  | 258.8422       |              |         |         |

| GROUP             | COUNT | MEAN   | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|-------------------|-------|--------|--------------------|----------------|---------|---------|--------------------------|
| DDT               | 56    | -.0427 | 1.0522             | .1406          | -1.2056 | 3.3803  | -.3245 TO .2391          |
| DDF               | 50    | .1495  | 1.1666             | .1599          | -1.2056 | 3.3803  | -.1711 TO .4701          |
| DDA               | 55    | -.2276 | .9387              | .1254          | -1.2056 | 3.5756  | -.4790 TO .0238          |
| DDO               | 59    | .7320  | 1.0865             | .1479          | -1.2056 | 3.5756  | .0352 TO .6288           |
| TOTAL             | 220   | .0405  |                    |                | -1.2056 | 3.5756  |                          |
| UNREPRODUCED DATA |       |        | 1.0838             | .0728          |         |         | -.0941 TO .1930          |

4-238



----- O N E W A Y -----

.VARIABLE XAAA ADJUSTED NO. TIMES APPSTD+CHPGD AFTER

CONTRAST COEFFICIENT MATRIX

|            | ONE | TWO  | THREE | FOUR |
|------------|-----|------|-------|------|
| CONTRAST 1 | .5  | .5   | -.5   | -.5  |
| CONTRAST 2 | .5  | -.5  | .5    | -.5  |
| CONTRAST 3 | 1.0 | -1.0 | 0     | 0    |
| CONTRAST 4 | 0   | 0    | 1.0   | -1.0 |
| CONTRAST 5 | 1.0 | 0    | -1.0  | 0    |
| CONTRAST 6 | 0   | 1.0  | 0     | -1.0 |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE  | S. ERROR | T VALUE | D.F.  | T PROB. | S. ERROR | T VALUE | D.F.  | T PROB. |
|------------|--------|----------|---------|-------|---------|----------|---------|-------|---------|
| CONTRAST 1 | .0012  | .1441    | .008    | 217.0 | .993    | .1440    | .008    | 210.9 | .993    |
| CONTRAST 2 | -.3759 | .1441    | -2.600  | 217.0 | .010    | .1440    | -2.611  | 210.9 | .010    |
| CONTRAST 3 | -.1922 | .2025    | -.940   | 217.0 | .344    | .2129    | -.903   | 108.2 | .369    |
| CONTRAST 4 | -.5596 | .2050    | -2.730  | 217.0 | .007    | .1939    | -2.886  | 103.7 | .005    |
| CONTRAST 5 | .1849  | .2025    | .913    | 217.0 | .362    | .1884    | .981    | 108.6 | .329    |
| CONTRAST 6 | -.1825 | .2050    | -.890   | 217.0 | .374    | .2178    | -.838   | 107.1 | .404    |

TESTS FOR HOMOGENEITY OF VARIANCES

Cochran's C = MAX. VARIANCE/SUM(VARIANCES) = .3121, P = .218 (APPROX.)  
 Bartlett-Box F = 1.194, P = .315  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 1.525

F-235

----- C N F W A Y -----

VARIABLE NETWORK ADJUSTED OTHER KINDS OF THEFT AFTER  
 BY COUNTY PERCENT FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 6.7666         | 2.2562       | .864    | .461    |
| WITHIN GROUPS  | 214  | 559.1111       | 2.6127       |         |         |
| TOTAL          | 217  | 565.8777       |              |         |         |

| GROUP          | COUNT | MEAN   | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|----------------|-------|--------|--------------------|----------------|---------|---------|--------------------------|
| 000            | 52    | .1754  | 1.3821             | .1903          | -1.9029 | 3.4220  | -.2076 TO .5583          |
| 001            | 54    | .2235  | 1.8659             | .2491          | -1.9029 | 4.7216  | -.2764 TO .7234          |
| 004            | 55    | -.2220 | 1.5135             | .2035          | -1.9029 | 4.7216  | -.6299 TO .1859          |
| 100            | 56    | .1227  | 1.5530             | .2250          | -1.9029 | 4.7216  | -.3287 TO .5742          |
| TOTAL          | 217   | .0737  |                    |                | -1.9029 | 4.7216  |                          |
| UNGROUPED DATA |       |        | 1.6155             | .1095          |         |         | -.1420 TO .2895          |

F-24a

CONTRAST WAY

ADJUSTED OTHER KINDS OF THEFT AFTER

CONTRAST MATRIX

|            | CONTRAST | COV | CON  | TRD  |
|------------|----------|-----|------|------|
| CONTRAST 1 | 1        | .5  | .5   | -.5  |
| CONTRAST 2 | 2        | .5  | -.5  | .5   |
| CONTRAST 3 | 3        | 1.0 | -1.0 | 0    |
| CONTRAST 4 | 4        | 0   | 0    | 1.0  |
| CONTRAST 5 | 5        | 1.0 | 0    | -1.0 |
| CONTRAST 6 | 6        | 0   | 1.0  | 0    |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE  | S. ERROR | T VALUE | D.F.  | T PROB. | S. ERROR | T VALUE | D.F.  | T PROB. |
|------------|--------|----------|---------|-------|---------|----------|---------|-------|---------|
| CONTRAST 1 | .2491  | .2191    | 1.137   | 214.0 | .257    | .2183    | 1.141   | 206.5 | .255    |
| CONTRAST 2 | -.1264 | .2191    | -.896   | 214.0 | .371    | .2183    | -.900   | 206.5 | .369    |
| CONTRAST 3 | -.0491 | .3105    | -.155   | 214.0 | .877    | .3139    | -.153   | 101.2 | .879    |
| CONTRAST 4 | -.3447 | .3092    | -1.115  | 214.0 | .266    | .3033    | -1.136  | 106.0 | .258    |
| CONTRAST 5 | .3074  | .3114    | 1.276   | 214.0 | .203    | .2789    | 1.425   | 105.7 | .157    |
| CONTRAST 6 | .1008  | .3083    | .327    | 214.0 | .744    | .3358    | .300    | 107.2 | .765    |

H-24b

TESTS FOR HOMOGENEITY OF VARIANCES

Cochran C = MAX. VARIANCE/SUM(VARIANCES) = .3343, P = .083 (APPROX.)  
 BARTLETT-BOX F = 1.746; P = .156  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 1.823

----- ONE WAY -----

VARIABLE XSTRM<sup>2</sup> ADJUSTED BURC OR BRNG+ENTPNG AFTER  
 BY TOTANT FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 3.3962         | 1.1321       | 1.282   | .282    |
| WITHIN GROUPS  | 207  | 182.8111       | .8831        |         |         |
| TOTAL          | 210  | 186.2074       |              |         |         |

| GROUP          | COUNT | MEAN   | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|----------------|-------|--------|--------------------|----------------|---------|---------|--------------------------|
| DDF            | 51    | .1987  | .9716              | .1372          | -1.3251 | 3.9254  | -.0769 TC .4744          |
| RDF            | 56    | -.0224 | 1.0693             | .1429          | -1.3251 | 3.6749  | -.3088 TC .2641          |
| PPA            | 53    | -.1392 | .5462              | .0744          | -1.3251 | 3.9250  | -.2884 TC .0101          |
| IPD            | 51    | .1726  | 1.0706             | .1494          | -1.3251 | 3.6749  | -.1975 TC .4027          |
| TOTAL          | 211   | .0306  |                    |                | -1.3251 | 3.9254  |                          |
| UNGROUPED DATA |       |        | .9405              | .0647          |         |         | -.0969 TC .1582          |

F-258

----- I N F O R M A T I O N -----

VARIABLE X12345 ADJUSTED BUREG OF POKNG+ENTONG AFTER

CONTRAST COEFFICIENT MATRIX

|            | CON | TR   | AS   | T    | PO   |
|------------|-----|------|------|------|------|
| CONTRAST 1 | 1   | 0    | 0    | -0.5 | -0.5 |
| CONTRAST 2 | 0   | 1    | 0    | 0.5  | -0.5 |
| CONTRAST 3 | 1.0 | -1.0 | 0    | 0    | 0    |
| CONTRAST 4 | 0   | 0    | 1.0  | -1.0 | 0    |
| CONTRAST 5 | 1.0 | 0    | -1.0 | 0    | 0    |
| CONTRAST 6 | 0   | 0    | 1.0  | 0    | -1.0 |

----- P O S T H O U M O U S -----

|            | VALUE  | S. ERROR | COLLIDED VARIANCE ESTIMATE |       |         | SEPARATE VARIANCE ESTIMATE |         |       |         |
|------------|--------|----------|----------------------------|-------|---------|----------------------------|---------|-------|---------|
|            |        |          | T VALUE                    | D.F.  | T PROB. | S. ERROR                   | T VALUE | D.F.  | T PROB. |
| CONTRAST 1 | .1065  | .1294    | .823                       | 207.0 | .411    | .1295                      | .822    | 178.2 | .412    |
| CONTRAST 2 | -.0193 | .1294    | -.090                      | 207.0 | .936    | .1295                      | -.080   | 178.2 | .937    |
| CONTRAST 3 | .2211  | .1827    | 1.210                      | 207.0 | .228    | .1981                      | 1.116   | 104.1 | .267    |
| CONTRAST 4 | -.2419 | .1832    | -1.320                     | 207.0 | .188    | .1662                      | -1.449  | 74.1  | .152    |
| CONTRAST 5 | .3379  | .1843    | 1.833                      | 207.0 | .068    | .1560                      | 2.165   | 76.2  | .033    |
| CONTRAST 6 | -.1250 | .1816    | -.638                      | 207.0 | .492    | .2067                      | -.605   | 104.5 | .547    |

F-25b

TESTS FOR HOMOGENEITY OF VARIANCES

COCHRAN C = MAX. VARIANCE/SUM(VARIANCES) = .3245, P = .135 (APPROX.)  
 BARTLETT-BX F = 8.827, P = .000  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 3.841

----- ONEWAY -----

VARIABLE YAGE ADJUSTED BARBITURATES RANK AFTER  
 BY TREAT FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | .8342          | .2981        | .412    | .745    |
| WITHIN GROUPS  | 220  | 150.2896       | .7240        |         |         |
| TOTAL          | 223  | 160.1830       |              |         |         |

| GROUP          | COUNT | MEAN   | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|----------------|-------|--------|--------------------|----------------|---------|---------|--------------------------|
| DDF            | 50    | -.0090 | .6980              | .0933          | -.8061  | 3.1939  | -.1969 TO .1770          |
| DDF            | 56    | .1002  | 1.1159             | .1491          | -.9970  | 3.9575  | -.1997 TO .3992          |
| DDF            | 56    | -.0579 | .7400              | .0989          | -.9970  | 4.0030  | -.2561 TO .1403          |
| DDF            | 55    | -.0505 | .7850              | .1049          | -.9970  | 4.0030  | -.2608 TO .1598          |
| TOTAL          | 224   | -.0045 |                    |                | -.9970  | 4.0030  |                          |
| UNGROUPED DATA |       |        | .6475              | .0566          |         |         | -.1161 TO .1071          |

F-26a

----- C N F W A Y -----

VARIABLE XAN% ADJUSTED RABBITURATES PANK AFTER

CONTRAST COEFFICIENT MATRIX

|            | DOE | DM   | OPM  | IPD  |
|------------|-----|------|------|------|
| CONTRAST 1 | .5  | .5   | -.5  | -.5  |
| CONTRAST 2 | .5  | -.5  | .5   | -.5  |
| CONTRAST 3 | 1.0 | -1.0 | 0    | 0    |
| CONTRAST 4 | 0   | 0    | 1.0  | -1.0 |
| CONTRAST 5 | 1.0 | 0    | -1.0 | 0    |
| CONTRAST 6 | 0   | 1.0  | 0    | -1.0 |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE  | S. ERROR | T VALUE | D.F.  | T PROB. | S. ERROR | T VALUE | D.F.  | T PROB. |
|------------|--------|----------|---------|-------|---------|----------|---------|-------|---------|
| CONTRAST 1 | .0994  | .1137    | .874    | 220.0 | .383    | .1137    | .874    | 187.0 | .383    |
| CONTRAST 2 | -.0589 | .1137    | -.517   | 220.0 | .606    | .1137    | -.517   | 187.0 | .606    |
| CONTRAST 3 | -.1102 | .1609    | -.685   | 220.0 | .494    | .1759    | -.626   | 92.3  | .533    |
| CONTRAST 4 | -.0074 | .1609    | -.046   | 220.0 | .964    | .1442    | -.051   | 109.6 | .959    |
| CONTRAST 5 | .0480  | .1609    | .298    | 220.0 | .766    | .1359    | .353    | 109.6 | .725    |
| CONTRAST 6 | .1609  | .1609    | .939    | 220.0 | .349    | .1823    | .827    | 98.7  | .410    |

F-265

TESTS FOR HOMOGENEITY OF VARIANCES

Cochran's C = MAX. VARIANCE/SUM(VARIANCES) = .4299, P = .000 (APPROX.)  
 Bartlett-Pox F = 5.361, P = .001  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 2.556

----- D N E W A Y -----

VARIABLE X AND Y ADJUSTED ALCOHOL RANK AFTER  
 BY TREATMENT FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 9.7296         | 3.2432       | 1.025   | .382    |
| WITHIN GROUPS  | 220  | 696.2847       | 3.1649       |         |         |
| TOTAL          | 223  | 706.0143       |              |         |         |

| GROUP          | COUNT | MEAN   | STANDARD<br>DEVIATION | STANDARD<br>ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|----------------|-------|--------|-----------------------|-------------------|---------|---------|--------------------------|
| DDF            | 56    | .0748  | 1.7669                | .2353             | -2.8587 | 4.2481  | -.4368 TO .5063          |
| DDF            | 56    | -.3442 | 1.7823                | .2382             | -3.3854 | 4.2481  | -.8217 TO .1333          |
| DDF            | 56    | .1627  | 2.0337                | .2718             | -3.3854 | 4.2481  | -.3819 TO .7073          |
| DDF            | 56    | -.2642 | 1.4589                | .2007             | -2.8587 | 4.2481  | -.6657 TO .1374          |
| TOTAL          | 224   | -.1027 |                       |                   | -3.3854 | 4.2481  |                          |
| UNGROUPED DATA |       |        | 1.7793                | .1189             |         |         | -.3370 TO .1316          |

F-27a



----- ONE WAY -----

VARIABLE XAD12 ADJUSTED ALCOHOL RANK AFTER

CONTRAST COEFFICIENT MATRIX

|            | TYPE | DF  | NUM  | IPD  |
|------------|------|-----|------|------|
| CONTRAST 1 | 1    | .5  | .5   | -.5  |
| CONTRAST 2 | 2    | .5  | -.5  | .5   |
| CONTRAST 3 | 3    | 1.0 | -1.0 | 0    |
| CONTRAST 4 | 4    | 0   | 0    | 1.0  |
| CONTRAST 5 | 5    | 1.0 | 0    | -1.0 |
| CONTRAST 6 | 6    | 0   | 1.0  | 0    |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE  | S. ERROR | T VALUE | D.F.  | T PROB. | S. ERROR | T VALUE | D.F.  | T PROB. |
|------------|--------|----------|---------|-------|---------|----------|---------|-------|---------|
| CONTRAST 1 | -.1040 | .2377    | -.437   | 220.0 | .662    | .2377    | -.437   | 210.6 | .662    |
| CONTRAST 2 | .4029  | .2377    | 1.695   | 220.0 | .092    | .2377    | 1.695   | 210.6 | .092    |
| CONTRAST 3 | .3790  | .3362    | 1.127   | 220.0 | .261    | .3348    | 1.132   | 110.0 | .260    |
| CONTRAST 4 | .4260  | .3362    | 1.270   | 220.0 | .206    | .3376    | 1.264   | 101.1 | .209    |
| CONTRAST 5 | -.1279 | .3362    | -.381   | 220.0 | .704    | .3595    | -.356   | 107.8 | .723    |
| CONTRAST 6 | -.0901 | .3362    | -.278   | 220.0 | .812    | .3112    | -.257   | 106.9 | .797    |

F-27b

TESTS FOR HOMOGENEITY OF VARIANCES

Cochran's C = MAX. VARIANCE / SUM(VARIANCES) = .3267, P = .111 (APPROX.)  
 Bartlett's Box F = 1.675, P = .171  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 1.841

----- ONE WAY -----

VARIABLE XAVA ADJUSTED \$ VALUE EACH ALCOHOL USE AFTER  
 TY TRTMT FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 9.6438         | 3.2146       | 1.081   | .358    |
| WITHIN GROUPS  | 220  | 654.0858       | 2.9731       |         |         |
| TOTAL          | 223  | 663.7296       |              |         |         |

| GROUP          | COUNT | MEAN   | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|----------------|-------|--------|--------------------|----------------|---------|---------|--------------------------|
| DDF            | 56    | -.3006 | 2.3734             | .3172          | -9.0632 | 9.4928  | -.9362 TO .3350          |
| RDF            | 56    | -.3768 | 1.1907             | .1591          | -4.5212 | 2.2638  | -.8958 TO -.2578         |
| DD4            | 56    | .0089  | 1.7105             | .2286          | -4.5212 | 6.7638  | -.4492 TO .4669          |
| LD             | 56    | -.2629 | 1.3941             | .1850          | -1.6446 | 7.9788  | -.6337 TO .1080          |
| TOTAL          | 224   | -.2829 |                    |                | -9.0632 | 9.4928  |                          |
| UNGROUPED DATA |       |        | 1.7252             | .1153          |         |         | -.5100 TO -.0557         |

F-288

----- D N E W A Y -----

VARIABLE XAVA ADJUSTED \$ VALUE EACH ALCOHOL USE AFTER

CONTRAST COEFFICIENT MATRIX

|            |     | DDF  | DDF  | UPM  | IPD |
|------------|-----|------|------|------|-----|
| CONTRAST 1 | .5  | .5   | -.5  | -.5  |     |
| CONTRAST 2 | .5  | -.5  | .5   | -.5  |     |
| CONTRAST 3 | 1.0 | -1.0 | 0    | 0    |     |
| CONTRAST 4 | 0   | 0    | 1.0  | -1.0 |     |
| CONTRAST 5 | 1.0 | 0    | -1.0 | 0    |     |
| CONTRAST 6 | 0   | 1.0  | 0    | -1.0 |     |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE  | S. ERROR | T VALUE | D.F.  | T PROB. | S. ERROR | T VALUE | D.F.  | T PROB. |
|------------|--------|----------|---------|-------|---------|----------|---------|-------|---------|
| CONTRAST 1 | -.3117 | .2304    | -1.353  | 220.0 | .178    | .2304    | -1.353  | 169.2 | .178    |
| CONTRAST 2 | .2739  | .2304    | 1.189   | 220.0 | .236    | .2304    | 1.189   | 169.2 | .236    |
| CONTRAST 3 | .2762  | .3259    | .847    | 220.0 | .398    | .3548    | .778    | 81.0  | .439    |
| CONTRAST 4 | .2717  | .3259    | .834    | 220.0 | .405    | .2940    | .924    | 105.4 | .358    |
| CONTRAST 5 | -.3095 | .3259    | -.950   | 220.0 | .343    | .3909    | -.792   | 100.0 | .430    |
| CONTRAST 6 | -.3139 | .3259    | -.963   | 220.0 | .336    | .2440    | -1.287  | 107.6 | .201    |

F-285

TESTS FOR HOMOGENEITY OF VARIANCES

COCHRAN'S C = MAX. VARIANCE/SUM(VARIANCES) = .4737, P = 0 (APPROX.)  
 BARTLETT-BOX F = 10.137, P = .000  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 3.973

----- O N E W A Y -----

VARIABLE XAYFA ADJUSTED YEARLY FREQ. ALCOHOL USE AFTER  
 BY TRTMT FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 158803.1910    | 52934.3970   | .438    | .726    |
| WITHIN GROUPS  | 220  | 26571600.0419  | 120780.0002  |         |         |
| TOTAL          | 223  | 26730403.2328  |              |         |         |

| GROUP          | COUNT | MEAN     | STANDARD<br>DEVIATION | STANDARD<br>ERROR | MINIMUM   | MAXIMUM   | 95 PCT CONF INT FOR MEAN |    |          |
|----------------|-------|----------|-----------------------|-------------------|-----------|-----------|--------------------------|----|----------|
| DDF            | 56    | 25.7598  | 518.7680              | 69.3233           | -170.8387 | 3472.8194 | -113.1671                | TO | 164.6868 |
| DDF            | 56    | -36.4841 | 276.2963              | 36.9217           | -817.7890 | 1582.9468 | -110.5076                | TO | 37.5324  |
| DDM            | 56    | -37.7174 | 223.9487              | 29.9262           | -288.4660 | 2252.1134 | -97.5909                 | TO | 22.2561  |
| DDJ            | 56    | .2112    | 295.3157              | 39.5301           | -222.3006 | 1693.9493 | -79.0419                 | TO | 79.4643  |
| TOTAL          | 224   | -12.0577 |                       |                   | -817.7890 | 3472.8194 |                          |    |          |
| UNGROUPED DATA |       |          | 346.2182              | 23.1327           |           |           | -57.6443                 | TO | 33.5289  |

F-29a

----- D N E W A Y -----

VARIABLE XAYFA ADJUSTED YEARLY FREQ. ALCOHOL USE AFTER

CONTRAST COEFFICIENT MATRIX

|            | DDF | DDF  | DDF  | DDF  |
|------------|-----|------|------|------|
| CONTRAST 1 | .5  | .5   | -.5  | -.5  |
| CONTRAST 2 | .5  | -.5  | .5   | -.5  |
| CONTRAST 3 | 1.0 | -1.0 | 0    | 0    |
| CONTRAST 4 | 0   | 0    | 1.0  | -1.0 |
| CONTRAST 5 | 1.0 | 0    | -1.0 | 0    |
| CONTRAST 6 | 0   | 1.0  | 0    | -1.0 |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE    | S. ERROR | T VALUE | D.F.  | T PROB. | S. ERROR | T VALUE | D.F.  | T PROB. |
|------------|----------|----------|---------|-------|---------|----------|---------|-------|---------|
| CONTRAST 1 | 13.3910  | 46.4412  | .288    | 220.0 | .773    | 46.4412  | .288    | 145.2 | .773    |
| CONTRAST 2 | 12.1577  | 46.4412  | .262    | 220.0 | .794    | 46.4412  | .262    | 145.2 | .794    |
| CONTRAST 3 | 62.2440  | 65.6778  | .948    | 220.0 | .344    | 78.5425  | .792    | 83.9  | .430    |
| CONTRAST 4 | -37.0286 | 65.6776  | -.577   | 220.0 | .564    | 49.5803  | -.765   | 102.5 | .446    |
| CONTRAST 5 | 63.4773  | 65.6776  | .966    | 220.0 | .335    | 75.5069  | .841    | 74.8  | .403    |
| CONTRAST 6 | -35.6953 | 65.6779  | -.559   | 220.0 | .577    | 54.0910  | -.678   | 109.5 | .499    |

F-29b

TESTS FOR HOMOGENEITY OF VARIANCES

COCHRAN'S C = MAX. VARIANCE/SUM(VARIANCES) = .5570, P = .0 (APPROX.)  
 BARTLETT-BOX F = 15.632, P = .000  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 5.366

----- O N E W A Y -----

VARIABLE BY TREAT ADJUSTED MASH-MARIJ RANK AFTER FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 7.6910         | 2.5637       | 1.160   | .326    |
| WITHIN GROUPS  | 220  | 486.1141       | 2.2096       |         |         |
| TOTAL          | 223  | 493.8051       |              |         |         |

| GROUP          | COUNT | MEAN   | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|----------------|-------|--------|--------------------|----------------|---------|---------|--------------------------|
| DDF            | 56    | -.1186 | 1.5206             | .2166          | -3.0530 | 4.5638  | -.3154 TO .5526          |
| RDF            | 56    | -.3904 | 1.4327             | .1915          | -3.0530 | 3.5638  | -.7642 TO .0034          |
| QPA            | 56    | -.1761 | 1.7074             | .2282          | -3.0530 | 4.5638  | -.6333 TO .2812          |
| TPD            | 56    | -.2686 | 1.1155             | .1491          | -3.0530 | 3.5638  | -.5685 TO .0292          |
| TOTAL          | 224   | -.1769 |                    |                | -3.0530 | 4.5638  |                          |
| UNGROUPED DATA |       |        | 1.4881             | .0994          |         |         | -.3728 TO .0191          |

F-30a

----- O N E W A Y -----

VARIABLE XADD ADJUSTED WASH-VARIJ PANK AFTER

CONTRAST COEFFICIENT MATRIX

|            | 100 | 000  | 000  | 100  |
|------------|-----|------|------|------|
| CONTRAST 1 | .5  | .5   | -.5  | -.5  |
| CONTRAST 2 | .5  | -.5  | .5   | -.5  |
| CONTRAST 3 | 1.0 | -1.0 | 0    | 0    |
| CONTRAST 4 | 0   | 0    | 1.0  | -1.0 |
| CONTRAST 5 | 1.0 | 0    | -1.0 | 0    |
| CONTRAST 6 | 0   | 1.0  | 0    | -1.0 |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE  | S. ERROR | T VALUE | D.F.  | T PROB. | S. ERROR | T VALUE | D.F.  | T PROB. |
|------------|--------|----------|---------|-------|---------|----------|---------|-------|---------|
| CONTRAST 1 | .0010  | .1986    | .463    | 220.0 | .644    | .1986    | .463    | 203.1 | .644    |
| CONTRAST 2 | .0073  | .1986    | 1.492   | 220.0 | .137    | .1986    | 1.492   | 203.1 | .137    |
| CONTRAST 3 | .0000  | .2809    | 1.776   | 220.0 | .077    | .2891    | 1.726   | 108.4 | .087    |
| CONTRAST 4 | .0035  | .2809    | .333    | 220.0 | .739    | .2725    | .343    | 94.7  | .732    |
| CONTRAST 5 | .0047  | .2809    | 1.049   | 220.0 | .295    | .3146    | .937    | 109.7 | .351    |
| CONTRAST 6 | -.0108 | .2809    | -.394   | 220.0 | .694    | .2426    | -.457   | 103.8 | .649    |

TEST FOR HOMOGENEITY OF VARIANCES

COCHRAN C = MAX. VARIANCE/SUM(VARIANCES) = .3298, P = .095 (APPROX.)  
 PARTIALLY-BOX F = 3.694, P = .013  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 2.343

F-30b

----- ONE WAY -----

VARIABLE BY XAVM TPTMT ADJUSTED \$ VALUE EACH MARIJ. USE AFTER FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | .7431          | .2477        | .735    | .532    |
| WITHIN GROUPS  | 220  | 74.1595        | .3371        |         |         |
| TOTAL          | 223  | 74.9025        |              |         |         |

| GROUP          | COUNT | MEAN   | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|----------------|-------|--------|--------------------|----------------|---------|---------|--------------------------|
| DDF            | 56    | -.0549 | .6935              | .0927          | -2.8698 | 2.5774  | -.2407 TO .1308          |
| RDF            | 56    | -.1743 | .6200              | .0828          | -1.2966 | 2.5774  | -.3404 TO -.0083         |
| OPM            | 56    | -.1469 | .6547              | .0875          | -1.2965 | 2.7522  | -.3222 TO .0284          |
| IPD            | 56    | -.2106 | .2333              | .0312          | -.7966  | 1.7034  | -.2731 TO -.1481         |
| TOTAL          | 224   | -.1467 |                    |                | -2.8698 | 2.7522  |                          |
| UNGROUPED DATA |       |        | .5796              | .0387          |         |         | -.2230 TO -.0704         |

F-31a



----- O N E W A Y -----

VARIABLE XAVM ADJUSTED \$ VALUE EACH PART. USE AFTER

CONTRAST COEFFICIENT MATRIX

|            | DDF | RDF  | DDM  | IDD  |
|------------|-----|------|------|------|
| CONTRAST 1 | .5  | .5   | -.5  | -.5  |
| CONTRAST 2 | .5  | -.5  | .5   | -.5  |
| CONTRAST 3 | 1.0 | -1.0 | 0    | 0    |
| CONTRAST 4 | 0   | 0    | 1.0  | -1.0 |
| CONTRAST 5 | 1.0 | 0    | -1.0 | 0    |
| CONTRAST 6 | 0   | 1.0  | 0    | -1.0 |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE  | S. ERROR | T VALUE | D.F.  | T PROB. | S. ERROR | T VALUE | D.F.  | T PROB. |
|------------|--------|----------|---------|-------|---------|----------|---------|-------|---------|
| CONTRAST 1 | .0641  | .0776    | .826    | 220.0 | .410    | .0776    | .826    | 176.7 | .410    |
| CONTRAST 2 | -.0916 | .0776    | -1.180  | 220.0 | .239    | .0776    | -1.180  | 176.7 | .240    |
| CONTRAST 3 | .1194  | .1097    | 1.088   | 220.0 | .278    | .1243    | .961    | 108.6 | .339    |
| CONTRAST 4 | -.0637 | .1097    | -.581   | 220.0 | .562    | .0929    | -.686   | 68.7  | .495    |
| CONTRAST 5 | .0920  | .1097    | .838    | 220.0 | .403    | .1274    | .722    | 109.6 | .472    |
| CONTRAST 6 | -.0362 | .1097    | -.330   | 220.0 | .741    | .0885    | -.410   | 70.3  | .683    |

TESTS FOR HOMOGENEITY OF VARIANCES

COCHRAN'S C = MAX. VARIANCE/SUM(VARIANCES) = .3567, P = .022 (APPROX.)  
 BARTLETT'S BOX F = 19.972, P = .000  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 8.840

F-31b

----- O N E W A Y -----

VARIABLE XAYFM ADJUSTED YEARLY FREQ. MARIJUANA USE AFTR  
 TY TPTWNT FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 192226.2201    | 64075.4067   | .758    | .519    |
| WITHIN GROUPS  | 220  | 18602304.7912  | 84555.9309   |         |         |
| TOTAL          | 223  | 18794531.0113  |              |         |         |

| GROUP          | COUNT | MEAN     | STANDARD DEVIATION | STANDARD ERROR | MINIMUM   | MAXIMUM   | 95 PCT CONF INT FOR MEAN |             |
|----------------|-------|----------|--------------------|----------------|-----------|-----------|--------------------------|-------------|
| DT             | 56    | -49.6121 | 208.5621           | 27.8836        | -618.6223 | 885.8964  | -105.4922                | TO 6.2680   |
| RDF            | 56    | -59.6768 | 145.1347           | 19.3945        | -618.6223 | 693.8386  | -98.5604                 | TO -20.7933 |
| OPM            | 56    | 14.9013  | 414.8241           | 55.4329        | -474.3197 | 2052.0888 | -96.2896                 | TO 125.8913 |
| 170            | 56    | -16.5829 | 318.6517           | 42.5817        | -208.3571 | 2940.3406 | -101.9540                | TO 68.7883  |
| TOTAL          | 224   | -27.7675 |                    |                | -618.6223 | 2940.3406 |                          |             |
| UNGROUPED DATA |       |          | 290.3106           | 19.3972        |           |           | -65.9927                 | TO 10.4577  |

F-32a

----- O N E W A Y -----

VARIABLE XAYEM ADJUSTED YEAPLY FRFO. MARIJUANA USE AFTR

CONTRAST COEFFICIENT MATRIX

|            | ODF | QDF  | OPM  | IPD  |
|------------|-----|------|------|------|
| CONTRAST 1 | .5  | .5   | -.5  | -.5  |
| CONTRAST 2 | .5  | -.5  | .5   | -.5  |
| CONTRAST 3 | 1.0 | -1.0 | 0    | 0    |
| CONTRAST 4 | 0   | 0    | 1.0  | -1.0 |
| CONTRAST 5 | 1.0 | 0    | -1.0 | 0    |
| CONTRAST 6 | 0   | 1.0  | 0    | -1.0 |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE    | S. ERROR | T VALUE | D.F.  | T PROB. | S. ERROR | T VALUE | D.F.  | T PROB. |
|------------|----------|----------|---------|-------|---------|----------|---------|-------|---------|
| CONTRAST 1 | -53.7537 | 38.8577  | -1.383  | 220.0 | .168    | 38.8576  | -1.383  | 148.9 | .169    |
| CONTRAST 2 | 20.7245  | 38.8577  | .533    | 220.0 | .594    | 38.8576  | .533    | 148.9 | .595    |
| CONTRAST 3 | 10.0647  | 54.9532  | .183    | 220.0 | .855    | 33.9653  | .296    | 98.1  | .768    |
| CONTRAST 4 | 31.3842  | 54.9531  | .571    | 220.0 | .569    | 69.9000  | .449    | 103.1 | .654    |
| CONTRAST 5 | -64.4134 | 54.9530  | -1.172  | 220.0 | .242    | 62.0508  | -1.038  | 81.2  | .302    |
| CONTRAST 6 | -43.0939 | 54.9533  | -.784   | 220.0 | .434    | 46.7905  | -.921   | 76.9  | .360    |

F-32b

TESTS FOR HOMOGENEITY OF VARIANCES

COCHRAN'S C = MAX. VARIANCE/SUM(VARIANCES) = .5088, P = 0 (APPROX.)  
 BARTLETT-BOX F = 21.120, P = .000  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 8.169

SENATE WEIGHTED HEROIN TYPES WITHOUT DELETED CASES  
 Y XA VARS ARE ADJUSTED BY REGRESSION OF AFTER VALUE WITH BEFORE  
 FILE DATASW (CORRELATION DATE = 03/28/77)

08/17/77

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----- C N E W A Y -----

VARIABLE ESTIMATED ADJUSTED DEALING OR SELLING DRUGS AFTER  
 BY TOTANT FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 48.8458        | 16.2819      | 4.396   | .005    |
| WITHIN GROUPS  | 210  | 777.7988       | 3.7038       |         |         |
| TOTAL          | 213  | 826.6447       |              |         |         |

| GROUP          | COUNT | MEAN   | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|----------------|-------|--------|--------------------|----------------|---------|---------|--------------------------|
| DDF            | 50    | -.0731 | 1.9296             | .2705          | -2.2825 | 4.5700  | -.6167 TO .4706          |
| PDF            | 56    | -.1213 | 1.8156             | .2432          | -2.2825 | 2.7175  | -.6088 TO .3662          |
| DP4            | 54    | -.4418 | 1.8042             | .2447          | -2.2825 | 4.5700  | -.9326 TO .0489          |
| DD             | 53    | .8469  | 2.1437             | .2961          | -2.2825 | 4.5700  | .2524 TO 1.4413          |
| TOTAL          | 213   | .0461  |                    |                | -2.2825 | 4.5700  |                          |
| UNGROUPED DATA |       |        | 1.9716             | .1749          |         |         | -.2198 TO .3120          |

F-338

----- D N E W A Y -----

VARIABLE XSTK056 ADJUSTED DEALING UP SELLING DRUGS AFTER

CONTRAST COEFFICIENT MATRIX

|            | DDF | DDF  | DDF  | DDF  |
|------------|-----|------|------|------|
| CONTRAST 1 | .5  | .5   | -.5  | -.5  |
| CONTRAST 2 | .5  | -.5  | .5   | -.5  |
| CONTRAST 3 | 1.0 | -1.0 | 0    | 0    |
| CONTRAST 4 | 0   | 0    | 1.0  | -1.0 |
| CONTRAST 5 | 1.0 | 0    | -1.0 | 0    |
| CONTRAST 6 | 0   | 1.0  | 0    | -1.0 |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE   | S. ERROR | T VALUE | D.F.  | T PROB. | S. ERROR | T VALUE | D.F.  | T PROB. |
|------------|---------|----------|---------|-------|---------|----------|---------|-------|---------|
| CONTRAST 1 | -.2797  | .2635    | -1.137  | 210.0 | .257    | .2645    | -1.133  | 202.0 | .259    |
| CONTRAST 2 | -.2702  | .2635    | -2.354  | 210.0 | .020    | .2645    | -2.345  | 202.0 | .020    |
| CONTRAST 3 | .0492   | .3728    | .129    | 210.0 | .897    | .3638    | .133    | 102.4 | .895    |
| CONTRAST 4 | -1.2887 | .3725    | -3.459  | 210.0 | .001    | .3841    | -3.355  | 100.5 | .001    |
| CONTRAST 5 | .7689   | .3754    | .982    | 210.0 | .327    | .3648    | 1.011   | 101.4 | .314    |
| CONTRAST 6 | -.2621  | .3699    | -2.617  | 210.0 | .010    | .3831    | -2.527  | 101.1 | .013    |

F-33b

TESTS FOR HOMOGENEITY OF VARIANCES

COCHRAN'S C - MAX. VARIANCE/SUM(VARIANCES) = .3027, P = .263 (APPROX.)  
 BARTLETT-BOX F = .712, P = .545  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 1.411

----- O N E W A Y -----

VARIABLE ADSPEND DOLLARS SPENT ALL-DRUGS ALL-PERIOD AFTER

CONTRAST COEFFICIENT MATRIX

|            | DDF | RDF  | DDM  | IPD  |
|------------|-----|------|------|------|
| CONTRAST 1 | .5  | .5   | -.5  | -.5  |
| CONTRAST 2 | .5  | -.5  | .5   | -.5  |
| CONTRAST 3 | 1.0 | -1.0 | 0    | 0    |
| CONTRAST 4 | 0   | 0    | 1.0  | -1.0 |
| CONTRAST 5 | 1.0 | 0    | -1.0 | 0    |
| CONTRAST 6 | 0   | 1.0  | 0    | -1.0 |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE      | S. ERROR  | T VALUE | D.F.  | T PROB. | S. ERROR  | T VALUE | D.F.  | T PROB. |
|------------|------------|-----------|---------|-------|---------|-----------|---------|-------|---------|
| CONTRAST 1 | -2637.2253 | 1016.7719 | -2.594  | 220.0 | .010    | 1016.7737 | -2.594  | 130.3 | .011    |
| CONTRAST 2 | -4527.6268 | 1016.7719 | -4.453  | 220.0 | .000    | 1016.7737 | -4.453  | 130.3 | .000    |
| CONTRAST 3 | -903.8573  | 1437.9346 | -.629   | 220.0 | .530    | 1055.1367 | -.857   | 82.2  | .394    |
| CONTRAST 4 | -8151.3963 | 1437.9307 | -5.669  | 220.0 | .000    | 1738.3905 | -4.689  | 78.6  | .000    |
| CONTRAST 5 | 995.5443   | 1437.9295 | .686    | 220.0 | .493    | 888.6630  | 1.110   | 94.1  | .270    |
| CONTRAST 6 | -6260.9948 | 1437.9359 | -4.354  | 220.0 | .000    | 1829.0963 | -3.423  | 89.8  | .001    |

F-34a

TESTS FOR HOMOGENEITY OF VARIANCES

Cochran's C = MAX. VARIANCE/SUM(VARIANCES) = .5961, P = 0 (APPROX.)  
 Bartlett-Box F = 25.511, P = .000  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 10.589

----- D N E W A Y -----

VARIABLE XADSPEND ADJUSTED \$ SPENT ALL-DRUGS ALL-PRD. AFTR  
 BY TPTMNT FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES   | MEAN SQUARES   | F RATIO | F PROB. |
|----------------|------|------------------|----------------|---------|---------|
| BETWEEN GROUPS | 3    | 1717673894.1714  | 572557964.7238 | 9.656   | .000    |
| WITHIN GROUPS  | 220  | 13045190386.8058 | 59296319.9400  |         |         |
| TOTAL          | 223  | 14762864280.9772 |                |         |         |

| GROUP          | COUNT | MEAN       | STANDARD DEVIATION | STANDARD ERROR | MINIMUM     | MAXIMUM    | 95 PCT CONF INT FOR MEAN |    |           |
|----------------|-------|------------|--------------------|----------------|-------------|------------|--------------------------|----|-----------|
| DDF            | 56    | -950.3374  | 4197.6032          | 560.9283       | -3061.8673  | 11341.1801 | -1974.4629               | TO | 273.7881  |
| RDF            | 56    | -462.4749  | 6887.7833          | 920.5868       | -11404.1084 | 29675.3899 | -2308.3409               | TO | 1383.3911 |
| DDM            | 56    | -1571.5274 | 5519.2582          | 737.5373       | -9842.4902  | 37457.8268 | -3049.5852               | TO | -93.4697  |
| DDO            | 56    | 5367.2451  | 11901.0208         | 1590.3435      | -9582.7350  | 34899.6003 | 2178.7981                | TO | 8555.6922 |
| TOTAL          | 224   | 620.7157   |                    |                | -11404.1084 | 37457.8268 |                          |    |           |
| UNGROUPED DATA |       |            | 8136.4039          | 543.6359       |             |            | -450.6051                | TO | 1692.0366 |

F-34b

----- O N E W A Y -----

VARIABLE KNOWN ADJUSTED NO. OF DRUG TREATMENTS AFTER  
 BY TREATMENT FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 1.4459         | .4820        | .714    | .544    |
| WITHIN GROUPS  | 220  | 148.4411       | .6747        |         |         |
| TOTAL          | 223  | 149.8870       |              |         |         |

| GROUP          | COUNT | MEAN  | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|----------------|-------|-------|--------------------|----------------|---------|---------|--------------------------|
| DDF            | 56    | .0518 | .9264              | .1239          | -1.3075 | 2.2419  | -.1953 TO .2999          |
| RDF            | 56    | .1344 | .8702              | .1163          | -1.3075 | 2.5166  | -.0987 TO .3675          |
| DP1            | 56    | .2760 | .8218              | .0831          | -1.3075 | 2.2419  | -.1095 TO .4425          |
| IP1            | 56    | .1662 | .8347              | .1115          | -1.3075 | 2.2419  | -.0574 TO .3899          |
| TOTAL          | 224   | .1571 |                    |                | -1.3075 | 2.5166  |                          |
| UNGROUPED DATA |       |       | .8198              | .0548          |         |         | .0492 TO .2651           |

F-35a



----- D N E W A Y -----

VARIABLE XDATA ADJUSTED NO. OF DRUG TREATMENTS AFTER

CONTRAST COEFFICIENT MATRIX

|            | 101 | 102  | 103  | 100  |
|------------|-----|------|------|------|
| CONTRAST 1 | .5  | .5   | -.5  | -.5  |
| CONTRAST 2 | .5  | -.5  | .5   | -.5  |
| CONTRAST 3 | 1.0 | -1.0 | 0    | 0    |
| CONTRAST 4 | 0   | 0    | 1.0  | -1.0 |
| CONTRAST 5 | 1.0 | 0    | -1.0 | 0    |
| CONTRAST 6 | 0   | 1.0  | 0    | -1.0 |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE  | S. ERROR | T VALUE | D.F.  | T PROB. | S. ERROR | T VALUE | D.F.  | T PROB. |
|------------|--------|----------|---------|-------|---------|----------|---------|-------|---------|
| CONTRAST 1 | -.1280 | .1099    | -1.166  | 220.0 | .245    | .1099    | -1.166  | 206.0 | .245    |
| CONTRAST 2 | .0136  | .1099    | .124    | 220.0 | .902    | .1099    | .124    | 206.0 | .902    |
| CONTRAST 3 | -.0326 | .1552    | -.532   | 220.0 | .595    | .1698    | -.486   | 109.6 | .628    |
| CONTRAST 4 | .1099  | .1552    | .707    | 220.0 | .480    | .1391    | .789    | 101.7 | .432    |
| CONTRAST 5 | -.2242 | .1552    | -1.444  | 220.0 | .150    | .1491    | -1.504  | 96.2  | .136    |
| CONTRAST 6 | -.0319 | .1552    | -.205   | 220.0 | .838    | .1611    | -.198   | 109.8 | .844    |

F-35b

TESTS FOR HOMOGENEITY OF VARIANCES

COCHRAN'S C = MAX. VARIANCE/SUM(VARIANCES) = .3180, P = .165 (APPROX.)  
 RAO'S TEST = MAX. F = 3.069, P = .027  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 2.219

FILE DATAS07 (CREATION DATE = 08/08/77)

----- ONEWAY -----

VARIABLE DRUGUSE1 BEFORE VS AFTER BAD DRUG-USE CONSEQUENCES

CONTRAST COEFFICIENT MATRIX

|            |     | DDF  | DDF  | DDF  | DDF |
|------------|-----|------|------|------|-----|
| CONTRAST 1 | .5  | .5   | -.5  | -.5  |     |
| CONTRAST 2 | .5  | -.5  | .5   | -.5  |     |
| CONTRAST 3 | 1.0 | -1.0 | 0    | 0    |     |
| CONTRAST 4 | 1   | 0    | 1.0  | -1.0 |     |
| CONTRAST 5 | 1.0 | 0    | -1.0 | 0    |     |
| CONTRAST 6 | 0   | 1.0  | 0    | -1.0 |     |

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POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE   | S. ERROR | T VALUE | D.F.  | T PROB. | S. ERROR | T VALUE | D.F.  | T PROB. |
|------------|---------|----------|---------|-------|---------|----------|---------|-------|---------|
| CONTRAST 1 | 1.4246  | .4430    | 2.950   | 220.0 | .004    | .4430    | 2.950   | 197.8 | .004    |
| CONTRAST 2 | -.9053  | .4430    | -1.874  | 220.0 | .062    | .4430    | -1.874  | 197.8 | .062    |
| CONTRAST 3 | .7560   | .6430    | 1.111   | 220.0 | .268    | .7571    | 1.002   | 109.7 | .318    |
| CONTRAST 4 | -2.5695 | .6830    | -3.762  | 220.0 | .000    | .5999    | -4.283  | 92.2  | .000    |
| CONTRAST 5 | 3.0487  | .6830    | 4.522   | 220.0 | .000    | .6094    | 5.069   | 91.0  | .000    |
| CONTRAST 6 | -.2396  | .6830    | -.351   | 220.0 | .726    | .7495    | -.320   | 109.3 | .750    |

TESTS FOR HOMOGENEITY OF VARIANCES

Cochran C = MAX. VARIANCE / SUM(VARIANCES) = .3245, P = .123 (APPROX.)  
 Bartlett-B\* = 5.911, P = .001  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 3.000

FILE DATG5J6 (CREATION DATE = 08/08/77)

----- ONE WAY -----

VARIABLE DRUGUSE1 BEFORE VS AFTER HAD DRUG-USE CONSEQUENCES  
BY TRTMT FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 314.6331       | 104.8777     | 8.029   | .000    |
| WITHIN GROUPS  | 220  | 2873.0592      | 13.0621      |         |         |
| TOTAL          | 223  | 3188.2923      |              |         |         |

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| GROUP | COUNT | MEAN            | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|-------|-------|-----------------|--------------------|----------------|---------|---------|--------------------------|
| ODF   | 56    | -7.4452         | 3.8913             | .5200          | -7.0000 | 7.0000  | -3.4873 TO -1.4031       |
| RDC   | 56    | -4.2041         | 4.1176             | .5502          | -7.0000 | 7.0000  | -4.3073 TO -2.1010       |
| OPZ   | 56    | -6.5340         | 2.3772             | .3177          | -7.0000 | 5.0000  | -6.1706 TO -4.8974       |
| IPZ   | 56    | -2.9645         | 3.8079             | .5089          | -7.0000 | 7.0000  | -3.9847 TO -1.9443       |
| TOTAL | 224   | -3.5370         |                    |                | -7.0000 | 7.0000  |                          |
|       |       | UNWEIGHTED DATA | 3.7812             | .2526          |         |         | -4.0348 TO -3.0391       |

DATE: 03/20/77

TEST DATA

VARIABLE: DRUG-USE INVOLVEMENT ACTS-EVENTS  
 TREATMENT: FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 1    | 79.1523        | 33.3328      | 2.443   | .065    |
| WITHIN GROUPS  | 221  | 3031.7845      | 13.6445      |         |         |
| TOTAL          | 223  | 3101.7324      |              |         |         |

| GROUP | COUNT | MEAN           | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|-------|-------|----------------|--------------------|----------------|---------|---------|--------------------------|
| DD    | 55    | 4.5536         | 3.5966             | .4806          | 0       | 9.0000  | 3.5904 TO 5.5167         |
| DD    | 55    | 4.1248         | 4.1487             | .5544          | 2       | 9.0000  | 3.0133 TO 5.2363         |
| DD    | 55    | 3.5138         | 3.5032             | .4681          | 0       | 9.0000  | 2.6756 TO 4.5519         |
| DD    | 56    | 5.4355         | 1.4358             | .4557          | 0       | 9.0000  | 4.5013 TO 6.3697         |
| TOTAL | 221   | 4.4317         |                    |                | 0       | 9.0000  |                          |
|       |       | UNSUPPDED DATA | 3.7295             | .2492          |         |         | 3.9493 TO 4.9230         |

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FILE DATES: 03/23/77 DATE: 03/28/77

ONE WAY

VARIABLE DRUGUSE2 DRUG-USE INVOLVEMENT ACTS-EVENTS

CONTRAST COEFFICIENT MATRIX

|            | DDC | DDP  | DD4  | (P)  |
|------------|-----|------|------|------|
| CONTRAST 1 | .5  | .5   | -.5  | -.5  |
| CONTRAST 2 | .5  | -.5  | .5   | -.5  |
| CONTRAST 3 | 1.0 | -1.0 | 0    | 0    |
| CONTRAST 4 | 0   | 0    | 1.0  | -1.0 |
| CONTRAST 5 | 1.0 | 0    | -1.0 | 0    |
| CONTRAST 6 | 0   | 1.0  | 0    | -1.0 |

|            | VALUE   | S. ERROR | POOLED VARIANCE ESTIMATE |       |         | SEPARATE VARIANCE ESTIMATE |         |       |         |
|------------|---------|----------|--------------------------|-------|---------|----------------------------|---------|-------|---------|
|            |         |          | T VALUE                  | D.F.  | T PROB. | S. ERROR                   | T VALUE | D.F.  | T PROB. |
| CONTRAST 1 | -.1854  | .4936    | -.376                    | 220.0 | .798    | .4936                      | -.376   | 215.0 | .708    |
| CONTRAST 2 | -.6965  | .4936    | -1.411                   | 220.0 | .160    | .4936                      | -1.411  | 215.0 | .160    |
| CONTRAST 3 | .4288   | .6981    | .614                     | 220.0 | .540    | .7337                      | .584    | 107.8 | .560    |
| CONTRAST 4 | -1.8217 | .6981    | -2.610                   | 220.0 | .010    | .6605                      | -2.758  | 110.0 | .007    |
| CONTRAST 5 | .2398   | .6981    | 1.346                    | 220.0 | .180    | .6709                      | 1.401   | 109.9 | .164    |
| CONTRAST 6 | -1.8107 | .6981    | -1.878                   | 220.0 | .062    | .7242                      | -1.810  | 106.8 | .073    |

TESTS FOR HOMOGENEITY OF VARIANCES

COEFFICIENT OF MAX. VARIANCE / SUM(VARIANCES) = .3154, P = .185 (APPROX.)  
 BARTLETT-BOX F = .772, P = .510  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 1.416

F-37b

----- C N E W A Y -----

VARIABLE BY XNDQA ADJUSTED NO. KINDS OF DRUGS USED AFTER  
 BY TOTHT FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 14.8973        | 4.9658       | 4.720   | .003    |
| WITHIN GROUPS  | 220  | 231.4579       | 1.0521       |         |         |
| TOTAL          | 223  | 246.3552       |              |         |         |

| GROUP          | COUNT | MEAN   | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|----------------|-------|--------|--------------------|----------------|---------|---------|--------------------------|
| DDC            | 56    | .2419  | 1.0687             | .1428          | -1.8038 | 3.1962  | -.0443 TO .5281          |
| DDF            | 56    | -.2733 | 1.1523             | .1537          | -2.6224 | 2.3776  | -.5815 TO .0349          |
| DDY            | 56    | -.1121 | .9850              | .1316          | -2.2131 | 2.6055  | -.3759 TO .1517          |
| DDZ            | 56    | .3639  | .8791              | .1175          | -1.2131 | 2.3776  | .1283 TO .5994           |
| TOTAL          | 224   | .0551  |                    |                | -2.5224 | 3.1962  |                          |
| UNGROUPED DATA |       |        | 1.0511             | .0702          |         |         | -.0833 TO .1935          |

F-38a

----- ONE WAY -----

VARIABLE KINDA ADJUSTED NO. KINDS OF DRUGS USED AFTER

CONTRAST COEFFICIENT MATRIX

|            | CONTRAST | 100 | 000  | 000  | 100  |
|------------|----------|-----|------|------|------|
| CONTRAST 1 | 1        | .5  | .5   | -.5  | -.5  |
| CONTRAST 2 | 1        | .5  | -.5  | .5   | -.5  |
| CONTRAST 3 | 1        | 1.0 | -1.0 | 0    | 0    |
| CONTRAST 4 | 1        | 0   | 0    | 1.0  | -1.0 |
| CONTRAST 5 | 1        | 1.0 | 0    | -1.0 | 0    |
| CONTRAST 6 | 1        | 0   | 1.0  | 0    | -1.0 |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE  | S. ERROR | T VALUE | D.F.  | T PROB. | S. ERROR | T VALUE | D.F.  | T PROB. |
|------------|--------|----------|---------|-------|---------|----------|---------|-------|---------|
| CONTRAST 1 | -.1416 | .1371    | -1.033  | 220.0 | .303    | .1371    | -1.033  | 212.0 | .303    |
| CONTRAST 2 | .0196  | .1371    | .143    | 220.0 | .886    | .1371    | .143    | 212.0 | .886    |
| CONTRAST 3 | .5152  | .1938    | 2.658   | 220.0 | .008    | .2098    | 2.455   | 109.4 | .016    |
| CONTRAST 4 | -.4760 | .1938    | -2.455  | 220.0 | .015    | .1764    | -2.698  | 108.6 | .008    |
| CONTRAST 5 | .1540  | .1938    | 1.826   | 220.0 | .069    | .1942    | 1.822   | 109.3 | .071    |
| CONTRAST 6 | -.6372 | .1938    | -3.287  | 220.0 | .001    | .1935    | -3.294  | 102.9 | .001    |

TESTS FOR HOMOGENEITY OF VARIANCES

Cochran's C - MAX. VARIANCE/SUM(VARIANCES) = .3144, P = .193 (APPROX.)  
 BARTLETT-BOX F = 1.422, P = .235  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 1.712

F-38b

----- D N E W A Y -----

VARIABLE XADZ ADJUSTED RANKIN RANK AFTER  
 BY TREATMENT FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 131.4107       | 43.8036      | 9.915   | .000    |
| WITHIN GROUPS  | 220  | 971.9554       | 4.4180       |         |         |
| TOTAL          | 223  | 1103.3661      |              |         |         |

| GROUP           | COUNT | MEAN   | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|-----------------|-------|--------|--------------------|----------------|---------|---------|--------------------------|
| 000             | 57    | .5876  | 1.8756             | .2506          | -3.2702 | 3.6033  | .0853 TO 1.0999          |
| 001             | 55    | -.0472 | 2.2740             | .3039          | -3.2702 | 2.4539  | -.6525 TO .5660          |
| 004             | 56    | -.6123 | 2.5075             | .3351          | -3.2702 | 4.6033  | -1.2838 TO .0592         |
| 100             | 55    | 1.4408 | 1.6417             | .2154          | -3.2702 | 4.6033  | 1.0100 TO 1.8896         |
| TOTAL           | 224   | .3455  |                    |                | -3.2702 | 4.6033  |                          |
| UNRECORDED DATA |       |        | 2.2244             | .1486          |         |         | .0526 TO .6384           |

F-39a



----- O N E V A R Y -----

VARIABLE XADJ ADJUSTED REGRESS. RANK AFTER

CONTRAST COEFFICIENT MATRIX

|            | CON | DD   | DD   | DD   |
|------------|-----|------|------|------|
| CONTRAST 1 | .5  | .5   | -.5  | -.5  |
| CONTRAST 2 | .5  | -.5  | .5   | -.5  |
| CONTRAST 3 | 1.0 | -1.0 | 0    | 0    |
| CONTRAST 4 | 0   | 0    | 1.0  | -1.0 |
| CONTRAST 5 | 1.0 | 0    | -1.0 | 0    |
| CONTRAST 6 | 0   | 1.0  | 0    | -1.0 |

|            | VALUE   | S. ERROR | Pooled VARIANCE ESTIMATE |       |         | SEPARATE VARIANCE ESTIMATE |       |         |
|------------|---------|----------|--------------------------|-------|---------|----------------------------|-------|---------|
|            |         |          | T VALUE                  | D.F.  | T PROB. | T VALUE                    | D.F.  | T PROB. |
| CONTRAST 1 | -.1465  | .2809    | -.522                    | 220.0 | .602    | -.522                      | 199.9 | .602    |
| CONTRAST 2 | -.7156  | .2809    | -2.548                   | 220.0 | .012    | -2.548                     | 199.9 | .012    |
| CONTRAST 3 | .6100   | .3972    | 1.588                    | 220.0 | .114    | 1.602                      | 106.2 | .112    |
| CONTRAST 4 | -2.0621 | .3972    | -5.191                   | 220.0 | .000    | -5.149                     | 94.8  | .000    |
| CONTRAST 5 | 1.1999  | .3972    | 3.021                    | 220.0 | .003    | 2.868                      | 101.9 | .005    |
| CONTRAST 6 | -1.4970 | .3972    | -3.759                   | 220.0 | .000    | -3.984                     | 100.1 | .000    |

F-39b

TESTS FOR HOMOGENEITY OF VARIANCES

Cochran's C = MAX. VARIANCE/SUM(VARIANCES) = .7558, P = .024 (APPROX.)  
 Bartlett's Test = 3.952, P = .009  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 2.133

----- O N E W A Y -----

VARIABLE XAV- ADJUSTED \$ VALUE EACH HEROIN USE AFTER  
 BY TPTMNT FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 1794.4735      | 598.1578     | 4.981   | .002    |
| WITHIN GROUPS  | 220  | 26416.9055     | 120.0768     |         |         |
| TOTAL          | 223  | 28211.3790     |              |         |         |

| GROUP          | COUNT | MEAN    | STANDARD<br>DEVIATION | STANDARD<br>ERROR | MINIMUM  | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|----------------|-------|---------|-----------------------|-------------------|----------|---------|--------------------------|
| DDF            | 56    | .5115   | 9.7083                | 1.2973            | -19.4429 | 19.6028 | -2.0884 TO 3.1114        |
| RDF            | 56    | -.1096  | 11.1480               | 1.4897            | -19.4429 | 18.1481 | -3.0963 TO 2.8771        |
| OPM            | 56    | -1.6434 | 13.0184               | 1.7396            | -19.4429 | 24.6028 | -5.1317 TO 1.8409        |
| IPD            | 56    | 5.8655  | 9.6073                | 1.2838            | -16.8974 | 23.2390 | 3.2915 TO 8.4394         |
| TOTAL          | 224   | 1.1555  |                       |                   | -19.4429 | 24.6028 |                          |
| UNGROUPED DATA |       |         | 11.2476               | .7515             |          |         | -.3255 TO 2.6364         |

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----- O N E W A Y -----

VARIABLE XAV4 ADJUSTED \$ VALUE EACH HEROIN USE AFTER

CONTRAST COEFFICIENT MATRIX

|            | DDF | RDF  | OPM  | IPD  |
|------------|-----|------|------|------|
| CONTRAST 1 | .5  | .5   | -.5  | -.5  |
| CONTRAST 2 | .5  | -.5  | .5   | -.5  |
| CONTRAST 3 | 1.0 | -1.0 | 0    | 0    |
| CONTRAST 4 | 0   | 0    | 1.0  | -1.0 |
| CONTRAST 5 | 1.0 | 0    | -1.0 | 0    |
| CONTRAST 6 | 0   | 1.0  | 0    | -1.0 |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE   | S. ERROR | T VALUE | D.F.  | T PROB. | S. ERROR | T VALUE | D.F.  | T PROB. |
|------------|---------|----------|---------|-------|---------|----------|---------|-------|---------|
| CONTRAST 1 | -1.9091 | 1.4643   | -1.304  | 220.0 | .194    | 1.4643   | -1.304  | 206.1 | .194    |
| CONTRAST 2 | -3.4449 | 1.4643   | -2.353  | 220.0 | .020    | 1.4643   | -2.353  | 206.1 | .020    |
| CONTRAST 3 | .6211   | 2.0709   | .300    | 220.0 | .765    | 1.9754   | .314    | 108.0 | .754    |
| CONTRAST 4 | -7.5109 | 2.0709   | -3.627  | 220.0 | .000    | 2.1621   | -3.474  | 101.2 | .001    |
| CONTRAST 5 | 2.1569  | 2.0709   | 1.042   | 220.0 | .299    | 2.1701   | .894    | 101.7 | .323    |
| CONTRAST 6 | -5.9751 | 2.0709   | -2.885  | 220.0 | .004    | 1.9666   | -3.038  | 107.7 | .003    |

F-40b

TESTS FOR HOMOGENEITY OF VARIANCES

COCHRAN'S C = MAX. VARIANCE/SUM(VARIANCES) = .3529, P = .028 (APPROX.)  
 WARTLETT-BOX F = 2.297, P = .076  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 1.836

----- O N E W A Y -----

VARIABLE XAYFM ADJUSTED YEAPLY FREQ. HEROIN USE AFTER  
 9Y TRINT FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 4918724.1571   | 1639574.7190 | 10.111  | .000    |
| WITHIN GROUPS  | 220  | 35673148.0425  | 162150.6729  |         |         |
| TOTAL          | 223  | 40591872.1995  |              |         |         |

| GROUP          | COUNT | MEAN      | STANDARD DEVIATION | STANDARD ERROR | MINIMUM   | MAXIMUM   | 95 PCT CONF INT FOR MEAN |
|----------------|-------|-----------|--------------------|----------------|-----------|-----------|--------------------------|
| DDF            | 56    | -32.8202  | 175.6228           | 23.4686        | -353.2200 | 489.9700  | -79.8523 TO 14.2119      |
| DDF            | 56    | -12.3163  | 439.0793           | 58.6745        | -785.1575 | 1653.1033 | -129.9515 TO 105.3190    |
| DDF            | 56    | -112.7256 | 303.2627           | 40.5249        | -590.4300 | 2086.2366 | -193.9394 TO -31.5118    |
| DDF            | 56    | 278.4488  | 577.0622           | 77.1133        | -395.7025 | 1510.9500 | 123.8459 TO 433.0516     |
| TOTAL          | 224   | 30.1460   |                    |                | -785.1575 | 2086.2366 |                          |
| UNGROUPED DATA |       |           | 425.6451           | 28.5064        |           |           | -26.0303 TO 86.3224      |

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----- ONEWAY -----

VARIABLE XAY=4 ADJUSTED YEARLY FREQ. HEROIN USE AFTER

CONTRAST COEFFICIENT MATRIX

|            |  | DDF | DDF  | DDF  | DDF  |
|------------|--|-----|------|------|------|
|            |  |     | DDF  | DDF  | DDF  |
| CONTRAST 1 |  | .5  | .5   | -.5  | -.5  |
| CONTRAST 2 |  | .5  | -.5  | .5   | -.5  |
| CONTRAST 3 |  | 1.0 | -1.0 | 0    | 0    |
| CONTRAST 4 |  | 0   | 0    | 1.0  | -1.0 |
| CONTRAST 5 |  | 1.0 | 0    | -1.0 | 0    |
| CONTRAST 6 |  | 0   | 1.0  | 0    | -1.0 |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE     | S. ERROR | POOLED VARIANCE ESTIMATE |       | T PROB. | S. ERROR | SEPARATE VARIANCE ESTIMATE |       | T PROB. |
|------------|-----------|----------|--------------------------|-------|---------|----------|----------------------------|-------|---------|
|            |           |          | T VALUE                  | D.F.  |         |          | T VALUE                    | D.F.  |         |
| CONTRAST 1 | -105.4298 | 53.8102  | -1.959                   | 220.0 | .051    | 53.8103  | -1.959                     | 146.9 | .052    |
| CONTRAST 2 | -205.8391 | 53.8102  | -3.825                   | 220.0 | .000    | 53.8103  | -3.825                     | 146.9 | .000    |
| CONTRAST 3 | -20.5039  | 76.0993  | -.269                    | 220.0 | .788    | 63.1939  | -.324                      | 72.2  | .747    |
| CONTRAST 4 | -391.1743 | 76.0991  | -5.140                   | 220.0 | .000    | 87.1133  | -4.490                     | 83.2  | .000    |
| CONTRAST 5 | 79.9054   | 76.0990  | 1.050                    | 220.0 | .295    | 46.8300  | 1.706                      | 88.2  | .091    |
| CONTRAST 6 | -290.7650 | 76.0993  | -3.821                   | 220.0 | .000    | 96.8977  | -3.001                     | 102.7 | .003    |

F-41B

TESTS FOR HOMOGENEITY OF VARIANCES

COCHRAN'S C = MAX. VARIANCE / SUM(VARIANCES) = .5134, P = .0 (APPROX.)  
 BARTLETT-ROX F = 24.291, P = .000  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 10.797

FILE DATAS06 (CORRELATIVE DATE = 08/02/77)

NEWAY

VARIABLE RESPECT NUMBER OF CLIENT DISRESPECT ITEMS ENDORSED  
BY IDENT FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 1    | 23.8041        | 7.9347       | 9.278   | .000    |
| WITHIN GROUPS  | 220  | 198.1426       | .8552        |         |         |
| TOTAL          | 221  | 211.9467       |              |         |         |

| GROUP          | COUNT | MEAN   | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|----------------|-------|--------|--------------------|----------------|---------|---------|--------------------------|
| DDF            | 55    | 1.8286 | .6869              | .0913          | 1.0000  | 4.0000  | 1.6446 TO 2.0125         |
| DDF            | 56    | 2.5365 | 1.0625             | .1429          | 1.0000  | 6.0000  | 2.3999 TO 2.9730         |
| DDF            | 55    | 2.0485 | 1.1393             | .1521          | 0       | 6.0000  | 1.7436 TO 2.3533         |
| DDF            | 50    | 2.3909 | .7137              | .0954          | 1.0000  | 6.0000  | 2.1897 TO 2.5721         |
| TOTAL          | 224   | 2.2161 |                    |                | 0       | 6.0000  |                          |
| UNGROUPED DATA |       |        | .9749              | .0651          |         |         | 2.1077 TO 2.3645         |

F-42a

FILED IN THE OFFICE OF THE CLERK OF COURT

LINE 1 A Y

NUMBER OF CLIENT DISRESPECT ITEMS ENDORSED

CONTRAST

| CONTRAST   | 1   | 2   | 3   | 4   | 5   | 6   |
|------------|-----|-----|-----|-----|-----|-----|
| CONTRAST 1 | 1.0 | 0   | 0   | 0   | 0   | 0   |
| CONTRAST 2 | 0   | 1.0 | 0   | 0   | 0   | 0   |
| CONTRAST 3 | 0   | 0   | 1.0 | 0   | 0   | 0   |
| CONTRAST 4 | 0   | 0   | 0   | 1.0 | 0   | 0   |
| CONTRAST 5 | 0   | 0   | 0   | 0   | 1.0 | 0   |
| CONTRAST 6 | 0   | 0   | 0   | 0   | 0   | 1.0 |

| CONTRAST   | VALUE  | S. ERROR | POOLED VARIANCE ESTIMATE |       |         | SEPARATE VARIANCE ESTIMATE |         |       |         |
|------------|--------|----------|--------------------------|-------|---------|----------------------------|---------|-------|---------|
|            |        |          | T VALUE                  | D.F.  | T PROB. | S. ERROR                   | T VALUE | D.F.  | T PROB. |
| CONTRAST 1 | .9424  | .1236    | .347                     | 220.0 | .729    | .1236                      | .347    | 185.5 | .729    |
| CONTRAST 2 | -4.816 | .1236    | -4.816                   | 220.0 | .000    | .1236                      | -4.816  | 185.5 | .000    |
| CONTRAST 3 | -4.909 | .1748    | -4.909                   | 220.0 | .000    | .1699                      | -5.051  | 93.8  | .000    |
| CONTRAST 4 | -1.992 | .1748    | -1.992                   | 220.0 | .058    | .1795                      | -1.852  | 92.5  | .067    |
| CONTRAST 5 | -1.258 | .1748    | -1.258                   | 220.0 | .210    | .1777                      | -1.238  | 90.4  | .219    |
| CONTRAST 6 | 1.749  | .1738    | 1.749                    | 220.0 | .082    | .1718                      | 1.779   | 95.9  | .078    |

F-42b

TESTS FOR HOMOGENEITY OF VARIANCES

Cochran's C = MAX. VARIANCE/SUM(VARIANCES) = .3799, P = .006 (APPROX.)  
 BARTLETT-BIX F = 7.399, P = .000  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 2.746

FILE STATUS: (OPERATION DATE = 08/04/77)

----- ONE WAY -----

VARIABLE BY SHAWY TREATMENT NUMBER OF HEAR-PROGRAM ITEMS ENDORSED FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 2.5115         | .8372        | .985    | .400    |
| WITHIN GROUPS  | 220  | 186.8916       | .8495        |         |         |
| TOTAL          | 223  | 189.4031       |              |         |         |

| GROUP          | COUNT | MEAN  | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|----------------|-------|-------|--------------------|----------------|---------|---------|--------------------------|
| DDF            | 56    | .5024 | .8120              | .1085          | 0       | 3.0000  | .2849 TO .7198           |
| PDF            | 56    | .7753 | 1.1031             | .1474          | 0       | 4.0000  | .4798 TO 1.0709          |
| DDH            | 56    | .5905 | .8764              | .1171          | 0       | 3.0000  | .3457 TO .8152           |
| IDD            | 56    | .5352 | .8692              | .1160          | 0       | 4.0000  | .3026 TO .7678           |
| TOTAL          | 224   | .5983 |                    |                | 0       | 4.0000  |                          |
| UNGROUPED DATA |       |       | .9216              | .0616          |         |         | .4770 TO .7197           |

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DATE: 04/23/77

EXPLANATION

VARIABLE: NUMBER OF YEAR-PROGRAM ITEMS ENDORSED

CONTRAST COEFFICIENT MATRIX

|  | CONTRAST | COEFFICIENT | COEFFICIENT | COEFFICIENT | COEFFICIENT |
|--|----------|-------------|-------------|-------------|-------------|
|  | 1        | .5          | .5          | -.5         | -.5         |
|  | 2        | .5          | -.5         | .5          | -.5         |
|  | 3        | 1.0         | -1.0        | 0           | 0           |
|  | 4        | 0           | 0           | 1.0         | -1.0        |
|  | 5        | 1.0         | 0           | -1.0        | 0           |
|  | 6        | 0           | 1.0         | 0           | -1.0        |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

| CONTRAST | T VALUE | S. ERROR | POOLED VARIANCE ESTIMATE |       | SEPARATE VARIANCE ESTIMATE |       | T VALUE | D.F.  | T PROB. |
|----------|---------|----------|--------------------------|-------|----------------------------|-------|---------|-------|---------|
|          |         |          | T VALUE                  | D.F.  | T VALUE                    | D.F.  |         |       |         |
| 1        | .0810   | .1232    | .658                     | 220.0 | .511                       | .1232 | .659    | 206.6 | .511    |
| 2        | -.1139  | .1232    | -.924                    | 220.0 | .356                       | .1232 | -.924   | 206.6 | .356    |
| 3        | -.2730  | .1742    | -1.567                   | 220.0 | .119                       | .1830 | -1.491  | 101.1 | .139    |
| 4        | .0453   | .1742    | .260                     | 220.0 | .795                       | .1649 | .275    | 110.0 | .784    |
| 5        | -.0781  | .1742    | -.446                    | 220.0 | .654                       | .1597 | -.489   | 109.4 | .626    |
| 6        | .2402   | .1742    | 1.379                    | 220.0 | .169                       | .1876 | 1.280   | 104.2 | .203    |

TESTS FOR HOMOGENEITY OF VARIANCES

COCHRAN'S C = MAX. VARIANCE / SUM(VARIANCES) = .3531, P = .021 (APPROX.)  
 BARTLETT'S K = 2.091, P = .101  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 1.545

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FILE DATE(S) OF OPERATION DATE(S) 09/20/77

ONEWAY

VARIABLE HELPFUL NO. OF PROG.-HELPEFULNESS ITEMS ENDORSED BY TOTAL FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 22.5698        | 7.5233       | 2.295   | .079    |
| WITHIN GROUPS  | 220  | 721.0720       | 3.2776       |         |         |
| TOTAL          | 223  | 743.6419       |              |         |         |

| GROUP          | COUNT | MEAN   | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|----------------|-------|--------|--------------------|----------------|---------|---------|--------------------------|
| DDF            | 56    | 4.6851 | 1.6079             | .2143          | 0       | 6.0000  | 4.2556 TO 5.1146         |
| DDF            | 56    | 4.5471 | 2.0217             | .2732          | 0       | 6.0000  | 4.0055 TO 5.0888         |
| DDM            | 56    | 4.1321 | 1.3242             | .1770          | 1.0000  | 6.0000  | 4.4775 TO 5.1868         |
| DDI            | 56    | 3.9930 | 2.1673             | .2896          | 0       | 6.0000  | 3.4124 TO 4.5736         |
| TOTAL          | 224   | 4.5143 |                    |                | 0       | 6.0000  |                          |
| UNGROUPED DATA |       |        | 1.9261             | .1220          |         |         | 4.2739 TO 4.7548         |

F-44a

FILE # 14700 (CORRELATION DATE = 08/23/77)

NEW YORK

VARIABLE INDEPENDENT NO. OF PROG.-HELPFULNESS ITEMS ENDORSED

CONTRAST CORRELATION MATRIX

|            | 1   | 2   | 3   | 4   | 5   | 6   |
|------------|-----|-----|-----|-----|-----|-----|
| CONTRAST 1 | 1.0 | .5  | -.5 | -.5 |     |     |
| CONTRAST 2 | .5  | 1.0 | .5  | -.5 |     |     |
| CONTRAST 3 | -.5 | .5  | 1.0 | 0   |     |     |
| CONTRAST 4 | -.5 | -.5 | 0   | 1.0 |     |     |
| CONTRAST 5 |     |     |     |     | 1.0 | 0   |
| CONTRAST 6 |     |     |     |     | 0   | 1.0 |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE  | S. ERROR | POOLED VARIANCE ESTIMATE |       | SEPARATE VARIANCE ESTIMATE |       |
|------------|--------|----------|--------------------------|-------|----------------------------|-------|
|            |        |          | T VALUE                  | D.F.  | T VALUE                    | D.F.  |
| CONTRAST 1 | .2935  | .2419    | .841                     | 220.0 | .401                       | .2419 |
| CONTRAST 2 | .4886  | .2419    | 2.020                    | 220.0 | .045                       | .2419 |
| CONTRAST 3 | .1380  | .3421    | .403                     | 220.0 | .687                       | .3449 |
| CONTRAST 4 | .8331  | .3421    | 2.453                    | 220.0 | .015                       | .3394 |
| CONTRAST 5 | -.1470 | .3421    | -.430                    | 220.0 | .668                       | .2779 |
| CONTRAST 6 | .5541  | .3421    | 1.620                    | 220.0 | .107                       | .3961 |

TESTS FOR HOMOGENEITY OF VARIANCES

COEFFICIENT OF MAX. VARIANCE / SUM(VARIANCES) = .3533, P = .020 (APPROX.)  
 PARTIAL F = 5.225, P = .001  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 2.679

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----- C N E W A Y -----

VARIABLE TREATMENT DEGREE OF TREATMENT-PROGRAM HELPFULNESS

CONTRAST COEFFICIENT MATRIX

|            |  | DDF | DDF  | DDF  | DDF  |
|------------|--|-----|------|------|------|
|            |  |     | DDF  | DDF  | DDF  |
| CONTRAST 1 |  | .5  | .5   | -.5  | -.5  |
| CONTRAST 2 |  | .5  | -.5  | .5   | -.5  |
| CONTRAST 3 |  | 1.0 | -1.0 | 0    | 0    |
| CONTRAST 4 |  | 0   | 0    | 1.0  | -1.0 |
| CONTRAST 5 |  | 1.0 | 0    | -1.0 | 0    |
| CONTRAST 6 |  | 0   | 1.0  | 0    | -1.0 |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE  | S. ERROR | T VALUE | D.F.  | T PROP. | S. ERROR | T VALUE | D.F.  | T PROP. |
|------------|--------|----------|---------|-------|---------|----------|---------|-------|---------|
| CONTRAST 1 | .0142  | .1428    | .099    | 217.0 | .921    | .1432    | .099    | 203.8 | .921    |
| CONTRAST 2 | -.2565 | .1428    | -1.867  | 217.0 | .063    | .1432    | -1.860  | 203.8 | .064    |
| CONTRAST 3 | .3909  | .2030    | 1.925   | 217.0 | .056    | .2182    | 1.791   | 106.3 | .076    |
| CONTRAST 4 | -.9239 | .2008    | -4.601  | 217.0 | .000    | .1856    | -4.978  | 101.5 | .000    |
| CONTRAST 5 | .6716  | .2004    | 3.351   | 217.0 | .001    | .1860    | 3.610   | 101.9 | .000    |
| CONTRAST 6 | -.6432 | .2034    | -3.162  | 217.0 | .002    | .2179    | -2.952  | 105.8 | .004    |

F-45b

TESTS FOR HOMOGENEITY OF VARIANCES

Cochran C = MAX. VARIANCE/SUM(VARIANCES) = .2997, P = .356 (APPROX.)  
 Bartlett-Fox F = 2.206, P = .086  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 1.946

FILE EXTENSION DATE = 03/24/77

ONE WAY

VARIABLE NAME SURVIVAL ASSISTANCE SVCS SOUGHT VS GOT  
BY TREATMENT FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 5.7798         | 1.9266       | .802    | .494    |
| WITHIN GROUPS  | 220  | 528.1685       | 2.4008       |         |         |
| TOTAL          | 223  | 533.9484       |              |         |         |

| GROUP          | TREATMENT | MEAN  | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|----------------|-----------|-------|--------------------|----------------|---------|---------|--------------------------|
| ODF            | 0         | .3268 | 1.0599             | .1416          | -1.0000 | 5.0000  | .0429 TO .6106           |
| ODF            | 1         | .5449 | 1.8558             | .2480          | -5.0000 | 5.0000  | .1477 TO 1.1421          |
| ODS            | 0         | .2152 | 1.4486             | .1936          | -3.0000 | 4.0000  | -.1727 TO .6031          |
| ODS            | 1         | .4665 | 1.7139             | .2290          | -4.0000 | 5.0000  | .0073 TO .9257           |
| TOTAL          | 224       | .4133 |                    |                | -5.0000 | 5.0000  |                          |
| UNGROUPED DATA |           |       | 1.5474             | .1034          |         |         | .2096 TO .6171           |

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FILE DATE(S) OR DATE = 08/03/77

ONE WAY

VARIABLE NAME SURVIVAL ASSISTANCE SVCS SOUGHT VS GOT

CONTRAST COEFFICIENT MATRIX

|            | DDF | DDF | DDM  | IDD  |
|------------|-----|-----|------|------|
| CONTRAST 1 | 1   | 0   | -0.5 | -0.5 |
| CONTRAST 2 | 1   | 0   | -0.5 | -0.5 |
| CONTRAST 3 | 1   | 0   | 0    | 0    |
| CONTRAST 4 | 1   | 0   | 1.0  | -1.0 |
| CONTRAST 5 | 1   | 0   | -1.0 | 0    |
| CONTRAST 6 | 1   | 0   | 1.0  | -1.0 |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE  | S. ERROR | T VALUE | D.F.  | T PROB. | S. ERROR | T VALUE | D.F.  | T PROB. |
|------------|--------|----------|---------|-------|---------|----------|---------|-------|---------|
| CONTRAST 1 | .1450  | .2071    | .700    | 220.0 | .484    | .2071    | .700    | 193.9 | .485    |
| CONTRAST 2 | -.2847 | .2071    | -1.375  | 220.0 | .170    | .2071    | -1.375  | 193.9 | .171    |
| CONTRAST 3 | -.3181 | .2928    | -1.086  | 220.0 | .278    | .2855    | -1.114  | 87.4  | .268    |
| CONTRAST 4 | -.2513 | .2928    | -.858   | 220.0 | .392    | .2999    | -.838   | 107.0 | .404    |
| CONTRAST 5 | .1116  | .2928    | .381    | 220.0 | .703    | .2399    | .465    | 100.8 | .643    |
| CONTRAST 6 | .1784  | .2928    | .609    | 220.0 | .543    | .3376    | .528    | 109.3 | .598    |

TESTS FOR HOMOGENEITY OF VARIANCES

Cochran's C = MAX. VARIANCE/SUM(VARIANCES) = .3586, P = .020 (APPROX.)  
 Bartlett's Test = 5.033, P = .000  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 3.066

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FILED DATE 09/23/77

ONE WAY

VARIABLE: SACO  
BY: TREATMENT  
EMPLOYMENT SERVICES SOUGHT VS GOT  
FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | P PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 4    | 36.3840        | 12.1280      | 3.976   | .039    |
| WITHIN GROUPS  | 220  | 671.0278       | 3.0501       |         |         |
| TOTAL          | 224  | 707.4118       |              |         |         |

| GROUP           | COUNT | MEAN   | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|-----------------|-------|--------|--------------------|----------------|---------|---------|--------------------------|
| COE             | 36    | .0048  | 1.4926             | .1995          | -3.0000 | 4.0000  | -.3950 TO .4045          |
| RDE             | 36    | -.0306 | 1.7561             | .2347          | -4.0000 | 4.0000  | -.5010 TO .4399          |
| OP4             | 36    | .3926  | 1.8055             | .2413          | -4.0000 | 4.0000  | .3190 TO 1.2861          |
| 101             | 36    | -.2640 | 1.9050             | .2545          | -4.0000 | 4.0000  | -.7753 TO .2455          |
| TOTAL           | 224   | .1230  |                    |                | -4.0000 | 4.0000  |                          |
| UNRECORDED DATA |       |        | 1.7811             | .1190          |         |         | -.1065 TO .3625          |

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FILE: D:\DATA\1\DATA1.DAT (03/19/77)

ONE WAY

TABLE 1001 EMPLOYMENT SERVICES SOUGHT VS GOT

CONTRAST COEFFICIENTS AT 1%

|            | 1   | 2    | 3    | 4    | 5 | 6 |
|------------|-----|------|------|------|---|---|
| CONTRAST 1 | 1.0 | 0.5  | -0.5 | 0    | 0 | 0 |
| CONTRAST 2 | 1.0 | 0.5  | 0.5  | -1.0 | 0 | 0 |
| CONTRAST 3 | 1.0 | -1.0 | 0    | 0    | 0 | 0 |
| CONTRAST 4 | 1.0 | 0    | 1.0  | -1.0 | 0 | 0 |
| CONTRAST 5 | 1.0 | 0    | -1.0 | 0    | 0 | 0 |
| CONTRAST 6 | 1.0 | 1.0  | 0    | -1.0 | 0 | 0 |

|            | VALUE  | S. ERROR | SCALD VARIANCE ESTIMATE |       |         | SEPARATE VARIANCE ESTIMATE |         |       |         |
|------------|--------|----------|-------------------------|-------|---------|----------------------------|---------|-------|---------|
|            |        |          | T VALUE                 | D.F.  | T PROB. | S. ERROR                   | T VALUE | D.F.  | T PROB. |
| CONTRAST 1 | -.2417 | .2334    | -1.207                  | 220.0 | .229    | .2334                      | -1.207  | 213.9 | .229    |
| CONTRAST 2 | .2414  | .2334    | 2.363                   | 220.0 | .019    | .2334                      | 2.363   | 213.9 | .019    |
| CONTRAST 3 | .3353  | .3331    | .107                    | 220.0 | .915    | .3080                      | .115    | 107.2 | .909    |
| CONTRAST 4 | 1.0674 | .3300    | 3.234                   | 220.0 | .001    | .3507                      | 3.043   | 109.7 | .003    |
| CONTRAST 5 | -.7079 | .3300    | -2.417                  | 220.0 | .016    | .3130                      | -2.549  | 106.2 | .012    |
| CONTRAST 6 | .7343  | .3391    | .719                    | 220.0 | .478    | .3462                      | .677    | 109.3 | .500    |

F-47b

TESTS FOR HOMOGENEITY OF VARIANCES

COEFFICIENT OF MAX. VARIANCE/SUM(VARIANCES) = .2974, P = .301 (APPROX.)  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 1.144, P = .330

FILE SAID501 LOCATION DATE = 08/23/77 J

LINEWAY

VARIABLE NAME: SAGA TREATMENT  
 MORE-EFFECTIVE-SELF SPVCS SOUGHT VS GUT  
 FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 261.2662       | 87.0887      | 9.902   | .000    |
| WITHIN GROUPS  | 220  | 2152.3063      | 9.7832       |         |         |
| TOTAL          | 223  | 2413.5725      |              |         |         |

| GROUP             | COUNT | MEAN   | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|-------------------|-------|--------|--------------------|----------------|---------|---------|--------------------------|
| DDF               | 56    | 1.5012 | 2.9781             | .3983          | -6.0000 | 7.0000  | .7037 TO 2.2987          |
| DDF               | 56    | 1.6904 | 3.1254             | .4177          | -6.0000 | 7.0000  | .8621 TO 2.5368          |
| DDF               | 55    | 3.4977 | 3.2263             | .4311          | -6.0000 | 7.0000  | 2.6337 TO 4.3616         |
| DDF               | 56    | .5923  | 3.1762             | .4244          | -6.0000 | 7.0000  | -.3486 TO 1.3533         |
| TOTAL             | 224   | 1.8021 |                    |                | -6.0000 | 7.0000  |                          |
| UNSTRUCTURED DATA |       |        | 3.2499             | .2198          |         |         | 1.3670 TO 2.2333         |

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FILED DATE: 08/23/77 (DATE: 08/23/77)

J N E W A Y

VARIABLE: SAGA MODE-EFFECTIVE-SELF CPVCS SOUGHT VS GOT

CONTRAST COEFFICIENT MATRIX

|            | IND | IND  | IND  | IND  |
|------------|-----|------|------|------|
| CONTRAST 1 | .5  | .5   | -.5  | -.5  |
| CONTRAST 2 | .5  | -.5  | .5   | -.5  |
| CONTRAST 3 | 1.0 | -1.0 | 0    | 0    |
| CONTRAST 4 | 0   | 0    | 1.0  | -1.0 |
| CONTRAST 5 | 1.0 | 0    | -1.0 | 0    |
| CONTRAST 6 | 0   | 1.0  | 0    | -1.0 |

POOLED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE   | S. ERROR | T VALUE | D.F.  | T PROB. | S. ERROR | T VALUE | D.F.  | T PROB. |
|------------|---------|----------|---------|-------|---------|----------|---------|-------|---------|
| CONTRAST 1 | -.3997  | .4130    | -.956   | 220.0 | .340    | .4180    | -.955   | 219.2 | .340    |
| CONTRAST 2 | 1.3986  | .4180    | 3.346   | 220.0 | .001    | .4180    | 3.346   | 219.2 | .001    |
| CONTRAST 3 | -.1982  | .5911    | -.335   | 220.0 | .738    | .5769    | -.344   | 109.7 | .732    |
| CONTRAST 4 | 2.9953  | .5911    | 5.067   | 220.0 | .000    | .6050    | 4.951   | 110.0 | .000    |
| CONTRAST 5 | -1.9965 | .5911    | -3.378  | 220.0 | .001    | .5867    | -3.403  | 109.3 | .001    |
| CONTRAST 6 | 1.1071  | .5911    | 2.025   | 220.0 | .044    | .5955    | 2.010   | 110.0 | .047    |

F-48b

TESTS FOR HOMOGENEITY OF VARIANCES

COCHRAN'S C = MAX. VARIANCE / SUM(VARIANCES) = .2659, P = 1.000 (APPROX.)  
 BARTLETT'S K = .129, P = .943  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 1.173

FILE: DAT001 TO HEALTHY DATE: 08/20/77

ONEWAY

VARIABLE: CAS) DRUG-USE-CONTROL SERVICES SOUGHT VS GUT  
BY: TRT01E FINAL STUDY PERIOD TREATMENT

ANALYSIS OF VARIANCE

| SOURCE         | D.F. | SUM OF SQUARES | MEAN SQUARES | F RATIO | F PROB. |
|----------------|------|----------------|--------------|---------|---------|
| BETWEEN GROUPS | 3    | 155.8933       | 51.9678      | 20.098  | .000    |
| WITHIN GROUPS  | 220  | 604.9855       | 2.7499       |         |         |
| TOTAL          | 223  | 770.7387       |              |         |         |

| GROUP           | COUNT | MEAN   | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
|-----------------|-------|--------|--------------------|----------------|---------|---------|--------------------------|
| QDF             | 36    | .2481  | 1.9640             | .2625          | -4.0000 | 4.0000  | -.2379 TO .8141          |
| RDF             | 36    | 1.5050 | 1.6196             | .2164          | -3.0000 | 4.0000  | 1.0711 TO 1.9389         |
| DDN             | 36    | 2.6627 | 1.3540             | .1809          | -1.0000 | 4.0000  | 2.3021 TO 3.0274         |
| DDI             | 36    | 1.8118 | 1.6339             | .2190          | -3.0000 | 4.0000  | 1.4727 TO 2.3508         |
| TOTAL           | 224   | 1.5924 |                    |                | -4.0000 | 4.0000  |                          |
| UNRECORDED DATA |       |        | 1.3592             | .1242          |         |         | 1.3476 TO 1.8372         |

F-49a

FILE ...

... A Y

WAGELAB ... DOUG-BUS-CONTROL SERVICES SOURCE VS GAT

CONTRAST ...

|            | III | IV   | V    | VI   |
|------------|-----|------|------|------|
| CONTRAST 1 | .5  | .5   | -.5  | -.5  |
| CONTRAST 2 | .5  | -.5  | .5   | -.5  |
| CONTRAST 3 | 1.0 | -1.0 | 0    | 0    |
| CONTRAST 4 | 0   | 0    | 1.0  | -1.0 |
| CONTRAST 5 | 1.0 | 0    | -1.0 | 0    |
| CONTRAST 6 | 0   | 1.0  | 0    | -1.0 |

PROJECTED VARIANCE ESTIMATE

SEPARATE VARIANCE ESTIMATE

|            | VALUE   | S. ERROR | PROJECTED VARIANCE ESTIMATE |       | T PROB. | SEPARATE VARIANCE ESTIMATE |        | T PROB. |      |
|------------|---------|----------|-----------------------------|-------|---------|----------------------------|--------|---------|------|
|            |         |          | T VALUE                     | D.F.  |         | T VALUE                    | D.F.   |         |      |
| CONTRAST 1 | -1.3917 | .2216    | -6.280                      | 220.0 | .000    | .2216                      | -6.280 | 205.8   | .000 |
| CONTRAST 2 | -1.3319 | .2216    | -1.047                      | 220.0 | .296    | .2216                      | -1.047 | 205.8   | .296 |
| CONTRAST 3 | -1.2169 | .3134    | -3.883                      | 220.0 | .000    | .3402                      | -3.577 | 106.1   | .001 |
| CONTRAST 4 | .7570   | .3134    | 2.403                       | 220.0 | .017    | .2841                      | 2.651  | 106.2   | .009 |
| CONTRAST 5 | -2.3766 | .3134    | -7.584                      | 220.0 | .000    | .3188                      | -7.455 | 97.6    | .000 |
| CONTRAST 6 | -1.4069 | .3134    | -1.298                      | 220.0 | .196    | .3079                      | -1.321 | 110.0   | .189 |

F=490

TESTS FOR HOMOGENEITY OF VARIANCES

COCHRAN'S C = MAX. VARIANCE / SUM(VARIANCES) = .1507, P = .032 (APPROX.)  
 BARTLETT-BAX F = 2.507, P = .058  
 MAXIMUM VARIANCE / MINIMUM VARIANCE = 2.104

APPENDIX G

Statistical Tables for Comparisons of  
Non-Heroin Client Types Diverted and Not Diverted  
into Outpatient Drug-Free Services

The derivation of these tables is presented in Chapters 6 and 8. Statistical significance was assessed by use of the "2-Tail Prob." value for the "Pooled variance estimate" unless the "Variance equality" test was statistically significant, in which case the "Separate variance estimate" was used.

FILE DAT0506 (CONTINUATION DATE = 08702777)

T - T E S T

| GROUP 1 - DIVERTED                              |                 | GROUP 2 - DIVERTED |                    | 1. DIVERTED    |         | 2. NOT DIVERTED |         | VARIANCE EQUALITY  |              | PULCED VARIANCE ESTIMATE |                    | SEPARATE VARIANCE ESTIMATE |  |
|---|-----------------|--------------------|--------------------|----------------|---------|-----------------|---------|--------------------|--------------|--------------------------|--------------------|----------------------------|--|
| VARIABLE  | NUMBER OF CASES | MEAN               | STANDARD DEVIATION | STANDARD ERROR | F VALUE | 2-TAIL PROB.    | T VALUE | DEGREES OF FREEDOM | 2-TAIL PROB. | T VALUE                  | DEGREES OF FREEDOM | 2-TAIL PROB.               |  |
| SOUGHTA NUMBER MORE-EFFECTIVE-SELF SRVCS SOUGHT |                 |                    |                    |                |         |                 |         |                    |              |                          |                    |                            |  |
| GROUP 1   | 33              | 2.0593             | 2.183              | .383           | 1.11    | .773            | -3.96   | 64                 | .000         | -3.96                    | 63.97              | .000                       |  |
| GROUP 2   | 33              | 4.2458             | 2.300              | .397           |         |                 |         |                    |              |                          |                    |                            |  |
| GOTA NUMBER MORE-EFFECTIVE-SELF SRVCS GOT       |                 |                    |                    |                |         |                 |         |                    |              |                          |                    |                            |  |
| GROUP 1   | 32              | 2.0774             | 2.204              | .387           | 1.20    | .610            | -3.12   | 64                 | .003         | -3.12                    | 63.06              | .003                       |  |
| GROUP 2   | 33              | 3.8990             | 2.014              | .348           |         |                 |         |                    |              |                          |                    |                            |  |
| SAGA MORE-EFFECTIVE-SELF SRVCS SOUGHT VS GOT    |                 |                    |                    |                |         |                 |         |                    |              |                          |                    |                            |  |
| GROUP 1   | 32              | 1.1833             | 2.473              | .434           | 1.15    | .699            | -1.62   | 64                 | .109         | -1.63                    | 63.91              | .109                       |  |
| GROUP 2   | 33              | 2.2093             | 2.651              | .458           |         |                 |         |                    |              |                          |                    |                            |  |
| SOUGHTB NUMBER EMPLOYMENT SERVICES SOUGHT       |                 |                    |                    |                |         |                 |         |                    |              |                          |                    |                            |  |
| GROUP 1   | 32              | .9801              | 1.287              | .226           | 1.32    | .437            | -2.04   | 64                 | .045         | -2.05                    | 63.28              | .045                       |  |
| GROUP 2   | 33              | 1.6783             | 1.480              | .256           |         |                 |         |                    |              |                          |                    |                            |  |
| GOTB NUMBER EMPLOYMENT SERVICES GOT             |                 |                    |                    |                |         |                 |         |                    |              |                          |                    |                            |  |
| GROUP 1   | 32              | .7101              | .956               | .168           | 1.53    | .236            | -1.28   | 64                 | .205         | -1.28                    | 62.02              | .204                       |  |
| GROUP 2   | 33              | 1.0494             | 1.182              | .204           |         |                 |         |                    |              |                          |                    |                            |  |
| SAGB EMPLOYMENT SERVICES SOUGHT VS GOT          |                 |                    |                    |                |         |                 |         |                    |              |                          |                    |                            |  |
| GROUP 1   | 32              | .0730              | 1.190              | .209           | 1.35    | .400            | -.35    | 64                 | .727         | -.35                     | 63.12              | .727                       |  |
| GROUP 2   | 33              | .1844              | 1.384              | .239           |         |                 |         |                    |              |                          |                    |                            |  |
| SOUGHTC NUMBER SURVIVAL ASSISTANCE SRVCS SOUGHT |                 |                    |                    |                |         |                 |         |                    |              |                          |                    |                            |  |
| GROUP 1   | 32              | .6405              | 1.157              | .210           | 1.58    | .205            | -1.87   | 64                 | .066         | -1.88                    | 61.70              | .065                       |  |
| GROUP 2   | 33              | 1.2678             | 1.504              | .260           |         |                 |         |                    |              |                          |                    |                            |  |



FILE DATASET IDENTIFICATION DATE 02768777

T - T E S T

| GROUP 1 - DIVRGN E3 |  | 1. DIVERTED     |                    |                | VARIANCE EQUALITY |              | * POOLED VARIANCE ESTIMATE |                    |              | * SEPARATE VARIANCE ESTIMATE |                    |              |
|---------------------|--|-----------------|--------------------|----------------|-------------------|--------------|----------------------------|--------------------|--------------|------------------------------|--------------------|--------------|
| GROUP 2 - DIVRGN F3 |  | 2. NOT DIVERTED |                    |                |                   |              |                            |                    |              |                              |                    |              |
| VARIABLE            | NUMBER OF CASES                            | MEAN            | STANDARD DEVIATION | STANDARD ERROR | F VALUE           | 2-TAIL PROB. | T VALUE                    | DEGREES OF FREEDOM | 2-TAIL PROB. | T VALUE                      | DEGREES OF FREEDOM | 2-TAIL PROB. |
| GUTC                | NUMBER SURVIVAL ASSISTANCE SVCS GOT        |                 |                    |                |                   |              |                            |                    |              |                              |                    |              |
| GROUP 1             | 32   | .3970           | .538               | .165           |                   |              |                            |                    |              |                              |                    |              |
| GROUP 2             | 33   | 1.0614          | 1.489              | .257           | 2.52              | .011         | -2.16                      | 64                 | .034         | -2.18                        | 55.09              | .034         |
| SAGC                | SURVIVAL ASSISTANCE SVCS SOUGHT VS GOT     |                 |                    |                |                   |              |                            |                    |              |                              |                    |              |
| GROUP 1             | 32   | -.1142          | .803               | .141           |                   |              |                            |                    |              |                              |                    |              |
| GROUP 2             | 33   | .5827           | 1.612              | .278           | 4.03              | .000         | -2.21                      | 64                 | .031         | -2.23                        | 48.05              | .030         |
| SOUGHTD             | NUMBER DRUG-USE-CONTROL SERVICES SOUGHT    |                 |                    |                |                   |              |                            |                    |              |                              |                    |              |
| GROUP 1             | 32   | .9901           | 1.056              | .185           |                   |              |                            |                    |              |                              |                    |              |
| GROUP 2             | 33   | 1.1803          | 1.070              | .185           | 1.03              | .947         | -.73                       | 64                 | .470         | -.73                         | 63.98              | .470         |
| GOTD                | NUMBER DRUG-USE-CONTROL SERVICES GOT       |                 |                    |                |                   |              |                            |                    |              |                              |                    |              |
| GROUP 1             | 32   | 1.0967          | 1.091              | .191           |                   |              |                            |                    |              |                              |                    |              |
| GROUP 2             | 33   | 1.1926          | 1.081              | .187           | 1.02              | .958         | -.36                       | 64                 | .721         | -.36                         | 63.89              | .721         |
| SAGD                | DRUG-USE-CONTROL SERVICES SOUGHT VS GOT    |                 |                    |                |                   |              |                            |                    |              |                              |                    |              |
| GROUP 1             | 32   | .5622           | 1.244              | .218           |                   |              |                            |                    |              |                              |                    |              |
| GROUP 2             | 33   | .4167           | 1.162              | .201           | 1.15              | .701         | .49                        | 64                 | .625         | .49                          | 63.37              | .625         |
| RESPECT             | NUMBER OF CLIENT DISRESPECT ITEMS ENDORSED |                 |                    |                |                   |              |                            |                    |              |                              |                    |              |
| GROUP 1             | 32   | 1.8815          | .378               | .066           |                   |              |                            |                    |              |                              |                    |              |
| GROUP 2             | 33   | 2.0849          | .589               | .102           | 2.43              | .015         | -1.66                      | 64                 | .101         | -1.68                        | 55.65              | .099         |
| HELPFUL             | NO. OF PROG.-HELPFULNESS ITEMS ENDORSED    |                 |                    |                |                   |              |                            |                    |              |                              |                    |              |
| GROUP 1             | 32   | 5.2567          | 1.344              | .236           |                   |              |                            |                    |              |                              |                    |              |
| GROUP 2             | 33   | 5.0794          | 1.322              | .228           | 1.03              | .925         | .54                        | 64                 | .591         | .54                          | 63.85              | .591         |

FILE DATE: (OR ALTER DATE: 09208777)

T - T E S T

| GROUP 1 - DIVISION 10 |   | 1. DIVERTED |                    | GROUP 2 - DIVISION 10 |         | 2. NOT DIVERTED |         | VARIANCE EQUALITY  |              | * POOLED VARIANCE ESTIMATE |                    |              | * SEPARATE VARIANCE ESTIMATE |  |  |
|-----------------------|---|-------------|--------------------|-----------------------|---------|-----------------|---------|--------------------|--------------|----------------------------|--------------------|--------------|------------------------------|--|--|
| VARIABLE              | NUMBER OF CASES                           | MEAN        | STANDARD DEVIATION | STANDARD ERROR        | F VALUE | 2-TAIL PROB.    | T VALUE | DEGREES OF FREEDOM | 2-TAIL PROB. | T VALUE                    | DEGREES OF FREEDOM | 2-TAIL PROB. |                              |  |  |
| SPAKY                 | NUMBER OF WEAK-PROGRAM ITEMS ENDCRFD      |             |                    |                       |         |                 |         |                    |              |                            |                    |              |                              |  |  |
| GROUP 1               | 32  | .2647       | .653               | .127                  | 1.81    | .100            | -1.77   | 64                 | .082         | -1.77                      | 60.03              | .081         |                              |  |  |
| GROUP 2               | 33  | .6225       | .932               | .161                  |         |                 |         |                    |              |                            |                    |              |                              |  |  |
| SOS                   | SOCIALLY DESIRABLE CHANGES INDICATED      |             |                    |                       |         |                 |         |                    |              |                            |                    |              |                              |  |  |
| GROUP 1               | 32  | 4.2766      | 4.813              | .844                  | 1.17    | .654            | -.47    | 64                 | .632         | -.47                       | 63.25              | .640         |                              |  |  |
| GROUP 2               | 33  | 4.8140      | 4.457              | .770                  |         |                 |         |                    |              |                            |                    |              |                              |  |  |
| WORK                  | BEFORE VS AFTER WORK-INVOLVEMENT CHANGES  |             |                    |                       |         |                 |         |                    |              |                            |                    |              |                              |  |  |
| GROUP 1               | 32  | 1.4832      | 2.300              | .404                  | 1.13    | .741            | -.07    | 64                 | .946         | -.07                       | 63.95              | .946         |                              |  |  |
| GROUP 2               | 33  | 1.5226      | 2.441              | .422                  |         |                 |         |                    |              |                            |                    |              |                              |  |  |
| INVLVD1               | BEFORE VS AFTER PSYCHOSOCIAL INVOLVEMENT  |             |                    |                       |         |                 |         |                    |              |                            |                    |              |                              |  |  |
| GROUP 1               | 32  | 2.5935      | 2.618              | .459                  | 1.32    | .434            | -1.87   | 64                 | .066         | -1.87                      | 62.21              | .067         |                              |  |  |
| GROUP 2               | 33  | 3.7216      | 2.278              | .394                  |         |                 |         |                    |              |                            |                    |              |                              |  |  |
| DRUGUSE1              | BEFORE VS AFTER BAD DRUG-USE CONSEQUENCES |             |                    |                       |         |                 |         |                    |              |                            |                    |              |                              |  |  |
| GROUP 1               | 32  | -2.6173     | 3.313              | .581                  | 1.24    | .547            | -.89    | 64                 | .379         | -.89                       | 63.63              | .378         |                              |  |  |
| GROUP 2               | 33  | -1.8508     | 3.692              | .638                  |         |                 |         |                    |              |                            |                    |              |                              |  |  |
| INVLVD2               | INVOLVEMENT-WITH-OTHER-USERS ACTS-EVENTS  |             |                    |                       |         |                 |         |                    |              |                            |                    |              |                              |  |  |
| GROUP 1               | 32  | 3.9514      | 3.969              | .696                  | 1.05    | .898            | -.82    | 64                 | .415         | -.82                       | 64.00              | .415         |                              |  |  |
| GROUP 2               | 33  | 4.7635      | 4.064              | .702                  |         |                 |         |                    |              |                            |                    |              |                              |  |  |
| DRUGUSE2              | DRUG-USE INVOLVEMENT ACTS-EVENTS          |             |                    |                       |         |                 |         |                    |              |                            |                    |              |                              |  |  |
| GROUP 1               | 32  | 3.7038      | 3.465              | .608                  | 1.16    | .676            | -.19    | 64                 | .847         | -.19                       | 63.88              | .846         |                              |  |  |
| GROUP 2               | 33  | 3.8762      | 3.736              | .645                  |         |                 |         |                    |              |                            |                    |              |                              |  |  |

FILE SATISDA (OPERATION DATE = 08708/77)

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| GROUP 1 - DIVERTED                               |                 | 1. DIVERTED     |                    | VARIANCE EQUALITY |           | * POOLED VARIANCE ESTIMATE |           |                    | * SEPARATE VARIANCE ESTIMATE |           |                    |                |
|--|-----------------|-----------------|--------------------|-------------------|-----------|----------------------------|-----------|--------------------|------------------------------|-----------|--------------------|----------------|
| GROUP 2 - DIVERTED                               |                 | 2. NOT DIVERTED |                    |                   |           |                            |           |                    |                              |           |                    |                |
| VARIABLE   | NUMBER OF CASES | MEAN            | STANDARD DEVIATION | STANDARD ERROR    | * F VALUE | * 2-TAIL PROB.             | * T VALUE | DEGREES OF FREEDOM | * 2-TAIL PROB.               | * T VALUE | DEGREES OF FREEDOM | * 2-TAIL PROB. |
| HARDSHIP ECONOMIC HARDSHIP EVENTS                |                 |                 |                    |                   |           |                            |           |                    |                              |           |                    |                |
| GROUP 1  | 32              | 1.3389          | 1.734              | .304              |           |                            |           |                    |                              |           |                    |                |
| GROUP 2  | 33              | 2.0889          | 3.587              | .620              | 4.28      | .000                       | -1.08     | 64                 | .286                         | -1.09     | 47.25              | .283           |
| DEPRSN PSYCHOLOGICAL DEPRESSION ACTS-EVENTS      |                 |                 |                    |                   |           |                            |           |                    |                              |           |                    |                |
| GROUP 1  | 32              | 1.7748          | 2.083              | .366              |           |                            |           |                    |                              |           |                    |                |
| GROUP 2  | 33              | 2.4772          | 1.829              | .316              | 1.30      | .463                       | -1.46     | 64                 | .150                         | -1.45     | 62.38              | .151           |
| ABSCLAE AFFECT BALANCE <PSYCH. WELL-BEING> SCALE |                 |                 |                    |                   |           |                            |           |                    |                              |           |                    |                |
| GROUP 1  | 32              | 6.3755          | 1.882              | .330              |           |                            |           |                    |                              |           |                    |                |
| GROUP 2  | 33              | 5.4360          | 2.160              | .373              | 1.32      | .444                       | 1.88      | 64                 | .064                         | 1.89      | 63.30              | .064           |
| PAS POSITIVE AFFECT SCALE ITEMS ENDORSED         |                 |                 |                    |                   |           |                            |           |                    |                              |           |                    |                |
| GROUP 1  | 32              | 4.0625          | 1.089              | .191              |           |                            |           |                    |                              |           |                    |                |
| GROUP 2  | 33              | 3.5576          | 1.206              | .208              | 1.23      | .570                       | 1.78      | 64                 | .079                         | 1.79      | 63.69              | .079           |
| FRIENDS NUMBER CONTACTS WITH FRIENDS             |                 |                 |                    |                   |           |                            |           |                    |                              |           |                    |                |
| GROUP 1  | 32              | 6.1872          | 3.317              | .582              |           |                            |           |                    |                              |           |                    |                |
| GROUP 2  | 33              | 6.8247          | 2.466              | .426              | 1.81      | .097                       | -.89      | 64                 | .378                         | -.88      | 58.10              | .380           |
| NOVELTY NUMBER NOVEL ACTS-EVENTS EXPERIENCED     |                 |                 |                    |                   |           |                            |           |                    |                              |           |                    |                |
| GROUP 1  | 32              | 1.5491          | 1.078              | .189              |           |                            |           |                    |                              |           |                    |                |
| GROUP 2  | 33              | 1.4927          | .931               | .161              | 1.34      | .410                       | .23       | 64                 | .921                         | .23       | 62.06              | .821           |
| NAS NEGATIVE AFFECT SCALE ITEMS ENDORSED         |                 |                 |                    |                   |           |                            |           |                    |                              |           |                    |                |
| GROUP 1  | 32              | 1.6870          | 1.504              | .264              |           |                            |           |                    |                              |           |                    |                |
| GROUP 2  | 33              | 2.1216          | 1.446              | .250              | 1.08      | .822                       | -1.20     | 64                 | .236                         | -1.20     | 63.68              | .236           |

FILE DATAS06 (CREATION DATE = 08708777)

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| GROUP 1 - DIVP5N 55                             |                 | 1. DIVERTED     |                    |                | VARIANCE EQUALITY |       | * POOLED VARIANCE ESTIMATE * |         | * SEPARATE VARIANCE ESTIMATE |       |         |       |
|---|-----------------|-----------------|--------------------|----------------|-------------------|-------|------------------------------|---------|------------------------------|-------|---------|-------|
| GROUP 2 - DIVP5N 50                             |                 | 2. NOT DIVERTED |                    |                | * F 2-TAIL *      |       | * T DEGREES OF 2-TAIL *      |         | * T DEGREES OF 2-TAIL *      |       |         |       |
| VARIABLE  | NUMBER OF CASES | MEAN            | STANDARD DEVIATION | STANDARD ERROR | VALUE             | PROB. | VALUE                        | FREEDOM | PROB.                        | VALUE | FREEDOM | PROB. |
| WORRIES NUMBER OF THINGS WORRIED ABOUT          |                 |                 |                    |                |                   |       |                              |         |                              |       |         |       |
| GROUP 1   | 32              | 4.5339          | 2.506              | .440           | 1.37              | .379  | -.86                         | 64      | .394                         | -.86  | 61.85   | .395  |
| GROUP 2   | 33              | 5.0260          | 2.144              | .370           |                   |       |                              |         |                              |       |         |       |
| ANXIETY NUMBER OF ANXIETY ITEMS ENDORSED        |                 |                 |                    |                |                   |       |                              |         |                              |       |         |       |
| GROUP 1   | 32              | .7255           | .693               | .122           | 1.43              | .319  | -2.20                        | 64      | .031                         | -2.21 | 62.67   | .031  |
| GROUP 2   | 33              | 1.1400          | .829               | .143           |                   |       |                              |         |                              |       |         |       |
| SYMPTOMS NUMBER OF PSYCHOPHYSIOLOGICAL SYMPTOMS |                 |                 |                    |                |                   |       |                              |         |                              |       |         |       |
| GROUP 1   | 32              | 1.8493          | 1.630              | .286           | 1.80              | .104  | -3.11                        | 64      | .003                         | -3.13 | 60.12   | .003  |
| GROUP 2   | 33              | 3.3299          | 2.185              | .377           |                   |       |                              |         |                              |       |         |       |

|   |    |        |       |      |      |      |      |    |      |      |       |      |
|---|----|--------|-------|------|------|------|------|----|------|------|-------|------|
| IRTMNTEV IN SPCE OF TREATMENT-PROGRAM HELPFULNESS |    |        |       |      |      |      |      |    |      |      |       |      |
| GROUP 1   | 32 | 2.3836 | 1.145 | .201 | 1.51 | .247 | 1.80 | 64 | .076 | 1.80 | 60.67 | .077 |
| GROUP 2   | 33 | 1.9212 | .932  | .161 |      |      |      |    |      |      |       |      |

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GROUP 1 - DIVRSN EQ 1. DIVERTED  
 GROUP 2 - DIVRSN EQ 2. NOT DIVERTED

VARIANCE EQUALITY \* POOLED VARIANCE ESTIMATE \* SEPARATE VARIANCE ESTIMATE  
 \* \* \* \* \*  
 \* T DEGREES OF 2-TAIL \* T DEGREES OF 2-TAIL \*  
 \* VALUE FREEDOM PROB. \* VALUE FREEDOM PROB.

VARIABLE NUMJFF OF CASES MEAN STANDARD DEVIATION STANDARD ERROR \* F 2-TAIL \* T DEGREES OF 2-TAIL \* T DEGREES OF 2-TAIL \*  
 \* VALUE PROB. \* VALUE FREEDOM PROB. \* VALUE FREEDOM PROB.

| VARIABLE | NUMJFF OF CASES                          | MEAN     | STANDARD DEVIATION | STANDARD ERROR | F VALUE | 2-TAIL PROB. | T VALUE | DEGREES OF FREEDOM | 2-TAIL PROB. | T VALUE | DEGREES OF FREEDOM | 2-TAIL PROB. |  |
|----------|--|----------|--------------------|----------------|---------|--------------|---------|--------------------|--------------|---------|--------------------|--------------|--|
| BYFM     | YEARLY FREQUENCY MARIJUANA USE BEFORE    |          |                    |                |         |              |         |                    |              |         |                    |              |  |
| GROUP 1  | 32                                       | 536.1604 | 840.128            | 147.415        |         |              |         |                    |              |         |                    |              |  |
| GROUP 2  | 33                                       | 408.9945 | 490.897            | 84.788         | 2.93    | .003         | 1.35    | 64                 | .183         | 1.34    | 50.41              | .188         |  |
| AYEM     | YEARLY FREQUENCY MARIJUANA USE AFTER     |          |                    |                |         |              |         |                    |              |         |                    |              |  |
| GROUP 1  | 32                                       | 314.6005 | 685.133            | 120.921        |         |              |         |                    |              |         |                    |              |  |
| GROUP 2  | 33                                       | 232.9120 | 381.342            | 65.866         | 3.27    | .001         | .60     | 64                 | .552         | .59     | 48.77              | .556         |  |
| XAYFM    | ADJUSTED YEARLY FREQ. MARIJUANA USE AFTR |          |                    |                |         |              |         |                    |              |         |                    |              |  |
| GROUP 1  | 32                                       | 68.1521  | 594.951            | 104.395        |         |              |         |                    |              |         |                    |              |  |
| GROUP 2  | 33                                       | 60.4378  | 305.972            | 52.849         | 3.78    | .000         | .06     | 64                 | .950         | .06     | 46.71              | .950         |  |
| BYFA     | YEARLY FREQUENCY ALCOHOL USE BEFORE      |          |                    |                |         |              |         |                    |              |         |                    |              |  |
| GROUP 1  | 32                                       | 84.7695  | 171.376            | 30.071         |         |              |         |                    |              |         |                    |              |  |
| GROUP 2  | 33                                       | 184.4751 | 388.916            | 67.174         | 5.15    | .000         | -1.29   | 64                 | .203         | -1.30   | 44.99              | .200         |  |

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| GROUP 1 - DIVRSN E0 |   | 1. DIVERTED     |                    |                | VARIANCE EQUALITY |              | * POOLED VARIANCE ESTIMATE |                    |              | * SEPARATE VARIANCE ESTIMATE |                    |              |
|---------------------|---|-----------------|--------------------|----------------|-------------------|--------------|----------------------------|--------------------|--------------|------------------------------|--------------------|--------------|
| GROUP 2 - DIVRSN F0 |   | 2. NOT DIVERTED |                    |                |                   |              |                            |                    |              |                              |                    |              |
| VARIABLE            | NUMBER OF CASES                         | MEAN            | STANDARD DEVIATION | STANDARD ERROR | F VALUE           | 2-TAIL PROB. | T VALUE                    | DEGREES OF FREEDOM | 2-TAIL PROB. | T VALUE                      | DEGREES OF FREEDOM | 2-TAIL PROB. |
| AYFA                | YEARLY FREQUENCY ALCOHOL USE AFTER      |                 |                    |                |                   |              |                            |                    |              |                              |                    |              |
| GROUP 1             | 32                                      | 46.4102         | 91.135             | 15.991         | 6.85              | 0            | -1.38                      | 64                 | .173         | -1.39                        | 42.07              | .170         |
| GROUP 2             | 33                                      | 108.0589        | 238.534            | 41.200         |                   |              |                            |                    |              |                              |                    |              |
| XAYFA               | ADJUSTED YEARLY FREQ. ALCOHOL USE AFTER |                 |                    |                |                   |              |                            |                    |              |                              |                    |              |
| GROUP 1             | 32                                      | -65.0153        | 93.213             | 16.356         | 6.48              | 0            | -.86                       | 64                 | .391         | -.87                         | 42.60              | .387         |
| GROUP 2             | 33                                      | -26.6986        | 237.192            | 40.968         |                   |              |                            |                    |              |                              |                    |              |

|         |  |        |       |      |      |      |      |    |      |      |       |      |
|---------|--|--------|-------|------|------|------|------|----|------|------|-------|------|
| BVM     | DOLLAR VALUE EACH MARIJUANA USE BEFORE |        |       |      |      |      |      |    |      |      |       |      |
| GROUP 1 | 32                                     | 1.6804 | 1.956 | .343 | 2.04 | .049 | -.31 | 64 | .755 | -.32 | 58.30 | .754 |
| GROUP 2 | 33                                     | 1.8671 | 2.796 | .483 |      |      |      |    |      |      |       |      |
| AVM     | DOLLAR VALUE EACH MARIJUANA USE AFTER  |        |       |      |      |      |      |    |      |      |       |      |
| GROUP 1 | 32                                     | 1.4856 | 1.769 | .310 | 1.78 | .105 | 1.36 | 64 | .178 | 1.35 | 58.31 | .181 |
| GROUP 2 | 33                                     | .9633  | 1.325 | .229 |      |      |      |    |      |      |       |      |

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| GROUP 1 - DIVRSN EQ |   | 1. DIVERTED |                    | GROUP 2 - DIVRSN EQ |      | 2. NOT DIVERTED |       | VARIANCE EQUALITY  |              | * POOLED VARIANCE ESTIMATE * |                    |              | * SEPARATE VARIANCE ESTIMATE * |   |  |
|---------------------|---|-------------|--------------------|---------------------|------|-----------------|-------|--------------------|--------------|------------------------------|--------------------|--------------|--------------------------------|---|--|
| VARIABLE            | NUMBER OF CASES                           | MEAN        | STANDARD DEVIATION | STANDARD ERROR      | F    | 2-TAIL PROB.    | T     | DEGREES OF FREEDOM | 2-TAIL PROB. | T                            | DEGREES OF FREEDOM | 2-TAIL PROB. |                                |   |  |
| XAVM                | ADJUSTED \$ VALUE EACH MARIJ. USE AFTEP   |             |                    |                     |      |                 |       |                    |              |                              |                    |              |                                |   |  |
| GROUP 1             | 32  | .5503       | 1.704              | .299                | *    | *               | *     | *                  | *            | *                            | *                  | *            | *                              | * |  |
| GROUP 2             | 33  | .0628       | 1.191              | .206                | 2.05 | .045            | 1.63  | 64                 | .109         | 1.62                         | 56.15              | .111         |                                |   |  |
| BVA                 | DOLLAR VALUE EACH ALCOHOL USE BEFORE      |             |                    |                     |      |                 |       |                    |              |                              |                    |              |                                |   |  |
| GROUP 1             | 32  | 1.5041      | 1.693              | .297                | *    | *               | *     | *                  | *            | *                            | *                  | *            | *                              | * |  |
| GROUP 2             | 33  | 2.0985      | 3.189              | .551                | 3.55 | .001            | -.94  | 64                 | .350         | -.95                         | 49.84              | .347         |                                |   |  |
| AVA                 | DOLLAR VALUE EACH ALCOHOL USE AFTER       |             |                    |                     |      |                 |       |                    |              |                              |                    |              |                                |   |  |
| GROUP 1             | 32  | .8639       | 1.446              | .254                | *    | *               | *     | *                  | *            | *                            | *                  | *            | *                              | * |  |
| GROUP 2             | 33  | 2.5278      | 3.781              | .653                | 6.83 | 0               | -2.35 | 64                 | .022         | -2.38                        | 42.09              | .022         |                                |   |  |
| XAVA                | ADJUSTED \$ VALUE EACH ALCOHOL USE AFTER  |             |                    |                     |      |                 |       |                    |              |                              |                    |              |                                |   |  |
| GROUP 1             | 32  | -.3278      | 1.282              | .225                | *    | *               | *     | *                  | *            | *                            | *                  | *            | *                              | * |  |
| GROUP 2             | 33  | 1.1562      | 3.276              | .566                | 6.53 | 0               | -2.41 | 64                 | .019         | -2.44                        | 42.51              | .019         |                                |   |  |
| ERSPEND             | DOLLARS SPENT ALL-DRUGS ALL-PERIOD BEF.   |             |                    |                     |      |                 |       |                    |              |                              |                    |              |                                |   |  |
| GROUP 1             | 32  | 1458.9833   | 2482.045           | 435.694             | *    | *               | *     | *                  | *            | *                            | *                  | *            | *                              | * |  |
| GROUP 2             | 33  | 2005.2318   | 3713.079           | 641.326             | 2.24 | .027            | -.70  | 64                 | .486         | -.70                         | 56.94              | .486         |                                |   |  |
| ADSPEND             | DOLLARS SPENT ALL-DRUGS ALL-PERIOD AFTER  |             |                    |                     |      |                 |       |                    |              |                              |                    |              |                                |   |  |
| GROUP 1             | 32  | 756.0648    | 997.796            | 175.081             | *    | *               | *     | *                  | *            | *                            | *                  | *            | *                              | * |  |
| GROUP 2             | 33  | 578.9842    | 1210.160           | 209.020             | 1.47 | .283            | .28   | 64                 | .779         | .28                          | 62.42              | .778         |                                |   |  |
| XADSPEND            | ADJUSTED \$ SPENT ALL-DRUGS ALL-PRD. AFTR |             |                    |                     |      |                 |       |                    |              |                              |                    |              |                                |   |  |
| GROUP 1             | 32  | -1357.2292  | 989.895            | 173.695             | *    | *               | *     | *                  | *            | *                            | *                  | *            | *                              | * |  |
| GROUP 2             | 33  | -1545.5806  | 1335.327           | 230.619             | 1.82 | .097            | .65   | 64                 | .518         | .65                          | 59.95              | .517         |                                |   |  |

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| GROUP 1 - DIVPSN EQ |   | 1. DIVERTED     |                    | VARIANCE EQUALITY |         | * POOLED VARIANCE ESTIMATE   |         | * SEPARATE VARIANCE ESTIMATE |              |         |                    |              |
|---------------------|---|-----------------|--------------------|-------------------|---------|------------------------------|---------|------------------------------|--------------|---------|--------------------|--------------|
| GROUP 2 - DIVPSN EQ |   | 2. NOT DIVERTED |                    | EQUALITY          |         | * SEPARATE VARIANCE ESTIMATE |         | * SEPARATE VARIANCE ESTIMATE |              |         |                    |              |
| VARIABLE            | NUMBER OF CASES                         | MEAN            | STANDARD DEVIATION | STANDARD ERROR    | F VALUE | 2-TAIL PROB.                 | T VALUE | DEGREES OF FREEDOM           | 2-TAIL PROB. | T VALUE | DEGREES OF FREEDOM | 2-TAIL PROB. |
| SCNE9               | HOURLY WAGE OF BEST JOB BEFORE          |                 |                    |                   |         |                              |         |                              |              |         |                    |              |
| GROUP 1             | 32                                      | 2.6793          | 2.119              | .372              | *       | *                            | *       | *                            | *            | *       | *                  | *            |
| GROUP 2             | 33                                      | 1.9726          | 1.651              | .285              | 1.65    | .161                         | 1.51    | 64                           | .135         | 1.51    | 69.48              | .137         |
| SCNE5               | HOURLY WAGE OF BEST JOB AFTER           |                 |                    |                   |         |                              |         |                              |              |         |                    |              |
| GROUP 1             | 32                                      | 3.3943          | 2.192              | .385              | *       | *                            | *       | *                            | *            | *       | *                  | *            |
| GROUP 2             | 33                                      | 2.1482          | 1.898              | .328              | 1.33    | .417                         | 2.47    | 64                           | .016         | 2.47    | 62.10              | .016         |
| XSCNE15             | ADJUSTED HOURLY WAGE OF BEST JOB AFTER  |                 |                    |                   |         |                              |         |                              |              |         |                    |              |
| GROUP 1             | 32                                      | .6927           | 1.760              | .309              | *       | *                            | *       | *                            | *            | *       | *                  | *            |
| GROUP 2             | 33                                      | -.2606          | 1.627              | .281              | 1.17    | .656                         | 2.29    | 64                           | .026         | 2.28    | 63.23              | .026         |
| SCNE10              | MONTHS EMPLOYED ON BEST JOB BEFORE      |                 |                    |                   |         |                              |         |                              |              |         |                    |              |
| GROUP 1             | 32                                      | 6.8195          | 4.848              | .851              | *       | *                            | *       | *                            | *            | *       | *                  | *            |
| GROUP 2             | 33                                      | 4.1724          | 3.868              | .668              | 1.57    | .204                         | 2.46    | 64                           | .017         | 2.45    | 60.14              | .017         |
| SCNE36              | MONTHS EMPLOYED ON BEST JOB AFTER       |                 |                    |                   |         |                              |         |                              |              |         |                    |              |
| GROUP 1             | 32                                      | 6.5912          | 4.407              | .772              | *       | *                            | *       | *                            | *            | *       | *                  | *            |
| GROUP 2             | 33                                      | 4.1848          | 4.300              | .743              | 1.05    | .892                         | 2.25    | 64                           | .028         | 2.25    | 63.80              | .028         |
| XSCNE16             | ADJUSTED MONTHS EMPLOYED BEST JOB AFTER |                 |                    |                   |         |                              |         |                              |              |         |                    |              |
| GROUP 1             | 32                                      | 1.5221          | 3.878              | .681              | *       | *                            | *       | *                            | *            | *       | *                  | *            |
| GROUP 2             | 33                                      | -.0402          | 4.051              | .700              | 1.09    | .810                         | 1.60    | 64                           | .115         | 1.60    | 63.99              | .114         |



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GROUP 1 - DIVRSN EQ 1. DIVERTED  
 GROUP 2 - DIVRSN EQ 2. NOT DIVERTED

VARIABLE NUMBER OF CASES MFAN STANDARD DEVIATION STANDARD ERROR \* T VALUE \* 2-TAIL PROB. \* POOLED VARIANCE ESTIMATE \* SEPARATE VARIANCE ESTIMATE \* T DEGREES OF FREEDOM \* 2-TAIL PROB. \* T DEGREES OF FREEDOM \* 2-TAIL PROB.

| VARIABLE   | NUMBER OF CASES | MFAN     | STANDARD DEVIATION | STANDARD ERROR | T VALUE | 2-TAIL PROB. | POOLED VARIANCE ESTIMATE | SEPARATE VARIANCE ESTIMATE | T DEGREES OF FREEDOM | 2-TAIL PROB. | T DEGREES OF FREEDOM | 2-TAIL PROB. |
|--|-----------------|----------|--------------------|----------------|---------|--------------|--------------------------|----------------------------|----------------------|--------------|----------------------|--------------|
| STW050 AVERAGE MONTHLY LEGAL INCOME BEFORE       |                 |          |                    |                |         |              |                          |                            |                      |              |                      |              |
| GROUP 1  | 32              | 350.9569 | 287.951            | 50.526         |         |              |                          |                            |                      |              |                      |              |
| GROUP 2  | 33              | 229.7350 | 192.619            | 33.269         | 2.23    | .025         | 2.02                     | 64                         | .048                 | 2.00         | 54.73                | .050         |
| STW068 AVERAGE MONTHLY LEGAL INCOME AFTER        |                 |          |                    |                |         |              |                          |                            |                      |              |                      |              |
| GROUP 1  | 32              | 427.0523 | 341.534            | 59.928         |         |              |                          |                            |                      |              |                      |              |
| GROUP 2  | 33              | 301.2543 | 284.685            | 49.172         | 1.44    | .306         | 1.63                     | 64                         | .109                 | 1.62         | 61.26                | .110         |
| XSTW068 ADJUSTED AVERAGE MONTHLY LEGAL INCM. AFT |                 |          |                    |                |         |              |                          |                            |                      |              |                      |              |
| GROUP 1  | 32              | 37.0891  | 249.555            | 43.789         |         |              |                          |                            |                      |              |                      |              |
| GROUP 2  | 33              | -33.8381 | 260.513            | 44.996         | 1.09    | .812         | 1.13                     | 64                         | .263                 | 1.13         | 63.95                | .263         |
| STW051 AVERAGE MONTHLY ILLEGAL INCOME BEFORE     |                 |          |                    |                |         |              |                          |                            |                      |              |                      |              |
| GROUP 1  | 32              | 107.6729 | 302.557            | 53.089         |         |              |                          |                            |                      |              |                      |              |
| GROUP 2  | 33              | 78.8556  | 133.642            | 23.043         | 5.13    | .000         | .50                      | 64                         | .617                 | .50          | 43.02                | .621         |
| STW069 AVERAGE MONTHLY ILLEGAL INCOME AFTER      |                 |          |                    |                |         |              |                          |                            |                      |              |                      |              |
| GROUP 1  | 32              | 56.9243  | 129.432            | 22.711         |         |              |                          |                            |                      |              |                      |              |
| GROUP 2  | 33              | 50.6327  | 169.584            | 29.291         | 1.72    | .134         | .17                      | 64                         | .866                 | .17          | 60.71                | .866         |

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| GROUP 1 - DIVRSN EQ |  | 1. DIVERTED     |                    |                | VARIANCE EQUALITY |              | * POOLED VARIANCE ESTIMATE |                    |              | * SEPARATE VARIANCE ESTIMATE |                    |              |
|---------------------|--|-----------------|--------------------|----------------|-------------------|--------------|----------------------------|--------------------|--------------|------------------------------|--------------------|--------------|
| GROUP 2 - DIVRSN EQ |  | 2. NOT DIVERTED |                    |                |                   |              |                            |                    |              |                              |                    |              |
| VARIABLE            | NUMBER OF CASES                          | MEAN            | STANDARD DEVIATION | STANDARD ERROR | F VALUE           | 2-TAIL PROB. | T VALUE                    | DEGREES OF FREEDOM | 2-TAIL PROB. | T VALUE                      | DEGREES OF FREEDOM | 2-TAIL PROB. |
| XSTW059             | ADJUSTED AVERAGE MONTHLY ILLEG INCM AFTR |                 |                    |                |                   |              |                            |                    |              |                              |                    |              |
| GROUP 1             | 32                                       | -29.9462        | 83.024             | 14.568         | 3.68              | .000         | -.07                       | 64                 | .944         | -.07                         | 49.32              | .943         |
| GROUP 2             | 33                                       | -27.7194        | 159.214            | 27.500         |                   |              |                            |                    |              |                              |                    |              |
| NDPR                | NUMBER OF KINDS OF DRUGS USED BEFORE     |                 |                    |                |                   |              |                            |                    |              |                              |                    |              |
| GROUP 1             | 32                                       | 2.5266          | 1.300              | .228           | 1.08              | .837         | 1.46                       | 64                 | .150         | 1.46                         | 64.00              | .149         |
| GROUP 2             | 33                                       | 2.0508          | 1.349              | .233           |                   |              |                            |                    |              |                              |                    |              |
| NDPA                | NUMBER OF KINDS OF DRUGS USED AFTER      |                 |                    |                |                   |              |                            |                    |              |                              |                    |              |
| GROUP 1             | 32                                       | 1.3804          | 1.094              | .192           | 1.50              | .262         | -.77                       | 64                 | .443         | -.77                         | 62.25              | .441         |
| GROUP 2             | 33                                       | 1.6131          | 1.338              | .231           |                   |              |                            |                    |              |                              |                    |              |
| YNDPA               | ADJUSTED NO. KINDS OF DRUGS USED AFTR    |                 |                    |                |                   |              |                            |                    |              |                              |                    |              |
| GROUP 1             | 32                                       | -.2296          | .886               | .155           | 1.38              | .373         | -1.79                      | 64                 | .077         | -1.80                        | 62.98              | .077         |
| GROUP 2             | 33                                       | .1978           | 1.040              | .180           |                   |              |                            |                    |              |                              |                    |              |
| SDNE12              | RANK SUPPORT WAGES BEFORE <6=HI>         |                 |                    |                |                   |              |                            |                    |              |                              |                    |              |
| GROUP 1             | 32                                       | 4.4886          | 2.467              | .433           | 1.28              | .490         | 1.05                       | 64                 | .300         | 1.05                         | 63.47              | .299         |
| GROUP 2             | 33                                       | 3.8094          | 2.793              | .482           |                   |              |                            |                    |              |                              |                    |              |
| SDNE39              | RANK SUPPORT WAGES AFTER <6=HI>          |                 |                    |                |                   |              |                            |                    |              |                              |                    |              |
| GROUP 1             | 32                                       | 5.2150          | 1.822              | .320           | 2.13              | .037         | 2.17                       | 64                 | .034         | 2.18                         | 57.66              | .033         |
| GROUP 2             | 33                                       | 3.9940          | 2.660              | .460           |                   |              |                            |                    |              |                              |                    |              |
| XSDNE38             | ADJUSTED RANK SUPPORT WAGES+SALARY AFTR  |                 |                    |                |                   |              |                            |                    |              |                              |                    |              |
| GROUP 1             | 32                                       | 1.6925          | 1.453              | .255           | 2.42              | .015         | 2.15                       | 64                 | .035         | 2.17                         | 55.73              | .035         |
| GROUP 2             | 33                                       | .6824           | 2.259              | .390           |                   |              |                            |                    |              |                              |                    |              |

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| GROUP 1 - DIVRSN E0 |   | 1. DIVERTED     |                    | VARIANCE EQUALITY |         | * POOLED VARIANCE ESTIMATE |         |                    | * SEPARATE VARIANCE ESTIMATE |         |                    |              |
|---------------------|---|-----------------|--------------------|-------------------|---------|----------------------------|---------|--------------------|------------------------------|---------|--------------------|--------------|
| GROUP 2 - DIVRSN E0 |   | 2. NOT DIVERTED |                    |                   |         |                            |         |                    |                              |         |                    |              |
| VARIABLE            | NUMBER OF CASES                           | MEAN            | STANDARD DEVIATION | STANDARD ERROR    | F VALUE | 2-TAIL PROB.               | T VALUE | DEGREES OF FREEDOM | 2-TAIL PROB.                 | T VALUE | DEGREES OF FREEDOM | 2-TAIL PROB. |
| SCNF13              | RANK SUPPORT CHARITY BEFORE <6=HI>        |                 |                    |                   |         |                            |         |                    |                              |         |                    |              |
| GROUP 1             | 32  | 3.4962          | 2.579              | .452              | 1.06    | .870                       | -.19    | 64                 | .846                         | -.19    | 64.00              | .846         |
| GROUP 2             | 33  | 3.6216          | 2.657              | .459              |         |                            |         |                    |                              |         |                    |              |
| SONE30              | RANK SUPPORT CHARITY AFTER <6=HI>         |                 |                    |                   |         |                            |         |                    |                              |         |                    |              |
| GROUP 1             | 32  | 2.5961          | 2.711              | .476              | 1.06    | .878                       | -.27    | 64                 | .786                         | -.27    | 64.00              | .786         |
| GROUP 2             | 33  | 2.7810          | 2.788              | .492              |         |                            |         |                    |                              |         |                    |              |
| XSONF39             | ADJUSTED RANK SUPPORT: OTHERS-CHRTY AFTER |                 |                    |                   |         |                            |         |                    |                              |         |                    |              |
| GROUP 1             | 32  | -2.0284         | 2.299              | .403              | 1.17    | .659                       | -.22    | 64                 | .827                         | -.22    | 63.24              | .827         |
| GROUP 2             | 33  | -1.9086         | 2.127              | .367              |         |                            |         |                    |                              |         |                    |              |
| SONE15              | RANK SUPPORT WELFARE BEFORE <6=HI>        |                 |                    |                   |         |                            |         |                    |                              |         |                    |              |
| GROUP 1             | 32  | .2540           | 1.227              | .215              | 1.76    | .117                       | -.59    | 64                 | .555                         | -.60    | 60.38              | .554         |
| GROUP 2             | 33  | .4649           | 1.629              | .281              |         |                            |         |                    |                              |         |                    |              |
| SONE41              | RANK SUPPORT WELFARE AFTER <6=HI>         |                 |                    |                   |         |                            |         |                    |                              |         |                    |              |
| GROUP 1             | 32  | .3725           | 1.347              | .236              | 1.46    | .290                       | -.25    | 64                 | .803                         | -.25    | 62.47              | .802         |
| GROUP 2             | 33  | .4649           | 1.629              | .281              |         |                            |         |                    |                              |         |                    |              |
| XSONE41             | ADJUSTED RANK SUPPORT: WELFARE ETC. AFTER |                 |                    |                   |         |                            |         |                    |                              |         |                    |              |
| GROUP 1             | 32  | -2.7036         | 1.515              | .266              | 3.54    | .001                       | .05     | 64                 | .962                         | .05     | 47.64              | .963         |
| GROUP 2             | 33  | -2.7177         | .806               | .139              |         |                            |         |                    |                              |         |                    |              |
| SONE10              | RANK SUPPORT ILLEGAL ACTS BEFORE <6=HI>   |                 |                    |                   |         |                            |         |                    |                              |         |                    |              |
| GROUP 1             | 32  | .5532           | 1.586              | .278              | 1.41    | .342                       | -.98    | 64                 | .332                         | -.98    | 62.81              | .331         |
| GROUP 2             | 33  | .9725           | 1.881              | .325              |         |                            |         |                    |                              |         |                    |              |

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| GROUP 1 - DIVRSN 60 |  | 1. DIVERTED     |                    |                |         | VARIANCE EQUALITY |         | * POOLED VARIANCE ESTIMATE * |              |         | * SEPARATE VARIANCE ESTIMATE * |              |  |
|---------------------|--|-----------------|--------------------|----------------|---------|-------------------|---------|------------------------------|--------------|---------|--------------------------------|--------------|--|
| GROUP 2 - DIVRSN 60 |  | 2. NOT DIVERTED |                    |                |         |                   |         | * T *                        |              |         | * T *                          |              |  |
| VARIABLE            | NUMBER OF CASES                          | MEAN            | STANDARD DEVIATION | STANDARD ERROR | F VALUE | 2-TAIL PROB.      | T VALUE | DEGREES OF FREEDOM           | 2-TAIL PROB. | T VALUE | DEGREES OF FREEDOM             | 2-TAIL PROB. |  |
| -----               |  |                 |                    |                |         |                   |         |                              |              |         |                                |              |  |
| SCNE42              | RANK SUPPORT ILLEGAL ACTS AFTER <6=HI>   |                 |                    |                |         |                   |         |                              |              |         |                                |              |  |
| GROUP 1             | 32                                       | .5764           | 1.556              | .273           | 1.54    | .230              | -.59    | 64                           | .557         | -.59    | 61.97                          | .556         |  |
| GROUP 2             | 33                                       | .8318           | 1.931              | .334           |         |                   |         |                              |              |         |                                |              |  |
| -----               |  |                 |                    |                |         |                   |         |                              |              |         |                                |              |  |
| XSONF42             | ADJUSTED RANK SUPPORT: ILLEGAL ACTS AFTR |                 |                    |                |         |                   |         |                              |              |         |                                |              |  |
| GROUP 1             | 32                                       | -3.6056         | 1.316              | .231           | 1.69    | .146              | -.28    | 64                           | .777         | -.29    | 60.92                          | .776         |  |
| GROUP 2             | 33                                       | -3.4985         | 1.710              | .295           |         |                   |         |                              |              |         |                                |              |  |
| -----               |  |                 |                    |                |         |                   |         |                              |              |         |                                |              |  |
| STWD45              | BURGLARIES OR BRKNG + ENTRG: BEFORE PRD. |                 |                    |                |         |                   |         |                              |              |         |                                |              |  |
| GROUP 1             | 31                                       | .2729           | .857               | .154           | 1.37    | .390              | .04     | 61                           | .969         | .04     | 59.03                          | .970         |  |
| GROUP 2             | 32                                       | .2652           | .733               | .129           |         |                   |         |                              |              |         |                                |              |  |
| -----               |  |                 |                    |                |         |                   |         |                              |              |         |                                |              |  |
| STWD67              | BURGLARIES OR BRKNG + ENTRG: AFTER PRD.  |                 |                    |                |         |                   |         |                              |              |         |                                |              |  |
| GROUP 1             | 31                                       | 0               | 0                  | 0              | 0       | 1.000             | -1.33   | 63                           | .189         | -1.38   | 32.52                          | .176         |  |
| GROUP 2             | 33                                       | .2297           | .963               | .166           |         |                   |         |                              |              |         |                                |              |  |
| -----               |  |                 |                    |                |         |                   |         |                              |              |         |                                |              |  |
| XSTWD63             | ADJUSTED BURG OR BRKNG+ENTRNG AFTER      |                 |                    |                |         |                   |         |                              |              |         |                                |              |  |
| GROUP 1             | 31                                       | -.1429          | .214               | .038           | 18.99   | .000              | -1.40   | 61                           | .165         | -1.43   | 34.53                          | .162         |  |
| GROUP 2             | 32                                       | .0986           | .934               | .165           |         |                   |         |                              |              |         |                                |              |  |
| -----               |  |                 |                    |                |         |                   |         |                              |              |         |                                |              |  |
| STWD46              | OTHER KINDS OF THEFT: BEFORE PERIOD      |                 |                    |                |         |                   |         |                              |              |         |                                |              |  |
| GROUP 1             | 31                                       | .3828           | 1.217              | .218           | 1.95    | .069              | -.00    | 61                           | .998         | -.00    | 54.29                          | .998         |  |
| GROUP 2             | 32                                       | .3834           | .871               | .154           |         |                   |         |                              |              |         |                                |              |  |
| -----               |  |                 |                    |                |         |                   |         |                              |              |         |                                |              |  |
| STWD24              | OTHER KINDS OF THEFT: AFTER PERIOD       |                 |                    |                |         |                   |         |                              |              |         |                                |              |  |
| GROUP 1             | 31                                       | .1063           | .414               | .074           | 7.39    | .000              | -1.17   | 63                           | .248         | -1.20   | 41.75                          | .237         |  |
| GROUP 2             | 33                                       | .3563           | 1.126              | .194           |         |                   |         |                              |              |         |                                |              |  |

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| GROUP 1 - DIVERTED TO |   | 1. DIVERTED     |                    |                | VARIANCE EQUALITY |              | * POOLED VARIANCE ESTIMATE |                    |              | * SEPARATE VARIANCE ESTIMATE |                    |              |
|-----------------------|---|-----------------|--------------------|----------------|-------------------|--------------|----------------------------|--------------------|--------------|------------------------------|--------------------|--------------|
| GROUP 2 - DIVERTED TO |   | 2. NOT DIVERTED |                    |                |                   |              |                            |                    |              |                              |                    |              |
| VARIABLE              | NUMBER OF CASES                         | MEAN            | STANDARD DEVIATION | STANDARD ERROR | F VALUE           | 2-TAIL PROB. | T VALUE                    | DEGREES OF FREEDOM | 2-TAIL PROB. | T VALUE                      | DEGREES OF FREEDOM | 2-TAIL PROB. |
| XSTW04                | ADJUSTED OTHER KINDS OF THEFT AFTER     |                 |                    |                |                   |              |                            |                    |              |                              |                    |              |
| GROUP 1               | 31                                      | -.2964          | .305               | .055           | 12.47             | .000         | -1.32                      | 61                 | .192         | -1.34                        | 36.27              | .189         |
| GROUP 2               | 32                                      | -.0314          | 1.078              | .190           |                   |              |                            |                    |              |                              |                    |              |
| STW04B                | DEALING OR SELLING DRUGS: BEFORE PERIOD |                 |                    |                |                   |              |                            |                    |              |                              |                    |              |
| GROUP 1               | 31                                      | .7642           | 1.533              | .275           | 1.28              | .497         | -.73                       | 61                 | .471         | -.73                         | 60.70              | .470         |
| GROUP 2               | 32                                      | 1.0634          | 1.736              | .306           |                   |              |                            |                    |              |                              |                    |              |
| STW06A                | DEALING OR SELLING DRUGS: AFTER PERIOD  |                 |                    |                |                   |              |                            |                    |              |                              |                    |              |
| GROUP 1               | 31                                      | .8203           | 1.658              | .305           | 1.05              | .891         | -.06                       | 63                 | .949         | -.06                         | 61.91              | .949         |
| GROUP 2               | 33                                      | .8470           | 1.658              | .286           |                   |              |                            |                    |              |                              |                    |              |
| XSTW06B               | ADJUSTED DEALING OR SELLING DRUGS AFTER |                 |                    |                |                   |              |                            |                    |              |                              |                    |              |
| GROUP 1               | 31                                      | .1072           | 1.485              | .267           | 1.37              | .395         | .12                        | 61                 | .907         | .12                          | 60.32              | .906         |
| GROUP 2               | 32                                      | .0593           | 1.736              | .306           |                   |              |                            |                    |              |                              |                    |              |
| RO7                   | HASH-MARIJ RANK BEFORE                  |                 |                    |                |                   |              |                            |                    |              |                              |                    |              |
| GROUP 1               | 32                                      | 4.1035          | 1.744              | .306           | 1.78              | .111         | 2.51                       | 64                 | .015         | 2.52                         | 60.27              | .015         |
| GROUP 2               | 33                                      | 2.8328          | 2.324              | .401           |                   |              |                            |                    |              |                              |                    |              |
| RO7B                  | HASH-MARIJ RANK AFTER                   |                 |                    |                |                   |              |                            |                    |              |                              |                    |              |
| GROUP 1               | 32                                      | 3.3681          | 2.337              | .410           | 1.04              | .921         | 1.71                       | 64                 | .092         | 1.71                         | 63.99              | .091         |
| GROUP 2               | 33                                      | 2.3731          | 2.380              | .411           |                   |              |                            |                    |              |                              |                    |              |
| XRO7C                 | ADJUSTED HASH-MARIJ RANK AFTER          |                 |                    |                |                   |              |                            |                    |              |                              |                    |              |
| GROUP 1               | 32                                      | .2474           | 1.908              | .335           | 1.05              | .896         | .34                        | 64                 | .732         | .34                          | 64.00              | .732         |
| GROUP 2               | 33                                      | .0837           | 1.955              | .338           |                   |              |                            |                    |              |                              |                    |              |

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| VARIABLE | NUMBER OF CASES                 | MEAN   | STANDARD DEVIATION | STANDARD ERROR | VARIANCE EQUALITY |              | POOLED VARIANCE ESTIMATE |                    |              | SEPARATE VARIANCE ESTIMATE |                    |              |   |
|----------|---------------------------------|--------|--------------------|----------------|-------------------|--------------|--------------------------|--------------------|--------------|----------------------------|--------------------|--------------|---|
|          |                                 |        |                    |                | F VALUE           | 2-TAIL PROB. | T VALUE                  | DEGREES OF FREEDOM | 2-TAIL PROB. | T VALUE                    | DEGREES OF FREEDOM | 2-TAIL PROB. |   |
| ED4      | OPAL AMPHET RANK BEFORE         |        |                    |                | *                 | *            | *                        | *                  | *            | *                          | *                  | *            | * |
| GROUP 1  | 32                              | 1.0150 | 1.603              | .281           | *                 | *            | *                        | *                  | *            | *                          | *                  | *            | * |
| GROUP 2  | 33                              | .5969  | 1.376              | .238           | *                 | *            | *                        | *                  | *            | *                          | *                  | *            | * |
| ED4      | OPAL AMPHET RANK AFTER          |        |                    |                | *                 | *            | *                        | *                  | *            | *                          | *                  | *            | * |
| GROUP 1  | 32                              | .0506  | .393               | .069           | *                 | *            | *                        | *                  | *            | *                          | *                  | *            | * |
| GROUP 2  | 33                              | .1313  | .723               | .125           | *                 | *            | *                        | *                  | *            | *                          | *                  | *            | * |
| XAD4     | ADJUSTED OPAL AMPHET RANK AFTER |        |                    |                | *                 | *            | *                        | *                  | *            | *                          | *                  | *            | * |
| GROUP 1  | 32                              | -.1115 | .392               | .069           | *                 | *            | *                        | *                  | *            | *                          | *                  | *            | * |
| GROUP 2  | 33                              | .0191  | .664               | .115           | *                 | *            | *                        | *                  | *            | *                          | *                  | *            | * |
| ED5      | HABITURATES RANK BEFORE         |        |                    |                | *                 | *            | *                        | *                  | *            | *                          | *                  | *            | * |
| GROUP 1  | 32                              | 1.1229 | 1.918              | .337           | *                 | *            | *                        | *                  | *            | *                          | *                  | *            | * |
| GROUP 2  | 33                              | 1.2272 | 1.867              | .322           | *                 | *            | *                        | *                  | *            | *                          | *                  | *            | * |
| ED5      | HABITURATES RANK AFTER          |        |                    |                | *                 | *            | *                        | *                  | *            | *                          | *                  | *            | * |
| GROUP 1  | 32                              | .1015  | .551               | .097           | *                 | *            | *                        | *                  | *            | *                          | *                  | *            | * |
| GROUP 2  | 33                              | .5004  | 1.478              | .255           | *                 | *            | *                        | *                  | *            | *                          | *                  | *            | * |
| ED5      | ADJUSTED HABITURATES RANK AFTER |        |                    |                | *                 | *            | *                        | *                  | *            | *                          | *                  | *            | * |
| GROUP 1  | 32                              | -.1553 | .602               | .106           | *                 | *            | *                        | *                  | *            | *                          | *                  | *            | * |
| GROUP 2  | 33                              | .2237  | 1.273              | .220           | *                 | *            | *                        | *                  | *            | *                          | *                  | *            | * |

SENATE WEIGHTED NON-HEROIN TYPES IN DOG ONLY, LESS DROPPED CASES  
 GROUP 1 = DIVERTED INTO TREATMENT, GROUP 2 = NOT DIVERTED  
 FILE DATASOURCE (CREATION DATE = 09/08/77)

09/30/77

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GROUP 1 - DIVERTED TO TREATMENT  
 GROUP 2 - DIVERTED TO NOT TREATMENT

VARIABLE NUMBER OF CASES MEAN STANDARD DEVIATION STANDARD ERROR

VARIANCE EQUALITY F 2-TAIL VALUE PROB.

\* POOLED VARIANCE ESTIMATE \* SEPARATE VARIANCE ESTIMATE

\* T DEGREES OF FREEDOM \* T DEGREES OF FREEDOM

\* 2-TAIL PROB. \* 2-TAIL PROB.

| VARIABLE                              | NUMBER OF CASES | MEAN   | STANDARD DEVIATION | STANDARD ERROR | F     | 2-TAIL VALUE | PROB. | T     | DEGREES OF FREEDOM | 2-TAIL PROB. | T | DEGREES OF FREEDOM | 2-TAIL PROB. |
|---------------------------------------|-----------------|--------|--------------------|----------------|-------|--------------|-------|-------|--------------------|--------------|---|--------------------|--------------|
| AD12 ALCOHOL RANK BEFORE              |                 |        |                    |                |       |              |       |       |                    |              |   |                    |              |
| GROUP 1                               | 32              | 2.1549 | 2.066              | .363           |       |              |       |       |                    |              |   |                    |              |
| GROUP 2                               | 33              | 2.3832 | 2.207              | .381           | 1.14  | .715         |       | -.43  | 64                 | .666         |   | 63.93              | .666         |
| AD17 ALCOHOL RANK AFTER               |                 |        |                    |                |       |              |       |       |                    |              |   |                    |              |
| GROUP 1                               | 32              | 1.4980 | 2.094              | .367           |       |              |       |       |                    |              |   |                    |              |
| GROUP 2                               | 33              | 2.2945 | 2.222              | .384           | 1.13  | .741         |       | -1.50 | 64                 | .139         |   | 63.95              | .139         |
| AD21 ADJUSTED ALCOHOL RANK AFTER      |                 |        |                    |                |       |              |       |       |                    |              |   |                    |              |
| GROUP 1                               | 32              | -.3889 | 2.091              | .367           |       |              |       |       |                    |              |   |                    |              |
| GROUP 2                               | 33              | 1.2873 | 1.825              | .315           | 1.31  | .442         |       | -1.40 | 64                 | .166         |   | 62.26              | .167         |
| AD19 NUMBER OF DRUG TREATMENTS BEFORE |                 |        |                    |                |       |              |       |       |                    |              |   |                    |              |
| GROUP 1                               | 32              | .0484  | .218               | .038           |       |              |       |       |                    |              |   |                    |              |
| GROUP 2                               | 33              | .0693  | .258               | .045           | 1.40  | .350         |       | -.36  | 64                 | .724         |   | 62.86              | .723         |
| AD22 NUMBER OF DRUG TREATMENTS AFTER  |                 |        |                    |                |       |              |       |       |                    |              |   |                    |              |
| GROUP 1                               | 32              | .0069  | .084               | .015           |       |              |       |       |                    |              |   |                    |              |
| GROUP 2                               | 33              | .0872  | .310               | .053           | 13.54 | 0            |       | -1.43 | 64                 | .158         |   | 37.44              | .156         |

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| GROUP 1 - DIVRSN EQ                          |                 | 1. DIVERTED     |                    |                |             | VARIANCE EQUALITY |             | * POOLED VARIANCE ESTIMATE * |                  | * SEPARATE VARIANCE ESTIMATE * |                        |                  |
|--|-----------------|-----------------|--------------------|----------------|-------------|-------------------|-------------|------------------------------|------------------|--------------------------------|------------------------|------------------|
| GROUP 2 - DIVRSN EQ                          |                 | 2. NOT DIVERTED |                    |                |             |                   |             |                              |                  |                                |                        |                  |
| VARIABLE                                     | NUMBER OF CASES | MEAN            | STANDARD DEVIATION | STANDARD ERROR | * F VALUE * | * 2-TAIL PROB. *  | * T VALUE * | * DEGREES OF FREEDOM *       | * 2-TAIL PROB. * | * T VALUE *                    | * DEGREES OF FREEDOM * | * 2-TAIL PROB. * |
| *****  |                 |                 |                    |                |             |                   |             |                              |                  |                                |                        |                  |
| XDATA ADJUSTED NO. OF DRUG TREATMENTS AFTER  |                 |                 |                    |                |             |                   |             |                              |                  |                                |                        |                  |
| GROUP 1                                      | 34              | -.4998          | .104               | .018           | * 7.90 *    | * 0 *             | * -1.37 *   | * 64 *                       | * .176 *         | * -1.39 *                      | * 40.86 *              | * .173 *         |
| GROUP 2                                      | 33              | -.4152          | .293               | .051           | * * *       | * * *             | * * *       | * * *                        | * * *            | * * *                          | * * *                  | * * *            |
| *****  |                 |                 |                    |                |             |                   |             |                              |                  |                                |                        |                  |
| NAD NUMBER TIMES ARRESTED AND CHARGED BEFORE |                 |                 |                    |                |             |                   |             |                              |                  |                                |                        |                  |
| GROUP 1                                      | 32              | 1.4898          | 1.019              | .179           | * 2.79 *    | * .005 *          | * .61 *     | * 64 *                       | * .542 *         | * .62 *                        | * 53.49 *              | * .540 *         |
| GROUP 2                                      | 33              | 1.2775          | 1.701              | .294           | * * *       | * * *             | * * *       | * * *                        | * * *            | * * *                          | * * *                  | * * *            |
| *****  |                 |                 |                    |                |             |                   |             |                              |                  |                                |                        |                  |
| NAA NUMBER TIMES ARRESTED AND CHARGED AFTER  |                 |                 |                    |                |             |                   |             |                              |                  |                                |                        |                  |
| GROUP 1                                      | 31              | .3569           | .659               | .118           | * 2.81 *    | * .005 *          | * -1.42 *   | * 63 *                       | * .161 *         | * -1.44 *                      | * 53.62 *              | * .155 *         |
| GROUP 2                                      | 33              | .6805           | 1.106              | .191           | * * *       | * * *             | * * *       | * * *                        | * * *            | * * *                          | * * *                  | * * *            |
| *****  |                 |                 |                    |                |             |                   |             |                              |                  |                                |                        |                  |
| NAAA ADJUSTED NO. TIMES ARRTD+CHRGD AFTER    |                 |                 |                    |                |             |                   |             |                              |                  |                                |                        |                  |
| GROUP 1                                      | 31              | -.3618          | .605               | .108           | * 2.37 *    | * .019 *          | * -1.88 *   | * 63 *                       | * .065 *         | * -1.90 *                      | * 56.20 *              | * .062 *         |
| GROUP 2                                      | 33              | .0066           | .932               | .161           | * * *       | * * *             | * * *       | * * *                        | * * *            | * * *                          | * * *                  | * * *            |
| *****  |                 |                 |                    |                |             |                   |             |                              |                  |                                |                        |                  |