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Comparative Case Studies

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MALPRACTICE ARBITRATION: COMPARATIVE CASE STUDIES

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16. Abstract (Limit: 200 words) The objectives of this study were to develop a data base on medical malpractice claims entering the arbitration forum; and to compare the effects and effectiveness of arbitration versus litigation as a method of resolving medical malpractice claims. Case files or summary data, such as insurer claim reports, were examined for approximately 300 closed arbitration cases believed to represent the majority of cases closed nationally between 1970 and 1979. The large majority of cases are from the California Hospital and Medical Association's arbitration program. Not included are data from cases resolved in arbitration under HMO or other prepaid group plan contracts. The arbitration data base was designed to yield information separately by claim-producing incident, by claim, by defendent, or by forum. For comparative analyses, a litigation sample of 500 cases was obtained from the National Association of Insurance Commissioners' (NAIC) national survey representing insured medical malpractice claims closed between 1975 and 1978. The data base and ancillary materials, including the computer program, are available directly from the American Arbitration Association. The Final Report presents a descriptive analysis of 205 cases closed in the arbitration forum; and, a comparative analysis of a sample of arbitration and court cases occurring in southern California. Because the information is limited in type and volume, and the comparison study is restricted to one area and program, this work is described as a pilot or introductory effort. The findings should be considered indicative rather than definitive, and cannot be generalized for other areas or even other arbitration systems. Given these caveats the major findings include: (1) arbitration appeared to be the more efficient method, as measured in terms of time for report and processing; (2) the two forums appear to be equivalent with regard to frequency and amount of indemnity award; (3) there was no evidence that arbitration produces compromise or favors one side over the other; (4) cases in arbitration were more likely to be adjudicated on the merits.

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MALPRACTICE ARBITRATION: COMPARATIVE CASE STUDIES

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Significance

This is the final report of a six-year nationwide study of voluntary, binding arbitration as applied to resolution of medical malpractice claims.

Final is the report but not this dynamic process of management of issues arising from maloccurrences in treatment of patients by doctors, hospitals, health care agencies, others. Arbitration stands as a viable alternative, at the threshold, not the exit door, with a future.

These studies clearly demonstrate that arbitration, as a complete substitute for litigation in this field, can accommodate all types of cases and can provide equivalent results at less time and cost. Given a chance to perform, private arbitration will serve the public interest. Well designed and administered, arbitration can meet the special needs of the health enterprise, its providers, patients, insurers, attorneys and managers.

The "crisis" of the 1970's may return, it is predicted. The breadth and stress may not be the same but many of the problems will and solutions will again be proposed. Some recommended but not tried will be reconsidered. Others, not well tried, will be improved in law and practice. And others, like arbitration, begun but not extended, may be more broadly applied.

These studies should offer a basis for discussion, decision and action. Arbitration has its problems, but these stem mainly from lack of understanding. There are legal, technical and administrative problems, to be sure, but the flexibility of the process and the involvement of parties in the formulation of systems can and should overcome such difficulties.

Both the legislation and case law favor and support voluntary, binding arbitration for medical malpractice. Programs have been designed and are responsive to the requirements of the health field, needs and desires of participants. Administration has been successfully undertaken by the parties, by professional agencies and under public and private auspices. Experience indicates slow but certain growth and acceptance, especially in jurisdictions with favorable legislation. Comparison of cases closed in court and arbitration jurisdictions discloses essentially similar outcomes for similar cases but greater efficiency for arbitration, as measured in time and cost. The obvious significance of these findings had to suggest that arbitration deserves consideration now, before the next crisis, as a major resolution and prevention process for medical malpractice issues.

I. MEDICAL MALPRACTICE ARBITRATION: LEGAL AND PROGRAM FOUNDATIONS

A. Introduction

Arbitration as an alternative to litigation for resolving medical malpractice and other health disputes is available in more places and in more ways than ever before. The first formal use of arbitration for this purpose started over half a century ago when the Ross-Loos clinic in California included a provision in its group health policy for settling differences through arbitration available under the California general arbitration statute. A similar plan was adopted later by the Kaiser-Permanente group and hospitals. Within the last decade, there has been more growth and variety of arbitration options under both private and public sponsorship than in any other period. The main advance has been the passage of special malpractice arbitration laws by the states, as part of the general reform movement following the malpractice crisis of the early '70s.

Definition

Arbitration is a process, subject to law, whereby parties may submit specified present or future controversies to a neutral party for final determination. Arbitration applies the same substantive law as litigation and in absence of statute, decides liability in medical malpractice on the local tort principles, statutes and decisions. When cases are conducted according to terms of the arbitration agreement and legal requisites, the determination of the arbitrator or panel, known as the award, is enforceable on the same basis as a court judgment. The essential

differences between litigation and arbitration relate to management and prccedure rather than legal structure or philosophy.

Comparison Between Court and Arbitration Systems

Litigation	Arbitration
formal pleadings	statement of nature of dispute
pretrial procedures by motions, discovery, and examinations before trial	ordinarily no pretrial procedures (but available)
trial by judge or jury	hearing by designees of parties or from AAA panel, usually experts in subject of the arbitration
rules of evidence followed at the trial	arbitrator judge of relevancy and materiality; conformity to rules of evidence not necessary
decision according to law	award deemed just and equitable; presumably but not necessarily the same as "law"
right of appeal	award final; review limited process (return to arbitration) if award vacated but arbitration valid
public proceedings	private hearings

Even though arbitration is founded on the simple principle of agreement to final determination by neutrals, a variety of methods and formats are possible. In fact, this versatility--adaptability to meet the needs of the parties--is perhaps the major virtue. In medical malpractice, two patterns are used, based on the type of agreement: preclaim and postclaim.

Preclaim: agreements prior to claim that any dispute that may arise within the future will be submitted to arbitration.

Postclaim: agreements after claim to submit disputed issues to arbitration.

Within the preclaim category, there are four types:

1. Exclusive: imposed by law (only Puerto Rico; medical malpractice statute specifies arbitration as sole method).
2. Mandatory: arbitration specified as sole method under terms of a health plan (e.g., Kaiser plan; California statute permits such provisions by adequate notice to subscribers).
3. Prescribed: offer of arbitration required by specific providers, enforceable by voluntary agreement of patient (e.g. Michigan medical malpractice arbitration statute).
4. Contractual: based on voluntary acceptance by both parties (e.g., California hospital project; New York contractual arbitration plan).

Within the postclaim category, there are two types:

1. Plan: conducted under terms or rules of a plan available to the parties (e.g., Suffolk County (New York) plan).
2. Ad hoc: conducted under agreement by the parties under general or malpractice arbitration law of jurisdiction (usually based on prior acceptance of arbitration by an insurer).

All types under pre- and postclaim agreements may be administered or nonadministered, depending on the terms of the agreement or applicable law. The former are conducted by a neutral agency, public or private (such as the American Arbitration Association), generally under basic rules; the

latter are conducted by the parties under applicable statutes. Administered systems usually specify a roster of neutrals for arbitrators whereas nonadministered systems usually have appointed panels (each side chooses one and these choose the neutral).

Role

Arbitration is essentially directed to final disposition of disputes not earlier adjusted. Yet, because of its close and integral relationship to grievance and settlement procedures, especially in the health field, arbitration serves as a continuum which, at various stages, seeks to prevent, adjust, settle, and eventually resolve differences. In this role, arbitration can be a prime component of a total conflict management program, offering feedback for prevention and risk control, as well as prompt and conclusive judgment.

It is recognized that many malpractice-reform laws that authorize or require screening are directed to the same objective as the arbitration laws, but the former are best considered as preliminary to trial. Some screening statutes, such as the Wisconsin Patient Compensation Laws, allow for arbitration within the review process by agreement of the parties, but the basic thrust of these laws is precourt review rather than final and binding determinations. These distinctions are significant because, in some jurisdictions, they may offer a choice and suggest a legal approach and strategy. Also, the number and type of settlements or other determinations between

parties which occur more frequently than court or arbitration adjudications, may be influenced by the basic method of disposition which is available.

Sources of Cases

Arbitration cases which are available for analysis are essentially limited to those which have been closed and recorded within the study period. They come from several main sources:

(1) programs and plans established on a voluntary basis by sponsors usually medical or hospital societies, bar associations and insurance groups

(2) special statutes providing for voluntary binding arbitration sometimes in jurisdictions with screening laws as well

(3) individual agreements, generally following a claim but also including pre-claim arrangements as in physicians' offices and clinics.

The availability of arbitration does not necessarily imply its use; in fact, few cases have been reported under the provisions of the recently enacted state laws. It is important, however, to describe these statutes because of their variety and the possibility of application in the future.

Legislation

The states acted variously to meet the perceived malpractice crisis. Some selected measures to assist the courts, to relieve them, or both. Assistance generally took the form of mandatory or voluntary pre-trial review (screening, mediation) intended to discourage baseless claims, encourage settlement of meritorious cases, through impartial

review and recommendations, and also to limit or regulate access to courts. By 1979, twenty-six states had such statutes. By 1981, following contests, four were held unconstitutional (Illinois, Missouri, Florida, Pennsylvania) and several are reportedly inactive or in difficulty.[1/]

As to court relief, fourteen jurisdictions passed arbitration provisions that offer a legal alternative or substitute for litigation. These took the form of amending or supplementing existing modern arbitration laws, adding provisions for malpractice disputes, despite existing arbitration laws, or introducing new arbitration laws, solely for medical malpractice (see chart). The list includes only binding arbitration laws. Thus, Pennsylvania and Maryland which have medical malpractice "arbitration" statutes, are excluded because they actually provide screening, namely a pretrial review, permitting a de novo trial if settlement is not achieved.

1/ Carlin, Peter E. Medical Malpractice Pre-Trial Screening Panels: A Review of the Evidence. Intergovernmental Health Policy Project, George Washington University, 1980.

9.a

Table 1 Statutory Provisions for Binding Arbitration * of Medical Malpractice Claims, August 1978

Statute	Providers Covered	Utilization Basis	Administration	Panel Selection	Panel Composition
Alabama Eff. date - 9/23/75 Act. 313 Laws of 1975 § 8	MD: Hosp: DDS: DO: Clinic	Voluntary: following claim	Procedural Rules of American Arbitration Association apply	Each party appoints one. These select third; court appoints if failure to agree within statutory time.	3; no qualifications.
Alaska Eff. date - 5/28/76 AS Stats. Ann. § 09.55.535 and as amended Ch. 177, Laws 1979 Eff. date - 7/17/78	MD: Hosp: DDS: Dental Hygienist: RN: Optician: Chiropractor: Optom: Pharm: Phys. Therapist: Podiatrist: Psychol: Psychol. Assoc.: Health Inst.	Voluntary: present and future claims: voidable only by patient, within 30 days of execution. Ct. appoints advisory panel if arbitration not chosen, unless deemed unnecessary.	State arbitration law (to extent it does not conflict with § 09.55.535) and any rules of court which may be adopted.	Each party appoints one; These select third, or failing agreement, parties choose from court list (furnished by attorney gen.)	3; no qualifications for party appointees but chairperson, if from attorney gen. list, will be an "attorney, or other qualified person."
California Eff. date - 9/23/75 Cal. Code of Civ. Pro. § 1295 Chap. 1185 and as ammended 1976	MD: Hosp: Chiropractor: DO: RN: Clinic: HMO: Health dispensary or facility: Legal representative of the above.	Voluntary: present and future claims (may be Mandatory to subscribers under registered health care service plan); voidable within 30 days of execution.	State arbitration law (allows adm. under agreement).	Written agreement (absent provision, party(s) may request court appointee).	Written agreement (absent provision, single arbitrator may be court-appointed).
Georgia Eff. date - 7/1/78 Act. 1489 Laws of 1978 Ch. 4 § 401–424	Health, medical, dental, surgical actions; hospital, nursing home, clinic or hospital facility or institution or agent thereof.	Voluntary: following claim.	Court-appointed referee (active member of the state bar).	Each party appoints one. These select third; court appoints if failure to agree.	3; no qualifications
Illinois Eff. date - 9/28/76 Ill. Rev. Stats. Ch. 10, § 101, Ill. Ins. Code, Ch. 73, § 768 20–21	Practitioners of medicine, surgery, chiropractic, dentistry, podiatry, optometry, phys. therapy or nursing; Hosp: Clinic: Nursing Home: Sanitarium: "Supplier" of products used in diagnosis or treatment.	Voluntary: present and future claims; voidable by any signatory within 60 days of execution, pt.'s hospital discharge, or last date of treatment, whichever is latest. Arbitration may be stayed if court finds that a "necessary party" is not signatory to agreement.	State arbitration law (to extent not inconsistent with provisions of Ch. 10, § 101).	Each party appoints one. These select third, or failing agreement, ct. appoints from roster of retired judges. If parties with a single arbitrator but fail to agree on one, then ct. appoints as above.	3, unless parties agree to 1. No qualifications if party-appointed or mutually chosen; any ct. appointees are retired judges.
Louisiana Eff. date - 9/15/75 La. Rev. Stats. § § 9:4229–36	MD: Hosp: Chiropractor: DDS: Optom: Phys. Therapist: Podiatrist: Psychol.: Clinic: Nursing Home.	Voluntary: present and future claims; voidable within 30 days of execution.	State arbitration law allows adm. under agreement).	Written agreement. If provision for neutral exists, court appoints when party-appointees fail to agree.	Written agreement (patient cannot be restricted as to type).
Maine Eff. Date - 7/2/77 Ch. 492; 24 MRSA c. 21	MD: DO: Health Care Provider (hospital, clinic, nursing home or other nursing/ medical facility).	Voluntary: present and future claims; voidable by patient within 30 days (provider) execution or discharge; or 60 days (physician). Physician may also revoke (60 days).	Agreement by parties under statue; general arbitration law if not in conflict.	Written agreement after start of arbitration proceeding; neutral. AAA rules may be used to select neutral.	Written agreement; otherwise, 3 arbitrators.
Michigan Eff. date - 9/01/75 Mich. Comp. Laws §§ 600.5033, 600.5040–65	MD: Hosp: Chiropractor: DDS: Optom: Pharm: Podiatrist: RN: Clinic: HMO: Sanitarium.	Voluntary: present and future claims (insurance requirement that hospitals offer binding arbitration of malpractice claims); voidable by patient within 60 days of execution, or hospital discharge.	American Arbitration Association	Parties jointly select from list submitted by administrative entity, which appoints on failure to agree.	3; 1 atty. as chairperson, 1 MD or Hosp. adm. if claim against hospital only), 1 not either of above nor ins. co. rep.

(continued)

Table 1 (cont.)

Statute	Providers Covered	Utilization Basis	Administration	Panel Selection	Panel Composition
North Dakota Eff. date - 7-1-77 Century Code Ch. 32-29; 1 Sess. 01-110	Health Care provider, e.g., MD: Hosp: Corpn. Facility: Inst. provid. services: or agent	Voluntary: present claims: by written agreements parties may select screening panel for arbitration.	State courts (which have responsibility for mandatory screening).	From lists by state associations, each party appoints one attorney and one physician; these select citizen member from court list. Judge provides candidates in case of challenge.	5: 2 MDs, 2 attys, at. 1 citizen
Ohio Eff. date - 7/28/75 Ohio Rev. Code Ann. §§ 2711.01, 2711.21-24	MD: Hosp: DO: Podiatrist: Clinic	Voluntary: present and future claims: voidable by patient on notice or initiation of suit within 60 days after hospital discharge or *termination of* physician-patient relation for the condition involved.	State arbitration law (allows adm. under agreement).	Written agreement (sample suggests party appointment).	3; only one can be MD or hos. rep.
South Dakota Eff. date - 2/20/76 S.D. Comp. Laws §§ 21-25A-38-41-58	MD: Hosp: HMO.	Voluntary: present and future (may include past services) claims (health maintenance organizations must have complaint system including voluntary arbitration); voidable on notice. Damages assessed if parties fail to settle after liability determination.	Court appoints arbitration officer (SD atty.) whose duties are specified in the statute.	Written agreement, selection from panel list or request to court. Court appoints neutrals or members if failure to agree within statutory time.	3 for claims over $10,000 or more than 2 parties; else 3, drawn from panels (for each congressional district) composed of 12 atts., 12 MDs, 12 hosp. reps.
Vermont*					
Eff. date - 7.01.76 12 V.S.A. Ch. 215 12 V.S.A. § 512(4)	Not specified: any provider covered upon assertion of a claim based on medical malpractice.	Voluntary: following claim (patients may not be requested to arbitrate until aware of claim); may be withdrawn with written consent of all parties involved.	Court administrator Supreme Court may modify rules.	Judicial referee selected by court administrator: parties select others by lot from court-established lists.	3, 1 atty. or Sup. Ct. Judge (judicial referee-chairman), 1 med. practitioner, 1 layman. List (by superior court dist.) selected by court administrator composed of 12 laymen, 12 MDs, 12 DDS, 12 Chiropractors; 12 RNs, 12 Hosp. reps.
Virginia Eff. date - 7.01.76 Code of Va. Vol. 2 §§ 8-911, 8-922	MD: Hosp: Chiropractor: DDS: DO: Optom: Pharm: Phys. Therapist and Asst. Podiatrist: Psychol.: RN: Nursing Home.	Voluntary: present and future claims: patient may withdraw within 60 days after termination of health care or after appointment of a guardian, committee or personal representative.	State arbitration law (allows adm. under agreement). Chief Justice of Sup. Ct. of Va. will promulgate all necessary rules and regulations.	Written agreement. Review panel may be designated under agreement or by parties.	Written agreement. 3 of review panel chosen: 3 attys, 3 providers, 1 circuit court judge (chairman with no vote).
*Puerto Rico*** Eff. Date - 7.01.76 Act 74, Laws of 1976 Ch. 41 to Insur. Code	MD: Hosp: DDS: DO: Health care institute: (except public employees agencies and non-prof. asylums)	Mandatory: all claims based on injuries after eff. date of law.	Administrative judge of Court of Superior Tribunal: who designates panel: rules in statute and pertinent civ. proc. applv.	Adm. judge designates three from list prepared by Sec. of Health as recommended by med. and bar assns. If parties object, replacement made.	3: atty. as president: med. rep. of category of defend: rep of public interest (not atty. or provider).

*Specifically provides appeal, under "rules of appellate procedure" of lower court confirmation of an arbitration award.

**Award may be modified or remand by court because of clearly erroneous fact or serious procedural flaw. No new trial is given. This court action is appealable to the Supreme Court.

State and Regional Plans

Long before passage of medical malpractice statutes, a few regional plans and programs were in existence. The Ross-Loos Clinic of California introduced arbitration a half century ago (1928) as part of the subscriber contract. The first Kaiser plan, following this model, started in 1971 and was extended to other groups in 1973 and 1975. Until recently, they were the fundamental source for case experience (except for some cases where both parties stipulated arbitration after claims were filed).

In July 1969 the California Hospital Association and the California Medical Association jointly sponsored the first hospital-based arbitration experiment. Affecting initially eight hospitals in the Los Angeles area, the program has gradually been extended to over 200.

In 1976, Heintz compared the experience in these hospitals with that of eight similar hospitals using litigation. He found the arbitration group had relatively fewer claims, faster settlements and lower defense costs. There were only a few arbitration cases concluded in this period (1969-75), but the mere existence of arbitration seems to have had a salutary effect.[1/] An update of this study has established that the trend has continued.[2/]

1/ Heintz, Duane H., An Analysis of the Southern California Arbitration Project, January 1966 through June 1975, NCHSR Research Report Series DHEW Publication No. (HRA) 76-3159 DHEW, National Center for Health Services Research (1977); Arbitration of Medical Malpractice Claims: Is It Cost Effective?, 36 Maryland L.R. 533-552 (1977)

2/ Heintz, Duane H. "Medical Malpractice Arbitration: A Successful Hospital-Based Application" Insurance Law Journal No. 680, Sept. 1979, p. 515-523.

At of the end of 1978, the AAA found fourteen plans or programs under which cases may be voluntarily filed for arbitration. Some plans were dropped or modified to comply with new malpractice arbitration statutes with respect to notice, arbitrator selection, or administration.

Malpractice arbitration programs and individual submission agreements, however, are not affected by any of the new screening laws, mandatory or voluntary. By present or prior agreement, they can avoid the courts and pre-trial procedures. For example, the mandatory screening law in New York, in effect statewide since 1974, has not precluded use of the arbitration programs of Suffolk County (post-claim) or the New York State Medical Society Hospital Association (pre-claim).

Characteristics

Of the fourteen plans, eleven were established since 1972. They differ widely in type, claims covered, jurisdiction, sponsorship, and activity. The most significant of the active programs is the California Hospital-Medical Associations (CHA-CMA) project, which grew out of the earlier experiment. Movement has been from southern California northward. The most recent interest expressed has come from the large hospital complex of the University of California (San Francisco) and physicians and other affiliated with the university. The Los Angeles branch of the University adopted arbitration early in the decade.

The fourteen plans are located in eleven states. California has three, New York two; Connecticut, Illinois, Massachusetts, Minnesota, New Mexico, Pennsylvania, Virginia, Washington, and Wyoming have one each.

Health Care Organizations

Arbitration for resolving medical malpractice claims is likely to be adopted more actively by group health care agencies. According to a review by the Office of Health Maintenance Organizations of the Department of Health and Human Services, a substantial number have arbitration provisions as part of their subscriber contracts. The Ross-Loos provisions, the first so established, have been retained under new ownership by Insurance Company of North America (INA). The largest and most influential is the Kaiser Foundation Health Plans network, covering three million subscribers under four arbitration plans: Northern California, Southern California, Oregon-Washington, and Hawaii. The Kaiser programs in the Cleveland and Denver regions do not use arbitration.

Acceptance by Physicians

Many physicians, on their own initiative or through professional association membership, include arbitration provisions for office practice. AAA surveys have not yet been able to estimate the breadth of such activity, but a 1976 survey by Medical Economics established that 59 percent of the respondents favored arbitration.[1/]

Heintz points out the "receptivity" of physicians to the (California) arbitration project was excellent. Many of the physicians responsible for more than 90 percent of patient

1/ Peck, R. L., Binding Malpractice Arbitration: Most Doctors Are For It, Medical Economics at 135-140, April 4, 1977.

admissions to the participating hospitals signed.

In Michigan, hospital compliance with the arbitration law is based on the percentage of doctor's agreements.

Accpetance by Consumers

It is difficult to gauge the attitudes or positions of patients. Most frequently cited as reflecting their approval is the statistic drawn from the California hospital project: of nearly 500,000 admissions, January 1, 1970, through June 30, 1975, less than one percent rejected the option initially or revoked it within thirty days of discharge. Some patients (or their attorneys), however, contested the legality of the agreements afterward, since the hospital admission form at that time assumed agreement unless arbitration was rejected. The current forms receive positive acceptance and recent figures show some 70-75 percent approval.

At the height of the crisis, when news media brought some of the issues to the public, a 1975 Gallup poll reported that of those questioned more than two to one favored arbitration over courts for settling medical and surgical disputes.

The most recent inquiry into consumer attitudes was made in 1976 by telephone interview of 1500 Ohio residents on all aspects of health care and medical malpractice. To the question, how would you rate "a requirement that patients agree to arbitration of malpractice claims" (the patient and the doctor would appoint skilled arbitrators to settle malpractice claims), 67.1 percent indicated support.[1/]

1/ Blackwell, R. and Talarzyk, W., Consumer Attitudes Toward Health Care and Medical Malpractice (Columbus, Ohio, Grid, Inc. 1977) at 40-41.

B. Court Cases

Almost since passage, malpractice legislation has been challenged on constitutional grounds. Issues have included objection to:

- various compulsory insurance provisions;
- tort reforms--statutes of limitation, ceilings on recovery, pleadings, changes such as collateral source rules;
- provisions for screening and arbitration 1/

The screening or medical review panels came under the most severe attack, predicated on equal protection, due process, and restriction on right to jury trial. Several, as noted, were found unconstitutional in whole or in part.

Constitutionality and Application of Arbitration Agreements

Throughout the period of private and public institution of arbitration in this field, there have been no successful challenges to the constitutionality of voluntary binding arbitration.

Although historically, arbitration has been called an unconstitutional or impermissible usurpation of the judicial function by private adjudicators, its voluntary use for commercial and other civil disputes has been accepted and approved repeatedly by the courts. The finality of arbitration and the substitution of an alternative expert or impartial tribunal for court and/or jury has not been held to be a deprivation of any

1/ Comment, An Analysis of State Legislative Responses to the Medical Malpractice Crisis, 1975 Duke L.J. 1417. See also Ladimer, Irving and Brown, Laura F., Medical Malpractice Arbitration: An Annotated Bibliography. American Arbitration Association (1977) (Sec. 11).

inviolable right. To the contrary, a fair arbitration agreement has been recognized as providing another forum which the parties might accept before or after a claim. Since voluntary binding arbitration offers finality, privacy, informality, speed and economy along with required due process, mutual selection of these advantages in exchange for the court process has been recognized as a proper, effective choice.

Accordingly, arbitration awards have generally been enforced in all jurisdictions unless there has been violation of due process in conduct of the proceedings, selection or actions of arbitrators, failure to disclose essential information or clear mistabke in the application of the terms of the agreement to the issues. Where a defect is found sufficient to vacate the award, but the agreement is valid, the case is returnable for proper arbitral proceedings and does not become subject to litigation.

Since arbitration is fundamentally founded on contract, some maintain that it does not apply fairly to a conventional hospital-doctor patient relationship. It is argued that contracts based on such relationships are, by their nature, adhesion contracts, because of the premised superior position of the provider and the relatively subordinate and dependent position of the patient who is thereby subject to direct or implied coercion or duress. Also, some consider that many if not most patients cannot understand the meaning or significance of arbitration, and certainly not at a time of medical need. Finally, others deem it unfair or not properly

informative to ask a patient to sign an arbitration agreement in advance of knowledge of the condition or treatment that might give rise to a claim. In short, the fundamental argument holds that there can be no meeting of the minds in this context sufficient to create an enforceable contract.

The principal case, interpreting and upholding the validity of voluntary contractual arbitration, is Doyle v. Guiliucci (62 Cal. 2d 606.401 P. 2d1 (1965)) decided by unanimous opinion by the California Supreme Court in 1965. The case presented a challenge of an arbitration clause by a member of the Ross-Loos Medical Group (Los Angeles) on behalf of his minor child who was allegedly injured because of negligent treatment by a Group physician. The provision, which had appeared since the first health insurance contracts reads:

> "In the event of any controversy between a Member (whether a minor or an adult), or the heirs-at-law or personal representatives of a Member, as the case may be, the Ross-Loos (including its agents, employed physicians or employees), whether involving a claim in tort, contract, or otherwise, the same shall be submitted to binding arbitration. .."

The member-father maintained that arbitration could not be imposed as a condition of membership and use of the health services and, further, that it could not apply to his child.

Since parents have authority to contract on behalf of their children, the court reasoned that the arbitration provision was legally binding on the child who had received care under terms of the agreement. The Secretary's Report on Medical Malpractice commented on this case:

"By validating the above agreement, the court in effect held that the provision requiring arbitration was not invalidated by the doctrine of adhesion. Under the doctrine of adhesion a contract may be invalidated where one party, in an inferior bargaining position, is forced to sign a contract or forego an urg urgently needed service from one who is in a superior bargaining position. Since the provision was a part of the total health insurance package negotiated in advance, the problem of adhesion was obviated."

The case was decided under the modern arbitration law of California which hold pre-claim agreements as enforceable. The court underscored the state's interest in arbitration and asserted that arbitration "was a reasonable restriction, for it does no more than specify a forum forthe settlement of disputes"; it does not create any substantive change.

Constitutionality of Michigan Law

Although the constitutionality of arbitration for medical malpractice was raised in California and other jurisdictions in specific cases, only in Michigan was the arbitration statute attacked. Arbitration generally has been upheld but in Michigan particular provisions of the malpractice arbitration law were contested as discriminatory and biased. Soon after passage of the law, lower court cases split on this issue.

Recently, however, the Michigan law was sustained in two cases at the appellate level following several constitutional challenges in which lower courts issued both positive and negative readings. These questioned the statute's inclusion

of a health provider as one of the three mutually selected arbitrators, the notice and offer given to parties on hospital entry and the right to choose a court review.[1/]

In the first case, a three-judge court, affirming a trial court decision, concluded that (a) presence of a health care member on the arbitration panel did not constitute bias or violation of due process (b) the statute does not deny a constitutional right in permitting the patient to choose arbitration and waive a jury trial and (c) the arbitration agreement, signed at hospital admission, is not a contract of adhesion. (Brown v. Dr. Thiek Siang and Sinai Hospital, Mich. App. No. 45249, June 5, 1981.)

A companion case (decided by the same court on the same day but before two different judges similarly found the law constitutional on essentially the same issues and reasoning. All three judges held that the arbitration agreement is not adhesive since "the patient is not required to sign the same as a condition of admission or treatment", even though the patient's situation and the coercive hospital setting makes it difficult to refuse. The presiding judge dissented, in part, on the composition of the arbitration panel, holding that the statutory requirement of a health provider rendered

1/ The allegation of bias through inclusion of doctors on the panel was also raised in a challenge to the Wisconsin screening law. The Supreme Court held that health providers as panelists are not per se prejudiced. Moreover, the technical issues before the panel require such expertise (State ex rel. Strykowski v. Edwin M. Wilkie 261 N.W. 2d 474,1978). Similarly, the Massachusetts Supreme Judicial Court upheld the constitutionality of the state's screening law which was challenged in part on this ground. (Paro v. Longwood Hospital, 369 N.E. 2d 985 (1977)).

the act unconstitutional in this respect "for failure to provide for a facially fair tribunal." (Morris v. Dr. Metriyakool and S. Macomb Hospital. Mich. App. No. 46598, June 5, 1981.)

He agreed that the act was not unconstitutional or unconscionable as depriving a patient of the right to "court access". Although the patient knows that execution of the arbitration agreement is not a prerequisite to care, the coercive atmosphere presented by the timing of the offer and the circumstances within the hospital may make patients believe "they will receive better care or at least be treated better by hospital staff if they execute the agreement". He also suggested that the patient's need for care may make him unable to appreciate the nature of arbitration. "The patient may be willing to sign anything handed to him". In view of this, the judge commented that the execution of the arbitration agreement prior to admission or while in the hospital "represents bad policy" but he explains that "policy-making is a legislative prerogative", not to be lightly overturned by the courts. Although the legislature has endorsed practices he believes are objectionable, he would not find the statute constitutionally deficient or void on the basis of a difference in policy determination.

Both cases arose on motions by the hospitals and physicians to compel arbitration when the plaintiffs sued in court, despite the existence of prior signed arbitration agreements. Although these cases may be appealed to the Supreme Court they stand at present as the utterances of the highest Michigan courts so far requested to rule on constitutional aspects.

Decided unanimously under the arbitration law of California which holds pre-claim agreements as enforceable, the court underscored the state's interest in arbitration; it asserted that arbitration "was a reasonable restriction, for it does no more than specify a forum for the settlement of disputes." It does not create nay substantive change.

Significant Cases

Madden v. Kaiser Foundation Hospitals sustained the arbitration agreement between a health care organization and the Board of Administration of the State Employees Retirement System as to an employee who claimed lack of knowledge of details.[1/] It was declared not to be an illegal adhesion contract.

The employee contended that the arbitration provision was included in the group health contract in 1971, six years after enrollment, without her knowledge or approval. By unamimous opinion reversing the lower court, the authority of the state, as principal, was affirmed as an agency entitled to act on behalf of its employees.

In Union Labor Life Insurance Co. v. Doerrie the lower court declined to comple arbitration under a group disability insurance policy.[2/] The policy contained an arbitration clause but the employees of the policyholder (a union) were not direct

1/ Madden v. Kaiser Foundation Hospitals (17 Cal 3d 699, 131 Cal. Rptr. 882, 1976).

2/ Union Labor Life Insurance Co v. Doerrie (48 Cal. App. 3d 496, 1975).

parties to the agreement and thus could not be bound by the voluntary decision of the union as their agent. The court declared that in voluntary arbitration, unlike that mandated by statute, the bases for agreement and for agency authority are questions of fact. The case was returned for such determination.

Wheeler v. St. Joseph Hospital held unenforceable a hospital agreement, the terms and conditions of which precluded a patient's valid assent to arbitrate.[1/]

In 1971 Wheeler signed Conditons of Admission which included the "Arbitration Option" providing for arbitration, unless marked negative or canceled within thirty days of discharge. In 1972, Mrs. Wheeler, the claimant, was appointed guardian ad litem, because of her husband's incompetence following the operation. She worte the hospital at once that she did not wish to be bound by the arbitration agreement.

The appeals court, however, found that the agreement did not fulfill the requirement that it must be "openly and fairly entered into." In view of the nature of a medical services transaction, it found the procedure used to obtain agreement and the loss of court process beyond any reasonable expectation.

Wheeler has in large part been overturned by Georgia Lamb v. Holy Cross Hospital, in which the patient unsuccessfully argued that the arbitration clause was not understood; this decision was affirmed on appeal.[2/]

1/ Wheeler v. St. Joseph Hospital (63 C.A. 3d 345, 133 Cal. Rptr. 775, 1976, hearing denied, Jan. 19, 1977).

2/ Georgia Lamb v. Holy Cross Hospital (Cal. Civ. No. 52310, Ct. of Appeal, 2nd Dist., 1977).

The two cases were based on agreements by a mother for a child. The Watley case involved a claim on behalf of a child of a pregnant woman who had signed a hospital agreement.[1/] The court denied the motion to compel arbitration, on the grounds that a minor could not be bound by a parental agreement. The case was distinguished from Doyle v. Guiliucci, which found that minors could be assured of benefits of a group contract only through their parents.

The most recent case, Ramirez v. Superior Court, Santa Clara Co. (163 Cal. Rptr. 223 (Cal. App. 1980)), goes further in interpreting the new statutory provision which sets out the language and elements of an arbitration agreement. Mrs. Ramirez brought her nine-month infant, who had been running a fever, to the hospital. The Spanish version of the admission form, which was given to Mrs. Ramirez,included the notice "By this contract you are agreeing to have any issue of medical malpractice decided by neutral arbitration and you are giving up your right to a jury or court trial. . .".

The emergency room physician sent the child home without a diagnosis. It turned out she had meningitis and she was left with paralysis and residual blindness. Mrs. Ramirez sued the hospital which replied by a motion to compel arbitration. The lower court upheld the agreement because it met the statutory

1/ Roy Watley, et al v. California Hospital Medical Center, Super. Ct. Cal. L.A. County, Div. No. 119890 (Oct. 10, 1975).

requirements, despite the mother's contention that she signed the paper but did not read it because of concern about her child. The appellate court reversed, however, stating that legislation cannot establish a conclusive presumption that a plaintiff agrees to arbitrate and waives the right to trial by jury. The statute must permit a party to challenge the agreement on grounds of coercion or misunderstanding. The case was returned to the trial court for reconsideration of the factual situation.

Physician's Office Arbitration

Several cases involving agreements offered to patients by physicians in office practice established the application of arbitration in this situation.

A Colorado appeals court held that a trial court properly dismissed a malpractice action once the court had found a valid agreement to arbitrate.[1/] The agreement stated:

> In the event of any controversy between the PATIENT or a dependent. . .and the ATTENDING PHYSICIAN (including its agents and employees), involved in a claim in tort or contract, the same shall be submitted to binding arbitration.

The trial court had rejected the patient's claim that he could not understand English, was unaware of the content of the agreement, had not consented, and thus the arbitration clause was invalid. The court found that the patient not only understood but had been helped by his wife who "spoke English with clarity and facility."

1/ Guthrie v. Barda (533 P. 2d 487 (Colo. 1975)).

The ruling was based on common law principles of contract, since the 1975 Colorado modern arbitration law had not yet been enacted.

Linden v. Baron is an even more recent case of this type.[1] Here, a New York doctor petitioned the court to stay its proceedings in favor of arbitration because the patient had signed an agreement. The "office agreement" was one of the early forms developed for the New York State medical and hospital arbitration plan.

The patient conceded that she signed the arbitration agreement, but not voluntarily. She was European-born and had considerable difficulty with English. There was also evidence that the agreement was never explained or discussed. The court set aside the arbitration agreement saying:

> While there can be little doubt that a patient and physician, both with full knowledge of the facts and circumstances, may enter into [an arbitration] contract of this kind relating to possible future acts of malpractice by the physician, such agreements must always be looked upon with a critical eye in view of the unevenness of the relationship between physician and patient.

In another New York case, Hubbard v. Cohen[1] the New York County Supreme Court, a lower court, declined to compel arbitration based on a doctor's agreement with a patient who signed the clause before having an abortion. Although the agreement was accompanied by a letter explaining the nature of arbitration, the court felt that the language was not

1/ Linden v. Baron (NY Supreme Court, NYLJ, July 21, 1977).

2/ Hubbard v. Cohen, (NY Supreme Court, NYLJ, March 21, 1980).

sufficiently informative for a lay person and that the letter was not an integral part of the agreement.

The court concluded that "an arbitration agreement will not be enforced unless it is mutually binding." Moreover, the agreement covered all claims except those a physician might have for services rendered, namely, medical fees. The court found no consideration on the part of the defendant doctor.

The Hubbard case referred to earlier cases in which the New York appellate division affirmed a lower court holding that, in a similar situation there was no reciprocally enforceable written contract. Also, the case referred to a New York Supreme Court decision which similarly declined enforcement because the urgency of the situation and lack of bargaining position between the patient and a medical group did not demonstrate the requirements of a contract. (O'Keefe v. South Shore Internal Medicine Assocs., NYLJ , Nov. 26, 1979; Miner v. Walden, NYLJ, Nov. 30, 1979).

Comment

The types of agreements and court interpretations necessarily affect the use of arbitration in various jurisdictions and situations. Generally, where there has been an established program or statutory specifications outlining the requisites of an arbitration agreement as in California and Michigan, objections are less likely to arise. Attorneys become acquainted with arbitration for medical malpractice and learn how to use the process effectively.

On the other hand, where there is no history or guideline, patients who sign agreements and later seek to revoke them are often in better position to claim that they were not fully informed or were under duress or coercion. Courts that have not recognized that arbitration is essentially a change of forum but not a change in basic rights to fair adjudication may conclude that any deviation from the conventional litigation represents some deprivation. Thus a waiver or an apparent waiver of the jury trial is carefully scrutinized in light of a relationship between the patient and physician or hospital. "Waiver of this right can only be made knowingly, intelligently and voluntarily" and then, not "unless the condition of the parties is clearly expressed in light of the subscribers". Any such waiver would have to be strictly and precisely construed against one who offers the agreement.

The principle of arbitration has been acknowledged and favored in must jurisdictions and has been recognized as applicable to medical malpractice cases as well as to others. It is therefore essential that parties understand the elements of arbitration before making a decision. The procedural aspects should not impede the constructive application of arbitration in this field.

II. DESCRIPTIVE ANALYSIS OF MEDICAL MALPRACTICE ARBITRATION EXPERIENCE

A. Introduction

This part describes 205 cases closed in the arbitration forum during the period 1967-79. They comprise the unique arbitration data base which includes all known cases administered by offices of the American Arbitration Association and a number of cases voluntarily supplied by other programs or parties. The base does not, however, include an estimated 40-50 cases which have been conducted in the same period under arbitration provisions of the Kaiser, Ross-Loos or a few similar health service programs in California or elsewhere, and cases which were not administered by any agency or under any program, but solely by the parties under local arbitration law. Although some information about excluded cases is known from secondary sources, full details for analysis are not available.

The first arbitrations for medical malpractice claims arose under the clauses in the policies offered to members of the Ross-Loos Medical Group in Los Angeles as early as 1929. It required submission of all controversies between the plan and members to binding arbitration. According to the Secretary's Commission on Medical Malpractice[1/], Ross-Loos dealt with 35 claims alleging malpractice since 1964, of which only three were concluded by arbitration award. The others were informally

1/ Report to the Secretary's Commission on Medical Malpractice. Report to the Department of Health, Education and Welfare, DHEW Publication No. (OS) 73-89, January 1973. See also Rubsamen, David S. "The Experience of Binding Arbitration in Appendix to the Report of the Secretary's Commission on Medical Malpractice (P. 424).

concluded at some stage in the process leading to hearings and arbitration. (Negotiation and disposition were likely influenced by the fact that arbitration rather than litigation was stipulated.)

Some 35 years later, a similar arbitration program was adopted by the Kaiser-Permanente health service programs in California. In most of the contracts as presented or amended, arbitration is the exclusive method for resolving claims which may arise. Since the Kaiser system involved over a million subscribers at the time of initiation of this provision, there has been more use of arbitration. But, just as in the Ross-Loos experience and, in fact, in the disposition of medical malpractice cases generally, the very great majority have been settled or withdrawn before reaching the tribunal, whether court or arbitration panel. As of 1980, the Kaiser programs produced 40-50 arbitration cases. Several of these are among the most critical and significant in arbitration literature since they were contested and provoked court determinations regarding the constitutionality of voluntary or contractual binding arbitration and the scope or application of an advance agreement to arbitrate.[1/]

As a result, it has been possible to advance the major arbitration programs sponsored by the State hospital and medical societies for hospitals, physicians and medical services throughout

1/ Doyle v. Guiliucci (62 Cal. 2d 606.401P. 2d1 (1965). This case established the constitutionality of voluntary binding arbitration and validity of a provision in the Ross-Loos contract applying a member agreement to a minor. See also Madden v. Kaiser Foundation Hospitals (17 Cal 3d 699, 131 Cal. Rptr. 882 , 1976). This case confirmed the constitutionality of arbitration under the California law and its application to a member of an organization which had a contract for health services.

California.

Although there are some 14 arbitration plans, sponsored by medical,hospital and legal associations, insurers and state programs, as described in Chapter 1, availability does not appear to have resulted in activity. The largest number of cases came from a special program initiated by an insurance company, Casualty Indemnity Exchange, operating in California, Colorado and New Mexico, which gave premium discounts to physicians who offered arbitration agreements to patients. Not all such cases were reported for inclusion in the data base and, likewise, arbitrations under similar insurance inducements or party agreements are omitted.

B. Composition of Cases in Data Base

The 205 cases in the base are characterized by place, time, type, parties to agreement, administration and authority (statute or voluntary program). Although all cases in the data base have in common some type of voluntary entry and binding disposition, they encompass a wide variety of styles and applications. These may exert substantial influence on the kinds of cases accepted, the processing, the cost of administration (or non-administration), and the possibility of contest. Nevertheless, the arbitration mix represents a cohesive and essentially consistent body of data from which policy determinations and administrative judgments can be made regarding the value of the forum for the particular type of case to be adjudicated and the formats which may be designed and utilized.

C. Concept of Forum

The descriptive analysis and later comparison with litigation, is based on the concept of forum, that is, that arbitration in its various formats and styles presents and represents a distinctive method for management and adjudication of claims and cases. This study is limited to those which arise from personal injury claims of negligence and other causes of action in the medical and health field, commonly understood as medical malpractice. With few exceptions, these involve alleged errors of omission or commission (negligence, substandard performance or similar dereliction) on the part of a professional and associate or an institution in providing medical diagnosis, treatment or after-care. The common claim is for damages to recover loss due to nature and severity of the injury. The tort system, requiring proof of fault as the basis for liability and indemnity, applies to arbitration as well as to litigation, but the process for determination differs substantially.

Arbitration has been used effectively and successfully in other fields. The question which this analysis seeks to answer is whether and how a private forum which offers and requires a binding determination, if accepted, can satisfactorily serve this aspect of the health field, the parties, and the legal as well as medical practitioners who use the system. Are the products or results different from litigation? Or, are the processes better than those for litigation, so that, given opportunity or choice, arbitration may be selected as the preferable or optimum method?

In this part of the study, the closed case data are considered solely in descriptive terms, not in comparison with conventional or modified litigation. Although it is recognized that arbitration or any other method is generally assessed in terms of the majority or prevailing approach, i.e., litigation, it is important to have an objective view of the process through analysis of its own characteristics.

D. The Analytic Theme

The analysis proceeds on the theory that arbitration as a forum be exemplified and illustrated by the (a) nature of the cases and the parties and (b) outcomes in relation to input. The analysis considers not only cases which were concluded by arbitration award but also those in which claims were resolved by settlement or withdrawal prior to award, but after entry via demand for arbitration. In addition, the analysis takes into account known cases which entered the forum but which were removed either by court order or party decision to go to court for conventional disposition.

The underlying premise of the study is that arbitration can and does influence the process and outcome of the claim or case. The descriptive analysis employs the <u>case</u> as the unit for discussion, that is, based on the incident and involving all parties on both sides. The later comparison uses both the <u>claim</u> as unit, that is, from the point of view of each defendant against whom a claim has been lodged and recovery requested and the <u>case</u>, as appropriate. Both approaches are essential for an understanding of arbitration and for comparison with litigation.

E. The Data Base

The data base represents closed cases available to the Research Institute based on two criteria: (a) those known to have entered voluntary arbitration for which there was information on closure and (b) those with sufficient information to provide a substantial amount of data required for analysis.

The coding definitions and the systems employed for the items selected for analysis is explained in the accompanying Information Manual. The Manual describes the data base in detail and includes the capture forms.

Content of the Data

Data were sought, mainly from insurance reports and AAA files, where applicable, for all claims arising from those incidents which produced at least one claim known to have entered voluntary binding arbitration (i.e., any claim for which an arbitration proceeding was formally initiated by either side). But not all claims arising from these incidents entered or were resolved in arbitration. For a minority, there was no prior or later agreement to arbitrate, and thus no demand for arbitration. Of those which did enter arbitration, a few were subsequently removed to court for resolution. Occasionally, other claims in the case, i.e., from the same incident, were resolved in a "forum straddle", i.e., while formal proceedings were pending both in arbitration and in court,

neither having been established as the primary forum for adjudication. In sum, not every claim generated by an incident which led to an arbitration proceeding entered arbitration, and not all claims which entered arbitration were resolved there.

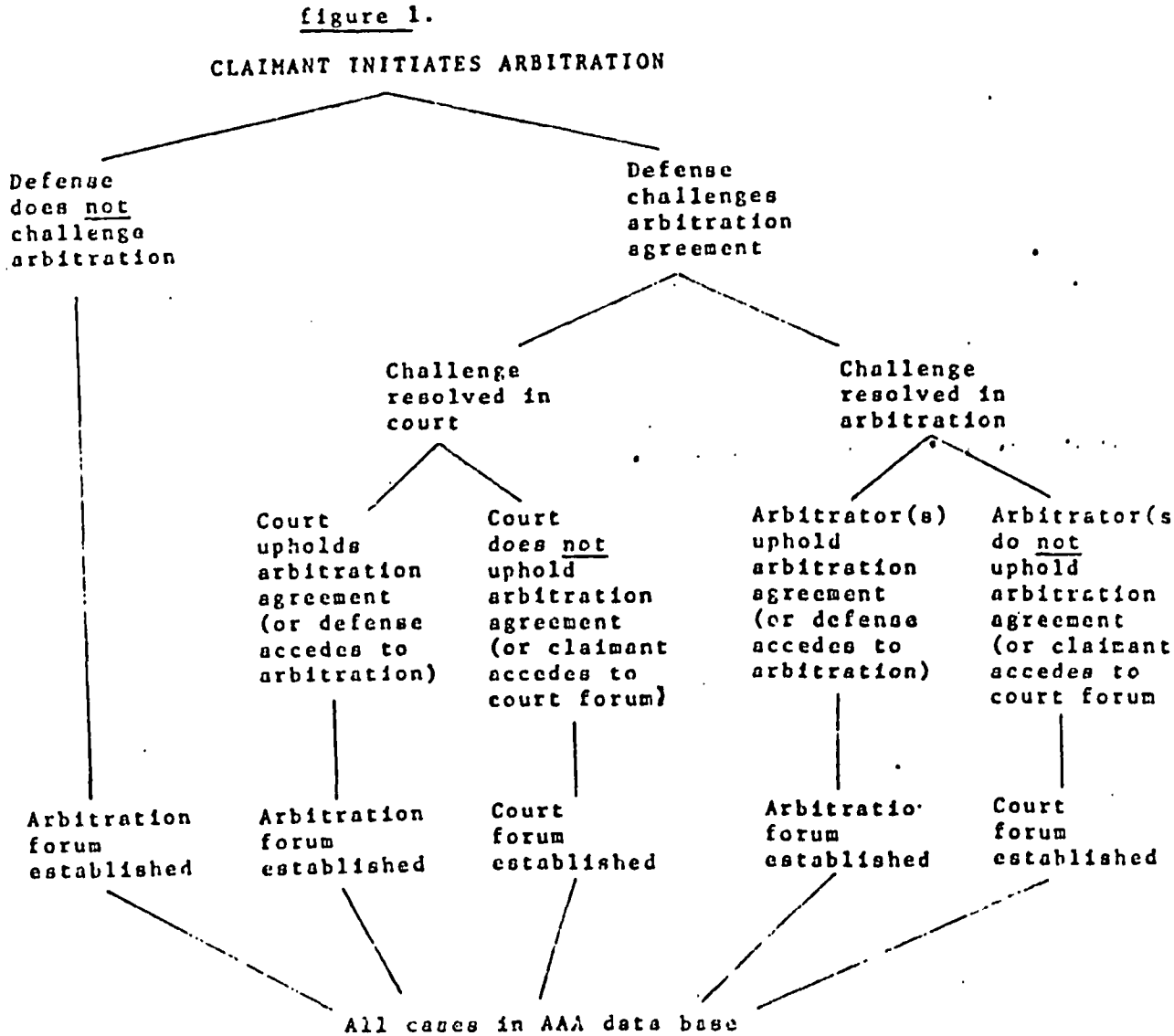
These situations arise because arbitration is a diversion from conventional litigation and becomes available upon agreement of the parties in advance of an incident, or afterwards, where an incident gives rise to several claims. Unless the parties decide or are required to processthem together, it is possible that one claim will be arbitrated and another litigated.

More likely, however, particularly in the beginning of an arbitration program when validity or application may be contested, the claimant may sue rather than arbitrate. The defendant may then request the court to compel arbitration. If the court agrees or the parties stipulate, the case will then be filed in arbitration (or it may be settled before). Sometimes, the defendant will not seek to compel arbitration. This usually happens when there is some doubt about the initial agreement, its application or the comprehension of the parties. Occasionally, after the claimant initiates arbitration, the defense may challenge the agreement; the case may then be removed to court or returned to arbitration.

The possibilities are illustrated in the accompanying figures which show what can ensue when (a) claimant initiates an arbitration proceeding (Figure 1) or (b) claimant files a lawsuit (Figure 2). In both situations, defense may agree or challenge.*

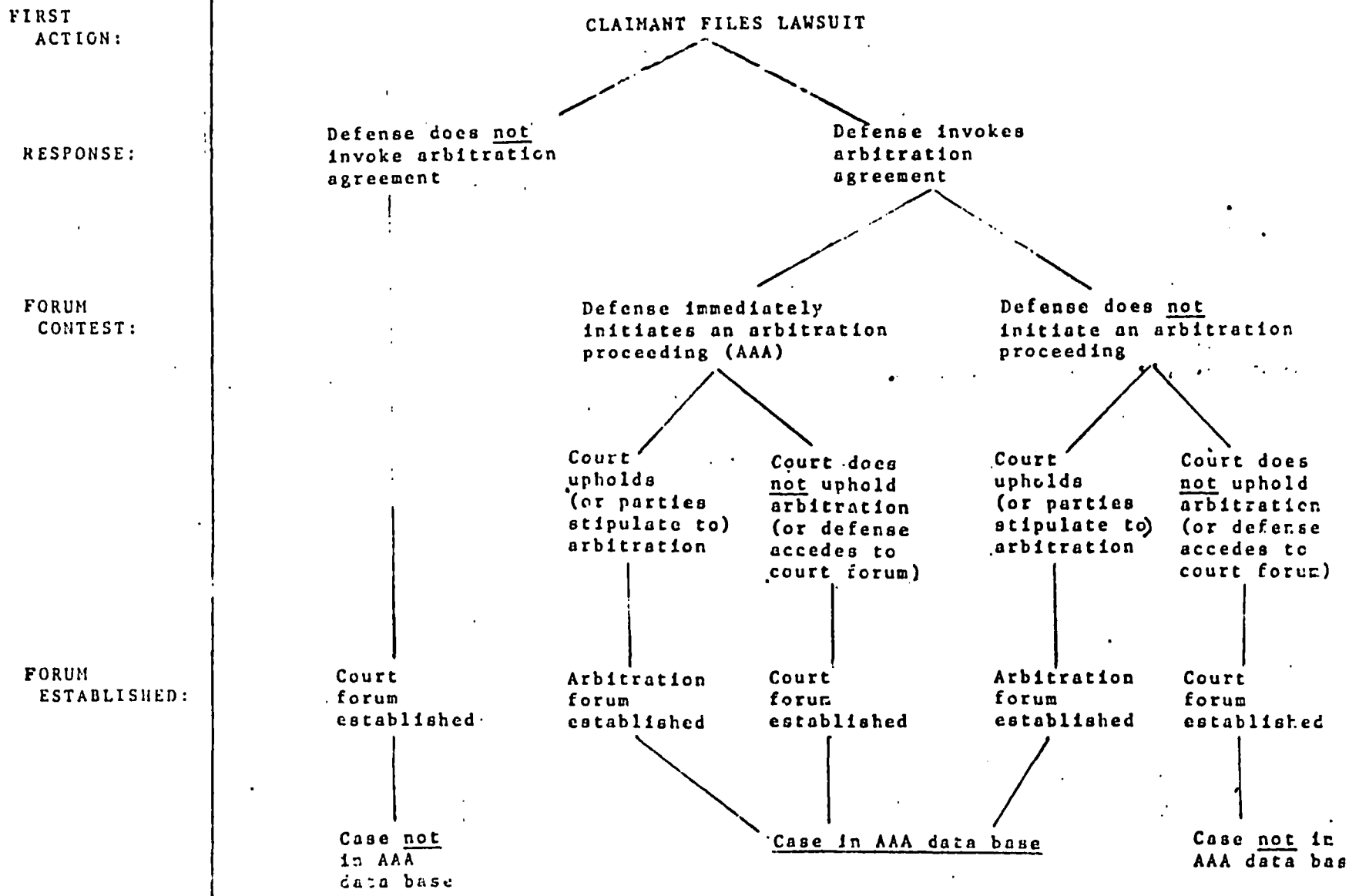
* Challenge by the defense is demonstrated by initial filing in arbitration to stay the court action. The court defendant then technically becomes the arbitration claimant and the court plaintiff (injured party) becomes the arbitration respondent. But, in the proceeding the injured party must, as always, bear the burden of proof.

figure 1.


FIRST ACTION:
CLAIMANT INITIATES ARBITRATION
RESPONSE:
Defense does not challenge arbitration
Defense challenges arbitration agreement
FORUM CONTEST:
Challenge resolved in court
Challenge resolved in arbitration
Court upholds arbitration agreement (or defense accedes to arbitration)
Court does not uphold arbitration agreement (or claimant accedes to court forum)
Arbitrator(s) uphold arbitration agreement (or defense accedes to arbitration)
Arbitrator(s) do not uphold arbitration agreement (or claimant accedes to court forum
FORUM ESTABLISHED:
Arbitration forum established
Arbitration forum established
Court forum established
Arbitration forum established
Court forum established
All cases in AAA data base

American Arbitration Association
Research Institute

figure 2.



The figures show which forum is established and which cases eventually appear in the data base.

These situations obviously arise only where there is a so-called preclaim agreement in which there may be a difference between the original and later intent. Where there is a post-claim understanding, both parties submit to arbitration after the incident or claim and would have no reason to remove the case to court.

Cases subject to arbitration: Because they could not readily be identified, no data were sought for any claims arising from incidents which did not lead to an arbitration proceeding, even though one or more of such claims was subject to arbitration by virtue of an arbitration agreement signed prior to the incident. This could occur where the arbitration agreement was not invoked, or was challenged in court without an arbitration proceeding being initiated, or where the matter was resolved by party action without the filing of any formal proceedings.

The relative number of such claims is unknown. Since insuror closed claim reports do not necessarily indicate whether an arbitration agreement existed, there is no practical way to identify these claims. However, their number is believed to be substantially larger than the number of claims which enter arbitration. In any event, the relative size of these two bodies of claims may be important in recognizing a fundamental difference between arbitration and court systems. Of all the claims subject to the jurisdiction of each, formal proceedings

are initiated for some, and the remainder are resolved in some way without an arbitration or a lawsuit being filed. If the proportion of formal filings to informal party resolution differs substantially between forums, that difference may reflect a characteristic difference in the way arbitration and the courts operate as claim-resolution systems.

Although it is important to understand when and how parties negotiate toward disposition, either by informal bargaining or formal proceedings in each forum, current data do not provide the relative numbers of cases handled in each way. It is likely that the nature of the ultimate forum will influence the strategies and, arbitration in comparison to litigation, may be preferred or avoided on this basis. However, it would be essential for attorney who may have a choice to have some understanding of the treatment of similar cases in each forum. In effect, this is the objective of this study. A further discussion of the estimates of the number of cases in each forum which are subject to each jurisdiction and submitted to formal proceedings as well as the stage of settlement is presented in the commentary relating to the comparison between arbitration and litigation.

F. Case Sources

State and Program: Nearly two-thirds of the 205 cases examined here occurred in California, with most coming under the State Hospital and Medical Associations' joint program, begun in 1969. The next-largest group of cases, 12%, came in Michigan under the statutory program begun in 1976. California and Michigan together were the source of nearly 78% of all cases (Table 1). They continue to be the only jurisdictions where malpractice arbitration is widely used, i.e., where arbitration agreements are routinely signed by thousands of patients entering many different hospitals or in many doctors' offices, and substantial numbers of claims subject to arbitration under such agreements have arisen over several years. Since 1975, some 500 arbitration cases have been filed under the statewide programs in California and Michigan. Since the bulk of these cases were filed only after 1977, most are still pending resolution.

Only about 22% of the cases examined came from states other than California and Michigan. Nearly half of these--22 cases--were processed in New York between 1972 and 1976 under the Suffolk County Medical Society/Bar Association plan. Not used since 1977, this program was redesigned in 1980. (The new program is administered by the AAA and accepts cases of all types.) The remainder included 9 cases from Washington's Seattle-area plan, 4 cases were from the Minnesota Bar's plan covering the Minneapolis area, and 11 cases scattered over nine other states (Table 2). Currently, there is little or no case activity under each of these programs.

About 80% of the 205 cases examined arose under arbitration plans or programs broadly adopted by health care

base: 205 cases

table #1

State where arbitration took place

state	no. of cases	rel freq. (%)	cum freq (%)
California	134	64.5	64.5
Michigan	25	12.2	77.6
New York	22	10.7	88.3
Washington	9	4.4	92.7
Minnesota	4	2.0	94.6
Colorado	2	1.0	95.6
Connecticut	2	1.0	96.6
Georgia	1	0.5	97.1
Maryland	1	0.5	97.6
Massachusetts	1	0.5	98.0
New Jersey	1	0.5	98.5
Pennsylvania	1	0.5	99.0
South Carolina	1	0.5	99.5
Virginia	1	0.5	100.0
totals: 14 states	205 cases	99.3%	

table # 2

Arbitration plan or arrangement

type of plan or arrangement	no. of cases	rel freq (%)	adjusted freq (%)
private, statewide	100	48.8	49.8
private, local	37	18.0	18.4
statutory	25	12.2	12.4
single-practitioner	20	9.8	10.0
ad hoc arrangement	10	4.9	5.0
single-insuror	8	3.9	4.0
single-agency	1	0.5	0.5
unknown	4	2.0	missing
total:	205	100.1	100.1

N=205 cases

3.4.b

providers and practitioners and their patients. Half came under the statewide, privately sponsored California hospital-medical program. Local (county or regional) programs accounted for another 18%, and Michigan's statutory program generated 12%, as noted. The remaining 20% came under plans or arrangements that had relatively restricted application, for example, relating solely to an individual medical practitioner, or to just those practitioners insured by a single company under a particular type of policy. (Table 3)

Type of arbitration agreement: Better than three out of every four arbitration agreements in the cases studied were made preclaim, before any claim existed; less than one agreement in four was entered into postclaim, after the claim had been asserted (Table 4). Since 1977, arbitration in roughly nine of every ten cases filed has been pursuant to preclaim agreement. Generally, the several local programs providing for postclaim submission of claims to arbitration have had few or no cases.

Only the statwide, hospital-centered programs in California and Michigan, both preclaim, have really taken hold; thus hospital-patient arbitration agreements were the basis for better than three out of every five cases. The total of such agreements signed in California alone since 1969 probably runs to several million. By contrast, arbitration agreements in all states between doctors (or other medical practitioners) and patients

802
base: 205 cases

table # 3

Parties to arbitration agreement

agreement	no. of cases	rel. freq (%)	adjusted freq (%)
hospital-patient	124	60.5	62.0
doctor-pationt	44	21.5	22.0
other practitioner patient	3	1.5	1.5
mixed	29	14.1	14.5
unknown	5	2.4	missing
total:	205	100.0	100.0

N=205 cases

37.a

801
base: 205 cases

table # 4

Time of arbitration agreement

	no. of cases	rel freq (%)	adjusted freq (%)
preclaim	158	77.1	78.6
postclaim	43	21.0	21.4
unknown	4	2.0	missing
total:	205	100.1	100.0

N=205 cases

probably number only in the tens of thousands. The relative frequency of cases arising from the two types of agreement is clearly not proportional to their respective numbers, however. Perhaps only one in a thousand preclaim agreements may result in an arbitration case, while generally every postclaim agreement results in a case. Most postclaim agreements have involved only physician defendants and not hospitals, whereas both a hospital and one or more physicians are party to most preclaim agreements. This pattern reflects principally the types of programs established for hospital and physician, respectively.

Administration: Some 94% of the cases examined were brought under the aegis and rules of a neutral administrative agency. The 6% of cases which were non-administered, were conducted under applicable statutes by the arbitrators and parties themselves. In the data base all entries in this category were ad hoc post-claim closed cases under the New York Suffolk plan; however, other non-administered cases may and do come under pre-claim arrangements. About 98% of administered cases were filed with American Arbitration Association offices in seven states; the small remainder were administered by a bar association or medical society as provided under the local arbitration programs concerned (Table 5).

Time frame: The incidents giving rise to the cases in the base occurred over the twelve-year span from 1967 through 1979. However, most incidents (about 61%) occurred in the four-year period 1974 through 1977. Correspondingly, most of the ensuing arbitration proceedings (also about 61%) were initiated in the period 1976 through 1978, and most (62%) were concluded in the period 1977 through 1979. Accordingly, the bulk of data for the 205 cases examined are for cases quite recently closed, generally after a two-to-four-year period from incident to closure. (Table 6)

In medical malpractice, action begins when a claim is reported to the insurer. At that point the insurer establishes a file and sets aside an estimated sum for potential liability from the point of view of the insurer. In the data base, only two-thirds of the closed cases had information on this data item. In the nine-year span, 1969-1978, for which there are figures,

about half are clustered in 1974-77 corresponding to a similar concentration of reported incidents. Obviously, these do not necessarily relate to the same cases. (Table 7)

An interesting feature of arbitration is the basis for agreement. As explained, most cases arise because of a pre-claim or prior patient agreement to an offer by a hospital or physician. In the data base, almost 95% of the closed cases arose from such agreements. These were signed when the programs became active, principally in California and Michigan. This is reflected in the fact that about three-fourths became effective between 1973-77 among the cases examined. (Table 8)

803
base: 205 cases

table # 5

Administrative authority for arbitration proceeding

	no. of cases	rel freq (%)	adjusted freq (%)
administered cases			
American Arbitration Association	167	81.5	81.9
medical society	20	9.8	9.8
bar association	6	2.9	2.9
non-administered cases			
ad hoc [a/]	11	5.4	5.4
unknown	1	0.5	missing
total:	205	100.1	100.0

N=205 cases

a/ cases brought to arbitration pursuant to postclaim agreement which were not under the aegis of any disinterested administrative agency

602Y/606Y/103
base: 205 cases

table #6

Year of case incident and initiation and conclusion of arbitration

Year	Incident			Arbitration initiation			Arbitration conclusion			Median total time (mos.)		
	no.	%	cum%	no.	%	cum%	no.	%	cum%	no.	%	cum%
1967	1	0.5	0.5									
1968	1	0.5	1.0									
1969	0	0.0	0.0									
1970	13	6.6	7.7				1	0.5	0.5			
1971	15	7.7	15.3	2	1.0	1.0	0	0.0	0.5			
1972	12	6.1	21.4	10	4.9	5.9	4	2.0	2.4			
1973	27	13.8	35.2	7	3.4	9.3	5	2.4	4.9			
1974	32	16.3	51.5	23	11.3	20.6	5	2.4	7.3			
1975	23	11.7	63.3	35	17.2	37.7	33	16.1	23.4			
1976	42	21.4	84.7	38	18.6	56.4	30	14.6	38.0			
1977	29	14.8	99.5	51	25.0	81.4	49	23.9	62.0			
1978	1	0.5	100.0	38	18.6	100.0	39	19.0	81.0			
1979	0	0.0		0	0.0		39	19.0	100.0			
unknown	9	missing		1	missing		--					
totals:	205	99.9		205	100.0		205	99.9				

N=205 cases

603Y
base: 205 cases

table # 7

Year claim first reported to insuror[a/]

year	no. of cases	rel freq (%)	adjusted freq (%)	cum freq (%)
1969	1	0.5	0.8	0.8
1970	3	1.5	2.3	3.1
1971	7	3.4	5.5	8.6
1972	9	4.4	7.0	15.6
1973	7	3.4	5.5	21.1
1974	24	11.7	18.8	39.8
1975	29	14.1	22.7	62.5
1976	10	4.9	7.8	70.3
1977	28	13.7	21.9	92.2
1978	10	4.9	7.8	100.0
unknown	72	35.1	missing	
not applicable[a/]	5	2.4	NA	
total:	205	100.0	100.1	

N=205 cases

a/ i.e., all defendants involved were either self-insured or uninsured

601 Y
base: 205 cases

table #8

Year of arbitration agreement

year	no. of cases	rel freq (%)	adjusted freq (%)	cum freq (%)
1969	1	0.5	0.5	0.5
1970	6	2.9	3.1	3.6
1971	13	6.3	6.6	10.2
1972	6	2.9	3.1	13.3
1973	20	9.8	10.2	23.5
1974	31	15.1	15.8	39.3
1975	35	17.1	17.9	57.1
1976	47	22.9	24.0	81.1
1977	33	16.1	16.8	98.0
1978	3	1.5	1.5	99.5
1979	1	0.5	0.5	100.0
unknown	9	4.4	missing	
	total: 205	100.0	100.0	

N=205 cases

G. Characteristics of Injured Person

The principal in the malpractice case is the person claiming injury based on alleged negligence or fault. Generally, this person is the claimant or plaintiff but a survivor or dependent may file an individual or joint claim.

Characteristics of injured persons were analyzed with respect to age, sex, occupation and earnings. These factors qualify the nature and severity of the injury to determine the indemnity payable in accordance with the extent of liability attributed to the defendant. For example, an employed younger person whose earning capacity is impaired by the alleged malpractice is likely to recover more than an older retired person with the same type of injury under similar circumstances.

Population of injured persons

Sex and age: The population of injured persons (i.e., patients) whose care or treatment included the claim-producing incident(s) was 60% females, 40% males. Age at the time of the (earliest) claim incident is known for three-quarters of this population. Although the patients ranged from newborns to octogenarians, 93% were adults, of whom two-thirds were between 21 and 50. Mean and median ages were 42.1 and 40.5 years, respectively. Some 41% of the patient population were women under 50, most in their child-bearing years. Only 18% of the population was over 60, which is noteworthy considering that persons in that age range constitute a disproportionately high percentage of all patients (based on numbers of visits to doctors and hosptials). (Table 9)

201 X 202
base: 205 cases

table #9

Age and sex of injured persons[a/]

age range (years)	all injured persons			males		females	
	no.	rel %	adj %	no.	adj. %	no.	adj. %
0 to 1	3	1.5	2.0	0	0.0	3	3.2
2 to 10	3	1.5	2.0	2	3.4	1	1.0
11 to 20	5	2.4	3.3	1	1.7	4	4.3
21 to 30	33	16.1	21.7	10	16.9	23	24.7
31 to 40	32	15.6	21.1	8	13.6	24	25.9
41 to 50	27	13.2	17.8	12	20.3	15	16.1
51 to 60	21	10.2	13.8	13	22.0	8	8.6
61 to 70	17	8.3	11.2	8	13.6	9	9.7
over 70	11	5.4	7.2	5	8.5	6	6.5
unknown	53	25.9	missing	22[b/]		30[b/]	
total:	205	100.1	100.1	81	39.7	123	60.3

N=205 cases

mean	42.171 yrs
median	40.500
mode	38
range	83

a/ i.e., patients

b/ Male-female total for which age is unknown is 52 rather than 53 because in one case the information available did not indicate whether the injured person was male or female.

The malpractice arbitration pattern, based mainly on pre-claim agreements appears to correspond with that for litigation, which demonstrates that claims incidence does not reflect patient-age but presenting reason for treatment. For example, the New York State Analysis of Physician Malpractice Claims Closed, 1976-77 (Second Report) notes that "claims brought by females peak in the decades between 20 and 39 years (mainly for obstetrical and related procedures) while claims brought by males peak in the decades between 40 and 59 years" (fracture and procedure/management events).

Occupational status (including students and children) at time of injury is known for nearly three-quarters (73%) of the injured persons. Some 52% of these were employed at paid full-time or substantial part-time work; 29% were not employed at paid work; 13% were retired; and 6% were children or students. Of the injured adults whose occupational status was known and who were not classed as retired, about two-thirds were employed at paid jobs at the time of the claim-producing incident (Table 10).

An occupational category was identified for 53% of the injured adults, including those among the retirees whose former occupation was known. About 28% of this group were classed as industrial or service workers; 23% did clerical or sales work; about 21% had professional, technical or managerial occupations; and the remaining 28% were homemakers (Table 11).

base: 205 cases

table # 10

Occupational status of injured person*

status	no. of persons	rel freq (%)	adjusted freq (%)
employed at paid work	78	38.0	52.0
not employed for pay	44	21.5	29.3
retired	19	9.3	12.7
child or student	9	4.4	6.0
unknown	55	26.8	missing
total:	205	100.0	100.0

N=205 cases

* at time of claim-producing incident

base: 205 cases

table # 11

Occupation of injured person*

occupations category	no. of persons	rel freq (%)	adjusted freq (%)
homemaker	29	14.1	28.2
clerical and sales	23	11.2	22.3
professional, technical & managerial	20	9.8	19.4
machine, bench, structural & misc. industrial work	17	8.3	16.5
service	10	4.9	9.7
other	4	2.0	3.9
unknown occupation	93	45.4	missing
not applicable (child or minor student)	9	4.4	--
total:	205	100.1	100.0

N=205 cases

* The occupation coded is that of the person whose alleged injury gave rise to the malpractice claim. Where the injured person was not employed (or was retired) at the time of the claim-producing incident but had formerly had a regular occupation, that former occupation was coded.

In at least 7% of cases the injured person was either employed in the health care field or was the spouse of a person so employed. Among the injured persons were two physicians and a physician's spouse; a dentist and a dentist's spouse; an optometrist; a registered nurse and a licensed practical nurse; two nurse's aides; a dental assistant; a former hospital mental health worker; and two other persons who were employed by health care providers in non-health care jobs.

Annual earnings: Data on the injured person's annual earnings (as opposed to income) provide a basis for evaluating specified claims for lost wages or other earnings, or for damages arising from loss of employment or diminished employability alleged to result indirectly from medical malpractice. In the data base cases, earnings data are known for fewer than half of all injured persons, including only about 37% of those who were known to be employed (Table 12).

However, since the great majority of those injured persons for whom a current or former occupation was known were nonmanagerial and nonprofessional (industrial, service or office) workers, it is likely that their annual earnings were in the middle-low range. If so, in most cases their typical incurred wage loss, if any, would have been modest, since few cases involved long-term disability affecting employment. This conclusion is supported by the data available for claimed economic loss (Table 37).

base: 205 cases

table #12

Annual earnings of injured person

earnings range (dollars)	no. of persons	rel freq (%)	adjusted freq (%)	non-zero adjusted freq (%)
0	68[a/]	33.2	70.1	--
1 to 10,000	15	7.3	15.5	51.7
10,001 to 25,000	11	5.4	11.3	37.9
over 25,000	3	1.5	3.1	10.3
unknown	108	52.7	missing	
total:	205	100.1	100.0	99.9

N=205 cases

	all amts	non-zero amts.
mean	$ 4,025.804	13,465.62
median	9.596	9,600
mode	0	
range	45,000	

a/ not wage earners at time of claim-producing injury (i.e., those who were children, retired, or not employed for pay)

Payment of health care costs: Available data sources provided some indication of the main source of payment of the injured person's health care costs in only about 48% of cases (Table 13). Coding took account not only of claimed expenses but also of any medical expenses for which no claim was advanced. In 92% of these cases, either government (at any level) or private insurance (in some form) was the main source of payment. Government sources, indicated for 48% of these cases, included chiefly Medicare, Medicaid, and workers' compensation. A few cases indicated other government sources, including the military, Veteran's Administration and others. In one case, the injured person was a state prison inmate, whose costs were of course paid by the state department of corrections. Private insurance was indicated in 44% of cases for which data was obtained. The most frequent private insurance was Blue Cross and/or Blue Shield, followed by commercial coverage through an employer, applying directly to the injured person's or via a spouse or parent. In only 5% of cases did the injured person or his or her family pay most of the medical costs. Most of those cases apparently involved care or treatment (e.g., cosmetic surgery) excluded from coverage under any government or private insurance that the injured person either may have had or been eligible for.

In at least two cases where a sizable indemnity was awarded by arbitrators, a third-party intervenor was awarded substantial costs paid for the injured person's care. In

one of these cases the intervenor was a state department of social services; in the other it was a private insuror. Third-party intervention by such payors of health care costs is specifically authorized in the rules governing malpractice arbitrations under the California and Michigan statewide programs.

table # 13

Major source of payment of health care costs of injured person

payment source		no. of cases	rel. freq (%)	adjusted freq (%)	cum adjusted freq (%)
Government		47	22.9	48.0	48.0
Medicare	18				
Medicaid	9				
Worker's compensation	12				
other	8				
Private insurance		43	21.0	43.9	91.8
Self or family		5	3.9	5.1	96.9
Other		3	1.5	3.1	100.0
Unknown		107	52.2	missing	
	total:	205			

N=205 cases

H. Injuries Generating Malpractice Claims

The gravamen of the medical malpractice case is the claimed injury, that is, the alleged consequence of the professional or administrative commission or omission on the part of the physician, associates or hospital. This is conventionally stated in terms of negligence or failure to meet diagnostic or treatment standards.

The claimed injury is usually a physical trauma, including death, but may be a resultant adverse condition or an emotional effect. There may also be a legal but not medically recognized injury.

The claimed injury should be distinguished from the presenting condition, which is the basis for hospital admission or physician visit. They are often connected, such as a failure to diagnose or treat a presenting condition, which later becomes the basis for malpractice. A fracture which fails to heal because of inattention is an illustration. Or, there may be no connection, as in the case of admission or a cardiac problem requiring blood transfusion which may lead to infection.

Principal Injury Claimed: Only the major injury claimed as directly associated with the malpractice, whether or not ultimately proved, was coded (Table 14). The classification system is the same as that used by the National Association of Insurance Commissioners for its surveys, namely the hospital adaptation of the International Classification of Diseases (H-ICDA). For those few cases of legally but not medically

base: 205 cases

table #14

Principal Injury claimed

H-ICDA code	Injury category	no. of cases	rel freq (%)	adjusted freq (%)
000.0	Legal Issue Only	5	2.4	2.8
000.9	Death Only	10	4.9	5.6
001.0 - 136.9	Infective Diseases	0		
140.0 - 209.9	Malignant Neoplasms	0		
210.0 - 239.9	Other Neoplasms	0		
240.0 - 279.9	Endocrine/Nutritional/Metabolic Diseases	0		
280.0 - 289.9	Diseases of the Blood	1	0.5	0.6
290.0 - 318.9	Mental Disorders	4	2.0	2.3
320.0 - 389.9	Diseases of the Nervous System	3	1.5	1.7
390.0 - 458.9	Diseases of the Circulatory System	1	0.5	0.6
460.0 - 519.9	Diseases of the Respiratory System	6	2.9	3.4
520.0 - 577.9	Diseases of the Digestive System	3	1.5	1.7
580.0 - 629.9	Diseases of the Genitourinary System	7	3.4	4.0
631.0 - 678.9	Delivery and Complications of Childbirth	9	4.4	5.1
680.0 - 709.9	Diseases of the Skin	1	0.5	0.6
710.0 - 739.9	Diseases of the Musculoskeletal System	0		
740.0 - 759.9	Congenital Anomalies	0		
760.0 - 768.9	Certain Diseases Peculiar to Newborns	21	10.2	11.9
770.0 - 796.9	Signs,Symptoms and Ill-defined Conditions	78	38.0	44.1
800.0 - 999.9	Injuries and Adverse Effects	21	10.2	11.9
Y 00.0 -Y 86.9	Supplementary Class-Specific Events	7	3.4	4.0
E807.0 -E995.9	Supplementary Class-External Causes			
-	Unspecified	28	13.7	missing
	total:	205	100.0	100.3

N=205 cases (incidents)

recognized injury, a supplemental category was used, since H-ICDA covers only medical injuries.

Because of the relatively small number of arbitration cases, the data are thinly distributed over the 22 standard and supplementary H-ICDA disease and injury categories. Further, by far the most common basis for a malpractice claims is an injury either resulting from or occurring during treatment. These were coded under the single H-ICDA category "Injuries and Adverse Effects", which covers fractures, dislocations, sprains, etc.; adverse effects of drugs, chemical substances or radiation; complications of surgical and other procedures; and various other injuries due to external causes. Some 44% of injuries coded for arbitration fell in the category "Injuries and Adverse Effects", and an additional 24% fell either in the category "Signs, Symptoms and Ill-Defined Effects" or in Supplementary Class-Specific Events". Thus, two of every three known injuries were coded in what are the catch-alls of H-ICDA standard disease and injury categories.*

Pleadings and testimony in the arbitration case are often not as precise as in court filings and proceedings. Thus, a claimed injury may have to be entered in a more comprehensive category, based on effect rather than description of the injury. Moreover, the classification scheme, as noted, was not designed for this purpose. In the absence of detail, about 12 percent (adjusted frequency) were classed as ill defined conditions and 15% in the supplementary category covering both specific and external causes (Table 14)

* It is well recognized that neither H-ICDA or any other morbidity/mortality classification adequately serves medical malpractice incidents. The H-ICDA provides a useful system, mainly because it is also employed by other analysts of similar data.

Final diagnosis: Available information in 74% (152) of the arbitration cases included a final medical diagnosis of the condition for which the injured person sought treatment. It should be noted that there is no necessary correspondence between final diagnosis and claimed injury, which in many cases is not related to the treatment sought or received. For example, if while hospitalized for cancer therapy, a patient receives radiologic burns, anesthetic effects or simply breaks an ankle, there is no direct or forseeable connection between the condition under treatment and the injury sustained during the period of treatment. (Table 14a)

Coding of the final diagnosis employed the same H-ICDA Classification of Diseases and Injuries which was used to code the principal injury in each case. This system is well suited to coding standard medical diagnosis, but not for medical injuries, since it includes some thirteen categories relating exclusively to diseases, but the principal malpractice injury is seldom a disease. For the cases examined, the distribution of principal injury was markedly skewed; as noted, the bulk of cases fell in three categories, while there were fewer than five entries in most categories and no entries at all in six categories. Final diagnosis, on the other hand, was most often a disease of some kind, resulting in a more normal distribution, in which all but one of the code categories had at least one entry and most had five or more entries.

About 20% of the final diagnoses coded fell in the H-ICDA category "injuries and Adverse Effects", which covers accidental injuries, adverse drug reactions, and similar reasons. Some

base: 205 cases

table #14a

Final diagnosis of injured person's actual medical condition

H-ICDA code	Diagnosis, by category	no. of cases	rel freq (%)	adjusted freq (%)
001.0 - 136.9	Infective Diseases	1	0.5	0.7
140.0 - 209.9	Malignant Neoplasms	7	3.4	4.6
210.0 - 239.9	Other Neoplasms	5	2.4	3.3
240.0 - 279.9	Endocrine/Nutritional/Metabolic Diseases	2	1.0	1.3
280.0 - 289.9	Diseases of the Blood	1	0.5	0.7
290.0 - 318.9	Mental Disorders	1	0.5	0.7
320.0 - 389.9	Diseases of the Nervous System	5	2.4	3.3
390.0 - 458.9	Diseases of the Circulatory System	12	5.9	7.9
460.0 - 519.9	Diseases of the Respiratory System	4	2.0	2.6
520.0 - 577.9	Diseases of the Digestive System	11	5.4	7.2
580.0 - 629.9	Diseases of the Genitourinary System	13	6.3	8.6
631.0 - 678.9	Delivery and Complications of Childbirth	13	6.3	8.6
680.0 - 709.9	Diseases of the Skin	1	0.5	0.7
710.0 - 739.9	Diseases of the Musculoskeletal System	19	9.3	12.5
740.0 - 759.9	Congenital Anomalies	1	0.5	0.7
760.0 - 768.9	Certain Diseases Peculiar to Newborns	0	0.0	0.0
770.0 - 796.9	Signs, Symptoms and Ill-defined Conditions	7	3.4	4.6
800.0 - 999.9	Injuries and Adverse Effects	31	15.1	20.4
Y 00.0 - Y 86.9	Supplementary Class-Specific Events	18	8.8	11.8
-	Unspecified	53	25.9	missing
	total:	205	100.1	100.2

N=205 cases (incidents)

13% fell in the category "Diseases of the Muskuloskeletal System" and another 12% were categorized as "Supplementary Class--Specific Events", covering special examinations and other reasons for hospital admission. No other category accounted for more than 9% of final diagnoses coded.

Distributions over H-ICDA categories of final diagnosis and principal injury in arbitration cases are of little intrinsic interest here, but are important for comparison with the corresponding data for court cases.

Injury Severity Rating: The rating scale employed for injury severity is the nine-category scale (Table 15) used by the NAIC 1975-78 and DHEW/Westat 1976 closed claim surveys. The category "not elsewhere classifiable" was added to distinguish cases involving only a legal and not a medical injury. Essentially, the scale rates injury in terms of resulting physical or mental disability, ascending in gravity from no disability to temporary disability to permanent partial or total disability. Ratings reflect the total functional and medical condition of the person affected, so that like injuries to different people may be rated differently. For example, a broken hip may have resulted in permanent disability for one person but only in temporary disability for another.

Although injury severity rating is subject to the imprecision attending all matters of judgment, it is perhaps the single most useful data item for analysis of claim substance and, thus, forum input. The main reason for this is that severity comes closer than any other data item to representing in non-money terms the relative value or worth of claims, assuming liability. That is, generally the dollar value of potential or actual recovery (damages) is higher where the severity rating is higher. Of course, occasionally the injured person's age, socio-economic situation, or both, may substantially reduce recovery value despite a relatively high severity rating, or may substantially increase it

not withstanding a relatively low severity rating. Also, the claimant involved, notably in death cases, will also affect total recovery, e.g., husband for wife or parent for child.

There was sufficient information to rate severity of the principal injury claimed in 87% (178) of the 205 arbitration cases. Just over 31% (56) of the 178 cases involved permanent physical or mental injury, including 8 deaths. The remaining 69% (122) involved temporary physical or mental injury and legal injuries (1) listed as "not elsewhere classifiable".

Excluding death cases between 60 and 80% of the medical injuries entailed some degree of temporary or permanent disability. These ranged in seriousness from minimal, short-term impairment of some physical function or mobility to the extreme condition of total impairment as quadriplegia.

Nearly three-fourths of the ratings would be considered minor or less or moderately severe covering minor temporary or permanent injuries and major temporary disability. These are broad categories and tend to encompass most of the injuries generally associated with medical malpractice claims whether in litigation or arbitration. The severity patterns are significant in establishing the nature of cases accommodated by arbitration systems since it is often maintained that only the less serious claimed injuries are submitted to arbitration. A comparison of severity patterns is presented in Part III of this report.

base: 205 cases

table #15

Severity rating of principal injury

rating	no. of injuries	rel freq(%)	adjusted freq (%)	cum freq (%)
1) emotional injury	12	5.9	6.7	6.7
2) insignificant physical injury	14	6.8	7.9	14.6
3) minor temporary disability	39	19.0	21.9	36.5
4) major temporary disability	48	23.4	27.0	63.5
5) minor permanent injury	44	21.5	24.7	88.2
6) significant permanent injury	1	0.5	0.6	88.8
7) major permanent disability	2	1.0	1.1	89.9
8) grave permanent disability	1	0.5	0.6	90.4
9) death	8	3.9	4.5	94.9
0) not elsewhere classifiable	9	4.4	5.1	100.0
UNKNOWN	27	13.2	missing	
total:	205	100.1	100.1	

N=205 cases

Place of Injury: Since probably over 90 percent of the malpractice arbitration agreements signed since 1969 have been signed under hospital-centered programs, it is no surprise that patients treated at hospitals constituted 84% of the injured persons in the cases examined. Most of those treated at hospitals (78) were inpatients, of whom the majority had been hospitalized in connection with operative procedures. Of the remaining 16% of injured patients not treated at hospitals, most had been treated in physicians' offices. (Table 16)

The place of incident occurrence is know for 86% of the cases claiming injury to a hospital inpatient. In more than two-thirds of these cases the incident occurred either in an operating room (57%) or a recovery room (14%); in about one-fifth (21%) it occurred in a patient's room or bathroom; and in the remainder it occurred at another or an unspecified place within the hospital. Obviously, the operating and recovery room incidents involved surgical patients, although the alleged injury did not necessarily involve the surgical procedure itself. For example, in some of these cases the injury was an accidental burn or was drug-related. The incidents occurring in patients' rooms were mostly patient falls, with any liability attaching to the institution rather than to individuals. (Table 17)

base: 205 cases

table # 16

Type of facility where principal injury occurred

	no. of cases	rel freq (%)	adjusted freq (%)	cum freq (%)
hospital inpatient facility	144	70.2	73.8	73.8
physician's office	24	11.7	12.3	86.2
hospital emergency room	15	7.3	7.7	93.8
hospital outpatient facility	4	2.0	2.1	95.9
non-hospital ambulatory care facility	3	1.5	1.5	97.4
injured person's home	1	0.5	0.5	97.9
other	4	2.0	2.1	100.0
unknown	10	4.9	missing	
total:	205	100.1	100.0	

N=205

base: 205 cases

table # 17

Location within hospital where injury occurred

	no. of cases	rel freq (%)	adjusted freq (%)	cum adjusted freq (%)
not applicable[a/]	51	24.9	--	--
operating room or suite[b/]	83	40.5	57.6	57.6
patient's room or bathroom	33	16.1	22.9	80.6
recovery room	24	11.7	16.7	97.2
other or unspecified location	4	2.0	2.8	100.0
unknown[b/]	10	4.9	missing	
total:	205	100.1	100.0	

N=205 cases

a/ i.e., non-inpatient injury
b/ in some cases it was known only that the injury occurred either in the operating room or the adjacent recovery room
c/ i.e., unknown whether injured person was an inpatient

Category of injury: The principal injury claimed was coded in one of seven categories[1/] which, together, are intended to cover the range of causes or circumstnaces of all injuries. In 88% of the cases (181 of 205) there was sufficient information to categorize the claimed injury (Table 18). In 77% of these cases the injury was claimed to have been either treatment-induced (45%) or the result of lack or failure of preventive steps (32%).

1/ The categories are:

(1) Occurrence of a new abnormal condition induced by treatment or procedure;
(2) Incomplete cure (correction, removal) of the original abnormal condition;
(3) Occurrence of a new abnormal condition through lack or failure of preventive efforts;
(4) Performance of unnecessary treatment or procedure without complication
(5) Failure to achieve intended goal or result (where original condition not medically abnormal);
(6) Emotional and/or financial consequences of misdiagnosis in the absence of an abnormal condition
(7) Physical, emotional and/or financial consequences of performing unauthorized act(s), whether or not medically proper

These categories, adapted from a question in the DHEW/Westat 1976 malpractice claim survey, are defined and examples given in the Information Manual. Table 18 presents this list through abbreviated headings.

base: 205 cases

table #18

Category of principal injury claimed

category	no.	rel freq (%)	adjusted freq (%)	cum freq (%
treatment-induced	81	39.5	44.5	44.5
failure to prevent	59	28.8	32.4	76.9
incomplete cure	18	8.8	9.9	86.8
failure to accomplish intended goal	16	7.8	8.8	95.6
unauthorized act	3	1.5	1.6	97.2
unnecessary treatment	3	1.5	1.6	98.9
misdiagnosis of abnormality in its absence	2	1.0	1.1	100.0
unknown	23	11.2	missing	
total:	205	100.1	100.0	

N= 205 cases

Treatment-related injury was usually associated with surgery of some sort. In a number of cases, surgical material was unintentionally left inside the patient's body, occasionally with serious effects. One patient suffered neurogenic bladder and bowel from blockage caused by a surgical cottonoid, undiscovered for several months after spinal surgery. Another had to undergo bowel resection owing to pre-gangrenous condition caused by a 7½" metal clamp left after heart surgery. A third, elderly, patient sustained no particular injury but had to undergo the trauma of additional surgery for removal of a guide wire left after brain-tumor surgery. Nearly all cases involving surgical material left resulted in payment of some indemnity.

In other cases, the surgery or anesthesia procedure was the apparent cause of an injury which was not necessarily considered the result of negligence. In several such cases, the patient's teeth or dental work was evidently damaged in the course of anesthesia. Other patients sustained temporary or lasting loss of sensation in a hand, foot, limb or part of the trunk from nerve damage occasioned by orthopedic or neurological or other surgery or, less often, by a hypodermic injection or the malpositioning of an intravenous line. These cases were often serious, entailing apparently permanent effects. Other treatment-related injuries were insignificant, except cosmetically; for example, in one case the dripping of a chemical solution used to remove a girl's facial wart left her cheek permanently scarred.

Of the injuries classed as "failures of prevention", over half resulted from hospital patient falls. Typically, an elderly patient, or one having reduced mobility following

surgery, fell from a hospital bed or on the way to or from the lavatory. Most such injuries were minor, but a number resulted in hip or other fractures or head injuries that, because of the patient's advanced age or weakened condition, involved serious consequences.

The "incomplete cure" classification typically covered such relatively common problems as delay in diagnosis of one or more fractures sustained in an auto accident. Similarly, "failure to accomplish the intended goal" included certain treatment results which, though undesired, were not uncommon and not necessarily considered negligent. For example, several such cases involved either the failure of an abortion to terminate pregnancy or the failure of a tubal ligation procedure to prevent conception.

Procedural and diagnostic misadventure: In about 90% of cases it was determinable whether the claimed injury related to a medical misadventure (Table 19). Some 71% of these cases involved a procedural problem (Table 20); 22% involved diagnostic misadventure (Table 21); a few cases involved both; and a small minority, perhaps 10%, involved neither.

While there was a procedural misadventure, it was either surgical or directly related to surgery (e.g., anesthesia-connected) in 76% of the cases. This is consistent with the high proportion of the injured persons who, at the time of the claim-producing incident, were hospital inpatients in connection with operative procedures. The medical or hospital procedure claimed to cause injury is known for 83% of the 151 cases involving procedural misadventure (Table 22). By far the largest group (at least 23%) were gynecological and obstetrical. The only other substantial group (12%) were orthopedic procedures. The remaining procedural misadventure cases involved more than a dozen other medical specialty areas.

Some diagnostic problem was claimed in about one case out of every five (Table 23). Delay in diagnosis occurred in about 50% of the cases. Less often it was misdiagnosis of an abnormal condition or rarely, in its absence. The injuries alleged to result from diagnostic misadventure were, in general, less serious than those allegedly resulting from procedural misadventure.

base: 205 cases

table #19

Type of procedural misadventure

procedural misadventure	no. of cases	rel freq (%)	adjusted freq (%)	adjusted cum freq (%)
none	54	26.3	29.2	---
surgical	92	44.9	49.7	70.2
treatment	25	12.2	13.5	89.3
anesthesia	7	3.4	3.8	94.7
diagnostic	7	3.4	3.8	100.0
unknown	20	9.8	missing	
total:	205	100.0	100.0	

N=205 cases

base: 205 case_

table # 20

Frequency and causes of procedural misadventure

procedural misadventures and causes	cases (N=205) no.	rel freq (%)	adj freq (%)	misadventure causes (N=154) no.	rel freq. (%)
no procedural misadventure claimed	54	26.3	29.2		
procedural misadventure(s) claimed	131	63.9	70.8		
improperly performed				77	50.0
more appropriate alternative				11	7.1
not adequately indicated				10	6.5
occasioned by misdiagnosis				6	3.9
not performed				4	2.6
other specified cause(s)				37	24.0
cause(s) not indicated				9	5.8
unknown whether procedural misadventure claimed	20	9.8	missing		
total:	205	100.0	10[illegible].0	154	99.9

base: 205 cases

table # 21

Type of diagnostic misadventure

diagnostic misadventure	no. of cases	rel freq (%)	adjusted freq (%)	adjusted cum freq (%)
none	143	69.8	78.1	--
delay in diagnosis	20	9.8	11.0	50.0
misdiagnosis of abnormality	14	6.8	7.7	85.0
no diagnosis made	5	2.4	2.7	97.5
misdiagnosis absent abnormality	1	0.5	0.5	100.0
unknown	22	10.7	missing	
total:	205	100.0	100.0	

N=205 cases

base: 205 cases

table #22

Procedures claimed to cause injury

H-ICDA code	Procedure category	no. of cases	rel freq (%)	adjusted freq (%)
01.0 - 05.9	Operation on the Nervous System	8	3.9	6.3
06.0 - 07.9	Operation on the Endocrine System	1	0.5	0.8
08.0 - 17.9	Operation on the Eye	2	1.0	1.6
18.0 - 20.9	Operation on the Ear	0	0.0	0.0
21.0 - 29.9	Operation on the Nose/Mouth/Pharynx	7	3.4	5.6
30.0 - 34.9	Operation on the Respiratory System	1	0.5	0.8
35.0 - 39.9	Operation on the Cardiovascular System	3	1.5	2.4
40.0 - 41.9	Operation on the Hemic/Lymphatic Systems	0	0.0	0.0
42.0 - 54.9	Operation on the Digestive System	8	3.9	6.3
55.0 - 59.9	Operation on the Urinary System	0	0.0	0.0
60.0 - 64.9	Operation on the Male Genital System	2	1.0	1.6
65.0 - 71.9	Operation on the Female Genital System	29	14.1	23.0
72.0 - 75.9	Obstetrical Procedures	1	0.5	0.8
76.0 - 85.9	Operation on the Musculoskeletal System	15	7.3	11.9
86.0 - 87.9	Operation on the Breast	6	2.9	4.8
88.0 - 90.9	Operation on the Skin/Subcutaneous Tissue	5	2.4	4.0
91.0 - 99.9	Misc Diagnostic/Therapeutic Procedures	22	10.7	17.5
Y 00.0 - Y 87.0	Supplementary Class-Specific Events	2	1.0	1.6
A168.0 - A968.9	Anesthesia Procedures	5	2.4	4.0
D60.0 - D 79.9	Treatment with Dr.	0	0.0	0.0
H93.0 - H 96.4	Other Hospital Procedures	9	4.4	7.1
-	No Procedural Misadventure	54	26.3	--
-	Unspecified	25	12.2	missing
	total:	205	99.9	100.1

N=205 cases

base: 205 case

table # 23

Frequency and causes of diagnostic misadventure

diagnostic misadventures and causes	cases (N=205) no.	rel freq (%)	adj freq (%)	misadventure causes (N=51) no.	rel freq (%)
no diagnostic misadventure	143	69.8	78.1		
diagnostic misadventure claimed	40	19.5	21.9		
failed to request diagnostic test				13	25.5
failed to request x-ray(s)				10	19.6
misinterpreted x-ray(s)				8	15.7
inadequate examination				5	9.8
misinterpreted diagnostic test				2	3.9
other specified cause(s)				4	7.8
cause(s) not indicated				9	17.6
unknown whether diagnostic misadventure claimed	22	10.7	missing		
total:	205	100.0	100.0	51	99.9

I. Basis for Claim

The first part of a malpractice case requires a description of the injured person and the injury on which the demand for recovery is based. At this stage, comparable characteristics of the defendants are described in relation to numbers of claims, numbers subject to arbitration and, for physicians and other professionals, the specialties which are represented.

Number of defendants: The 205 arbitrations were based on incidents which generated claims against 405 known defendants. About three-fourths were resolved in arbitration and the balance outside, under court jurisdiction. These included cases in which 23 claims were not resolved at all in arbitration and 30 in which a claim against one or more defendants was similarly concluded outside of arbitration.

Defendants Involved in Arbitration Claim and Incidents

	No. of Defendants	Incidents
Resolved In Arb'n	296	182*
Resolved Outside of Arb'n	109	23
Total:	405	205

* Includes 30 in which one or more claims were resolved outside of arbitration: thus a total of 53 (including 23) were so resolved.

The 205 arbitrations involved from one to eight defendants, principally fewer (Table 24). For this sample, the total number of defendants is known for 86% of incidents. Of these, 49% involved just one defendant; 29% involved two defendants; and

the remaining 19% involved three or more defendants (Table 25). For 84% of these incidents, all defendants were at least initially party to the arbitration.

These figures indicate that the bulk of incidents which have led to arbitration generated claims against only one or two defendants and, correspondingly, that the great majority of arbitrations have involved all claims associated with the underlying incidents.

Just over three-fourths of the defendants who were party to arbitration were either from California or Michigan, just as three-fourths of the arbitration cases were from those two states. Of the remaining one-quarter of the defendants who were not party to arbitration, most were from New York, Washington or Minnesota.

Of the 30 cases in which all claims were resolved outside of arbitration, essentially the same pattern was observed (Table 26). Half (16 of 30) had only one defendant and a fourth two. Thus, three fourths of all such cases had one or two defendants only.

Interestingly, of the 109 defendants against whom the claim was not resolved in arbitration, a somewhat larger than expected proportion (85%) were from either California or Michigan. This may be due to the hospital-based nature of the statewide arbitration programs in these states. As a result, claims against some doctor defendants have to be pursued in court when they did not subscribe to the blanket arbitration agreements signed by the majority of their colleagues on the hospitals' medical staffs or do not join the arbitration following the claim or demand.

base: 205 cases

table # 24

Number of defendants in arbitration, per case

no. of defendants	no. of cases	rel freq (%)	adjusted freq (%)	cum freq (%)
one	117	57.1	57.4	57.4
two	55	26.8	27.0	84.3
three	21	10.2	10.3	94.6
four	4	2.0	2.0	96.6
five	3	1.5	1.5	98.0
six	2	1.0	1.0	99.0
seven	1	0.5	0.5	99.5
eight	1	0.5	0.5	100.0
unknown	1	0.5	missing	
total:	205	100.1	100.2	

N=205 cases

mean	1.706
median	1.372
mode	1.000
range	7.000

413 + 414
base: 205 cases

table #25

Total number of defendants, per incident

no. of defendants	no. of	rel freq (%)	adjusted freq (%)	cum freq (%)
one	86	42.0	48.9	48.9
two	51	24.9	29.0	77.8
three	18	8.8	10.2	88.1
four	7	3.4	4.0	92.0
five	8	3.9	4.5	96.6
six	3	1.5	1.7	98.3
seven	1	0.5	0.6	98.9
eight	2	1.0	1.1	100.0
unknown	29	14.1	missing	
total:	205	100.1	100.0	

N=205 cases

59.6

base: 205 cases

table #26

Number of defendants in addition to those in arbitration, per incident

no. of defendants	no. of cases	rel freq (%)	adjusted freq (%)	cum adjusted freq (%)
none	147	71.7	83.1	83.1
one	16	7.8	9.0	92.1
two	8	3.9	4.5	96.6
three	2	1.0	1.1	97.7
four	3	1.5	1.7	99.4
five	1	0.5	0.6	100.0
unknown	28	13.7	missing	
total:	205	100.1	100.0	

N= 205 cases

mean	0.301
median	0.095
mode	0
range	5

Insurance: At least 270 (67%) of the known defendants associated with the incidents underlying the 205 arbitration cases were conventionally insured for medical professional liability. Some 18 different carriers were identified, which insured one or more of them. At least 15 more (3%) of the 405 defendants were known to be either self-insured or had no provision at all for medical liability judgments. It is not known whether the remaining 120 defendants (30%) were conventionally insured, self-insured or uninsured.

Of the 270 defendants whose insuror is known, 94 (35%) in California--mostly hospitals--were insured by the same carrier. While no other insuror alone covered more than 10% of these 270 defendants, a total of 77% were insured by just six of the 18 different carriers.

Defendant type: Of the 405 known defendants, about 62% (252) were individuals and about 36% (144) were institutions. The remaining 2% (9) have not been identified. Some 96% of the individuals were physicians (doctors of medicine or osteopathy) and the rest were dentists, registered nurses, or other health care professionals or technicians. Of the institutions, 95% were hospitals and the rest were clinics or professional practice groups (Table 27).

Among the physician defendants in arbitration, the commonest specialty was obstetrics and gynecology, accounting for almost 20% of the total. Only one other specialty group represents more than 10% of the total--orthopedic surgery at 12%. These

505
base: 205 cases

table #27

Defendant category

	no. of defendants	rel freq (%)	adjusted freq (%)
individuals	252	62.2	
physician [a/]	242		61.1
other professional	10		2.5
institutions	144	35.6	
hospital	137		34.6
clinic	3		0.8
other	4		1.0
unknown	9	2.2	
total:	405	100.0	100.0

N= 405 defendants

a/ doctor of medicine or osteopathy

60.a

two specialties plus general surgery (9%) and plastic surgery (8%) constitute almost half of all physician defendants; the remaining half includes at least 15 other medical specialties (Table 28).

Type of practice is known for about half the individual defendants: 82% were private practitioners and 18% were salaried employees at the time of the malpractice incident (Table 29).

Defendant age: Age at the time of the claim-producing incident was recorded to the nearest year for those individual defendants who were doctors of medicine or osteopathy, dentists, oral surgeons, or other medical professionals (e.g., podiatrists) who are usually private practitioners. Of 225 such individual defendants whose age is known, over 87% were between 31 and 60. Two-thirds were 50 or under, and 63% were between 31 and 50. The mean and median ages were close together at 45.5 and 44 years, respectively, an indication that this age distribution would likely change little with added data and thus is probably representative of such defendants in malpractice claims generally (Table 30).

Data capture rates are relatively low for physician defendants' board certification status and length of individual practitioners' professional relationship with the injured person. Based on 96 physicians, 60% were board certified in the specialty they were practicing. As to length of professional relationship, 63% knew the injured person for less than one

month, and over 80% had treated or known the injured person less than two months. These figures reflect the relatively high proportion of claims against specialists to whom patients had been referred in connection with specific, limited-duration surgical or medical treatment that primary-care physicians usually do not provide (Table 31).

62.a.

506
base: 513=1
(182 of 205 cases)

table #28

Type and medical specialty of defendants in arbitration[a/]

	all defendants			MDs and DOs	
	no.	rel freq (%)	adjusted freq (%)	adjusted freq (%)	cum freq (%)
PHYSICIANS (MDs and DOs)	161	54.4	57.1		
obstetrics & gynecology	32			19.9	19.9
orthopedic surgery	20			12.4	32.3
general surgery	15			9.3	41.6
plastic surgery	12			7.5	49.1
anesthesiology	11			6.8	55.9
general practice	11			6.8	62.7
internal medicine	11			6.8	69.6
radiology	9			5.6	75.2
thoracic surgery	9			5.6	80.7
urology	8			5.0	85.7
neurosurgery	6			3.7	89.4
family practice	5			3.1	92.5
cardiovascular disease	2			1.2	93.8
ophthalmology	2			1.2	95.0
otolaryngology	2			1.2	96.3
administrative medicine	1			0.6	96.9
pathology	1			0.6	97.5
pediatrics	1			0.6	98.1
psychiatry	1			0.6	98.8
unspecified specialty	2			1.2	100.0
OTHER INDIVIDUALS	10	3.4	3.5		
oral surgery	3				
dentistry	1				
podiatry	1				
registered nurse	4				
technician	1				
INSTITUTIONS	111	37.5	39.4		
hospital	109				
clinic	2				
UNKNOWN	14	4.7	missing		
total:	296	100.0	100.0	99.7	

N=296 defendants

[a/] i.e., defendants with respect to whom the claim was resolved in arbitration

507
base: 205 cases

table # 29

Medical professional defendants'[a] type of practice

	all defendants		medical professionals	
	no. of defendants	rel freq (%)	rel. freq (%)	adjusted freq (%)
private practice	115	28.4	44.2	83.3
medical group	68			49.3
solo	43			31.2
independent contractor	4			2.9
employed practitioner	23	5.7	8.8	16.7
intern or resident	10			7.2
hospital-based physician	8			5.8
other	5			3.6
unknown	122	30.1	46.9	missing
not a medical professional	145	35.8	--	--
total:	405	100.0	99.9	100.0 100.0

N=405 defendants

a/ includes physicians, dentists and podiatrists

62.b

508
base: 205 cases

table # 30

Age of individual defendants[a/]

age range (years)	no. of individuals	rel freq (%)	adjusted freq (%)	cum freq (%)
30 and under	9	3.5	4.0	4.0
31 - 40	74	28.5	32.9	36.9
41 - 50	68	26.2	30.2	67.1
51 - 60	54	20.8	24.0	91.1
61 - 70	19	7.3	8.4	99.6
over 70	1	0.4	0.4	100.0
unknown	35	13.5	missing	
total:	260	100.2	99.9	

N=260 defendants (of total of 405)

mean 45.627 years
median 44.9
mode 40
range 74

a/ including MDs, DOs, dentists, oral surgeons and podiatrists

42.c.

511
base: 513=1
(182 of 205 cases)

table # 31

Length of professional relationship[a/] with injured person

time range (months)	no. of defendants[a/]	rel freq (%)	adjusted freq (%)	cum freq (%)
less than 1	61	35.9	63.5	63.5
1 - 2	17	10.0	17.7	81.3
3 - 6	2	1.2	2.1	83.3
7 - 12	4	2.4	4.2	87.5
13 - 24	4	2.4	4.2	91.7
over 24	8	4.7	8.3	100.0
unknown	74	43.5	missing	
not applicable[b/]	124	NA	--	
total:	294	100.1	100.0	

N=170 defendants (of 294)

a/ physicians and other professional practitioners (e.g. dentists, podiatrists)
b/ institutional defendants and individuals such as nurses and technicians

62.d

Category of claimed liability: The main basis claimed for liability in each case was fixed in one of a set of seven general categories which broadly cover established theories or bases for medical institutional or professional liability. These categories, listed below, were denominated not along strictly legal lines but conceptually, with a view to the common bases for medical malpractice claims:

1) negligent or substandard diagnosis or treatment (or both), where injury was claimed to result indirectly from late diagnosis or misdiagnosis or directly from treatment rendered

2) failure to diagnose, consult or refer as required or appropriate, where injury was claimed to result indirectly from a practitioner's failure to make a proper diagnosis or to consult with or refer the patient to an appropriate specialist

3) failure to disclose risks or otherwise to obtain proper or adequate consent for treatment, covering claims based chiefly on lack of proper consent for treatment rendered

4) outcome of treatment not in accord with contract, guaranty or warrenty, usually in connection with elective treatment (e.g., sterilization, abortion, cosmetic surgery)

5) breach of duty to patient, whether or not directly involving treatment; usually connected with actions or failures by nurses or other hospital employees

6) failure to observe requirement of statute, regulation, rule or sanction (e.g., failure to get autopsy permission; illegal drug prescription)

7) action, omission or conduct for which liability could ensue independent of patient-provider relationship, covering claims which could have been pursued on grounds other than medical liability (e.g, harassment or assault of a patient)

The list was developed by review of malpractice cases generally, in the arbitration data base and elsewhere such as the NAIC survey, to reflect the grounds for malpractice claims. They

include both failures to meet medical professional standards and legal requirements. The principal basis for medical malpractice, as is well known, is negligence or substandard treatment and some type of breach of duty to observe conditions essential for diagnosis or treatment. In parallel, the principal legal basis in contemporary suits, rests on failures to meet specified promises or contracts or unauthorized action, i.e., failure to disclose or lack of informed consent.

The majority of cases in the data base result from pre-claim agreements. Thus, generally, there would be no selection or rejection of arbitration based on the nature of the injury or claim. In this respect, therefore, arbitration should correspond with litigation.

Some 57% of codable cases were based on alleged substandard diagnosis or treatment, while another 18% were based on alleged breach of duty to patients. Thus, 75% of cases fell in two categories. The remainder were split among four of the other five categories (none of the cases examined was based on category 6 liability, i.e., failure to observe statute). (Table 32)

The distribution of arbitration cases appears to be similar to that found for medical malpractice generally. Approximately 90% of the cases could be coded; only one category was used for each case.

base: 205 case

table # 32

Category of liability claimed

	No.	rel freq (%)	adjusted freq (%)	cum adjusted freq (%)
substandard diagnosis or treatment	105	51.2	57.4	57.4
breach of duty	32	15.6	17.5	74.9
lack of consent	18	8.8	9.8	84.7
breach of contract	15	7.3	8.2	92.9
failure to consult	11	5.4	6.0	98.9
action for which liability may ensue independent of patient-provider relation	2	1.0	1.1	100.0
unknown	22	10.7	missing	
total:	205	100.0	100.0	

N=205 cases

Legal issues in arbitration: Cases were examined for the specific legal issue raised, that is, the response by the defendant to the claim or charge by the plaintiff. Generally, these fall into three categories: denial, justification or lack of jurisdiction or standing. The latter are, in effect, the threshold issues which are determined without reaching the merit of the case. For example, whether the matter is arbitrable, whether the claim was timely brought or whether the defendants named are proper parties. Since closed arbitration case files do not always include opinions or a full statement of the reasoning for the award, it is not always possible to establish the legal issue and no assumptions were made. Cases entered in the arbitration forum but settled by the parties rarely provided information on which to determine the legal issue. For this reason only 54% of the arbitrations examined were considered sufficient to yield legal issues. (Table 33) Another 2% of arbitrations were resolved at early stages clearly without developing far enough for formal statements of legal issues to emerge. Threshold issues, raised in 18% of cases for which legal issues were coded were about equally divided between the statute of limitations and various issues of arbitrability of claims asserted.[1/] Of the substantive issues, by far the commonest

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1/ Of course, in many other cases all issues of arbitrability were resolved in court, prior to arbitration.

402 A/B
base: 205 cases

table # 33

Legal issues or doctrines raised in arbitration

		cases (N=205)		issues (N=152)	
		no.	freq (%)	no.	freq (%)
no issue raised		5	2.4		
legal issue or doctrine raised		111	54.1		
threshold issues	arbitrability			14	9.2
	statute of limitations			12	7.9
other issues or doctrines	res ipsa loquitur			52	34.2
	informed consent			33	21.7
	neglect			20	13.2
	comparative/contributory negligence			7	4.6
	scope of consent			6	3.9
	products liability			2	1.3
	respondeat superior			2	1.3
	punitive damages			2	1.3
	strict liability			1	0.7
	abandonment			1	0.7
unknown what issue(s), if any, were raised		89	43.4		
total:		205	99.9	152	100.0

65.4

was res ipsa loquitur,[1] which was raised in nearly half the cases coded. If found applicable, res ipsa establishes a presumption that the event resulting in injury would ordinarily not have occurred without negligence, burdening the defense to show otherwise. This is usually a decided advantage for the claimant and, thus, it is no surprise that res ipsa is evidently so often asserted. Furthermore, a substantial share of incidents in health care, as opposed to other contexts which commonly generate negligence claims, inevitably have at least the appearance of true res ipsa situations. An obvious example is the still relatively common incident in which surgical material is inadvertently left inside a patient's body after an operation. Res ipsa situations usually fall in the liability category covering substandard treatment which, accordingly, included more than half of all cases.

The second most frequent issue was that of informed consent for treatment, which was raised in 30% of the coded cases. A related issue--whether the treatment rendered fell within the scope of the consent obtained--was raised in another 6% of cases. The third commonest issue, raised in about 18% of cases, was that of simple neglect (of patient or duty), usually by nursing or other hospital employees. This issue covered the substantial number of cases involving injuries sustained in falls by unattended patients, either in their rooms or elsewhere in the hospital. In several

1/ Literally, "the thing speaks for itself".

such cases the defense claimed that patients had contributed to their injuries by ignoring warnings or instructions to ring for aid in ambulating, even if only from bed to lavatory and back.

A half dozen other legal issues or doctrines were asserted only in one or two cases each, most often only secondary to or in connection with one of the more common issues discussed above. For example, the doctrine of respondeat superior, under which hospitals may be liable for negligence by their employees, was of course asserted in the context of alleged neglect by nurses or other employees.

Derivative claims incidence: In 94% of the cases examined, the patient who allegedly sustained injury as a result of medical negligence was also the person who signed the arbitration agreement as well as the sole or main claimant in arbitration. In about one out of every five such cases, there was at least one additional claimant, most often the patient's spouse (claiming loss of consortium). In the 5% of cases in which, the injured patient was not a claimant, the person either did not sign the arbitration agreement because a minor or otherwise legally incompetent,or else became legally incompetent or died after signing the arbitration agreement and receiving medical care or treatment.

Several of these derivative claims (brought by someone other than the injured person) raised legal issues regarding enforceability of the arbitration agreement. Such issues included whether a patient who becomes mentally incompetent after signing an arbitration agreement is necessarily bound by it, and whether heirs or executors of a decedent who had signed an arbitration agreement are bound by it. However, most derivative claims in which the injured patient was a minor or legally incompetent in the first place, were based on an arbitration agreement that had been signed by the person who ultimately pressed the claim. Such a surrogate claimant (spouse, parent, or adult sibling or child) was therefore not likely to contest arbitration.

Total monetary claim in arbitration: Total monetary claims in arbitration included any amounts specified for economic loss ("special damages" in legal terms) as well as amounts claimed for pain and suffering and any other non-economic damages ("general damages" and, occasionally, "punitive damages" in legal terms.)

Although dollar claims need not be specified in an arbitration demand or submission, they were specified for 78% of the cases examined. The median claim was just under $50,000. Although claims ranged in amount from the hundreds of dollars to $2.5 million, about two-thirds did not exceed $100,000. More than half of these were for amounts between $10,000 and $50,000, including 22 cases in which there was a claim ceiling of $25,000 under the terms of the arbitration program involved. (Table 34).

Note: Because monetary claims in medical malpractice are often unrealistic, many recent medical malpractice statutes prohibit such a statement (ad damnum). The amounts claimed were, in many instances, intended for negotiation rather than, as expected, recoveries. Statements of claims, whether in litigation or arbitration, would likely be the same. Accordingly, any analysis of such demands, as presented, must be understood solely as requests to initiate a proceeding rather than as calculated expectations of indemntiy.

table # 34

Monetary claim in arbitration initially [a/]

dollar range	no. of cases	rel freq (%)	adjusted freq (%)	cum freq (%)
up to 5,000	5	2.4	3.1	3.1
5,001 to 10,000	12	5.9	7.5	10.6
10,001 to 20,000	27	13.2	16.8	27.3
20,001 to 50,000	44	21.5	27.3	54.7
50,001 to 100,000	18	8.8	11.2	65.8
100,001 to 250,000	26	12.7	16.1	82.0
250,001 to 500,000	15	7.3	9.3	91.3
500,001 to 1 million	11	5.4	6.8	98.1
over 1 million	3	1.5	1.9	100.0
unspecified/unknown	44	21.5	missing	
total:	205	100.2	100.0	

N=205 cases

mean $ 197,202.375
median 49,992.305
mode 25,000
range 2,500,000

a/ In 22 of the 205 cases, the claim ceiling was $25,000 under the terms of the arbitration program, which was based on postclaim agreement to submit the matter to arbitration.

69.a.

Claimed economic loss: Full information on the injured person's monetary claims for economic loss was available in roughly half the cases. Even in some of these cases, the data available may not have represented total or final amounts claimed for each of the main categories of economic loss--medical costs, wage loss, and other costs. Frequently, the available records included only a partial enumeration or initial estimates of claims in these categories. Thus, the tabulated data (Tables 35-37) represents specified amounts for which recovery was sought at some point in the proceeding, but not necessarily the total medical or other expense, or wage loss, incurred or anticipated for the injured person due to the claim-producing incident.

For one thing, in many cases part or all of any economic loss may have been borne by a third party on behalf of the injured as an insured or otherwise eligible person under some form of private or social insurance. Or, occasionally, economic loss was absorbed directly by government, as where the injured was an inmate at a public institution. In at least two cases, a third-party payor of medical expenses joined arbitration as an intervenor and eventually recovered at least a portion of such expenses out of the indemnity awarded to the claimant. In most cases, however, third-party payors apparently did not seek reimbursement of expenses or losses absorbed on behalf of the injured person. Accordingly, the tabulated economic loss data represent only amounts claimed, as known from available sources, and not the total economic cost to the injured persons.

Incurred medical expenses were claimed in roughly four cases of every five for which such information was available. Claimed amounts ranged from under $100 to over $33,000. The typical (median) claim was $2,273. Some 75% of such claims were under $5,000, and only 12% exceeded $10,000 (Table 35). In contrast, incurred wage loss claims were relatively infrequent but more substantial. Incurred wage loss was claimed in roughly one case out of three, with the median claim being $4,932. Only 20% of incurred wage loss claims exceeded $10,000, however (Table 36).

The distribution of incurred medical expenses plus incurred wage loss combined yields a pattern somewhat like that for claimed medical expense alone: claims were made in four out of five cases and in most they totalled under $3,000; in less than one case in four did such claims total more than $10,000. These combined claims (medical plus wage) for incurred economic loss reached to about $72,000, however, averaging nearly $10,000 for the 60 cases in which a combined amount was claimed (Table 37).

base: 205 case

table #35

Incurred medical expenses claimed

dollar range	no. of cases	rel freq (%)	adjusted freq (%)	cum adjusted freq (%)	adjusted non-zero freq (%)
0	18	8.8	19.4	19.4	--
1 to 1,000	18	8.8	19.4	38.7	24.0
1,001 to 2,000	14	6.8	15.1	53.8	18.7
2,001 to 3,000	13	6.3	14.0	67.7	17.3
3,001 to 5,000	11	5.4	11.8	79.6	14.7
5,001 to 10,000	10	4.9	10.8	90.3	13.3
10,001 to 20,000	6	2.9	6.5	96.8	8.0
over 20,000	3	1.5	3.2	100.0	4.0
unknown *	112	54.6	missing		
total:	205	100.0	100.2		100.0

N=205 cases

	all amts.	non-zero amts.
mean	$ 3,594.215	4,456.827
median	1,547	2,273.50
mode	0	
range	33,312	
aggregate	334,262	

* i.e., unknown what amount of incurred medical expense, if any, was claimed

214

table #36

Incurred wage loss claimed

dollar range	no. of cases	rel freq (%)	adjusted freq (%)	adjusted non-zero freq (%)
0	77	37.6	69.4	--
1 to 1,000	7	3.4	6.3	20.6
1,001 to 5,000	10	4.9	9.0	29.4
5,001 to 10,000	10	4.9	9.0	29.4
10,001 to 50,000	6	2.9	5.4	17.6
over 50,000	1	0.5	0.9	2.9
unknown*	94	45.6	missing	
total:	205	99.8	100.0	99.9

N=205 cases

	all known amts.	non-zero amts.
mean	$ 3,110.703	$ 10,155.529
median	1.104	4,932
mode	0	
range	60,000	
aggregate		345,288

* i.e., unknown what amount of incurred wage loss was claimed, or whether incurred wage loss was claimed at all

403 + 405
base: 205 cases

table # 37

Incurred economic loss claimed[a/]

dollar range	no. of cases	rel freq. (%)	adjusted freq (%)	cum freq (%)	non-zero adjusted freq (%)
0	16	7.8	21.1	21.1	--
1 to 1,000	13	6.3	17.1	38.2	21.7
1,001 to 2,000	5	2.4	6.6	44.7	8.3
2,001 to 3,000	9	4.4	11.8	56.6	15.0
3,001 to 5,000	5	2.4	6.6	63.2	8.3
5,001 to 10,000	10	4.9	13.2	76.3	16.7
10,001 to 20,000	10	4.9	13.2	89.5	16.7
20,001 to 50,000	6	2.9	7.9	97.4	10.0
over 50,000	2	1.0	2.6	100.0	3.3
unknown[b/]	129	62.9	missing		
total:	205	99.9	100.1		100.0

N=205 cases

	all amts.	non-zero amts.
mean	$ 7,289.156	$ 9,232.933
median	2,294.50	4,367.50
mode	0	
range	71,816	
aggregate	553,976	

a/ total of claimed medical expense and wage loss incurred
b/ i.e., total claimed incurred economic loss claimed is currently unknown in whole or in part

Party Representation: Parties in arbitration may be represented by counsel or by themselves (pro se). In the cases with such data, 177 (of 200) or about 89% of claimants and 317 (of 325) or 98% of defendants were represented in arbitration by attorneys (Tables 38, 39). One of the claimants and three of the defendants in these cases was represented by persons other than attorneys. In 22 cases claimants brought arbitration without attorney or other representation, but it appears that, in some instances, the claimant was receiving legal advice from an unidentified source. A defendant appeared without counsel, however, in only five cases. Others, such a nominal parties and some defendants named but not party to arbitration were also not represented by counsel. The pro se claimant cases were apparently minor, for the most part, or of such questionable liability that an attorney was not available.

817
base: 205 cases

table # 38

Claimant representation in arbitration

	no. of cases	rel freq (%)	adjusted freq (%)
attorney	177	86.3	88.5
self	22	10.7	11.0
other person	1	0.5	0.5
did not appear	3	1.5	--
unknown	2	1.0	missing
total:	205	100.0	100.0

N= 205 cases

71.2

base: 205 cases

table # 39

Defendant representation in arbitration

	no. of defendants	rel freq (%)	adjusted freq (%)
attorney	317	93.5	97.5
self	5	1.5	1.5
other person	3	0.9	0.9
unknown party status or representation	14	4.1	missing
nominal party, not represented	16	--	
not party to arbitration	50	--	
total:	405	100.0	99.9

N=405 dofendants

J. Outcomes

This section discusses the dispositions reached for the closed arbitration cases in the data base. Dispositions are of two types (a) administrative and (b) substantive. Administrative factors include the stage at which the case was closed, proceedings involved, elapsed time periods, and costs associated with processing and indemnity. Substantive resolutions cover claims indemnified by type (win/lose ratios) and amounts. In summary, selected administrative and substantive factors are cross-analyzed to determine the relationship between such variables as type of claim (injury severity), processing time an and resolution.

Case disposition and claim resolution: Some 92% (198) of the arbitration cases resolved the claim with respect to at least one defendant. The other 8% (17) did not resolve any claims in arbitration. This occurred when claims were removed from arbitration to court or were not remanded from court to arbitration, most often because one or more defendants had not signed any preclaim arbitration agreement and declined to submit to arbitration postclaim. Forum straddle, i.e., where claims were submitted to court and arbitration, occurred in several cases. Where the arbitration proceeding did resolve at least one claim, the resolution was attributed to the arbitration forum either by party action or arbitral decision. (Table 40)

611
base: 205 cases

table # 40

Mode of case disposition

disposition mode	no. of cases	rel freq (%)	adjusted freq (%)
resolved in arbitration by party action	82	42.0	43.6
negotiated settlement [a/]	51	24.9	27.1
withdrawn by claimant	25	12.2	13.3
abandoned by claimant	2	1.0	1.1
other/unspecified [b/]	4	2.0	2.1
resolved by arbitral decision	106	51.7	56.4
decision on the merits	102	49.8	54.3
dismissal on technical ground	4	2.0	2.1
not resolved in arbitration [c/]	17	8.3	--
total:	205	100.0	100.0

N=205 cases which entered arbitration

a/ includes 2 awards upon settlement (consent awards)

b/ split forum or unspecified party action

c/ either removed from arbitration to court, or forum straddle

72.6

Disposition mode: Of the 188 arbitrations which disposed of claims, 56% resulted in a decision by the arbitrator(s) while 44% were concluded by party action, without any arbitral decision. Arbitrators decided ther merits of at least one claim in 54% (102) of the cases and dismissed another 2% (4) on technical grounds, including non-arbitrability, statute of limitations, and failure of claimant to comply with an arbitral ruling concerning discovery. In 27% (51) of cases concluded by party action, the parties negotiated a payment to resolve one or more claims. Claimants withdrew all claims filed in 13% (25) of these arbitrations[1/] and abandoned them in another 1% (2). In the remaining 2% (4) the methods of closure in arbitration was peaceful; the claims were either settled or withdrawn (Table 40).

Defendants: Claims were made against a total of 405 defendants in connection with the incidents underlying the 205 arbitrations. Proceedings were initiated in arbitration against 86% (348) of these defendants; the others were not party to arbitration. Claims with respect to 73% (296) of the total of 405 were resolved in arbitration (Table 41). Almost all of the rest--28 were unknown or questionable --were resolved in court.

About 55% (162) of these 296 claims were resolved by arbitral decision (award) and 45% (134) were resolved in arbitration by party-action. Of the entire total of 296, 25% (74) were settled; i.e., by payment of a negotiated indemnity. Thus, of the 134 claims decided by party action, settlements

1/ In some of these cases, however, the claimant continued to pursue recovery in court from one or more defendants who were not party to the arbitration.

513
base: 205 cases

table # 41

Defendants by forum of claim disposition

forum of claim disposition	no. of defendants	rel freq (%)	adjusted freq (%)
arbitration	296	73.1	78.1
court	81	20.0	21.4
not arbitration or court	2	0.5	0.5
unknown	26	6.4	missing
total:	405	100.0	100.0

N=405 defendants

K3.a

514
base: 205 cases

table # 42

Defendants by mode of claim disposition

mode of claim disposition	no. of defendants	rel freq (%)	adjusted freq (%)
Arbitration			
Decision (award)	162	40.0	54.8
Negotiated Settlement	74	18.2	25.0
Withdrawn by claimant	56	14.0	18.9
Abandoned by claimant	4	1.0	1.3
Non-Arbitration	81	20.0	--
Unknown or questionable	28	6.9	missing
total:	405	100.1	100.0

N=405 defendants

73.b

were the largest group; accounting for 55%. In comparison, the next largest group, those withdrawn by the claimants, constituted 19% (56) of all arbitrations and 42% of those decided by the parties.

These percentages, both in case and claim terms, show a pattern of resolution mainly by decision rather than by negotiation or withdrawal. This is at some variance from historical experience with malpractice claims resolution in court. Resolution by parties or by trial of malpractice claims filed in the courts (or subject to their jurisdiction) is importantly influenced by the known patterns of court decisions and party action in respect to past claims. That is, the disposition of a new claim to some extent hinges on what those involved know about the resolution of similar claims. Thus, if recent trials of similar claims resulted in defense verdicts, a claimant might well be expected to settle for a nominal indemnity or even to drop his claim. Conversely, a defendant may seek to settle if such cases have favored claimants. On this reasoning, more knowledge in general tends toward more party determination rather than court adjudication.

Thus far, arbitration seems different.* Since arbitration is still a relatively little-used forum for medical malpractice claims, there are not yet any clear adjudication patterns against which new claims subject to arbitration can be assessed. The relative informality and rapid procedure almost certainly

* A limited arbitration-litigation comparison (California) is presented in Part III of this Report.

make it quicker, easier and less expensive to pursue adjudication in arbitration than in court. These factors probably contribute significantly to the high proportion of decisions among all disposition modes for arbitration cases so far. (On the other hand, the privacy and confidentiality of arbitration may limit general knowledge, unless some reporting system is developed, similar to that for labor arbitration.)

Stage of procedure of disposition: Proceedings reached the hearing stage in most of the arbitrations which did resolve claims. Hearing was begun in at least 57% of these cases and was completed in 55%. There was no hearing in over 39%, and in the remainder--just over 3%--it is not known whether any hearing took place. That most arbitrations reached the hearing stage suggests that these cases were not necessarily handled as they would have been in court. Relatively few malpractice cases filed in court ever reach trial and in fewer still is there a jury verdict.* 1/ In contrast, most of the arbitrations reached hearing, and in nearly all of these at least one claim was decided by the arbitrator(s). The reason for this difference may lie in the relative ease of preparing for arbitration due to its procedural informality and customary relaxation of strict evidence rules. Preparing a case for arbitration hearing

* National Association of Insurance Commissioners (NAIC) data for some 72,000 malpractice claims closed between July 1, 1975 and Dec. 31, 1978 show that at least 12.7% were resolved by third-party disposition in court, including at least 7.1% after trial began. An additional 1.7% were settled after trial had begun. (NAIC Malpractice Claims, Vol. 2, No. 2., Sept. 1980, Table 2.11, p. 75)

table # 43

Stage of procedure of case disposition

procedural stage	no. of cases	rel freq (%)	adjusted freq (%)
in arbitration	188	91.7	100.0
without hearing	74	36.1	39.4
during hearing	4	2.0	2.1
after hearing, without award	1	0.5	0.5
by award	102	49.8	54.3
after award vacatur	1	0.5	0.5
unknown	6	2.9	3.2
not in arbitration	17	8.3	--
forum straddle[a/] or removed from arbitration short of award	15	7.3	
in court, after award vacatur	2	1.0	
total:	205	100.0	

N=205 cases

a/ forum straddle cases are those in which there were proceedings pending in both arbitration and court at the time the case was resolved, and neither forum had been established over the other as the place where adjudication would have been pursued, but for the resolution reached.

therefore probably requires somewhat less time and cost than preparing the same case for court trial. Almost certainly, arbitration hearing would take substantially fewer days than a trial. Furthermore, since a separate arbitration tribunal is constituted for each case, there is no docket delay as there may be in court, where each case is "in line" for trial and may be heard sooner or later, depending on the number of other cases also awaiting trial.[1/] Normally, the arbitration panel is constituted and ready to hear a case within a short time after it is filed, long before the parties are ready for hearing.

1/ In some courts, processing of malpractice cases is segregated from other types of cases; in others it is not. Particularly where malpractice cases are not segregated, there might be a prolonged wait for trial.

Indemnity: Claimants received indemnity from at least one defendant--either in arbitration or in court, or both--for nearly 56% (101) of the incidents in which outcome was known (Table 44). Although claimants' total recovery in paid incidents ranged from less than $100 to nearly $1 million, the distribution of total indemnity by incident is heavily weighted to relatively small payments. Total indemnity was $5,000 or less in nearly 51% of paid incidents, with most under $2,500; it was $20,000 or less in 84%[1/], with most of these under $10,000. Only 16% of paid incidents involved total indemnity over $20,000, with half of these under $50,000 and three-quarters under $100,000. Total indemnity exceeded $100,000 in fewer than 5% of paid incidents (Table 45).

Arbitral awards: Arbitrators decided the merits of at least one claim in 55% (100) of those arbitrations which resolved claims. In 43 of these cases, the arbitrator(s) awarded an indemnity ranging from less than $100 to more than $160,000 (Table 46). But more than half these indemnities were under $10,000, and more than three-quarters were under $20,000.[2/] Considering only cases with some indemnity, the median awarded was $8,135 (Table 47). All but two of the awarded indemnities were under $100,000. In other words, arbitrators awarded no indemnity in the majority of cases

1/ These figures include paid cases under the former Suffolk County, N.Y., Medical Society/Bar Association Plan, which set a maximum of $25,000 on claims. This was the only plan known to have such a restriction; the proposed successor plan would not restrict the amount of claim.

2/ Eleven awards of less than $20,000 were in cases under the former Suffolk County, N.Y. Plan.

base: 205 cases

table # 44

Outcome by incident[a/]

outcome	no. of incidents	rel. freq (%)	adjusted freq (%)
indemnity paid	101	49.3	55.8
no indemnity	80	39.0	44.2
unknown[b/]	24	11.7	missing
totals:	205	100.0	100.0

N=205 incidents

a/ incidents generating one or more claims filed (but not necessarily resolved) in arbitration

b/ i.e., unknown whether or not claimant received some amount of indemnity from any defendant associated with the incident; includes at least 13 incidents for which all claims, including one or more claims initially filed in arbitration, were ultimately resolved in court.

sum of 518
base: 205 cases

table # 45

Indemnity by incident[a/]

indemnity range (dollars)	all incidents (N=205) no.	rel freq (%)	adjusted freq (%)	paid incidents (N=101) rel freq (%)	adjusted freq (%)	cum adjusted freq (%)
0	80	39.0	44.2	--		
1 to 1,000	16	7.8	8.8	15.8	17.6	17.6
1,001 to 2,500	18	8.8	9.9	17.8	19.8	37.4
2,501 to 5,000	12	5.9	6.6	11.9	13.2	50.5
5,001 to 10,000	10	4.9	5.5	9.8	11.0	61.5
10,001 to 20,000	20	9.8	11.0	19.8	22.0	83.5
20,001 to 50,000	7	3.4	3.9	6.9	7.7	91.2
50,001 to 100,000	4	2.0	2.2	4.0	4.4	95.6
100,001 to 500,000	3	1.5	1.7	3.0	3.3	98.9
over 500,000	1	0.5	0.6	1.0	1.1	100.0
unspecified[b/]	10	4.9	5.5	9.8	missing	
unknown[c/]	24	11.7	missing			
totals:	205	100.2	99.9	99.8	100.1	

a/ total indemnity paid by all defendants associated with the claim-producing incident
b/ one or more defendants paid indemnity in these incidents but total indemnity is unknown
c/ unknown whether indemnity was paid by any defendant associated with the claim-producing incident

819
base: 611=6
(102 cases of 205)
8/8/79

Table # 46

Indemnity awarded by arbitrators [a/]

indemnity range (dollars)	no. of cases	rel freq (%)	cum freq (%)	non-zero freq (%)	cum. freq (%)
0	59	57.8	57.8	--	--
1 to 1,000	9	8.8	66.7	20.9	20.9
1,001 to 2,500	7	6.9	73.5	16.3	37.2
2,501 to 5,000	4	3.9	77.5	9.3	46.5
5,001 to 10,000	3	2.9	80.4	7.0	53.5
10,001 to 20,000	10	9.8	90.2	23.3	76.7
20,001 to 50,000	5	4.9	95.1	11.6	88.4
50,001 to 100,000	3	2.9	98.0	7.0	95.3
over 100,000	2	2.0	100.0	4.7	100.0
total:	102	99.9		100.1	

N=102 cases

	all awards	non-zero awards
mean	$8,155	$ 19,344
median	7	8,135
mode	0	500
range	161,148	161,148
aggregate	$831,779	$831,779

a/ Total of 102 cases includes 20 in which, under the rules of the arbitration plan involved, the arbitrators could award no more than $25,000.

7-7.2

table # 10

Occupational status of injured person*

status	no. of persons	rel freq (%)	adjusted freq (%)
employed at paid work	78	38.0	52.0
not employed for pay	44	21.5	29.3
retired	19	9.3	12.7
child or student	9	4.4	6.0
unknown	55	26.8	missing
total:	205	100.0	100.0

N=205 cases

* at time of claim-producing incident

base: 205 cases

table # 11

Occupation of injured person*

occupations category	no. of persons	rel freq (%)	adjusted freq (%)
homemaker	29	14.1	28.2
clerical and sales	23	11.2	22.3
professional, technical & managerial	20	9.8	19.4
machine, bench, structural & misc. industrial work	17	8.3	16.5
service	10	4.9	9.7
other	4	2.0	3.9
unknown occupation	93	45.4	missing
not applicable (child or minor student)	9	4.4	--
total:	205	100.1	100.0

N=205 cases

* The occupation coded is that of the person whose alleged injury gave rise to the malpractice claim. Where the injured person was not employed (or was retired) at the time of the claim-producing incident but had formerly had a regular occupation, that former occupation was coded.

ba: 205 cas

table # 47

Indemnity paid by defendants [a/]

indemnity range (dollars)	all amounts... (N=405) no.	rel freq (%)	adjusted freq (%)	non-zero amounts (N=112) adjusted freq(%)	cum freq(%)
0	191	47.2	63.0	--	
1 to 1,000	31	7.7	10.2	27.7	27.7
1,001 to 2,500	25	6.2	8.3	22.3	50.0
2,501 to 5,000	12	3.0	4.0	10.7	60.7
5,001 to 10,000	14	3.5	4.6	12.5	73.2
10,001 to 20,000	16	4.0	5.3	14.3	87.5
20,001 to 50,000	7	1.7	2.3	6.3	93.8
50,001 to 100,000	4	1.0	1.3	3.6	97.3
over 100,000	3	0.7	1.0	2.7	100.0
unknown	102	25.2	missing	missing	
total:	405	100.2	100.0	100.1	

N=405 defendants

	all amts...	non-zero amts.
mean	$ 4,471.422	$ 12,096.803
median	0.293	2,999
mode	0	1,000
range	161,148	
aggregate	1,354,842	

a/ Total of 205 cases includes 22 cases in which claims could not exceed $25,000 under the rules of the arbitration plan concerned.

7.F

they decided and where they did award indemnity, it was usually relatively small, typically under $10,000.[1/] These facts probably say more about the nature of the cases heard than about arbitration. Because of their litigation experiences, many plaintiffs' attorneys evidently prefer the court forum, at least for cases with potential for large damages. They have very often attempted to overcome preclaim arbitration agreements in such cases. For this reason, probably large-damages cases are underrepresented among the arbitrations examined here. Of course, some such cases were settled. Thus, arbitrators were confronted with relatively few cases in which a large indemnity might have been justified, negligence aside.

While indemnity amount bears no direct relation to whether payment is made, aggregate and average dollars paid, in claim terms, have intrinsic interest for the malpractice defense community. Some indemnity was paid by at least one-third of the defendants for whom claims were resolved in arbitration. These payments ranged from under $100 to more than $160,000, aggregating over $1.2 million. Average payment was $12,351 and the median $4,157 (Table 48). Of these payments, 52% were made pursuant to arbitral decisions and 48% were negotiated.

1/ In two of the 59 cases where arbitrators awarded nothing, claimants succeeded in having a court set aside the arbitration on the ground that the agreement to arbitrate should not be enforced. In each of these cases the claimant obtained a settlement during the course of a subsequent lawsuit.

It is interesting to compare indemnity paid by defendants (a) pursuant to arbitral decision and (b) without arbitral decision (Tables 48 and 49). Of the total of 296 claims resolved in 182 arbitrations, about 55% were claims decided by arbitrators. Indemnity was paid for 32% of these claims, as against 46% of other claims. But median non-zero indemnity for claims decided by arbitrators ($4,396) was 26% higher than that for other claims ($3,500). Furthermore, payments exceeded $10,000 for 36% of claims decided by arbitrators, compared to only 19% for other claims. One reason for these differences is that "nuisance" settlements would tend to hold down averages and increase the proportion of small indemnities for settled claims, which of course are in the "other" group. In fact, total payment was no more than $2,500 in at least 29% of incidents generating a settlement. Doubtless some, if not all, of these small payments were "nuisance" settlements. By definition, there would be no nuisance settlements among claims decided by arbitrators.

518
base: 513=1
(182 of 205 cases)

table # 48

Indemnity paid by defendants in arbitration[a/]

indemnity range (dollars)	all amounts (N=296) no.	rel freq(%)	adjusted freq(%)	non-zero amounts (N=100) adjusted freq (%)	cum freq (%)
0	167	56.4	62.5	--	
1 to 1,000	25	8.4	9.4	25.0	25.0
1,001 to 2,500	23	7.8	8.6	23.0	48.0
2,501 to 5,000	10	3.4	3.7	10.0	58.0
5,001 to 10,000	14	4.7	5.2	14.0	72.0
10,001 to 20,000	15	5.1	5.6	15.0	87.0
20,001 to 50,000	7	2.4	2.6	7.0	94.0
50,001 to 100,000	3	1.0	1.1	3.0	97.0
over 100,000	3	1.0	1.1	3.0	100.0
unknown	29	9.8	missing	missing	
total:	296	100.0	99.8	100.0	

N=296 defendants

	all amts.	non-zero amts.
mean	$ 4,625.754	12,350.77
median	0.299	4,156.50
mode	0	1,000
range	161,148	
aggregate	1,235,077	

a/ Includes 32 defendants in 20 cases processed under an arbitration plan providing for a maximum award to claimant of $25,000.

19.a

518
base: 513≠1
(53 of 205 cases)

table # 49

Indemnity paid by defendants beside those in arbitration

indemnity range (dollars)	no. of defendants	rel freq (%)	adjusted freq (%)
0	24	22.0	66.7
1 to 1,000	6	5.5	16.7
1,001 to 2,500	2	1.8	5.6
2,501 to 5,000	2	1.8	5.6
5,001 to 10,000	0	0.0	0.0
10,001 to 20,000	1	0.9	2.8
20,001 to 50,000	0	0.0	0.0
50,001 to 100,000	1	0.9	2.8
over 100,000	0	0.0	0.0
unknown	73	67.0	missing
total:	109	99.9	100.2

N=109 defendants

	all amts.	non-zero amts.
mean	3,326.805	9,980.417
median	0.250	1,050
mode	0.0	1,000
range	90,000	
aggregate	119,765	

17.0

X. Costs

Defense Costs: Costs incurred on behalf of insured defendants for claim investigation and legal defense were sought as two separate data items: 1) defense counsel fees, and (2) insuror's allocated loss adjustment expense. Where a defendant was either a self-insuror or had no provision at all for professional liability judgments, usually it was not possible to obtain any data on defense costs.

Defense counsel fee: Data represents the defense attorney's charges for legal work in connection with the claim. Normally these charges are paid by the liability insuror on behalf of its policyholder, and the attorney is most often a private practitioner selected by the insuror to defend its insureds, as might be necessary, in a particular community or region. Occasionally, however, some insurors assign defense of selected claims to "house" counsel, or attorneys in their own employ.[1/] Where this is done, there is no ascertainable counsel fee, since the attorney-employee does not charge the insuror-employer a fee. The cost for house counsel services (salary and benefits) is a regular business expense of the insuror and not allocable to a claim. Where it was known whether house counsel was involved, coding so indicated.

1/ At least one carrier, whose sole line is medical liability insurance, apparently uses house counsel wherever practical, considering the locale involved and the size and type of claim.

Insuror's allocated loss adjustment expense (ALAE):
Data represents the cost of claim investigation plus claim defense costs other than attorney fees. ALAE might typically include any or all of the following: cost of photocopying or obtaining medical records; fees and expenses for stenographic recording or verbatim transcripts of depositions, hearings or trial; fees and expenses of medical experts for claim evaluation or appearance as witnesses; fees and expenses for other witnesses or for private investigators; and forum costs, including filing or administrative fees and expenses. Insurors vary in how they allocate reimbursements to attorneys or investigators for costs advanced by them (e.g., forum filing or records-search fees). Some generally include such costs in ALAE and some generally include them as part of counsel fees. An insuror's practice in this regard may also vary from claim to claim. Because the sum of costs advanced by attorneys may be substantial, it is important to take account of it in analysis. Unfortunately, there is no way to adjust for the variation in how insurors tally defense costs short of reviewing attorney bills and insuror cost allocations in all cases. Thus, defense cost data are probably most reliable if analyzed in the aggregate, that is, as the total of both defense counsel fee and the insuror's allocated expense for the claim.

In the cases examined here, wherever two or more defendants were insured and represented as one party in arbitration, all counsel fees and allocated expenses were coded for the primary defendant. For example, where a

hospital and two of its employees (e.g., an intern and a nurse) were each named as defendants although all were insured by the hospital and consequently represented as one party, then all defense costs were usually attributed by the insuror to the hospital alone, and coded accordingly in the data set. However, where two or more defendants (e.g., physicians in practice as partners) were insured under one policy but represented (by the same attorney or not) as separate parties, then defense costs were usually allocated among the defendants by the insuror, and so coded.

Reported Expense and Cost

Full defense expense data were available for only about 27% of 513 defendants for whom the claim was resolved in arbitration. Median claim expense (counsel fee plus insuror's allocated expense) was $1,531 for 106 such defendants, and for four out of five total claim expense was under $5,000 (Table 50). Information on defense counsel fees was available for 37% of arbitration defendants, of whom three out of four incurred attorney fees. Counsel fees ranged to $16,500, but the median fee was just $1,565, and only 13% of known fees exceeded $5,000 (Table 51). One defendant in four incurred no known counsel fees. Of these defendants, 60% were represented by their insuror's "house" counsel and 40% were not represented by an attorney. Information on allocated loss adjustment expense was similarly limited. Data were recorded for just

519+520
base: 513=1
(182 of 205 cases)

table 050

Claim expense[a/] for arbitration defendants[b/]

claim expense (dollar range)	no. of defendants	rel freq (%)	adjusted freq (%)	cum. adjusted freq (%)	non-zero cum. freq. (%)
0	11	3.7	10.4	10.4	--
1 to 1,000	27	9.1	25.5	35.8	28.4
1,001 to 2,500	29	9.8	27.4	63.2	58.9
2,501 to 5,000	19	6.4	17.9	81.1	78.9
5,001 to 10,000	13	4.4	12.3	93.4	92.6
over 10,000	7	2.4	6.6	100.0	100.0
unknown[c/]	190	64.2	missing		
total:	296	100.0	100.1		

N=296 defendants

mean	$ 2,975.745
median	1,531
mode	0
range	18,434

a/ Claim expense includes defense counsel fee, if any, and insuror's allocated loss adjustment expense, if any.
b/ i.e., defendants for whom the claim was resolved in arbitration
c/ includes all defendants for whom either counsel fee or insuror's allocated claim adjustment expense is currently unknown

519
base: 513=1
(182 of 205 cases)

table #51

Counsel fees for defendants in arbitration

fee range (dollars)	all amounts (N=296) no.	rel. freq (%)	adjusted freq (%)	non-zero amounts (N=82) adjusted freq (%)	cum. freq (%)
0	27 a/	9.1	24.8	--	--
1 to 1,000	26	8.8	23.9	31.7	31.7
1,001 to 2,500	28	9.5	25.7	34.1	65.9
2,501 to 5,000	17	5.7	15.6	20.7	86.6
5,001 to 10,000	4	1.4	3.7	4.9	91.5
over 10,000	7	2.4	6.4	8.5	100.0
unknown	187	63.2	missing	missing	
total	296	100.1	100.1	99.9	

N=296 defendants

	all amts.	non-zero amts.
mean	$ 2,269.798	$3,017.171
median	1,070.000	1,564.50
mode	0	
range	16,541	
aggregate	247,608	

a/ including 11 defendants who were not represented by an attorney and 16 whose attorneys were employees of the insuror (i.e., salaried "house" counsel)

36% of arbitration defendants, of whom five out of six incurred some expense. Although ALAE ranged to about $6,200, median expense was only $409, and only 9% of known expense amounts exceeded $2,000 (Table 52).

From the point of view of the defendant, total cost included indemnity paid or payable plus the expenses of counsel and loss adjustment. Such total costs were known and calculated for 106 arbitration defendants or 37% of the entire group of such defendants. For 9% neither indemnity or expense was recorded. Excluding these, almost 19% had a claim total cost of up to $1,000 and 43% up to $2,500. More than three-fourths fell below $10,0000, in total. Only two defendants were found to have a total claim cost of $50,000 (Table 53). Understandably, there was a large range ($137,184). The median figure, however, was only $2,639, reflecting the substantial number of low payments.

520
base: 513=1
(182 of 205 case:

table # 52

Insuror allocated loss adjustment expense for defendants in arbitration

expense range (dollars)	all amounts (N=296) no.	rel freq (%)	adjusted freq (%)	non-zero amounts (N=90) adjusted freq (%)	cum freq (%)
0	17	5.7	15.9	--	
1 to 250	27	9.1	25.2	30.0	30.0
251 to 500	27	9.1	25.2	30.0	60.0
501 to 1,000	12	4.1	11.2	13.3	73.3
1,001 to 2,000	16	5.4	15.0	17.8	91.1
2,001 to 5,000	7	2.4	6.5	7.8	98.9
over 5,000	1	0.3	0.9	1.1	100.0
unknown	189	63.9	missing	missing	
total:	296	100.0	99.9	100.0	

N=296 defendants

	all amts.	non-zero amts.
mean	$ 661.607	786.578
median	326.000	409
mode	0	
range	6,183	
aggregate	70,792	

83.a

518+519+520
base: 513=1
(182 of 205 cases)

table # 53

Claim total cost [a/] for arbitration defendants [b/]

claim total cost (dollar range)	no. of defendants	rel freq (%)	adjusted freq (%)	cum adjusted freq (%)	non-zero cum. freq. (%)
0	10	3.4	9.4	9.4	--
1 to 1,000	18	6.1	17.0	26.4	18.8
1,001 to 2,500	23	7.8	21.7	48.1	42.7
2,501 to 5,000	17	5.7	16.0	64.2	60.4
5,001 to 10,000	17	5.7	16.0	80.2	78.1
10,001 to 20,000	12	4.1	11.3	91.5	90.6
20,001 to 50,000	7	2.4	6.6	98.1	97.9
over 50,000	2	0.7	1.9	100.0	100.0
unknown [c/]	190	64.2	missing		
total:	296	100.1	99.9		

N=296 defendants

mean	$ 8,524.301
median	2,639.500
mode	0
range	137,184

a/ including indemnity paid, if any, and all claim expense
b/ i.e., defendants for whom the claim was resolved in arbitration
c/ includes all defendants for whom either indemnity paid, counsel fee, or insuror's allocated claim adjustment expense (or all of these) is currently unknown

Arbitration forum costs: A subcategory of allocated loss adjustment expense is the cost attending use of the arbitration forum. This cost has two components: 1) the administrative fees and expenses of arbitration and 2) arbitrator compensation.

Arbitration administrative fees may include a flat initial charge by an impartial agency for its services in administering the arbitration proceeding, usually under specified rules. In 81% of cases examined, the arbitration proceeding was administered by the American Arbitration Association. AAA regional offices in California, Michigan, Washington, and several other states handled these cases. A few other cases were administered by either local or state medical or bar organizations, and the remainder were conducted without any administrative agency. Under rules governing all AAA-administered cases, each separately represented party--claimant and defendant--incurs an initial administrative fee. Except in Michigan, the fee has been $150; in Michigan, the fee is $200 pursuant to the rules for cases under the statutory program. Under the rules in all states, a financially indigent claimant may be granted deferral or waiver of this fee, so that it is possible for a claim to be pursued in arbitration without any cash outlay by the claimant for use of the forum. Under the malpractice arbitration plans administered by medical and bar groups, claimants incur modest administrative fees ranging from $25 to $100, and defendants are not charged a fee. However, these plans,

like AAA-administered plans, either provide for claimants to recover administrative fees paid if they prevail or allow arbitrators discretion to allocate claimant's share of fees to the defense. In Michigan, the statutory program created a special state fund which pays specified fees and expenses of the arbitration forum where the arbitrators so direct.

Other expenses of the arbitration forum normally may include fees or costs for hearing facilities or arrangements; reimbursement to the administrative agency for sundry costs advanced or unusual expenses incurred for the case being processed; and payment of arbitrators' per diem compensation and travel or out-of-pocket expenses. Under the rules for AAA-administered cases there are fixed charges for postponement of scheduled hearings ($50 to the party responsible) and for hearings beyond the first, if AAA furnishes a hearing room or tribunal clerk ($25 per party). In the relatively few cases administered by bar or medical groups, there was no administrative charge beyond the initial fee, although parties in some cases were charged for sundry costs. In cases where there was no administrative agency, all expenses of the arbitration proceeding would normally be absorbed by one or another of the parties or shared.

With respect to arbitrator fees, in AAA-administered cases the arbitrators are paid only if the parties stipulate

to pay them; otherwise, they serve without compensation beyond reimbursement of out-of-pocket or travel expenses. The lone exception is Michigan, where under the statutory program each arbitrator is paid $150 per diem plus expenses, for hearing and deliberation toward decision. This cost is paid by the special state fund under the program. In other states, AAA arbitrator per diem may vary from $150 to $300 (the current rate (1975-78) in Los Angeles).

Arbitrator Compensation: Arbitrators may or may not be compensated in cases administered by medical or bar groups. On the one hand, under the Suffolk County, New York, Medical Society-Bar Association Plan, all the arbitrators were local doctors and lawyers who, as legal-medical affairs committee members or alternates, were not compensated; on the other hand, under the Minnesota Medical Society Bar Association plan arbitrators were paid $150 per diem. In nonadministered cases it appears that arbitrators--usually attorneys--were compensated at a daily rate reflecting typical legal fees at the time in the locale involved. For example, rate of $250 to $350 were common in such cases closed before 1979 in California.

In view of the variety of compensation methods and plans, data regarding arbitrator compensation cannot be generalized. It is of interest, however, to note that for claimants, 70% of all known cases (84 of 102) indicate no payment. Correspondingly, for defendants, 61% showed no payment.

This may be due to the fact that arbitrators served without fee or the case was closed prior to a requirement of fee payment. On the other hand, in four cases the defense cost exceeded $2,000 solely for this purpose (Table 54). The table reflects costs borne by the parties for payment of arbitrators and does not include any payment which they may have received from other sources as in the case of Michigan.

Tables 55 and 56 show arbitration forum costs for the 102 cases which resulted in an arbitral decision on the merits of at least one claim. The vast majority of these cases were AAA-administered. Total forum costs ultimately borne by claimants ranged to just over $2,000, while those borne by the defense (all defendants together) ranged to almost $9,500 (Table 55). Typical forum costs were much lower, however. Average cost for claimants was $319 and for the defense, $741. These figures reflect only what was ultimately payable by each party after the arbitral decision, which in some cases directed that the defense bear part or all the forum costs initially paid (or payable) by claimants or, in the rare case, vice versa.

A portion of the arbitration forum costs relates solely to administrative fees and expenses, that is, without arbitrator compensation. For claimants, a third showed no costs due or payable and for defendants, about a fifth. Most of these reflect cases under plans such as Suffolk in which there are no formal costs for presenting or defendint a claim. Administrative fees for claimants in virtually all cases came to $300 or less. For defendants, the figure was similarly

o14, 816
base: 611=6
(102 cases of 205)

table #54

Arbitrator Compensation

dollar range	borne by claimant(s)				borne by defense			
	no. of cases	rel %	adj. %	cum adj. %	no. of cases	rel %	adj. %	cum. adj. %
0	59	57.8	70.2	71.1	51	50.0	61.4	61.4
1 to 150	3	2.9	3.6	73.8	1	1.0	1.2	62.7
151 to 300	5	4.9	6.0	80.0	8	7.8	9.6	72.3
301 to 500	6	5.9	7.1	86.9	7	6.9	8.4	80.7
501 to 1,000	4	3.9	4.8	91.7	3	2.9	3.6	84.3
1,001 to 2,000	7	6.9	8.3	100.0	9	8.8	10.8	95.2
2,001 to 5,000	0	0.0	0.0		3	2.9	3.6	98.8
5,001 or more	0	0.0	0.0		1	1.0	1.2	100.0
unknown	18	17.6	missing		19	18.6	missing	
total:	102	99.9	100.0		102	99.9	99.8	

N=102 cases

810 + 814
812 + 816
base: 611=6
(102 cases of 205)

table # 55

Arbitration forum costs[a/]

dollar range	borne by claimant(s)				borne by defense			
	no. of cases	rel %	adj. %	cum adj %	no. of cases	rel %	adj. %	cum adj %
0	23	22.5	29.1	29.1	13	12.7	16.5	16.5
1 to 150	26	25.5	32.9	62.0	22	21.6	27.8	44.3
151 to 300	6	5.9	7.6	69.6	11	10.8	13.9	58.2
301 to 500	7	6.9	8.9	78.5	7	6.9	8.9	79.7
501 to 1,000	8	7.8	10.1	88.6	12	11.8	15.2	82.3
1,001 to 2,000	8	7.8	10.1	98.7	7	6.9	8.9	91.1
2,001 to 5,000	1	1.0	1.3	100.0	5	4.9	6.3	97.5
5,001 or more	0	0.0	0.0	100.0	2	2.0	2.5	100.0
unknown	23	22.5	missing	--	23	22.5	missing	--
total:	102	99.9	100.0		102	100.1	100.0	

N=102 cases		
	mean $ 319	mean $ 741
	median 148	median 297
	mode 0	mode 0
	range 2,025	range 9,480

a/ arbitration administrative fees and expenses plus arbitrator compensation

810
812
base: 611=6
(102 cases of 205)

table # 56

Administrative fees and expenses of arbitration

dollar range	borne by claimant				borne by defense			
	no. of cases	rel %	adjusted %	cum %	no. of cases	rel %	adjusted %	cum %
0	31	30.4	34.4	30.4	19	18.6	20.4	20.4
1 to 150	38	37.3	42.2	76.7	28	27.5	30.1	50.5
151 to 300	17	16.7	18.9	95.6	26	25.5	28.0	78.5
301 to 500	4	3.9	4.4	100.0	15	14.7	16.1	94.6
501 to 1,000	0	0.0	0.0	100.0	2	2.0	2.2	96.8
1,001 to 2,000	0	0.0	0.0	100.0	3	2.9	3.2	100.0
unknown	12	11.8	missing		9	8.8	missing	--
total:	102	100.1	99.9		102	100.0	100.0	

N=102 cases

low,but in five cases such expenses ranged from $500 to $2000 (Table 56).

L. Structural Aspects

Arbitrators: Perhaps the most fundamental difference between voluntary binding arbitration and the courts is the nature, authority and manner of appointment of the decision-makers. In the courts, decisions are made by judge and jury. Judges decide procedural and legal issues while juries, on instruction, decide factual questions and weigh the evidence. Trial court decisions may be reversed by higher courts. In arbitration, the arbitrators decide all matters, not only procedural and legal issues but also factual questions and the weight to be accorded each piece of evidence. Arbitral awards are not reversible, although they may be set aside by courts on statutory grounds, in which event there is no judicial review or enforcement, but the matter is remanded to arbitration before the same or new arbitrators. This may result in a new arbitration or settlement or, if the parties decide not to arbitrate, may be litigated.

Judges are usually full-time, salaried professionals in public employ, and litigants usually have no choice of judge. Jurors are citizens who, at public request and expense, occasionally perform a civic duty. They are chosen by the litigants, with selection being largely dependent on the prospective juror's lack of knowledge or experience in the subject matter of the dispute. Arbitrators, too, are private citizens performing what may be regarded as public service, normally either without pay or at the disputants' expense.

Like jurors, arbitrators are usually selected by the disputants, but with the critical difference that most often they are selected precisely because they do possess experience or knowledge relating to the subject matter of the dispute. Wheras all practicing attorneys are exempt from jury call and practicing physicians and dentists are almost always exempted, attorneys routinely serve as arbitrators in all types of cases and physicians regularly serve in medical malpractice arbitrations.

Generally, the differences between court and arbitration decision-makers apply without regard to the class or type of dispute, and medical malpractice cases are not an exception. But these differences are supposed to affect case outcomes, more or less depending on the class of case involved. With medical malpractice cases, it is argued that inclusion of one physician on a panel of three decision-makers creates a bias favoring defendants. Certainly it would be very rare for a jury in a medical malpractice case to include a physician. But there is no evidence of such bias from the record of the arbitration cases examined. In fact, in those cases which were decided by arbitrators, nearly all decisions were unanimous and nearly half were in favor of the claimants.

In a special analysis of arbitration plans involving both those requiring at least one physician panelist or involving a physician, based on choices of the parties following a claim, virtually all of the 58 arbitration decisions were unanimous. This pattern agrees with the outcomes

in arbitration generally, regardless of the size or composition of panel. The doctors' presence, therefore, does not seem to have an adverse influence on the claimant's position. Statisically, arbitration does not seem to support one side or another, based on the nature of the panel. Each of the panelists, whether physician or attorney, serves in an expert capacity and as an authority on the evidence.[1/]

Number of Arbitrators: Some 81% of the 102 cases examined were under rules providing for either one of three arbitrators. One arbitrator was usually called for where the claim was under $50,000 or some lower ceiling, or where the parties agreed on one; otherwise, usually three arbitrators were called for. In the 17% of cases where just one arbitrator was called for, that arbitrator was always an attorney and, in a number of such cases, a retired judge.(Table 57). In the 63% of cases where three arbitrators were called for, the typical panel included one attorney, one physician or other health care professional or manager, and one person who was neither an attorney nor a health care professional.

About 10% of the cases examined were under the former Suffolk program which provided an essentially fixed panel of six or, occasionally, five attorneys and physicians, who constituted the medical-legal affairs committee jointly established by a local medical society and bar association.

1/ Ladimer, I. "Arbitration of Patient-Hospital Disputes" (letter to the editor) Arbitration Journal, Vol. 33, No. 2, June 1978, p.3.

table # 57

Number of arbitrators

	no. of cases	rel. freq (%)	adjusted freq (%)	cum. freq (%)
one	17	16.7	17.2	17.2
two	1	1.0	1.0	18.2
three	62	60.8	62.6	80.8
five	5	4.9	5.1	85.9
six	14	13.7	14.1	100.0
unknown	3	2.9	missing	
total:	102	100.0	100.0	

N=102 cases

M. Administrative Aspects: Elapsed Time

Time: The effectiveness of arbitration is best measured by such administrative aspects as time for processing, expense involved and other costs of the system. Elapsed time presents the express calculable element which can objectively distinguish arbitration from litigation.

Processing time is thought to be a major point of difference between arbitration and court forums. Any differences in forum procedure, particularly differences in the order or formality of proceedings, are important not only intrinsically but also to the extent that they affect the total time spent resolving malpractice claims.

An important objective of the project is to identify and analyze any differences in claim resolution time which are due to characteristics of arbitration and court forums rather than to differences in the claims resolved under their respective jurisdictions.

Case total time, from the incident giving rise to the claim(s) resolved in arbitration through the close of arbitration proceedings, averaged 31.5 months for the 185 cases in which this measure could be calculated (Table 58). For 69% of cases total time was under three years. A majority (61%) of total time values were in the range from 13 to 36 months, with the typical (median) time being 27.3 months. For 20 cases out of the 205 analyzed, case total time could not be measured either because no claim was

o10-602
base: 205 case.

table # 58

Case total time[a/]

time range (months)	no. of cases	rel freq (%)	adjusted freq (%)	cum adjusted freq (%)
1 - 12	15	7.3	8.1	8.1
13 - 24	63	30.7	34.1	42.2
25 - 36	49	23.9	26.5	68.6
37 - 48	29	14.1	15.7	84.3
49 - 60	18	8.8	9.7	94.1
61 or more	11	5.4	5.9	100.0
unknown	20	9.8	missing	
total:	205	100.0	100.0	

N=205 cases

mean	31.535 months
median	27.286
mode	21
range	86

a/ time from incident giving rise to claim through close of arbitration proceedings

93a.

resolved in arbitration or because it is not known when the claim-producing incident occurred.

Surprisingly, case total time values are similarly distributed for adjudicated cases (About half of the total). These include cases for which there was an arbitral decision on the merits. Some 63% were resolved in under three years, and a majority (53%) of the values fell in the range from 13 to 36 months. The median of 27.4 months for adjudicated cases is very close to the median of 27.2 months for the distribution that includes all the arbitration cases. This is strong evidence that taking a case to decision in arbitration does not necessarily, or even usually, delay its resolution (Table 59).

Case total time may be split for analysis into two increments: (1) that from claim-producing incident through formal initiation of an arbitration proceeding; and (2) that from initiation through close of arbitration. Only the second increment, termed arbitration proceeding time, need be examined here. Average arbitration proceeding time was 11.5 months for the 197 cases (96%, of the total of 205) in which it was measurable. Typical (median) arbitration proceeding time was 9.4 months. In 93% of these cases it was less than two years, and for two-thirds of them it was less than one year (Table 60).

As previously noted with respect to total time, values for proceeding time were similarly distributed for adjudicated cases. Thus, average arbitration proceeding time for all cases compares with 11.7 months for adjudicated cases. Median proceeding time similarly was 9.4 months for all cases and

610-602
base: 611=6
(102 cases of 205)

Table #59

Total time for cases resulting in arbitral decision[a/]

time range (months)	no. of cases	rel freq (%)	adjusted freq (%)	cum adjusted freq (%)
1 - 12	10	9.8	10.3	10.3
13 - 24	31	30.4	32.0	42.3
25 - 36	21	20.6	21.6	63.9
37 - 48	16	15.7	16.5	80.4
49 - 60	11	10.8	11.3	91.8
over 60	8	7.8	8.2	100.0
unknown	5	4.9	missing	--
total:	102	100.0	99.9	

N=102 cases

mean 32.897 mos.
median 27.4
mode 21
range 84

a/ time from incident giving rise to claim through close of arbitration proceedings

table # 60

Arbitration proceeding time[a/]

time range (months)	no. of cases	rel freq (%)	adjusted freq (%)	cum freq (%)
up to 6	59	28.8	29.9	29.9
7 - 12	71	34.6	36.0	66.0
13 - 18	34	16.6	17.3	83.2
19 - 24	19	9.3	9.6	92.9
25 - 30	3	1.5	1.5	94.4
31 - 36	4	2.0	2.0	96.4
over 36	7	3.4	3.6	100.0
unknown	8	3.9	missing	
total:	205	100.1	100.0	

N=205 cases

mean	11.510 months
median	9.375
mode	7
range	97

a/ time from filing of arbitration demand or submission (with administrative agency, if any) through close of arbitration proceedings

9.7 months for those resulting in arbitral decision. For both situations, 93% of the cases were completed in less than two years and for two-thirds it was less than a year (Table 61).

Thus, for the bulk of cases resolved in arbitration, most of the total time had elapsed before the case entered arbitration. In other words, in these arbitrations there was relatively little, if any, of the delay in processing, once the case was filed, unlike the delays often associated with malpractice case resolution under court jurisdiction.

Challenge as Affecting Time: In at least 45% and possibly in as many as 69% of the 205 cases, the claimant had filed a lawsuit prior to the initiation of an arbitration proceeding. In a minority of these cases, claimant sued and subsequently signed an agreement to arbitrate; but in most, claimant and one or more defendants had previously signed an arbitration agreement.[1/] Most of the defendant(s) invoked that agreement, with the result that the case was sooner or later removed from court to arbitration.[2/] But in 23 of the cases where claimant sued, for legal or practical

1/ In virtually all cases where such agreements existed, they were signed before the patient received the care or treatment which gave rise to the claim(s).

2/ A few cases in which a court set aside the arbitration agreement are included in the 205 because one party had initiated an arbitration proceeding prior to the court's ruling. Cases in which the claimant filed suit and no defendant invoked an existing arbitration agreement are not included among the 205 since no arbitration proceeding was initiated.

reasons, the entire matter was ultimately resolved in court with no claim being resolved in the arbitration. Commonly these were multi-defendant cases in which some defendants had chosen to arbitrate but one or more had not agreed. Faced with the possibility of two separate proceedings, those parties who were willing to arbitrate, but found it impractical if not legally risky to do so, eventually acceded to the court forum.

Some delay usually results where a case filed in one forum is subsequently shifted to the other. Although such a delay might conceivably be insignificant, it appears that forum challenge (and subsequent change) often adds substantially to the total time for case resolution. In more than 53% of the cases which involved lawsuits filed before initiation of arbitration, the forum change came at least six months after the suit was filed, and in 73% there was a lag of a year (Table 61,62, 63) The corresponding figures for cases resulting in award were 41% and 59% respectively.

In some cases, part of this time may have been productive in any event, i.e., claim investigation or discovery may have moved along. But probably there was some wasted time in most cases and, in a few cases, most of the time which elapsed pending establishment of the forum was not otherwise productive in moving the case toward resolution.

610-606
base: 611=6
(102 cases of 205)

table #61

Arbitration proceeding time in cases resulting in arbitral decision[a/]

time range (months)	no. of cases	rel freq (%)	adjusted freq (%)	cum freq (%)
up to 6	27	26.5	27.8	27.8
7 - 12	37	36.3	38.1	66.0
13 - 18	16	15.7	16.5	82.5
19 - 24	11	10.8	11.3	93.8
25 - 30	2	2.0	2.1	95.9
31 - 36	2	2.0	2.1	97.9
over 36	2	2.0	2.1	100.0
unknown	5	4.9	missing	--
total:	102	100.2	100.0	

N=102 cases

mean 11.701 mos
median 9.750
mode 7
range 52

a/ time from filing of arbitration demand or submission with administrative agency (if any; otherwise from date of demand or submission agreement) through close of arbitration proceedings by issuance of an award

96.a

606-604
base: 205 cases

table # 62

Time from filing of lawsuit to initiation of arbitration

time range (months)	no. of cases	rel freq (%)	adjusted freq (%)	cum freq (%)
(no lawsuit)	72 [a/]	35.1	--	--
0 - 6	41	20.0	53.3	53.3
7 - 12	15	7.3	19.5	72.8
13 - 18	7	3.4	9.1	90.6
19 - 24	5	2.4	6.5	94.0
25 - 30	5	2.4	6.5	97.3
31 - 36	1	0.5	1.3	98.0
over 36	3	1.5	3.8	100.0
unknown	56 [b/]	27.3	missing	
total:	205	99.9	100.	

N=205 cases

mean	10.156
median	6.222
mode	2
range	68

a/ includes 2 cases in which lawsuit filed after initiation of arbitration proceeding; these cases were assigned a value of "0" for this tabulation and were excluded from calculation of mean and median

b/ includes cases in which lawsuit was filed but time unknown, and cases in which it is not known whether a lawsuit was filed

606-604
base: 611=6
(102 cases of 205)

Table # 63

Time from filing of lawsuit to initiation of arbitration, cases resulting in arbitral decision

time range (months)	no. of cases	rel freq. (%)	adjusted freq (%)	cum adjusted freq (%)
(no lawsuit)	25	24.5	--	--
0 - 6	16[a/]	15.7	41.0	41.0
7 - 12	7	6.9	17.9	59.0
13 - 18	4	3.9	10.3	69.2
19 - 24	3	2.9	7.7	76.9
24 - 30	5	4.9	12.8	89.7
31 - 36	1	1.0	2.6	92.3
over 36	3	2.9	7.7	100.0
unknown	38[b/]	37.3	missing	
total:	102	100.0	100.0	

N=102 cases

mean	14.6 months
median	9
mode	6
range	67

a/ includes 1 case in which lawsuit filed after initiation of arbitration proceeding; this case was assigned a value of "0" for tabulation but was excluded from calculation of mean, median and range

b/ includes 5 cases in which lawsuit filed but time was unknown, and 33 cases in which it was not known whether a lawsuit was filed.

Hearing: An important administrative aspect in arbitration is the hearing. The convening of a hearing and its nature obviously contributes to the time required for processing and also to the time for disposition.

Hearing was begun in at least 53% of the 205 arbitrations, including a few cases in which ultimately all claims were resolved in court. Strikingly, hearing was completed in 96% of the arbitrations in which it was begun. This strongly suggests that at least one of the parties is committed to "go all the way" to a decision once hearing begins, and consequently that there is very little likelihood of a resolution by party action once this point in the arbitration is reached.

In turn, the likelihood of a resolution by party action probably hinges on how the parties view the claim(s) after the early stage of discovery. Obviously, if at this stage all parties conclude either that there was no malpractice or that claimant's case is weak, then a withdrawal by claimant or perhaps a token or nuisance settlement might be expected. On the other hand, if the parties independently conclude that there probably was malpractice, or that the claimant could probably make a convincing case for liability, even if actual malpractice is questionable, that should favor a settlement. But if the parties differ substantially in their assessments of (1) whether there was malpractice, or (2) whether the arbitrators would likely find liability, or--assuming liability--of (3) what the claim is worth, then of course there is little basis for settlement, and the matter would likely proceed to hearing and decision.

Hearing time is a reflection of the maturity of the plan or system in which the case arises, the formality accorded to the process and, of course, the complexity of the particular case. Since virtually all cases in which hearings took place resulted in arbitral decision, data on hearing time relates solely to adjudicated cases (Table 64). Well over 90% of the cases required less than 60 days from beginning to end of hearing including time for scheduling, adjournment, arbitral study and delivery of the award. A scatter of cases took more than 60 days principally because of delays by the parties or, in some instances, adjournments to resolve legal issues. There was a wide range--570 days--including one case which lasted over a year and a half because of an extensive abeyance at the request of the parties. However, the mean time, even considering the range, was only 17 days and the median 2.7 days. These reflect the basically short time usually required.

For the most part, only one hearing is necessary, consisting of a day or less; more than 57% of the cases were tried in one hearing and an additional 25% required two. Almost 90% of the cases were completed in three hearing days. Characteristically, arbitration is denoted by its hearing: its structure, procedure and time. The data bear out the fact that, generally, the hearing as the critical element in arbitration generally, and in malpractice in particular, is brief and most often started and concluded in a single session. (Table 65)

606-607
base: 611
(102 cases of 205)

Table # 64

a/
Arbitration hearing time, cases resulting in arbitral decision

time range (days)	no. of cases	rel freq (%)	adjusted freq (%)	cum freq (%)
1 to 60	90	88.2	92.8	92.8
61 to 120	3	2.9	3.1	95.9
121 to 180	2	2.0	2.1	97.9
181 or more	2	2.0	2.1	100.0
unknown	5	4.9	missing	--
total:	102	100.0	100.0	

N=102 cases

mean 17.0 days
median 2.7
mode 1
range 570

a/ time, in days, from date of first hearing to date of last hearing

98.6

base: 611=6
(102 cases of 205)

Table # 65

Number of dates on which hearing occurred, cases resulting in arbitral decision

no. of hearing days	no. of cases	rel freq (%)	adjusted freq (%)	cum freq (%)
one	58	56.9	57.4	57.4
two	25	24.5	24.8	82.2
three	7	6.9	6.9	89.1
four	4	3.9	4.0	93.1
five	4	3.9	4.0	97.0
six or more	3	2.9	3.0	100.0
unknown	1	1.0	missing	--
total:	102	100.0	100.1	

N=102 cases

mean	1.881 days
median	1.371
mode	1
range	9

N. Summary

The data on arbitration experience provided the possibility of analyzing relationships between major input and outcome variables. A series of illustrative items was developed based on adjudicated cases; similar analytic tables are available for other factors. Questions concerning the differences in disposition, time and cost, for example, as related to injury or even type of arbitration can be answered within limits of the data. In Part II, comparisons between the litigation and arbitration of medical malpractice cases are presented.

Injury Relationships

From general consideration of medical malpractice, the nature of the injury generating the malpractice claim is perhaps the most critical factor to be considered in understanding the process in both administrative and substantive terms. The degree of injury severity apparently does not have a statistically significant effect on total case time, that is, between the report of injury and conclusion (Table 66). The proceeding time, the period elapsed between entry into the forum and closure which is attributed to the arbitration procedure, similarly shows no difference, in relation to severity of injury.

In general the proceeding time based on the mean for all cases constituted about a third of the total time--11 months compared to 33 months. This is consistent for all categories.

In contrast there are substantial differences in the forum costs, by category. These would appear to correspond with

the increasing severity of injury: this, the mean of $2,265 for permanent total disability cases is almost three times that for "no injury" including those based solely on legal issues and emotional effects.

According to the limited data, the latter categories took as much proceeding time but evidently involved fewer administrative steps and costs related to hearing and management. The most important relationship, that is, between severity of injury and indemnity, indicates that of all cases about 44% received some indemnity. The highest proportion, 62%, was awarded for permanent, partial disability cases and in the permanent total disability category there were no indemnity awards. (The number of cases (5) available for study in this category was very limited.)

From the data, therefore, it appears that there is a significant difference in the likelihood of monetary award depending on the severity of injury. In this arbitration series, although the amount may be small, the chances of recovery would seem to be greater for permanent than for temporary disabilities, along with an increase in amount of award with increasing severity.

Misadventure

An aspect of the medical injury information is the nature or category of alleged negligence or deviation. With respect to the nature of the misadventure, it appears that where the error is diagnostic only, time for the entire case and time for proceeding is less, although not statistically

table # 66

RELATIONSHIP BETWEEN SEVERITY OF INJURY AND TOTAL CASE TIME, ARBITRATION PROCESSING TIME, TOTAL ARBITRATION COSTS AND AMOUNT OF INDEMNITY AWARDED.

Degree of Severity of Injury	Number*	Case Total Time (months) Mean	S.D.	Arbitration Proceeding Time (months) Mean	S.D.	Total Arbitration Forum Costs Mean	S.D.	% Awarded	Indemnity Mean† (n)	S.D.†
No injury	21	35.6	19.9	10.7	4.9	872.9	873.4	33.3	8,104 (7)	10,473
Temporary Disability	49	29.1	14.6	12.0	7.8	959.7	1,376.7	44.9	10,039 (22)	10,087
Permanent Partial Disability	21	40.9	21.5	12.3	12.2	1,423.5	2,523.4	61.9	42,591 (13)	53,148
Permanent Total Disability	5	32.8	19.1	11.6	13.3	2,265.2	2,469.4	0.0	--	--
TOTAL	96	33.4		11.7	8.6	1,110.6	1,638.2	43.7	19,792 (42)	33,673
STATISTICS		Analysis of Variance $F_{3,90}=2.27$, p=.08		Analysis of Variance $F_{3,88}=0.133$, p=.94		Analysis of Variance $F_{3,70}=1.22$, p=.3		$\chi^2=8$ p<.05	An. of Var. $F_{2,39}=5.2$, p=.01	

*For 6 cases data was missing
†Of those receiving an award

table #67

RELATIONSHIP BETWEEN TYPE OF MISADVENTURE AND TOTAL CASE TIME, ARBITRATION PROCESSING TIME, TOTAL ARBITRATION COSTS AND AMOUNT OF INDEMNITY AWARDED.

Type of Misadventure	Number	Case Total Time (months) Mean	S.D.	Arbitration Proceeding Time (months) Mean	S.D.	Total Arbitration Forum Costs Mean	S.D.	% Awarded	Indemnity Mean† (n)	S.D.†
Diagnostic only	14	28.9	16.9	7.7	9.7	175.8	228.7	35.7	14,435 (5)	8,5[illegible]
Procedural only	52	36.0	18.4	12.6	8.7	1,126.2	1,844.5	46.1	21,815 (24)	31,7[illegible]
Both	10	38.9	24.5	15.7	10.2	2,127.5	1,979.3	30.0	5,461 (3)	5,160
Neither	17	26.8	13.7	11.2	7.2	789.6	798.1	47.1	6,971 (8)	9,00[illegible]
TOTAL	93	33.7	18.4	12.1	8.8	1,080.4	1,645.0	43.0	16,697 (40)	25,730
STATISTICS		Analysis of Variance $F_{3,86}=1.57$, p=.20		Analysis of Variance $F_{3,86}=1.79$, p=.16		Analysis of Variance $F_{3,87}=2.58$, p=.06		$x^2<1.0$, N.S.	An. of Var. $F_{3,36}=0.89$, p=.[illegible]	

†If those receiving an award

significeant, than for procedural errors or cases in which the injury was occasioned by diagnostic and procedural misadventures combined (Table 67). These mean differences, although apparently quite substantial, are clouded by the large variations and small case numbers and must be interpreted with caution. Diagnostic errors required somewhat under eight months on the average proceeding time compared with a mean of twelve months for procedural errors and 16 months, more than twice as much, where both misadventures appeared.

For forum costs, the differences appear to be even more dramatic, but again, do not quite achieve statistical significance due to large variations and small sample sizes. Total forum costs ranged from a mean of $175 for injuries caused by diagnostic errors to a mean of in excess of $2,000 where both types of misadventures were involved.

On the other hand, the indemnity award shows little relationship with type of misadventure both in terms of likelihood of award and amount of monetary award. The absence of relationship here is not surprising since there is no substantive reason or basis for difference in recovery due to type of misadventure, as would be expected for severity of injury.

Type of Arbitration

Does the type of arbitration agreement influence any administrative or substantive aspects? Clearly, the time required for processing a case in which the parties have agreed to arbitrate after the injury should take substantially

less time. The data definitely confirm this expectation. Thus, post-claim cases which do not involve question or challenge of the application of arbitration were processed in somewhat over eight months on the average, whereas the pre-claim cases, many of which invoked challenge, took 13 months (Table 68). On the other hand, the total time was reversed, signifying that a substantial amount of filing time, probably up to the end of the local statute of limitation, elapsed for post-claim cases, thereby lengthening the entire period between the date of injury and final disposition.

On the average, post-claim cases required 38 months compared with 30 months for the pre-claim category. Thus, once a case enters arbitration it moves rapidly. Not unexpectedly, forum costs were substantially greater for the pre-claim cases ($1500) probably because of the maneuvers and some challenges and quite low (almost $400) for post-claim. Most of the pre-claim cases were party-administered under the Suffolk plan for which no fees were charged and no special forum arrangements were made.

Indemnity was essentially the same for both types of cases. There is no reason for difference, and no difference was demonstrated. In each category, approximately 40% were awarded. But the post-claim cases, many of which came under the small claim programs, had a mean of somewhat over $11,000 compared with $25,000 for the more conventional arbitration category. Because of the high degree of variability, however, these amounts are not statistically reliable.

table #68

RELATIONSHIP BETWEEN TIME OF ARBITRATION AND TOTAL CASE TIME, ARBITRATION PROCESSING TIME, TOTAL ARBITRATION COSTS AND AMOUNT OF INDEMNITY AWARDED.

Time of Arbitration Agreement	Number	Case Total Time (months) Mean	S.D.	Arbitration Proceeding Time (months) Mean	S.D.	Total Arbitration Forum Costs Mean	S.D.	Indemnity % Awarded	Mean	S.D.
Preclaim	64	30.0	14.7	13.1	9.5	1,462.3	1,872.5	40.6	25,006	40,75
Postclaim	36	38.0	22.1	8.4	5.3	397.4	615.6	44.4	11,319	14,41
TOTAL	100	32.9	18.1	11.5	8.5	1,084.0	1,624.4	42.0	19,792	33,67
STATISTICS		$t_{95 d.f.}=2.1$, p=.035		$t_{93}=2.6$, p=.01		$t_{75}=2.86$, p=.006		$\chi^2<1$, N.S.	$t_{40}=1.29$, p=.2	

Claim Demand

Although the amount claimed or demanded has only a rough relationship to the severity of injury, it is calculated by the plaintiffs' attorney on the basis of characteristics of the claimant, such as age, potential earning loss and cost of medical care; thus, it should correspond to the indemnity awarded if liability is established. This pattern is demonstrated in the small data set of 38 cases for which indemnity was awarded (Table 69). There was a clear progression from an average of $4,000 for the claims under $25,000 to $55,000 awarded on the average (three cases) for the nine cases in which claims of over $500,000 were entered. There was a similar correspondence in forum cost and in proceeding time.

Defendants

The number of defendants in a case might be expected to affect both total time and arbitration processing time as well as costs. In terms of time, the number of defendants, appears to have no effect on the total time, but a substantial effect on proceeding time is apparent (Table 70). In the 52 one-defendant cases of the total of 97 for which data were known, only 9.7 months was required for processing compared with 15 months on the average where there were three-defendants or more. Forum costs follow the same pattern with an average of $530 for one-defendant cases in contrast to $2,400 for large multi-defendant cases. There appears to be little relationship between the number of defendants and either the potential for award and the amount awarded.

In general, however, it appears that number of defendants is of considerably less importance than the severity of the injury in respect to a win or lose outcome. And the severity of injury as well as type of agreement seems to have maximum impact on the proceeding time for arbitration as well as the cost involved.

table # 69

RELATIONSHIP BETWEEN AMOUNT INITIALLY CLAIMED IN ARBITRATION AND TOTAL CASE TIME, ARBITRATION PROCESSING TIME, TOTAL ARBITRATION COSTS AND AMOUNT OF INDEMNITY AWARDED.

Amount Claimed	Number	Case Total Time (months) Mean	S.D.	Arbitration Proceeding Time (months) Mean	S.D.	Total Arbitration Forum Costs Mean	S.D.	% Awarded	Indemnity Mean† (n)	S.D.
[illegible],000	22	24.8	12.9	9.0	3.7	466.3	571.6	45.5	4,202 (10)	5,109
$25,000 to $100,000	32	29.0	20.9	9.7	7.8	294.2	352.5	37.5	7,497 (12)	7,152
$100,000 to $500,000	23	37.3	14.3	14.2	7.5	1,576.3	1,504.0	56.5	21,538 (13)	21,039
$500,000	9	39.1	14.3	19.2	15.2	3,548.0	3,422.1	33.3	55,479 (3)	74,782
TOTAL	86	31.3	17.4	11.8	8.6	1,011.6	1,667.3	44.2	15,245 (38)	25,777
STATISTICS		Analysis of Variance $F_{3,77}=2.8$, $p=.047$		Analysis of Variance $F_{3,78}=4.66$, $p=.005$		Analysis of Variance $F_{3,64}=12.6$, $p=.0000$		$\chi^2=1$ N.S.	An. of Var. $F_{3,34}=4.78$, $p=.00$	

† those receiving an award

table # 70

RELATIONSHIP BETWEEN NUMBER OF DEFENDANTS IN ARBITRATION AND TOTAL CASE TIME, ARBITRATION PROCESSING TIME, TOTAL ARBITRATION COSTS AND AMOUNT OF INDEMNITY AWARDED.

mber of Defendants	Number	Case Total Time (months) Mean	S.D.	Arbitration Proceeding Time (months) Mean	S.D.	Total Arbitration Forum Costs Mean	S.D.	Indemnity % Awarded	Mean† (n)	S.D.†
ne	52	30.7	18.1	9.7	6.4	530.8	675.3	24/52=46.1%	15,563 (24)	19,512
o	32	35.8	17.8	13.7	11.0	1,480.9	2,086.8	14/32=43.8%	29,303 (14)	52,293
ree or more	13	34.4	18.9	15.3	8.5	2,431.9	2,248.1	5/13=38.5%	9,612 (5)	9,149
TOTAL	97	32.9	18.1	11.7	8.6	1,073.8	1,616.1	43/97=44.3%	19,343 (43)	33,400
STATISTICS		Analysis of Variance $F_{2,94}=.83$, $p=.44$		Analysis of Variance $F_{2,94}=3.47$, $p=.035$		Analysis of Variance $F_{2,74}=8.45$, $p=.0005$		$\chi^2<1.0$, N.S.	An. of Var. $F_{2,40}=0.988$, $p=.38$	

† those receiving an award (n=43)

III. COMPARISON STUDY

A. Background

This first comparative analysis permits an insight into certain differences and similarities in the methods available for deciding medical malpractice claims. Although the information is limited in type and volume and is restricted to one area and program, the California hospital project, it is still possible to assess the alternative of arbitration in light of the dominant litigation mode.

In a sense this small study provides the first factual evidence of the results of arbitration relative to litigation, thus replacing surmise and speculation. It was designed as an objective scientific study with scrupulous attention to accounting for possible bias (in a statistical as well as organizational sense) with the intent of answering the questions customarily asked about the difference between the forums of litigation and arbitration. The lack of adequate data, because of limited experience and also because of the complexities of reporting and collection of data characterize this work as a pilot or introductory effort. Its major contribution rests not so much with the answers but in the discussion of ways to obtain answers for this and similar comparisons.

Rationale for Forum Comparison

During diagnosis, treatment or aftercare, patients may incur some injury, disability or disease, allegedly due to action (or omission) by physician, hospital or other provider rather than to the expected outcome or course of the presenting condition. In such circumstances, our legal system permits a claim for damages on grounds that a personal injury and economic loss attributable to careless, negligent or substandard practice should be indemnified. Traditionally, such claims are brought under the court litigation process which contemplates final adjudication by trial before judge or jury. In most instances, parties dispose of the case by settlement or withdrawal before or during trial.

The recent medical malpractice crisis resulted in a number of proposed reforms which included modifications of and alternatives to conventional litigation. The landmark 1972-73 Report of the (DHEW) Secretary's Commission on Medical Malpractice and other studies noted that malpractice cases were subject to unconscionable delays, that there were apparent inequities in verdicts and recoveries, and general lack of expertise in managing the complexities of such controversies. Among others, the Report recommended that arbitration, which had been widely used for commercial and labor cases and, to a limited extent for medical and health care issues, might be tried. The Report recognized that there was virtually no adequate data concerning arbitration and no systematic comparison between arbitration and litigation for medical malpractice cases

To meet these needs and to provide fact rather than speculation, the American Arbitration Association undertook a descriptive and comparative analysis, based on a review of case experience. The descriptive study was summarized in Chapter II; the results of the comparison of forums is presented below. It is, of course, recognized that many influences contribute to use and consideration for further application of litigation or arbitration, where possible. Of particular importance are the views or attitudes of attorneys, the interests of insurers and their clients and, to some extent, the general understanding of arbitration on the part of the public and their representatives in the legislature. The reports of the AAA, supported by Federal research grants, should prove helpful in such assessment.

Basis for Comparison

An evaluation and comparison of two available systems for adjudicating medical malpractice issues would ideally consider:

(1) How well does each serve the public interest and the field to which it applies?

In this case, is the medical and health care system, best met by a public or private process (or elements of each): by adjudication through a general or expert tribunal: by formal or informal procedures; by final or an appealable judgment? Also, to what extent does each forum contribute to more equitable outcome and to the improvement of medical practice through sanctions on practitioners and contributions to the prevention of malpractice? Finally, how well does each system encourage use through party settlement and effective enforcement?

(2) How well does each resolve the controversies which may be presented?

How does each forum respond to claims and issues and to the programs for disposition of medical malpractice claims? For example, do outcomes appear to reflect the substance of valid claims, in respect to severity of injury, characteristics of parties and actual and estimated loss. Are equitable or fair results more likely to be offered by arbitration rather than the court forum?

(3) How well do they manage the cases?

For similar cases, which system demonstrates greater effectiveness and efficiency in terms of time required for processing, cost to the parties and fewer steps for final resolution? Are the standard court processes preferable to contractual arrangements developed by the parties?

(4) How well does each forum satisfy the parties directly concerned and effected?

Satisfaction is determined in part by continued use of a system where optional, and by views expressed by participants. In a legal system, for example, do attorneys, their clients, and insurers consider an alternative to litigation desirable or preferable? Can claimants and defendants effectively employ the process with or without advocates? How well does each system serve new forms of health care delivery and other innovations in medical treatment? In sum, how well does each system meet the needs and expectations of the direct and affected parties.

To answer these questions, there would have to be data on cases filed and closed; changes effected by experience; and views of participants and others who may be affected.

Data: Available and Needed

Although the data assembled do not directly answer such questions of policy, legal practice and strategy, they can contribute objective bases for full consideration of the issues. For instance, there is mounting evidence that "small" medical malpractice claims now generally cannot be economically adjudicated, particularly in urban courts. With inflation, the definition of "small" has changed to include what may now be the majority of these claims. Cases in which, realistically, potential damages are under $25,000 are not considered "small" and may be rejected as "uneconomic" by those plaintiffs' attorneys who are leading specialists in medical malpractice cases. And less experienced or less specialized attorneys must resolve essentially the same cost-to-return equation. Often, such "small" claims are not small matters to the litigants, particularly the plaintiffs. Furthermore, the general rapid growth of civil litigation has led to routine trial docket backlogs in many states, including the most populous one, which apparently account for the great majority of medical malpractice litigation.[1/] Since medical malpractice claims tend to take considerably longer to emerge, to be developed into lawsuits, and readied for trial than other personal injury actions, court docket backlogs unduly affect them as a class. For this reason, among many others, it seems legally as well as practically justifiable

1/ Of the 62,000 different medical malpractice incidents represented by claims reported to the National Association of Insurance Commissioners' 1975-78 national survey, 51% were from just six states: California, New York, Pennsylvania, Illinois, Florida and Ohio. Just eleven states (these plus Michigan, Texas, New Jersey, Missouri and Minnesota) account for 67% of the reported incidents. (NAIC Malpractice Claims, Vol. 2, No. 2, Septe. 1980; Table 3.2, p. 121.)

to treat them specially. The passage of special malpractice legislation in the last decade by virtually all states was considered at least a short-run solution. Many such laws, especially mandatory screening systems, were held unconstitutional. Others have not scored unqualified success. Adoption of a private forum, such as voluntary, contractual arbitration is therefore worth serious consideration.

It is currently the only complete alternative to the court forum for adjudication of medical liability claims. From a policy standpoint, it should be assessed not only in legal terms but also on its own merits. The legal considerations which have emerged concerning malpractice arbitration relate mainly to issues of contract, specifically to conditions for the making and enforcement of agreements to arbitrate. If attention is given to legal aspects alone, medical malpractice arbitration will remain a relatively little-used alternative to the courts. The versatility of arbitration and the general approval of arbitration permits designs which pass legal tests and also meet parties' needs.

This analysis concerns not legal issues but the merits of arbitration. Whether arbitration based on preclaim agreement may validly apply to medical malpractice claims (generally the courts have been supportive) on its merits, arbitration may be considered a better forum than the courts, if it provides adjudication that is, on the whole, no less fair, more likely to be "correct", and markedly more efficient.

If this is true, why has arbitration not been more widely adopted? The explanation seems to be that arbitration may to some extent change the outcome for any party in every medical malpractice case. Or it may be so perceived. But notwithstanding the interests of any particular party, if any change in outcome is likely to be toward (rather than away from) the normative or "correct" outcome for the case, then society may be better served by arbitration than by litigation of malpractice claims, assuming arbitration is in fact more efficient than the courts. This will be true even if it means that some parties will be worse off (and others better off) than they would have been if their cases had been subject to adjudication in court. Legal questions aside, the core issue for public policy, is whether the gain to society of the ostensible "correctness" of decisions and operative efficiency of the private forum outweighs the loss to particular parties in some cases of peculiar advantages available in court.

In general, use of medical malpractice arbitration has depended on lawyers' views of it. Both plaintiffs' and defense attorneys who handle medical malpractice cases may see arbitration solely as an appropriate option for cases where potential damages are too low to justify the costs of a proceeding at law. But in any event, many attorneys--especially those for plaintiffs--oppose having the decision to arbitrate made before the claim arises. Or they may use it for certain programs, as for group practices. Insurers may adopt it for potential cost savings.

Current malpractice arbitration experience supports the idea that most attorneys and insurers take a pragmatic view. While arbitration has long been legally sanctioned for malpractice claims, it has in fact been used very little. Even in 1981, after a decade which saw a spurt in malpractice arbitration use, there is only a small body of experience,[1/] although vastly more than previously. Despite the widely recognized shortcomings of the courts as the forum for malpractice cases, lawyers have very seldom sought to move to arbitration cases arising subject to court jurisdiction. (Nearly all malpractice cases are now subject to court jurisdiction, except in California and Michigan, where substantial numbers of cases arise subject to arbitration.) On the contrary, plaintiffs' attorneys have sought--most often without success--to move to court many among the small fraction of malpractice cases arising subject to arbitration (by virtue of patient-provider agreements signed before care or treatment). Data other than the statistical patterns of closed cases are needed to examine attorneys' views. A separate study, associated with the statistical reports, is clearly indicated.

Arbitration: The Viable Option

Arbitration appears to be advantageous for medical malpractice cases, as a class. For one, it can considerably reduce

1/ The AAA research data base on malpractice arbitration cases closed since 1971 now includes about 300 cases, which are believed to represent a large majority of such cases closed nationally in the past decade.

the time for resolving a case. Second, the separate tribunal for each case permits accommodation to schedules of the parties. Moreover, the arbitration administrative agency or the arbitrator(s) may often be in a position to prevent delay, e.g., by discouraging dilatory tactics. Where litigants take advantage of this feature of arbitration, substantial time and, consequently, cost savings are possible, not to mention other possible advantages to the parties in an early resolution.[1/] Third, no matter what the time frame, arbitration's relative informality generally minimizes attorney fees and certain other substantial costs. Most would agree that arbitration, compared with litigation of these claims is likely to save time and expense. They may fear that arbitration will yield a different pattern of case outcomes than would court jurisdiction. The following analysis provides some response to this concern.

1/ For a discussion of time and cost savings possible with binding arbitration, see Nocas, Andrew, "Arbitration of Medical Malpractice Claims" The Forum, Vol. XIII, No. 2 (Fall 1977), ABA Section on Insurance, Negligence and Compensation Law.

Conceptual Framework

Forum as System: The analytic framework for this study views voluntary binding arbitration and litigation (courts) as parallel systems, each designed to provide adjudication in the sense of an enforceable third-party decision. Between them, these two systems have jurisdiction over all existing and potential claims of medical professional liability, whether or not eventually adjudicated.

When a malpractice claim is asserted, it is subject to court jurisdiction unless the parties had previously agreed instead that any such claim would be subject to arbitration. Or, the parties may agree to arbitration after a claim is asserted, thus avoiding court jurisdiction. In either such event, arbitration governs claim resolution unless the agreement to arbitrate is either ruled invalid by a court or by arbitrators, or mutually ignored by the parties. Thus, arbitration can replace the court forum. It serves essentially the same purpose, only privately, under different rules and less formal procedures, with different decision-makers, and without the possibility of a true appeal.[1/]

Thus resolution of medical malpractice claims is currently divided between the conventional court jurisdiction and the very small but growing arbitration jurisdiction. All statutory and private nonbinding procedures (screening, mediation and

1/ Given a valid agreement for binding arbitration, an arbitral award (decision) on the substance of a dispute can usually be challenged in court only on essentially procedural grounds, and not on its merits. The court may order enforcement of the award or else set it aside on specified statutory grounds, normally with remand of the case to the original arbitrator(s) or a new tribunal. Generally, however, a court may not substitute its judgement of the merits of a claim for that of arbitrators.

other pretrial review procedures, including nonbinding "arbitration") are adjuncts to the jurisdiction of the courts, since with all such procedures a jury trial is ultimately available (albeit conditionally in some states), no matter what the review panel's determination or finding.

Forum Variants: Each of the two adjudication systems or forums has primary and common variant forms:

ARBITRATION FORUM		COURT FORUM			
primary form	variant	primary form	variants		
preclaim agreement to arbitrate	postclaim agreement to arbitrate	direct access to trial; no statutory screening (e.g., Ca.)	voluntary statutory screening (e.g., Va.)	screening prerequisite to suit (e.g., Wi.)	screening prerequisite to trial (e.g, NY)

The distinction between the primary and variant forms of arbitration hinges on when the agreement to arbitrate is made. The primary form of arbitration is based on an agreement made pre-claim, before a claim arises (e.g., at hospital admission), and which thus ultimately applies to a claim whose substance is unknown when the agreement is made. The variant form is based on an agreement made postclaim, after a claim arises, and which thus ultimately applies to a claim whose substance is unknown when the agreement is made. The variant form is based on an agreement made postclaim, after a claim arises, and which thus applies to a claim whose substance is known when the agreement is made. Between 1975 and 1978, special medical malpractice arbitration statutes were enacted in fourteen jurisdictions, ten authorizing preclaim agreements and

four limiting malpractice arbitration to postclaim agreements. Most malpractice arbitration plans are in states having at least a general arbitration statute, if not a special malpractice arbitration law; thus they provide for preclaim agreements.

The primary form of the court forum is direct (though not necessarily immediate) access to jury trial; the variations for court process potentially or actually limit or modify such access by interposing a nonbinding procedure. By 1979, some 30 states had passed malpractice reform laws that included a procedure for claim review (screening, mediation or nonbinding "arbitration") prior to suit or trial. In a few other states there are still some older, privately sponsored claim review procedures, all voluntary. In many states the statutory claim review procedurally resembles arbitration, but in all it is legally a preliminary to court trial, even though intended to encourage claim disposition short of trial. Unlike any claim review procedure, binding arbitration is designed to be a complete substitute for trial and not a preliminary to it. Arbitration is designed to adjudicate, whereas claim review procedures are designed to avoid or reduce the need for adjudication by discouraging nonmeritorious claims or encouraging parties to resolve claims without moving to trial and adjudication.

Resolution Patterns: If arbitration and the courts are viewed as systems in which each procedural step progresses toward adjudication, then the parties' strategies are at each point

in that progression in some way or degree affected by their assumptions or judgments about the relation of the forum to the outcome if the matter is adjudicated. And if the parties' assessments of position are influenced by their expectations regarding adjudicated outcome, then these expectations will be critical to a resolution at some stage short of adjudication. In other words, past third-party decisions (in court or arbitration) set the pattern of expectations for adjudicated outcomes in pending cases, influencing whether those claims are resolved (settled, withdrawn) by party action, either without any formal proceeding or after forum entry.[1/] For example, parties may at an earlier or later procedural stage anticipate a decision (jury verdict or arbitrators award) in favor of claimant, and negotiate a settlement (indemnity payment), usually discounted by the expected cost of adjudication.

Certain differences are to be expected in relative power to affect outcome between the primary forms of the court and arbitration forums, that is direct access and pre-claim agreements. Some such difference may also be expected for the forum varients, i.e., claim review as prerequisite to lawsuit or trial, or for post-claim arbitration. Such differences may characteristically affect or condition outcomes.

Conceptual Model: The study's conceptual model may be expressed as the interrelation of variables in three categories which, together, represent the substantive elements of closed medical malpractice cases:

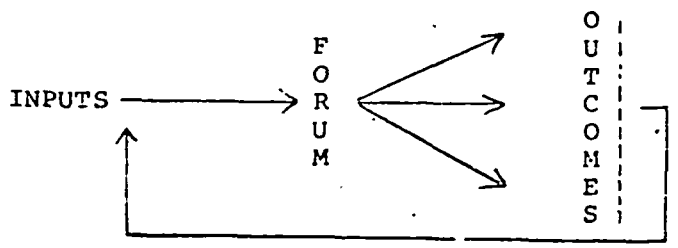
1/ Forum entry is defined as formal filing of a lawsuit or filing or service of a demand for arbitration.

INPUT
  parties' characteristics
  injury (event) characteristics
  particulars of the claim(s) made

FORUM
  primary forms of arbitration and court forums

OUTCOME
  disposition measures
  time measures
  cost measures

The general relationship among these three categories of variables is represented diagrammatically as follows:



This model reflects the hypothesis that case outcomes are determined partly by input and partly by forum, and that in any particular case, party expectations and strategy with respect to eventual outcome are influenced by knowledge of decisional patterns for past cases in the applicable forum. In turn, new outcome experience will influence future inputs; that is, experience continually influences which claims (or types of claims) are likely to be brought, as well as what their outcome will be.

The analysis undertaken compared the primary forms of arbitration and court forums--arbitration pursuant to preclaim

* Attorneys characteristically evaluate cases in terms of possible outcome compared with cost of preparation and presentation (value of case). They also assess forum, jurisdiction and patterns of known decisions (adjudications or settlements). Arbitration is thus viewed as an element for such consideration, especially where choice is available.

agreement and court process without screening. Since in this form arbitration's jurisdiction is established before there is any claim, then regardless of which forum obtains when a claim arises, the position of the parties with respect to forum is the same, and the respective influence of each forum on what happens thereafter may be compared. If samples of malpractice incidents for such a comparison of forums are drawn from the same geographic area, a similar time period, and similar health care settings, then the distribution of input measures for the two forums should prove essentially similar. If so, then any statistically significant differences in the distributions of outcome measures for the two forums should be due, at least in part, to their respective effect or influence. Such inter-forum comparison of course requires data from a geographic area where there has been relatively widespread preclaim adoption and subsequent use of arbitration over enough time for an analyzable number of arbitration cases to have accrued. When this study began, southern California was the only area which met these data requirements.[1/]

1/ As of October, 1981 it appears that there is sufficient data for malpractice arbitration experience in Michigan to replicate this study.

Input Variables: Medical malpractice case (or claim) substance is embodied by three categories of input variables--the parties' characteristics, the injury characteristics and the claim particulars. These variables represent directly measurable aspects of the malpractice incident as well as the basis for alleging liability and the remedy sought by the claimant. Available data did not measure these input elements in every conceivable way, but did measure those inputs considered most directly affecting or related to outcomes, i.e., those for which outcomes are believed most likely to vary with the forum. The measures of input variables which were available for test included:

injured person

- age and sex
- final diagnosis (of medical condition for which treatment was sought)

injury claimed

- severity rating
- place of occurrence
  - -location within institution, if any
- medical procedure claimed to cause injury
- frequency of medical (procedural or diagnostic) misadventure

defendants

- number
- type
  - -medical specialty (physicians)
  - -age (physicians)

claims particulars

- economic loss claimed
- derivative claim frequency

Outcome Variables

Medical malpractice case (or claim) outcome is embodied by three categories of variable--disposition, time and cost--which represent direct measures of what may broadly be called claim resolution. Outcome measures may be more or less forum-sensitive, that is, more or less likely to vary with the forum. The primary object of this study was to establish which outcome measures are most forum-sensitive and to what extent. Or, expressed another way, the objective was to establish what may be expected to differ if the class of medical malpractice cases were resolved under the jurisdiction of arbitration instead of that of the courts.

Generally, differences in outcomes between the primary forms of court and arbitration forums were expected to depend on the variables. Variability in time and cost, the basic measures of forum efficiency, were expected to be linked in most cases, since time and cost will be affected similarly by fundamental forum differences in extent and degree of procedural formality. But cost was not necessarily expected to be closely time-linked, so that shorter time might not always mean lower cost and vice-versa.

Disposition is a two-pronged variable, covering on the one hand forum efficiency, as reflected in mode and stage of procedure of case (or claim) disposition, and on the other hand forum result, as measured by payment frequency and amount. With respect to efficiency, time and cost differences by mode and stage of procedure of disposition (e.g., between adjudicated and other cases) were expected to be roughly proportional from forum to forum; however, forum differences in time and cost values were not necessarily

expected to follow disposition mode and stage patterns. With respect to result--case inputs apart--any forum differences for adjudicated cases were expected to be due to the nature of the decision-maker and to such procedural elements as forum requirements regarding evidence, while differences for party-resolved cases were expected to be due to party expectations about the effect of the decision-makers and procedures obtaining.

The measures of outcome variables which were available for test included:

disposition

- mode
- stage of procedure

indemnity

- payment frequency (non-zero amounts)
- amount

time

- total, from incident to disposition
  - -report (increment from incident to report of claim to an insuror)
  - -processing (increment from report of claim to disposition)

cost

- defense cost
  - -defense counsel fees
  - -insurors' allocated loss adjustment expense

Statistical Approach

The basic goal of analysis was to determine the degree of association between FORUM (arbitration or court) and incident or claim OUTCOME measures (various indices of disposition, time and cost). To accomplish this, the analysis plan had to deal with two problems. First, because the comparison employed "arbitration" and "court" samples which were not by definition (or impliedly) comparable, it was necessary to discover and adjust for any statistically significant differences between samples in INPUTS (substantive characteristics of claim-producing incidents). Second, since it was expected that OUTCOMES would prove independently related both to FORUM and to INPUTS, it was essential to separate their respective effects. Either or both of these problems might have interfered with a fair comparison of OUTCOMES by FORUM.

The analysis began with the first of these problems--determining whether selected INPUT characteristics measured by the available data were differently distributed in the "arbitration" and "court" samples. For example, if the proportions of injuries at various severity levels differed for the two samples, then this difference might produce an apparently significant but actually spurious difference between arbitration and court OUTCOMES. In other words, that difference would be due not to some characteristic difference between arbitration and court FORUMS but, rather, to the fact that one sample had relatively more incidents involving a severe injury. In that event, the INPUT variable "severity

of injury" would be said to "confound" analysis of the FORUM-OUTCOME relation.

Having identified potentially "confounding" INPUTS in its first stage, the analysis turned in its second stage to the primary object of assessing the relation of FORUM to OUTCOME measures. The OUTCOME variables (disposition, time and cost) measured by available data were of two types. Time, cost and indemnity amount are continuous measures; indemnity payment frequency and the mode and stage of procedure of case disposition are categorical measures. Multiple linear regression was used for analysis of the continuous OUTCOME measures, while multi-dimensional contingency tables were used for the discrete (categorical) measures. These approaches are separately discussed below.

Regression yielded quantitative estimates of the effect of FORUM on continuously measured OUTCOME parameters while holding constant the effect of potentially confounding INPUTS. In the regressions, FORUM and those INPUTS identified as potential confounders were the <u>independent</u> variables; the continuous OUTCOME measures were the <u>dependent</u> variables. FORUM was of course scored in dummy form, i.e., expressed numerically; court was assigned the value 1, and arbitration, 2.

Initially, simple regression equations were run separately for each dependent variable (indemnity payment amount, time and cost). The B coefficients of these equations provided estimates of the linear relation between each of the variables and FORUM. But a further step was necessary to determine the extent to which FORUM, independent of INPUTS, determines

indemnity amount, time and cost. Accordingly, "step-wise" regressions were subsequently run, entering into the equations first the potentially confounding INPUT and then FORUM.

In a subanalysis, yet a further regression equation was run to determine how FORUM was related to certain costs which appeared not to vary with time. In this equation, cost was the dependent variable while time was treated as an independent variable and entered first, followed by potentially confounding INPUTS and then FORUM. The object was to see if FORUM contributed significantly to cost variation which was neither time-related nor explained by differences in the mix of cases entering arbitration and court.*

Regression analysis was of course applicable only to the continuously measured OUTCOME or dependent variables; thus the relation of FORUM to discrete or categorical OUTCOME variables had to be analyzed by another means. The means employed was contingency-table analysis, which was feasible because, as anticipated, most INPUTS proved not to be potentially confounding variables. The three discrete disposition variables tested were indemnity payment frequency, mode of disposition, and procedural stage of disposition. Each was the dependent variable in a separate contingency table. There were two dimensions in each analysis because only two potentially confounding INPUT variables were previously identified. In each table the confounding variable was stratified and the relation of FORUM to the disposition measure was

* Cost and other variables were not analyzed for the final comparisons because of paucity of data. This mention illustrates the methodologic approach, computer work and tests applied throughout this study.

examined for each stratum. For example, for injury severity (which, as anticipated, proved to be the most important potentially confounding variable), the strata in each table were (a) insignificant (including no physical injury), (b) temporary injury and (c) permanent injury; within each stratum the relation of Forum to one of the categorical disposition variables was examined.

Data

When this project was conceived, there had not been enough case experience to provide an adequate basis to test how binding arbitration, as opposed to the court forum, affects medical malpractice claims. Thus, it appeared that it might not be possible to set forth a theory or model and then identify and proceed to collect data to test it. In any event, it was apparent that it was practically impossible to obtain all the data relevant to that approach. Accordingly, an "archive" approach was developed, systematically gathering that generally available case data which seemed likely to be useful in establishing a framework of facts about medical malpractice arbitration. By methodically sifting this data, the team of lawyer, analyst, epidemiologist gained perspective, and began to appreciate what a shift from the court to the arbitration forum would mean for the class of medical malpractice cases. With this understanding, a simple model (discussed previously) was conceived as the basis for a forum comparison study.

The choice of California as a comparison locale was dictated by the fact that, at the outset, it was the only state which had considerable malpractice arbitration experience. Even now, the California experience considerably exceeds that in Michigan, the only other jurisdiction with substantial experience under a statewide malpractice arbitration program. But there were other considerations relating to the study design which, fortuitously, were met by California. For one thing, California allowed a comparison

of what was defined as the primary forms of the arbitration and court forums.[1/] Unlike most states, California has no statutory screening procedure, so that access to court and trial is direct for the class of malpractice claims.[2/] Most California malpractice arbitration was similarly in the primary form, that is, based on voluntary preclaim agreements to arbitrate.

For another thing, one program was by far the largest source of California arbitration proceedings pursuant to such agreements. That program, jointly sponsored by the California Hospital and Medical Associations, began in 1969 as a pilot project at eight Los Angeles-area hospitals. By 1980 it had been adopted at an estimated 200 public and private California hospitals, including some in nearly every part of the State. Under the Program, patients entering these hospitals under non-emergency circumstances are routinely offered arbitration agreements, which they may sign or not without affecting their health care or treatment. The hospital, its employees, and the majority of its staff of attending physicians are precommitted to arbitration, which would govern (in place of the court forum) any claim a patient might later bring if he signs the agreement and does not revoke it within sixty days after his hospitalization.

1/ See discussion under Conceptual Model.

2/ In the early 1970's, the California Superior Court for Los Angeles County instituted a compulsory nonbinding "arbitration" system, under court aegis, for "small" civil claims. Originally, the program applied to claims up to $7,500; subsequently, the ceiling has been $15,000. Recently the procedure has been adopted by other California jurisdictions. While medical malpractice claims filed in Los Angeles County and elsewhere in California are subject to this procedure, few of them would involve claims under the ceiling amounts.

For a third thing, the frequency and volume of California medical malpractice claims lent assurance that a study employing claim data for California would encounter the fewest data problems.

As far as known, the respective "arbitration" and"court" sample populations of patient-claimants held a fee-for-service relation to the health care practitioner- or provider-defendants; neither group included subscribers to prepaid group health plans such as Kaiser-Permanente or Ross-Loos.

The array of variables addressed by the comparison was limited to those within the NAIC data capture format; other variables which could have been examined for the arbitration sample were not available for the court sample.

The "court" sample

The study's sample of incidents which generated medical malpractice lawsuits was drawn from the population of incidents represented by certain insured claims closed in southern California. Data for these claims was obtained in coded form from the National Association of Insurance Commissioners (NAIC), which in 1980 completed a national survey of nearly 72,000 insured medical malpractice claims closed between July 1, 1975 and December 31, 1978.[1/]

A total of 6,541 such claims were reported to NAIC's Survey as having arisen from incidents at hospitals in the Los Angeles-to-San Diego metropolis or in the rural areas extending from there east to Arizona and north to Nevada.

1/ The NAIC claim report form is included in the Appendix. For NAIC Survey results, see NAIC Malpractice Claims, Vol. 2., No. 2, National Association of Insurance Commissioners, 1980.

This geographic area, which we refer to as "southern California", was defined by postal zip code sectional area.[1/] As illustrated on the accompanying map, it includes: Los Angeles County except its northern (Lancaster) sector; the southern edge of Ventura County, adjcining Los Angeles; the entire counties of Orange, Riverside, San Diego and Imperial; all but the northwest edge of San Bernardino County; and southeast Inyo County (Death Valley). This area represents roughly one-fourth of the State's territory but contains about 55 percent[2/] of its population. The hospitals in this area appear to be at least roughly representative of the range of hospital type and size for the state as a whole, and they account for about half of the state's hospital bed capacity.

Claims based on hospital occurrences represent 80 per cent; the remaining 20 per cent were claims based on occurrences at doctor's offices, clinics and other nonhospital settings. For the purpose of the study, hospital occurrences were defined as all those involving hospital inpatients plus those involving other patients at hospital emergency rooms, hospital clinics, or hospital special treatment facilities.

Before sampling it for the comparison study, we examined the data base obtained from NAIC was examined and found to be very

1/ Zip code prefixes 900- through 928-, taken from the zip codes reported in item 6d on the NAIC claim report form.
2/ Rand-McNally Zip Code Atlas, 1975.

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largely incomplete, both in defendant and incident terms. NAIC had determined that this base of 6,541 claim reports represented 5,409 different incidents.[1/] In a further analysis, it was found that this base represents just 45 per cent of the total defendants reportedly associated with those incidents (Table 1), and that it includes claim reports for all defendants in only 38 per cent of those incidents (Table 2).

It is quite clear that NAIC received claim reports only for a minority of the defendants involved in the 5,409 incidents. However, it is not clear what proportion of the unreported claims were insured claims closed during the Survey period and,

1/ In order to be able to analyze its data in incident as well as claim (defendant) terms, NAIC had to determine the number of different incidents represented by the claims reported to its Survey. Essentially, the problem was to determine whether, among claim reports indicating a multi-defendant incident, more than one such report was linked to any one incident represented in NAIC's data base. Reports indicating one-defendant incidents were not a concern because a one-defendant incident would normally generate only one claim report. However, about two-thirds of all claim reports received by NAIC indicated multiple-defendant incidents.

NAIC used a two-stage procedure to determine claim report-incident linkage for those reports indicating a multi-defendant incident. The first stage was a rough sorting by computer of all such "multi-defendant" claim reports. This sorting was initially by month and year of the claimed injury and then, within that, by zip code of the locale where the incident occurred.

The second stage was a clerical review of listings of certain coded data, generated by computer within the framework produced by the computer sort. The data generated included codes for final diagnosis of the injured person; procedure alleged to have caused injury; principal injury claimed; and for the three indemnity questions asked for each claim reported.

If after this process there was still doubt whether particular claims were linked to a common incident, then as a final step the claim report forms concerned were located in NAIC files and compared with respect to the injured person's name, the plaintiff's attorney's name, or other reported information which, alone or in combination, is normally unique to an incident.

table 1

Defendant-unit completeness of NAIC data for southern California hospital incidents

reported no. of defendants per incident	total defendants reportedly associated with incidents represented in NAIC data			claim reporting completeness, defendant units		
				reports received	no report	percent complete a/
	no.	%	cum. %			
one	1,782	12.3	12.3	1,782	0	100.0
two	2,806	19.4	31.7	1,580	1,226	56.3
three	2,826	19.5	51.2	1,178	1,648	41.7
four	2,124	14.7	65.8	750	1,374	35.3
five	1,505	10.4	76.2	452	1,053	30.0
six	912	6.3	82.5	245	667	26.9
seven	672	4.6	87.2	169	503	25.1
eight	424	2.9	90.1	95	329	22.4
nine	288	2.0	92.1	46	242	16.0
ten	250	1.7	93.8	42	208	16.8
eleven or more	878 b/	6.1	99.9	184	694 b/	unk
unknown	18 c/	0.1	100.0	18	unk	unk
	14,485 c/	100.0		6,541	7,944 c/	45.2

13/.a

a/ by category
b/ minimum figure; actual total not calculated.
c/ minimum figure; (since the total number of defendants associated with 18 of the incidents is unknown)

table 2

Incident-unit completeness of NAIC data for southern California hospital incidents

reported no. of defendants per incident	total incidents represented in NAIC data			claim reporting completeness, incident units		
				complete	incomplete	per cent complete a/
	no.	%	cum %			
one	1,782	32.9	32.9	1,782	0	100.0
two	1,043	25.9	58.8	177	1,226	12.6
three	942	17.4	76.3	47	895	5.0
four	531	9.8	86.1	18	513	3.4
five	301	5.6	91.7	6	295	2.0
six	152	2.8	94.5	3	149	2.0
seven	96	1.8	96.3	1	95	1.0
eight	53	1.0	97.2	0	53	0.0
nine	32	0.6	97.8	0	32	0.0
ten	25	0.5	98.3	0	25	0.0
eleven or more	74	1.4	99.7	0	74	0.0
unknown	18	0.3	100.0	0	18 b/	0.0
	5,409	100.0		2,034	3,375	37.6

a/ by category

b/ In order to make the totals add up, it has been arbitrarily presumed that each of these 18 incidents involved more than one defendant, and therefore that reporting was incomplete with respect to each such incident.

thus, eligible for reporting. Probably most of the approximately 8,000 unreported claims were insured, but either were closed before the Survey period or remained open afterward, and at least some were closed during the Survey and simply not reported to NAIC, whether through inadvertence or otherwise. Certainly some of the unreported claims involved self-insured or uninsured defendants, and therefore were not subject to reporting, regardless when closed. Furthermore, in addition to those "southern California" hospital incidents represented in the Survey, there must have been other "southern California" incidents for which at least one insured claim was closed during the Survey, but which are not represented in NAIC's data base because such claims were not reported.

Whatever the relative contributions of these reasons, the very extensive incompleteness of the NAIC claim population sampled for the comparison study suggests that it may not be representative of "southern California" hospital claims experience. But, there was no way to test this. But since it does include over 6,000 claims, it is likely that it is more nearly representative than not. At this time, there is no particular evidence to the contrary and, in any event, NAIC's Survey was the best available source of "court" data for comparison with California arbitration experience. Accordingly, a great deal of confidence can be placed in finding based on these reported data.

The sampling population for "court" experience was a subset of NAIC's data base for southern California hospital incidents. This subset consisted of all claims associated with these incidents in the base which evidently generated

a lawsuit. It included 60.9% (3,246) of incidents and 63.5% (4,152) of claims in that base. The subset incidents were identified chiefly by NAIC coding of claim disposition. That is, if coding for any claim indicating either on its face or logically that a suit was filed, then any other claims associated with the same incident were included in the subset. In all, the subset comprised five separately defined claim groups:

(1) all claims coded as "disposed of by a court", including trial verdicts and other third-party decisions on the merits or on technical grounds;

(2) all claims coded as "settled by parties" at any stage after a lawsuit was filed;

(3) all claims coded as withdrawn or abandoned (by plaintiffs) at any stage after a lawsuit was filed;

(4) all claims whose disposition was not coded or not clear from the coding, but for which a defense counsel fee was reported, which was taken as a strong indication that a lawsuit had been filed 1/;and

(5) all claims linked by NAIC with an incident represented by claims in any group above, but which were not included in any of these groups.

Table 3 shows which NAIC codes defined claims in each group. Claims excluded from the subset were those remaining, including, first, those which were both clearly coded as disposed of without a lawsuit and not linked to incidents in the subset; and second, those claims for which not only the disposition was uncoded or doubtful but also the defense counsel fee was reported as zero, which was taken as a strong indication that no suit was filed. 1/

1/ With relatively few exceptions, the insurors which reported southern California claims to NAIC would normally have retained defense counsel, and thus have occasion to report a counsel fee, only if the insured was sued.

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table 3

Sampling Population for "Southern California" Court Experience

incidents		claims		description of claim coding
no.	%	no.	%	
3,246	100.0	452	10.9	third-party disposition of suit a/
		1,135	27.3	"settled by parties" at any stage after suit filed b/
		1,074	25.9	withdrawn or abandoned by plaintiff at any stage after suit filed c/
		1,099	26.5	disposition ambiguous or not coded, but defense counsel fee>0 reported d/
		392	9.4	none of the above, but lined to an incident represented by any claim defined above e/
3,246	100.0	4,152	100.0	(63.5% of the 6,541 NAIC "southern California" claims reportedly based on hospital incidents)

a/ coded 21a=1,2,3,4,5,6,7, or 8 or coded 20b=2 and 20c=2,3,4,5,6 or 7 and 21a=9 on NAIC report form
b/ coded 20b=1 and 20c=2,3,4,5,6,7 or 9 on NAIC report form
c/ coded 20c=8 or blank and 21a=9 on NAIC report form
d/ coded 20b=1 and 20c=8 and 21a=blank and 25 > 0 on NAIC report form
e/ incident-claim linkage was established by NAIC for the data base, of claims associated with "southern California" hospital incidents that it provided at AAA request

data source: National Association of Insurance Commissioners

Once the subset of 4,152 claims linked to the 3,246 incidents generating lawsuits was defined and segregated, a simple random sample of 500 incidents was drawn from it to represent "court" experience in the incident-unit comparison of forums. The court sample for the corresponding defendant-unit comparison was, in parallel fashion, a random sample of 500 claims (defendants) among the 4,152. This defendant sample is skewed toward defendants from one-, two-, and three- defendant incidents, since reports for such defendants comprise 69.4% of the total received by NAIC.[1/] In contrast, the incident sample is not weighted, since it could be randomly drawn without regard to claim reporting completeness.

A brief explanation of the reason for such sampling is set forth below.

1/ Calculated from Table 1.

The Arbitration Sample

Arbitration experience in the comparison study was represented by 138 incidents which led to initiation of an arbitration proceeding. These incidents met the following criteria: first, they were "hospital incidents" occurring in "southern California", as those terms were defined in the court sample; second, each involved an arbitration agreement signed before any claim arose, so that the claims they generated were subject to arbitration when they arose and not specially selected for resolution under arbitration jurisdiction; and third, they involved arbitration proceedings initiated and closed at the American Arbitration Association's Los Angeles or San Diego offices after 1971 and before 1981.

Because these 138 "arbitration" incidents included all the incidents which met the above criteria, they constitute a population. However, since they represent the first 138 incidents in what may be presumed will eventually be a much larger population, they are also in a sense a sample, and one which could ultimately prove to be unrepresentative of that larger population in ways relevant to this study. There was no choice but to use these limited empirical data to represent what is essentially an emerging phenomenon. While ultimately these data may to some extent prove unrepresentative of arbitration experience, that could not be assumed; rather, it was reasonable to assume that the 138 incidents constitute a reasonable (albeit limited) basis for conclusions about the true nature and order (or degree) of any forum differences identified by the analytic method employed.

Context of the arbitration data: It is important to understand that the arbitration sample comprises incidents involving at least one claim for which an arbitration proceeding was initiated, but that not every claim arising from each of the 138 "sample" incidents entered or was resolved in arbitration. In a small minority of the sample incidents, there was one or more claims for which there was no preclaim agreement to arbitrate, and which thus never entered arbitration. Of the vast majority of the sample claims which did enter arbitration, a few were subsequently removed to court for resolution or resolved in a "forum straddle", i.e., while formal proceedings were pending both in arbitration and in court, without either forum having been established over the other by a judicial ruling. In sum, not every claim generated by a sample incident entered arbitration, and not all sample claims which entered arbitration were resolved there.

Among the arbitration sample incidents, many represent claims which were at first pressed in a lawsuit and only later removed to arbitration, pursuant either to court order or stipulation by the parties. As explained, for an unknown but possibly larger number of incidents, all claims were resolved without filing in arbitration, even though the parties had signed arbitration agreements before the claims arose. Such incidents could not be included in the arbitration sample because there is no practical way to identify them.

It is recognized that the absence of information on cases "subject to arbitration" but not identified (and thus not represented in the sample) limits an understanding and appreciation of the effect of this alternative forum. Whether "subject" cases are substantially different from those identified, as described, cannot now be known. The closest approximation to answering this question are the studies by Heintz which assumed that all cases associated with hospitals that were enrolled in the California arbitration project were arbitration cases, regardless of method of process or disposition.[1/]

1/ Heintz, D. "An Analysis of the Sourthern California Arbitration Project, January 1966 Through June 1975". National Center for Health Services Research, November, 1975. DHEW Publication No. 77-3159.

Litigation Sample

For purposes of comparing arbitration to litigation, a random sample of the litigation data set was drawn containing 500 cases. The rationale for basing the comparative analyses on a sample basis is as follows:

Since the arbitration data set contains only 138 cases and the litigation data set contains in excess of 3,000 cases, there is an imbalance in the confidence with which the two forums are characterized. The effect of this imbalance has implications in the statistical power of the subsequent analyses. The primary effect is that of achieving statistical significance with differences between the forums which may be of an inconsequential or minor nature. By reducing the sample size in litigation, the correspondence between the meaningfulness or substance of the differences and the degree of statistical significance are brought more in line with one another. The random sample of 500 litigation cases was checked against the data set from which they were drawn in respect to numerous characteristics. The results indicate a very good random sample which confidently reflects the whole.

B. Comparison

The main goal of the analysis was to assess the degree of association between Forum (arbitration or court) and outcome variables, including selected measures of time, cost and disposition. These outcome variables can be viewed from either of two perspectives: (1) that of the patient-claimant, whose focus is the incident, which encompasses resolution of all claims relating to a particular claim producing occurrence, or (2) that of a defendant, which refers to the claim with respect to each defendant (person or institution) singly. Analytic implications may depend on whether the point of view is that of the plaintiff or the defense. The defense will naturally be interested in the effect of Forum on an outcome variable with respect to defendants singly, whereas plaintiffs will be interested in these variables in incident terms, i.e., with respect to all defendants named in connection with a given claim-producing incident. Accordingly, analyses from both incident and defendant perspectives have been performed. These analyses are presented separately, reflecting generation of the study data in both incident and defendant units, respectively.

Incident-unit Analysis

The first stage of analysis was to compare the two Forums to assess their degree of comparability with respect to input (case or claim) characteristics. In particular, the objective was to identify any input which differed significantly by Forum, since such a difference might interfere with ("confound")

evaluation of each Forum's effect on outcomes (time, cost and disposition). Any such input would then be treated as a confounding variable and held constant ("controlled for") in the second stage of the analysis, whose objective was to compare outcomes by Forum. The issues (input variables) selected for this analysis were those for which (a) the data was complete enough to insure meaningful analysis and (b) there was reason to believe that the variable might be independently related to one ore more of the outcome measures under study.

Six input variables were examined: (1) number of defendants per incident; (2) severity rating of the injury generating the malpractice claim; (3) age of the injured person; (4) sex of the injured person; (5) incident location within the hospital; and (6) final diagnosis of the injured person's medical condition. Three of these--number of defendants, injury severity and age of injured person--were found to be potential "confounders". That is, these variables were differently distributed in the two forum samples and might be independently related to outcomes, requiring that they be held constant for a fair test of whether any differences in outcome are Forum-related.

Potential confounding input variables

Number of Defendants: Almost 62% of the incidents which gave rise to arbitration involved just one defendant compared with 21% for litigation. At the other end, only 6% of the arbitration incidents involved four or more defendants, compared to 29% of the litigation cases. The difference in these patterns is statistically significant at the .001 level;

consequently, it was necessary to hold this variable constant in examining outcomes by forum. (Table 1)

Among the reasons for the difference in this variable may be the difficulty in arbitrating a multiple-defendant case where not all defendants were pre-committed to arbitration. Any defendant who did not sign a preclaim arbitration agreement may decline to arbitrate; for both legal and practical reasons, this tends to force into the court forum a case which otherwise would be in arbitration. Another reason for the difference may be relative under-reporting of one-defendant incidents to the NAIC Survey (source of the litigation sample), since it would appear that the probability of an incident being reported to the Survey increased with the number of defendants. There is also the fact that the arbitration program was quite small-scale before 1975, and most of sample arbitration incidents occurred later. Multi-defendant incidents evidently take more time to resolve in either forum, and a large proportion of those occurring after 1975 and subsequently entering arbitration may have been unresolved by 1980 and, thus, could not be in the sample.

Severity of Injury: With respect to distribution of injury severity rating, there is a significantly greater proportion of death cases in litigation than in arbitration (17% compared to 3%), and a substantially lower proportion of temporary injury cases (47% compared to 64%). Of 126 arbitration incidents where severity was known, only 4 were death cases,

Table 1

Number of Defendants per Incident, by Forum

INPUT VARIABLE	FORUM			
Number of defendants per incident	Arbitration		Litigation	
	N	%	N	%
one	84	61.8	103	20.9
two	26	19.1	142	28.7
three	18	13.2	108	21.9
four or more	8	5.9	141	28.5
total known:	136	100.0	494	100.0
missing or unknown	2		6	
total incidents:	138		500	

(x^2=93.1, $p < .001$)

an unusually low figure for malpractice claims (Table 2). In California, the claim of wrongful death permits a separate cause of action, which means that an arbitration agreement signed by a decedent may not apply to his heirs. Thus, most death cases are filed in court. Moreover, many plaintiffs' attorneys prefer the court forum in these and other cases because they believe that the likelihood of recovery on the amount, or both, will be greater there than in arbitration.

Age of Injured Person: The patient-age distributions for arbitration and litigation are essentially similar except in the 60-and-over category, where the wide difference apparently led to the test finding of statistical significance at the .001 level. Only 13% of litigation cases involved persons 60 or over, in contrast to 32% for arbitration (Table 3). In general, older persons who filed medical malpractice suits will recover less than younger claimants because of lower earning potential. It may be that attorneys have tended to leave such cases in arbitration rather than seek to move them to court; certainly the anticipated value of the case may affect the attorney's judgment about proceeding in the arbitration forum. In any event, there is only a six-year difference in the patient mean ages for arbitration and litigation incidents, and it is hard to see how such a relatively small difference would have much effect on outcomes.

In summary the incidents which generated arbitration typically involved fewer defendants, somewhat less severe injury, and relatively older claimants. These differences are controlled

Table 2

Severity of Injury by Forum

INPUT VARIABLE	FORUM			
Injury Severity Rating	Arbitration		Litigation	
	N	%	N	%
Insignificant	10	7.9	21	4.2
Temporary	81	64.3	234	47.4
Permanent	31	24.6	154	31.2
Death	4	3.2	85	17.2
total known:	126	100.0	494	100.0
missing or unknown	12		6	
total incidents:	138		500	

($x^2=24.3$, $p < .001$)

Table 3

Age of Injured Person by Forum

INPUT VARIABLE	FORUM			
Age of Injured Person	Arbitration		Litigation	
	N	%	N	%
0-19	7	5.7	33	7.1
20-39	34	27.6	196	42.3
40-59	43	35.0	176	38.0
60 or more	39	31.7	58	12.6
total known:	123	100.0	463	100.0
missing or unknown:	15		37	
total incidents:	138		500	

($x^2=27.6$, $p<.001$)

14.2.6

for in the analyses of forum effect on selected outcome variables.

Other input variables

The other input variables examined--sex of injured person, incident location within the hospital, and final diagnosis--were not found to be differently distributed in the samples of incidents for the two forums (Tables 4 through 6). No significant difference was found in the relative frequency of male and female patients in the arbitration and litigation incidents. The distribution of the final diagnosis in the two forums roughly corresponds within the very large number of H-ICDA categories, which prevented any test of significance with the study data. Likewise, the distribution of incident location within the hospital appeared the same for both forums, although no test was made. An effort was made to compare claimed economic loss (claimed medical costs and wage loss incurred); unfortunately, that information was too often unobtainable for arbitration incidents to allow any useful analysis.

Outcomes

The main aspect of analysis is, of course, the comparison of outcome by forum. Outcomes examined included four principal elements: (1) whether any indemnity was paid and, if so, (2) what amount; (3) the mode of disposition of the incident or claim; and (4) the time required to resolve the matter. Unfortunately, cost data were too often missing for arbitration incidents to allow any forum comparison of defense costs, an obviously important outcome variable.

Table 4

Sex of Injured Person by Forum

INPUT VARIABLE	FORUM			
	Arbitration		Litigation	
Sex of injured person	N	%	N	%
Male	56	40.6	209	42.8
Female	82	59.4	279	57.2
total known:	138	100.0	488	100.0
missing or unknown	0		12	
total incidents:	138		500	

(x^2=0.3, N.S.)

Table 5

Incident Location Within Hospital, by Forum

INPUT VARIABLE	FORUM			
Incident location within hospital	Arbitration		Litigation	
	N	%	N	%
Operating or Recovery Room	67	56.3	187	65.4
Patient's Room	34	28.6	60	21.0
Other	18	15.1	39	13.6
	119	100.0	286	100.0
missing or unknown	19		214	
total incidents:	138		500	

(x^2=3.40; N.S.)

Table 6

Final Diagnosis of Patient's Presenting Medical Condition, by Forum

INPUT VARIABLE		FORUM			
		Arbitration		Litigation	
Final diagnosis of patient's presenting medical condition (H-ICDA category)		N	%	N	%
001.0-136.9	Infectious Disease	1	1.0	30	1.0
140.0-209.9	Malignant Cancer	8	8.2	143	4.6
210.0-239.9	Benign Cancer	3	3.1	113	3.7
240.0-279.9	Endocrine	1	1.0	63	2.0
280.0-289.9	Blood	0	0.0	9	0.3
290.0-318.9	Mental	1	1.0	61	2.0
320.0-389.9	Nervous System	2	2.0	113	3.7
390.0-458.9	Circulatory System	9	9.2	314	10.2
460.0-519.9	Respiratory System	2	2.0	100	3.2
520.0-577.9	Digestive System	4	4.1	351	11.3
580.0-629.9	Genitourinary System	7	7.1	279	9.0
631.0-678.9	Childbirth	6	6.1	164	5.3
680.0-709.9	Skin	1	1.0	37	1.2
710.0-739.9	Musculoskeletal	16	16.3	282	9.1
740.0-759.9	Congenital Anomaly	1	1.0	33	1.1
760.0-768.9	Newborns	0	0.0	9	0.3
770.0-796.9	Signs and Symptoms	7	7.1	127	4.1
800.0-999.9	Injuries	18	18.4	612	19.8
Y	Other category	11	11.2	254	8.2
	Total known:	98	71.0	3,092	95.3
	No. missing or unknown:	40	29.0	154	4.7
	Total incidents:	138	100.0	3,246	100.0

Frequency of Indemnity

The question most often raised is whether payment frequency in arbitration is different from that in litigation, given basically similar cases. Indemnity frequency is a dichotomy--either (a) payment by one or more defendants or (b) no payment by any defendant. The three potential confounding input variables--number of defendants, severity of injury and patient-age--were held constant in examining this outcome by forum. With respect to the number of defendants, the percentages of paid arbitration and litigation incidents were substantially similar, regardless whether one, two, three, or four or more defendants was involved. For one-defendant incidents, about 46% were paid in arbitration compared with 51%;for two defendant incidents the corresponding figures were 48% and 54%. Neither these differences nor those in the other categories were statistically significant. For all incidents combined, the percentages paid were 45% for arbitration and 53% for litigation, also not a statistically significant difference (Table 7).

When injury severity rating was held constant, there was no significant difference in indemnity frequency by incident. The bulk of incidents were in the temporary and permanent injury categories, and the percentage paid in each forum was quite close: 44% in arbitration for temporary injuries compared to 50% in litigation; for permanent injuries the figures were 69% and 61%, respectively (Table 8). Even though there were no paid arbitration incidents in the insignificant injury category, the test showed no significant difference between forums because of the small numbers of incidents. In the death category, the

Table 7

Indemnity Frequency per Incident , by Forum and Number of Defendants

INPUT VARIABLE	OUTCOME VARIABLE, by FORUM					
No. of defendants per incident	Arbitration		Litigation		x^2	P val.
	no.	% paid	no.	% paid		
one	57	45.6	95	54.7	1.18	N.S.
two	27	48.1	114	53.5	0.30	N.S.
three	20	30.0	92	52.2	3.5	N.S.
four or more	15	60.0	106	52.8	0.4	N.S.
Total known:	119	45.4	407	53.3	2.0	N.S.
unknown or missing	19		93			
Total incidents	138	100.0	500	100.0		

Table 8

Indemnity Frequency per Incident, by Forum and Severity of Injury

INPUT VARIABLE	OUTCOME VARIABLE, by FORUM					
Injury severity rating	Arbitration		Litigation		x^2	P val.
	no.	% paid	no.	% paid		
Insignificant injury	6	0.0	14	28.6		N.S.
Temporary injury	77	44.2	195	50.3	0.6	N.S.
Permanent injury	29	69.0	122	60.7	0.7	N.S.
Death	4	0.0	74	55.4	*	.05
Total	116	46.6	405	53.6	2.0	N.S.
missing	22		95			
total incidents	138	100.0	500	100.0		

* Fisher's Exact Test

the test showed marginally significant difference, but there were only four death cases in arbitration as aginst 74 in litigation. It is therefore reasonable to discount this result, since a few paid incidents in arbitration would be enough to change the test result to "no significance" (Table 8).

Indemnity frequency was also compared with respect to age of the injured person, which had been found to be differently distributed only in the 60-or-older category. There was no significant difference in payment frequency in this category but, surprisingly, there was a difference, significant at the .01 level, in the telescoped categories covering 0 to 59 years, where there had been similar distributions in the two forums (Table 9). Information at hand does not account for this finding; it may reflect the influence of one or more input variables not measured by the available data.

Disposition mode

The incident-unit comparison of forum outcomes included an aspect of one non-quantitative variable, disposition mode. Forum frequency of incidents involving a third-party decision was compared, showing up a remarkable pattern. In 38% of the arbitration incidents, but only 5% of those in litigation, a third-party (arbitrator or jury) decided the merits of the claim with respect to at least one defendant (Table 10). This difference, statistically significant at the .001 level, represents probably better than that for any other outcome a central distinction between the two forums--that it is substantially

Table 9

Indemnity Frequency per Incident, by Forum and Age of Injured Person

INPUT VARIABLE	OUTCOME VARIABLE, by FORUM					
Age of injured person	Arbitration		Litigation		x^2	P val.
(yrs.)	no.	% paid	no.	% paid		
0 to 59	98	35.7	446	52.5	8.5	.01
60 or over	32	68.8	53	58.5	0.8	N.S.
Total known:	130		499			
missing or unknown:	8		1			
Total incidents:	138		500			

Table 10

Frequency of Third-Party Decision by Incident, by Forum

OUTCOME VARIABLE	FORUM			
Disposition Mode	Arbitration		Litigation	
	no.	%	no.	%
Third-party decision on the merits	50	37.9	13	4.6*
Other disposition	82	62.1	268	95.4
total known:	132	100.0	281	100.0
missing or unknown:	6		219	
Total incidents:	138		500	

($x^2=77.7$, $p < .001$)

* This is a minimum percentage, since for technical reasons the disposition of each litigation incident which involved more than one defendant had to be represented by the disposition for a single defendant from that incident; such representative defendants were selected systematically.

easier, less costly, and less time-consuming to get a malpractice claim adjudicated (i.e., to get a decision on the merits) in arbitration than in court.

The importance of the difference in decision frequencies should not be assessed in time and money alone. It is critical to recognize that adjudications, though they occur only in the minority of incidents in each forum, set the overall pattern of expectations for party-determined claim dispositions, which occur in the majority of incidents in each forum. Many have suggested that arbitrators are less likely than juries either to find liability on small evidence of negligence or, having found liability, to award indemnity in an amount which may be considered excessive. If so, then arbitration might be expected to produce a more normative pattern of outcomes than litigation, including the outcomes reached by party action. In any event, arbitration's relatively easier access to comparatively quick and inexpensive adjudication favors claims having some merit but low value, and which it would accordingly be uneconomic to pursue in court.

Also compared was indemnity frequency for incidents decided by arbitration award and court trial. The payment frequency of 40% in arbitration decisions and 46% in litigation decisions were not statistically significant (Table 11).

Indemnity amount

Distributions of amount of indemnity for incidents in which some payment was made were not significantly different by forum. A few litigation incidents involving very high payments resulted

Table 11

Indemnity Frequency in Third-Party Decisions on the Merits, Incidents by Forum

OUTCOME VARIABLE	FORUM			
	Arbitration		Litigation	
Indemnity frequency in third-party decisions	n	%	n	%
Decision awarding indemnity	20	40.0	6	46.2
Decision denying indemnity	29	58.0	7	53.8
Decision unknown	1	2.0	0	0.0
Total incidents known to involve a decision on the merits	50	100.0	13*	100.0
Other incidents	88		487	
Total incidents	138		500	

(x^2=0.1, N.S.)

* This total is a minimum since, for technical reasons, the disposition of each litigation incident involving more than one defendant had to be represented by the disposition for just one defendant from that incident; such representative defendants were selected systematically.

in high mean dollar values for litigation in some categories in Tables 12, 13 and 14, which examine indemnity per incident while controlling for number of defendants, injury severity, and age of injured person.

The analysis by number of defendants showed mean indemnity for all known paid incidents of $34,494 for arbitration and $47,434 for litigation, not a statistically significant difference. Mean indemnity difference for one-defendant incidents was marginally significant (p=.05); mean indemnity was $8,018 for 27 arbitration incidents and $18,129 for 52 litigation incidents (Table 12). However, it is hard to make much of this in view of the clear lack of significance of the other differences in this table. The reason may be related to under-representation of one-defendant cases in litigation (or over-representation in arbitration), as earlier discussed.

Mean indemnity difference by forum was likewise found not to be statistically significant when considered in relation to severity of injury (Table 13). In that analysis, however, there were no arbitration incidents in either the insignificant injury or death categories for which indemnity was paid; accordingly, no statistical test could be made for those categories. The absence of paid incidents in the death category may also relate to the legal status (earlier discussed) of wrongful death claims in California.

The patient-age patterns, like those for the other two potential confounders, disclose no statistically significant difference in indemnity amount (Table 14). In sum, although the

Table 12

Mean Indemnity per Incident,* by Forum and Number of Defendants

INPUT VARIABLE	OUTCOME VARIABLE, by FORUM					
No. of defendants per incident	Arbitration		Litigation		t-test	P val.
	mean$	(n)	mean$	(n)		
one	8,018	(27)	18,129	(52)	2.01	.05
two	19,530	(14)	51,644	(61)	1.82	N.S.
three	19,898	(6)	42,915	(49)	1.31	N.S.
four or more	139,658	(9)	75,218	(56)	0.64	N.S.
Total (known paid incidents):	34,495	(56)	47,434	(218)	0.77	N.S.

* incidents for which some amount of indemnity was paid

Table 13

Mean Indemnity per Incident* by Forum and Severity of Injury

INPUT VARIABLE	OUTCOME VARIABLE, by FORUM					
Injury severity rating	Arbitration		Litigation		t-test	P val.
	mean$	(n)	mean$	(n)		
insignificant	--	(0)	4,563	(4)	--	--
temporary	7,693	(34)	13,695	(99)	1.89	N.S.
permanent	80,555	(21)	75,422	(75)	0.11	N.S.
death	--	(0)	81,485	(41)	--	--
Total (known paid incidents)	34,495	(55)	47,434	(219)	0.77	N.S.

* incidents for which some amount of indemnity was paid

Table 14

Mean Indemnity per Incident,* by Forum and Age of Injured Person

INPUT VARIABLE	OUTCOME VARIABLE, by FORUM			
Age of injured person	Arbitration	Litigation	t-test	P val.
	mean$ (n)	mean$ (n)		
0 to 59	45,046 (35)	52,452 (190)	0.3	N.S.
60 or over	17,709 (22)	15,651 (30)	0.3	N.S.
Total (known paid incidents)	34,495 (57)	47,434 (220)	0.3	N.S.

* Incidents for which some amount of indemnity was paid

mean indemnities for the arbitration and litigation incidents here are very different in absolute terms, the differences are not significant statistically and, thus, do not establish an order of forum difference. Nor should they be regarded as typical values for the two forums, since the standard deviations of the distributions were very large, indicating instability. Much larger samples are needed to establish typical values.

Time

A similar analysis, including the possible effect of confounders, was undertaken to determine whether there were differences between forums in respect to the number of weeks for (a) filing a claim and (b) processing the case and (c) the total transaction.

With respect to these three time components--report, processing, total--evaluated by number of defendants involved, arbitration cases required substantially less time, in general (Table 15). For instance, arbitration cases were reported within 51 weeks compared to 78 for litigation; they were processed within 92 weeks compared with 198. Within the defendant categories, however, there were differences in either direction. For example, there was apparently no statistical significance, by t-test, in respect to time intervals for cases involving three and more defendants. But there were marked differences in respect to the one-defendant cases, and, to some extent, for two-defendant cases. This table also illustrates the greater elapsed time in both forums, for all components, as numbers of defendants increase. For example, total time for one-defendant cases (arbitration) was recorded as 118 weeks, compared with 171 for four or more defendant cases. In parallel, litigation

Table 15

Report, Processing and Total Time per Incident, by Forum and Number of Defendants

INPUT VARIABLE	OUTCOME VARIABLE, by FORUM					
Number of defendants per incident		Arbitration		Litigation	t-test	p val.
		mean wks.	(n)	mean wks.	(n)		
one	Report time	38	(29)	69	(101)	3.22	$<.01$
	Processing time	79	(29)	100	(101)	2.02	$<.05$
	Total time	118	(54)	168	(102)	3.68	$<.001$
two	Report time	66	(21)	81	(140)	1.10	N.S.
	Processing time	84	(21)	121	(140)	2.43	$<.05$
	Total time	148	(28)	203	(140)	3.30	$<.01$
three	Report time	48	(15)	83	(106)	2.61	$<.05$
	Processing time	111	(15)	121	(106)	0.58	N.S.
	Total time	149	(18)	204	(105)	1.86	N.S.
four or more	Report time	61	(10)	79	(138)	0.87	N.S.
	Processing time	120	(10)	134	(139)	0.61	N.S.
	Total time	171	(14)	212	(139)	2.15	$<.05$
TOTALS	Report time	51	(75)	78	(485)	4.75	$<.001$
	Processing time	92	(75)	120	(486)	3.52	$<.001$
	Total time	136	(114)	198	(486)	7.80	$<.001$
missing or unknown:	Report time		(63)		(15)		
	Processing time		(63)		(14)		
	Total time		(24)		(14)		
Total incidents			138		500		

ranged from 168 weeks to 212 weeks.

When time components were reviewed in relation to severity of injury, again the general outcomes favored arbitration. However, the extremes of insignificant injury and death categories, for which there were relatively few cases did not apparently demonstrate difference between forums. The cases for temporary injury and permanent injury which are characteristically prominent in both forums illustrate that in respect to report time, processing and overall time, arbitration is considerably faster. For instance, permanent injuries for arbitration required 149 weeks compared to 224; for temporary injuries, comparable figures were 133 weeks and 184 (Table 16).

Analysis of elapsed time by the two age groupings, 0-59 and 60 and over, clearly demonstrates that for cases involving younger persons, all time elements markedly favor arbitration. Thus, 144 weeks were required, in total, for arbitration compared with 202 weeks for litigation. The smaller group, namely 60 and over, did not show such a clear statistical difference but, on the whole, time for reporting, processing and for the entire case management indicate that arbitration was faster (Table 17).

These analyses confirm that, for all bases, arbitration is faster, even though in some particulars, this difference is not as powerful, statistically. The difference in report time which is consistent cannot be explained as a function of the arbitration process or administration; thus, either the nature of the case or the determination of the attorney, to accept the arbitration agreement, may account in part for the earlier

Table 16

Report, Processing and Total Time per Incident, by Forum and Severity of Injury

INPUT VARIABLE		OUTCOME VARIABLE, by FORUM					
Injury Severity Rating		Arbitration		Litigation		t-test	P val.
		mean wks.	(n)	mean wks.	(n)		
Insignificant Injury	Report time	23	(5)	101	(20)	3.63	<.01
	Processing time	102	(5)	96	(21)	0.19	N.S.
	Total time	128	(8)	191	(20)	1.86	N.S.
Temporary Injury	Report time	51	(47)	71	(229)	2.51	<.05
	Processing time	90	(47)	113	(229)	2.29	<.05
	Total time	133	(75)	184	(230)	5.15	<.05
Permanent Injury	Report time	56	(20)	96	(151)	3.71	<.001
	Processing time	91	(20)	128	(151)	2.61	<.001
	Total time	149	(27)	224	(151)	5.35	<.001
Death	Report time	57	(3)	61	(85)	0.16	N.S.
	Processing time	110	(3)	132	(85)	0.53	N.S.
	Total time	142	(4)	193	(85)	1.15	N.S.
Totals	Report time	51	(75)	78	(485)	4.75	<.001
	Processing time	92	(75)	120	(486)	3.52	<.001
	Total time	136	(114)	198	(486)	7.80	<.001
missing or unknown values:							
	Report time		(63)		(15)		
	Processing time		(63)		(14)		
	Total time		(24)		(14)		
Total incidents:			138		500		

149.a

Table 17

Report, Processing and Total Time per Incident, by Forum and Age of Injured Person

INPUT VARIABLE	OUTCOME VARIABLE, by FORUM					
Age of Injured Person (years)		Arbitration mean wks.	Arbitration (n)	Litigation mean wks.	Litigation (n)	t-test	p val.
0 to 59	Report time	56	(53)	82	(444)	3.7	$<.001$
	Processing time	99	(53)	122	(444)	2.8	$<.01$
	Total time	144	(93)	202	(445)	6.7	$<.001$
60 or over	Report time	38	(24)	59	(53)	1.5	N.S.
	Processing time	78	(24)	109	(53)	2.1	$<.05$
	Total time	116	(31)	169	(53)	2.9	$<.01$
TOTALS	Report time	51	(74)	74	(460)	4.04	$<.001$
	Processing time	94	(74)	121	(460)	3.3	$<.001$
	Total time	138	(115)	194	(461)	7.56	$<.001$
missing or unknown:							
	Report time		(61)		(3)		
	Processing time		(61)		(3)		
	Total time		(14)		(2)		
Total incidents:			138		500		

filing. Also, the possibility exists that arbitration filing may be easier and thus pursued more rapidly. Processing time, on the other hand, is likely to be faster under the informality and procedural accommodation of arbitration. This difference is clearly borne out by these data, in all the analyses.

Analysis based on Defendants

In addition to the foregoing analysis in incident units, further analysis was made in defendant units, that is, based on claims with respect to defendants individually. As discussed previously, the defendant or claim is the unit universally employed by liability insurors for rate-setting and other business purposes. Consequently, claim-or defendant-unit data are, for the most part, the only substantial malpractice data readily available, with the result that nearly all previous studies have been based on the claim unit almost exclusively. But, as explained earlier, claim-unit analysis is from the defense perspective, and for some important variables it fails to represent or, worse, misrepresents the claimant perspective on medical malpractice. This does not mean that defendant-unit analysis is inherently bad or wrong, but only that it should not be exclusive, as it tells just part of the story. In this study, defendant-unit analysis is undertaken for two general reasons: first, some variables examined are either best measured or are expressible at all only in defendant units; and second, some variables examined are measurable either in incident or defendant units, but with potentially different analytic results.

As mentioned in the discussion of the data sources, the litigation incidents were represented by a sample of defendants. A simple random sample of 500 defendants was drawn to represent defendants asscciated with NAIC's 3,246 southern California hospital incidents which evidently involved a lawsuit. While this sample <u>is</u> representative of the group of such defendants

for whom NAIC received claim reports--the minority--it may not be representative of those for whom NAIC did not receive a claim report--the majority. (See discussion of Tables in section on Data)The 500-incident litigation sample was not affected by this problem because there were no "missing" incidents--only missing defendants.)

The 500-defendant litigation sample was drawn irrespective both of how many defendants were involved in each incident and of which defendants were co-defendants in a given incident. In contrast, the "arbitration" defendants include all defendants (a total of 293) known to be associated with the 138 "arbitration" incidents. The claims as to some few of these "arbitration" defendants were eventually resolved in court, however, owing to forum crossover. In any event, sampling the "litigation" defendants was appropriate statistically because otherwise the large difference in the litigation and arbitration sample sizes would have made the tests of significance artificially sensitive.

Potentially confounding input variables

Missing or unavailable data limited analysis of defendant-unit inputs to four: (1) number of defendants involved in the incident; (2) injury severity rating for the incident; (3) type of defendant; and (4) age of physician defendants.

Number of defendants: This variable proved not to be a confounder when treated categorically (i.e., one, two, three, four, or five or more defendants per incident); no significant difference was found in the distribution by forum (Table 18). Although

Table 18

Number of Defendants per Incident, by Forum, in Defendant Units

INPUT VARIABLE	FORUM			
Number of Defendants per incident	Arbitration		Litigation	
	No.	%	No.	%
One	63	22.7	92	18.4
Two	62	22.4	117	23.4
Three	66	25.3	108	21.6
Four	33	10.5	59	11.8
Five or more	53	19.1	124	24.8
Total known:	277	100.0	500	100.0
Unknown	16		0	
total defendants	293		500	

(x^2=4.76, N.S.)

there was a statistically significant difference between forums when number of defendants was treated as a continuous variable (i.e., when the mean number of defendants per incident was compared), this was ignored because a few litigation incidents involved very large numbers of defendants (in one incident, 39), distorting the mean on the high side. Since the number of defendants per incident, whether in incident or defendant units, is not normally distributed, the categorical analysis is clearly more appropriate.

It will be noted that the number of defendants per incident was associated with Forum in incident terms but not in defendant terms. The explanation probably lies in the relative completeness of the data for the two Forums, illustrated in figure below.

fig. 1

	INCIDENT BASE		DEFENDANT BASE	
	no. of defendants	no. of incidents	no. of defendants expected a/	no. of defendants observed
ARBITRATION (N=116 incidents)	one	63	63	63
	two	31	62	62
	three	22	66	66
LITIGATION (N=2296 incidents)	one	759	759	761 b/
	two	875	1750	1010
	three	662	1986	868

a/ (no. of defendants) X (no. of incidents) = no. of defendants expected

b/ probable coding error for two defendants

In the arbitration data base the observed number of defendants is the same as the expected number because basic information for all defendants associated with each incident was known. In the litigation base, however, the expected and observed numbers differ widely for multiple-defendant incidents because NAIC did not receive claim reports for all defendants associated with each such incident.

There are several reasons for this discrepancy in the litigation data. First, the claims with respect to many of the defendants may not have been closed during the 1975-78 NAIC data capture period. Second, some defendants were insured by carriers which did not participate in the NAIC Survey, and some were simply not insured. Third, some participating insurors probably failed in some instances to report associated closed claims. And fourth, some defendants may not have been correctly linked to their common incident.

Obviously, the greater the number of defendants per incident, the greater the likelihood that the claim report for at least one defendant involved in that incident will be missing from the data base. This incompletness does not <u>necessarily</u> produce a nonrepresentative sample of litigation defendants, however. It seems unlikely that there was any systematic failure to file claim reports for certain defendants and those for whom reports were filed are probably the majority of defendants for whom southern California claims based on hospital incidents were closed during the NAIC Survey. It is thus reasonable to assume that the recorded group of defendants has substantially the same

characteristics as their "missing" counterparts, about whom nothing but their number is known.

Injury severity rating: As was true for the incident-unit analysis, severity of injury in defendant terms was found to be significantly differently distributed by forum. Not unexpectedly, litigation defendants were far more often associated with incidents involving a death (25% compared with 2.6%). On the other hand, defendants in the arbitration incidents were more often associated with insignificant and temporary injury (together, 65% of all arbitration defendants compared with 48% of those in the litigation sample (Table 19). Thus, analysis of outcomes had to take injury severity into account as a potential confounder.

Type of defendant: The distributions of type of defendant by forum are remarkably similar. Physician and hospital defendants together account for 97% of arbitration defendants and 99% of those in litigation. Physicians were the larger group, accounting for virtually the same percentage in each forum--56% in arbitration, 55% in litigation. The percentages of hospital defendants were not quite so close at 40% for arbitration and 44% for litigation (Table 20). But these patterns are so similar that even though no test of significance was performed for these data, it was concluded that the type of defendant is not a potentially confounding variable.

Age of physician defendants: This final input was examined categorically rather than as a continuous variable because the mean age difference between forums was only some six years. The

Table 19

Severity of Injury by Forum, in defendant units

INPUT VARIABLE	FORUM			
Injury severity rating	Arbitration		Litigation	
	No.	%	No.	%
Insignificant	34	12.6	44	8.9
Temporary	140	52.1	194	39.2
Permanent	88	32.7	133	26.9
Death	7	2.6	124	25.1
Total known	269	100.0	495	100.0
Unknown	24		5	
Total defendants:	293		500	

($x^2=59; p < .001$)

Table 20

Type of Defendant by Forum

INPUT VARIABLE	FORUM			
Type of Defendant	Arbitration		Litigation	
	no.	%	no.	%
Physician*	161	56.1	276	55.2
Hospital	116	40.4	221	44.2
Other Professional	5	1.7	0	0.0
Other Facility	5	1.7	3	0.6
Total:	287	100.0	500	100.0
unknown:	6		0	
Total defendants:	293		500	

* M.D. or D.O.

three age categories--under 35, 35 to 59, and 60 or over--were supposed to reflect three distinct stages in medical practice: (1) entry-level, (2) mid-career and (3) pre-retirement. An interesting difference of pattern was discovered, statistically significant at the .001 level (Table 21). While the pre-retirement group included nearly the same percentage of doctor defendants in each forum, there was a substantial difference in the mid-career percentages (71% in arbitration, compared to 83% in litigation) and a marked difference in the entry-level group (17% compared to just 4%). This difference may be due to the fact that most of the early arbitration incidents arose in hospitals which were part of the California arbitration pilot project. In these hospitals, staff physicians were automatically participants in the program. As employees, they were generally younger than attending and consulting physicians, who could each decide independently whether to participate in the arbitration program.

While the distribution of physician age is clearly different for the two forums, it is thought to have at most only a weak independent relation to the outcomes which this study examines (time, indemnity frequency, and indemnity amount). Accordingly, it has not been treated as a confounding input.

Outcome Variables

Four outcome variables were examined in defendant terms: (1) indemnity frequency; (2) indemnity amount; (3) claim disposition mode; and (4) time increments. Although some other outcome variables were judged important (particularly defense costs), regrettably there was too much missing data to permit their meaningful analysis.

Table 21

Age of Physician Defendants, by Forum

INPUT VARIABLE	FORUM			
	Arbitration		Litigation	
Age of physician defendants (yrs)	no.	%	no.	%
under 35	25	17.1	9	3.9
35 to 59	103	70.5	190	83.0
60 or over	18	12.4	30	13.1
Total known	146	100.0	229	100.0
unknown or not physician	147		271	
Total defendants	293		500	

($x^2=19.8$, $p < .001$)

As discussed above, injury severity rating was the only control variable for the analysis of forum outcome patterns.

Indemnity frequency: The question here is whether, in defendant terms, there is any difference between the respective proportions of indemnity payments made in arbitration and litigation. The data were stratified by the control, injury severity category. With respect to insignificant and temporary injuries there was no statistical difference. However, for permanent injuries, a marked difference appears: indemnity was paid for 59% of arbitration defendants but for only 36% of litigation defendants. Because only two arbitration defendants, as against 122 litigation defendants, were involved in death cases, no test was possible or appropriate in that category. Unfortunately, there is considerable missing information on indemnity frequency for defendants associated with the arbitration incidents (Table 22). On the whole, the data show that forum does not affect indemnity payment frequency for defendants except within the permanent injury category. The statistical difference for this category is at the .01 level, arbitration defendants paying indemnity significantly more often. It seems clear, though, that this pattern is not very different, in statistical terms, from that for indemnity frequency for severity-controlled incidents (Table 8). Based on the two analyses, then, there is substantial evidence that at least where injury is insignificant or temporary, defendants in cases which enter arbitration are no more likely to pay indemnity than those in cases filed in court.

Table 22

Indemnity Frequency per Defendant, by Forum and Severity of Injury

INPUT VARIABLE	OUTCOME VARIABLE, by FORUM					
Injury Severity Rating	Arbitration		Litigation		x^2	P val.
	no.	% paid	no.	% paid		
Insignificant	17	17.7	43	20.9	0.08	N.S.
Temporary	105	44.8	193	42.0	0.22	N.S.
Permanent	49	59.2	132	36.4	7.6	$<.01$
Death	2	0.0	122	39.3	--	
Total known	173		490			
missing or unknown	120*		10			
Total defendants	293		500			

*for 107 of these 120 defendants it was not known whether any indemnity was paid

Table 23

Frequency of Third-Party Decision by Defendant, by Forum

OUTCOME VARIABLE	FORUM			
Disposition Mode	Arbitration		Litigation	
	no.	%	no.	%
Third-party decision on the merits	85	41.9	30	6.0
Other	118	58.1	470	94.0
Total known:	203	100.0	500	100.0
Unknown:	90*		0	
Total defendants:	293		500	

(x^2=137, $p < .001$)

* Few, if any, of these incidents involved a third-party decision on the merits with respect to any defendant.

Table 24

Indemnity per Defendant,* by Forum and Severity of Injury

INPUT VARIABLE	OUTCOME VARIABLE, by FORUM					
Injury Severity Rating	Arbitration		Litigation		t-test	P val.
	mean$	(n)	mean$	(n)		
Insignificant	218	(3)	1,543	(9)	1.64	N.S.
Temporary	5,562	(47)	8,805	(81)	1.15	N.S.
Permanent	55,815	(29)	57,523	(48)	0.05	N.S.
Death	--	(0)	32,797	(48)	--	--
Total known:		(79)		(186)		
missing or unknown:		(2)				
Total defendants for whom some indemnity was paid:		81				

* Defendants for whom some amount of indemnity was paid

Indemnity amount: Analysis of amount of indemnity paid by defendants is based on just those defendants for whom some indemnity was paid. The small number of cases makes it hard to provide any strong comparative statement. Altogether, the analysis had to be based on 79 arbitration defendants and 186 litigation defendants (Table 23). While mean indemnity amounts at all severity levels were lower for arbitration defendants than for those for litigation, there was great variability in each range, indicating that the means were hardly typical (Table 24). The test applied showed no statistical significance, as did the test in the parallel incident-unit analysis (Table 13). Thus, it cannot be stated that forum importantly affects the average indemnity payment by a defendant.

Time: The critical comparison, as in the case of incident units, related to time required for reporting and managing cases in each forum. For this analysis, the data were stratified by injury categories. In all categories, average time for arbitration, calculated in mean weeks, was faster than for litigation (Table 25). Thus, for report time, the figures were 53 weeks for arbitration compared with 69 for litigation; 98 weeks compared with 118 for processing time and, correspondingly, 149 versus 188 for total time. With respect to permanent injury, the most striking difference can be sen in respect to all three time components. The report time for arbitration averaged 57 weeks compared with 82 for litigation; processing time averaged 91 weeks compared with 119; and total time came to 146 weeks on the average compared with 201 weeks. It should be borne in mind that

Table 25

Report, Processing, and Total Time per Defendant, by Forum and Severity of Injury

INPUT VARIALBE		OUTCOME VARIABLE, by FORUM					
Injury Severity Rating		Arbitration mean wks.	(n)	Litigation mean wks.	(n)	t-test	p val.
Insignificant	Report time	29	(18)	81	(43)	4.2	< .001
	Processing time	84	(9)	106	(44)	1.6	N.S.
	Total time	114	(11)	185	(43)	4.5	< .001
Temporary	Report time	54	(89)	63	(193)	1.4	N.S.
	Proccssing time	106	(44)	119	(193)	1.2	N.S.
	Total time	163	(47)	183	(194)	1.46	N.S.
Permanent	Report time	57	(53)	82	(133)	3.7	<.001
	Processing time	91	(17)	119	(133)	2.04	<.05
	Total time	146	(20)	201	(133)	4.42	<.001
Death	Report time	76	(6)	61	(124)	0.55	N.S.
	Processing time	78	(2)	124	(124)	0.94	N.S.
	Total time	106	(2)	185	(124)	1.3	N.S.
TOTALS	Report time	53	(169)	69	(498)	3.9	<.001
	Processing time	98	(73)	118	(499)	2.5	<.05
	Total time	149	(82)	188	(499)	4.5	<.001
Unknown or missing values	Report time		(124)		(2)		
	Processing time		(220)		(1)		
	Total time		(211)		(1)		
Total defendants			293		500		

there was also a wide range here and, again, average time for a particular category cannot be construed as typical. On the whole, however, the pattern shows a substantial difference favoring arbitration as the faster method.

C. Summary

The highlights of the comparative analysis can best be summarized by answering three questions:

Findings

1. To what extent do arbitration and litigation differ?
   Statistically, a significant difference is found only with respect to time. In both case (incident) and claim (defendant) analyses, arbitration is generally faster in respect to total time for management and the components of report and processing time. This is true when variables of injury severity and number of defendants are controlled. Thus, arbitration appears to be a more efficient process, by this measure.
2. To what extent are arbitration and litigation equivalent?
   Statistically, there seems to be no difference in outcome, that is, in indemnity payment ratio or average amount paid, for similar cases, i.e., when confounding variables are controlled. However, there are insufficient data for comparing other important variables such as expenses and costs for plaintiffs or defendants.
   It appears, however, that cases entering the arbitration forum are more likely to proceed through the entire process including hearing and award than litigation. Stated otherwise, adjudication on merits of the case is more often found in arbitration, possibly reflecting ease and economy of process. It must be recognized, that this finding relates solely to cases which have entered each forum, that is, by request for arbitration, by at least one concerned party, and

for litigation,by some formal court filing. Cases which were closed without such action which were subject to either jurisdiction were not considered in the study. There is no reason, however, to believe that these would be essentially different substantively or medical/legally from those which did.

3. To what extent does each system appear to serve the needs of the parties and of medical and health practice?

Statistical data based on these samples cannot provide measures to which the parties can refer for purposes of deciding the forum to use, if choice is available. However, administratively it is clear that arbitration offers essentially the same outcomes with apparent advantages in time and, likely, cost. Also arbitration offers greater possibility of adjudication compared with party-determination. The data cannot assure that these findings would obtain if all types of cases were submitted to each forum on a random basis. To the extent that the variables have been controlled for certain analyses, the arbitration forum seems able to accommodate all types of cases and treats them essentially the same but more rapidly and efficiently.

The procedural advantages of arbitration, coupled with these outcomes, would suggest that arbitration can well serve the health field for management and prevention.

Limitations

The major limitation was the relatively small number of arbitration cases available for study and the particular area and program which had to be selected for comparison of arbitration and litigation experience. On the other hand, there is reliability,

since both court and arbitration cases derive from the same geographic and population base. Adjusting the data to permit valid comparison further reduced the numbers which could be used. Also, for certain analyses, the case rather than claim unit was employed and, because of data gaps, certain findings apparently differed statistically.

Despite such handicaps and others recognized but not detailed, certain comparisons can be considered as probative. What was not established statistically could be inferred, in many instances, from knowledge of the law, the program and practice in the locale.

With these cautions, the findings can be accepted. They cannot be generalized for other areas or even other arbitration systems. But, they do confirm the application of arbitration as a useful process, providing appropriate outcomes, well and effectively.

IV. FINDINGS AND RECOMMENDATIONS

Although this report culminates about six years of study, issues in understanding medical malpractice arbitration as a process and as an alternative forum will remain for many years. For one, the experience both in time and volume has been limited. For another, assembly and manipulation of data recognized as important for these analyses could not be achieved to the extent deemed necessary for full scientific assessment. Finally, this study does not include subjective information, particularly the views of attorneys who participate in arbitration and the understanding of policy makers, legislators and others who are concerned or affected by medical malpractice administration. Despite these understandable limitations and that only those questions that could be reliably answered by closed case data could be posed, the findings stand as the first statement of the nature of arbitration intrinsically and comparatively.

The statistical study covered a relatively small compass in terms of medical malpractice but virtually the universe of arbitration in this field. For the study on arbitration, all identified closed cases which were reported to the American Arbitration Association directly or indirectly were included. This base covered a span of about ten years and included examples from some fourteen jurisdictions, chiefly California and Michigan. For the comparative analysis, a special sample was drawn from southern California representing hospital-related incidents, because of the availability of information principally from the southern California hospital pilot project

and data from the NAIC survey for this area.

It was not possible for either study to include cases which were subject to arbitration under agreements but which were not represented by entry into a forum. Whether the inclusion of such information would have substantially changed some of the results cannot be ascertained. It is reasonable to suppose, however, that there is no substantive difference between cases which enter the forum and those which were subject to arbitration, since the California program is based on a pre-claim agreement which did not permit choice of forum based on the nature of the case.

Findings

Efficiency: The outstanding finding in the comparative study was that, for all types of cases, arbitration appeared to be the more efficient method, as measured in terms of time for report and processing.

Equivalence: Otherwise, outcomes were essentially the same. The effect of forum on such factors as indemnity payment and amount of payment does not appear to be significantly different.

Fairness: In view of this fairly conclusive result, there can be no substance to the notion that arbitration produces compromise or that it favors one side or the other.

Availability: It is true, from the study data, that certain types of cases do not enter the arbitration forum with the same frequency, as they go into litigation, for example, claims by survivors in death cases. These are artifacts of the law and are not aspects of arbitration or its procedures. There is indeed

sufficient evidence to support the fact that arbitration can and does accommodate all types of cases.

Formats: Moreover, the special features of arbitration, versatility and flexibility, permit parties to design formats, programs, rules and procedures which meet the needs of the health industry and the requirements and preferences of the parties.

Disposition: The comparative study also disclosed that cases in arbitration were more likely to be adjudicated on the merits. Relatively few which entered the court forum went to verdict by judge or jury whereas in arbitration about one third proceeded to award. This may be a reflection of the relative ease and economy of the arbitral process and it may also demonstrate that once arbitration is selected the parties intend to use it fully. In any event, the decision-making process of specialists or experts which arbitration offers is more frequently in play.

Use: The arbitration experience was limited by the relatively infrequent use of a method which has been available for many years in this country under general arbitration law and more recently under special statute. Within a brief span of about five years in the mid-70s, fourteen jurisdictions passed medical malpractice arbitration statutes, as part of the national reform movement. In California, such a law largely confirmed pre-existing programs and in Michigan, currently the most active, the new statute provided a voluntary system which differed from others in requiring an offer of arbitration by hospitals and other health institutions as a condition of insurability.

In other states, passage of the law apparently did not persuade medical societies, bar associations, insurance organizations or others to adopt private contractual arrangements. Thus, more than legal and administrative availability appear to be needed for considering other approaches.

Recommendations

Recommendations are best divided into suggestions for further study and for immediate action.

Further study: The description of the arbitration experience and the comparative analysis were, in effect, pilot studies. The nature and amount of data precluded the type of extensive and intensive examination which this subject requires.

(a) Future research should be undertaken based on more complete data and, desirably replicated in another study, probably Michigan. In this jurisdiction, arbitration is offered as a condition of insurance for hospitals and health institutions by virtue of a special statute. The number of cases has been steadily increasing, leading to the possibility of a comprehensive study. (It may be noted that an evaluation of the Michigan program is planned for 1982 in accordance with the statutory requirement.)

(b) For any further study, complementary surveys based on the experience of participants should be included. Plans for such a subjective component were developed by the AAA Research Institute and are available for this purpose.

(c) Additional data concerning medical malpractice should be collected through appropriate surveys or reporting programs similar to that undertaken by the National Association of Insurance Commissioners. Without such national information it will be impossible to mount definitive and reliable inquiries into the nature and source of medical malpractice claims and their dispositions.

(d) Although many states now collect claim and payment information, there is no uniform reporting system and no central depository of data or analytic activity. Thus, the work of the last decade will not be fully productive since there will be no continuing series of factual information. In devising new surveys special attention should be given to issues which have become prominent in the development of short and long-term resolutions, for example, accurate reporting of arbitration, screening and other methods of processing and disposition.

(e) Studies on medical malpractice screening, mediation and other pre-trial systems for resolving medical malpractice claims should specifically incorporate data on and reference to arbitration. Although arbitration is a substitute for rather than an adjunct to the court process, it is essential that all mechanisms for medical malpractice management be considered in any comprehensive review of the field.

(f) The methodology developed for this study should be further tested by using a larger array of input and outcome variables and better sampling. The work done demonstrates the importance of careful data collection, appropriate samples for comparative studies, selection of the correct unit or measure and, most

important, the need for better characterization of medical/ legal issues. This study and others establish that available medical categories do not adequately reflect the essence of medical malpractice in either legal, social or administrative considerations.

Action: Specific action might be taken as a direct result of these studies.

(a) The findings and conclusions should be widely disseminated. To date, the attitudes concerning arbitration and its use have very largely been based on conjecture and speculation. The factual information on legislation, legal application, administration and, chiefly, analysis of completed cases should dispel many notions held by attorneys and others regarding the availability of arbitration and the outcomes resulting from effective use of the process. There must be a factual base instead of a body of opinion without experience or knowledge.

(b) The versatility of arbitration suggests that programs and formats can be devised for the health industry and meet the needs of the parties so that there can be a satisfactory alternative to litigation. To the extent that the report answers questions about what has been done the potential for arbitral approach will be improved.

(c) Evaluation of arbitration as a continuing feature in use of arbitration should be emphasized. At present there are several major plans, both public and private, as well as for various types of clientele. Some of these data have not been reported in this project, for example the programs of Kaiser and other health maintenance and group practice organizations. It

is essential to report and assess all known examples of arbitration so that future programs can be designed on the basis of the best features of each type.

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MALPRACTICE ARBITRATION: COMPARATIVE CASE STUDIES

APPENDIX

A. Information Manual for Data in the Medical Malpractice Data Base

B. Medical Malpractice Research Data Base (Statement)

C. Selected Bibliography

D. Methodological Note: Problems Affecting Forum Comparison

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National Center for Health Services Research,
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Public Health Service
Department of Health and Human Services

APPENDIX A

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I N F O R M A T I O N M A N U A L

for data in

The Medical Malpractice Arbitration Research Data Base

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INTRODUCTION

Information Manual

This Information Manual is a companion tc the capture form used to record and code all data constituting the American Arbitration Association's Medical Malpractice Arbitration Research Data Base. The Manual is intended to be read together with the capture form, which is incorporated as Appendix A herein. The Manual is not an instruction book for data extraction and coding, however. Rather, it explains each data item, providing information on its definition, coding, significance or relation to other data (particularly where that may not be obvious), and points out recognized assumptions, limitations and possible analytic uses. The Manual follows the capture form outline. Questions on the capture form (but not the code options) are repeated in sequence in the Manual; the table of contents provides cross-reference between the two. A brief description of the arbitration data base and data capture,comparison uses, coding and keypunching follows.

Data base description

Until 1979, little or no data on medical malpractice arbitration case substance, outcome, time and cost had been available in an organized format. Now, however, with the significant increase in arbitration activity since 1975 (particularly under statewide programs in California and Michigan, where most patients entering participating hospitals routinely sign voluntary agreements to arbitrate any claims which they may later have),data for objective studies is now available in a machine-readable data base developed by the Research Institute of the American Arbitration Association. Association. In constructing this data base, the Institute received or examined actual case files or summary data (e.g., insuror claim reports) after arbitration cases were closed; such records were abstracted and coded on a uniform data capture format, from which in turn the data were keypunched to constitute the arbitration data base.

The data base includes only arbitration cases closed after entry into the arbitration forum, marked by the filing or service of a demand for arbitration. Not included are cases closed subject to arbitration, i.e., cases for which an arbitration agreement existed but was either not invoked or else ignored or successfully challenged without an arbitration proceeding having been initiated. Unfortunately, such cases cannot be reliably identified in any practical way.

arbitration as the resolution forum); review of claim files at insuror offices; and review of "arbitration" claim reports by insurors to the 1975-78 National Association of Insurance Commissioners' (NAIC) malpractice closed claim survey. Such efforts to assure data accuracy and to fill any important data gaps will extend to cases to be added to the arbitration base through mid-1980.

Since analyses employing the arbitration data base will necessarily be limited by the scope and amount of data included, and because the number of cases closed in arbitration forums nationally is still comparatively small--probably under 300 between 1970 and 1979--much attention has been paid to assuring data accuracy. In view of the varying accuracy observed for secondary data sources such as insuror closed claim reports to various surveys and state authorities, efforts have been made to seek data first-hand from primary sources, such as insuror claim files, arbitration case files and court records. Insuror claim reports and other sources considered secondary have been used corroboratively or to fill in data gaps, although information considered questionable has not been entered in the data base.

Comparable data from other sources

Since the data base is intended to serve a variety of research interests, it has been designed to include most of the substantive data items included in both the 1975-78 National Association of Insurance Commissioner' (NAIC) and the 1976 DHEW/ Westat closed claim survey formats. To facilitate use of the arbitration base with data from either of these surveys, coding has followed that used in or or the other (e.g., coding of injury data follows NAIC use of the H-ICDA). Thus, the arbitration base includes data items and coding detail not essential to studies which AAA has planned, but which may be of interest to other researchers. Listings of comparable data items in the AAA, NAIC and DHEW 1976 data sets are included in the Appendix to this Manual.

Data Coding

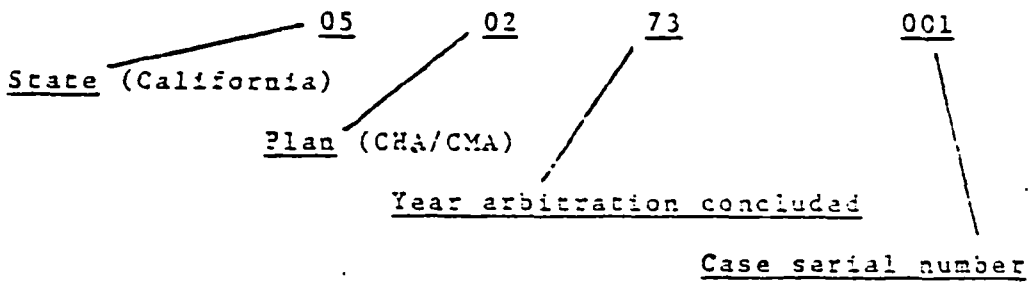
Coding instructions and/or code options for most data items sought appear on the capture form. Explanations, as necessary, and the long code-option lists for a few data items are incorporated in this Information Manual. Notes on possible coding refinements are made as coding of new cases and preparations for analysis indicate the need for them.

I. CASE IDENTIFICATION

General Information

Section I records the state where arbitration took place, the arbitration plan or arrangement involved, the year arbitration proceedings were concluded, and a serial number for each case in the medical malpractice arbitration data base.

The state and plan code numbers, the year arbitration was concluded, and the case serial number, all together, comprise a unique identifier. This identifier appears in the first nine columns of every computer card record in the data base. Thus, for example, a case in which the arbitration proceeding was concluded in 1973 under the California Hospital and Medical Associations' arbitration plan was coded as follows:



The state, plan, year and serial components of this identifier are each explained in the following pages.

I. CASE IDENTIFICATION

1. State where arbitration took place. The following abbreviations and codes were employed.

Alabama	AL	01
Alaska	AK	02
Arizona	AZ	03
Arkansas	AR	04
California	CA	05
Colorado	CO	06
Connecticut	CT	07
Delaware	DE	08
Dist. of Columbia	DC	09
Florida	FL	10
Georgia	GA	11
Guam	GU	12
Hawaii	HI	13
Idaho	ID	14
Illinois	IL	15
Indiana	IN	16
Iowa	IA	17
Kansas	KS	18
Kentucky	KY	19
Louisiana	LA	20
Maine	ME	21
Maryland	MD	22
Massachusetts	MA	23
Michigan	MI	24
Minnesota	MN	25
Mississippi	MS	26
Missouri	MO	27
Montana	MT	28
Nebraska	NE	29
Nevada	NV	30
New Hampshire	NH	31
New Jersey	NJ	32
New Mexico	NM	33
New York	NY	34
North Carolina	NC	35
North Dakota	ND	36
Ohio	OH	37
Oklahoma	OK	38
Oregon	OR	39
Pennsylvania	PA	40
Puerto Rico	PR	41
Rhode Island	RI	42
South Carolina	SC	43
South Dakota	SD	44
Tennessee	TN	45
Texas	TX	46
Utah	UT	47
Vermont	VT	48
Virginia	VA	49
Virgin Islands	VI	50
Washington	WA	51
West Virginia	WV	52
Wisconsin	WI	53
Wyoming	WY	54

I. CASE IDENTIFICATION

2. Arbitration plan or arrangement.

A uniform coding system applies to medical malpractice arbitration plans within each state:

	codes	type of arbitration plan or agreement
formal arbitration plans	01	statutory (all)
	02 through 09	privately sponsored, statewide
	10 through 29	privately sponsored, local (county or region)
	30 through 79	single agency (public or private, not classifiable above)
	80 through 89	single-insuror (not elsewhere classifiable)
other arbitration arrangements	97	single-practitioner or medical group practice (all)
	98	ad hoc arrangement (all)
	99	unknown plan (all)

Each plan identified is assigned a code number from the appropriate category above. Combined with the state code (I-1), this code number provides a unique numerical identifier for each formal arbitration plan, and a general identifier for other arbitration arrangements.

All ad hoc (essentially, one-time) arrangements are identified as a separate category, coded 98. Any arbitration agreement whose provisions are unique to a single practitioner or medical group practice is coded 97. However, if such an agreement is substantially the same as the agreement under a local or statewide plan, then that plan is coded (either a code from 02 through 09, or one from 10 through 29) rather than 97.

Code number assignments within each state are listed below for each plan identified as of June 1979. Any new plans identified are entered on this list.

state	code	plan
Alabama		
Alaska		
Arizona		
Arkansas		
California	02	California Hospital and Medical Associations (CHA/CMA)
	03	California Blue Cross Subscriber
	30	Kaiser Foundation Health Plan
	31	Ross-Loos Clinic
	32	Family Health Program (FHP)
	33	Northeast Valley HMO (NEV)
	34	Health Alliance of No. Cal. (HANC)
	35	Patient Protective Ass'n Grass Valley Medical Quality Ass'n
Colorado	80	Casualty Indemnity Exchange (CIE) "Plan III"
Connecticut		

state	code	plan
District of Columbia		
Florida	30	AVMED (HMO)
Georgia		
Hawaii	30	Kaiser Foundation Health Plan
Idaho		
Illinois	02	Illinois Hospital Ass'n/Medical Societ
Indiana		
Iowa		
Kansas		
Kentucky		
Louisiana		
Maine		
Maryland		
Massachusetts	30	Valley Health Plan
	80	Mass. Medical Arbitration Plan (St. Paul Cos.)
Michigan	01	Michigan Medical Arbitration Program (MMAP)
Minnesota	10	Minnesota Medical/Legal Experimental Arbitration Plan
Mississippi		
Missouri		
Montana		
Nebraska		
Nevada		
New Hampshire		
New Jersey	30	Southshore HMO
	31	Washington Memorial Hosp.
New Mexico	02	New Mexico Blue Shield Subscriber Plan
New York	02	State Medical Society/Hospital Ass'n (MSSNY/HANYS)
	10	Suffolk County Medical/Legal Plan
North Carolina		
North Dakota	01	Medical Arbitration Panels
Ohio		
Oklahoma		
Oregon	30	Kaiser Foundation Health Plan
	31	Cascade Health Plan (HMO)
Pennsylvania	10	Allegheny County Medical/Legal Plan
Rhode Island		
South Carolina		
South Dakota	01	Health Care Services Arbitration
Tennessee		
Texas		
Utah		
Vermont	01	Court-supervised arbitration of medical malpractice claims
Virginia	10	Fairfax County Medical/Legal Plan
Washington	10	Seattle-area HospitalCouncil/King-County Medical Society/Seattle-King County Bar Ass'n (SAHC/KCMS)
	30	Cowlitz Medical Service (HMO)
West Virginia	30	Mountaineer Family Health Plan
Wisconsin	01	Patient Compensation Panels (binding arbitration by stipulation)
Wyoming	01	State Medical Society Plan
Puerto Rico	01	Court-supervised (mandatory) arbitrat
Virgin Islands		

I. CASE IDENTIFICATION

3. Year arbitration concluded: last two digits of the year in which all arbitration proceedings in the case were finally terminated, e.g., "77" for 1977 (see VI-10).

4. Serial number

A three-digit serial number was assigned to each case as it was entered in the arbitration data base. This number, unique for each case, is administratively but not analytically useful since it does not by itself establish the case source. Accordingly, the additional identifying data (state, plan and year) were incorporated in the case identifier.

II. INJURED PERSON

General Information

In each case, information for Section II was recorded and coded for only one injured person--the patient whose health care included the incident(s) which gave rise to the claim(s) of medical malpractice.

Where a case involved claims on behalf of more than one injured person, the following rules were observed:

Where it was claimed that prenatal care or treatment or the delivery procedure at childbirth resulted in fetal death or stillbirth, the mother was considered the patient, and her age, occupational status, etc., were recorded and coded.

Where it was claimed that pre- or postnatal care or treatment or the delivery procedure at childbirth caused injury to a child which survived delivery, the child was considered the patient, and its age, etc. recorded, whether it subsequently lived or died.

Where a claim alleged injury to a person who died, except a claim for fetal death or stillbirth, the decedent was considered the patient, whether or not it was claimed that the alleged injury caused or contributed to death.

Where a claim sought damages because sterilization procedure failed to prevent conception or an abortion procedure failed to terminate pregnancy, and a child was born, the parent who underwent such procedure was considered the patient.

II. INJURED PERSON

1. Age in years at the time of alleged injury (at last birthday) is coded. If age was unknown, where possible it was estimated from available information (e.g., a recently retired person is likely to be at least 60 and not more than 70). If claim involved a newborn which was congenitally or otherwise injured or which subsequently died, its age was coded as 0. If claim involved fetal death or stillbirth, the mother's age was coded, since she was the patient.

2. Sex: male or female.

3. Occupational status at time of injury. This information links to wage loss claims. Accordingly, "not employed" means merely that the injured person did not hold a full- or part-time paying job at the time of the injury. This includes persons who regularly perform unpaid work (e.g., homemakers) and persons who were previously employed, regardless whether they were seeking new employment at the time of injury.

4. Occupation. Codes were employed from the two-digit "Occupational Divisions" section (on next page) in the Dictionary of Occupational Titles (DOT). Wherever it was necessary to choose among possible codes from this two-digit list, the coding decision was guided by the DOT three-digit "Occupational Groups" subdivision (not included here.)

Occupations were coded not only for persons who were employed at the time of injury, but also for persons who were retired, disabled or temporarily not employed; i.e., the former or last occupation, where known, was coded. No occupation was coded for children or students under 21.

5. Annual earnings. This data represents earnings, as opposed to income, and relates to wage loss claims (section IV, questions 3 and 4). Where earnings were unknown but could be estimated to within about $1,000 based on available information, an approximation was entered and coded.

6. Major source of payment of health care costs. This question refers to the main or primary source of payment for health care expenses incurred in connection with the treatment out of which the claim(s) arose. It encompasses not only claimed expenses (section IV, questions 3 and 4), but also any expenses for which no claim was advanced.

4. Occupation (cont'd.)

OCCUPATIONAL CATEGORIES, DIVISIONS, AND GROUPS

OCCUPATIONAL CATEGORIES

0|1 Professional, technical, and managerial occupations
2 Clerical and sales occupations
3 Service occupations
4 Farming, fishery, forestry, and related occupations
5 Processing occupations
6 Machine trades occupations
7 Bench work occupations
8 Structural work occupations
9 Miscellaneous occupations

TWO-DIGIT OCCUPATIONAL DIVISIONS

PROFESSIONAL, TECHNICAL, AND MANAGERIAL OCCUPATIONS

00|01 Occupations in architecture and engineering
02 Occupations in mathematics and physical sciences
04 Occupations in life sciences
05 Occupations in social sciences
07 Occupations in medicine and health
09 Occupations in education
10 Occupations in museum, library, and archival sciences
11 Occupations in law and jurisprudence
12 Occupations in religion and theology
13 Occupations in writing
14 Occupations in art
15 Occupations in entertainment and recreation
16 Occupations in administrative specializations
18 Managers and officials, n.e.c.
19 Miscellaneous professional, technical, and managerial occupations

CLERICAL AND SALES OCCUPATIONS

20 Stenography, typing, filing, and related occupations
21 Computing and account-recording occupations
22 Material and production recording occupations
23 Information and message distribution occupations
24 Miscellaneous clerical occupations
25 Salesmen, services
26|
27| Salesmen and salesgirls, commodities
28|
29 Merchandising occupations, except salesmen

SERVICE OCCUPATIONS

30 Domestic service occupations
31 Food and beverage preparation and service occupations
32 Lodging and related service occupations
33 Barbering, cosmetology, and related service occupations
34 Amusement and recreation service occupations
35 Miscellaneous personal service occupations
36 Apparel and furnishings service occupations
37 Protective service occupations
38 Building and related service occupations

FARMING, FISHERY, FORESTRY, AND RELATED OCCUPATIONS

40 Plant farming occupations
41 Animal farming occupations
42 Miscellaneous farming and related occupations
43 Fishery and related occupations
44 Forestry occupations
45 Hunting, trapping, and related occupations
46 Agricultural service occupations

PROCESSING OCCUPATIONS

50 Occupations in processing of metal
51 Ore refining and foundry occupations
52 Occupations in processing of food, tobacco, and related products
53 Occupations in processing of paper and related materials
54 Occupations in processing of petroleum, coal, natural and manufactured gas, and related products
55 Occupations in processing of chemicals, plastics, synthetics, rubber, paint, and related products
56 Occupations in processing of wood and wood products
57 Occupations in processing of stone, clay, glass, and related products
58 Occupations in processing of leather, textiles, and related products
59 Processing occupations, n.e.c.

MACHINE TRADES OCCUPATIONS

60 Metal machining occupations
61 Metalworking occupations, n.e.c.
62 Mechanics and machinery repairmen
63
64 Paperworking occupations
65 Printing occupations
66 Wood machining occupations
67 Occupations in machining stone, clay, glass, and related materials
68 Textile occupations
69 Machine trades occupations, n.e.c.

BENCH WORK OCCUPATIONS

70 Occupations in fabrication, assembly, and repair of metal products, n.e.c.
71 Occupations in fabrication and repair of scientific and medical apparatus, photographic and optical goods, watches and related products
72 Occupations in assembly and repair of electrical equipment
73 Occupations in fabrication and repair of products made from assorted materials
74 Painting, decorating, and related occupations
75 Occupations in fabrication and repair of plastics, synthetics, rubber, and related products
76 Occupations in fabrication and repair of wood products
77 Occupations in fabrication and repair of sand, stone, clay, and glass products
78 Occupations in fabrication and repair of textile, leather, and related products
79 Bench work occupations, n.e.c.

STRUCTURAL WORK OCCUPATIONS

80 Occupations in metal fabricating, n.e.c.
81 Welders, flame cutters, and related occupations
82 Electrical assembling, installing, and repairing occupations
83 Painting, plastering, waterproofing, cementing, and related occupations
84 Excavating, grading, paving, and related occupations
85 Construction occupations, n.e.c.
86 Structural work occupations, n.e.c.

MISCELLANEOUS OCCUPATIONS

90 Motor freight occupations
91 Transportation occupations, n.e.c.
92 Packaging and materials handling occupations
93 Occupations in extraction of minerals
94 Occupations in logging
95 Occupations in production and distribution of utilities
96 Amusement, recreation, and motion picture occupations, n.e.c.
97 Occupations in graphic art work
98 Homemaker
99 Not elsewhere classified

III. INJURY

General Information

Section III is intended to apply to the primary injury claimed in each case, i.e., the alleged injury for which indemnity or other remedy was sought. In cases where there was more than one injury or injured person (see General Information for Section II), the questions in Section III refer to the most serious injury sustained by any injured person, whether or not that person was legally a claimant or was considered the "injured person" in Section II. Thus, for example, where a case involved fetal death or stillbirth, that was considered the injury for the purposes of Section III, although the mother was considered the patient in Section II.

Section III includes all five of the data items for which nosological codes were used in the data base. These five items are: principal injury (III-1); final diagnosis (III-4); diagnostic misadventure (III-5); procedural misadventure (III-8); and drug causing injury (III-12). These items, when they applied, were coded in three-, four- or five-digit codes from the second edition of the Hospital Adaptation of the International Classification of Diseases (H-ICDA-2). Coding was chiefly from H-ICDA "Classification of Diseases and Injuries", "Supplementary Classifications", and "Classification of Operations and Treatments" but also incorporated those adaptations of the H-ICDA system and additions which are indicated in the published volumes of the National Association of Insurance Commissioners (NAIC) Malpractice Closed Claim Survey. For example, H-ICDA provides no code for situations where there was a legal but not a medical injury; NAIC added one, and AAA has followed NAIC usage.

In coding principal injury and diagnostic and procedural misadventures, a "medically abnormal condition" was defined as one involving physical or mental disease or injury. Biologically normal events or life-cycle conditions (e.g., pregnancy, menopause) were not considered medically abnormal, although complications of such conditions were.

III. INJURY

1. Description of principal injury for which medical liability was claimed. Specify body part(s) involved.

Refers to the primary injury (or complication) asserted by the claimant(s) as the basis for seeking damages, whether or not the injury (or its cause) was ultimately found to be as claimed. Where there was more than one injured person or injury, (see General Information for Section II), this question refers to the most serious injury for which damages were sought, whether or not the person who sustained it was technically a claimant or was considered the "injured person" in Section II. Thus, for example, where a case involved a fetal death or still-birth, usually that was considered the principal injury for the purposes of Section III, even though the mother was considered the injured person for the purposes of Section II.

Where possible and appropriate, the principal injury has been described on the capture form and coded in clinical terms (e.g., "asystole"; "fracture of R. femoral neck"; "diplopia"). Where information about the precise injury claimed was lacking or ambiguous, the injury has been described in laymen's terms (e.g., "heart attack"; "broken hip'; "vision disturbance") and coded consistent with the specificity of the available information. In cases where the alleged injury was neither a disease nor anatomical condition nor H-ICDA-codified complication or result, or where information was vague, the injury has been recorded in plain language (e.g., "patient had to undergo a second operation") and coded, where appropriate, as a physical effect or result, rather than a specific disease, anatomical injury or complication.

III. INJURY

2. Severity rating of principal injury for which medical liability was claimed.

The rating scale employed for injury severity coding is the nine-category scale used by NAIC and DHEW closed claim surveys, with the added category "Not elsewhere classifiable" (code 0), to distinguish cases involving only a legal injury (e.g., whether autopsy was authorized).

The scale rates injury in terms of resulting physical disability, ascending in gravity from no disability to temporary disability to permanent partial or total disability. Ratings reflect total functional and medical condition of the person affected, so that like injuries to different people might result in different severity ratings; for example, a broken hip may have resulted in only temporary disability for one person but permanent disability for another.

III. INJURY

3. Category of principal injury claimed. This data item is adopted from the DHEW 1976 closed claim survey (item A-III-5 on the capture form for that survey). Where there was sufficient information about the principal injury, one of the following seven categories was coded, even where the injury fit more than one category or did not squarely fit any category. Each category is explained and examples given below.

   1) Occurrence of new abnormal condition induced by treatment or procedure.

      Includes all adverse complications or reactions claimed to be caused by, and arising during or after, any treatment or procedure. Such injuries result only from acts of commission. Examples: hemorrhage during surgery; post-surgical hemorrhage or incontinence; surgical material inadvertently left inside patient's body; adverse drug reaction.

   2) Incomplete cure (correction, removal) of original abnormal condition.

      Includes cases where delay in treatment, often because of a diagnostic problem, prevented a (more nearly) complete cure. Can result either from acts of commission or omission. Examples: injury (including death) claimed to result from delay in diagnosing cancer; injury claimed to result from failure of an operative procedure to achieve intended or expected result (relieve pain, terminate pregnancy, e.g.)

   3) Occurrence of new abnormal condition through lack or failure of preventive efforts.

      Includes injuries allegedly caused either by diagnostic or by procedural problems resulting from acts of omission, particularly failure to properly protect the patient. Examples: fall resulting from failure to use bed side-rails or to respond to patient call for assistance; nosocomial infection; injury occurring due to omission of medical warning.

      Distinguish from categories 1) and 2)-- Category 3) injuries are not direct outgrowths of the patient's original abnormal condition.

   4) Performance of unnecessary treatment or procedure, without further complication.

      Recognizes treatment or procedure unnecessarily performed as constituting injury. Includes only acts of commission. Example: unnecessary performance of a hysterectomy (but if surgical material was left inside patient's body following such a procedure, the injury would be category 1)).

III. INJURY

3. Category of principal injury (cont'd.)

5) Failure to accomplish intended goal or result (where original condition was not medically abnormal).

Covers claims for unsatisfactory results of procedures which are usually optional, such as cosmetic surgery, abortion or sterilization. Includes only acts of commission. Examples: failed abortion or sterilization; dissatisfaction with "face-lift."

Distinguish from category 2), in which patient's original condition was medically abnormal.

6) Emotional and/or financial consequence(s) of a misdiagnosis in the absence of an abnormal condition.

Covers claims for emotional suffering or financial loss in cases such as diagnosis of pregnancy or of coronary disease in its absence. Such injuries result only from acts of commission.

7) The physical, emotional and/or financial consequence of performing unauthorized acts, whether or not such conduct was medically proper.

Covers certain claims alleging lack of proper or informed consent. Includes only acts of commission. Examples: Unauthorized autopsy; surgical removal of body tissue without proper consent.

Where both lack of consent and treatment-induced injury are claimed, category 1) applies, not category 7).

III. INJURY

4. Final diagnosis of injured person's actual medical condition (for which diagnosis and/or treatment was sought, and which relates to development of the injury).

"Final diagnosis" means the ultimate clinical description of a patient's actual condition originally, i.e., at the time he sought medical care or treatment. It is not the "initial impression" or "admitting diagnosis", or the injury prompting the claim. For example, where a patient was hospitalized for tests which confirmed the preliminary diagnosis, and incidentally fell and broke an ankle while in the hospital, the diagnosis confirmed was coded, and not the broken ankle which spawned the patient's claim.

For coding accuracy, final diagnosis was recorded on the capture form, where possible, in clinical terms (e.g., "myocardial infarction", not "heart condition"; ruptured R. medial meniscus", not "knee injury"). However, in many cases no clinical information was available, so that the entry from which final diagnosis was coded may have lacked form precision and/or been ambiguous (e.g., the entry "residual brain damage" may be coded in a number of ways, whereas a clear clinical description would fit only one M-ICDA code).

5. Diagnostic misadventure as cause of injury.

Refers to error or delay in diagnosis or failure to make any diagnosis of patient's medical condition as finally determined. "NA" (not applicable) was entered and "0" coded where no diagnostic error, delay or failure was claimed.

If a diagnostic error (misdiagnosis) was claimed, then the claimed misdiagnosis was entered and coded (prefixed by the letter "M" if treatment was rendered based on the misdiagnosis). If a delay or failure to diagnose was claimed, that was entered and the condition ultimately diagnosed was coded. The error, delay or failure itself was coded in III-6.

For example, if abdominal pain was at first diagnosed as being due to peptic ulcers and treatment rendered for ulcers, but was ultimately determined to be due to stomach cancer or to be psychosomatic, then the misdiagnosis ("peptic ulcers") was coded with an "M" prefix. If there was no diagnosis of the cause of the abdominal pain, and it was later determined to be due to a medically abnormal condition (such as stomach cancer), delay or failure in diagnosing the condition would be entered, and the diagnosed condition coded without an "M" prefix since there was no treatment based on a misdiagnosis.

Doubt as to whether a case involved a diagnostic misadventure was generally resolved in favor of coding one (a diagnostic misadventure), as opposed to coding the question "not applicable" (code 0).

III. INJURY

6. Type of diagnostic misadventure (causing or aggravating the injury).

Refers to general category of diagnostic misadventure coded (in III-5). Categories cover failure to make a diagnosis, delay in diagnosis, and misdiagnosis (diagnostic error), either of a medically abnormal condition or in its absence.

7. Cause of diagnostic misadventure.

Up to two chief causes of the diagnostic misadventure (III-5) were coded. Where information as to the claimed or accepted cause was not clear or not available, an apparent or probable cause was coded if it could be inferred from the available information.

8. Procedural misadventure (if any) as cause of injury.

Refers to diagnostic, surgical, anesthesia or medical treatment procedure claimed to cause, contribute to or aggravate injury. Doubt as to whether the claim involved a procedural misadventure was generally resolved in favor of coding one (a procedural misadventure), as opposed to coding the question "not applicable"(code 0).

Procedures were coded from the H-ICDA"Classification of Operations & Treatments" plus supplementary codes used by NAIC for anesthesia, drug treatment and special hospital procedures not codified in the H-ICDA. Where information was vague for a procedure which could have been performed in one of two or more ways (e.g., hysterectomy--abdominal or vaginal), then it was either coded as having been performed in the most common manner or coded only partially (for example, with the digit to the right of the code decimal left blank, identifying the procedure but not necessarily how it was performed).

Where a course of chemical or drug treatment was begun, with or without other treatment, and it was specifically claimed to result in injury, then a procedural code was entered for drug treatment. Usually drug-related injury was claimed to result from use of a drug or chemical agent only in connection with a surgical, anesthesia or treatment procedure. In such cases, that procedure (not a drug procedure) was coded as the procedural misadventure, and a drug injury was coded (from the H-ICDA) in III-11 (and, where it was the principal injury, also in III-1).

III. INJURY

9. Type of procedure (if any) causing injury.

Refers to the general category of medical procedure--surgical, anesthesia, diagnostic or treatment--for which a misadventure was coded (in III-8). Drug treatment procedures were coded as "treatment". Anesthesia procedures are distinguished by type in III-11.

10. Nature or cause of procedural misadventure (if any).

As with diagnostic misadventures, up to two chief causes of the procedural misadventure (III-8) were coded. Where information as to the claimed or accepted cause was not clear or not available, an apparent or probable cause was coded if it could be inferred from the available information.

11. Type of anesthesia procedure claimed as cause of injury.

Refers to method of administration of anesthetic agent (included because H-ICDA does not code anesthesia procedures by type). Injury claimed to result from the anesthetic agent employed (as opposed to other responsibility of the anesthesiologist) was treated as a drug injury and coded in III-12 from the H-ICDA section "Adverse effects of chemical substances".

12. Name of principal drug (if any) claimed to cause injury.

Applies where the claimed injury was related to use of any drug, whether or not a procedural misadventure was coded (see discussion under III-8). Coding is from the H-ICDA section covering "adverse effects of medicinal agents", except where injury resulted from an anesthetic agent (see discussion under III-11).

13. Nature or cause of claimed drug injury.

Where available information did not indicate the specific nature or cause of the claimed drug injury, coding was based on the purpose, if known, for which the drug was given.

III. INJURY

14. Type of facility where principal claimed injury occurred.
15. Location within institution (if any) where principal claimed injury occurred.

For questions III-14 and -15, wherever the "principal injury claimed" involved physical consequences but was not a physical injury in the strict sense, the location of the medical treatment or other events giving rise to the claimed injury was the basis for coding.

For example, where the claimed injury was that a patient had to undergo an additional surgical or other procedure which could have been avoided but for an error, the place where the error occurred was coded. Thus, if the error was that a pathologist misread a slide or a radiologist misread an x-ray, then "laboratory" or "radiology" was coded as the location where the principal injury occurred, whether or not the physical consequences of the error (i.e., the "injury") were experienced by the patient at a different place and time. Similarly, if there was no physical injury, as in a case where sterilization did not prevent conception and the claim was for the cost of bearing and rearing a healthy child, then the location of treatment (i.e., sterilization procedure) was coded.

In some cases, the claimed injury was temporally removed from the event(s) giving rise to it. In these situations, usually the place whre the event(s) occurred was coded. For example:where a healing fracture collapsed weeks after cast removal, and it was claimed that the cast was removed too soon, the location of the cast removal was coded. But where the principal injury was drug-related, the code for III-14 could reflect the place where a drug reaction was experienced, which was not necessarily the facility where the drug was prescribed, dispensed or administered.

16. Persons (other than defendants) who contributed to principal claimed injury.

Refers to institutional or other employees, or consultants, whether or not the institution or other employer was itself named as a party defendant in court or arbitration. (Excludes persons named as defendants in arbitration or in court.)

Up to three such persons were coded. Where more than one person from any single code category contributed to the claimed injury, that category was coded two or three times, as appropriate. For example, if two registered nurses were the main contributors to the injury beside the person(s) named as defendants, then code 7 was entered twice.

17. Factors associated with injury or claim. (cont'd.)

08) drug or fluid administration technique: applies where injury related to manner of administration (by mouth, injection, intravenous drip). Distinguish from adverse effect of drugs (see III-12) and improper insertion/management of tube or drain (III-17, code 10).

09) blood administration: covers all problems, including transfusions which later cause disease or adverse reaction in patient.

10) insertion or management of tube or drain: covers catheters, intravenous feeding or fluid administration, etc. connected to patient's body, e.g., clogged or broken-off cathether.

11) obtaining specimen: covers procedure and materials used for obtaining a blood, urine, stool or other specimen from patient for laboratory analysis.

12) monitoring of patient: refers to periodic or continuous observation of patient, and/or equipment used to treat or sustain patient, by institutional personnel, purusuant either to routine procedure or to specific instruction from a physician or other authority.

13) medical records: refers to any claimed br ach of institutional or individual responsibility to create, update, maintain, interpret, safeguard or keep confidential a patient's medical records.

14) administration, billing and collection: refers to claims that delayed, unperformed or improperly performed administrative functions caused or contributed to medical or legal injury. Includes billing issues in cases where patient seeks cancellation or remission of fees billed as full or partial relief for alleged medical liability.

15) premature discharge from institution: may reflect error either in medical or administrative judgment or procedure.

16) lack of adequate facilities or equipment: generally, refers to allegations of faulty or inadequate facilities or devices employed or relied on to accomplish an intended result by diagnostic, surgical or medical procedure.

17) interprofessional relations: refers to allegations that conduct among or between medical professionals and/or other individuals responsible for delivering health care was such as to cause or contribute to the injury for which medical liability is claimed. (Legal liability for such allegations, if sustained, may rest with one or more individuals or with an institution.)

III. INJURY

17. Factors associated with injury or claim. These factors relate mainly to actions or omissions by persons other than physicians. Up to 3 factors from the combined lists of institutional or management factors and personnel-related factors were coded for each case. Factors in the two categories are usually related. For example, if the claimed injury was sustained in a fall from a hospital bed (code 1), then an associated factor may have been "failure (by nursing or other personnel) to properly protect the patient" (code 28) by securing bed guard-rails. The associated factors offered as code options are explained or illustrated below by number:

00) not applicable: no institutional, management or personnel-related factors were associated with injury or claim.

Institutional and management factors

01) patient fell: form entry states where and how fall occurred (e.g.,in patient's room, patient's bathroom, hall, stairway, elevator, physical therapy dept., from bed or wheelchair while trying to get up to visit lavatory) as well as the alleged cause of the fall, if known (e.g.,failure to caution patient, failure to use bed side rails).

02) transportation, positioning or position of patient: Entry states where, how and why patient was being moved or positioned, or was in physical position alleged to cause or contribute to injury claimed. For example, "positioning of patient by technician for spine x-rays allegedly aggravated back pain", or "failure to regularly reposition a paraplegic patient resulted in bedsores."

03) infection control action or technique: e.g., sterilization of instruments or equipment, skin preparation, aseptic technique, isolation of patient for infection control.

04) maintenance or operation of equipment: e.g., emergency, cautery, x-ray, radiation (or other therapy), traction, anesthesia (or other operative) equipment and heating or cooling devices used directly on patient, or laboratory, food preparation or other equipment whose malfunction or misuse may affect patient.

05) laboratory error: e.g., mislabeling, mis-computation, lost or inadequate specimen, misinterpretation or misreading, delay or error in reporting.

06) pharmacy error: e.g., mislabeling, misinterpretation or misreading, delay, inadvertent substitution.

07) nursing error: mistake or failure by registered, practical or vocational nurse in performing a function for which responsible, e.g., failure to execute physician order.

III. INJURY

17. Factors associated with injury or claim. (cont'd.)

18) Other institutional or management factors: any not classifiable above.

Personnel-related factors

19) not applicable: no personnel-related factor was associated with injury or claim.

20) inadequate assessment: refers to determinations regarding patient response, reaction or condition, usually (but not always) by a nurse.

21) mis-identification of patient: e.g., wrong patient treated.

22) delay (or failure) in notifying or consulting a physician, or another physician: refers to delay or failure by nurse, M.D. or other practitioner, e.g., nurse, intern, or technician fails to call attending physician; general practitioner fails to consult a specialist.

23) delay in performance: e.g., failure to timely execute an order or give medication caused or contributed to injury.

24) failure to instruct or caution patient: refers to situations where explanation or warning instructions to patient were procedurally required or were necessary under the circumstances, and failure to instruct or warn allegedly contributed to the claimed injury.

25) failure to (timely) disclose: refers to situations where failure to (timely) disclose information about or relating to patient's condition or treatment allegedly caused or adversely affected the claimed injury.

26) lack of supervision: refers to supervision of persons involved in delivery of health care treatment or services (not to supervision of the patient).

27) failure to properly protect patient: refers to alleged breach of individual or institutional responsibility to take required or appropriate precautions to safeguard patient (e.g., using bed side-rails, x-ray lead shields, heat-shield pads, etc.)

28) other personnel-related factors: any not classification above.

29) institutional, management or personnel-related factor(s) are associated with claim, but not specified by available data sources: coded only where unspecified associated factor(s) appeared to be central to claim.

IV. CLAIM PARTICULARS

General Information

Section IV records information on the legal (liability) claims and monetary or other damands (for damages), the general identity of claimant(s), and the number of defendants in each case. Data on the liability claims and damages demands are unique to the malpractice arbitration base (such data are not included in any of the insuror closed claim surveys), and help to establish the range of claims which has reached arbitration.

The number of defendants in each case is recorded by forum, i.e., the number of defendants against whom a claim was pursued (but not necessarily resolved) in the arbitration proceeding (IV-13) and the number of other defendants (IV-14) were separately recorded. (The number of defendants in each case against whom the claim was resolved in arbitration may be determined from V-13).

IV. CLAIM PARTICULARS

1. Category of liability claimed. Refers to general basis of legal liability which best represents claimant's main claim in arbitration. Intended to collapse all theories or bases for hospital or medical professional liability into a limited but comprehensive set of categories. Parallels question III-3, which collapses all injuries into seven categories. Where there was sufficient information about the main liability theory advanced in arbitration, one of the following categories was selected, even if the theory fit more than one category or did not squarely fit any category. Each category is explained and examples given below.

   1) Negligent or substandard diagnosis or treatment.

      Where injury was claimed to result directly or indirectly from the diagnosis made or treatment rendered. Examples: misdiagnosis of an abnormal condition (e.g., gastroenteritis for appendicitis); treatment-induced injury (e.g., nerve damaged during hysterectomy; surgical material inadvertently left in patient's body).

   2) Failure to diagnose, consult or refer as required or appropriate.

      Where injury was claimed to result indirectly from failure to meet professional obligation to make a proper diagnosis or to consult with or refer patient to a specialist or appropriate practitioner. Examples: failure to order diagnostic tests; failure to refer patient for surgical consult.

   3) Failure to diclose risks or otherwise to obtain proper or adequate consent for treatment rendered.

      Where claimed that physician or provider failed to disclose information essential to patient's informed consent or refusal to receive treatment, or that required consent not sought. Example: treatment beyond scope of consent, whether or not medically proper.

   4) Outcome of treatment not in accord with contract, guaranty or warranty.

      Where claimed that treatment result was not as provided in oral or written warranty, guaranty or contract. Examples: treatment does not achieve intended goal (e.g., abortion or sterilization fails; surgery fails to relieve pain).

IV. CLAIM PARTICULARS

1. Category of liability claimed. (cont'd.)

5) Breach of duty to patient, whether or not directly involving medical treatment.

Failure to care for patient as required by standard or circumstance; applicable chiefly to institutional providers and their employees (e.g., hospitals, nurses). Examples: failure to respond to patient call or to attend or protect patient (e.g. neglecting to secure bed side-rails).

6) Failure to observe requirement of statute, regulation, rule or sanction.

Failure to adhere to an express written requirement. Example:

7) Action, omission or conduct for which liability may ensue independent of patient-provider relationship.

Covers claims which could have been pursued on grounds other than medical professional liability. Examples: physical assault or harrassment of patient, or failure to prevent same.

2. Specific legal issues, theories or doctrine raised in arbitration.

Refers to threshold issues, liability theories or doctrines, evidence rules, or other legal issues specifically raised in the course of the arbitration proceedings. Up to two issues most central to the case were coded where evidenced in available information. No code was entered where there was no document stating or indicating what legal issues were raised in the arbitration.

Code options include those issues most likely to be raised, but not all possible issues. Accordingly, this data represents an indication of the relative frequency with which common legal issues are raised in medical malpractice arbitration, rather than a complete list of the legal issues in each case.

IV. CLAIM PARTICULARS

Injured person's monetary claims

3. incurred medical expense
4. anticipated medical expense

5. incurred wage loss
6. anticipated (future) wage loss

7. other claimed expense

8. total amount claimed in lawsuit
9. total amount claimed in arbitration, initially
10. total amount claimed in arbitration, finally

Data on the injured person's monetary claims was recorded as known: for some cases no information at all was available on monetary claims; for others, there was no specification of "medical expense", "wage loss", or "other" claims. The aggregate of amounts coded for questions IV-3 through -7 represents claimed economic loss. Expenses coded for questions IV-3 and -4 represent stated amounts for which recovery was specifically sought, but not necessarily the total medical expenses incurred in connection with the health care experience out of which the claim arose. Similarly, data coded for questions IV-5, -6 and -7 represent only what could be identified as specific claims. In view of all of the foregoing, caution is advised in interpreting the economic loss data recorded.

Claimed medical expenses (IV-3/-4) link to source of payment of health care costs (II-6), and claimed wage loss (IV-5/-6) link to occupation status, occupation, and earnings (II-3, -4 and -5).

Amounts recorded for total monetary claims (IV-8, -9 and -10) include any specification of economic loss ("special damages" in legal terms) as well as additional amounts claimed ("general damages" and, occasionally, "punitive damages" in legal terms).

In some cases which involved a lawsuit as well as an arbitration proceeding, no amount of damages sought was specified because of a legal bar to such a specification ("ad damnum" in legal terms).

The total claimed in arbitration initially (IV-9) was defined and coded as the amount specified, if any, in the arbitration demand. In some cases this amount was the same as that sought in a pre-arbitration lawsuit; in other cases it was different--usually less (sometimes substantially). The total claimed in arbitration finally (IV-10) was coded for cases where: there was an award on the merits; where hearing on the merits had begun but the matter was resolved short of decision; and where the claimant formally changed the amount of its initial claim, regardless of the disposition.

IV. CLAIM PARTICULARS

11. Non-monetary remedy (if any) sought in arbitration.

Refers to remedies other than direct payment of monetary indemnity, including provision of health care or treatment and administrative actions such as cancellation of billing. This data is sought chiefly because Michigan's medical malpractice arbitration law (1975) specifically authorizes arbitrators to award non-monetary remedies. (See questions V-17 and VIII-20)

12. Identity of primary claimant(s) in arbitration.

"Claimant(s)" refers to the injured person and/or any party pressing a claim on his or her behalf, whether or not the moving (filing) party in arbitration. Correspondingly, "defendant" refers to a party (doctor, hospital, etc.) against whom a claim of medical liability is made, even if the moving party and, thus, technically the "claimant" (as opposed to the "respondent") in the arbitration proceeding.

The primary claimant in most cases is the injured person, if an adult (see General Information, Section II). Where an injured adult was married, frequently a claim for lack of consortium was asserted by the spouse, so that in many arbitrations there may be two or more claimants. Where the injured person was a minor, the primary claimant was usually a parent. Where the injured person was a decedent and the primary claimant was the administrator/executor of the estate, "administrator" was coded even if the administrator was the decedent's spouse, parent or child.

IV. CLAIM PARTICULARS

13. Number of defendants in arbitration.

Refers to medical professionals (individuals) and health care providers (institutions) against whom claims of medical liability were pursued in arbitration, whether or not the claims were ultimately resolved in arbitration.

Any doctor, nurse or other health care professional named in the arbitration demand, stipulation or submission, or in any amendment, was counted as a separate defendant, regardless whether or how insured or represented. However, a medical or business group or professional corporation (e.g., "Medical Associates, Inc. d/b/a Third Street Clinic"; or "Drs. Smith and Jones, P.C.") was not counted unless separately represented in arbitration.

Any hospital, nursing home, clinic or other health care provider named in the arbitration demand, stipulation or submission, or in any amendment, was counted as a separate defendant, regardless whether or how insured or represented.

Sometimes a body or entity legally responsible for a health care provider, but which does not itself deliver health care, is named as a defendant, either instead of or in addition to the health care provider whose actions gave rise to the claim. For example, the "Board of Regents of the University of California", or "Kaiser Foundation Health Plan" may have been named a defendant in addition to or instead of a hospital operating under its control. Where such a legally responsible body or entity was named in addition to the provider, it was not counted as a defendant unless it was separately represented in arbitration; where it was named instead of the provider, the provider was counted a defendant.

Where both a health care provider (hospital, e.g.) and an individual in its employ (e.g., a nurse or Resident physician) were named as defendants, both were counted as defendants whether or not they were separately represented in arbitration.

14. Number of other defendants associated with incident.

Refers to defendants (as defined in question IV-13) against whom no claim was filed in arbitration, i.e., individual or institutional defendants against whom claims were asserted either in court or directly (usually through an insuror, if any), without a lawsuit.

Questions IV-13 and -14 together provide the total number of defendants (as defined in IV-13) against whom claims were asserted for any incident that gives rise to a claim.

V. DEFENDANT(s)

General Information

Section V records information about defendants individually. Data was coded separately for each defendant counted in IV-13 and -14. Questions V-1 through -6 and V-12 through -19 generally apply to all defendants; questions V-7 through -11 apply only to physicians and other individual practitioners.

Where appropriate for particular data, e.g., cost, the total defense experience in any one case is the aggregate of that data for all defendants in that case. Similarly, the total defense experience by forum is the aggregate of data for those defendants against whom the claim was resolved in arbitration (court) in any case.

Section V data for all cases together comprises a subfile within the malpractice arbitration base since it is in defendant (essentially, claim) units. This difference has required separate manipulation and analysis of defendant data. However, planned further coding of certain defendant-unit data in case terms, to constitute an addition to the main (case-unit) data set, will enable full integration of data from Section V with that from the rest of the base.

V. DEFENDANT(s)

1. Serial number of this defendant:

A serial number, beginning with 001, was assigned to each defendant in each case, thus providing each defendant with a unique identifier, consisting of the case identification number plus the defendant's serial number.

2. Location of institution or professional practice (at time of incident).

Only zip codes were coded, although city and state were recorded as well. Where the town or city was unknown, partial zip code information was recorded and coded for the state and, if known, county or vicinity (e.g., suburban Los Angeles).

V. DEFENDANT(S)

3. Name of Insuror. Primarily for administrative purposes, each defendant's insuror, if any, was coded from the listings below. If defendant was a self-insuror, then 888 was coded. If defendant had no provision at all for professional liability judgments, then 000 (Not applicable) was coded. If defendant was insured but the insuror's name was unknown, 999 was coded.

NOT APPLICABLE (no provision for professional liability judgments)	000
Aetna Life & Casualty Company	001
All Star Insurance Corporation	002
American International Group	003
American Mutual Liability	004
American Universal	005
Argonaut Insurance	006
Brown-McNeely Fund	007
Buckeye Union Insurance	008
Canadian Universal	009
Casualty Indemnity Exchange (CIE)	010
CNA Casualty of California	011
CNA/Insurance Group	012
Commercial Union	013
Continental Casualty Company	014
Continental Insurance Company	015
Chubb Insurance Group	016
Employers Fire Insurance	017
Employers Mutual Liability (Wausau, WI)	018
Federal Insurance	019
Fidelity & Casualty Company	020
Fidelity & Guaranty Insurance Underwriters	021
Fremont Indemnity Company	022
Glacier General Assurance Company	023
Glens Falls Insurance Company	024
Globe Indemnity Company	025
Hartford Accident & Indemnity	026
Hospital Underwriters Mutual (HUM)	027

13. Name of insuror (cont'd.) 209

Imperial Insurance Company	028
Insurance Company of North America (INA)	029
Investors Insurance Company	030
Liberty Mutual Insurance	031
Medical Insurance Exchange of California	056
Medical Liability Mutual Insurance Company (MLMIC)	057
Medical Malpractice Insurance Association (MMIA)	032
Medical Protective Company	033
Michigan Hospital Association Mutual Insurance Company	058
Michigan Physicians Mutual Liability Company	059
National Union Fire Insurance Company	034
Norcal Mutual Insurance Company	060
Pacific Indemnity	035
Pacific Insurance	036
Phoenix Assurance Company of New York	037
Professional M I C	038
Reserve Insurance	039
Royal Globe Insurance Company	040
Royal Indemnity Company	041
Royal Indemnity Limited US BR	042
St. Paul Fire & Marine	043
Security-Hartford	044
Shelby Mutual Insurance	045
Signal Insurance	046
Southern California Physicians Insurance Exchange	047
Transportation I C	048
Travelers Insurance Company	049
Truck Insurance Exchange	050
Underwriters-Lloyds of London	051
United States Fidelity & Guaranty (USF&G)	052
Vigilant Insurance	053
Western Casualty & Surety	054
Western Fire Insurance	055
SELF-INSUROR	886
UNKNOWN	999

V. DEFENDANT(S)

4. Insuror's claim file number.

This data item, where known, has been coded not only for administrative purposes but also to provide a way to link two or more defendants (see definitions, I7-13/-14) who were insured and represented as one (e.g., a hospital and its employee, such as a resident physician, each named as a defendant). This link should be made in connection with any cost analysis on a defendant (as opposed to case or incident) basis, since insurors usually attribute all costs to the policyholder alone, regardless how many defendants were covered.

5. Defendant category.

Refers to business or function in connection with health care, as opposed to professional specialty or type (V-6)

6. Defendant's individual professional specialty or institution type.

The list of codes (see next page) for this question is substantially the same as that used for the corresponding question (3-3) in the DHEW 1976 malpractice closed claim survey. The more detailed codes for the corresponding question (4b) in the NAIC survey could not be employed because they require knowledge of each defendant's risk rating, based on detailed information about his practice.

For each identified defendant, code selection was based on the listing in standard reference sources (American Medical Directory; AHA Guide to the Health Care Field, etc.)

Hospital defendants are not distinguished by type except that Osteopathic hospitals, like Osteopathic physicians, are separately coded.

V. DEFENDANT(S)

6. Defendant's individual professional specialty or institution type. (cont'd.)

Physicians and Surgeons (M.D.)

10 Administrative medicine
11 Allergy
12 Anesthesiology
13 Aviation medicine
14 Cardiovascular disease
15 Vascular surgery
16 Cardiac surgery
17 Dermatology
18 Forensic pathology
19 Gastroenterology
20 General practice
21 Family practice
22 General surgery
23 Internal medicine
24 Neurosurgery
25 Neurology
26 Obstetrics and gynecology
27 Occupational medicine
28 Ophthalmology
29 Orthopedic surgery
30 Otolaryngology
31 Pathology
32 Pediatrics
33 Physical medicine and rehabilitation
34 Plastic surgery
35 General preventive medicine
36 Colon and rectal surgery
37 Psychiatry
38 Public health
39 Pulmonary diseases
40 Radiology, n.e.c.
41 Diagnostic radiology
42 Therapeutic radiology
43 Thoracic surgery
44 Urology
45 Physician - no surgery - speciality unspecified
46 Physician - minor surgery speciality unspecified
47 Physician - surgery speciality unspecified

Osteopathic Physicians (D.O.)

48 Osteopathic physician, no surgery
49 Osteopathic surgeon

Nurses, Therapists and Technicians

50 Registered nurse (RN)
51 Licensed practical nurse (LPN or LVN)
52 Physician's assistant
53 Therapist (all specialties)
54 Technicians (all specialties)

Dentists

60 Dentist, n.e.c.
61 Oral surgery

Institutions

70 Hospital (other than osteopathic)
71 Convalescent/nursing home
73 Mental psychopathic institution
74 Clinics, etc. - outpatients only
75 Sanitariums and all other inpatient institutions that are not hospit.
76 Osteopathic hospital

Other Practitioners

80 Chiropody (Podiatry)
81 Chiropractic
82 Optometry
83 Pharmacy

97 Business, corporation or partnership
98 Not elsewhere classified
99 UNKNOWN physician or practitioner

V. DEFENDANT(S)

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7. Type of practice. (non-institutional defendants only)

Refers to business or employment arrangement (including self-employment) for physicians and other licensed professional practitioners.

8. Age. (Physicians and other professional practitioners only)

For identified physicians and practitioners, age at time of the incident giving rise to a claim (see VI-2) was coded, to the nearest year, from reference sources which provide a listee's birth year (e.g., Physicians Reference listing; American Osteopathic Directory). For unidentified individuals, age could be coded only if indicated by a secondary source (e.g., claim report).

9. Board certification status. (Physician defendants only)

For identified physicians, specialty board certification or non-certification at the time of claim-producing incident was coded from standard reference sources (American Medical Directory, e.g.). It was not possible to indicate the board eligibility status of physicians who were not board certified at the time of the incident. For unidentified physicians, this item could be coded only if indicated by a secondary source (e.g., claim report).

7. DEFENDANT(S)

10. Country of primary medical education (physicians and dentists)

This data is coded for identified individuals listed in physician reference sources (e.g., American Medical Directory). The Worldwide Geographic Location Codes prepared by the U.S.General Services Administration Office of Finance (November 1976) are employed, as follows:

GSA code	Worldwide geographic location
100	NO INFORMATION
110	Afghanistan
120	Albania
125	Algeria
141	Angola
150	Argentina
160	Australia
165	Austria
182	Bangladesh
190	Belgium
205	Bolivia
220	Brazil
245	Bulgaria
250	Burma
255	Cambodia
260	Canada
--	Ceylon (code Sri Lanka)
275	Chile
280	China, People's Republic of (Mainland)
281	China, Republic of (Taiwan or Formosa)
285	Colombia
--	Congo (code Zaire)
295	Costa Rica
300	Cuba
310	Czechoslovakia
315	Denmark
320	Dominican Republic
325	Ecuador
922	Egypt (U.A.R.)
330	El Salvador
--	England (code United Kingdom)
--	Estonia (code Soviet Union
335	Ethiopia
338	Fiji
340	Finland
--	Formosa (code China, Republic of)
350	France
394	Germany, Federal Republic of (West)
395	German Democratic Republic (East)
396	Ghana
--	Goa (code India)
--	Great Britain (code United Kingdom)

V. DEFENDANT(S)

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10. Country of primary medical education (cont'd.)

GSA code	Worldwide geographic location
400	Greece
406	Grenada
415	Guatemala
417	Guinea
420	Haiti
--	Holland (code the Netherlands)
430	Honduras
435	Hong Kong
445	Hungary
450	Iceland
455	India
458	Indonesia
460	Iran
465	Iraq
470	Ireland
475	Israel
480	Italy
485	Ivory Coast
487	Jamaica
490	Japan
505	Kenya
514	Korea, North
515	Korea, South
530	Laos
--	Latvia (code Soviet Union)
540	Lebanon
545	Liberia
--	Lithuania (code Soviet Union)
550	Libya
	Malagasy Republic
580	Malaysia
590	Malta
595	Mexico
610	Morocco
615	Mozambique
630	Netherlands, The
660	New Zealand
665	Nicaragua
670	Nigeria
--	Northern Ireland (code United Kingdom)
685	Norway
700	Pakistan
710	Panama
712	Papua (New Guinea)
715	Paraguay
720	Peru
725	Philippines
730	Poland
735	Portugal
--	Rhodesia (code Southern Rhodesia)
755	Romania
--	Russia (code Soviet Union)
758	Rwanda
785	Saudi Arabia
--	Scotland (code United Kingdom)

V. DEFENDANT(S)

10. Country of primary medical education (cont'd.)

GSA code	Worldwide geographic location
795	Singapore
901	South Africa
818	Southern Rhodesia
825	Soviet Union (USSR)
830	Spain
272	Sri Lanka
835	Sudan
850	Sweden
855	Switzerland
858	Syria
--	Taiwan (code China, Republic of)
865	Tanzania
875	Thailand
890	Tunisia
905	Turkey
910	Uganda
925	United Kingdom
926	USA
--	USSR (code Soviet Union)
930	Uruguay
940	Venezuela
945	Vietnam (North and South)
--	Wales (code United Kingdom
970	Yugoslavia
291	Zaire
990	Zambia

DEFENDANT(S)

11. Length of professional relationship with injured person.

Refers to the length of patient-physician (or other practitioner) relationship at the time of the claim-producing incident. This question applies only to physicians, dentists, or licensed private practitioners such as podiatrists.

Where the defendant's professional specialty was one (e.g., pathology, anesthesiology) in which there is normally no relationship, or no continuing relationship, with patients, then "less than 1 month" was coded, absent evidence of a longer relationship.

12. Representation in arbitration.

Refers to the person who defended against the claim--an attorney, the defendant, or another person. Code 4, "Nominal party only, not represented", applies to defendant named in the arbitration demand but not represented in the proceedings.

V. DEFENDANT(S)

13. Forum of disposition of claim against this defendant.

For most defendants, the claim was clearly resolved either in arbitration or in court. However, in some cases proceedings against a defendant were pending in both forums at the time the claim was withdrawn or settled; in these cases "arbitration" was coded except where, but for the resolution reached, the parties would clearly have pursued adjudication in court. But, if the claim as to a defendant continued to be pressed in court after that defendant ceased to be a party to arbitration, "court" was coded as the forum of disposition.

Where the claim against a defendant was resolved by arbitral decision (award), "arbitration" was coded, whether or not there was entry of court judgment on the award. If the award was vacated and the claim as to a defendant was thereafter resolved in court, then "court" was coded as the forum of disposition for that defendant.

14. Mode of disposition of claim against this defendant.

Indicates by whose action resolution was reached: i.e., by claimant action (withdrawal, abandonment); by joint party action (settlement on negotiated terms); or by third-party action (arbitral or court decision on the merits or dismissal).

Code 1, "deemed abandoned by claimant", applies where, pursuant to a defense motion, arbitration and/or court proceedings are closed (by arbitral or judicial order or administratively) because the claimant fails to appear or to press the claim. Where claimant appeared and arbitrators or court dismissed claim without hearing its merits, code 4 applies.

Code 2, "affirmatively withdrawn by claimant", applies where the arbitration and/or court proceedings were closed pursuant to claimant's indication that it did not intend to pursue the claim, regardless of defendant's action (i.e., waiver of right to seek recovery of defense costs).

15. Date of closure of proceedings on claim against this defendant.

Refers to the date of conclusion of all proceedings on the claim against the defendant, regardless of forum (V-13). For some defendants, this date is the date a dismissal is entered in a court action; for some, it is the date of transmittal of (or entry of judgment on) the arbitration award; for some it is the date of conclusion of arbitration proceedings in which the claim was abandoned, withdrawn or settled.

In some instances where the date of an insurer's claim file closure (V-16) is unknown, this date may be used as a surrogate in calculating time intervals.

7. DEFENDANT(S)

16. Date of closure of insuror's claim file for this defendant.

Refers to month and year of insuror claim file closure, drawn from the file where it was available. In other cases, file closure date was coded as reported by the insuror in the NAIC (1975-78) or DHEW/Westat (1976) malpractice closed claim survey or elsewhere. In some cases where neither the claim file nor a claim report was available, the month and year of closure were approximated, based on other information about the progress of the case. Otherwise, no closure date was coded and, where appropriate, the "date of closure of proceedings" (V -15) or "date arbitration proceedings concluded" (VI-10) was used as a surrogate in calculating case and claim time intervals.

17. Non-monetary remedy, if any, provided by this defendant.

Refers to any remedy other than direct monetary payment. (See discussion under I7-11)

18. Total indemnity paid (on behalf of) this defendant.

Refers only to direct monetary payment as damages for injury. Indemnity as defined here does not include any amount paid, either directly to or on behalf of claimant(s), to underwrite or reimburse claimant-incurred fees or expenses in an arbitration proceeding. (See VIII-19 and -21.)

Indemnity data was drawn mainly from insuror claim files or closed claim reports where either was available; otherwise indemnity was ascertained by telephone or other communication with insuror representatives, attorneys or other persons having access to records or having personal knowledge about the case.

19. Total defense counsel fees paid by (on behalf of this defendant
20. Insuror's allocated loss adjustment expense for this defendant.

Question 7-19 refers to the total amount paid to defense counsel only for legal services, not including reimbursement for costs advanced. Question 7-20 refers to all allocable expenses for claim investigation and defense except fees paid to defense counsel for legal services. (Thus, reimbursement to counsel for costs advanced would be included in the allocated expense total.) The aggregate of these two amounts represents total defense cost for any defendant.

V. DEFENDANT(S)

19. Total defense counsel fees. (cont'd.)
20. Insuror's allocated loss adjustment expense. (cont'd.)

This aggregate total is a more reliable cost index than either defense counsel fees or allocated loss adjustment expense by itself. The reason is that insurors vary in how they compute or report allocated expenses: some include costs advanced by defense attorneys in allocated expenses, and some include them in counsel fees. There is no way to adjust for these variations short of reviewing attorney bills and insuror cost computations. Therefore, probably defense cost data are inaccurate to some extent, and must be considered somewhat unreliable for analysis of either counsel fees of allocated expenses alone.

Reliability of defense counsel fee data is also affected by some insurors' use of "house" counsel (i.e., attorneys who are salaried employees) in some cases. Usually in such cases an insuror reports no (zero) counsel fee, since the cost of the attorney employee's services is part of its fixed cost of doing business, and not an expense allocable to the case. Where identifiable, "house counsel" situations were noted on the capture form and coded specially (column 77 on the defendant card (Card "C") is key punched as a hyphen).

Where two or more defendants were insured and represented as one, counsel fees and allocated expenses were coded only for the defendant considered to be primary. For example, if a hospital and two of its employees (e.g., an intern and a registered nurse) were each named as defendants, although all were insured under the hospital's policy or arrangement and represented as one party, then all defense counsel fees and allocated expenses were attributed to the hospital alone, and coded accordingly. However, where two or more defendants (e.g., physician partners) were insured under one policy but represented (by the same attorney or not) as separate parties, counsel fees and allocated expenses were coded for each defendant unless the insuror allocated all defense costs to one.

Where a defendant was either a self-insuror or had no provision at all for professional liability judgments, usually no amounts were coded for counsel fees or allocated expenses because no information on defense costs was available. However, total fees and expenses incurred in arbitration (e.g., administrative fees, arbitrators' compensation) were coded as allocated expense for these defendants if other cost information was unavailable for them.

VI. PATH to CASE DISPOSITION

General Information

Section VI records certain dates and other information which, taken together, outline the legal or formal path to resolution for each case in the data base. Because each case entered arbitration, the question sequence starts with the dates of the arbitration agreement and claim-producing incident, continues through any (pre-arbitration) lawsuit, and then concentrates on the arbitration proceeding, allowing for the possibility that the claim as to some or all defendants in any case may have been resolved in court, either pre-or post-arbitration.

VI PATH to CASE DISPOSITION

1. Date of arbitration agreement.

Refers to the month, day and year when the arbitration agreement was subscribed by the parties. The arbitration agreement almost always predates the incident (VII-2) where the agreement was entered preclaim (VIII-1, code 1); where the agreement was entered postclaim (VIII-1, code 2), the incident necessarily predates the arbitration agreement.

2. Date of incident giving rise to claim.

Refers to the month, day and year of the specific claim-producing incident, if any, such as a particular surgery, procedure or other event. Where the claim arose from a course or series of treatments and not a specific event, then the first known date of care or treatment was coded.

These rules were applied even where the claimed injury (as recorded in III-1) occurred or was discovered at a point removed in time from the event or course of treatment out of which it was claimed to arise. For example, if at age 21 a man claimed injury as a result of treatment at his birth, then the date of incident would be the birth date, not the date the claimed injury occurred or was discovered, or the date the claim was asserted.

3. Date claim first reported to insuror.

Refers to the month and year of first notice to an insuror that a claim was being made. Where more than one insuror was involved in a case, the earliest date of reporting to any insuror was coded. Usually, in multiple-insuror cases, reporting immediately followed the filing of a lawsuit, so that all defendants named and their respective insurors (if any) learned of the claim at about the same time. Thus, there would normally be little difference in the dates on which the claim was reported to insurors involved, unless there was a pre-lawsuit (or pre-arbitration) incident report by an insured, or unless one defendant was named not initially but only in an amended court complaint (or arbitration demand).

Where the only defendant was a self-insuror or had no provision at all for professional liability judgments, the date of filing of the lawsuit (if any) or arbitration demand (if no suit was filed) was coded.

4. Date lawsuit filed (if any).

Refers to month, day and year on which a summons and complaint alleging medical liability was first filed in court.

5. Basis of removal of case from court to arbitration.

Questions VI-4 and -5 apply only to cases reaching the arbitration forum which also involved lawsuits, whether filed before or after an arbitration proceeding was initiated. IV-5 codes the basis for removal (of some or all) of the case from court to arbitration, either by court order or by stipulation before, during or after trial.

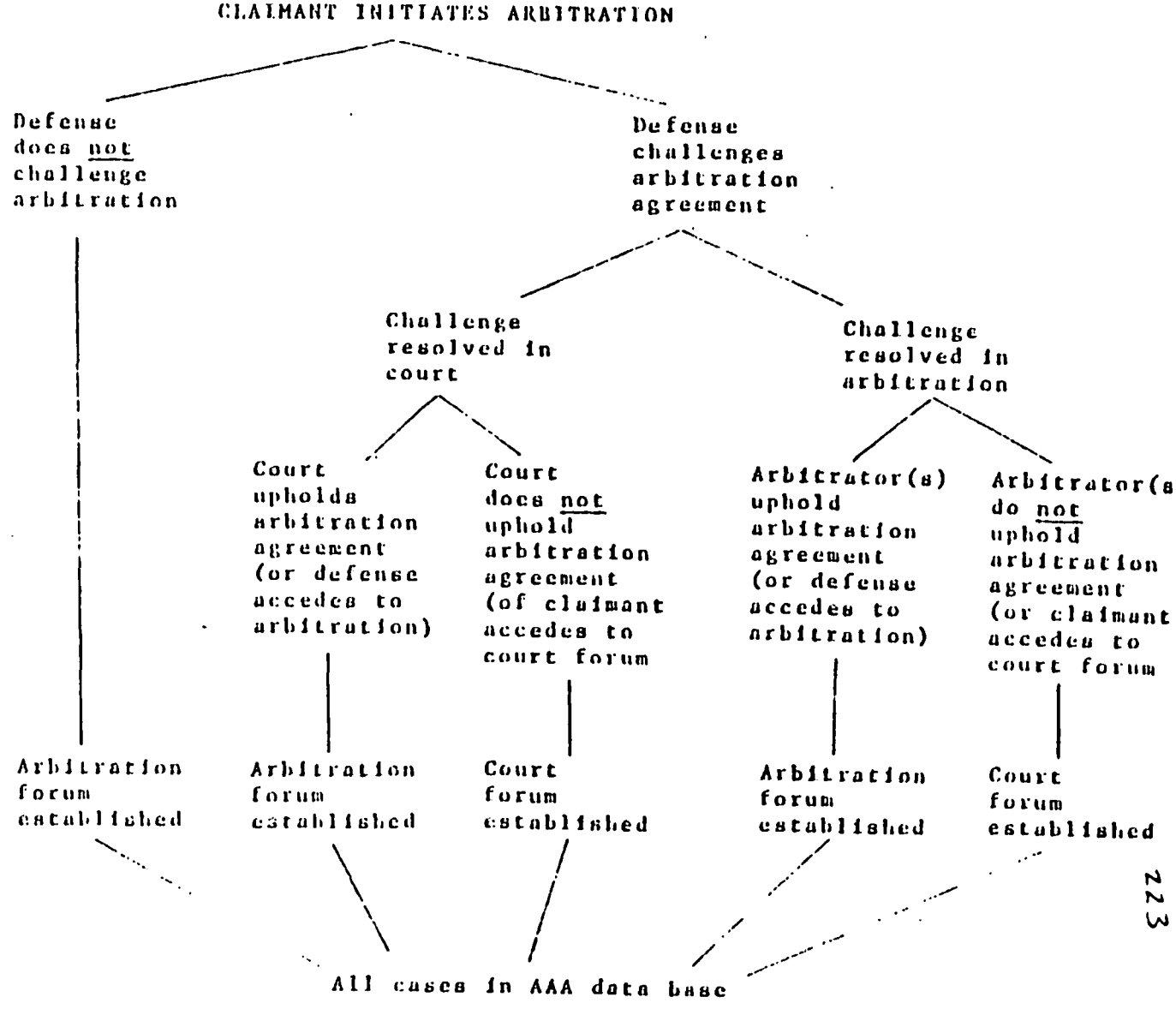
VI PATH to CASE DISPOSITION

5. Basis of removal of case from court to arbitration. (cont'd.)

Many claims were at first pressed in lawsuits and only subsequently removed to arbitration, either by court order or by stipulation of the parties. Where a suit was filed notwithstanding that an arbitration agreement had been signed before the claim arose, usually (but not always) the defense sought a court order for arbitration. If the defense did not invoke the arbitration agreement or the court did not uphold it, then the case continued to resolution in court, and would not be in the arbitration data base. Where an arbitration proceeding was initiated (by any party) under American Arbitration Association administration, it was included in the AAA data base, even if the ultimate disposition of all claims involved was in court.

Where there was a pre-claim arbitration agreement, the accompanying figures show what could have ensued when the first action on a claim was that (a) claimant initiated an arbitration proceeding (fig. 1); (b) claimant filed a lawsuit (fig. 2); and (3) defense initiated an arbitration proceeding (fig. 3), an eventuality which may follow informal claimant efforts to press a claim.

Figure 1.


IRST ACTION:
CLAIMANT INITIATES ARBITRATION
ESPONSE:
Defense does not challenge arbitration
Defense challenges arbitration agreement
ORUM CONTEST:
Challenge resolved in court
Challenge resolved in arbitration
Court upholds arbitration agreement (or defense accedes to arbitration)
Court does not uphold arbitration agreement (of claimant accedes to court forum
Arbitrator(s) uphold arbitration agreement (or defense accedes to arbitration)
Arbitrator(s do not uphold arbitration agreement (or claimant accedes to court forum
ORUM ESTABLISHED:
Arbitration forum established
Arbitration forum established
Court forum established
Arbitration forum established
Court forum established
All cases in AAA data base

American Arbitration Association
Research Institute

figure 2.

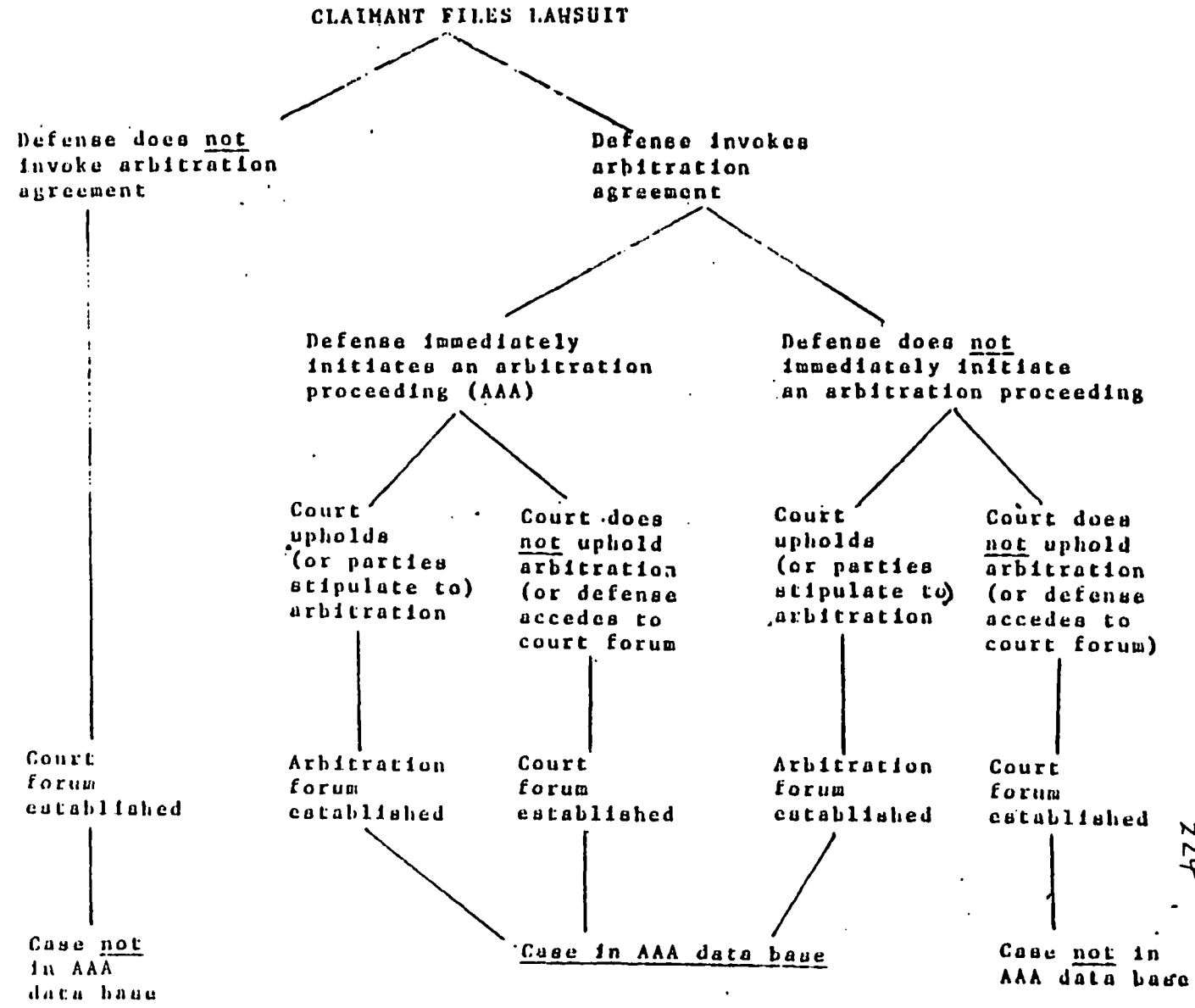


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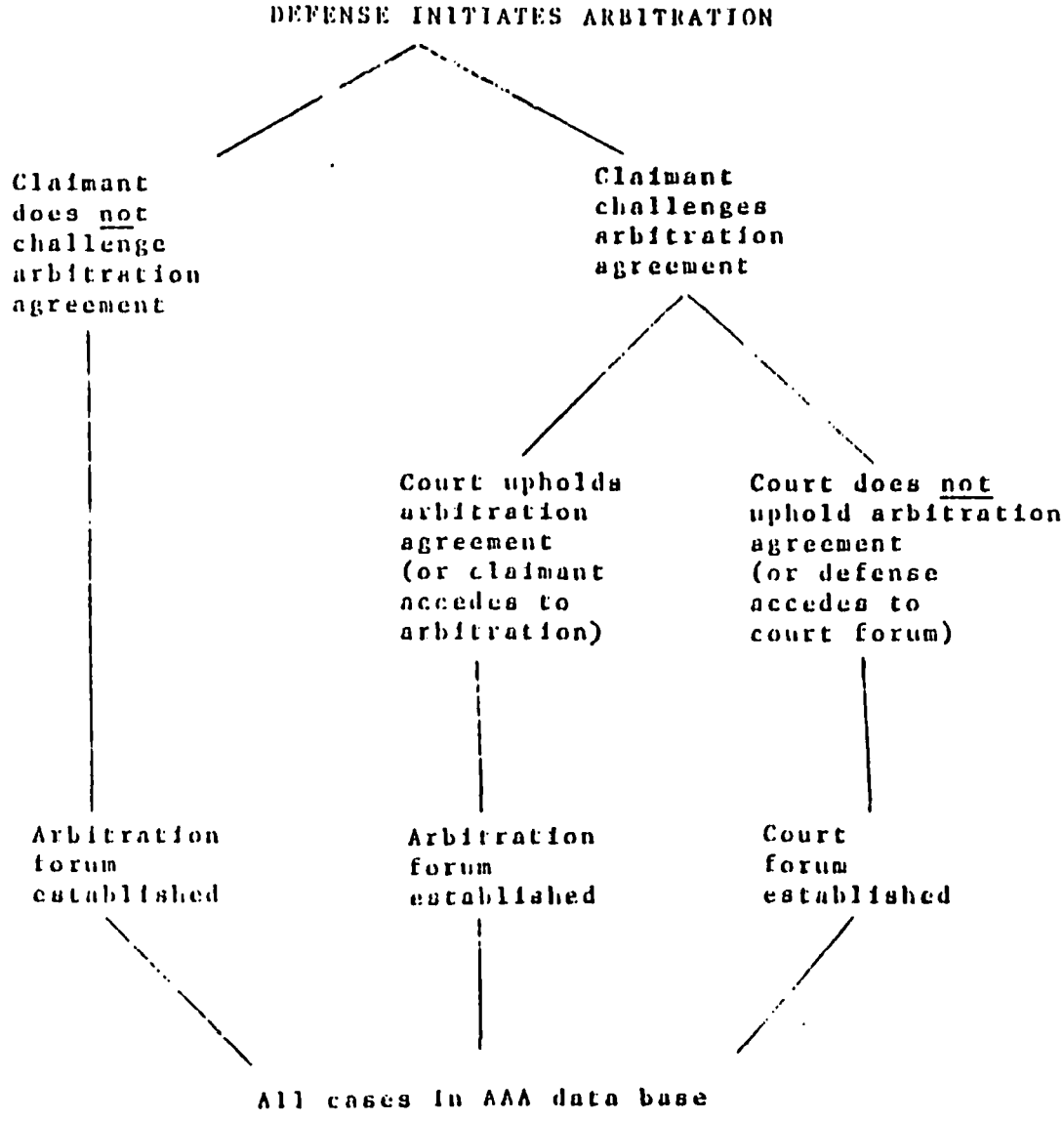
figure 1.


DEFENSE INITIATES ARBITRATION
RST ACTION:
SPONSE:
RUM CONTEST:
RUM ESTABLISHED:
Claimant does not challenge arbitration agreement
Claimant challenges arbitration agreement
Court upholds arbitration agreement (or claimant accedes to arbitration)
Court does not uphold arbitration agreement (or defense accedes to court forum)
Arbitration forum established
Arbitration forum established
Court forum established
All cases in AAA data base

VI. PATH TO CASE DISPOSITION

6. Date arbitration proceeding initiated.
7. Date arbitration hearing begun.
8. Date arbitration hearing completed.
9. Number of separate dates on which arbitration hearing occurred.
10. Date arbitration proceedings concluded.

Data items VI-6 through -10 measure the duration of arbitration proceedings and elapsed time between certain procedural junctures, where reached. Month, day and year were coded for each date.

The date coded for initiation of arbitration proceeding (IV-6) was the date that the arbitration demand or submission was filed with the administering agency, most often the AAA. Where there was no administering agency, the date coded was the date of the demand or submission, which could predate by many months any further action toward arbitration selection and a hearing.

The date coded for conclusion of arbitration proceedings (IV-10) was the date of transmittal of award, if any, or if not, then the date the parties advised the administrative agency of settlement, the date claimant advised it would not further pursue the claim, or the date the claim was deemed abandoned. Where there was no impartial administrative agency, the appropriate date was approximated, if necessary.

Where arbitration hearing started and was completed in a single day, the date hearing began (IV-7) and concluded (IV-8) were the same, and the number of separate dates of hearing (IV-9) was coded 1. Otherwise, different dates were coded for IV-7 and -8 and, accordingly, a number greater than one was coded in IV-9.

In combination with other data, items IV-6 through -10 may provide information on costs as well as time. For instance, given the typical trial per diem fee charged by defense counsel at a particular locale and time, then knowledge of the number of days of arbitration hearing (IV-9) permits an estimate of the defense counsel fee for at least the hearing portion of the arbitration.

VI. PATH TO CASE DISPOSITION

11. Mode of disposition of case in arbitration.

This refers to the disposition of arbitration proceedings, rather than claims disposition, which is recorded in question V-14. It addresses cases in which at least one claim was resolved in arbitration.

However, since the criterion for inclusion of cases in the data base is merely that they involve one claim which entered arbitration, regardless in what forum that claim was resolved, inevitably the base includes a few cases in which no claim was resolved in arbitration. Such a case was coded 0 ("not applicable") if, as a threshold issue, the arbitration forum was defeated (by court or arbitral ruling) or relinquished (by party agreement to proceed in court); it was coded 8 ("other") if there was ultimately a forum "straddle", in which both an arbitration proceeding and a lawsuit were pending and the threshold issue of forum had not been decided at the time the matter was resolved. In the rare case where no claim was resolved in arbitration because a court vacated the arbitration award and subsequently the matter was resolved in court, the arbitral decision was coded as the mode of disposition.

Where claims against two or more defendants were resolved in the arbitration forum, the disposition mode coded was that of the claim(s) which progressed furthest procedurally in arbitration. For example, if the claim as to one defendant was resolved prior to arbitration hearing while that against the other was heard and decided by the arbitrator(s), then the disposition mode coded was the arbitral decision (code option 6).

12. Court action subsequent to disposition of case in arbitration.

Refers to cases where there were known to be any proceedings in court following the close of arbitration. Such proceedings could involve a related new motion (e.g., for entry of judgment on or vacatur of an arbitral award) or continuing lawsuit.

13. Stage of procedure of final case disposition.

Coding of this question is linked to coding of VI-11 because it, too, concerns arbitration proceedings as opposed to forum and mode of disposition of the claim(s) (V-13 and -14). Where at least one claim was resolved in arbitration, as was true in most cases, coding reflects the furthest procedural point reached (code 2,3,4,5 or, very rarely, 7). Where no claim was resolved in arbitration, code 0, 6 or 8 applies.

In "split-forum" cases--those involving proceedings in court against one or more defendants other than the defendant(s) in arbitration--coding of this question reflects only the disposition in arbitration. In "forum-straddle" cases (see discussion under VI-11), coding similarly is based on the arbitration proceeding's progress.

VII. ARBITRATORS

General Information

Section VII records for each case the number of arbitration panelists called for and acutally appointed, and for each arbitrator, individual occupational status, profession or speciality, method of appointment, and vote on award (if any).

To facilitate extraction and coding of this information, it was first recorded in one format (page 14 of the capture form) and then coded in a separate format (page 15 of the capture form, plus a "Supplement" page if there was more than one arbitrator). Questions VIII-1 and -2 appear on the capture form once, at page 15; questions VIII-3 through -7 were coded separately for each arbitrator serving, up to a total of seven. (No known medical malpractice arbitration plan provides for panels of more than seven arbitrators.)

VII. ARBITRATORS

1. Total number of arbitrators to be appointed.

Refers to number of arbitrators specified in the arbitration agreement, plan or rules or otherwise stipulated by the parties. Most arbitration plans call for three arbitrators (sometimes one in small-claim cases).

2. Number of arbitrators serving at the close of arbitration proceedings.

Refers to arbitrators duly appointed at the time the arbitration was concluded, whether or not there was any hearing. The number coded for this question should match the number of individual arbitrators for whom data is recorded (below).

Juxtaposed with VII-1, this data indicates whether a full panel had been appointed, and it may be useful in assessing the power of the arbitration forum to encourage claim resolution at various stages of procedure.

3. Arbitrator #.

For identification, in each case a different number (from one to seven)was assigned to each arbitrator serving.

4. Occupation status.

Refers to activity status in occupation or profession coded for VIII-5, i.e., "active", "retired" or "other" (e.g., surgeon turned office practitioner or administrator).

5. Professional or occupational specialty field.

Refers to profession or occupation at time of service as arbitrator, except that for physicians, medical practice background rather than occupation at time of service was usually the basis for coding. Thus, if a physician arbitrator was a hospital administrator who for most of his career had practiced medicine as an internist, then the specialty coded was "internal medicine" and not "hospital administrator." However, if a hospital was the sole or main defendant in the case, then the arbitrator's occupation as a hospital administrator was coded, since it was more relevant to the case than was the practice in internal medicine.

VII. ARBITRATORS

5. Professional or occupational specialty field (cont'd).

A list of professional or occupational codes was developed (below and next page) to provide a way to relate arbitrator professional or specialty and case outcome, particularly in award cases. Data on identified attorney arbitrators was obtained from the American Arbitration Association's National Panel of Arbitrators and the Martindale-Hubbell Lawyer Director. Data on identified physician arbitrators was obtained from the American Medical Directory and AAA records. Data for other (non-attorney, non-physician) identified arbitrators was obtained from the records of AAA and other administrative authorities.

ARBITRATOR OCCUPATION or SPECIALTY CODES

LAW 00 Attorney, specialty/practice unspecified

Attorneys in private practice of law

01 Negligence, only or mainly plaintiffs
02 Negligence, only or mainly defense
03 Negligence, balanced plaintiff/defense practice
04 Health care law
05 Corporate law
06 General practice or n.e.c.

Other attorneys

07 Employed attorney (public or private sector)
08 Law professor or dean
09 Judge

VII. ARBITRATORS

5. Arbitrator professional or occupational specialty field. (cont'd.)

HEALTH CARE

Physicians and Surgeons (M.D.)

10 Administrative medicine
11 Allergy
12 Anesthesiology
13 Aviation medicine
14 Cardiovascular disease
15 Vascular surgery
16 Cardiac surgery
17 Dermatology
18 Forensic pathology
19 Gastroenterology
20 General practice
21 Family practice
22 General surgery
23 Internal medicine
24 Neurosurgery
25 Neurology
26 Obstetrics and gynecology
27 Occupational medicine
28 Ophthalmology
29 Orthopedic surgery
30 Otolaryngology
31 Pathology
32 Pediatrics
33 Physical medicine and rehabilitation
34 Plastic surgery
35 General preventive medicine
36 Colon and rectal surgery
37 Psychiatry
38 Public health
39 Pulmonary diseases
40 Radiology, n.e.c.
41 Diagnostic radiology
42 Therapeutic radiology
43 Thoracic surgery
44 Urology
45 Physician-no surgery-specialty unspecified
46 Physician-minor surgery-specialty unspecified
47 Physician-surgery-specialty unspecified

Osteopathic Physicians (D.O.)

48 Osteopathic physician, no surgery
49 Osteopathic surgeon

Nurses, Therapists and Technicians

50 Registered nurse
51
52 Physician's assistant
53 Therapist (all specialties)
54 Technician (all specialties)

Dentists

60 Dentist, n.e.c.
61 Oral surgery

Health Care Administrators/Officials

70 Hospital administrator
71 HMO or prepaid group health plan administrator
72 Administrator for other health care provider
73 Other health care administrator
74 Nursing director or assistant d

Other Practitioners

80 Chiropody (Podiatry)
81 Chiropractic
82 Optometry
83 Pharmacy
84 All other

OTHER

90 Manager or executive
91 Professional (e.g., accountant, actuary, architect, broker, engineer, journalist, airline pilot, editor, clergy, teacher etc.)
95 Homemaker
98 Not elsewhere classified
99 Unknown

VII. ARBITRATORS

6. Method of appointment.

Refers to the way an individual came to hold the arbitrator's office, normally either by mutual agreement of the disputing parties, or as a designee by a party, court, or administrative authority such as AAA. In at least one arbitration plan, however, arbitral office comes with membership on a joint committee of medical and bar association officers.

7. Vote on award.

Applies only to cases in which there was an arbitral award, whether or not it disposed of the case. Refers to each arbitrator's concurrence with or dissent from the determination reached. Where there was an indication in the award (or elsewhere) that an arbitrator disagreed, in whole or part, with the determination, code 3 ("dissented") was entered. Otherwise, where a signed award indicated no dissent, code 2 ("concurred") was entered or, if a copy of the award was not available, "unknown" was coded.

This data should provide some indication of how often arbitrators differ in their judgment of the case before them. It may be of interest to link this data with occupational specialty (VII-5).

General Information

Section VIII records detailed information on the arbitration agreement, hearing, costs and award where applicable in each case.

Data sought under these headings is of varying significance. For instance, the time of arbitration agreement (VIII-1) is critical to bifurcation of the entire data base for analysis of what changes when, instead of agreeing to arbitrate any claim which might arise in future, parties commit themselves to arbitrate only after a claim arises. And certainly indemnity awarded (VIII-19) and the costs of arbitration (VIII-9 through -16) are of intrinsic interest. On the other hand, the relative frequency of hearing transcripts, legal briefs, or claimant self-representation in malpractice arbitration may not be of intrinsic importance, but may provide a useful measure of the extent to which arbitration differs from the courts in these respects.

VIII. ARBITRATION DETAIL

A. AGREEMENT

1. Time of arbitration agreement.

Refers to the point in time, with respect to existence of a claim, at which the agreement to arbitrate was made. Agreements are made either preclaim, prior to the assertion of a claim (or, often, prior to medical treatment) or postclaim, after a claim has been asserted.

2. Type of arbitration agreement.

This item is linked to the arbitration plan or arrangement (I-2) as well as to the type of arbitration agreement (VIII-2, above).

Codes 1 through 6 address the great majority of cases in which the arbitration agreement was preclaim; code 7 applies where the agreement was postclaim.

Coding was based on the health care relationship of the parties under the arbitration plan or program concerned. That is, where a plan was centered on the patient-hospital relationship, then code 1 ("hospital-patient") applied because the agreement was one between the patient and the hospital, with doctors being party to it on a blanket basis by means of a separate agreement with the hospital. Similarly, where the agreement was offered directly by a physician (or private medical group practice) to the patient, code 4 ("physician-patient") applied.

3. Administrative authority for arbitration proceedings.

Refers to the agency or organization under whose auspices or administrative control the arbitration proceedings took place. The administrative authority may have promulgated its own arbitration rules or may employ other rules, statutory or private. Arbitration does not require an administrative authority, and such an authority need not be strictly disinterested in case outcomes, however.

B. HEARING

Appearances of expert medical witnesses

4. for claimant(s)
5. for defense (total for all defendants).

"Expert medical witness" has been here defined as a health care professional who was not a defendant and who had no responsibility for treatment or care of the injured person (see General Information for Section II), and who testified concerning the standard of care or practice or the injured person's medical condition.

The frequency of appearance of expert medical witnesses in arbitration, and the number used, provide a measure of the apparent need for such experts in arbitration and, together with other data, may also provide a means to estimate costs.

6. Verbatim transcript or stenographic record.

Refers to ordering by a party (or parties) of a transcript or record of part or all of the arbitration hearing. Transcripts of depositions and other pre-hearing proceedings are not counted here. (Where transcripts or records were ordered, the cost, if known, was recorded although not coded. Thus, some assessment of cost for transcripts or records should be possible.)

7. Post-hearing brief.

Refers to legal briefs or memoranda submitted to the arbitrator(s) following hearing. Where it was known that briefs or memoranda were prepared by the attorneys and presented to the arbitrator(s) before or during the hearing, that was recorded, although not coded.

8. Total number of hours of arbitration hearing.

Refers only to cases in which hearing was completed and an arbitration award rendered. When considered together with the time span between hearing start and conclusion (VI-7 and -8) and the number of dates on which hearing occurred (VI-9), this information provides a basis for comparison of all such cases.

In evaluating available information as to how many hours the hearing(s) took, no allowance was made for recesses for meals, etc.; rather, the number of hours was calculated as the difference between the time hearing was noted to start and end on any particular day.

VIII. ARBITRATION DETAIL

C. COSTS

Administrative fees and expenses of arbitration

9. Amount attributable to claimant.
10. Amount ultimately borne by claimant.
11. Amount attributable to defense (all defendants together).
12. Amount ultimately borne by defense.

Arbitrator compensation

13. Amount attributable to claimant.
14. Amount ultimately borne by claimant.
15. Amount attributable to defense (all defendants together).
16. Amount ultimately borne by defense (all defendants together).

Administrative fees and expenses of arbitration include: administrative (filing) fees; amounts reimbursable (for out-of-pocket or other unusual expenses) to an impartial administrative agency or its personnel; fees for hearing facilities or arrangements; and any other costs directly associated with the arbitration forum utilized. Such costs do not include: compensation paid to arbitrators (VIII-13 through -16); costs or expenses for expert medical witnesses, stenographers or transcripts; or any other cost or expense incurred as an aid to prosecution or defense of the case, as distinguished from expenses incidental to the arbitration tribunal.

Arbitrator compensation includes any per diem fee paid to arbitrators as well as any out-of-pocket expenses for which they were reimbursed (e.g., meals, lodging, transportation, etc.).

Amounts "attributable to" claimant(s) and defendants are those which would be shared by the parties, pro rata, absent some contravening provision. Amounts "ultimately borne" by the parties are those actually billed to the parties or to third parties (insurors, statutory funds, providers, e.g.) which paid on their behalf.

Where a claimant had filed an affidavit of indigency to obtain waiver of any arbitration forum costs or an application seeking to have a third party (indigents' or statutory fund, e.g.) pay such costs, that was noted on the form, and could later be coded.

17. Claimant representation in arbitration.

Refers to the person who presented the claim in arbitration--an attorney, the claimant himself, or another person.

VIII. ARBITRATION DETAIL

D. AWARD (VIII-18 through -22 apply aonly to cases in which there was an arbitral award).

18. Award accompanied by narrative opinion.

Usually medical malpractice arbitrators need only provide a written decision (award), and need not state reasons for the decision. With rare exceptions, the courts as reviewers of fairness and due process in arbitration and enforcers of awards can not require an arbitral rationale. Arbitrators may volunteer a written "opinion" or "finding", however, or they may be required by law (in Michigan, e.g.) to provide one. All cases in which such an opinion or rationale was provided were coded either 2 or 3.

19. Money amount awarded by arbitrators to claimant(s) as indemnity for injury.

This amount, coded to the nearest dollar, represents only that amount awarded as indemnity for injury, exclusive of any money amount awarded which represented reimbursement of arbitration forum costs. Normally, arbitrators have no authority to award amounts for attorney's fees.

The amount coded here is not necessarily the total amount of indemnity for injury which may have been paid by (on behalf of) all defendants against whom claims were asserted in connection with the same incident or injury. That total would be the aggregate of "total indemnity" (V-18) for each defendant.

20. Non-monetary remedy, if any, awarded by arbitrator(s).

Refers to any remedy directed by the arbitrator(s) other than direct monetary payment (e.g., provision of treatment or services, cancellation of a bill).

See discussion under IV-11.

21. Amount of claimant-incurred arbitration forum costs allocated to defendant(s) in award.

Applies only where, in the award, the arbitrator(s) specifically directed that one or more defendants bear some forum-related costs which were attributable to, and would otherwise have been borne by, claimant(s). (See discussion under COSTS, VIII-9 through -16). In cases where no indemnity for injury was awarded, a provision that some or all forum costs be borne by the defense may indicate that the claim was perceived by the arbitrator(s) as reasonably pursued or well-founded, even if negligence was not proved or damages not warranted.

VIII. ARBITRATION DETAIL

22. Method specified (in arbitration award) for payment of indemnity.

In most cases where the arbitrator(s) awarded an amount of indemnity for injury, no method of payment was specified and payment was tendered in a lump sum draft. Recently, however, as a matter of law or discretion on the part of a judge or arbitrator, "structured" (periodic) indemnity payments have become possible--particularly in high-damages cases--in certain jurisdictions. Arbitration traditionally has offered considerable latitude in connection with remedies; this data will indicate how often structured indemnity payments may have been provided in malpractice arbitration.

APPENDIX

Appendix A

Capture form for the American Arbitration Association (AAA) Medical Malpractice Arbitration Research Data Base.

Appendix B

Capture form for the National Association of Insurance Commissioners' (NAIC) 1975-78 Malpractice Closed Claim Survey.

Appendix C

Capture form for the DHEW/Westat Research 1976 Malpractice Closed Claim Study.

Appendix D

Cross-listings of comparable data from the AAA, NAIC and DHEW/Westat bases. The following three listings, employing the respective data item numbering systems used for each capture form, are provided:

I. NAIC and DHEW/Westat data keyed to AAA capture form
II. AAA data keyed to NAIC capture form
III. AAA data keyed to DHEW/Westat capture form.

NAIC MEDICAL PROFESSIONAL LIABILITY INSURANCE UNIFORM CLAIMS REPORT

Report each claim closed on or after July 1, 1976. Submit a report for each defendant insured by filing insurer, including claims closed without payment. Complete all blocks on the form. If information is unknown, enter "UNK," if not applicable, enter "NA." When an item calls for a dollar amount and no amount is involved, enter 0 in the space after the $ sign. When you prepare a report on a reopened case on which a previous report has been made, mark "Previously Reported" at the top of the report. Record all amounts in whole dollars only, all dates as MM YY and all ages (on date of occurrence) as YY

1a.	Name of insurer			1b.	Claim file identification		
2a.	Date of injury			2b.	Date reported to insurer	2c.	Date reopened
3a.	Insured's name	3b.	Age	3c.	City	3d.	State 3e. Zip
4a.	Profession or business (CODE)			4b.	Specialty (CODE)	4c.	Type of practice (CODE)
5a.	Board certification (CODE)			5b.	Foreign medical graduate?	5c.	Country
6a.	Place where injury occurred (CODE)			6b.	City	6c.	State 6d. Zip
7a.	Name of institution (if injury occurred in institution)			7b.	Location in institution (CODE)	7c.	Hospital identification (Leave Blank)
8a.	Injured person's name					8b.	Age 8c. Sex
9a.	Total defendants involved in claim			9b.	Derivative claim (CODE)		
10.	Amount of reserve for indemnity if still outstanding $			11.	Amount of reserve for expense if still outstanding $		
12a.	Plaintiff attorney's name			12b.	City	12c.	State 12d. Zip

13.	Describe action which caused claim to be made	(Leave Blank) 14a.
		14b.
14a.	Final diagnosis for which treatment was sought or rendered (patient's actual condition)	15.
14b.	Describe misdiagnosis made, if any, of patient's actual condition	15.
15.	Operation, diagnostic or treatment procedure causing the injury	16a.
16a.	Describe principal injury giving rise to the claim	16a.

16b.	Severity of injury (CODE)		
17a.	Misadventures in procedures (CODE)	17b.	Misadventures in diagnosis (CODE)
18a.	Others contributing to injury (CODE)	18b.	Associated issues (CODE) 18c. Coverage (CODE)
19	Companion claim file identification 1. 2. 3. 4.		
20a.	Date of this payment or closure	20b.	Claim disposition (CODE) 20c. Settlement (CODE)
21a.	Court (CODE)	21b.	Binding arbitration (CODE) 21c. Review panel (CODE)

22.	Indemnity paid by you on behalf of this defendant	$
23.	Other indemnity paid by or on behalf of this defendant	$ D ☐ E ☐
24.	Indemnity paid by all parties (for all defendants)	$
25.	Loss adjustment expense paid to defense counsel	$
26.	All other allocated loss adjustment expense paid by you	$
27.	Injured person's incurred medical expense	$
28.	Injured person's anticipated future medical expense	$
29.	Injured person's incurred wage loss	$
30.	Injured person's anticipated wage loss	$
31.	Injured person's other expense	$
32.	Total amount allocated for future periodic payments (for all defendants)	$

Contact Person and Telephone Number

Address

Person Responsible for Report

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Appendix B

NAIC MEDICAL PROFESSIONAL LIABILITY INSURANCE UNIFORM CLAIMS REPORT INSTRUCTIONS

4a. Profession or Business Code: 1) physicians and surgeons, 2) hospitals, 3) other medical professionals, 4) other health care facilities. (When 3 is entered, specify type of professional in addition.)

4b. Specialty Code: (five digits) from ISO Common Statistical Base classifications.

4c. Type of Practice Code: 1) institutional (academic), 2) professional corporation or partnership (group), 3) self-employed, 4) employed physician, 5) employed nurse, 6) all other employees, 7) intern or resident.

5a. Enter appropriate code if insured physician is Board Certified in 1) specialty coded in 4b, 2) a different specialty, 3) both specialty coded in 4b and another specialty 4) insured physician is not board-certified. If 2 or 3 is entered, also enter the additional specialty code (5 digits) in this line.

5b. Indicate yes or no if insured physician is a Foreign Medical Graduate.

5c. Enter Country in which primary medical education was received if other than U.S.

6a. Enter the appropriate code of the Place Where the principal Injury Occurred: 1) hospital inpatient facility, 2) emergency room, 3) hospital outpatient facility, 4) nursing home, 5) physician's office, 6) patient's home, 7) other outpatient facility, 8) other. Use only one code. If code 8, other, is used enter description of the place.

7b. Enter appropriate code if Location of Institutional Injury was: 1) patient's room, 2) labor and delivery room, 3) operating suite, 4) recovery room, 5) critical care unit, 6) special procedure room, 7) nursery, 8) radiology, 9) physical therapy department.

9a. Enter the Total Number of Defendants (persons and institutions other than Joan Does) Involved in Claim.

9b. Enter the appropriate code(s) if a Derivative Claim (on behalf of someone other than the medically injured) was made by: 1) spouse, 2) children, 3) parent, 4) personal representative.

14a. Use nomenclature and/or descriptions to enter the Final Diagnosis for which Treatment was Sought or Rendered (actual abnormal condition), and also 14b. the Misdiagnosis, if any, of the Patient's Actual Condition.

15. Use nomenclature and/or descriptions of the procedure used. Include method of anesthesia, or name of drug used for treatment, with detail of administration.

16a. Use nomenclature and/or descriptions of the injury. Include type of adverse effect from drugs where applicable.

16b. Enter one digit code for Severity of Injury from scale provided below. Enter the code for the most serious injury if several are involved.

	Severity of Injury Scale	Examples
	1) Emotional only	Fright, no physical damage.
Temporary	2) Insignificant	Lacerations, contusions, minor scars, rash. No delay.
	3) Minor	Infections, minor fracture, fall in hospital. Recovery delayed.
	4) Major	Burns, surgical material left, drug side effect, brain damage. Recovery delayed.
Permanent	5) Minor	Loss of fingers, loss or damage to organs. Includes nondisabling injuries.
	6) Significant	Deafness, loss of limb, loss of eye, loss of one kidney or lung.
	7) Major	Paraplegia, blindness, loss of two limbs, brain damage.
	8) Grave	Quadriplegia, severe brain damage, lifelong care or fatal prognosis.
	9) Death	

17a. Enter the appropriate Misadventure Code(s) if the Procedure was: 1) not adequately indicated, 2) contraindicated, 3) there was a more appropriate alternative, 4) delayed, 5) improperly performed, 6) not performed, 7) occasioned by misdiagnosis, 8) inadequate assessment, 9) misidentification of the patient, 10) delay in notifying physician, 11) failure to notice an improper order, 12) failure to obtain a proper order, 13) failure to instruct patient.

17b. Enter the appropriate code if the following Misadventures in Diagnosis caused or aggravated the injury: 1) delay in diagnosis, 2) misdiagnosis of the abnormal condition, 3) misdiagnosis in the absence of an abnormal condition.

18a. Enter the appropriate code(s) if any Other person(s) caused or Contributed to the Injury: 1) attending physician, 2) house staff, 3) consultant, 4) nurse R.N., 5) nurse L.P.N. or L.V.N., 6) aide, 7) orderly, 8) pharmacist, 9) radiologist, 10) radiology technician, 11) anesthesiologist, 12) anesthetist, 13) pathologist, 14) laboratory technician, 15) physician's assistant, 16) O.R. technician, 17) physical therapist, 18) inhalation therapist, 19) other therapists, 20) other technicians, 21) dietitian, 22) maintenance personnel, 23) engineer, 24) administrator, 25) other personnel, 26) patient, 27) another patient.

18b. Enter the appropriate code(s) if one or more of the following factors were Associated Issues in the claim: 1) abandonment, 2) premature discharge from institution, 3) false imprisonment, 4) lack or delay of consultation, 5) lack of supervision, 6) breach of confidentiality, 7) failure to prevent an abnormal condition, 8) failure to accomplish intended result, 9) failure to conform with regulation or statutory rule, 10) lack of adequate facilities or equipment, 11) laboratory error, 12) pharmacy error, 13) products liability, 14) failure to timely disclose, 15) failure to provide warning instructions, 16) lack of consent from proper person, 17) inadequate information for informed consent, 18) procedure exceeded consensual understanding, 19) breach of contract, 20) warranty, 21) assault and battery, 22) res ipsa loquitur, 23) emergency equipment, 24) cooling devices, 25) heating devices, 26) cautery equipment, 27) x-ray equipment, 28) radiation therapy equipment, 29) traction equipment, 30) anesthesia equipment, 31) operative equipment, 32) surgical instruments and materials, 33) food preparation equipment, 34) laboratory equipment, 35) laboratory mislabeling, 36) laboratory computation error, 37) inadequate laboratory specimen, 38) lost laboratory specimen, 39) laboratory interpretation, 40) laboratory reporting error, 41) laboratory delay in reporting, 42) sterilization of equipment, 43) skin preparation, 44) aseptic technique, 45) isolation for infection control, 46) records, 47) billing and collection, 48) inter-professional relations, 49) vicarious liability, 50) statute of limitations, 51) punitive damages.

18c. Enter the appropriate Coverage Code for the type of policy covering the claim: 1) policy covers all claims made during the term of the policy, 2) policy covers all claims made during the policy term for events which occurred during a designated previous policy term, 3) policy covers all claims whenever presented for events which occur during the policy term.

20b. Enter final method of Claim Disposition: 1) settled by parties, 2) disposed of by a court, 3) disposed of by binding arbitration.

20c. If settled by agreement of parties, enter appropriate Settlement Code: 1) before filing suit or demanding hearing, 2) before trial or hearing, 3) during trial or hearing, 4) after trial or hearing, but before judgment or decision (award), 5) after judgment or decision, but before appeal, 6) during appeal, 7) after appeal, 8) claim or suit abandoned, 9) during review panel or non-binding arbitration.

21a. Enter the appropriate Court Code: 0) no court proceedings, 1) directed verdict for plaintiff, 2) directed verdict for defendant, 3) judgment notwithstanding the verdict for the plaintiff, 4) judgment notwithstanding the verdict for the defendant, 5) judgment for the plaintiff, 6) judgment for the defendant, 7) for plaintiff after appeal, 8) for defendant after appeal, 9) all other.

21b. Enter appropriate Binding Arbitration Code: 0) claim not subject to arbitration, 1) claim subject to arbitration, but previously coded disposition reached in lieu of award, 2) award for plaintiff, 3) award for defendant.

21c. If a review panel or non-binding arbitration was used in disposition, enter appropriate code: 1) finding for plaintiff, 2) finding for defendant.

23. Mark appropriate box if this amount was a recoverable paid by the insured or indemnity paid under an excess limits policy by another insurer.

25. Enter fees paid to your defense counsel for this defendant.

26. Enter filing fees, investigation charges, photocopy fees, expenses of defense counsel, etc.

28. Enter best estimate of future medical expense if it appears the claimant will incur expenses in the future.

30. Enter best estimate of future wage loss if it appears the claimant will incur wage loss in the future.

32. If a reserve, annuity, trust fund or similar mechanism was established to provide future periodic payments, enter total amount thereof.

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Appendix B-2

FORM—A

MEDICAL PROFESSIONAL LIABILITY INSURANCE UNIFORM CLOSED CLAIMS REPORT

Directions: Complete the white space for each question with an entry, specified code, or check mark in the appropriate box or space, unless directed to skip that question. Do not write in colored spaces. Place all numbers as far to the right in the field as possible. When answer is zero or none, indicate with an "0". If unknown, enter "—" in each space. For question not answered by instruction booklet, please call (collect) to (202) 245-7611.

Report No. (1-5) [ ][ ][ ][ ][ ]

I. BASIC IDENTIFYING AND CROSS REFERENCING DATA

1. Claim file identification number ..... (6-15) [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]

2. Insuring Company ..... (16-18) [ ][ ][ ]

3. Date when medical liability injury first occurred ..... (19-22) Mo [ ][ ] Yr [ ][ ]

4. Place where medical liability injury occurred _____ City _____ State (23-31) [ ][ ][ ][ ][ ][ ][ ][ ][ ]

If injury occurred in an institution, name of institution _____ (32-38) [ ][ ][ ][ ][ ][ ][ ]

☐ Not in an institution

5. Date file opened ..... (39-42) Mo [ ][ ] Yr [ ][ ]

6. Total number of defendants/insureds involved in this claim ..... (43-44) [ ][ ]

Number of other files opened by this insurance company in this claim ..... (45-46) [ ][ ]

If any, list claim ID number(s)

(47-56) [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]

(57-66) [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]

(67-76) [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]

(80) [1]

(6-15) [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]

(16-25) [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]

(80) [2]

II. PATIENT DATA

1. Age: 1) ☐ 0-12 months 2) ☐ 13 months-9 years 3) ☐ 10-19 4) ☐ 20-39 5) ☐ 40-59 6) ☐ 60-69 7) ☐ 70 & over 8) ☐ unknown (6) [ ]

2. Sex: 1) ☐ Male 2) ☐ Female (7) [ ]

3. Occupational status at time of injury: 1) ☐ Employed 2) ☐ Unemployed 3) ☐ Unknown (8) [ ]

4. Injured patient's occupation at time of injury _____ (9-10) [ ][ ]

5. Patient's annual earnings at time of injury (estimate, if necessary) (11) [ ]

1) ☐ None
2) ☐ $1-$4,999
3) ☐ $5,000-$9,999
4) ☐ $10,000-$14,999
5) ☐ $15,000-$24,999
6) ☐ $25,000-$49,999
7) ☐ $50,000 and over
8) ☐ Unknown

6. Major source of payment of patient's health care costs (12) [ ]

1) ☐ Self
2) ☐ Private Insurance
3) ☐ Medicare
4) ☐ Medicaid
5) ☐ Worker's compensation
6) ☐ Other (specify) _____
7) ☐ Unknown

(NOTE: Dollar amounts requested in questions 7-10 below refer to those resulting from medical liability injury.)

7. Incurred medical expense of patient ..... (13-19) $[ ][ ][ ][ ][ ][ ][ ]

8. Future medical expense of patient ..... (20-26) $[ ][ ][ ][ ][ ][ ][ ]

9. Patient's lost wages ..... (27-33) $[ ][ ][ ][ ][ ][ ][ ]

10. Other expense of patient ..... (34-40) $[ ][ ][ ][ ][ ][ ][ ]

III. INJURY DATA

1. Name of actual medical condition (for which treatment was rendered or diagnosis sought, and) which is related to the development of the injury or complication (41-44) ____

_____

_____

Injury (for which medical liability claim was made) (45-48) ____

2. Description of principal injury or complications for which medical liability claim was made. (Include name of body part involved.)

_____

_____

3. Severity of injury. Check severity of ultimate injury on scale provided below (49) ____

1) ☐ Emotional only. Fright, no physical damage, pain and suffering.

2) ☐ Insignificant. Lacerations, contusions, minor scars, rash. No delay in recovery.

Temporary disability

3) ☐ Minor. Infections, missed fracture, fell in hospital. Recovery delayed.

4) ☐ Major. Burns, surgical material left, drug side-effect, brain dysfunction. Recovery delayed.

Permanent partial disability

5) ☐ Minor. Loss of fingers, loss or damage to organs. Includes non-disabling injuries.

6) ☐ Major. Deafness, loss of limb, loss of eye, loss of one kidney or lung.

Permanent total disability

7) ☐ Major. Paraplegia, blindness, loss of two limbs, brain damage.

8) ☐ Severe. Quadriplegia, severe brain damage, lifelong care or fatal prognosis.

9) ☐ Death.

0) ☐ Other (specify) _____

_____

Cause of Injury (50-53) ____

4. Describe how injury occurred: _____

(54-57) ____

_____

_____

_____

5. Which of the following best characterizes the injury? (58) ____

1) ☐ Occurrence of new abnormal condition induced by treatment or procedure

2) ☐ Incomplete cure or removal of original medically abnormal condition

3) ☐ Occurrence of new abnormal condition through lack or failure of preventive efforts

4) ☐ The mere performance of unnecessary treatment or procedure without further complications

5) ☐ Failure to accomplish intended goal (original condition not medically abnormal)

6) ☐ Emotional and/or financial consequences of a misdiagnosis in absence of an abnormal condition

7) ☐ The physical, emotional and/or financial consequences of performing unauthorized acts whether or not such conduct was medically proper

Diagnostic Problem (whether or not liability was found and/or indemnity paid)

6. Name of misdiagnosis, if any: use nomenclature or description to enter misdiagnosis of patient's condition. If diagnostic problem was a failure to diagnose, indicate accordingly. (If not applicable, check ☐ and skip to III.G). (59-62) ____

_____

_____

7. Type of misdiagnosis (select one choice) (63) ____

1) ☐ Diagnosis of a disease or condition in the absence of an abnormal condition or disease.

2) ☐ No diagnosis made (failure to diagnose)

3) ☐ Original diagnosis incorrect

8. Cause of misdiagnosis (Check up to three appropriate codes.) (64) (65) (66)

1) ☐ An inadequate history
2) ☐ An inadequate physical or mental examination

Failure to request

3) ☐ X-rays (specify type) _____
4) ☐ All other diagnostic tests (specify type) _____

Improper selection of

5) ☐ X-rays (specify type) _____
6) ☐ All other diagnostic tests (specify type) _____

Misinterpretation of

7) ☐ X-rays (specify type) _____
8) ☐ All other diagnostic tests (specify type) _____
9) ☐ Misinterpretation of otherwise adequate information acquired by history or physical examination
0) ☐ Other(s) (specify) _____

Procedural Problem (whether or not liability was found and/or indemnity paid)

9. Did injury arise from, or was it associated with, a specific procedure?

1) ☐ Yes 2) ☐ No (If "No" checked, go to III.13) (67)

10. Name of procedure from which injury arose: (specify) _____ (68-71)

11. Anesthesia as cause of injury. Check appropriate code(s) for type of anesthesia used or combination thereof.

1) ☐ No or not applicable
2) ☐ Inhalation
3) ☐ Intravenous
4) ☐ Conduction, local, regional, spinal, etc.
5) ☐ Yes, but unknown
6) ☐ Other (Specify) _____

(72) (73)

12. Why did the injury arise from this procedure? (Check up to three that apply).

1) ☐ Improperly performed
2) ☐ Not adequately indicated
3) ☐ Contraindicated
4) ☐ There was a more appropriate alternative
5) ☐ Delayed
6) ☐ Occasioned by misdiagnosis
7) ☐ Treatment of wrong patient
8) ☐ Treatment of wrong body part
9) ☐ Other (specify) _____
0) ☐ Unknown

(74) (75) (76)

(80) 3

Drugs

13. Name of drug(s) causing injury (if any): _____ (6-9)

☐ No drug involved (Go to III.15) (10-13)

14. Cause of drug injury (Check up to three that apply)

01) ☐ Overdose
02) ☐ Inadequate dose
03) ☐ Improper route of administration
04) ☐ Improper method of administration
05) ☐ Adverse interaction with another drug
06) ☐ Allergic reaction
07) ☐ Toxic reaction
08) ☐ Wrong drug
09) ☐ Wrong patient
10) ☐ Other (Specify) _____
11) ☐ Unknown

(14-15) (16-17) (18-19)

Aggravation of Injury

15. Was principal injury made worse by

1) ☐ Delay in its recognition 2) ☐ The treatment of it 3) ☐ Other 4) ☐ Not applicable (20)

16. Type of Facility where injury occurred: (21)

1) ☐ Hospital
2) ☐ Nursing home
3) ☐ Office of physician or clinic
4) ☐ Patient's home
5) ☐ Other (specify) _____

17. If injury occurred in an institution, check appropriate box to describe where it occurred: 00☐ Not in an institution (22-23)

- 01☐ Operating room
- 02☐ Patient's room
- 03☐ Bathroom
- 04☐ Emergency room
- 05☐ Labor and delivery room
- 06☐ Recovery room
- 07☐ Critical care unit
- 08☐ Nursery
- 09☐ Radiology
- 10☐ Outpatient department
- 11☐ Other (specify)

18. Institutional factors related to medical liability injury (Check up to three appropriate codes): (24-25) (26-27) (28-29)

- 01☐ Not applicable
- 02☐ Drug or fluid administration technique
- 03☐ Blood administration
- 04☐ Obtaining specimen
- 05☐ Insertion or management of tube or drain
- 06☐ Position of patient
- 07☐ Transportation
- 08☐ Fall from bed
- 09☐ Fall from table
- 10☐ Fall from chair or stool
- 11☐ Fall while walking or standing
- 12☐ Fall in tub or shower
- 13☐ Other falls (specify)
- 14☐ Infection control technique
- 15☐ Monitoring of patient
- 16☐ Maintenance and operation of equipment (specify equipment)
- 17☐ Crash cart (specify equipment)
- 18☐ Laboratory error (specify)
- 19☐ Other (specify)
- 20☐ Unknown

19. For injuries caused by institutional personnel, check the appropriate box or boxes (not more than three) which best describe the conduct of the person(s) responsible for the injury in an institution. (30-31) (32-33) (34-35)

- 01☐ Not applicable
- 02☐ Inadequate assessment
- 03☐ Mis-identification of patient
- 04☐ Delay in notifying physician
- 05☐ Failure to use side rails or restraints
- 06☐ Failure to maintain floors
- 07☐ Improper protection of patient
- 08☐ Delay in performance
- 09☐ Failure to instruct patient
- 10☐ Nursing error (specify)
- 11☐ Other improper performance (specify)
- 12☐ Unknown

IV. COST

1. Was payment made? 1) ☐ No 2) ☐ Yes If so, how much by you? ..... (36-42) $
2. To your knowledge, what was total indemnity paid by all defendants? ..... (43-49) $
3. Was a claimant's attorney associated with this claim? 1) ☐ Yes 2) ☐ No (50)

In the space provided below, write in any other relevant comments or additional information. If necessary continue on a separate sheet.

(51-52)

(80) 4

FORM–8

MEDICAL PROFESSIONAL LIABILITY INSURANCE UNIFORM CLOSED CLAIMS REPORT

INSURED AND DISPOSITION DATA

INSTRUCTIONS: Submit one Form 8 for each insured named in claim

Report No. (1-5) ☐☐☐☐☐

1. Claim ID Number ..... (6-15) ☐☐☐☐☐☐☐☐☐☐

2. Insuring Company ..... (16-18) ☐☐☐

3. Type of Insured (Enter code from list on reverse side of questionnaire. If unable to find appropriate code, describe insured) ..... (19-20) ☐☐

_____

4. Was payment made on behalf of this insured? 1) ☐ No 2) ☐ Yes 3) ☐ Unknown ..... (21) ☐

5. Date of final disposition of this claim for this insured ..... (22-25) Mo. Yr. ☐☐☐☐

6. Stage of this claim at time of closure (26) ☐

1) ☐ Claim filed, but before suit
2) ☐ Suit, but before trial
3) ☐ Suit, but before binding arbitration
4) ☐ During trial but before verdict
5) ☐ During binding arbitration, but before decision
6) ☐ After trial verdict by jury
7) ☐ After trial verdict without jury
8) ☐ After binding arbitration

7. Did this claim undergo review during its pendency by medical-legal screening panel, review panel or Mediation Board? 1) ☐ Yes 2) ☐ No 3) ☐ Unknown (27) ☐

If "Yes," was recommendation/finding for: 1) ☐ Claimant 2) ☐ Insured (28) ☐

Date of review ..... (29-32) Mo. Yr. ☐☐☐☐

8. Practitioner data. (Answer only if answer to Question 3 was a physician.) (33) ☐

0) ☐ Not a physician
(If checked, Form 8 is complete)

a. Indicate whether insured person was
1) ☐ Physician in individual practice
2) ☐ Physician in group practice
3) ☐ Hospital based salaried physician
4) ☐ Other salaried employee
(Specify type of employer)
_____
5) ☐ Other (specify)_____

b. Was physician on medical school faculty? 1) ☐ Yes 2) ☐ No 3) ☐ Unknown (34) ☐

c. Was physician Board certified? 1) ☐ Yes 2) ☐ No 3) ☐ No, but eligible 4) ☐ Unknown (35) ☐

d. Country in which primary medical education was received _____ (36-40) ☐☐☐☐

e. Age 1) ☐ 30 & under 3) ☐ 41-50 5) ☐ 61-70 7) ☐ Unknown (41) ☐
2) ☐ 31-40 4) ☐ 51-60 6) ☐ Over 70

f. For how long before the occurrence of the medical liability injury had the patient been seeing this practitioner? (42) ☐

1) ☐ Less than 1 month 2) ☐ 3-6 months 5) ☐ 13-24 months 7) ☐ Unknown
2) ☐ 1-2 months 4) ☐ 7-12 months 6) ☐ over 24 months

(80) 5

CODING SHEET

Question 3: Type of Insured

Physicians and Surgeons

10 Administrative medicine
11 Allergy
12 Anesthesiology
13 Aviation medicine
14 Cardiovascular disease
15 Vascular surgery
16 Cardiac surgery
17 Dermatology
18 Forensic pathology
19 Gastroenterology
20 General practice
21 Family practice
22 General surgery
23 Internal medicine
24 Neurosurgery
25 Neurology
26 Obstetrics and gynecology
27 Occupational medicine
28 Ophthalmology
29 Orthopedic surgery
30 Otolaryngology
31 Pathology
32 Pediatrics
33 Physical medicine and rehabilitation
34 Plastic surgery
35 General preventive medicine
36 Colon and rectal surgery
37 Psychiatry
38 Public health
39 Pulmonary diseases
40 Radiology, n.e.c.
41 Diagnostic radiology
42 Therapeutic radiology
43 Thoracic surgery
44 Urology
45 Physician - no surgery - speciality unspecified
46 Physician - minor surgery speciality unspecified
47 Physician - surgery speciality unspecified

Nurses

50 Registered nurse
51 Licensed practical nurse

Dentists

60 Dentist, n.e.c.
61 Oral surgery

Facilities

70 Hospital
71 Convalescent/nursing home
73 Mental psychopathic institution
74 Clinics, etc. - outpatients only
75 Sanitariums and all other institutions

Appendix D

Appendix D comprises three cross-listings of comparable data from the AAA, NAIC and DHEW/Westat (1976) medical malpractice data bases. Three cross-listings, employing the respective data-item numbering systems used for each capture form (Appendices A,B, and C) are provided:

I. NAIC and DHEW/Westat data keyed to AAA capture form

II. AAA data keyed to NAIC capture form

III. AAA data keyed to DHEW/Westat capture form

Comparable Data: I. AAA/NAIC/DHEW (1976)

	AAA	NAIC	DHEW (1976)
I	-1	6d	A-I-4
	-2	none	none
	-3	20a	B-5
	-4	none	Report No.
II	-1	8b	A-II-1
	-2	8c	A-II-2
	-3	none	A-II-3
	-4	none	A-II-4
	-5	none	A-II-5
	-6	none	A-II-6
III	-1	16a	A-III-2
	-2	16b	A-III-3
	-3	none	A-III-5
	-4	14a	A-III-1
	-5	14b (partial)	A-III-6
	-6	17b	A-III-7
	-7	none	A-III-8
	-8	15	A-III-10
	-9	none	none
	-10	17a	A-III-12
	-11	15	A-III-11
	-12	15	A-III-13
	-13	17a (partial)	A-III-14
	-14	6a	A-III-16
	-15	7b	A-III-17
	-16	18a	none
	-17	18b (partial)	A-III-18/-19
IV	-1	none	none
	-2	18b (partial)	none
	-3	27	A-II-7
	-4	28	A-II-8
	-5	29	A-II-9
	-6	30	(see A-II-9)
	-7	31	A-II-10
	-8	none	none
	-9	none	none
	-10	none	none
	-11	none	none
	-12	none	none
	-13	9a	A-I-6
	-14	9a	A-I-6

Comparable Data: I. AAA/NAIC/DHEW (1976)

	AAA	NAIC	DHEW (1976)
V	-1	none	none
	-2	6d	A-I-4 (state)
	-3	1a	B-2 (A-I-4)
	-4	1b	B-1 (A-I-1)
	-5	4a	(see B-3)
	-6	4b	B-3
	-7	4c	B-8-a
	-8	3b	B-8-e
	-9	5a	B-8-c
	-10	5b/5c	B-8-d
	-11	none	B-8-f
	-12	none	none
	-13	20b/20c/21a/21b	(see B-6)
	-14	20b (partial)	(see B-6)
	-15	(see 20a)	(see B-5)
	-16	20a	B-5
	-17	none	none
	-18	22 + 23	A-IV-1
	-19	25	none
	-20	26	none
VI	-1	none	none
	-2	2a	A-I-3
	-3	2b	A-I-5
	-4	(see 2b)	(see A-I-5)
	-5	none	none
	-6	none	none
	-7	none	none
	-8	none	none
	-9	none	none
	-10	(see 20a)	(see B-5)
	-11	20b/20c/21a	(see B-6)
	-12	(see 20b, 21a)	none
	-13	20c/21a	(see B-6)

Comparable Data: I. AAA/NAIC/DHEW (1976)

	AAA	NAIC	DHEW (1976)
VII	-1	none	none
	-2	none	none
	-3	none	none
	-4	none	none
	-5	none	none
	-6	none	none
	-7	none	none
VIII	-1	none	none
	-2	none	none
	-3	none	none
	-4	none	none
	-5	none	none
	-6	none	none
	-7	none	none
	-8	none	none
	-9	none	none
	-10	none	none
	-11	none	none
	-12	none	none
	-13	none	none
	-14	none	none
	-15	none	none
	-16	none	none
	-17	12a	A-IV-3
	-18	none	none
	-19	(possibly 22, 22+23 or 24)	(see A-IV-1 or -2)
	-20	none	none
	-21	none	none
	-22	(see 32)	none

Comparable Data: II. NAIC/AAA

NAIC	AAA
1a	V-3
1b	V-4
2a	VI-2
2b	VI-3
2c	none
3b	V-8
3e	V-2
4a	V-5
4b	V-6
4c	V-7
5a	V-9
5b/5c	V-10
6a	III-14
6d	(see V-2)
7b	III-15
8b	II-1
8c	II-2
9a	IV-13 + IV-14
9b	none
10	none
11	none
12a	(see VIII-17)
14a	III-4
14b	III-5
15	III-8
16a	III-1
16b	III-2
17a	III-10
17b	III-6
18a	(see III-16)
18b	III-17, IV-2
18c	none
19	(Defendant Supplements, V-4)
20a	V-16
20b	V-13/-14
20c	V-13/VI-13
21a	compare V-13/-14
21b	V-13/-14
21c	none
22 + 23	V-18
24	aggregate of V-18's
25	V-19
26	V-20
27	IV-3
28	IV-4
29	IV-5
30	IV-6
31	IV-7
32	(see VIII-22)

Comparable Data: III. DHEW (1976)/AAA

	DHEW (1976)	AAA
Form A		
	A-I-1	V-4
	A-I-2	V-3
	A-I-3	VI-2
	A-I-4	(see V-2)
	A-I-5	VI-3
	A-I-6	IV-13 + IV-14
	A-II-1	II-1
	A-II-2	II-2
	A-II-3	II-3
	A-II-4	II-4
	A-II-5	II-5
	A-II-6	II-6
	A-II-7	II-3
	A-II-8	II-4
	A-II-9	II-5
	A-II-10	II-7
	A-III-1	III-4
	A-III-2	III-1
	A-III-3	III-2
	A-III-4	none
	A-III-5	III-3
	A-III-6	III-5
	A-III-7	III-6
	A-III-8	III-7
	A-III-9	(see III-8)
	A-III-10	III-8
	A-III-11	III-11
	A-III-12	III-10
	A-III-13	III-12
	A-III-14	III-13
	A-III-15	none
	A-III-16	III-14
	A-III-17	III-15
	A-III-18	III-17
	A-III-19	III-17
	A-IV-1	V-18
	A-IV-2	V-18 (aggregate for all defendants)
	A-IV-3	VIII-17
Form B		
	B-1	V-4
	B-2	V-3
	B-3	V-6
	B-4	(see V-13)
	B-5	V-16
	B-6	(see V-13/-14, VI-13)
	B-7	none
	B-8-a	V-7
	B-8-b	none
	B-8-c	V-9
	B-8-d	V-10
	B-8-e	V-8
	B-8-f	V-11

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MEDICAL MALPRACTICE ARBITRATION RESEARCH DATA BASE

Under NCHSR grants, the American Arbitration Association (AAA) has developed a computer data file on some 300 medical malpractice cases whose resolution involved voluntary binding arbitration. These unique data, now being analyzed by the AAA's Research Institute, have been collected to provide a base for quantitative studies of binding arbitration as a forum for resolving malpractice claims. Together with ancillary materials that include an explanatory manual, a methodology for analysis, and computer programming, the data base is available to other researchers.

Scope and sources of cases

The approximately 300 medical malpractice arbitration cases in the data base are believed to represent the majority of such cases closed nationally since 1970. The majority of cases included are from the California Hospital and Medical Association's arbitration program, but the base also includes a substantial group from Michigan's statutory program, as well as small numbers of cases from at least ten other states. The great majority of cases included came to arbitration under a hospital-patient or physician-patient preclaim agreement. Most patients entering hospitals participating in the California and Michigan programs now routinely sign voluntary agreements to arbitrate any claims which they may later have. A minority of cases included in the data base came under postclaim arbitration agreements, some linked to established programs and some ad hoc. Relatively few malpractice cases have been arbitrated under prepaid group plan contracts, and none are included in the data base.

The data base includes only cases closed after entry into voluntary binding arbitration, marked by the filing or service of a demand for arbitration or submission agreement. Not included are cases closed subject to voluntary binding arbitration, i.e., cases where an arbitration agreement existed but either was not invoked or was successfully challenged in court without an arbitration proceeding having been initiated.

Data description and sources

The data base incorporates substantive and procedural case information which it was considered both desirable and feasible to obtain. About 130 separate data items were sought for each case, providing the following types of substantive and interpretive information: data on the population of patients whose health care gave rise to malpractice claims; data on injuries, treatments, and misadventures alleged to represent malpractice; data on the legal basis asserted for claims, money damages sought, and numbers of defendants in each incident; descriptive data on each defendant individually, including the outcome of the claim as to each defendant; data tracing the formal path from claim-producing incident to disposition of the arbitration (and other proceedings) connected with the incident; and data on the arbitration agreement, panelists, hearing, costs and decision, if any.

The data are drawn from arbitration case files, insurer claim files or closed claim reports, and other sources. These records were abstracted and coded by AAA research staff on a specially designed capture form. Coded data were then keypunched on standard 80-column machine-readable cards. The resulting data base provides, for the first time, case data suitable for quantitative studies to evaluate medical malpractice arbitration.

Because the number of medical malpractice cases closed in binding arbitration forums nationally is still small--probably well under 500 between 1970 and 1980--much attention has been paid to assuring data accuracy. In view of the varying accuracy of secondary data sources such as insurer closed claim reports, efforts have been made to seek data from primary sources such as insurer claim files, arbitration case files and court records. Secondary sources have been used corroboratively or to fill gaps, although doubtful information was not entered in the data base.

Information Manual

Each individual data item on the capture form is discussed in a detailed Information Manual which provides information on its definition, coding, significance, or relation to other data (particularly where that might not be obvious), and indicates some recognized assumptions, limitations and possible analytic uses. Essentially, the Manual provides interpretive information which could otherwise be gleaned only from thorough examination of the executed data capture forms or primary paper files for the cases in the data base. Since for reasons of confidentiality these forms and files cannot be made available to other researchers, the Manual is needed for use of the data base.

Conceptual framework and analytic methodology

Selection of which data to collect, its organization and its planned uses reflect a conceptual framework which sees private arbitration and public litigation (including pretrial screening panels) as parallel systems for adjudication of medical malpractice claims. Between them, these systems have jurisdiction over all existing and potential malpractice claims, no matter whether adjudicated, settled by negotiation, or otherwise resolved.

A methodology for direct quantitative comparison of these two forums has been developed under the project. It is based on a simple conceptual model whose variables are the case inputs and outcomes and the forum in which the outcomes are generated. This model states that case outcomes are determined partly by inputs (such as the characteristics of the parties and the injury) and partly by forum—either voluntary binding arbitration or a court. The data base provides an array of case input and outcome measures to test the conceptual model and methodology.

AAA researchers are currently employing their methodology in the first direct quantitative comparisons of medical malpractice cases in arbitration and in court. Their study employs data from the arbitration base and from the National Association of Insurance Commissioners' (NAIC) 1975-78 malpractice closed claim survey. The analyses aim to discover what claim characteristics are forum-related and, if possible, the extent to which any such characteristics may be expected to vary with the forum. Of special interest are the effect of the forum on claim resolution time and cost, and on indemnity payment frequency and amount.

Data limitations and compatibility with other sources

Data items selected for capture in the arbitration base represent the best available measures of the objective elements of forum input and outcome. However, the base does not contain data appropriate for study of all important policy or value questions. The data do not address subjective factors such as participant satisfaction with arbitration, for example.

Since the data base is intended to serve a variety of potential research interests, by design it includes most of the substantive data items included in both the NAIC and DHEW (1976) closed claim survey formats. Coding has generally been adapted to facilitate use of the arbitration base with data from either of these surveys. Cross-listings of comparable data items in the AAA, NAIC and DHEW (1976) data sets are included in the Appendix to the Information Manual.

• • •

The data base is available to other researchers either in punchcard or computer tape form. Arrangements for obtaining the package of materials, including the data, computer programming, Information Manual and conceptual statement, should be made directly with the Research Institute. Cost of the package will be essentially the cost of duplication and mailing of the computer data file and the ancillary materials.

FOR FURTHER INFORMATION, CALL OR WRITE:

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APPENDIX C

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Methodological Note

Problems Affecting Forum Comparison

Pursuing this study has taught us about two subtle problems which may fundamentally affect any forum comparison based on quantitative data: (1) definition of a valid framework of claim resolution activity for comparison; and (2) selection of proper units for comparison. The framework problem concerns the scope of activity being compared, and involves structuring a correct parallel between activity under the jurisdiction of each of the forums being compared. The units problem concerns measurements and involves comparing variables in terms appropriate for the analytic objective.

The "framework" problem: This study had to be limited to comparison of incidents which generated proceedings in the forums being compared; it excluded incidents which did not lead either to a lawsuit or an arbitration. The reason for this was the difficulty of identifying those incidents for which all claims were resolved subject to the jurisdiction of court or arbitration but without having reached the forum. The main problem in this regard was that there was no practical way to identify situations where claimants had signed arbitration agreements applicable tc subsequent claim-producing incidents which did not lead to initiation of arbitration proceedings.[1/] A lesser problem was that the data source for

1/ This could occur in one of two ways: (1) where, notwithstanding a preclaim arbitration agreement, the claimant filed a lawsuit and the defense either did not invoke arbitration or unsuccessfully invoked it without initiating an arbitration proceeding; or (2) where all claims were resolved without any formal proceeding having been initiated.

incidents representing court experience did not establish for some incidents whether they had generated a lawsuit; accordingly, absent other (extrinsic) evidence of a suit, such incidents had to be excluded from the base used for the comparison.

While in this instance the nature of the "framework" problem is thus clear, its scope and significance are not. At bottom, it is not clear what differences there might be, if any, between (1) a forum comparison based exclusively on incidents for which proceedings were initiated in each forum; and (2) a forum comparison based on incidents which did as well as incidents which did not generate a lawsuit or arbitration proceeding. This study is a comparison on the former basis, and it is possible that not all differences which may exist in claim resolution patterns between and within forums were detectable from it. Specifically, forum influence on resolution of claims may differ according to whether the claims enter formal proceedings.

In any event, difference in the relative size of these two bodies of incidents for each forum conceivably reflects a fundamental difference between arbitration and the courts as claim resolution systems. Unfortunately, available data do not clearly fix the relative size ofthe two groups for either forum. With respect to the courts, there is evidence that lawsuits were filed for most incidents generating claims processed in the mid-1970s, and that only the minority of

claim-producing incidents did not lead to a lawsuit.[1/] [2/] With respect to arbitration, it is not clear what proportion of all incidents involving preclaim arbitration agreements generated a claim that entered arbitration.

Moreover, to an unknown but possibly significant extent, assessment of the relative size of the two groups for the arbitration forum is affected by "forum crossover", or removal of claims from one forum to the other. It appears that quite frequently, claims among the relative few which arise subject to arbitration are resolved in court. In such instances, either the arbitration agreement is not invoked or it is successfully challenged, either with or without an arbitration proceeding having been initiated. In contrast, claims among the overwhelming majority arising subject to court jurisdiction are seldom removed to arbitration, which requires mutual agreement of the parties. This is unusual, and the claims involved must be considered in a different category from those which are subject to arbitration from the first, since they are, in effect, specially selected for arbitration.

1/ In the population of California incidents sampled to represent court-forum experience in this study, 60.0% of the incidents apparently generated lawsuits, and 63.5% of all claims associated with the incident population were resolved after they were filed in court (but not necessarily adjudicated on merit).

2/ In the Westat Research, Inc. study of 3800 claims closed in 1976, 59.4% of claims were resolved after they were filed in court. Medical Malpractice Closed Claim Study 1976 - Final Report, National Center for Health Statistics, DHEW, 1979. Percentage calculated from Table 7-6, p. 7.15.

Notwithstanding that the comparison here is limited to incidents which generated proceedings, and despite the forum crossover problem, we believe the critical point is that in either forum, all claim-resolution short of adjudication is influenced by what is known about cases previously adjudicated in that forum. That being the case, then adjudication patterns are the key to understanding forum differences, and knowledge of past third-party decisions in a forum is basic to evaluation of new claims subject to adjudication in that forum. Since the study samples included substantial numbers of incidents for which claims were adjudicated in arbitration and in court, respectively, we conclude that absence from the samples of incidents which did not generate proceedings is not critical to the study findings. This is not to say, however, that it is necessarily of no significance.

The "units" problem: The problem of units bears more explanation. First, it is essential to state and define the four basic terms or units in which quantitative medical malpractice data may be expressed:

(1) claim-producing incidents;
(2) insurance claims;
(3) defendants singly; and
(4) arbitration or court forum cases.

"Incident" refers not only to the medical or health care event(s) or situation on which the malpractice allegation is based but, also, as a unit it is the sum or aggregate value of any measure which is additive or cumulative with respect to that event or situation.

"Claim" is an insurance term, referring to the acknowledgement of an existing potential liability by an insuror, normally

marked by creation of a numbered file with respect to its insured(s) in connection with the incident which has generated a formal (or, at times, informal) malpractice allegation: As a unit, it measures a variable only with respect to the insurance file. Where there is no insurer[1/], data cannot always be expressed in such claim terms.

Generally, "defendant" refers to any party, insured or not, against whom malpractice is alleged, although strictly it refers to such a party (usually, a medical practitioner or institutional health care provider) when named in a lawsuit. As a unit, it measures variables only with respect to a particular individual or institution against whom a claim is made. Frequently, as in the analysis here, the distinction between "claim" and "defendant" units is not important and may be safely ignored.

"Case" represents either the largest measure or the sum or aggregate of measures for those defendants (or claims) whose disposition occurred in the same forum, either arbitration or court.[2/] Forum is thus the defining element of a "case"; for example, a case in arbitration encompasses just those

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1/ Since the so-called malpractice "crisis" of the mid-1970s, in some states larger hospitals and other institutions have become self-insurors in part or whole, and some doctors have "gone bare", i.e., made no provision at all to pay malpractice judgments.

2/ By definition, all claims of medical malpractice are subject to resolution in one or the other of these two forums. All statutory or court-rule nonbinding procedures for malpractice claim review are viewed as adjuncts to the court forum, even if they are termed "arbitration", as in Maryland and, formerly, in Pennsylvania

defendants against whom claims were pursued in arbitration, and not any other defendants who may have been associated with the underlying incident. Arbitration case units are occasionally clouded by the forum crossover phenomenon, discussed above.

Thus, incident units represent the totality of what there is to be measured; defendant or claim units are the fundamental sub-units or building blocks which, in the aggregate, constitute the incident; and case units represent forum-defined subtotals of defendant (or claim) units within the incident-unit frame.

Where only one defendant is associated with an incident giving rise to a malpractice claim, then the data item values recorded in connection with that incident are the same regardless of the unit in which expressed. That is, in one-defendant situations, defendant=claim=case=incident. But, where there are two or more defendants, quantitative data items (e.g., indemnity paid, time, frequency of occurrence) may have different values according to the measurement unit. Of course, for many data items it is inappropriate or nonsensical to record a value in each unit. But it is critical to recognize that while not every data item is (or should be) expressible in each unit of measure, an analytic finding may be a function of the unit selected to represent the variable(s) being analyzed.

Since some of the data items considered most significant for forum comparison are affected, it is important to show how the analytic conclusion may shift with the unit used for analysis. A prime illustration is indemnity payment frequency, which usually is tallied and discussed in claim or defendant

terms. The best current medical malpractice data source shows that ultimately indemnity is paid by (or on behalf of) just 33.7 per cent of insured malpractice defendants.[1/] From the defense point of view, this can easily be interpreted to suggest that most malpractice cases have little merit. However, analysis in incident terms is equally appropriate, because from the claimant's viewpoint, "winning" relates to the outcome for the incident rather than the outcome for each defendant separately. The same data source shows that 49.2 per cent[2/] of claim-producing incidents lead to payment of some amount of indemnity by at least one defendant. Obviously, the shift from defendant-unit to incident-unit analysis would lead to a substantially different conclusion regarding the proportion of malpractice cases which have merit.

Data for time further illustrate the relation of the data unit to the analytic conclusion. From the viewpoint of individual defendants and their insurors, the important unit for analysis is the claim. If malpractice defense costs vary directly with the length of time required to close claims, then changes in average claim "life" time may signal important shifts in defense costs, or vice versa. But from the claimant's viewpoint, incident units are what matter in assessing time, since claimant costs (not to mention the wait for an outcome, no matter whether it is favorable) relate to the total time

1/ Calculated from NAIC Malpractice Claims, Vol. 2, No. 2, Sept. 1980, Table 2.11, p. 75.

2/ Ibid., Calculated from Table 2.1, p. 34.

required to resolve all claims connected with the claim-producing incident. Typically, for an incident spawning claims against a hospital and a doctor, each independently insured, the claim as to one defendant will be relatively minor and the claim as to the other, relatively important. In such a case, often the minor claim is resolved early while resolution of the major claim takes longer, entailing more cost to both the claimant and the defendant, regardless of outcome. Defendant- or claim-unit time for these claims is the average for the two, while incident-unit time--and time from claimant's viewpoint--would be that for the claim which took longer to resolve. There might well be substantial difference in the time by unit. And since cost variability likely relates directly to time variability, cost analysis, too, might well reach a somewhat different conclusion from data in incident or case units than from data in claim or defendant units.

A different but related problem with data units is that the count of medical malpractice claims or defendants is to some extent an artifact of medical liability insurance arrangements. This problem originates with closed claim reporting by medical liability insurors to the several recent claim surveys such as that for 1975-78 by the National Association of Insurance Commissioners. Specifically, the difficulty is that a given claim-producing incident may or may not result in a closed claim report for each defendant.

For example, at a medical center or teaching hospital, many doctors are employees, insured like other employees

under liability coverage in the institution's name. In a malpractice proceeding against the institution and one or more of its physician-employees, often all the defendants are treated and represented as one party because any indemnity would be paid under the institution's insurance, no matter which defendant is found to be at fault. Not surprisingly, in that situation the insuror may consider the institution the only defendant, at least for the purpose of closed claim reporting. But if instead the same incident involved a hospital and one or more physicians separately insured, probably each would be separately represented and there would be a separate claim report for each defendant. Thus, depending on insurance arrangements, a multi-defendant incident could result in either one or more than one closed claim report.

The extent to which this claim reporting problem affects the count of claims and defendants is unclear. In any event, however, it would appear to distort analysis of defense cost and indemnity paid, among other measures, when these variables are considered in claim or defendant units. Defense cost per claim is probably relatively higher than it would be if each named defendant were always insured and reported on separately, and indemnity per claim is similarly higher.

Technical Problems

Two sorts of technical difficulty were faced by the project: (1) problems associated with the small number of cases in the arbitration data base and (2) problems of data manipulation. While the data manipulation problems were for the most part overcome by use of sophisticated packaged computer programming, additional work and ingenuity, unfortunately the problem of the small size of the data base could only be in part compensated for and not cured. In some instances, the data supported only limited statistical analyses and, consequently, yielded only tentative answers to questions about differences between voluntary binding arbitration and the courts as forums for medical malpractice claims. Nonetheless, the project identified what appear to be important forum differences, even if their extent, scope or significance could not be clearly or immediately established.

Beside the very limited absolute size of the arbitration sample in the study--138 incidents--there was the problem of its relatively small size compared to the much larger sample of incidents representing court experience. The order of this difference not only affected confidence levels but also limited analysis strategies. In most instances, it proved fruitless to employ multi-variate techniques, particularly where there were sizable data gaps on the arbitration side of the comparison.

Data manipulation problems arose because the data used in the comparison to represent court experience was in claim terms, since its source was insuror reports to a claim-

penetration survey, while the data used to represent arbitration experience was essentially case data, since its main source was files on arbitration proceedings. For insured defendants in arbitration, claim-unit files exist but are beyond reach if the insuror's identity is not known, which was often the situation. The problems of data manipulation were resolved by means of recoding and additional coding, by use of surrogate data items, and by the extensive analysis-units flexibility afforded by the Statistical Analysis System (SAS) programming package.

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