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A Report to Congress
Volume 1

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The Health Status of Soon-To-Be-Released Inmates

Volume 1

March 2002

This project was supported by cooperative agreement 97-IJ-CX-K018 awarded by the National Institute of Justice, Office of Justice Programs, U.S. Department of Justice. It was awarded to the National Commission on Correctional Health Care. Points of views in this document are those of the authors and do not represent the official position or policies of the U.S. Department of Justice.

This report fulfills the reporting requirements of Public Law 104-208 as set forth in the Conference Reports for HR 3610 and HR 3814.

Preface

Through the mid-1990s, a number of studies, limited in scope, found a higher prevalence of certain infectious diseases, chronic diseases, and mental illness among prison and jail inmates. Further, each year the Nation's prisons and jails release more than 11.5 million inmates. The potential that ex-offenders may be contributing to the spread of infectious disease in the community became of increasing concern. In addition, as these ex-offenders' diseases get worse, society may have to pay substantially more to treat them than if these conditions had been treated at an earlier stage—or prevented altogether—while these individuals were still incarcerated.

In 1997 Congress instructed the U.S. Department of Justice to determine whether these concerns were well founded and, if so, to recommend solutions. The National Institute of Justice (NIJ), the research arm of the Department of Justice, entered into a cooperative agreement with the National Commission on Correctional Health Care (NCCHC) to study the problem. *The Health Status of Soon-To-Be-Released Inmates* report is the result of that research.

The NCCHC commissioned a series of papers (summarized in volume 1 of this report and provided in full in volume 2) that documents indisputably that tens of thousands of inmates are being released into the community every year with undiagnosed or untreated communicable disease, chronic disease, and mental illness. Another set of commissioned papers clearly shows that it not only would be cost effective to treat several of these diseases, but in several instances, it would even save money in the long run.

The report concludes with policy recommendations designed to improve disease prevention, screening, and treatment programs in prisons and jails. The recommendations have been carefully crafted. First, they are based on a consensus among a number of the Nation's leading experts in correctional health care and public health. Second, they propose interventions for which there is strong, and in many cases overwhelming, scientific evidence of therapeutic effectiveness. Third, they reflect a realistic consideration of what correctional systems can reasonably be expected to accomplish.

There are serious political, logistical, and financial barriers to improving health services in prisons and jails. As documented in this report, however, a number of jurisdictions have found ways to overcome some of these barriers, often through collaborations with public health departments and national or community-based organizations.

Prisons and jails offer a unique opportunity to establish better disease control in the community by providing improved health care and disease prevention to inmates before they are released. Implementing the recommendations in this carefully researched report will go a long way toward taking advantage of this opportunity and contribute significantly to improving the health of both inmates and the larger community.

Edward A. Harrison, CCHP

President

National Commission on Correctional Health Care

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Executive Summary

In the Omnibus Consolidated Appropriations Act of 1997, Congress instructed the U.S. Department of Justice to set aside funding for a study of *The Health Status of Soon-To-Be-Released Inmates*. As a result of these earmarked funds, the National Institute of Justice (NIJ), the research and evaluation arm of the U.S. Department of Justice, entered into a cooperative agreement with the National Commission on Correctional Health Care (NCCCHC) to conduct the study. This report is the culmination of the project's work. The project has shown unmistakably that a unique opportunity exists to reduce the health risks and financial costs to the community that are associated with releasing large numbers of inmates with undiagnosed and untreated diseases.

Volume 1 of *The Health Status of Soon-To-Be-Released Inmates* has seven chapters. This summary outlines the information presented in considerably more detail in the following seven chapters. It is important to read the entire volume to gain a full understanding of the problems and opportunities associated with the health status of inmates. Volume 2 of the report includes the papers commissioned for the project. They form the basis for the project's findings and policy recommendations.

Introduction

The inmate population in the United States has been growing rapidly since the early 1970s: As of 1999, an estimated 2 million persons were incarcerated in the Nation's jails and prisons, compared with 325,400 in 1970—an increase of about 500 percent.¹ Approximately 11.5 million inmates were released into the community in 1998, most from city and county jails.² As explained below, these inmates have high rates of communicable disease, chronic disease, and mental illness. Coupled with the expanding inmate population, these high rates of disease create a critical need for preventing, screening, and treating illness before inmates are released into the community.³ Why?

- Some of the serious diseases affecting inmates, including sexually transmitted diseases (STDs), human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS), hepatitis B and C, and tuberculosis (TB), can be transmitted to other inmates.
- The Nation's one-half million correctional employees⁴—and thousands of daily visitors to prisons and jails—may be at risk of becoming infected from inmates with communicable diseases if appropriate precautions are not implemented.
- Inmates with communicable diseases who are released without having been effectively treated may transmit these conditions in the community, threatening public health.
- Inmates who are released with untreated conditions may become a serious financial burden on community health care systems.

Because they have a large and concentrated population of individuals at high risk for disease, prisons and jails offer a unique opportunity for improving disease control in the community by providing comprehensive health care and disease prevention programs to inmates.⁵ Prisons and jails make it possible to reach a population that is largely underserved and difficult to identify and treat in the general community. Because inmates are literally a “captive” audience, it is vastly more efficient and effective to screen and treat them while they are incarcerated than it is to conduct extensive outreach in local communities designed to encourage at-risk individuals to go to a clinic for testing and treatment.

History of the Project

The Health Status of Soon-To-Be-Released Inmates project involved several components. A steering committee coordinated the work and provided expert guidance to the project. Three expert panels, one each on communicable disease, chronic disease,

and mental illness, provided expert guidance to the steering committee. Panel members included many of the Nation's most respected researchers, practitioners, and scholars in the fields of public and correctional health care (see appendixes A and B). Centers for Disease Control and Prevention (CDC) staff were especially helpful in guiding the scholarly work of the expert panels.

After identifying the specific communicable diseases, chronic diseases, and mental illnesses the project would examine, each expert panel estimated the extent of illness among inmates for the more common but remediable health problems; determined the cost-effectiveness of preventing or treating these health problems; and developed public policy recommendations for capitalizing on these opportunities.

The steering committee conducted a mail survey of State prison systems to collect information on policies and procedures for discharge planning and for providing medications to inmates with chronic disease and mental illness when they were released. The survey also asked about the availability of databases on the prevalence of chronic disease and mental illness.⁶

The steering committee commissioned eight papers and two sets of presentation materials (see volume 2) from nationally known experts in the correctional and public health care fields. The authors estimated the prevalence of the selected diseases in prisons and jails and calculated whether it would save money or be cost effective to prevent, screen for, or treat these diseases. The papers present the principal empirical support for the project's policy recommendations.

Prevalence of Communicable Disease, Chronic Disease, and Mental Illness Among the Inmate Population

Different procedures were used to estimate the prevalence of disease and mental illness among the inmate population, but the estimates rely on well-established national databases.

Communicable disease⁷—prevalence

The approximate number of inmates with selected communicable diseases in 1997 was calculated by applying national prevalence estimates for each condition to the total number of inmates in U.S. prisons and jails on June 30, 1997. The approximate number of releasees with these conditions was obtained by applying the same prevalence percentages to the total unduplicated number of persons released from prisons and jails during 1996 (the most recent data available at the time the estimates were done). Because the estimates for releasees are based on total numbers of persons released during a full year, an especially high figure for jails, they are much higher than the estimates for inmates, which are based on the correctional population on a given day. Statistics on total number of individuals incarcerated during a full year are not available.

The estimated prevalence of selected communicable diseases in prisons and jails is as follows:

- An estimated 34,800 to 46,000 inmates in 1997 were infected with HIV. An estimated 98,500 to 145,500 HIV-positive inmates were released from prisons and jails in 1996.
- Included among the HIV-positive inmates in 1997 were an estimated 8,900 inmates with AIDS. An estimated 38,500 inmates with AIDS were released from prisons and jails in 1996.
- There were an estimated 107,000 to 137,000 cases of STDs among inmates in 1997 and at least 465,000 STD cases among releasees: 36,000 inmates in 1997 and 155,000 releasees in 1996 had current or chronic hepatitis B infection; between 303,000 and 332,000 prison and jail inmates were infected with hepatitis C in 1997; and between 1.3 and 1.4 million inmates released from prison or jail in 1996 were infected with hepatitis C.⁸
- About 12,000 people who had active TB disease during 1996 served time in a correctional facility during that year.⁹ More than 130,000 inmates tested positive for latent TB infection in 1997. An estimated 566,000 inmates with latent TB infection were released in 1996.

Thus, a highly disproportionate number of inmates suffer from infectious disease compared with the rest of the Nation's population. During 1996, about 3 percent of the U.S. population spent time in a prison or jail; however, between 12 and 35 percent of the total number of people with selected communicable diseases in the Nation passed through a correctional facility during that same year.

- Seventeen percent of the estimated 229,000 persons living with AIDS in the United States in 1996 passed through a correctional facility that year.¹⁰ The prevalence of AIDS among inmates is five times higher than among the general U.S. population.¹¹
- The estimated 98,000 to more than 145,000 prison and jail releasees with HIV infection in 1997 represented 13 to 19 percent of all HIV-positive individuals in the United States.
- The estimated 155,000 releasees with current or chronic hepatitis B infection in 1996 indicate that between 12 and 15 percent of all individuals in the United States with chronic or current hepatitis B infection in 1996 spent time in a correctional facility that year.
- The estimated 1.3–1.4 million releasees infected with hepatitis C in 1996 suggest that an extremely high 29–32 percent of the estimated 4.5 million people infected with hepatitis C in the United States¹² served time in a correctional facility that year. The 17.0–18.6 percent prevalence range of hepatitis C among inmates—probably an underestimate—is 9–10 times higher than the estimated hepatitis C prevalence in the Nation's population as a whole.¹³
- Of all people in the Nation with active TB disease in 1996, an estimated 35 percent (12,200) served time in a correctional facility that year. The prevalence of active TB among inmates is between 4 and 17 times greater than among the total U.S. population.

Chronic disease¹⁴—prevalence

- The prevalence of asthma among Federal, State, and local inmates in 1995 is estimated to be between 8 and 9 percent, for a total of more than

140,000 cases nationwide. Prevalence rates for asthma are higher among inmates than among the total U.S. population.

- The prevalence of diabetes in inmates is estimated to be about 5 percent, for a total of nearly 74,000.
- More than 18 percent of inmates are estimated to have hypertension, for a total of more than 283,000 inmates.

Mental illness¹⁵—prevalence

The estimated prevalence of mental illness among jail inmates is as follows:

- An estimated 1 percent have schizophrenia or another psychotic disorder.
- About 8–15 percent have major depression.
- Between 1 and 3 percent have bipolar disorder.
- Between nearly 2 and less than 5 percent of jail inmates are estimated to have dysthymia (less severe but longer-term depression).
- Between 14 and 20 percent have some type of anxiety disorder.¹⁶
- Another 4 to less than 9 percent suffer from post-traumatic stress disorder.

The estimated prevalence of mental disorders among State prison inmates is as follows:

- An estimated 2–4 percent have schizophrenia or another psychotic disorder.
- Between 13 and less than 19 percent have major depression.
- Between 2 and less than 5 percent have bipolar disorder.
- Between 8 and less than 14 percent have dysthymia.
- Between 22 and 30 percent have an anxiety disorder.
- Between 6 and 12 percent have post-traumatic stress disorder.

Improving Correctional Health Care: A Unique Opportunity to Protect Public Health

The large concentration of prison and jail inmates with serious disease or mental illness affords a unique opportunity to provide needed treatment and prevention and to help protect public health in general. To what extent are prisons and jails seizing this opportunity? Many correctional agencies are doing too little to address communicable disease, chronic disease, and mental illness.

Communicable disease¹⁷—current state of corrections prevention, screening, and treatment programs

- Few prison or jail systems have implemented comprehensive HIV-prevention programs¹⁸ in all their facilities.
- On average, less than one-quarter of jail inmates undergo routine laboratory testing for syphilis during incarceration. In some jails, only 2–7 percent of inmates are tested.
- More than 90 percent of State and Federal prisons, and about half of jails, routinely screen at intake for latent TB infection and active TB disease. Particularly in jails, however, many inmates are released before skin tests can be read. Most prisons and jails report that they isolate inmates with suspected or confirmed TB disease in negative pressure rooms. Some facilities, however, do not test the rooms to ensure that the air exchange is working properly, or they continue to use the rooms even when the air exchange is known to be out of order.

Chronic disease—current state of corrections prevention, screening, and treatment programs

Of the 41 State correctional systems that responded to a survey conducted for *The Health Status of Soon-To-Be-Released Inmates* project,¹⁹ only 24 reported they had protocols for diabetes, 25 for hypertension, and 26 for asthma. A content analysis revealed that many of these “guidelines” were incomplete or out of date.

Mental illness—current state of corrections prevention, screening, and treatment programs

Few jails provide a comprehensive range of mental health services.²⁰ Only 60 percent provide mental health evaluations, 42 percent provide psychiatric medications, 43 percent provide crisis intervention services, and 72 percent provide access to inpatient hospitalization.²¹ A majority of State adult prisons provide screening and assessment for mental illness, medication and medication monitoring, counseling or verbal therapy, and access to inpatient care. Only 36 percent of prisons have specialized housing for individuals with stable mental health conditions.²²

Continuity of care for inmates released with communicable disease, chronic disease, and mental illness is especially inadequate. Only 21 percent of jails provide case management or prerelease planning for mentally ill inmates.²³

Corrections’ Mixed Record of Compliance with National Clinical Guidelines

Many prisons and jails fail to conform to nationally accepted clinical guidelines. For example, consider the following:

- A significant proportion of prisons and jails do not adhere to CDC standards with regard to screening for and treating latent TB infection and active disease. About 10 percent of State and Federal prisons, and about 50 percent of jails, do not have mandatory TB screening for inmates at intake and annually thereafter.²⁴
- Most prisons and jails fail to conform to nationally accepted health care guidelines for mental health screening and treatment. Seventeen percent of jails and prisons do not provide recommended intake screening for mental illness, and 40 percent of jails and 17 percent of prisons do not provide recommended mental health evaluations.²⁵

By rectifying these gaps in prevention, screening, and treatment services in prisons and jails, communities can take advantage of a tremendous opportunity to improve public health by reducing the problems associated with untreated inmates returning to the community. Furthermore, addressing these health care deficiencies would be cost effective.

Cost-Effectiveness of Prevention, Screening, and Treatment of Disease Among Inmates

A cost-saving intervention saves more money in averted medical costs than is needed to implement it. An intervention is cost effective if the benefits it will achieve are worth the price—even if the intervention costs more than the money saved.

Cost-effectiveness findings

The members of the project steering committee and expert panels found that several interventions would be a cost saving or cost effective.

- Universal screening for syphilis at intake in both prisons and jails would be a cost saving (and, therefore, cost effective) if at least 1 percent of the inmates had the disease. Routine syphilis screening and treatment would save almost \$1.6 million for every 10,000 inmates screened.²⁶
- Routine screening of men and women in prisons and jails for gonorrhea and chlamydia would be cost effective. Universal screening of women for gonorrhea and chlamydia at intake to prisons and jails would also be a cost saving if at least 8 percent of female inmates had gonorrhea and 9 percent had chlamydia.²⁷
- For correctional systems with HIV prevalence rates as low as 1.5 percent, an HIV-prevention program of voluntary counseling and testing for HIV-infected inmates in prison would be a cost saving. Offering counseling to 10,000 prison inmates would prevent three future cases of HIV if 60 percent of those inmates agreed to be counseled and tested. On the three cases alone, \$140,000 could be saved. Counseling and testing 10,000 inmates would cost the prison system about \$117,000, or approximately \$39,000 per case of HIV prevented.²⁸
- For correctional systems with HIV prevalence rates of at least 2.3 percent—the overall infection rate in prisons and jails nationwide—universal screening for tuberculosis in prisons would be a cost saving because of the heightened susceptibility to TB of individuals with HIV. The 989 cases of active TB that would be prevented for every 100,000 inmates tested, with treatment of those inmates found to have latent TB infection,²⁹ would save \$7,174,509, or \$7,254 per case prevented.³⁰
- Universal screening in prisons and jails for hypertension and diabetes would be cost effective.³¹

Scientifically effective interventions

Obviously, only effective medical interventions can be a cost saving or cost effective. Fortunately, correctional agencies can introduce many scientifically tested interventions to target inmate diseases. The following interventions have proven to be effective for communicable diseases:³²

- **Sexually transmitted diseases:** Peer-led educational sessions addressing safer sexual practices, rapid screening for and treatment of syphilis, and screening and treatment for gonorrhea and chlamydia.
- **HIV/AIDS:** Encouraging all inmates with risk factors to agree to be tested, providing educational programming to help inmates avoid acquiring and transmitting HIV/AIDS, and offering appropriate standard-of-care treatment to all inmates with HIV infection.
- **Tuberculosis:** Training correctional staff to be alert for inmates with TB symptoms, screening all new admissions, testing current inmates and all staff annually, having access to properly operating negative pressure isolation rooms, providing prompt and effective treatment under direct observation, and providing for followup in the community when release precedes completion of treatment.
- **Hepatitis B and C:** Routinely vaccinating all inmates, or susceptible inmates, against hepatitis B and offering educational sessions that present strategies to avoid acquiring and transmitting infection.

Empirically based interventions are known to reduce illness and death associated with several chronic diseases, including asthma, diabetes, and hypertension. Appendix D, “Sample Draft Clinical Guidelines,” provides examples of these proven interventions.³³

Barriers to Effective Prevention, Screening, and Treatment—and Overcoming Them

Despite the compelling reasons for improving the prevention, screening, and treatment of disease among inmates, significant barriers may make it difficult for prisons and jails to improve these services. Most barriers fall into one of four categories:

- **Lack of leadership**, such as failure to recognize the need for improved health care services, reluctance to consider that improving public health is a correctional responsibility, and unwillingness of public health agencies to advocate for improving correctional health care or to collaborate to promote improvement.
- **Logistical barriers**, such as short periods of incarceration, security-conscious administration procedures for distributing medications, and difficulty coordinating discharge planning.
- **Limited resources** that require difficult budgeting decisions to meet the high cost of many health care services and some medications, and that make it difficult to provide adequate space for medical services.
- **Correctional policies**, such as failure to specify minimum levels of required care in contracts with private health care vendors, delays caused by the need to escort inmates to medical treatment, poor communication between public health agencies and prisons and jails, and lack of adequate clinical guidelines.

Most of these barriers to improved health care for inmates can be overcome. First, position statements that a number of well-respected, national professional groups have developed describing appropriate health care for inmates can be used as leverage to encourage correctional administrators to find ways of resolving barriers to providing adequate care. A list of NCCHC position statements appears in appendix E. Second, collaboration among correctional agencies, public health departments, and community-based organizations can help overcome the lack of correctional health care funds and staff. Public health departments may be willing to contribute funds, staff, and expertise if they understand

that this use of their resources can advance the cause of public health in their communities. Public health departments in some jurisdictions already contribute significantly to testing and screening of inmates, providing prevention and treatment programs in prisons and jails, and following up on inmates after release to ensure a continuum of care. Many community-based organizations are interested in and willing to provide services to inmates.

- The Hampden County Correctional Center, which serves 500,000 residents of Massachusetts' second largest metropolitan area, has developed a public health model of correctional health care that focuses on disease screening, prevention, treatment, discharge planning, and continuity of care for releasees. The program costs about \$6 per inmate day, or 9 percent of the facility's budget. Based on ZIP Code of residence, inmates with HIV/AIDS and other serious medical and mental health conditions are assigned to one of four health teams that work jointly in the correctional center and in four community health centers. Case managers who work in both agencies provide discharge planning services for all inmates with HIV/AIDS and serious mental health problems. A discharge planning nurse at the facility provides similar services for inmates with chronic diseases. Releasees are linked with community-based agencies that address issues of family reintegration, housing, employment training and readiness, and benefit programs.³⁴
- The Fairfax County (Virginia) Jail has overcome the pervasive barriers to discharge planning for mentally ill inmates. A private nonprofit organization links detainees with mental health-related services upon release and maintains the detainee's family ties while the person is incarcerated. This affords the inmate a source of additional support after release. The organization's eight staff provide or arrange for the following services:
 - Transportation and housing assistance to mentally ill inmates upon release.
 - Teaching, mentoring, and tutoring in the facilities.
 - Teaching life skills for releasees.
 - Group therapy for inmates and their families.

- Support groups for families and close friends of inmates.
- Emergency funds for families for food and clothing while providers are in jail.³⁵

Policy Recommendations

The expert panels assembled for *The Health Status of Soon-To-Be-Released Inmates* project developed policy recommendations for improving the health care of prison and jail inmates. The project steering committee refined the panels' recommendations. The recommendations are based on expert consensus that there is sufficient—if not always definitive—scientific evidence to justify their implementation. Much of this scientific evidence is presented in this report.

Many prisons and jails have implemented interventions that are not reflected in these recommendations. That this report does not include an intervention that correctional systems are currently implementing does not mean that these systems should discontinue the intervention—or that other systems should not consider introducing it. In fact, professional organizations, including the National Commission on Correctional Health Care, will likely develop new recommendations as clinical studies demonstrate the effectiveness of additional interventions.

The policy recommendations to Congress, listed in full below, are followed by actions that the steering committee proposes that specified Federal, State, and local agencies take in order to support implementation of the recommendations.

Surveillance³⁶

The principal use of disease surveillance in correctional facilities is to monitor disease incidence, prevalence, and outcomes in the inmate population. Surveillance includes collecting health data and evaluating the data collection system to assist correctional health officials in characterizing the health status of the inmate population. The information obtained from the surveillance system is used to plan, implement, and evaluate health needs of the inmate population and their anticipated health needs upon release.

- I. Congress should promote surveillance of selected communicable diseases, chronic diseases, and mental illnesses among inmates in all correctional jurisdictions. Appropriate Federal agencies in partnership with national health-related organizations should:
 - A. Develop surveillance guidelines to promote uniform national reporting of selected conditions to enhance epidemiologic research of these conditions and assist with accurate health care planning. Ensure that data collected in prisons and jails as part of the surveillance program are collected in the same manner as they are collected in the community.³⁷ Surveillance guidelines should incorporate processes for protecting confidentiality of data.
 - B. Create a national correctional health care database.
 1. Develop standardized definitions and measures for reporting to assess the prevalence of selected communicable diseases, chronic diseases, and mental illnesses.³⁸
 2. Mandate national reporting of these prevalence data.
 3. Design an information system and make it available for use by local, State, and Federal correctional authorities to measure and report the data with the ability to categorize the data by age, race, and gender.
 - C. Produce statistical reports of local, State, and national rates of selected communicable diseases, chronic diseases, and mental illnesses in prisons and jails to aid planning correctional and public health programs and allocate local resources.³⁹
 - D. Evaluate the utility of surveillance activities and implement improvements as appropriate.

Clinical guidelines

Clinical guidelines provide definitions and abbreviated decision trees for the diagnosis and management of various diseases and conditions. They guide the clinician in areas where scientific evidence of the value of selected interventions exists to improve

survival and clinical outcomes and to reduce morbidity and the cost of care. Clinical guidelines are widely used outside corrections.

II. Congress should promote the use of nationally accepted evidenced-based clinical guidelines for prisons and jails. This will help assure appropriate use of resources to prevent, diagnose, and treat selected communicable diseases, common chronic diseases, and mental illnesses that are prevalent among inmates. Appropriate Federal agencies in partnership with national health-related organizations should:

- A. Ensure that the clinical guidelines are consistent with nationally accepted disease definitions and evidence-based guidelines used for the nonincarcerated population.⁴⁰
- B. Disseminate the clinical guidelines to correctional health care professionals, public health agencies, and public policymakers.
- C. Update the clinical guidelines as often as needed.
- D. Develop standardized performance measures for State and local correctional authorities to determine adherence to nationally accepted clinical guidelines.
- E. Train correctional health and public health professionals in the use of these clinical guidelines and performance measures.
- F. Develop tools for correctional systems to assess over-prescribing and under-prescribing of psychotropic medications.

Immunizations

Immunizations prevent the development of a variety of communicable diseases in individuals. In the case of diseases such as hepatitis B, poliomyelitis, measles, mumps, or rubella, immunizations prevent the transmission of disease to susceptible individuals in the general population. Such immunizations are nationally accepted and promoted by the Centers for Disease Control and Prevention. Some immunizations are directly cost saving and others are highly cost effective.

III. Congress should establish and fund a national vaccine program for inmates to protect them and

the public from selected vaccine-preventable communicable diseases.

- A. The vaccination program should be similar to the National Vaccine Program for Children.
- B. The program should conform to the recommendations of the CDC's Advisory Committee on Immunization Practices (ACIP).⁴¹

National correctional health care literature database

To function competently, correctional health care clinicians require access to the medical literature, especially as it relates to correctional health care issues. Existing resources do not provide this level of specificity.

IV. Congress, through appropriate Federal agencies and health-related national organizations, should develop and maintain a national literature database for correctional health care professionals, including a compendium of policies, standards, guidelines, and peer-reviewed literature.

Ethical decisionmaking

Correctional health care professionals function in a uniquely restrictive environment with limited opportunity for peer review of medical policies and administrative actions. A national forum is needed to discuss issues, such as confidentiality, informed consent, clinical management of hepatitis C⁴² and HIV, and the availability of biomedical research.

V. Congress should establish a national advisory panel on ethical decisionmaking among correctional and health authorities to assist those authorities in addressing ethical dilemmas encountered in correctional health care.

Eliminate barriers to inmate health care

In correctional facilities, health care professionals face unique barriers to the delivery of health services. These include constraints on policy, budgets, priorities, and staffing. Correctional institutions are positioned to provide individual care to inmates and protect the public health through aggressive health promotion and disease prevention efforts. At all levels of government, public policymakers should recognize that eliminating barriers to health care for inmates provides long-term public health benefits.

VI. Congress, through appropriate Federal and State agencies and health-related national organizations, should identify and eliminate barriers to the successful implementation of public health policy.

- A. Reduce obstructions to effective public health programs within correctional facilities and in the community.
- B. Promote continuity of inmate health care by maintaining Medicaid benefits for eligible inmates throughout their incarceration.
- C. Promote continuity of ex-offender health care by mandating immediate Medicaid eligibility upon release.
- D. Provide incentives to jails and prisons to expand their alcohol and other drug treatment programs. These services should be gender specific and made available to inmates from admission through release, with special attention paid to inmates with both mental illness and substance abuse problems.

Correctional health care research

Too little is known about the epidemiology of disease in correctional populations and too little has been done to evaluate programs designed to improve inmate health.

VII. Congress, through appropriate Federal agencies and health-related national organizations, should support research in correctional health care to identify and address problems unique to correctional settings.

- A. Fund projects to evaluate models that emphasize creative, cost-effective options for continuity of care following release.
- B. Fund research programs to define effective health education and risk reduction strategies for inmates. These strategies need to deal with relevant differences between inmate and noninmate populations. The research programs should work through public, private, and community-based health care agencies.
- C. Fund research programs to identify correctional system barriers that prevent correctional health care staff from implementing prudent medical care and public health recommendations.

Improve delivery of health care

For a variety of reasons, the scope and content of correctional health care services vary. The quality of care is not as high as it might be, resulting in unnecessary morbidity, premature mortality, and increased costs.

VIII. Congress, through appropriate Federal agencies and medically based accrediting organizations, should promote improvements to the delivery of inmate health care.⁴³

- A. Require Federal, State, and local correctional systems to adhere to nationally recognized standards for the delivery of health care services in corrections.⁴⁴ These standards should include access to care, quality of care, quality of service, and appropriate credentialing of health care professionals.
- B. Provide sufficient resources for correctional systems to adhere to national standards.
- C. Weigh the correctional system's adherence to national standards for health care delivery whenever determining funding levels for the system.

Disease prevention

Primary prevention is designed to keep disease from occurring. Examples include lifestyle choices and vaccination against selected communicable diseases. Primary prevention is widely believed to be the best and most cost-effective use of health care dollars. In some cases, it is also a cost saving—that is, the prevention program saves more money than it costs to implement. Secondary prevention (screening) is the early detection of disease that already exists but may not be apparent to the patient.⁴⁵

IX. Congress, through appropriate Federal agencies and national organizations, should encourage primary and secondary disease prevention efforts.

- A. Promote primary disease prevention measures by requiring Federal, State and local correctional agencies to:
 - 1. Provide all inmates with a smoke-free correctional environment. Offer tobacco cessation programs for all staff and inmates as a method of achieving tobacco-free facilities.

2. Offer heart-healthy choices on institutional menus and in commissaries.
 3. Make daily aerobic exercise available to all inmates.
 4. Consistent with the recommendations of the ACIP, make hepatitis B vaccines available to all inmates, even when their length of incarceration is short or indeterminate.
 5. Screen all females for pregnancy. Test women found to be pregnant for hepatitis, HIV infection, syphilis, gonorrhea, and chlamydia. Provide HIV treatment to HIV-infected mothers to prevent transmission of the disease to the newborn.
 6. Although not a correctional system responsibility, administrators should seek to collaborate with community health care providers to ensure the timely immunization of all infants born to mothers who test positive for hepatitis B.
 7. Offer scientifically based risk reduction education on HIV infection and STD to all inmates.
- B. Promote secondary disease prevention measures by using nationally accepted evidence-based clinical guidelines as appropriate.
1. Provide hypertension, obesity, asthma, and seizure disorder screening for all prison inmates.
 2. Provide diabetes and hyperlipidemia screening for jail and prison inmates at high risk.
 3. Provide suicide prevention programs, including timely screening for inmates at high risk for suicide.
 4. Prevent the spread of tuberculosis.
 - a. Consistent with nationally accepted guidelines,⁴⁶ routinely screen inmates for TB disease and infection, and provide preventive treatment for inmates with latent TB infection.
 - b. Promote the use of short-course preventive therapy (delivered over 2 months) in correctional settings.
 - c. Strengthen the link of TB control efforts between correctional facilities and public health departments.
 - d. On employment and annually thereafter, screen all correctional staff who have inmate contact for latent TB infection.
 5. Prevent the spread of HIV infection.
 - a. Encourage voluntary HIV counseling and testing of inmates.
 - b. Provide appropriate treatment for HIV-positive, pregnant inmates to prevent HIV transmission to their babies.⁴⁷
 6. Screen inmates for syphilis, gonorrhea, and chlamydia routinely upon reception at prisons and jails, and treat inmates who test positive for these infections.⁴⁸
- ### Prerelease planning
- Many inmates are released into the community while still being treated for communicable and chronic diseases or mental illness. Ensuring continuity of care upon release can reduce health risks to the public, such as in cases of tuberculosis and sexually transmitted diseases. Continuity of care upon release for inmates with co-occurring mental illness and substance abuse disorders can reduce the risk of illicit drug use in the community. It is cost effective to the community to provide continuity of care on release for inmates with chronic disease.
- X. Congress, through appropriate Federal agencies and national organizations, should encourage Federal, State and local correctional facilities to provide prerelease planning for health care for all soon-to-be-released inmates.
- A. Address the medical, housing, and postrelease needs of inmates in prerelease planning and make use of appropriate resources and new technologies.
 - B. Coordinate discharge planning efforts between appropriate public agencies—such as correctional, parole, mental health, substance abuse, and public health agencies—to prevent disease transmission and to reduce society’s costs from untreated and undertreated illness.

Recommended actions by government agencies

The steering committee and expert panels recognized that many Federal agencies have a role in affecting the health status of soon-to-be-released inmates. Within the U.S. Department of Health and Human Services (DHHS), for example, agencies such as the Centers for Disease Control and Prevention (CDC), the Health Resources and Services Administration (HRSA), the Substance Abuse and Mental Health Services Administration (SAMHSA), the National Institute on Drug Abuse (NIDA), the Office of Women's Health (OWH), the Public Health Service (PHS), the Indian Health Service (IHS), and the Office of Minority Health (OMH) are actively engaged in health services programs that impact on inmates. In addition, within the U.S. Department of Justice (DOJ), agencies such as the National Institute of Justice (NIJ), the Immigration and Naturalization Service (INS), the Bureau of Prisons (BOP) including the National Institute of Corrections (NIC), the Corrections Program Office (CPO), and the Office of Justice Programs (OJP) conduct programs and activities that ultimately influence inmate health. Finally, the Office of the Surgeon General (OSG) and the White House Executive Office of National Drug Control Policy (ONDCP) also impact the health care of inmates.

The steering committee and expert panels recommend that Congress provide the necessary authorization, funding, and other assistance to the appropriate agencies to implement the following recommendations.

- I. The Secretary of DHHS should direct appropriate agencies to collaborate with other agencies in analyzing the potential economic benefits to the community of early diagnosis and treatment of communicable diseases, chronic diseases, and mental illnesses.
- II. The Secretary should direct CDC to collaborate with NIJ, NIC, CPO, and other DOJ divisions in developing tools to assist State and local agencies in deciding when and whom to screen for communicable diseases in correctional settings.
- III. The Secretary should direct all appropriate agencies within the department to work toward reducing interagency regulatory and bureaucratic barriers to testing and counseling for HIV, TB, and STDs among inmates.
- IV. The Secretary and the Attorney General should involve correctional health professionals in public health planning and the evaluation of correctional health care programs.
- V. The Secretary and the Attorney General should direct appropriate agencies to support field tests of innovative medical information systems to improve the continuity of care for inmates transferred between correctional facilities or released into the community. These efforts should concentrate on removing barriers that impede the transfer of appropriate medical information.
- VI. The Secretary and the Attorney General should direct appropriate agencies to develop educational programs to inform policymakers and the public about the public health and social benefits of investing in health care for inmates.
- VII. A Federal interagency task force, currently established and co-chaired by CDC and NIJ, should report annually to the Secretary and the Attorney General on the status of correctional health care in the Nation and on progress made toward implementing the recommendations included in this report.

Notes

1. Beck, A.J., *Prisoners in 1999*, Bulletin, Washington, DC: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, August 2000, NCJ 183476.
2. Beck, Allen, U.S. Department of Justice, Bureau of Justice Statistics, personal interview, May 15, 2000.
3. Corrections departments also have a legal obligation to treat inmates. The most important single ruling has been the U.S. Supreme Court's 1976 finding in *Estelle v. Gamble*, 429 U.S. 97, that "deliberate indifference" (not mere medical malpractice) to "serious medical needs" of inmates violates the eighth amendment's prohibition against cruel and unusual punishment.
4. An estimated 339,070 people were employed in State and Federal correctional facilities in 1995 and 165,500 were employed in jails. See Stephan, J.J., *Census of State and Federal Correctional Facilities, 1995*, Bureau of Justice Statistics Executive Summary, Washington, DC:

U.S. Department of Justice, Bureau of Justice Statistics, August 1997, NCJ 166582; and Perkins, C.A., J.J. Stephan, and A.J. Beck, *Jails and Jail Inmates, 1993–94*, Bulletin, Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics, April 1995, NCJ 151651.

5. See, for example, Glaser, J.B., and R.B. Greifinger, “Correctional Health Care: A Public Health Opportunity,” *Annals of Internal Medicine* 118 (2) (1993): 139–145.

6. Hornung, C.A., B.J. Anno, R.B. Greifinger, and S. Gadre, “Health Care for Soon-To-Be-Released Inmates: A Survey of State Prison Systems,” paper prepared for the National Commission on Correctional Health Care, Chicago, IL, n.d. (Copy in volume 2 of this report.)

7. Hammett, T.M., P. Harmon, and W. Rhodes, “The Burden of Infectious Disease Among Inmates and Releasees From Correctional Facilities,” paper prepared for the National Commission on Correctional Health Care, Chicago, IL, May 2000. (Copy in volume 2 of this report.)

8. The U.S. Department of Justice, Bureau of Justice Statistics, is preparing a report for release in 2002 on the prevalence of hepatitis among correctional populations, based on data from the 2001 census of State and Federal adult correctional facilities.

9. This figure was derived by applying the prevalence of TB disease among inmates in prisons (0.04 percent) and jails (0.17 percent) to the estimated number of releasees from prisons and jails. The estimate of releases was calculated by applying a point prevalence rate for inmates (i.e., the percentage of inmates who were under treatment for TB disease on a given day in 1997) to the total number of releasees during all of 1996. The estimate suggests that about 12,000 people who were released from a correctional facility during 1996 had TB disease at some time during that year, but it does not mean that they all had TB disease at the time of their release from prison or jail. Most of them probably did not have TB disease at the time of their release because, if properly treated, TB disease typically lasts only a short time. The denominator (34,000) is an estimate of the total number of persons with TB in the United States during 1996. The Centers for Disease Control and Prevention’s TB Registry Reports, which provided the numbers of cases in a given year, were discontinued in 1994. The only report for subsequent years is CDC’s TB surveillance report, which provides incident (new) cases each year. Therefore, an average ratio of incident cases to prevalent cases was calculated for the last 3 years in which Registry Reports

were available (1992–94). This ratio (0.627) was then applied to the number of incident cases for 1996 (21,337) to obtain the estimate of 34,000 prevalent cases in 1996.

10. Centers for Disease Control and Prevention, *HIV/AIDS Surveillance Report, 1997*, Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 1997.

11. A more recent study concluded that the 1996 AIDS rate for incarcerated persons was at least six times the national rate. See Dean-Gaitor, H.D., and P.L. Fleming, “Epidemiology of AIDS in Incarcerated Persons in the United States, 1994–1996,” *AIDS* 13 (17) (1999): 2429–2435.

12. Based on the prevalence estimate in McQuillan, G.M., M.J. Alter, L.A. Moyer, S.B. Lambert, and H.S. Margolis, “A Population-Based Serologic Survey of Hepatitis C Virus Infection in the U.S.,” in Rizzetto, M., R.H. Purcell, G.L. Gerin, and G. Verme (eds.), *Viral Hepatitis and Liver Disease*, Turin, Italy: Edizioni Minerva Medica, 1997: 267–270.

13. Hammett, Harmon, and Rhodes, “The Burden of Infectious Disease Among Inmates and Releasees” (see note 7). The 17.0–18.6 percent estimate is probably very low, given that studies conducted in individual prison systems have found prevalence rates of 30–40 percent.

14. Hornung C.A., R.B. Greifinger, and S. Gadre, “A Projection Model of the Prevalence of Selected Chronic Disease in the Inmate Population,” paper prepared for the National Commission on Correctional Health Care, Chicago, IL, n.d. (Copy in volume 2 of this report.)

15. Veysey, B.M., and G. Bichler-Robertson, “Prevalence Estimates of Psychiatric Disorders in Correctional Settings,” paper prepared for the National Commission on Correctional Health Care, Chicago, IL, May 1999. (Copy in volume 2 of this report.)

16. Dysthymia and anxiety range from completely disabling (e.g., agoraphobia) to not even mildly incapacitating (e.g., generalized anxiety disorder). Depending on the severity of their condition, many individuals with dysthymia and anxiety do not require medical treatment.

17. Hammett, T.M., P. Harmon, and L.M. Maruschak, *1996–1997 Update: HIV/AIDS, STDs, and TB in Correctional Facilities*, Issues and Practices, Washington, DC: U.S. Department of Justice, National Institute of Justice, July 1999, NCJ 176344.

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18. A comprehensive HIV-prevention program provides HIV counseling and testing, instructor-led education, peer-based programs, and multisession HIV-prevention counseling in each correctional facility.
19. Hornung, Anno, Greifinger, and Gadre, "Health Care for Soon-To-Be-Released Inmates" (see note 6).
20. Steadman, H.J., and B.M. Veysey, *Providing Services for Jail Inmates With Mental Disorders*, Research in Brief, Washington, DC: U.S. Department of Justice, National Institute of Justice, January 1997, NCJ 162207.
21. Ibid.
22. Manderscheid, R.W., and M.A. Sonnenschein (eds.), *Mental Health, United States, 1992*, Rockville, Maryland: U.S. Department of Health and Human Services, 1992.
23. Steadman and Veysey, *Providing Services* (see note 20).
24. Hammett, Harmon, and Maruschak, *1996–1997 Update* (see note 17).
25. Steadman and Veysey, *Providing Services* (see note 20).
26. Kraut, J.R., A.C. Haddix, V. Carande-Kulis, and R.B. Greifinger, "Cost-Effectiveness of Routine Screening for Sexually Transmitted Disease Among Inmates in United States Prisons and Jails," paper prepared for the National Commission on Correctional Health Care, Chicago, IL, February 2000. (Copy in volume 2 of this report.)
27. Ibid.
28. Varghese, B., and T.A. Peterman, "Cost-Effectiveness of HIV Counseling and Testing in U.S. Prisons," paper prepared for the National Commission on Correctional Health Care, Chicago, IL, n.d. (Copy in volume 2 of this report.)
29. American Thoracic Society and the Centers for Disease Control and Prevention, "Targeted Tuberculin Testing and Treatment of Latent Tuberculosis Infection," *American Journal of Respiratory and Critical Care Medicine* 161 (2000): 221S–247S; American Thoracic Society and the Centers for Disease Control and Prevention, "Diagnostic Standards and Classification of Tuberculosis in Adults and Children," *American Journal of Respiratory and Critical Care Medicine* 161 (2000): 1376–1395.
30. Taylor, Z., and C. Nguyen, "Cost-Effectiveness of Preventing Tuberculosis in Prison Populations," presentation prepared for the National Commission on Correctional Health Care, Chicago, IL, n.d. (Copy in volume 2 of this report.)
31. Tomlinson, D.M., and C.B. Schechter, "Cost-Effectiveness Analysis of Annual Screening and Intensive Treatment for Hypertension and Diabetes Mellitus Among Prisoners in the United States," paper prepared for the National Commission on Correctional Health Care, Chicago, IL, n.d. (Copy in volume 2 of this report.)
32. Shuter, J., "Communicable Diseases in Inmates: Public Health Opportunities," paper prepared for the National Commission on Correctional Health Care, Chicago, IL, n.d. (Copy in volume 2 of this report.)
33. Draft clinical guidelines submitted to the National Commission on Correctional Health Care, Chicago, Illinois, currently under consideration for adoption. (Copy in appendix D of this volume.)
34. Hammett, Harmon, and Maruschak, *1996–1997 Update* (see note 17).
35. Morris, S.M., H.J. Steadman, and B.M. Veysey, "Mental Health Services in United States Jails: A Survey of Innovative Practices," *Criminal Justice and Behavior* 24 (1) (1997): 3–19.
36. Surveillance is the ongoing systematic collection, analysis, and interpretation of health data.
37. See, for example, National Center for Health Statistics, *National Health and Nutrition Examination Survey III [NHANES–III]*, Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 1997.
38. The definitions of mental disorders and presentation of their prevalence in American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders*, 4th ed., Washington, DC: American Psychiatric Press, 1994, are a good illustration of the standardized definitions and measures that are needed in the field of correctional health care.
39. "Summary of Notifiable Diseases, United States, 1998," *Morbidity and Mortality Weekly Report* 47 (53) (December 31, 1999).

40. See, for example, “Guidelines for the Use of Antiretroviral Agents in HIV-Infected Adults and Adolescents,” Rockville, MD: U.S. Department of Health and Human Services, available at http://www.hivatis.org/guidelines/adult/Apr23_01/pdf/AAAPR23S.PDF (updated April 23, 2001); American Diabetes Association, “Standards for Medical Care for Patients With Diabetes Mellitus,” *Clinical Practice Recommendations 2000, Diabetes Care* (supp. 1) (2000): 1–23; American Diabetes Association, “Management of Diabetes in Correctional Institutions,” *Clinical Practice Recommendations 2000, Diabetes Care* 21 (supp. 1) (2000): 1–3; National Institutes of Health, National Asthma Education and Prevention Program, *Expert Panel Report 2: Guidelines for the Diagnosis and Management of Asthma*, Bethesda, MD: National Heart, Blood, and Lung Institute, February 1997; National Institutes of Health, “Sixth Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure,” Bethesda, MD: National Heart, Lung, and Blood Institute, November 1997; “Clinical Guidelines: Report of the NIH Panel to Define Principles of Therapy of HIV Infection and Guidelines for the Use of Antiretroviral Agents in HIV-Infected Adults and Adolescents,” Bethesda, MD: National Institutes of Health (updated May 5, 1999); and Centers for Disease Control and Prevention, “Clinical Guidelines: 1999 USPHS/IDSA Guidelines for the Prevention of Opportunistic Infections in Persons Infected With Human Immunodeficiency Virus,” *Morbidity and Mortality Weekly Report* 48 (RR-10) (August 20, 1999): 1–59, 61–66.
41. The recommendations of the CDC’s Advisory Committee on Immunization Practices can be found at CDC’s Web site: <http://www.cdc.gov/nip/publications/ACIP-list.htm>.
42. See the Centers for Disease Control and Prevention, “Recommendations for Prevention and Control of Hepatitis C Virus (HCV) Infection and HCV-Related Chronic Disease,” *Morbidity and Mortality Weekly Report* 47 (RR-19) (October 16, 1998): 1–39.
43. For a comparison of accreditation services for correctional institutions, see Anno, B. J., *Correctional Health Care: Guidelines for the Management of an Adequate Delivery System*, Washington, DC: U.S. Department of Justice, National Institute of Corrections (in press).
44. See National Commission on Correctional Health Care, *Standards for Health Services in Prisons*, and *Standards for Health Services in Jails*, Chicago, IL: Author (in press).
45. A detailed discussion of the differences between primary and secondary prevention may be found in Last, J.M., *Public Health and Human Ecology*, 2d ed., Stamford, CT: Appleton & Lange, 1998.
46. An excellent source for a tuberculosis clinical guideline is the Centers for Disease Control and Prevention at their Web site: www.cdc.gov.
47. See U.S. Department of Health and Human Services, “Guidelines for the Use of Antiretroviral Agents” (see note 40).
48. The Centers for Disease Control and Prevention have prepared “HIV Prevention Through Early Detection and Treatment of Other Sexually Transmitted Diseases—United States. Recommendations of the Advisory Committee for HIV and STD Prevention,” *Morbidity and Mortality Weekly Report* 47 (RR-12) (July 31, 1998).

Chapter 1. Introduction

This report presents the results of a 2-year study of the health status of prison and jail inmates.¹ The study demonstrates that improving the health care of inmates can benefit public health in two important ways:

- (1) **By reducing the transmission of communicable disease to others in the community** from inmates who are released with untreated conditions and without having participated in disease prevention programs.
- (2) **By reducing the financial burden on the public** associated with treating released inmates who return to the community with undiagnosed or untreated communicable disease, chronic disease, and mental illness, thereby freeing up resources for other worthy public health initiatives.

In the Omnibus Consolidated Appropriations Act of 1997, Congress instructed the U.S. Department of Justice (DOJ) to set aside money to fund *The Health Status of Soon-To-Be-Released Inmates* study. As a result, the National Institute of Justice (NIJ), DOJ's research and evaluation arm, entered into a cooperative agreement with the National Commission on Correctional Health Care (NCCHC) to conduct the study. This report represents the culmination of the project's work.

There are many reasons why inmate health should be appropriately addressed. *The Health Status of Soon-To-Be-Released Inmates* examines only certain diseases and illnesses with serious implications for public health. The omission of diseases and illnesses from the study and the report does not mean that it is not important to address these conditions. The project is not intended to be a full-scale study of all aspects of inmate health care.

Organization of the Report

Volume 1 of *The Health Status of Soon-To-Be-Released Inmates* has seven chapters.

Chapter 1, **Introduction**, reviews the urgency of addressing inmate health care needs, the unique opportunity that addressing these needs provides for improving public health, and the need for reliable data on the health status of inmates in order to develop effective correctional health care policy recommendations.

Chapter 2, **History of the Project**, describes the steps *The Health Status of Soon-To-Be-Released Inmates* project followed in producing this report.

Chapter 3, **Prevalence of Communicable Disease, Chronic Disease, and Mental Illness Among the Inmate Population**, estimates the number and proportion of inmates with selected communicable diseases, chronic medical conditions, and mental illnesses. The chapter compares the prevalence of these conditions among inmates to their prevalence among the population as a whole.

Chapter 4, **Improving Correctional Health Care: A Unique Opportunity to Protect Public Health**, describes the current status of prevention, screening, and treatment programs in prisons and jails for communicable disease, chronic disease, and mental illness. The chapter documents difficulties many correctional agencies have experienced in meeting nationally accepted guidelines for correctional health care. These findings suggest that a tremendous—and, as yet, largely unexploited—opportunity exists to benefit public health by improving correctional health care practices.

Chapter 5, **Cost-Effectiveness of Prevention, Screening, and Treatment of Disease Among Inmates**, establishes that implementing interventions for selected communicable and chronic diseases would be cost effective and, in some cases, save money. The chapter identifies interventions with proven efficacy to help reduce or eliminate the risks associated with communicable and chronic disease.

Chapter 6, **Barriers to Effective Prevention, Screening, and Treatment—and Overcoming**

Them, identifies the barriers to providing health care in prisons and jails and well-documented approaches to overcoming these barriers.

Chapter 7, **Policy Recommendations**, identifies steps that correctional systems and Federal, State, and local agencies can take that will reduce health risks to the community by improving the prevention, screening, and treatment of disease and mental illness among inmates.

Appendixes to volume 1 include the list of authors, experts, and consultants who participated in the project, brief biographies of these individuals, the survey instrument used to collect information from State departments of corrections, sample clinical guidelines for correctional health care, and an introduction to the National Commission on Correctional Health Care and its position statements.

Volume 2 of the report includes the eight papers and two presentations commissioned for the project (see chapter 2, “History of the Project”).

This chapter makes clear that a unique opportunity exists to reduce the health risks and financial costs to the community—and to correctional staff and

visitors—associated with the large numbers of undiagnosed, underdiagnosed, untreated, and undertreated inmates returning to the community from the Nation’s prisons and jails. The chapter explains the need for empirical data to support policy recommendations for addressing the health care needs of inmates and the critical role this project plays in identifying and generating this scientific information. This chapter’s main points are summarized in “The Rationale for Improving Health Care for Inmates Before They Are Released.”

Problem of Untreated Prison and Jail Inmates

The inmate population in the United States has been growing rapidly since the early 1970s: As of 1999, an estimated 2 million persons were incarcerated in the Nation’s jails and prisons compared with 325,400 in 1970—an increase of almost 600 percent.² Approximately 11.5 million inmates were released into the community in 1998, most from city and county jails.³ As documented in chapter 3, these inmates are at higher risk for many serious diseases and mental illness than are nonincarcerated individuals.

The Rationale for Improving Health Care for Inmates Before They Are Released

1. There are high rates of serious disease and mental illness among prison and jail inmates—in some cases, much higher rates than in the general public.
2. Untreated inmates with communicable disease who are released into the community may transmit these conditions to members of the public at large.
3. Releasing inmates with untreated serious communicable disease, chronic disease, and mental illness is likely to create a financial burden on the local community’s public health system.
4. As a result, prisons and jails offer a uniquely important opportunity for establishing better disease control in the community by providing health care and prevention interventions to inmates while they are still incarcerated.
5. Preventing and treating inmates with serious communicable and chronic disease is cost effective—that is, the benefits outweigh the expense. For some diseases, prevention or screening can even save money.
6. Barriers to providing prevention, screening, and treatment services to inmates can be overcome.
7. Correctional administrators and public health officials need accurate information about the health of inmates in order to select appropriate and cost-effective interventions. These data have been lacking. *The Health Status of Soon-To-Be-Released Inmates* project has been able to develop scientifically based policy recommendations for improving correctional health care.

- The prevalence rates for several serious communicable diseases are significantly higher among inmates and releasees than in the total U.S. population. Seventeen percent of the estimated 229,000 persons living with AIDS in the country in 1996 passed through a correctional facility that year.⁴ An extremely high 29–32 percent of the estimated 4.5 million people infected with hepatitis C in 1996 in the United States served time in prison or jail that year.⁵
- Inmates have high rates of some serious chronic diseases, including asthma, diabetes, and hypertension. Prevalence rates for asthma are higher among inmates than among the total U.S. population.⁶
- The prevalence of mental illness is higher among inmates than among the rest of the population. An estimated 2.3 to nearly 4 percent of inmates in State prisons have schizophrenia or another psychosis compared with 0.8 percent among the population of the Nation as a whole.⁷

These high rates of communicable disease, chronic disease, and mental illness among an expanding inmate population create a critical need for prevention, screening, and treatment services before these individuals are released into the community.⁸ Why? First, serious diseases affecting inmates can be transmitted to other inmates. Absent appropriate screening and isolation for contagious individuals, tuberculosis (TB) transmission is a serious possibility in prisons and jails because of poor ventilation and overcrowding.⁹ HIV transmission has been documented within correctional facilities, albeit at low rates.¹⁰ In addition, the many inmates with poor overall health have an increased susceptibility to disease.

Second, the Nation's 500,000 correctional employees¹¹—and the thousands of daily visitors to prisons and jails—may be exposed to disease unless appropriate precautions are taken. These employees and visitors in turn may infect family members and others in the community.

Third, inmates with communicable diseases who are released without having been effectively treated may transmit these conditions in the community, threatening public health.

Finally, the threat of releasing untreated inmates with contagious diseases involves more than the possibility of infecting other people in the community. Inmates who are released with untreated conditions—including communicable disease, chronic disease, and mental illness—may also become a serious financial burden on community health care systems. An illustration suggests the seriousness of this danger:

Outbreaks of multidrug/resistant tuberculosis that have occurred in prisons have spread into the community as inmates with the disease have been released, resulting in deaths and enormous public costs to control the infection.¹² Efforts to control the resurgence of tuberculosis in the early 1990s—fueled at least in part by released inmates—cost New York City alone more than \$1 billion.¹³

The danger and expense to the community of releasing untreated inmates are likely to grow for several reasons.

- Prison and jail populations are increasing. The number of inmates is growing about 5 percent per year and is now more than 1.9 million. Each week, the Nation must add more than 1,100 prison beds to keep up with the rapidly growing inmate population.¹⁴
- Certain diseases are more common among substance abusers than among the rest of the population, including HIV/AIDS, hepatitis B and C, and tuberculosis.¹⁵ At the same time, an increasing proportion of inmates are substance abusers. In 1985, only 38,900—8.6 percent—of State prison inmates were serving time for drug offenses as their most serious crime committed. By 1995, that number had increased almost sixfold to 224,900—22.7 percent of all inmates.¹⁶ This change has brought more individuals into the corrections system who are at very high risk for acquiring and transmitting HIV, hepatitis, and tuberculosis.¹⁷
- Even though correctional populations are still younger than the national average, the Nation's prison and jail populations are aging. In 1997, almost 30 percent of inmates in State or Federal prisons were between the ages of 35 and 44, compared with 23 percent in 1991. The rise was offset

by a decline in the percentage of inmates aged 18–34. (The percentage of inmates 55 years old or older did not change—about 3 percent in both years.)¹⁸ A similar phenomenon is occurring in jails.¹⁹ As the inmate population gets older, chronic diseases associated with increasing age, such as diabetes and hypertension,²⁰ can be expected to increase among correctional populations.

Window of Opportunity

Prisons and jails offer uniquely important opportunities for improving disease control in the community by providing health care and disease prevention programs to a large and concentrated population of individuals at high risk for disease.²¹ Prisons and jails make it possible to reach a population that is largely underserved and difficult to identify and treat in the general community. Inmates often have little interaction with the health care system before and after being incarcerated.²² Most inmates come from poor communities where health care services, other than hospital emergency rooms, are largely inaccessible or underutilized.²³ For a variety of reasons, many inmates do not seek diagnosis or treatment for illness before arriving in prison or jail.²⁴ Because inmates are literally a “captive” audience, it is vastly more efficient and effective to screen and treat them while incarcerated than to conduct extensive outreach in local communities designed to encourage at-risk individuals to go to a clinic for testing and treatment. By introducing routine prevention, screening, and treatment into prisons and jails, incarceration offers an opportunity for an underserved high-risk population to receive prevention and treatment services.

There is another important advantage to reaching this population while it is still incarcerated. Many illnesses that are prevalent among inmates are linked to a number of other health problems. There are high rates of coinfection with HIV/AIDS, sexually transmitted diseases, hepatitis B and C, and tuberculosis.²⁵ Substance abusers are at very high risk for HIV, hepatitis, and other infectious and chronic diseases.²⁶ Unless adequately treated, people with mental illness often “medicate” themselves with alcohol or illicit drugs.²⁷ By preventing or treating one of the conditions these individuals suffer from, the development of several other conditions may be averted.

Finally, correctional facilities offer this population access to prevention and treatment services at a time when their thinking is less likely to be clouded by active drug use or by pressing survival concerns, such as the need for employment, housing, or food.

Preventing and Treating Disease in Prisons and Jails Are Cost Effective

Most inmates have not had access to routine health care before being incarcerated. Correctional systems pay the consequences of this lack of preincarceration prevention and treatment. Because inmates may not have had eye examinations before they went to prison or jail that might have detected treatable incipient diabetes, the correctional system must pay for addressing the medical consequences of their untreated diabetes. Nevertheless, it is cost effective for correctional systems to implement proven approaches to preventing, screening for, and treating disease among inmates. The reduction in adverse health consequences to society that correctional agencies can achieve is unquestionably worth the cost of providing these services. Analyses conducted expressly for *The Health Status of Soon-To-Be Released Inmates* project document that screening for syphilis²⁸ and latent tuberculosis infection,²⁹ and providing counseling and testing for HIV infection,³⁰ will save more money in averted medical costs than would be needed to implement the interventions.

Corrections agencies can most effectively limit the number of untreated inmates they release into the community by addressing diseases that (1) are highly prevalent among inmates, (2) pose a serious threat to public health, and (3) can be effectively prevented or treated. On the one hand, these are the conditions that, if untreated, are most likely to spread in prisons and jails and to pose a threat to public health as inmates are released. On the other hand, these are the conditions that the correctional health care system is best equipped to prevent or treat.

Many correctional systems have experienced difficulties in attempting to improve their health care services for the most prevalent, serious, and preventable or treatable diseases and mental disorders among inmates. Correctional systems have faced the following barriers:

- **Leadership barriers.** Many administrators and other decisionmakers in correctional systems and in the community are not aware of the need or the opportunity to improve correctional health care, while others lack the political will or commitment to take the lead.
- **Logistical barriers.** The short stay of many jail inmates increases the challenge to identify quickly inmates with serious conditions, particularly communicable diseases.
- **Financial barriers.** Correctional administrators may feel they cannot provide adequate medical care for all inmates because other prison or jail services have a higher priority for the limited funds available.
- **Policy barriers.** Many correctional systems will not allow mentally ill inmates with substance abuse problems to participate in outpatient and residential drug treatment programs if they continue to use prescription medications to treat their mental disorders.

As chapter 6 explains, the local community—in particular, local public health departments—contributes to the barriers correctional systems face in providing health care by not sharing responsibility for improving correctional health care services. As the chapter demonstrates, however, there are well-documented ways of overcoming these barriers through collaborations between correctional and public health agencies.

Need for Scientific Data on Inmate Health

The principal goal of *The Health Status of Soon-To-Be-Released Inmates* project is to provide public policy recommendations whose implementation will help reduce health risks and health care costs resulting from the release of undiagnosed or untreated inmates. Correctional health administrators, public health officials, and government policymakers need accurate correctional health data to establish priorities, allocate resources, and select the most cost-effective health care interventions. Correctional health care programs should be based on the best available information on the efficacy and costs of competing health care priorities and intervention strategies.

For many health care policy questions, substantial evidence often demonstrates how various interventions can be expected to affect health outcomes. This is usually not the case for inmate health. There has been a severe gap in the data available regarding the health status of inmates in prisons and jails, and therefore a lack of information regarding cost-effective means of improving inmates' physical and mental health. A survey of 41 State departments of corrections conducted as part of this project³¹ documented this gap.

- Fewer than one-half of the departments reported having data on the number of inmates with chronic diseases, such as diabetes, asthma, or hypertension.
- Only 17 out of 41 departments could report the number of inmates taking selected medications; even fewer could report the number of inmates taking inhaled asthma medications, insulin or medications for low blood sugar, or antihypertension medicines; fewer still could provide the number of inmates taking medications prescribed for heart disease. Collecting and having quick access to reliable pharmaceutical data is crucial to determining which inmates are or should be taking medication and improving quality of care.
- Just more than one-half of the responding departments reported having data on the number of mentally ill inmates in their systems.

The cooperative agreement between the National Institute of Justice and the National Commission on Correctional Health Care charged the Commission with providing this missing empirical evidence regarding inmate health. The Commission was then charged with using the information to develop scientifically based policy recommendations related to prevention, screening, and treatment of disease and mental illness among inmates in prisons and jails. The following chapter provides the history of this collaboration.

Notes

1. Inmates refer to individuals incarcerated in a prison or jail. Releasees are individuals discharged from a prison or jail.
2. Beck, A.J., *Prisoners in 1999*, Bulletin, Washington, DC: U.S. Department of Justice, Office of Justice

Programs, Bureau of Justice Statistics, August 2000, NCJ 183476.

3. Beck, Allen, U.S. Department of Justice, Bureau of Justice Statistics, personal interview, May 15, 2000.

4. Hammett, T.M., P. Harmon, and W. Rhodes, "The Burden of Infectious Disease Among Inmates and Releasees From Correctional Facilities," paper prepared for the National Commission on Correctional Health Care, Chicago, IL, May 2000. (Copy in volume 2 of this report.)

5. Ibid.

6. Hornung, C.A., R.B. Greifinger, and S. Gadre, "A Projection Model of the Prevalence of Selected Chronic Diseases in the Inmate Population," paper prepared for the National Commission on Correctional Health Care, Chicago, IL, 1998. (Copy in volume 2 of this report.)

7. Veysey, B.M., and G. Bichler-Robertson, "Prevalence Estimates of Psychiatric Disorders in Correctional Settings," paper prepared for the National Commission on Correctional Health Care, Chicago, IL, n.d. (Copy in volume 2 of this report.)

8. Corrections departments have a legal obligation to treat inmates. A number of suits brought by individual inmates have resulted in important court rulings. The most important single ruling was the U.S. Supreme Court's finding in *Estelle v. Gamble*, 429 U.S. 97 (1976), that "deliberate indifference" (not mere medical malpractice) to "serious medical needs" of inmates violates the eighth amendment's prohibition against cruel and unusual punishment. The Court ruled that "deliberate indifference" could be evidenced in a number of ways, such as a correctional officer's intentional denial or delay of medical care, or a physician's indifference.

9. Centers for Disease Control and Prevention, "Prevention and Control of Tuberculosis in Correctional Facilities: Recommendations of the Advisory Council for the Elimination of Tuberculosis," *Morbidity and Mortality Weekly Report* 45 (RR-08) (June 7, 1996).

10. Hammett, T.M., P. Harmon, and L.M. Maruschak, *1996-1997 Update: HIV/AIDS, STDs, and TB in Correctional Facilities*, Issues and Practices, Washington, DC: U.S. Department of Justice, National Institute of Justice, July 1999, NCJ 176344.

11. There were an estimated 339,070 employees in State and Federal correctional facilities in 1995 and 165,500 employees in jails. See, Stephan, J.J., *Census of State and Federal Correctional Facilities, 1995*, Executive

Summary, Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics, August 1997, NCJ 166582; and Perkins, C.A., J.J. Stephan, and A.J. Beck, *Jails and Jail Inmates, 1993-94*, Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics, April 1995, NCJ 151651.

12. Valway, S.E., S.B. Richards, J. Kovacovich, R.B. Greifinger, J.T. Crawford, and S.W. Dooley, "Outbreak of Multi-Drug-Resistant Tuberculosis in a New York State Prison," *American Journal of Epidemiology* 88 (1994): 113-122.

13. Satcher, D., "Tuberculosis—Battling an Ancient Scourge," *Journal of the American Medical Association* 282 (1999): 1996.

14. Beck, *Prisoners in 1999* (see note 2).

15. Selwyn, P.A., D. Hartel, V.A. Lewis, E.E. Schoenbaum, S.H. Vermund, R.S. Klein, A.T. Walker, and G.H. Friedland, "A Retrospective Study of the Risk of Tuberculosis Among Intravenous Drug Users With Human Immunodeficiency Virus Infection," *New England Journal of Medicine* 320 (1989): 545-550.

16. Skolnik, A., "'Collateral Casualties' Climb in Drug War," *Journal of the American Medical Association* 271 (1994): 1638-1639.

17. Glaser, J., and R.B. Greifinger, "Correctional Health Care: A Public Health Opportunity," *Annals of Internal Medicine* 118 (1993): 139-145.

18. Beck, *Prisoners in 1999* (see note 2).

19. Harlow, C.W., *Profile of Jail Inmates 1996*, Special Report, Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics, April 1998, NCJ 164620.

20. National Center for Health Statistics, *National Health and Nutrition Examination Survey III [NHANES-III]*, Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 1997.

21. See, for example, Glaser and Greifinger, "Correctional Health Care: A Public Health Opportunity"(see note 17).

22. Ibid.

23. Ibid.

24. Ibid.

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25. Selwyn et al., "A Retrospective Study of the Risk of Tuberculosis" (see note 15).
26. Ibid.
27. Khantzian, E.J., "The Self-Medication Hypothesis of Substance Use Disorders: A Reconsideration and Recent Applications," *Harvard Review of Psychiatry* 4 (5) (1997): 231–244.
28. Kraut, J.R., A. Haddix, V. Carande-Kulis, and R.B. Greifinger, "Cost-Effectiveness of Routine Screening for Sexually Transmitted Diseases in Inmates of U.S. Correctional Facilities," paper prepared for the National Commission on Correctional Health Care, Chicago, IL, February 7, 2000. (Copy in volume 2 of this report.)
29. Taylor, Z., and C. Nguyen, "Cost-Effectiveness of Preventing Tuberculosis in Prison Populations," presentation prepared for the National Commission on Correctional Health Care, Chicago, IL, n.d. (Copy in volume 2 of this report.)
30. Varghese, B., and T.A. Peterman, "Cost-Effectiveness of HIV Counseling and Testing in U.S. Prisons," paper prepared for the National Commission on Correctional Health Care, Chicago, IL, n.d. (Copy in volume 2 of this report.)
31. Hornung, C.A., B.J. Anno, R.B. Greifinger, and S. Gadre, "Health Care for Soon-To-Be-Released Inmates: A Survey of State Prison Systems," paper prepared for the National Commission on Correctional Health Care, Chicago, IL, 1998. (Copy in volume 2 of this report.)

Chapter 2. History of the Project

This chapter describes how *The Health Status of Soon-To-Be-Released Inmates* project was conducted. The project involved three expert panels, a mail survey of State departments of corrections, commissioned papers, and the development of policy recommendations based on empirical evidence of need and effectiveness. A Steering Committee coordinated the work.

Steering Committee

The cooperative agreement between the National Institute of Justice (NIJ) and the National Commission on Correctional Health Care (NCCHC) was signed in spring 1997. Shortly thereafter, NCCHC established a steering committee to guide the project. The members, identified in “Steering Committee Members,” met six times to set priorities, develop and update a project work plan, and monitor progress toward project goals.

During the planning stages of the project, several NIJ staff members helped significantly in developing the project work plan. These staff included Cheryl Crawford, Deputy Director, Office of Development and Communication; Sally Hillsman, Deputy Director, NIJ; Pamela Lattimore, Director, Criminal Justice and Criminal Behavior Division; and Laura Winterfield, Director, Criminal Justice and Criminal Behavior Division.

The steering committee and NIJ staff made an early decision to form three expert panels, one each on communicable disease, chronic disease, and mental illness, that would meet periodically to provide expert guidance to the steering committee.

Expert Panels

Appendix A identifies the members of the three expert panels.¹ Panel members include many of the

Steering Committee Members

B. Jaye Anno, Ph.D., CCHP–A, Consultants in Correctional Care

R. Scott Chavez, M.P.A., PA–C, Vice President, National Commission on Correctional Health Care, Project Coordinator of *The Health Status of Soon-To-Be-Released Inmates* Project

Cheryl Crawford, M.P.A., J.D., Deputy Director, Office of Development and Communication, National Institute of Justice, U.S. Department of Justice

Andrew L. Goldberg, M.A., Social Science Analyst, National Institute of Justice, U.S. Department of Justice

Robert B. Greifinger, M.D., Chief, The Bromeen Group, Principal Investigator of *The Health Status of Soon-To-Be-Released Inmates* Project

Edward A. Harrison, President, National Commission on Correctional Health Care

John R. Miles, M.P.A., Special Assistant for Corrections and Substance Abuse, National Center for HIV, STD, and TB Prevention, Centers for Disease Control and Prevention, U.S. Department of Health and Human Services

Marilyn Moses, M.S., Social Science Analyst, National Institute of Justice, U.S. Department of Justice

Laura Winterfield, Ph.D., Director, Criminal Justice and Criminal Behavior Division, National Institute of Justice, U.S. Department of Justice

Nation's most respected researchers, practitioners, and scholars in the fields of public and correctional health care. Centers for Disease Control and Prevention (CDC) staff helped guide the scholarly work of the expert panels.

The steering committee asked each expert panel to:

- Estimate the extent of illness among inmates for the more common but remediable health problems.
- Identify the threat to the health status of the community from the release of inmates with untreated or undertreated illness.
- Determine the cost-effectiveness of preventing or treating these health problems.
- Identify public health opportunities among soon-to-be-released inmates.
- Develop public policy recommendations for capitalizing on these opportunities.

During these 2-day meetings held in August and September 1997, the expert panels identified the illnesses the project would examine using three criteria developed by the steering committee. The panels selected illnesses that:

- Were prevalent among prison or jail inmates.
- Involved a threat to public health or burden on public health expenditures.
- Could be effectively prevented or treated.

Based on these criteria, the communicable disease panel elected to study seven diseases:

- Syphilis, gonorrhea, and chlamydia.
- Hepatitis B and C.
- HIV/AIDS.
- Tuberculosis.

The chronic medical conditions panel chose to study three conditions:^{2,3}

- Asthma.
- Diabetes.
- Hypertension.

The mental illness panel decided to look at six disorders:

- Schizophrenia and other psychoses.
- Major depression.
- Bipolar disease.
- Dysthymia.
- Post-traumatic stress disorder.
- Anxiety.

At the direction of the steering committee, the panels identified experts to conduct research and prepare papers addressing these conditions (see *The Health Status of Soon-To-Be-Released Inmates*, volume 2).

In 1999, the steering committee reassembled the expert panels to review the draft papers that had been commissioned and the results of a survey of State departments of corrections. The panels developed policy recommendations based on the papers' and survey's conclusions. The steering committee distilled the panels' recommendations and prepared them in their final form (see chapter 7, "Policy Recommendations").

Prison Survey

While some data existed about the prevalence of HIV/AIDS, sexually transmitted diseases (STDs), and tuberculosis (TB) in the prison and jail population, little had been published in 1997 about the prevalence of hepatitis B or C and still less about the prevalence of chronic disease and mental illness among inmates. As a result, the steering committee commissioned a survey of State prison systems to collect information on the prevalence of four chronic medical conditions—asthma, diabetes, hypertension, and heart disease—and mental illness in the inmate population. The survey was also intended to identify the availability of the following information from State departments of corrections:

- Policies and procedures for discharge planning and providing medications to inmates when they are released.
- Databases on the prevalence of chronic disease and mental illness.

Papers Commissioned for the Study on *The Health Status of Soon-To-Be-Released Inmates*

Prevalence studies

The Burden of Infectious Disease Among Inmates and Releasees From Correctional Facilities (Theodore M. Hammett, Patricia Harmon, and William Rhodes)

A Projection Model of the Prevalence of Selected Chronic Diseases in the Inmate Population (Carlton A. Hornung, Robert B. Greifinger, and Soniya Gadre)

Prevalence Estimates of Psychiatric Disorders in Correctional Settings (Bonita M. Veysey and Gisela Bichler-Robertson)

Cost-effectiveness studies

Cost-Effectiveness of Routine Screening for Sexually Transmitted Diseases Among Inmates in United States Prisons and Jails (Julie R. Kraut, Anne C. Haddix, Vilma Carande-Kulis, and Robert B. Greifinger)

Cost-Effectiveness of Preventing Tuberculosis in Prison Populations (overhead slides) (Zachary Taylor and Cristy Nguyen)

Cost-Effectiveness of HIV Counseling and Testing in U.S. Prisons (Beena Varghese and Thomas A. Peterman)

What Is the Value of Immunizing Prison Inmates Against Hepatitis B? (overhead slides) (Robert Lyerla)

Cost-Effectiveness Analysis of Annual Screening and Intensive Treatment for Hypertension and Diabetes Mellitus Among Prisoners in the United States (Donna M. Tomlinson and Clyde B. Schechter)

Providing Psychiatric Services in Correctional Settings (Bonita M. Veysey and Gisela Bichler-Robertson)

Other paper

Communicable Diseases in Inmates: Public Health Opportunities (Jonathan Shuter)

- Information about the health status of inmates recently released into the community.

In December 1997, the National Commission on Correctional Health Care sent a mailback questionnaire (see appendix C), designed by a member of the steering committee,⁴ to corrections officials in each State, the District of Columbia, and the Federal Bureau of Prisons. At least two calls were made to departments that did not return the questionnaire to request their participation in the survey again. Responses were received from 41 of 52 systems.⁵ Four public health experts analyzed and reported on the survey results.⁶

Commissioned Papers

The steering committee commissioned eight papers and two presentations from nationally known experts in the correctional and public health care fields, some of whom were already members of the expert panels. The papers and presentations focused on three areas:

- Estimating the prevalence of the selected diseases in prisons and jails.
- Identifying effective prevention, screening, and treatment programs that could be implemented in prisons and jails to address these diseases.

- Determining whether it would save money or be cost effective to prevent, screen for, or treat these diseases.

“Papers Commissioned for the Study on *The Health Status of Soon-To-Be-Released Inmates*,” lists the papers and presentations that were commissioned. Volume 2 of this report provides the complete set of papers. The papers represent the principal empirical support for the policy recommendations the project developed.

Need for Further Research

The survey of departments of corrections was originally designed as the first phase of a two-stage survey research plan. The information provided by the first phase of the survey was expected to enable the steering committee to identify State prison systems with the most comprehensive data on the health status of their inmate populations and on the health status of inmates whom they had recently released into the community. The second phase of the survey research plan called for selecting a sample of prison facilities in these departments at which selected medical records could be reviewed to collect comprehensive data on the health status of a sample of inmates who had recently been released into the community. The review would have focused on the prevalence of communicable disease, chronic disease, and mental illness, and provisions for continuity of health care.

The planned second phase of the survey was not conducted because the steering committee determined that obtaining a representative national sample of medical records would require a massive study beyond the project’s available time and resources. The steering committee believes, however, that a national program for surveillance and reporting systems for tracking these conditions is of critical importance for quality management and research in correctional health care (see chapter 7, “Policy Recommendations”).

Notes

1. Appendix B provides brief biographies of all those who contributed to the project.
2. The steering committee concluded that it might still be cost effective to address hypertension and diabetes, even though these diseases might be less prevalent among inmate populations than among other adults (e.g., because of inmates’ younger average age). The committee came to this decision for three reasons. First, the inconvenience and cost of being diagnosed or treated are negligible to inmates. Although there may be copayments for some acute and chronic disease services, inmates do not lose income or have to give up leisure time while using health care system resources for screening or treatment of these conditions. Second, followup and adherence to dietary and medical regimens for these conditions can be encouraged in the prison or jail environment to a greater extent than outside. Third, it is cost effective to diagnose and treat these diseases in terms of the many years these inmates will be in the community following release (Tomlinson, D.M., and C.B. Schechter, “Cost-Effectiveness Analysis of Annual Screening and Intensive Treatment for Hypertension and Diabetes Mellitus Among Prisoners in the United States,” paper prepared for the National Commission on Correctional Health Care, Chicago, IL, n.d. (Copy in volume 2 of this report.)
3. The steering committee initially considered examining heart disease among inmates. The committee concluded that, because of the low prevalence of manifest disease, it was more important to concentrate on preventing chronic disease. See the policy recommendations related to chronic disease in the executive summary and chapter 7.
4. B. Jaye Anno.
5. No response was obtained from the Federal Bureau of Prisons or from 10 States that together at the time housed 200,000 inmates. The responses received from 40 States and the District of Columbia

were of limited value. Several of the States provided very few reliable data; either questions were not answered or clearly erroneous answers were provided. Instead of providing the number representing the proportion of the total inmate population with asthma, several systems provided a number representing the ratio of asthma patients to other patients who were currently in the hospital. Other systems reported that fewer than 10 inmates in a prison population of more than 10,000 suffered from asthma. Several considerations may account for missing or incomplete data. The departments of corrections may not have had the data or had it accessible; they may

have lacked confidence in the reliability of their data; or their health care units may not have had data analysts with the expertise to collect, store, analyze, or report the data properly. Some surveys may have not reached correctional staff with access to the requested data.

6. Hornung, C.A., B.J. Anno, R.B. Greifinger, and S. Gadre, "Health Care for Soon-To-Be- Released Inmates: A Survey of State Prison Systems," paper prepared for the National Commission on Correctional Health Care, Chicago, IL, 1998. (Copy in volume 2 of this report.)

Chapter 3. Prevalence of Communicable Disease, Chronic Disease, and Mental Illness Among the Inmate Population

This chapter presents estimates of the prevalence of selected communicable diseases, chronic diseases, and mental illnesses among inmates in the Nation's prisons and jails.¹ When *The Health Status of Soon-To-Be-Released Inmates* project began, there appeared to be several possible methods of collecting prevalence data. The best approach would have been to interview and physically examine a statistically valid sample of inmates across the Nation. This type of survey would have been far beyond the resources available for the project. A second option would have been to abstract medical records for a sample of inmates. In addition to being expensive and complex, this approach would have potentially been invalid: because of significant differences in the information systems among correctional institutions (e.g., prisons, jails, prerelease centers, work camps), it would have been impossible to identify a sample of medical records that would have been representative of all prison inmate records.

A third approach, which was selected for this project, was to estimate the prevalence of selected diseases from limited but valid data sets collected and published periodically by Federal agencies. The project steering committee (see chapter 2, "History of the Project") concluded that this was the best approach given limited resources. The steering committee therefore commissioned established correctional and public health researchers, practitioners, and scholars to examine these existing databases and generate estimates of the prevalence of selected communicable diseases, chronic diseases, and mental illnesses among inmates. The remainder of this chapter summarizes the results of these analyses. For each of the three major disease categories, the prevalence estimates are preceded by a brief summary of the methodology used to arrive at the estimates. The full papers from which the findings and estimation methodologies have been summarized below may be found in volume 2 of this report.

Communicable Disease

The Health Status of Soon-To-Be-Released Inmates project examined the following communicable diseases: human immunodeficiency virus (HIV) infection, acquired immunodeficiency syndrome (AIDS), syphilis, gonorrhea, chlamydia, hepatitis B and C, and tuberculosis (TB) infection and disease. The complete analysis may be found in Theodore M. Hammett, Patricia Harmon, and William Rhodes, "The Burden of Infectious Disease Among Inmates and Releasees From Correctional Facilities," in volume 2 of this report. "Definitions of Communicable Diseases Examined," provides capsule definitions of each of the diseases examined.

Methodology

Estimates of the prevalence of HIV infection and AIDS in State and Federal prisons, and estimates of HIV infection in jails, rely primarily on surveys of correctional systems conducted by the U.S. Department of Justice, Bureau of Justice Statistics.² The methodology for estimating HIV infection in prisons adjusts the prevalence figures reported to the Bureau of Justice Statistics upward, taking into account that for most State correctional systems the figures are based on voluntary testing, which does not identify all HIV-infected inmates. There are no national surveys of AIDS in jails. The national AIDS (AIDS only, not all HIV infection) prevalence estimate of 0.5 percent for prison inmates in 1996 was applied to the total jail population.

The prevalence estimates for syphilis, gonorrhea, chlamydia, and TB rely in part on 1996–97 national surveys of correctional systems conducted by Abt Associates Inc. and sponsored by the Centers for Disease Control and Prevention (CDC) and the U.S. Department of Justice, National Institute of Justice (NIJ). The estimates are also based on other

Definitions of Communicable Diseases Examined

- HIV/AIDS** A virus transmitted through sexual relations and exposure to blood. Acquired immunodeficiency syndrome (AIDS) results when human immunodeficiency virus (HIV) attacks the body's immune system, leaving the individual highly susceptible to a range of infections, cancers, and other illnesses. HIV infection also attacks the central nervous system, causing progressive dementia, and it may lead to a serious wasting syndrome.
- Syphilis** An acute and chronic sexually transmitted disease (STD) characterized initially by an ulcer in the genital area followed within weeks by a secondary eruption of the skin and mucous membranes. Long periods of latency then occur followed by, in one-third of cases, often irreparable damage to the skin, bone, nervous system, and cardiovascular system. Syphilis can be easily tested for and treated. Syphilis, like gonorrhea and chlamydia (see below), enhances the transmission of HIV because of ulcers, bleeding, or inflammatory discharges.
- Gonorrhea** An acute STD with different manifestations in men and women. In men, infection is usually characterized by painful urination and discharge from the penis. In women, infection of the cervix often leads to severe pelvic inflammatory disease (infection of the upper genital tract) followed by infertility, ectopic pregnancy (a fetus developing outside the uterus, which results in fetal and sometimes maternal death), and chronic pelvic pain. Newborns are easily infected; eye infection and death may occur. Initial infection without symptoms is common in men and women. Gonorrhea can be easily tested for and treated.
- Chlamydia** An acute and chronic STD that mimics many of the manifestations of gonorrhea. Because symptoms are milder than with gonorrhea, infection commonly remains undetected. As a result, infection is more widespread in the population, and the damage caused by pelvic inflammatory disease, while more subtle than with gonorrhea, is more common. Newborns are easily infected; eye infection and pneumonia may occur. Chlamydia can be easily tested for and treated.
- Tuberculosis** A communicable disease caused by bacteria. Tuberculosis (TB) manifests itself in pathological alterations of tissue, most commonly of the lung. People with latent TB infection may be totally free of symptoms, and therefore unable to spread the disease for a long time—sometimes for a lifetime. They are, however, at risk of developing active tuberculosis, which is contagious and a progressive disease. TB is the only disease discussed in this report that is transmitted by an airborne route. The vast majority of patients with active TB can be cured with a 6- to 12-month course of medications. Preventive therapy dramatically reduces the risk that latent TB infection will lead to active TB disease.
- Hepatitis** An infection of the liver caused by viruses. Hepatitis B can develop into a chronic disease that is responsible for 5,000 deaths annually in the United States, most from cirrhosis of the liver. Complications of infectious hepatitis account for an estimated 25,000 deaths annually in the United States—1 percent of all deaths in the United States. Hepatitis C is the leading reason for liver transplantation in the United States.* Both hepatitis viruses are acquired through exposure to contaminated blood products, especially during injection drug use. Sexual transmission is another important route for hepatitis B but less so for hepatitis C. A vaccine provides immunity to hepatitis B; there is no vaccine for hepatitis C.

* "Management of Hepatitis C," *NIH Consensus Statement* 15 (3) (March 1997): 24–26.

published and unpublished studies conducted in specific correctional systems.

No agency has identified and tabulated hepatitis B and C virus infections among the Nation's jail or prison populations. The prevalence of hepatitis B was estimated based on a small number of studies conducted in individual corrections systems. Prevalence estimates for hepatitis C were developed indirectly, by multiplying the estimated prevalence of the infection among injection drug users (IDUs) in the United States by the estimated percentage of prison inmates with histories of injection drug use.

Prevalence estimates

The discussion below, summarized in table 3–1, presents the estimated number of inmates and releasees with the selected communicable diseases.

HIV/AIDS. The study estimates that 35,000 to 47,000 inmates in 1997 were infected with HIV. These included 28,000 to 36,300 prison inmates and 6,800 to 10,200 jail inmates. An estimated 98,000 to 145,000 HIV-positive inmates were released from prisons and jails in 1996, including about 11,600 to 15,000 released from Federal and State prisons and about 87,000 to 130,400 released from jails. The estimated rates for these communicable diseases are much higher for releasees than for current inmates largely because of the rapid turnover and short lengths of stay in jails. Among HIV-infected inmates, an estimated 8,900 inmates had AIDS in 1997: 6,000 in State and Federal prison and 2,800 in jails.³ An estimated 39,000 inmates with HIV were released from prisons and jails in 1996, about 2,500 from prisons and 36,000 from jails.

Sexually transmitted diseases: syphilis, gonorrhea, and chlamydia. The total number of inmates or releasees infected with any one STD cannot be determined because an inmate could have more than one infection. It is safe to conclude, however, that in 1997 the Nation's prisons and jails held, or released into the community, at least 200,000 individuals with an STD. There were an estimated 107,000 to 137,000 cases of STDs among inmates and between 465,000 and 595,000 STD cases among releasees in 1997. As shown in table 3–1, most of these inmates and releasees were infected with syphilis.⁴

Hepatitis B and C. More than 36,000 prison and jail inmates in 1997 and 155,000 releasees in 1996—an estimated 2 percent of prison and jail inmates and releasees—had current or chronic hepatitis B infection. At least 303,000–332,000 prison and jail inmates were infected with hepatitis C in 1997. Between 1.3 and 1.4 million inmates released from prison or jail in 1996 were infected with hepatitis C.⁵

Tuberculosis infection and disease. An estimated 131,000 inmates tested positive for latent TB infection in 1997—more than 90,000 prison inmates and more than 41,000 jail inmates. An estimated 566,000 inmates with latent TB infection were released in 1996, including more than 37,000 inmates from prisons and nearly 529,000 inmates from jails. In 1996, an estimated 1,400 inmates had active TB disease, including nearly 500 from prisons and over 950 from jails. About 12,000 persons released from a correctional facility during 1996 had TB disease during that year.⁶

Burden of communicable disease among inmates and releasees

The prevalence rates for these communicable diseases are significantly higher among inmates and releasees than among the total U.S. population (see figure 3–1). During 1996, about 3 percent of the U.S. population spent time in a prison or jail; however, between 12 and 35 percent of the total number of people in the Nation with selected communicable diseases passed through a correctional facility during that year.⁷ Specifically:

- Almost 39,000 prison and jail releasees in 1996 had AIDS. Seventeen percent of the estimated 229,000 persons living with AIDS in the United States in 1996 passed through a correctional facility that year.⁸ The prevalence of AIDS among inmates is five times higher than among the total U.S. population.⁹
- The estimated 98,000 to more than 145,000 prison and jail releasees with HIV infection in 1996 represented 13–19 percent of all HIV-positive individuals in the United States.
- The estimate of 155,000 releasees with current or chronic hepatitis B infection in 1996 indicates that between 12 and 15 percent of all individuals in the Nation with chronic or current hepatitis B

Table 3–1. National Estimates of Selected Infectious Diseases Among Inmates and Releasees and Prevalence in U.S. Population

Disease	Estimated Prevalence Among Inmates, %		Prevalence in U.S. Population, 1996, %	Estimated Number of Inmates w/Condition, 1997	Estimated Number of Releasees w/Condition, 1996	Number in U.S. Population w/Condition, 1996	Releasees With Condition as % of Total in U.S. Population w/Condition, 1996
	Prisons	Jails					
AIDS	0.5 ^a	0.5 ^a	0.09	8,900	39,000	229,000 ^b	17.0
HIV Infection (non-AIDS)	2.3–2.98 ^c	1.2–1.8 ^d	0.3	35,000–47,000	98,000–145,000	750,000 ^e	13.1–19.3
Syphilis Infection	2.6–4.3	2.6–4.3	N/A	46,000–76,000	202,000–332,000	N/A	—
Chlamydia	2.4	2.4	N/A	43,000	186,000	N/A	—
Gonorrhea	1.0	1.0	N/A	18,000	77,000	N/A	—
Hepatitis B Infection	2.0 ^f	2.0	N/A	36,000	155,000	1,000,000–1,250,000 ^g	12.4–15.5
Hepatitis C Infection	17.0–18.6 ^h	17.0–18.6 ^h	1.8	303,000–332,000	1,300,000–1,400,000	4,500,000 ⁱ	28.9–32.0
Tuberculosis Disease	0.04 ^j	0.17 ^k	0.01	1,400	12,000	34,000 ^l	35.0
Tuberculosis Infection	7.4	7.3	N/A	131,000	566,000	N/A	—

^aMore than 5 times the prevalence in the U.S. population (0.09%).

^bCenters for Disease Control and Prevention, *HIV/AIDS Surveillance Report* 9 (2) (1997): 1–43.

^cEight to ten times the prevalence in the U.S. population (0.3%).

^dFour to six times the prevalence in the U.S. population (0.3%).

^eCDC estimate, based on midpoint of 1993 estimate in Rosenberg, P.S., "Scope of the AIDS Epidemic in the United States," *Science* 270 (Nov 24, 1995): 1372–1375.

^fCurrent or chronic.

^gCenters for Disease Control, "Hepatitis B Virus: A Comprehensive Strategy for Eliminating Transmission in the United States Through Universal Childhood Vaccination: Recommendations of the Immunization Practices Advisory Committee (ACIP)," *Morbidity and Mortality Weekly Report* 40 (RR–13) (1991): 1–19.

^hNine to 10 times the prevalence in the U.S. population (1.8%).

ⁱBased on prevalence estimate in McQuillan G.M., M.J. Alter, L.A. Moyer, S.B. Lambert, and H.S. Margolis, "A Population-Based Serologic Survey of Hepatitis C Virus Infection in the U.S." In M. Rizzetto, R.H. Purcell, G.L. Gerin, and G. Verme, eds., *Viral Hepatitis and Liver Disease*, Turin, Italy: Edizioni Minerva Medica, 1997, pp. 267–270.

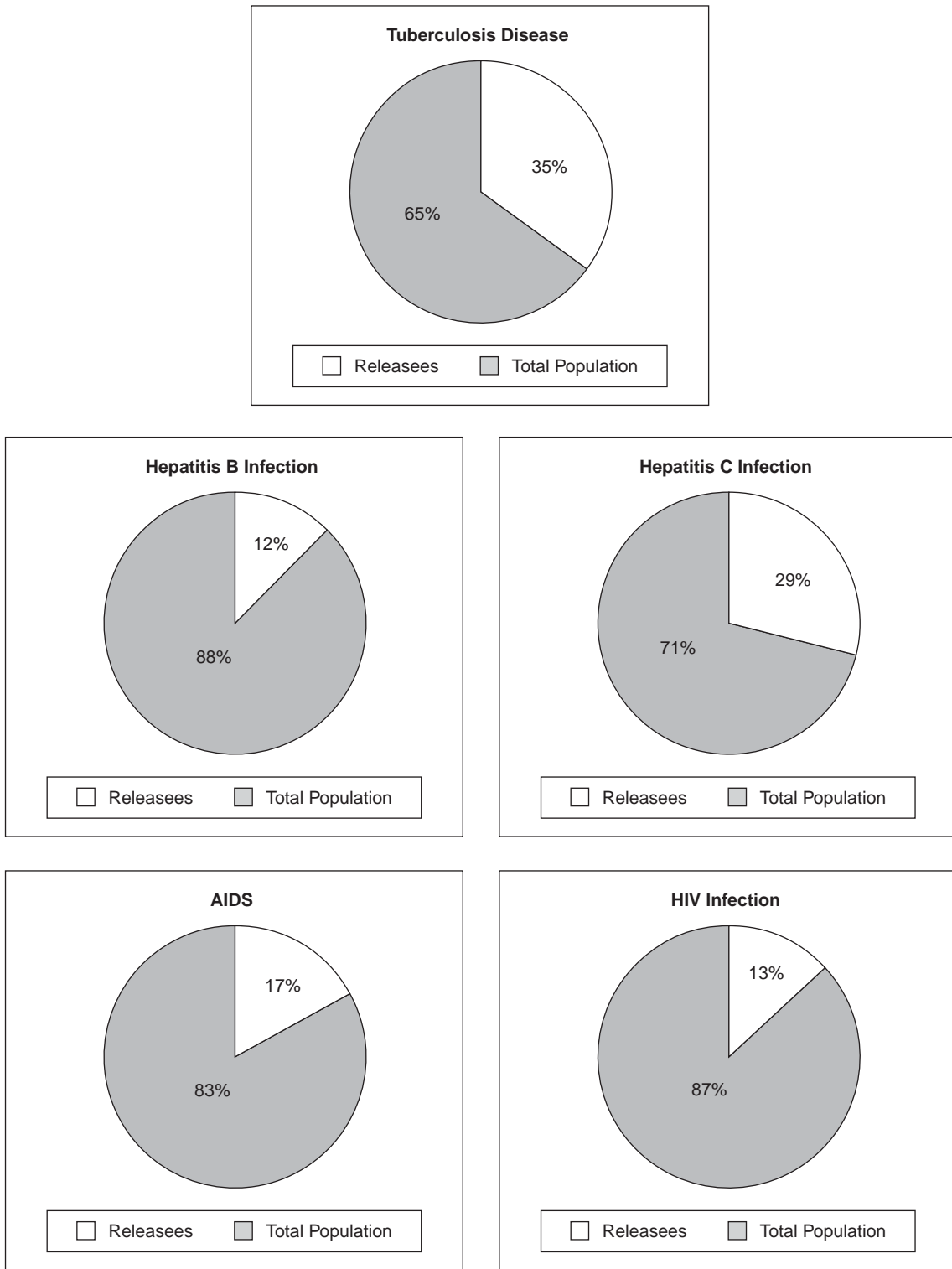
^jFour times the prevalence in the U.S. population (0.01%).

^kSeventeen times the prevalence in the U.S. population (0.01%).

^lEstimated from CDC, TB Registry Reports, 1992–94.

Source: (Unless otherwise noted in the footnotes): Hammett, T.M., P. Harmon, and W. Rhodes, "The Burden of Infectious Disease Among Inmates and Releasees from Correctional Facilities," paper submitted to the National Commission on Correctional Health Care, Chicago, Illinois, May 2000. (Copy in volume 2 of this report.)

Figure 3–1. Releasees With Selected Infectious Diseases as a Proportion of the Total U.S. Population With Each Disease, 1996



Source: Hammett, T.M., P. Harmon, and W. Rhodes, "The Burden of Infectious Disease Among Inmates and Releasees from Correctional Facilities," paper submitted to the National Commission on Correctional Health Care, Chicago, Illinois, May 2000. (Copy in volume 2 of this report.)

infection in 1996 spent time in a correctional facility that year.

- The estimate of 1.3–1.4 million releasees infected with hepatitis C in 1997 suggests that an extremely high 29–32 percent of the estimated 4.5 million people infected with hepatitis C in the United States¹⁰ served time in a correctional facility that year. The 17.0–18.6 percent prevalence range of hepatitis C among inmates—probably an underestimate—is 9–10 times higher than the estimated hepatitis prevalence in the Nation’s population as a whole.¹¹
- An estimated 35 percent (12,200) of all those in the Nation who had TB disease during 1996 served time in a correctional facility during that year. This estimate was calculated by applying a point prevalence rate for inmates (i.e., the percentage of inmates who were treated for TB disease on a given day in 1997) to the total number of releasees during all of 1996. The estimate suggests that about 12,200 people who were released from a correctional facility during 1996 also had TB disease during that year; it does not mean, however, that they all had TB disease at the time of their release from prison or jail. Most of them probably did not have TB disease at the time of their release because, if properly treated, TB disease typically

lasts only a short time. Nevertheless, the estimate indicates the congruence between populations likely to be incarcerated and those likely to have TB. The prevalence of TB disease among inmates is between 4 and 17 times greater than among the total U.S. population.

Chronic Disease

The project examined three chronic diseases: asthma, diabetes, and hypertension (see “Definitions of the Chronic Conditions Examined” for brief descriptions of these diseases).¹² The complete analysis may be found in Carlton A. Hornung, Robert B. Greifinger, and Soniya Gadre, “A Projection Model of the Prevalence of Selected Chronic Diseases in the Inmate Population,” in volume 2 of this report.

Inmates with chronic disease create serious demands on the correctional health care system. When released, these inmates can burden the health care system in the general community through increased demand for acute care and costly hospitalization. The inmate whose diabetes is poorly managed while incarcerated is more likely to use costly health care services, such as dialysis for kidney failure, limb amputation, or emergency room visits for glucose (sugar) control when released into the community. Untreated hypertension, the most common chronic illness among

Definitions of the Chronic Conditions Examined

Asthma	A chronic inflammatory disease of the airways that can make breathing difficult. Asthma, one of the most common chronic diseases in the United States, is increasing nationally. Five thousand individuals die each year in the United States because of asthma, and 470,000 are hospitalized. The effects of asthma are largely preventable with improved patient education and medical management.
Diabetes	A chronic disease involving insulin metabolism, causing, among other problems, excessive sugar in the blood. Diabetes can lead to blindness, kidney failure, heart disease, and disease of the blood vessels. Controlling blood sugar levels can prevent acute and long-term consequences of diabetes. Diabetes is the most common cause of blindness in people under age 60 in the United States.
Hypertension	A chronic disease expressed by elevated blood pressure. Untreated, it leads to significant heart disease and ultimately organ failure and death. Fifty million adult Americans have hypertension. A large proportion are unaware of it. Seventy percent of adult Americans with hypertension are not controlling their blood pressure. Blood pressure control is associated with a substantial reduction in heart disease and stroke.

adults (and inmates), can eventually require expensive health care services because it is a major risk factor for coronary heart disease, kidney failure, stroke, and blood vessel disease.

Methodology

There are no direct data sources on the prevalence of chronic disease among inmates. As a result, the prevalence of the three target diseases was estimated using data from the 1988–94 *National Health and Nutrition Examination Survey III (NHANES–III)* sponsored by the U.S. Departments of Health and Human Services and Agriculture.¹³ The survey estimates the number and percentage of persons in the Nation who have selected diseases or are at risk for developing these diseases. Because inmates are more likely to be economically disadvantaged than the average citizen, inmate prevalence rates for asthma, diabetes, and hypertension were estimated from the *NHANES–III* figures for the lowest one-fourth of the Nation in socioeconomic status. These estimates were further adjusted for age, gender, and race differences between the 1995 inmate population and the *NHANES–III* respondents.

Prevalence estimates

Table 3–2 and figure 3–2 summarize the prevalence of the three chronic diseases among inmates in 1995. As shown, the overall prevalence of asthma among Federal, State, and local inmates is estimated to be 8.5 percent, or 140,738 cases nationwide. The

prevalence of diabetes (defined as a blood glucose level of 126 mg/dL or higher) is estimated to be 4.8 percent. The prevalence rate for hypertension among inmates (defined as more than 140 mmHg systolic or more than 90 mmHg diastolic) is projected to be more than 18 percent, representing a total of 283,105 inmates.

Burden of chronic disease among inmates

The prevalence estimates for asthma, diabetes, and hypertension among inmates presented in this chapter suggest that large numbers of people with these conditions are in correctional populations (see table 3–2). Prevalence rates for asthma are higher among inmates than among the total U.S. population (8.5 percent versus 7.8 percent), in part because of the low socioeconomic status and disproportionately minority composition of inmate populations, segments of the overall population in which asthma and other chronic diseases are more commonly found.¹⁴

The estimated prevalence rates for diabetes and hypertension are lower for inmates than for the total U.S. population (4.8 percent versus 7.0 percent for diabetes, more than 18 percent versus more than 24 percent for hypertension). These inmate prevalence rates are still high, however, considering that inmates are a relatively young population (despite the aging of the prison population) and that these two diseases are much likelier to afflict older individuals, who are relatively underrepresented among inmates.

Table 3–2. National Estimates of Prevalence of Three Chronic Diseases Among Inmates in Prisons and Jails and in the Total U.S. Population, 1995

Condition	Estimated Prevalence ^a Among Inmates (%)	Estimated Number of Inmates	Prevalence in Total U.S. Population ^b (%)
Asthma	8.5	140,738	7.8
Diabetes ^c	4.8	79,873	7.0
Hypertension	18.3	283,105	24.5

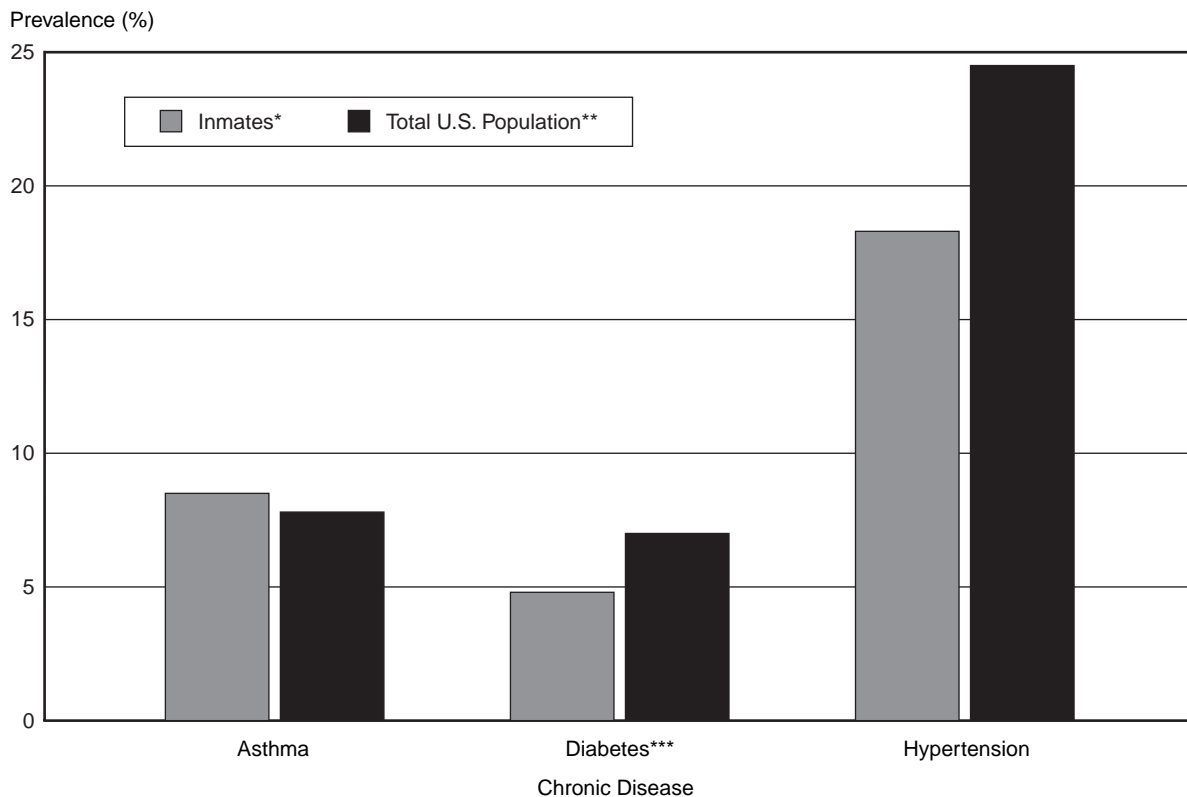
^aBased on lowest socioeconomic status.

^bBased on baseline U.S. population.

^cUsing new definition of fasting serum glucose of >126 mg/dL.

Source: Hornung, C.A., R.B. Greifinger, and S. Gadre, "A Projection Model of the Prevalence of Selected Chronic Diseases in the Inmate Population," paper submitted to the National Commission on Correctional Health Care, Chicago, Illinois, n.d. (Copy in volume 2 of this report).

Figure 3–2. National Estimates of Prevalence of Three Chronic Diseases Among Inmates in Prisons and Jails and in the Total U.S. Population, 1995



* Based on lowest socioeconomic status.

** Based on baseline U.S. population.

*** Using new definition of fasting serum glucose of >126 mg/dL.

Source: Hornung C.A., R.B. Greifinger, and S. Gadre, "A Projection Model of the Prevalence of Selected Chronic Diseases in the Inmate Population," paper submitted to the National Commission on Correctional Health Care, Chicago, Illinois, n.d. (Copy in volume 2 of this report.)

Mental Illness

The extent of mental illness among inmates has been difficult to estimate. Because of rapid inmate turnover, identifying the number of different inmates with a mental illness in jails at any time is especially difficult. Epidemiological studies of jail populations, therefore, should be made on admission (i.e., bookings).¹⁵ Prisons present fewer problems in gathering data and estimating the need for services because they have more stable populations. Most estimates of mental illness in prisons, as in jails, are based on inmates who have used mental health services.¹⁶

Methodology

The Health Status of Soon-To-Be-Released Inmates project used the United States National Comorbidity Survey to generate estimated prevalence rates for

various psychiatric diagnoses among the incarcerated population. Conducted in the early 1990s, this landmark investigation, mandated by Congress, is the first survey to administer a structured psychiatric interview to a nationally representative sample (8,098 persons aged 15–54) using trained interviewers and focused on a community sample (i.e., non-institutionalized individuals).¹⁷

The project examined six different diagnoses from the National Comorbidity Survey data: nonaffective psychosis, major depression, bipolar mania, dysthymia, post-traumatic stress disorder, and anxiety.¹⁸ The complete analysis of these conditions may be found in Bonita M. Veysey and Gisela Bichler-Robertson, "Prevalence Estimates of Psychiatric Disorders in Correctional Settings," in volume 2 of

Definitions of the Six Mental Illness Diagnoses Examined

Schizophrenia/Other Psychotic Disorders	Disorders of the thought process. Psychotic disorders typically include hallucinations or delusions, and may include disorganized speech and grossly disorganized behavior lasting more than 6 months.
Major Depression	A disorder of mood. The essential feature of major depressive disorder is one or more periods of at least 2 weeks during which there is either depressed mood or loss of interest or pleasure in nearly all activities. Individuals must also experience at least four additional symptoms from a list that includes changes in appetite or weight, changes in sleep, decreased energy, feelings of worthlessness or guilt, and difficulty thinking, concentrating, or making decisions. Up to 15 percent of individuals with the condition commit suicide, but all patients with major depression are at some risk of suicide.
Bipolar Disorder	A major disorder of mood. The essential feature of this mood disorder is one or more manic episodes—distinct periods of at least 1 week during which there is an abnormally and persistently elevated, expansive, or irritable mood that may include inflated self-esteem, distractibility, or increased involvement in goal-directed activities. Bipolar disorder may also involve periods of time lasting at least 1 week in which the individual experiences rapidly alternating moods (e.g., sadness, irritability, euphoria). Ten to 15 percent of people with bipolar disorder commit suicide.
Dysthymic Disorder	A chronically depressed mood that lasts for most of the day on most days for at least 2 years. Other symptoms may include poor appetite or overeating, insomnia or excessive sleep, low energy or fatigue, low self-esteem, and feelings of hopelessness. Usually dysthymic disorder is characterized by chronic, less severe depressive symptoms that have been present for many years, while major depressive disorder (see above) consists of one or more discrete major depressive episodes that can be distinguished from the person's usual functioning.
Post-Traumatic Stress Disorder	A major disorder of feeling. The essential feature of this disorder is the development of characteristic symptoms following exposure to direct personal experience (as a participant, witness, or someone who learns about the experience) with an event that involves a threat to the person's or someone else's physical integrity, such as sexual or physical abuse. The person's response to the event involves intense fear, helplessness, or horror. Characteristic symptoms include persistent reexperiencing of the event.
Anxiety Disorders	A group of disorders that includes panic disorder, agoraphobia (anxiety about being in places or situations from which escape might be difficult or help might not be available), obsessive-compulsive disorder, generalized anxiety disorder, and other conditions. General anxiety disorder is characterized by at least 6 months of persistent and excessive anxiety and worry.

Adapted from American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders*, 4th ed. (DSM-IV), Washington, D.C.: American Psychiatric Press, 1994.

this report. “Definitions of the Six Mental Illness Diagnoses Examined” describes each illness briefly.

Three adjustments were made to the National Comorbidity Survey data to arrive at the closest possible approximation of the number of inmates with each of these illnesses.

1. Prevalence estimates were first calculated for all inmates. Inmates, however, are disproportionately from the lowest socioeconomic stratum of society, and poverty and mental illness appear to be correlated. Therefore, a subsample of respondents with a reported income below the poverty line was used to provide a second estimate of prevalence rates for State prison and jail inmates.
2. Because the vast majority of inmates abuse alcohol or other drugs, the analysis generated a third set of estimated prevalence rates for a subsample of State and jail inmates who were substance abusers as well as poor.
3. All the resulting estimated rates for each mental illness were then weighted according to the 1995 age, race, and gender distributions of inmates in prisons and jails.

Most major mental illnesses have periods of quiet and other periods of activity. The rates at any point in time—for example, during a short jail stay—are lower than lifetime prevalence rates. To reflect this consideration, the calculations based on the National Comorbidity Study used 6-month prevalence rates for jail inmates and lifetime prevalence rates for prison inmates.

Prevalence Estimates

As shown in table 3–3 and figures 3–3, 3–4, and 3–5, separate prevalence estimates for mental illness were developed for inmates in jails, State prisons, and Federal prisons.

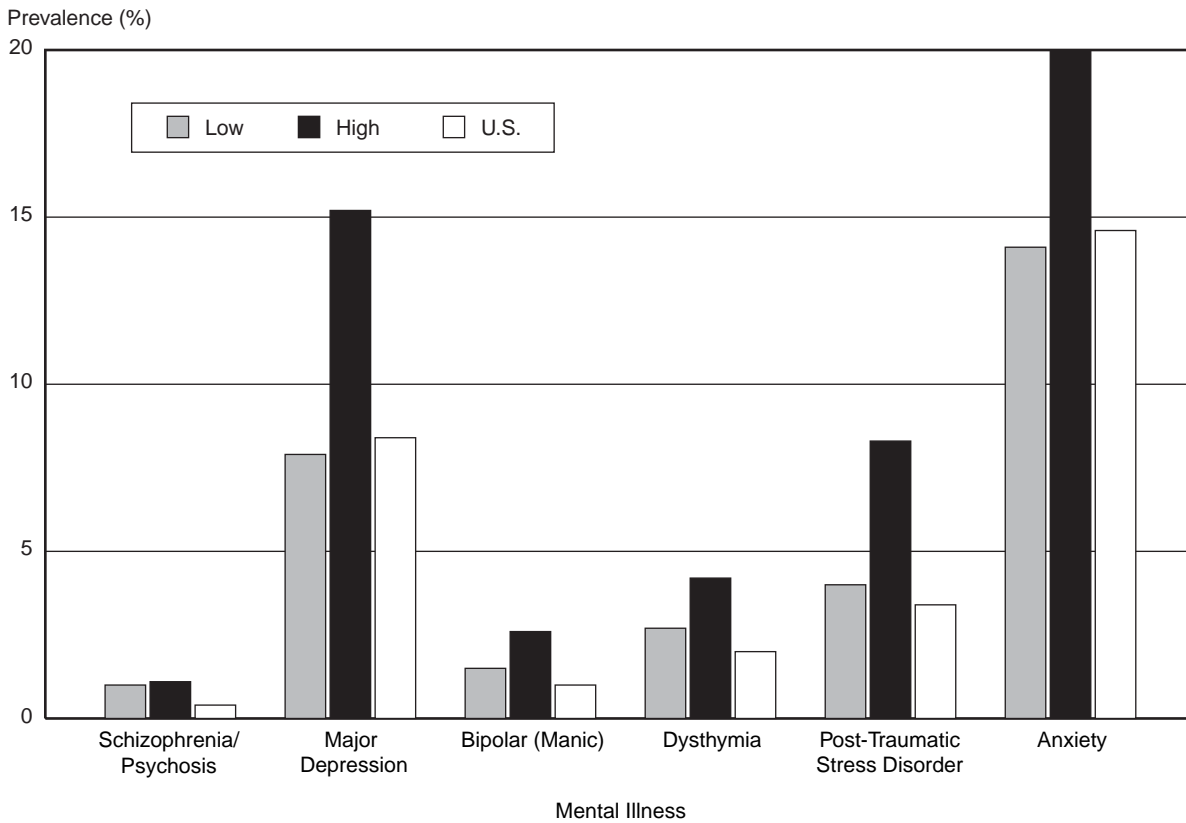
- **Jails.** On any given day, an estimated 1.0–1.1 percent of offenders booked into U.S. jails have schizophrenia or another psychotic disorder, 7.9–15.2 percent have major depression, and 1.5–2.6 percent have bipolar disorder (manic episode). Between 2.7 and 4.2 percent of jail inmates are estimated to have dysthymia, and between 14.1 and 20.0 percent have some type of anxiety disorder,¹⁸ not including another 4.0–8.3 percent with post-traumatic stress disorder.

Table 3–3. National Estimates of Six Psychiatric Disorders Among Prison and Jail Inmates and Prevalence in U.S. Population, 1995

Disease	Jail (6-month estimated prevalence) (n = 500,483 inmates)		Total U.S. Population (6-month prevalence)	State Prison (estimated lifetime prevalence) (n = 1,010,228 inmates)		Federal Prison (estimated lifetime prevalence) (n = 91,506 inmates)		Total U.S. Population (lifetime prevalence)
	n	%		n	%	n	%	
Schizophrenia/ Psychosis	4,955–5,589	1.0–1.1	0.4	22,994–39,262	2.3–3.9	763–2,326	0.8–2.5	0.8
Major Depression	39,690–76,229	7.9–15.2	8.4	132,619–188,259	13.1–18.6	12,378–14,363	13.5–15.7	18.1
Bipolar (Manic)	7,755–12,920	1.5–2.6	1.0	21,468–43,708	2.1–4.3	1,393–2,475	1.5–2.7	1.5
Dysthymia	13,644–21,040	2.7–4.2	2.0	85,018–135,121	8.4–13.4	6,253–10,652	6.8–11.6	7.1
Post-Traumatic Stress Disorder	19,770–41,509	4.0–8.3	3.4	62,388–118,071	6.2–11.7	4,466–6,257	4.9–6.8	7.2
Anxiety	70,613–100,098	14.1–20.0	14.6	222,147–303,936	22.0–30.1	16,638–21,079	18.2–23.0	N/A

Source: Veysey, B.M., and G. Bichler-Robertson, “Prevalence Estimates of Psychiatric Disorders in Correctional Settings,” paper submitted to the National Commission on Correctional Health Care, Chicago, Illinois, October 1999. (Copy in volume 2 of this report.)

Figure 3–3. Jails: Estimated Prevalence of Six Mental Illnesses Among Inmates in 1995 Compared With Prevalence Rates for the Total U.S. Population in the Early 1990s*



* "The National Comorbidity Survey," Kessler, R.C., *International Review of Psychiatry* 6 (1994): 365–376.

Source: Veysey, B.M., and G. Bichler-Robertson, "Prevalence Estimates of Psychiatric Disorders in Correctional Settings," paper submitted to the National Commission on Correctional Health Care, Chicago, Illinois, May 1999. (Copy in volume 2 of this report.)

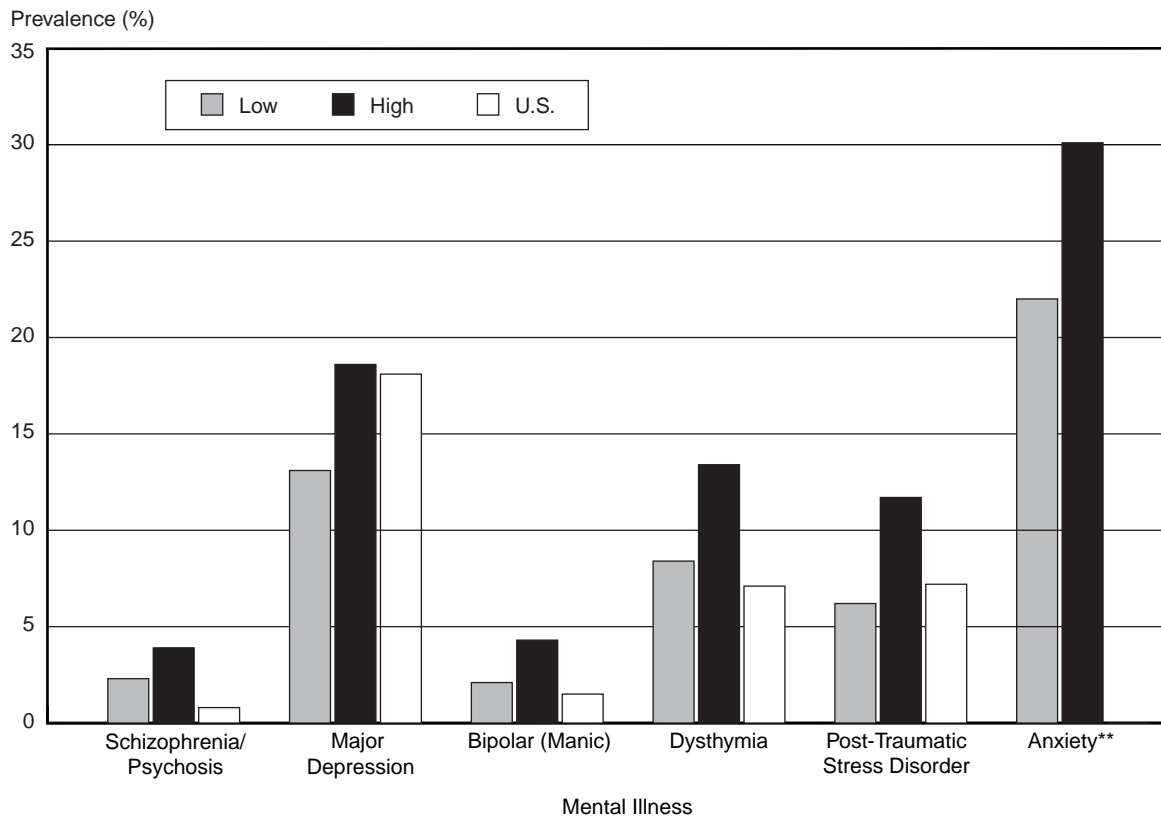
- State prisons.** On any given day, between 2.3 and 3.9 percent of inmates in State prisons are estimated to have schizophrenia or other psychotic disorder, between 13.1 and 18.6 percent major depression, and between 2.1 and 4.3 percent bipolar disorder (manic episode). A substantial percentage of inmates exhibit symptoms of other disorders as well, including between 8.4 and 13.4 percent with dysthymia, between 22.0 and 30.1 percent with an anxiety disorder, and between 6.2 and 11.7 percent with post-traumatic stress disorder.
- Federal prisons.** Federal inmates are estimated to have lower rates of mental illness than State prison inmates across all diagnostic categories. Between 0.8 and 2.5 percent are estimated to have schizophrenia or other psychotic disorder,

between 13.5 and 15.7 percent major depression, and between 1.5 and 2.7 percent bipolar disorder. Between 6.8 and 11.6 percent are predicted to have dysthymia, and between 18.2 and 23.0 percent have an anxiety disorder, not including another 4.9 to 6.8 percent with post-traumatic stress disorder.

Burden of mental illness among inmates

It would be inaccurate simply to add the number of inmates with each of the six mental illnesses to come up with the total number and percentage of mentally ill inmates because inmates may suffer from more than one of these conditions at the same time. As shown in table 3–3 and figures 3–3, 3–4, and 3–5, however, *prevalence rates of many mental*

Figure 3–4. State Prisons: Estimated Prevalence of Six Mental Illnesses Among Inmates in 1995 Compared With Lifetime Prevalence Rates for the Total U.S. Population in the Early 1990s*



* "The National Comorbidity Survey," Kessler, R.C., *International Review of Psychiatry* 6 (1994): 365–376.

** No data for total U.S. population.

Source: Veysey, B.M., and G. Bichler-Robertson, "Prevalence Estimates of Psychiatric Disorders in Correctional Settings," paper submitted to the National Commission on Correctional Health Care, Chicago, Illinois, May 1999. (Copy in volume 2 of this report.)

illnesses among inmates are higher than the rates for these conditions among the U.S. population as a whole.

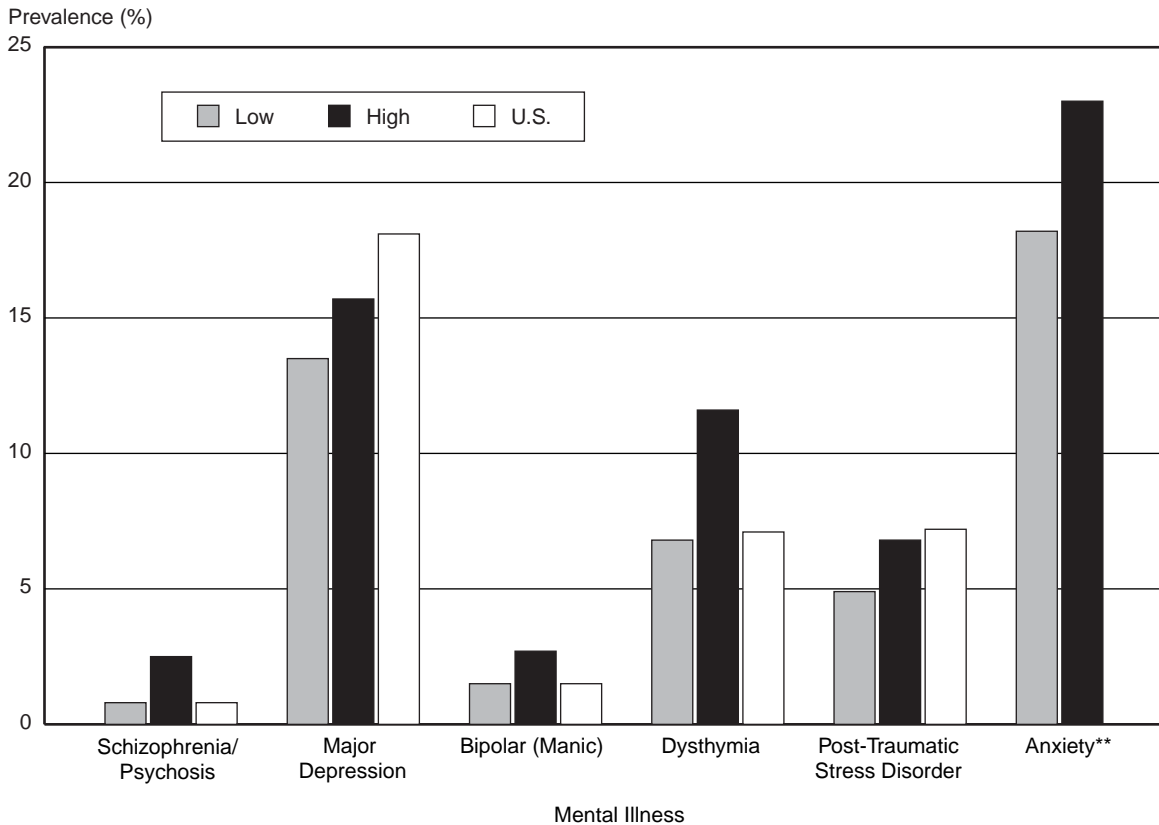
This chapter has demonstrated that inmates suffer from higher rates of communicable disease, chronic disease, and several mental illnesses than the U.S. population as a whole. This large concentration of infected and mentally ill persons in prisons and jails provides a unique opportunity to provide needed treatment and prevention services and to help protect the larger public health. The natural question to ask, given these findings, is: To what extent are prisons and jails seizing this opportunity? The following chapter discusses the extent of current prevention, screening, and treatment efforts in the Nation's correctional systems.

Notes

1. Jails are locally operated correctional facilities that confine persons before or after adjudication. Inmates sentenced to jail usually have a sentence of a year or less, but jails also incarcerate persons in a wide variety of other categories.

2. Some inmates—especially jail inmates—are incarcerated more than once in a year. In order not to count these individuals more than once, the methodology divides the number of inmates by a factor of 1.38 to arrive at the number of *different* people who are incarcerated during a year. For an explanation of the use of this correction factor, see pages 3–4 of Hammett, T.M., P. Harmon, and W. Rhodes, "The Burden of Infectious Disease Among

Figure 3–5. Federal Prisons: Estimated Prevalence of Six Mental Illnesses Among Inmates in 1995 Compared With Lifetime Prevalence Rates for the Total U.S. Population in the Early 1990s*



* "The National Comorbidity Survey," Kessler, R.C., *International Review of Psychiatry* 6 (1994): 365–376.

** No data for total U.S. population.

Source: Veysey, B.M., and G. Bichler-Robertson, "Prevalence Estimates of Psychiatric Disorders in Correctional Settings," paper submitted to the National Commission on Correctional Health Care, Chicago, Illinois, May 1999. (Copy in volume 2 of this report.)

Inmates and Releasees From Correctional Facilities," in volume 2 of this report.

3. Findings in a recent paper indicate that 9,370 cases of AIDS among inmates were reported to the Centers for Disease Control and Prevention for January 1, 1994 through December 31, 1996. Dean-Gaitor, H.D., and P.L. Fleming, "Epidemiology of AIDS in Incarcerated Persons in the United States, 1994–1996," *AIDS* 13 (1999): 2429–2435.

4. Several qualifications to the syphilis estimates should be noted. They are based on limited data, some of which represent crude RDR test positivity rates that may include false positives and do not reflect disease stage or infectiousness. Moreover, the incidence of syphilis has dropped

substantially since 1996–97, the years for which these estimates were made. Because syphilis is concentrated in the South, a range of prevalence estimates excluding and including Southern jurisdictions were calculated. The details of the methodology are described in the background paper in volume 2 by Hammett, Harmon, and Rhodes, "The Burden of Infectious Disease Among Inmates and Releasees From Correctional Facilities."

5. The U.S. Department of Justice, Bureau of Justice Statistics, is preparing a report on the prevalence of hepatitis among correctional populations for release in 2002, based on data from the 2001 census of State and Federal correctional facilities.

6. This figure was derived by applying the prevalence of TB disease among inmates in prisons (0.04%) and jails (0.17%) to the estimated number of releasees from prisons and jails. The denominator (34,000) is an estimate of the total number of persons with TB in the U.S. during 1996. The Centers for Disease Control and Prevention's TB Registry Reports, which reported the number of cases in a given year, were discontinued in 1994. The only report for subsequent years is CDC's TB surveillance report, which reports incident (new) cases each year. The analysis calculated an average ratio of incident cases to prevalent cases for the last 3 years in which the Registry Reports were available (1992–94) and applied this ratio (0.627) to the number of incident cases for 1996 (21,337) to obtain the estimate of 34,000 prevalent cases in 1996.
7. These figures are supported and explained in more detail in Hammett, Harmon, and Rhodes, "The Burden of Infectious Disease Among Inmates and Releasees From Correctional Facilities," in volume 2 of this report.
8. Centers for Disease Control and Prevention, *HIV/AIDS Surveillance Report, 1997*, Atlanta, GA: U.S. Department of Health and Human Services, 1997.
9. A more recent study concluded that the 1996 AIDS rate for incarcerated persons was at least six times the national rate. See Dean-Gaitor and Fleming, "Epidemiology of AIDS" (see note 3).
10. McQuillan, G.M., M.J. Alter, L.A. Moyer, S.B. Lambert, and H.S. Margolis, "A Population-Based Serologic Survey of Hepatitis C Virus Infection in the U.S.," in M. Rizzetto, R.H. Purcell, G.L. Gerin, and G. Verme (eds.), *Viral Hepatitis and Liver Disease*, Turin, Italy: Edizioni Minerva Medica, 1997: 267–270.
11. Based on the prevalence estimate in McQuillan et al., "A Population Based Serologic Survey" (see note 10). The 17.0–18.6 percent estimate is probably very low, given that studies conducted in individual prison systems have found prevalence rates of 30–40 percent. Hammett, Harmon, and Rhodes, "The Burden of Infectious Disease Among Inmates and Releasees" (see note 2).
12. A fourth chronic disease, heart disease, was excluded from the report. Because the prevalence of heart disease increases with age, rates of diagnosable heart disease among inmates are low.
13. *National Center for Health Statistics, National Health and Nutrition Examination Survey III [NHANES-III]*, Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, and the U.S. Department of Agriculture, 1997.
14. Ibid.
15. One study that interviewed admissions (conducted in the Cook County [Chicago], Illinois, jail) found acute symptoms of serious mental illnesses requiring treatment in about 6 percent of males and 15 percent of females at booking. See Teplin, L.A., "Psychiatric and Substance Abuse Disorders Among Male Urban Jail Detainees," *American Journal of Public Health* 84 (1994): 290–293; and Teplin, L.A., E.M. Abram, and G.M. McClelland, "Prevalence of Psychiatric Disorders Among Incarcerated Women," *Archives of General Psychiatry* 53 (1996): 505–512.
16. Ditton, P.M., *Mental Health and Treatment of Inmates and Probationers*, Special Report, Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics, July 1999, NCJ 174463, found that about 16 percent of prison and jail inmates, or an estimated 283,800 inmates, reported either a mental or emotional condition or an overnight stay in a mental hospital or program in 1998.
17. Kessler, R.C., "The National Comorbidity Survey," *International Review of Psychiatry* 6 (1994): 365–376.
18. The National Comorbidity Study included information about antisocial personality, a character disorder involving a pervasive pattern of disregard for, and violation of, the rights of others that begins in childhood or early adolescence and continues into adulthood. Although antisocial personality disorder is a management problem for correctional health care professionals and security staff, it was excluded from this analysis because there is no effective medical intervention for the condition. "In general, adult antisocial behavior provokes therapeutic pessimism. That is, therapists have little hope of changing a pattern of behavior that has been present almost continuously throughout the patient's life. Psychotherapy has not been effective, and there have been no major breakthroughs with biological treatments, including the use of medications." Kaplan, H.I., B.J. Sadock, and J.A. Grebb, *Kaplan and Sadock's Synopsis of Psychiatry: Behavioral Sciences, Clinical Psychiatry*, 7th ed., Baltimore, MD: Williams & Wilkins, 1994: 799.
19. Dysthymia and anxiety range from completely disabling (e.g., agoraphobia) to not even mildly incapacitating (e.g., generalized anxiety disorder). Depending on the severity of their condition, many individuals with dysthymia and anxiety do not require medical treatment.

Chapter 4. Improving Correctional Health Care: A Unique Opportunity to Protect Public Health

This chapter reviews the extent to which prisons and jails provide prevention, screening, and treatment programs for communicable disease, chronic disease, and mental illness. The chapter then examines whether current correctional prevention and treatment efforts for selected communicable diseases and for mental illness meet accepted national standards for correctional health care. The findings suggest that there is a tremendous opportunity—as yet, largely unexploited—to protect public health by improving current correctional prevention, screening, and treatment programs.

Current State of Correctional Prevention, Screening, and Treatment Programs

Chapter 3, “Prevalence of Communicable Disease, Chronic Disease, and Mental Illness Among the Inmate Population,” documented that communicable disease, chronic disease, and mental illness are prevalent in prisons and jails. Many specific conditions are more prevalent among inmates than among the general population. The discussion below suggests that many correctional agencies are not doing enough to address most of these medical conditions.

Communicable disease

Data suggest that many prisons and jails are not adequately addressing three communicable diseases—human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS), syphilis, and tuberculosis (TB).¹

HIV/AIDS. Although rudimentary HIV education programs are becoming more widespread in correctional facilities, few prison or jail systems have implemented comprehensive HIV-prevention programs in all of their facilities.² Most correctional systems provide HIV antibody testing only when

inmates ask to be tested or have signs and symptoms of HIV disease. Testing is not aggressively “marketed” in most correctional systems. Some correctional systems, however, are beginning to implement an integrated continuum of care for inmates with HIV and AIDS.

Syphilis. Very few correctional systems routinely screen inmates for syphilis. Despite the availability of fairly inexpensive diagnostic and treatment modalities for syphilis, a national survey conducted by the Centers for Disease Control and Prevention (CDC) found that fewer than one-half of all jails (46–47 percent) offer routine laboratory testing for the disease as a matter of policy. Even jails that report aggressive screening policies actually screen fewer than one-half of inmates (48 percent). As a result, on average fewer than one-quarter of jail inmates undergo laboratory testing for syphilis while incarcerated. In jails that offer testing only to patients with suggestive symptoms or signs, only 2–7 percent of inmates are tested. Continuity of care for inmates released with syphilis and other sexually transmitted diseases (STDs) is also inadequate.

Tuberculosis. Although more prisons and jails screen for TB than for STDs, too few conduct TB screening. According to a 1997 survey conducted for the National Institute of Justice (NIJ) and CDC, more than 90 percent of State and Federal prisons, and about one-half of jails, routinely screen at intake for TB. In part, however, because of short inmate stays in jail, TB skin test results—which require 48–72 hours before they indicate infection—may not be read.³ Ninety-eight percent of State and Federal prison systems and 85 percent of jails report that they isolate inmates with suspected or confirmed TB disease in negative pressure rooms. Some facilities, however, do not test the rooms to ensure that they are working properly, or they use the rooms even when they are known to be out of order.

Directly observed therapy for latent TB infection (watching patients swallow each dose of medication) is the reported policy for all patients in 91 percent of State and Federal prisons and in 85 percent of jails. Correctional systems may have appropriate policies in place related to TB, but implementation of those policies may be inadequate.⁴

Chronic disease

As part of *The Health Status of Soon-To-Be-Released Inmates* project, a survey was conducted examining prevention, screening, and treatment services for chronic disease offered by State departments of corrections (see chapter 2, “History of the Project”).⁵

Treatment protocols for chronic diseases in corrections systems. As shown in table 4–1, only 24 to 26 of the 41 States responding report they have systemwide treatment protocols for diabetes, hypertension, and asthma. Departments of corrections with systemwide protocols tended to be those with the largest average daily population and the largest number of annual releasees. Eighty-four percent of inmates and 78 percent of annual releasees covered by the 41 departments of corrections that responded to the survey were in correctional systems that report they have protocols for the treatment of asthma. Seventy-three percent of inmates and annual releasees from systems that responded to the survey are from systems with protocols for the treatment of diabetes. Seventy-seven percent of inmates and

annual releasees from systems that responded to the survey were from systems with protocols for treating hypertension. These figures may be over-estimates, however; a content analysis found that most of the clinical “guidelines” addressing chronic disease that correctional systems submitted were incomplete or out of date, making them useless for screening or treating inmates or for measuring quality of care. In addition, although the policies and procedures in place may be acceptable, actual services may be inadequate.

Status of discharge planning programs for chronic diseases. Discharge planning is designed to facilitate an inmate’s transition into the community. In the case of health care, discharge planning means that, at a minimum, arrangements are made for inmates to have a contact from whom they can get needed services for any medical or mental condition they may have when they are released into the community. Sixteen of the 41 responding States, housing 61 percent of the total inmate population in the responding States, had policies and procedures for discharge planning for inmates with chronic diseases. Once again, however, the policies and procedures may not be followed, especially in jails; as a result, services may be inadequate.

Twenty-nine of the 41 responding States, accounting for 84 percent of total annual releasees in these States, indicated that inmates with chronic diseases

Table 4–1. States Reporting Systemwide Treatment Protocols for Chronic Disease* (n = 41)

Chronic Disease	Average Daily Population			Total Annual Releasees		
	n	%**	Mean	n	%***	Mean
Asthma (n = 26)	692,295	84.2	26,627	338,695	78.4	13,706
Diabetes (n = 24)	606,878	73.8	25,287	316,686	73.3	13,195
Hypertension (n = 25)	660,520	80.3	26,421	336,320	77.8	13,453

*As discussed in the text, the clinical guidelines from a large proportion of corrections systems that reported that their protocols were incomplete or out of date.

**Percentage of all inmates housed in the prison systems covered by the protocols.

***Percentage of all releasees housed in the prison systems covered by the protocols.

Source: Hornung, C.A., B.J. Anno, R.B. Greifinger, and S. Gadre, “Health Care for Soon-To-Be-Released Inmates: A Survey of State Prison Systems,” paper prepared for the National Commission on Correctional Health Care, Chicago, Illinois, 1998. (Copy in volume 2 of this report.)

were given a supply of medication when they were released. Even when a discharge policy provides for a supply of medication upon release, the policy may not be followed because of logistical barriers.⁶ Security staff responsible for preparing an inmate's discharge may not inform health care staff that the inmate is leaving, so the inmate does not receive medication.

Mental illness

Surveys have documented that jails and prisons provide inadequate services to inmates with mental illness.

Jails. A study of mental health services in U.S. jails having rated capacities for 50 or more detainees found that few jails provide a comprehensive range of services.⁷ Approximately 83 percent of all U.S. jails provide intake screening, but only 60 percent provide full mental health evaluations. Forty-two percent provide psychiatric medications. In response to emergencies, 43 percent of jails provide crisis intervention services and 72 percent offer access to inpatient hospitalization. Although 73 percent of jails report they have suicide prevention programs, the content of the programs is not known.⁸ Release planning may be the most important service a jail can provide to reduce the probability of mentally ill releasees returning to jail. Only 21 percent of jails, however, provide case management or discharge planning.⁹

Prisons. Among State adult prisons, 83 percent provide screening and assessment for mental illness, 80 percent provide medication and medication monitoring, 87 percent offer some form of counseling or verbal therapy, and 77 percent have access to inpatient care. Only 36 percent of prisons have specialized housing for individuals with stable mental health conditions.¹⁰

Corrections' Mixed Record of Compliance With National Guidelines

The information above suggests that many prisons and jails fail at least in part to conform to nationally accepted health care guidelines. Illustrations of this mixed record follow.

Communicable disease

A significant minority of prisons and jails do not adhere to CDC standards with regard to screening for and treating TB.¹¹

- About one-fourth of corrections systems do not follow CDC recommendations regarding universal TB screening. About 10 percent of State and Federal prisons and about one-half of jails do not have mandatory TB screening for inmates at intake and annually thereafter. CDC acknowledges that screening may be infeasible in short-term facilities because most inmates are released before the skin test can be read.
- Nearly all (98 percent) of State and Federal prison systems and 85 percent of jail systems have a policy to isolate inmates with suspected or confirmed TB disease in negative pressure rooms. However, 16 percent of State and Federal prison systems and 74 percent of jails report they do not conform to the CDC guideline that respiratory isolation be maintained until patients have tested negative for TB on three consecutive sputum smears.
- Ten percent of State and Federal prison systems and 15 percent of jails do not have policies for directly observed therapy for treatment of latent TB infection. (Only 2 percent of prisons and 5 percent of jails do not have policies for directly observed therapy for TB disease.)

Chronic disease

A significant number of prisons and jails do not appear to adhere to national standards for screening for and treating chronic disease.

As discussed above, the survey of State departments of corrections conducted as part of *The Health Status of Soon-To-Be-Released Inmates* project found that many departments report that they lack systemwide protocols for screening for and treating diabetes, hypertension, and asthma. Analysis of the existing protocols found that most do not meet American Diabetes Association and National Institutes of Health standards for treating these diseases.¹² Correctional health care experts who have visited many prisons

conclude that, although it is relatively easy to provide services that meet national standards, it is rarely done in the absence of any or appropriate treatment protocols.

Mental illness

Most prisons and jails do not conform to nationally accepted health care guidelines for mental health screening and treatment.

Screening. The American Psychiatric Association,¹³ the American Public Health Association,¹⁴ and the National Commission on Correctional Health Care¹⁵ have established principles for the delivery of mental health care services in prisons. All of these organizations' standards emphasize that mental health screening and evaluation should be provided by qualified personnel for all inmates as part of the admission process to jail or prison.

The American Psychiatric Association describes the following procedures for identifying inmates requiring mental health treatment:

- Screening newly arriving inmates at the correctional facility immediately following admission.
- Comprehensive evaluation in response to referrals from a screening examination or from other staff, or in response to a self-referral.¹⁶

As noted in the previous section, 17 percent of jails and prisons do not screen for mental illness at intake, and 40 percent of jails and 17 percent of prisons do not provide mental health evaluations.

Treatment. Professional standards also call for comprehensive mental health treatment. According to the American Psychiatric Association,¹⁷ the essential components of a comprehensive mental health care system include:

- An acute care program.
- A crisis intervention program with infirmary beds for short-term treatment and 24-hour availability of a psychiatrist for clinical evaluations and emergency medications.
- A chronic care program or special needs unit within the correctional setting that can house 30–50 inmates with chronic mental illness who

do not require inpatient treatment, but cannot function adequately in the general population housing.

- Outpatient treatment services.
- Consultation services.
- Transfer and discharge planning.

The fundamental policy goal of the American Psychiatric Association guidelines is to provide the same level of mental health care to patients in the criminal justice system as is available in the average community.¹⁸ As noted above, a significant proportion of correctional systems do not provide all the called-for services. In particular, few jails provide comprehensive services. The mental health treatment available to inmates in jails is often limited by inmates' short stays and the small size of most facilities. The Center for Mental Health Services argues that it is impractical for jails to provide therapy and that—

only four services should reasonably fall within the purview of the jail. . . . Realistically, [jail inmates] . . . should be assessed, provided with emergency treatment, and linked to the [community] mental health care system. Thus, the essential jail services are intake screening, evaluation, crisis intervention, and discharge/transfer planning.¹⁹

As noted above, few jails provide the “essential” service of discharge planning.

Implications: A Significant Opportunity to Intervene

The previous chapter documented the high prevalence rates—disproportionately high, in some cases—of communicable diseases, chronic diseases, and mental illnesses among inmates. This chapter establishes that many prisons and jails are doing too little to address these conditions. Failure to prevent or treat these conditions is likely to have significant adverse effects on society.

- Released inmates who are not treated for communicable diseases may transmit these diseases to members of the general community.

- Many inmates who are released with untreated communicable or chronic diseases, or with mental illness, are likely to become a much greater financial burden on their local health care system or, if indigent or elderly, a much greater burden on State and national health care insurance systems (Medicaid, Medicare) than if they had been treated while still incarcerated and in an earlier stage of their disease.

By providing comprehensive prevention, screening, and treatment services in prisons and jails, communities can take advantage of a tremendous opportunity to improve public health by reducing the problems associated with untreated inmates returning to the community. The following chapter documents that preventing, screening, and treating communicable disease, chronic disease, and mental illness in prisons and jails would be cost effective. The benefits of prevention and treatment would outweigh the expense.

Notes

1. Hammett, T.M., P. Harmon, and L.M. Maruschak *1996–1997 Update: HIV/AIDS, STDs, and TB in Correctional Facilities*, Issues and Practices, Washington, DC: U.S. Department of Justice, National Institute of Justice, July 1999, NCJ 176344.
2. A comprehensive HIV-prevention program provides HIV counseling and testing, instructor-led education, peer-based programs, and multisession HIV-prevention counseling in each correctional facility.
3. Valway, S.E., R.B. Greifinger, M. Papania, J.O. Kilburn, C. Woodley, G.T. DiFerdinando, and S.W. Dooley, “Multidrug Resistant Tuberculosis in the New York State Prison System, 1990–1991,” *Journal of Infectious Disease* 170 (1994): 151–156.
4. Ibid.
5. Hornung, C.A., B.J. Anno, R.B. Greifinger, and S. Gadre, “Health Care for Soon-To-Be-Released Inmates: A Survey of State Prison Systems,” paper prepared for the National Commission on Correctional Health Care, Chicago, IL, 1998. (Copy in volume 2 of this report.)
6. This was the consensus of *The Health Status of Soon-To-Be-Released Inmates* project expert panels. (See chapter 2, “History of the Project,” for a discussion of the composition and role of the panels.)
7. Steadman, H.J., and B.M. Veysey, *Providing Services for Jail Inmates With Mental Disorders*, Research in Brief, Washington, DC: U.S. Department of Justice, National Institute of Justice, 1997, NCJ 162207.
8. NCCHC Jail Standard on Suicide Prevention (J–51) requires jails to have a program for identifying and responding to suicidal individuals. Program components include identification, training, assessment, monitoring, housing, referral, communication, intervention, notification, reporting, review, and critical incident debriefing. National Commission on Correctional Health Care, *Standards for Health Services in Jails*, Chicago, IL: Author, 1996.
9. Steadman and Veysey, *Providing Services* (see note 7).
10. Manderscheid, R.W., and M.A. Sonnenschein (eds.), *Mental Health, United States, 1998*, Rockville, MD: United States Department of Health and Human Services, 1999.
11. Hammett, Harmon, and Maruschak, *1996–1997 Update* (see note 1). The CDC guidelines at the time this report was written may be found in “Prevention and Control of Tuberculosis in Correctional Facilities: Recommendations of the Advisory Council for the Elimination of Tuberculosis,” *Morbidity and Mortality Weekly Report* 45 (RR–8) (June 7, 1996): 1–27.
12. American Diabetes Association, “Standards for Medical Care for Patients With Diabetes Mellitus,” *Clinical Practice Recommendations 2000, Diabetes Care* 23 (supp. 1) (2000): 1–23; American Diabetes Association, “Management of Diabetes in Correctional Institutions,” *Clinical Practice Recommendations 2000, Diabetes Care* 21 (supp. 1) (2000): 1–3; National Institutes of Health, National Asthma Education and Prevention Program, *Expert Panel Report 2: Guidelines for the Diagnosis and Management of Asthma*, Bethesda, MD: National Heart, Blood, and Lung Institute, February 1997; National Institutes of Health, *Sixth Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure*, Bethesda, MD: National Heart, Lung, and Blood Institute, November 1997.
13. American Psychiatric Association, *Task Force Report No. 29: Psychiatric Services in Jails and Prisons*, Washington, DC: Author, 1989.
14. American Public Health Association, *Standards for Health Services in Correctional Institutions*. Washington, DC: Author, 1976.

15. National Commission on Correctional Health Care, *Correctional Mental Health Care: Standards and Guidelines for Delivering Services*, Chicago, IL: Author, 1999.

16. Screening is a form of assessment that seeks to identify risks for various diseases, conditions, or behaviors in ways that are quick, inexpensive, and relatively accurate. Essentially, a screen is a form of probability estimate. Diagnostic assessments (or evaluations) need to be thorough and definitive. An example of the distinction between screening and assessment taken from the detection of breast cancer would be the difference between a mammogram and a biopsy.

17. In 1982 the American Psychiatric Association (APA) created a Task Force on Psychiatric Services in Correctional Facilities, and in 1983 APA became officially represented on the board of directors of the National Commission on Correctional Health Care (NCCHC). Henry Weinstein, a board member of both organizations, chaired APA's most recent revision of its guidelines, *Psychiatric Services in Jails and Prisons* (1998), and NCCHC's comprehensive

Correctional Mental Health Care: Standards and Guidelines for Delivering Services (1999). Jails also have a constitutional obligation to provide minimum care. Custodial facilities have both the duty to protect and the duty to treat serious medical and psychiatric conditions. See Cohen, F., and J. Dvoskin, "Inmates With Mental Disorders: A Guide to Law and Practice," *Mental and Physical Disability Law Reporter* 16 (3-4) (1992): 39-46, 462-470; and Metzner, J.L., "An Introduction to Correctional Psychiatry: Part III," *Journal of the American Academy of Psychiatry and the Law* 26 (1) (1998): 107-115.

18. American Psychiatric Association, *Psychiatric Services in Jail and Prisons*. (see note 13).

19. Goldstrom, I., M. Henderson, A. Male, and R.W. Manderscheid, "Jail Mental Health Services: A National Survey," in R.W. Manderscheid and M.J. Henderson (eds.), *Mental Health, United States, 1998*, Rockville, MD: U.S. Department of Health and Human Services, Center for Mental Health Services, 1999, p. 182.

Chapter 5. Cost-Effectiveness of Prevention, Screening, and Treatment of Disease Among Inmates

This chapter assesses whether it would be cost effective for correctional systems to implement interventions for preventing, screening for, and treating selected communicable and chronic diseases. The chapter concludes that a number of interventions would be cost effective and, in several cases, save money. Although clinical guidelines are available for certain mental illnesses, such as major affective disorder (depression and bipolar disorder) and schizophrenia,¹ insufficient data are available to analyze the cost implications of following these guidelines for corrections.²

Cost-Effectiveness of Prevention, Screening, and Treatment

The project considered whether it would be cost effective or a cost saving to prevent, screen for, and treat selected diseases. (See “The Differences Between Cost Effective and a Cost Saving”.) For each disease, the discussion below (1) summarizes the results of the cost-effectiveness and cost-saving analysis, (2) describes briefly the analytic methodology used, and (3) reviews the findings. “Summary of Cost-Effectiveness and Cost-Savings Estimates”

provides an overview of the project’s conclusions regarding the cost-effectiveness and the cost saving of the interventions.

Communicable Disease

The discussion below examines whether it would be cost effective and a cost saving to screen for and treat three sexually transmitted diseases (STDs) (syphilis, gonorrhea, and chlamydia), tuberculosis (TB), and human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS). The analysis frequently makes the case for cost-effectiveness or a cost saving, assuming that a minimum level of infection is present among the inmates in a correctional system. Whether and to what extent an intervention for a specific disease is cost effective or a cost saving depends on each correctional system’s prevalence infection rate for the disease. The higher the rate, the greater the intervention’s cost-effectiveness and cost savings will be.

Syphilis, gonorrhea, and chlamydia

Summary. It would be cost effective to screen routinely for syphilis, gonorrhea, and chlamydia in

The Differences Between Cost Effective and a Cost Saving

A cost-saving intervention saves more money in averted medical costs than is needed to implement the intervention. A program does not have to save costs to be a worthwhile investment. If the reduction in adverse health consequences is judged to be worth the cost of the program, the program is still cost effective. A cost-effective intervention means that the benefits the intervention will achieve are worth the costs even if the intervention costs more than the money that is saved as a result of averted illness or death. Clearly, any intervention that is cost saving is also cost effective, but not all cost-effective interventions save money.*

*A cost-effectiveness analysis compares the cost of incremental interventions with the financial value of the effect or intended outcome. The outcome may be expressed in terms of dollars expended per case (or complication avoided), as it is for sexually transmitted diseases in this report. Cost-effectiveness ratios can be calculated for the incremental prices (as in dollars per year or dollars per quality-adjusted year of life expectancy [QALY]). In this report, ratios of this type are used to evaluate chronic disease interventions. See M.R. Gold, J.E. Siegel, L.B. Russell, and M.C. Weinstein, *Cost-Effectiveness in Health and Medicine*, New York, New York: Oxford University Press, 1996; and A.C. Haddix, S.M. Teutsch, P.A. Shaffer, and D.O. Dunet, *Prevention Effectiveness: A Guide to Decision Analysis and Economic Evaluation*, New York, New York: Oxford University Press, 1996.

prisons and jails. It would be a cost saving to screen routinely for syphilis in prisons and jails. The methodology and findings presented below are based on the paper “Cost-Effectiveness of Routine Screening for Sexually Transmitted Disease in Inmates of U.S. Correctional Facilities,” by Julie R. Kraut, Anne Haddix, Vilma Carande-Kulis, and Robert B. Greifinger, in volume 2 of this report.

Methodology. The method of estimating the cost-effectiveness of preventing and treating these three STDs considers the number of new individuals whom inmates leaving prison or jail with these diseases are likely to infect and the averted costs of treating these new cases. To make this calculation, the analysis makes assumptions regarding the prevalence of infection among inmates. The analysis for syphilis makes the following additional assumptions:

- The average number of people an infected person further infects in a susceptible population.

- The probability of transmitting the disease from an infected person to someone else.
- The length of time during which the person with the disease remains infectious.
- The average number of new people with whom the infected person will have sexual contact over a given period of time.

Findings. The findings are largely similar for the three sexually transmitted diseases but at different levels of prevalence.

- *Syphilis.* Routine syphilis screening on intake to prisons or jails would be a cost saving (and therefore cost effective) if at least 1 percent of inmates were infected. In a hypothetical cohort of 10,000 inmates, screening would identify and make it possible to treat 234 individuals before they could transmit the disease to others. By interrupting

Summary of Cost-Effectiveness and Cost-Savings Estimates					
Condition	Intervention	Cost Effective	Where	Cost Saving	Where
Syphilis	universal screening	yes, if >1%	prisons and jails	yes, if >1%	prisons and jails
Gonorrhea	universal screening	yes	prisons and jails	no (men), yes, if prevalence is >8% (women)	prisons and jails*
Chlamydia	universal screening	yes	prisons and jails	no (men), yes, if prevalence is >9% (women)	prisons and jails*
HIV Infection	counseling and testing	yes	prisons	yes	prisons
Tuberculosis Infection	universal screening	yes	prisons	yes, if >3% of HIV-infected inmates have TB infection	prisons
Hypertension	universal screening	yes	prisons and jails	no	N/A
Diabetes	universal screening	yes	prisons and jails	no	N/A

*For jail inmates, to be a cost saving, at least 85 percent of diagnosed women would need to be treated.

transmission of the disease, this would prevent at least 186 new cases of syphilis in sexual partners of inmates. The public health benefits would probably be even greater, as the analysis could not estimate the total number of cases detected resulting from interrupting transmission in the community. Routine screening for syphilis would also prevent 10 new cases of HIV infection because the risk of HIV transmission is increased in persons with both HIV and syphilis infection. Routine screening for syphilis would save almost \$1.6 million in future treatment costs for every 10,000 inmates screened, excluding any savings associated with HIV prevention.

- *Gonorrhea.* Routine screening for gonorrhea for men in prisons and jails would be cost effective but not a cost saving. Because women face more and costlier complications related to the disease, the concern is that undiagnosed men may transmit the disease to women. Screening men would prevent a substantial number of undiagnosed cases of gonorrhea, decreasing transmission rates. For a hypothetical cohort of 10,000 male prison inmates, at least 6 percent of whom were infected, routine screening would prevent 296 cases of untreated or undiagnosed gonorrhea. It would cost only \$267 to prevent a case of undiagnosed gonorrhea, an acceptable cost-effectiveness ratio. This probably underestimates the cost-effectiveness of screening because some averted HIV treatment costs were excluded from the analysis.

As with men, routine screening for gonorrhea for women in prisons and jails would be cost effective because it would prevent many cases of gonorrhea and avert the development of complications associated with the disease. Routine screening may also be considered cost effective because it would cost the health care system only \$585 to \$3,638, depending on the setting, to avert a single case of pelvic inflammatory disease (PID).³ Routine screening for women would be a cost saving in prisons if at least 8 percent of female inmates had gonorrhea. To be a cost saving for a cohort of the same size in a jail, the prevalence of gonorrhea would also have to be at least 8 percent, and at least 85 percent of diagnosed women would have to be available to be treated.

- *Chlamydia.* Routine screening at intake for chlamydia for men in prisons and jails would be cost effective. Screening would detect a substantial number of undiagnosed cases and decrease transmission from men to women. It would cost only \$198 in prisons and about \$1,100 in jails to prevent one case of chlamydia, an acceptable cost-effectiveness ratio. Screening would not be a cost saving for men in prisons and jails.

Routine screening of female inmates for chlamydia in prisons and jails would be cost effective. Screening would substantially reduce the number of PID cases and untreated or undiagnosed cases of chlamydia in prisons. It would cost only \$198 to prevent each case of PID in prisons, and the cost per case of PID averted would be about \$2,450. These are acceptable cost-effectiveness ratios. The results probably underestimate the cost-effectiveness of screening because, as with gonorrhea, some averted treatment costs were excluded from the analysis. Screening for chlamydia would be a cost saving for female prison inmates only if at least 9 percent of women were infected. To be a cost saving for a cohort of the same size in a jail, the prevalence of chlamydia would also have to be at least 9 percent, and at least 85 percent of diagnosed women would have to be treated.

HIV

Summary. HIV counseling and testing in prisons would be cost effective and a cost saving. The methodology and findings presented below are based on the paper, “Cost-Effectiveness of HIV Counseling and Testing in U.S. Prisons,” by Beena Varghese, in volume 2 of this report.

Methodology. This analysis examined the cost-effectiveness of HIV counseling and testing (not treatment) of prison inmates in preventing future HIV infection. The analysis included all societal costs and benefits of a prevention program, including personnel and laboratory costs for counseling and testing, and averted lifetime treatment costs of HIV (excluding the costs and benefits of identifying and treating HIV-infected inmates).⁴

Findings. As an HIV-prevention program, voluntary counseling and testing in prisons would be cost

effective and a cost saving. Offering counseling and testing to 10,000 prison inmates would prevent three future cases of HIV if 60 percent of the inmates agreed to be counseled and tested. Preventing these future cases would save \$410,000—almost \$137,000 per future case of HIV prevented.⁵ For correctional systems with HIV prevalence rates as low as 1.5 percent, offering counseling and testing to 10,000 inmates would cost the prison system about \$117,000, or approximately \$39,000 per case of HIV prevented. As the prevalence of HIV, transmission rate, and effectiveness of counseling increased, counseling and testing would become more cost effective. The cost drops to \$28,000 per case of HIV prevented when HIV prevalence among inmates increases to 3 percent or more—the current percentage in most State prisons in the Northeast and some in the South.⁶

Tuberculosis

Summary. Screening all prison inmates for TB at intake would be cost effective and, in certain circumstances, cost saving. The methodology and findings presented below are based on the presentation, “The Cost-Effectiveness of Preventing Tuberculosis in Prison Populations,” by Zachary Taylor and Cristy Nguyen, in volume 2 of this report.

Methodology. This analysis takes into consideration a range of prevalence estimates for latent TB infection, screening costs, the health effects of latent TB infection and active TB disease, the effectiveness of screening for prison inmates, and the effectiveness of preventive therapy (90 percent in HIV-negative patients, 73 percent in HIV-positive patients).

Findings. Screening for latent TB infection in prisons would be cost effective. For every 100,000 prison inmates tested and with treatment of those who are found to have latent TB infection,⁷ 989 cases of active TB would be prevented each year. With a high-risk group, such as HIV-infected inmates, the number of TB cases prevented would increase according to the rate of HIV infection. The estimate of 989 cases that would be prevented per 100,000 screened inmates assumes that 2.3 percent of inmates are HIV positive—the percentage infected in the Nation’s prisons and jails as a whole. The number of TB cases prevented would increase to 1,336 cases for prisons with HIV infection rates of

5 percent and to 1,704 cases prevented for prisons with an HIV infection rate of 7.85 percent.

Screening for latent TB infection in prisons would be cost saving if the prevalence were more than 3 percent *among HIV-infected inmates*. The 989 cases of active TB that would be prevented per 100,000 screened inmates, assuming that 2.3 percent of inmates are HIV positive, would save \$7,174,509, or \$7,254 per case prevented.

This cost-effectiveness analysis is limited to prisons. Because the short stays and rapid turnover of jail inmates present serious challenges to screening for latent TB infection, jails are not included. In the jail setting, the highest priority should be placed on screening incoming inmates for active TB disease so that any contagious individuals are properly isolated.

Chronic Disease

Summary. Universal screening and treatment in prisons and jails for hypertension and diabetes would be cost effective but not cost saving. The methodology and findings presented below are based on “Cost-Effectiveness Analysis of Annual Screening and Intensive Treatment for Hypertension and Diabetes Mellitus Among Prisoners in the United States,” by Donna M. Tomlinson and Clyde B. Schechter, in volume 2 of this report.

Methodology.⁸ A simulation was constructed that projected the 20-year economic and health consequences of initiating annual screening and intensive treatment for hypertension and diabetes. The occurrence of complications in a cohort of released inmates was then predicted using the results of three epidemiological studies of heart disease and diabetes.⁹ The average per-inmate annual cost of screening and confirmatory tests for both diseases was estimated at about \$15. Assuming that the least expensive generic brands of drugs were used, and assuming five physician checkups per year, the annual per-inmate cost of treating inmates with hypertension would be approximately \$388.¹⁰ The average increased costs associated with aggressive diabetic treatment were estimated to be \$1,983 per year per diabetic. The analysis factored in the number of years of less-than-ideal quality of life that infected inmates would avoid if treated aggressively.

Findings. Universal screening for hypertension and diabetes would be cost effective because of the added years that inmates with these diseases could expect to live and the reduced number of medical complications they could be expected to experience. Over 20 years of followup, in the absence of screening and treatment, the 1,599,409 individuals incarcerated in 1998 could be expected to live 7,616,668 years in prison and another 22,567,690 years outside prison. With aggressive screening and treatment, and assuming 100 percent compliance, they could be expected to live another estimated 386,108 years, 3,768 years in prison and 382,340 years (more than 99 percent of the total) outside prison. The cost to achieve this improved survival would be \$131.71 per inmate per year, about 5 percent of current average correctional health care budgets.

There would be large public benefits to this investment. In addition to increased survival, investment in screening and treatment would result in reductions of:

- 31,697 years of blindness (94.1 percent outside prison).
- 61,021 episodes of coronary heart disease (91.7 percent outside prison).
- 31,555 years of congestive heart failure (89.25 percent outside prison).
- 44,400 strokes (more than 90 percent outside prison).
- 15,395 years of terminal kidney disease (94.6 percent outside prison).

Moving Beyond Cost-Effectiveness

The discussion above demonstrates that it would be cost effective and, in some cases, save money for prisons and jails to introduce or expand prevention, screening, and treatment interventions targeting communicable and chronic disease. There are issues to consider beyond that of cost-effectiveness—in particular, identifying specific interventions that have been shown scientifically to prevent and reduce these diseases among inmates. Only those interventions that are known to work will be cost effective. The discussion below examines scientifically tested interventions that correctional agencies can introduce to target selected diseases and chronic

diseases. These interventions would address three public health goals:

- Decrease the likelihood of infection being transmitted from an infected person to an uninfected person.
- Reduce the time period during which the infected person can transmit the disease to others.
- Reduce the number of contacts the infected person has with uninfected persons.

Scientifically tested interventions addressing communicable disease

A complete discussion of most of the scientifically tested interventions that prisons and jails can implement to reduce the prevalence of communicable disease among inmates may be found in the paper, “Communicable Diseases in Inmates: Public Health Opportunities,” by Jonathan Shuter, in volume 2 of this report. See “Summary of Scientifically Tested Interventions Correctional Agencies Can Implement to Reduce Communicable Disease” for a list of these interventions.

Sexually transmitted diseases. Syphilis, gonorrhea, and chlamydia are highly prevalent in correctional populations. Correctional agencies can introduce a variety of proven approaches to preventing, screening for, or treating these diseases.

Reducing the likelihood of transmission per contact. In addition to screening and treating current infection, the ideal approach to reducing the likelihood of transmission of all three STDs would include multiple culturally appropriate educational sessions led by peer counselors who would teach the dangers of unsafe sexual practices, the importance and proper use of barrier protection, and techniques to encourage safer sexual practices. These approaches have demonstrated effectiveness.¹¹

Reducing the duration of infectiousness. Reducing the length of time during which an inmate is infectious depends on timely screening and prompt treatment. The following screening and treatment methods would reduce the period of infectiousness:

- *Syphilis.* Rapid screening and treatment can be done at little cost in jails and prisons.¹² Rapid screening techniques reduce the time lag from

Summary of Scientifically Tested Interventions Correctional Agencies Can Implement to Reduce Communicable Disease

Sexually transmitted diseases

- Offer educational interventions regarding the dangers of sexual contact with multiple partners.
- Offer peer-led educational sessions addressing safer sexual practices.
- Provide rapid screening and treatment of syphilis.
- Screen for and treat gonorrhea and chlamydia in correctional systems with high rates of these infections.

HIV/AIDS

- Aggressively market confidential counseling and testing so that all inmates with risk factors accept these interventions.
- Provide educational programs to help inmates reduce their risk of acquiring or transmitting HIV infection.
- Offer treatment to all inmates with HIV disease who qualify under current guidelines.

Tuberculosis

- Ventilate high-population areas adequately.
- Train correctional staff to be alert for inmates with TB symptoms.
- Screen all new admissions for latent TB infection and treat as appropriate; test current inmates and all staff annually.
- Provide access to negative pressure isolation rooms.
- Provide prompt and effective treatment under direct observation.
- Provide for followup in the community when release precedes completion of treatment.
- Identify all contacts of inmates newly discovered to be infected.
- Coordinate all TB control activities with local or State departments of health.

Hepatitis B and C

- Routinely vaccinate all inmates, or susceptible inmates, against hepatitis B.
- Consider screening before vaccinating in systems with high rates of hepatitis B.
- Offer educational sessions to encourage steps to avoid acquiring or transmitting hepatitis B and C.

testing to start of treatment, increasing the likelihood that the infected patient will be treated before being released. All new admissions to jails and prisons should be tested, and infected inmates should be treated on the same day.

- *Gonorrhea.* Every correctional system should screen new admissions for gonorrhea infection. New screening methods for gonorrhea are very accurate and less uncomfortable than traditional methods. A urine screening test (Ligase Chain Reaction) already in wide use is much less invasive and less uncomfortable for the patient, and requires less staff time, than traditional culture methods. Inmates diagnosed with gonorrhea should receive medication that can be taken in a single dose. Staff can observe inmates taking single doses, increasing the certainty of treatment and reducing the chance that drug resistance may develop from partial treatment.
- *Chlamydia.* Every correctional system should screen new admissions for chlamydia infection. Urine screening is a viable alternative to the traditional culture method, which requires an uncomfortable vaginal examination for women. Inmates testing positive for chlamydia infection should receive a single dose of azithromycin, even though other medications that require multiple administrations cost less. The single-dose treatment is more reliable and therefore more effective. Correctional systems in which more than 20 percent of the entire inmate population—or 20 percent of identifiable subgroups of inmates—have chlamydia infection might consider immediate treatment for every inmate in the risk group without waiting for laboratory confirmation.

Reducing the number of new contacts. Educational interventions that heighten awareness of the dangers of having sexual contact with numerous partners—a form of “harm-reduction strategy”—appear to be effective with inner-city patients with STDs.¹³ Culturally appropriate messages delivered by respected personalities or peers are most likely to be effective.¹⁴ Patients diagnosed with any STD should be referred for immediate HIV testing.

HIV/AIDS. Three interventions hold promise for preventing HIV and AIDS among inmates: testing, education, and treatment.

HIV testing. Correctional systems should incorporate easy, convenient, and voluntary HIV testing into the intake procedure for all inmates who are not already known to be HIV infected. Because new medications have reduced mortality in recent years, correctional systems should encourage all incoming inmates with HIV risk factors who have not knowingly tested positive for HIV to receive counseling and testing. Alternatively, routine testing of incoming inmates with risk factors might be considered. The United States military is already using testing programs of this magnitude efficiently and affordably at a cost of approximately \$2.50 per test.¹⁵ Because pretest counseling sessions and drawing blood require many staff, larger correctional systems should consider innovative approaches to enhance efficiency, such as showing videotaped pretest counseling sessions (instead of using live counselors) and using fingerstick blood or oral fluid samples for testing purposes. Correctional systems should maintain logs of inmates who choose not to be tested at intake and recontact these individuals periodically during their incarceration. Results of HIV tests should be confidential and available in a timely fashion. Correctional systems should coordinate with local health departments to ensure that test results are communicated to inmates who have been released from prison or jail before testing is complete or before the test results are known. Inmates must be informed of their test results in a method that assures confidentiality. A few departments of corrections have systems of anonymous testing in which, for example, inmates are given a toll-free telephone number and a password to obtain their test results.

Harm-reduction training. All correctional systems should offer educational programs aimed at helping inmates reduce their risk of acquiring or transmitting HIV, including discussions of condom usage and safer injection practices. Correctional institutions might consider inviting respected members of the community to talk with groups of inmates at highest risk of acquiring HIV infection or transmitting it to others, such as inmates with active STDs, sex workers, and active injection drug users.

Treatment of HIV disease. Prisons and jails should offer comprehensive therapy to inmates with HIV infection, including standard diagnostic testing and antiretroviral medications as appropriate to each

patient. HIV treatment regimens require that medications be taken on a strict schedule. Therefore, many correctional systems distribute a full day's medication each morning in "day packs" to improve the inmate's ability to take his or her medications at the proper times. Systems might consider increasing the flexibility in their medication or meal distribution schedules to accommodate these and other requirements of treating HIV-infected inmates. Some regimens require that medications be taken on an empty stomach or after a full meal, or that patients have free access to fluids. Inmates in all systems housing HIV-infected individuals should have access to consultation with an infectious-disease or HIV specialist.

Tuberculosis. In considering interventions for tuberculosis, it is important to keep in mind the distinction between latent TB infection and active TB disease explained in chapter 4: Active TB is a contagious and progressive disease, but individuals with latent TB infection are free of symptoms and therefore cannot spread the disease. Individuals with latent TB infection, however, have a 10 percent chance of developing active TB disease in their lifetimes. Among HIV-infected persons, the risk goes up to 10 percent per year. Nevertheless, correctional systems can implement clinically tested steps to reduce both latent TB infection and active TB disease.

Reducing the likelihood of disease transmission. Areas within prisons and jails that house large numbers of inmates for substantial periods of time should be well ventilated. Initial intake areas and sick-call clinics with poor ventilation should be evaluated for additional measures, such as high-efficiency particulate air (HEPA) filtration and ultraviolet radiation (which kills microbes). Dormitories and infirmaries that house inmates with weakened immune systems, such as AIDS patients, should be particularly stringent in screening current and prospective admissions for active TB because TB can spread extremely rapidly through these populations.¹⁶ Correctional systems should train all staff to be attuned to the prevalence and nature of TB and to be alert for inmates with persistent coughs, sputum production, chronic fever, or unexplained weight loss. Staff should encourage inmates who are coughing to cover their mouths with their hands or with tissues until medical evaluation is complete.

Reducing the duration of infectiousness. Correctional systems should take advantage of three approaches to reducing the duration of infectiousness of active TB cases.

- *Timely diagnosis.* All correctional systems should have formal programs to screen new admissions for latent TB infection and active TB disease, and to test all staff and inmates annually for latent TB infection. These programs should include a history and physical examination by a qualified health care provider and tuberculin skin testing. For inmates with a history of old or recently active TB, the facility should check with the local health department for treatment information. Each facility should, in cooperation with local public health agencies, adjust the intensity of these efforts to reflect the prevalence of TB in the surrounding community.
- *Respiratory isolation.* All correctional systems should have access to appropriate negative pressure isolation rooms either onsite or at a local hospital. Patients should remain in isolation until there is no risk of transmitting TB to others.
- *Prompt and effective treatment.* Patients without drug-resistant tuberculosis rapidly become non-contagious with appropriate medical therapy.¹⁷ Correctional staff should directly observe all inmates being treated for active TB to make sure patients swallow their medication.¹⁸ Followup in the community with local public health authorities should be arranged for inmates released before their course of treatment has ended.

Reducing the number of new contacts. Many of the measures outlined above will reduce the number of new contacts as well as the likelihood that individuals infected with TB will transmit the disease to others. The occasional inmate with TB who ends up in the general inmate population despite existing screening practices is least likely to infect other inmates and staff in a facility that is not overcrowded and where staff are sensitive to the symptoms and signs of disease.

Miscellaneous measures. At least two other components are required for an effective TB control program in correctional systems.

- When an inmate housed in the general inmate living area develops active TB, every correctional facility should be able to conduct a thorough investigation to identify all individuals with whom the infected person has come in contact. Because newly infected individuals are at high risk of progression to active TB, health care staff should screen and evaluate inmates with recent close contact with a patient with active TB for signs of new infection.¹⁹ Some groups, such as HIV-infected patients, are at such high risk of becoming infected through contact that TB preventive therapy should begin as soon as possible after it becomes known that the individual has had close contact with a contagious inmate.²⁰
- All TB control activities in jails and prisons should be performed in concert with local or State health departments. Access to county and city department of health registries is invaluable in identifying patients who may fail to report their diagnosis at intake.²¹ These agencies may also help ensure followup of inmates after release and help track epidemiological trends pertaining to TB both inside and outside the facility.

Hepatitis B and C. As explained in chapter 4, hepatitis B and C are both bloodborne infections affecting the liver. Hepatitis C, however, is responsible for about five times as many deaths each year as hepatitis B. A vaccine protects against hepatitis B but not hepatitis C. Nevertheless, prisons and jails can implement proven interventions that will reduce the spread of both hepatitis B and C.

Reducing the likelihood of disease transmission. Because inmates are such a high-risk group for future hepatitis B infection, the Centers for Disease Control and Prevention recommends one of two options: (1) routine vaccination against hepatitis B for all new prison and jail inmates or (2) screening all new inmates for the infection. The rationale for not routinely vaccinating all incoming inmates is that up to 80 percent of some groups of inmates in some facilities (e.g., injection drug users) may show evidence upon screening of prior hepatitis B infection.²² Inmates with prior infection would not benefit from vaccination. In these high-prevalence populations it may be more cost effective to screen

prior to vaccination than to immunize every inmate. This will avoid the expense of immunizing large numbers of inmates for whom the vaccine will be of no benefit. Health care staff can vaccinate only those inmates whose screening shows are not yet infected with hepatitis B because these individuals are highly susceptible to the infection.

A complete hepatitis B vaccination series requires three injections administered over 6 months. Although inmates who will be incarcerated for less than 6 months are unlikely to complete the series after release, an incomplete series of injections can still be beneficial. The first dose of vaccine confers immunity in up to 50 percent of patients, and the second dose yields an immunity rate of up to 85 percent.²³ Although the three-dose series, which immunizes 95 percent of patients, is best, the rates of immunity conferred with fewer doses remain high enough to merit recommendation.

Other methods to reduce the likelihood that infected inmates will acquire or transmit hepatitis B or C include harm reduction messages identical to those recommended for HIV. It is important to inform inmates that hepatitis B and C are both serious threats separate from the risk of HIV and that safer drug injection and sexual practices are necessary even when individuals have tested negative for HIV. Hepatitis B is generally more easily transmitted than HIV, and hepatitis C is more easily spread through needle use than HIV.

Improved and early diagnosis may reduce the transmission of hepatitis B and C by making it possible to treat selected infected inmates with antiviral agents. Although antiviral treatment is currently controversial because it is not always effective, it cures 35–45 percent of patients.²⁴ Even among patients it does not cure, antiviral treatment may reduce the amount of the virus in the body and therefore reduce transmissibility.²⁵

Reducing the number of new contacts. As with HIV prevention, harm-reduction counseling and behavior modification techniques may decrease the number of contacts that infected individuals have with susceptible other people.

Minimum Standards for Care of Chronic Disease in Prison (evidence based on current, nationally accepted guidelines—January 25, 2000)

Parameter	Diabetes Types 1 & 2 ^{1,2}	Asthma ³	Hypertension ⁴	HIV ^{5,6}
Definition	untreated preprandial blood glucose >125 mg/dL	on or should be on medication; ≥ 1 β -agonist inhaler/month	systolic >140 or diastolic >90 mm Hg or on Rx (130/85 for diabetics)	known infection
Applies	all diabetics, both insulin- & non-insulin-dependent	limited to moderate, persistent, and severe persistent	all risk groups	all; asymptomatic and symptomatic
Initial history	complete, including nutrition, medications, monitoring, known complications	complete, including triggers, medications, use of PEFR	complete, including nutrition, medications, known complications, smoking, alcohol	complete, including nutrition, medications, TB infection status, STD status, known complications
Admission physical examination	complete, including BP, EKG, cardiovascular, dilated retinal referral and foot	complete, including peak flow measure	complete, including BP, weight, EKG funduscopy	complete, all systems
Physician, NP or PA visits (controlled disease)	at least quarterly until controlled, then at least every 6 months	at least quarterly until controlled, then at least every 6 months	at least quarterly until controlled, then at least every 6 months	3 mos CD4+ <500 6 mos CD4+ >500
Office procedure each visit	foot exam including monofilament testing, weight, annual EKG	peak flow measure (PEFR)	blood pressure, weight, annual EKG	system review, weight
Laboratory, initial every 3 months, until controlled, then at least every 6 mos.	glycated hemoglobin, fasting glucose	theophylline level (if on)		CD4+ & RNA viral load
Laboratory, initial and annual for controlled disease	fasting lipid, urinary microalbumin		fasting lipid, urine protein	RPR & GC & Chlamydia screen, Pap (6 months)
Vaccine	annual influenza, 1 pneumococcal	annual influenza, 1 pneumococcal		annual influenza, 1 pneumococcal
Medication as appropriate	insulin, oral hypoglycemics, aspirin	inhaled steroid if on ≥ 1 β -agonist inhaler/month	β -blocker, diuretic, add appropriate ACE inhibitor, Ca+ blocker, etc., aspirin	as appropriate for viral load & trend; OI prophylaxis <500 CD4+
Routine referral	annual dilated retinal exam by eye care specialist			HIV knowledgeable physician
Special needs	daily access to glucose monitor, exercise, diet, insulin timed with meals	daily access to peak flow monitoring, environmental control	exercise, diet	diet, exercise, appropriately timed medications

Note: Clinical guidelines are time sensitive; they may be outdated by the time they are published. Guidelines should be updated at least every 2 years and as often as every 6 months for diseases such as HIV infection for which therapies change rapidly.

1. American Diabetes Association, "Clinical Practice Recommendations 2000: Standards of Medical Care for Patients With Diabetes Mellitus," *Diabetes Care* 23 (supp. 1) (2000): 1–23.
2. American Diabetes Association, "Clinical Practice Recommendations 1998: Management of Diabetes in Correctional Institutions," *Diabetes Care* 21 (supp. 1) (1998): S80–S81.
3. "National Asthma Education and Prevention Program, Expert Panel Report 2: Guidelines for the Diagnosis and Management of Asthma," Washington, D.C.: National Institutes of Health, National Heart, Blood, and Lung Institute, February 1997.
4. "The Sixth Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure," Washington, D.C.: National Institutes of Health, National Heart, Blood, and Lung Institute, November 1997.
5. "Report of the NIH Panel to Define Principles of Therapy of HIV Infection and Guidelines for the Use of Antiretroviral Agents in HIV-Infected Adults and Adolescents" (updated May 5, 1999).
6. Centers for Disease Control and Prevention, "1999 USPHS/IDSA Guidelines for the Prevention of Opportunistic Infections in Persons Infected With Human Immunodeficiency Virus," *Morbidity and Mortality Weekly Report* 48 (RR-10) (August 20, 1999): 1–59.

Source: Robert B. Greiffinger, Principal Investigator

Scientifically tested interventions addressing chronic disease

There is sound clinical evidence that certain interventions are effective in interrupting the progression of certain common chronic diseases or in reducing or delaying their complications or symptoms. Appendix D, “Sample Draft Clinical Guidelines,” illustrates clinical guidelines for the screening and treatment of four diseases—asthma, diabetes, hypertension, and HIV. The guidelines are examples of empirically based interventions that, if applied by correctional systems, are known to reduce illness and death associated with the four chronic diseases.

“Minimum Standards for Care of Chronic Disease in Prison,” abstracts various aspects of four clinical guidelines discussed in detail in appendix D. Each of the recommendations (elaborated fully in the appendix) is based on the nationally accepted guidelines that are referenced to the text. The recommendations are designed to guide the clinician in areas where scientific evidence of the value of selected interventions exists. The recommendations constitute a set of definitions and abbreviated “decision trees” for the diagnosis and management of various chronic diseases and conditions.

The definition specifies the point at which a person has a diagnosis assigned for the purposes of the guideline. The guideline may apply to all patients with the diagnosis (e.g., diabetes, hypertension, HIV), or only to some of those with the diagnosis (e.g., asthma).

The sections on initial history and admission physical examination present the specific areas of clinical inquiry that should be pursued and documented. This is the area where risk factors are identified and physiologic baselines are established. The next rows describe the expected frequency of visits, depending on how well the patient’s condition is controlled. The rows describe the expectations for physical examination and laboratory examination. The guidelines present the expected preventive interventions, such as vaccinations to prevent diseases for which the patient is at especially high risk, medications to treat the illness, and the threshold for referral by the primary care practitioner to the specialist. Finally, the guidelines describe the special needs of the

patient, especially as these needs are unique to corrections.

Conclusion

This chapter has demonstrated that a number of interventions for preventing, screening for, and treating several communicable and chronic diseases can be cost effective and, in some cases, can even save the community money. The chapter has also presented a number of prevention, screening, and treatment interventions that correctional systems can introduce that have been shown scientifically to be effective in preventing or reducing these diseases. The recommendations for addressing communicable and chronic diseases discussed above illustrate some of the empirically proven interventions that provide the scientific basis for the more general policy recommendations presented in chapter 7.

Introducing or expanding these interventions will be difficult for many correctional administrators. The following chapter identifies some of the barriers correctional systems may encounter—and, in many cases, have already encountered—in trying to expand or improve health care services to inmates. The chapter also suggests how some prisons and jails have overcome these barriers.

Notes

1. See Agency for Health Care Policy Research, “Depression in Primary Care,” Clinical Practice Guideline, vols. 1 and 2, Washington, DC: U.S. Government Printing Office, April 1993.
2. The literature reports a wide range of direct cost estimates for mental illness, in large part because of differences in the types of costs that have been measured and in the types of mental illness on which the cost estimates have been based. The even larger range of estimates for the indirect costs of mental illness in the available studies makes them impossible to use in a cost-effectiveness analysis. The difficulties involved in estimating the cost-effectiveness of screening for and treating mental disorders are elaborated in White, A., L. Hatt, K. Reszek, and T. M. Hammett, “The Feasibility of Using Published Estimates of the Costs of Chronic Diseases and Mental Illness to Conduct Cost-Benefit Analyses of Prevention and Early Intervention,” paper prepared for the National Commission on Correctional Health Care, Chicago, IL, February 1999.

3. Pelvic inflammatory disease (PID) is a bacterial infection of the female upper genital tract, including the uterus, fallopian tubes, and ovaries. Complications of PID can include abscesses, chronic pelvic pain, infertility, and, occasionally, death.

4. The cost estimates for counseling and testing services are based on estimates collected from HIV/STD clinics at the Michigan Department of Community Health, with time estimates and lifetime treatment costs from the literature. All cost figures are expressed in 1997 dollars.

5. The estimate assumes that, without HIV counseling and testing, 7 percent of infected inmates would transmit HIV to an uninfected partner (De Vincenzi, I., "A Longitudinal Study of Human Immunodeficiency Virus Transmission by Heterosexual Partners," *New England Journal of Medicine* 331 (6) (1994): 341–346) and 0.35 percent of uninfected inmates would acquire HIV infection within 12 months (Kamb, M.L., M. Fishbein, J.M. Douglas, F. Rhodes, J. Rogers, G. Bolan, J. Zenilman, T. Hoxworth, C.K. Malotte, M. Iatesta, C. Kent, A. Lentz, S. Graziano, R.H. Byers, and T.A. Peterman, "Efficacy of Risk-Reduction Counseling to Prevent Human Immunodeficiency Virus and Sexually Transmitted Diseases: A Randomized Controlled Trial," *Journal of the American Medical Association* 280 (1998): 1161–1167). The analysis assumes that HIV counseling and testing reduces the risk of transmission from infected inmates to uninfected partners by 25 percent (from 7 percent to 5.2 percent) and the risk of acquiring infection from uninfected inmates by 10 percent (from 0.35 percent to 0.31 percent) (Kamb et al., "Efficacy of Risk-Reduction Counseling"; McKay, N.L., and K.M. Phillips, "An Economic Evaluation of Mandatory Premarital Testing for HIV," *Inquiry* 28 (1991): 236–248; Holtgrave, D.R., R.O. Valdiserri, A.R. Gerber, and A.R. Hinman, "Human Immunodeficiency Virus Counseling, Testing, Referral, and Partner Notification Services: A Cost-Benefit Analysis," *Archives of Internal Medicine* 153 (1993): 1225–1230). The study estimated that offering HIV counseling and testing to 10,000 inmates would have averted more than three future infections. Each averted infection saves almost \$175,000, while the counseling and testing program would cost only \$117,000. Offering HIV counseling and testing programs to 10,000 inmates would result in societal savings of almost \$410,000 ($\$175,000 \times 3 - \$117,000$).

6. Hammett, T.M., P. Harmon, and W. Rhodes, "The Burden of Infectious Disease Among Inmates and Releasees From Correctional Facilities," paper prepared for the National Commission on Correctional Health Care, Chicago, IL, October 1999. (Copy in volume 2 of

this report.) A case for the cost-effectiveness of providing treatment to inmates with HIV can be based on the speculation that, if HIV virus circulating in the blood is reduced to undetectable levels, an HIV-positive individual's chances of transmitting the disease to others may be reduced. R.B. Greifinger, personal communication, January 26, 2000.

7. American Thoracic Society and the Centers for Disease Control and Prevention, "Targeted Tuberculin Testing and Treatment of Latent Tuberculosis Infection," *American Journal of Respiratory and Critical Care Medicine* 161 (2000): 221S–247S; American Thoracic Society and the Centers for Disease Control and Prevention, "Diagnostic Standards and Classification of Tuberculosis in Adults and Children," *American Journal of Respiratory and Critical Care Medicine* 161 (2000): 1376–1395.

8. The economic calculations for communicable disease and chronic disease were estimated in different ways. Rates of communicable disease vary widely across regions of the Nation. TB is more prevalent in urban areas in the Northeast and along the coasts than in the rest of the Nation. Sexually transmitted diseases are most prevalent in the Southeast. Both TB and STDs are more prevalent in areas where there are high rates of HIV infection. Because of these variations, the economists who modeled communicable diseases (see the papers in volume 2) used sensitivity analysis. This model assumes a variety of underlying prevalence rates and reports quantitatively on the cost-effectiveness or cost-saving potential at varying prevalence rates. Areas with high prevalence of the underlying condition would demonstrate more favorable ratios than areas with low prevalence. Modeling that uses sensitivity analysis is a useful tool for local decisionmaking where the underlying rates of disease vary considerably. Cost-effectiveness analyses were also done for hypertension and diabetes. Although the rates of these diseases vary with gender, race, and age, they have little geographic variation, so there is less value in performing a sensitivity analysis in the modeling. Consequently, the cost-effectiveness study used the National Commission on Correctional Health Care data set for the correction population (see Hornung, C.A. R.B. Greifinger, and S. Gadre, "A Projection Model of the Prevalence of Selected Chronic Diseases in the Inmate Population," in volume 2 of this report). This data set is based on the National Health and Nutrition Examination Study (NHANES–III), adjusted to reflect the gender, race, and age mix of the correctional population in 1996. The question for this simulation was, given this sample population, "Would it be cost effective to provide diagnosis and treatment?"

9. The three studies used are the Diabetes Control and Complications Trial, the Wisconsin Epidemiologic Study of Diabetic Retinopathy, and the Framingham Heart Study.
10. Pearce, K.A., C. Furberg, B.M. Psaty, and J. Kirk, "Cost-Minimization and the Number Needed to Treat in Uncomplicated Hypertension," *American Journal of Hypertension* 11 (1998): 618–629.
11. Ngugi, E.N., D. Wilson, J. Sebstad, F.A. Plummer, and S. Moses, "Focused Peer-Mediated Educational Programs Among Female Sex Workers to Reduce Sexually Transmitted Disease and Human Immunodeficiency Virus Transmission in Kenya and Zimbabwe," *Journal of Infectious Disease* (174) (1996): S240–247; DiClemente, R.J. and G.M. Wingood, "A Randomized Controlled Trial of an HIV Sexual Risk-Reduction Intervention for Young African-American Women," *Journal of the American Medical Association* 274 (1995): 1271–1276.
12. Centers for Disease Control and Prevention, "Syphilis Screening Among Women Arrestees at the Cook County Jail—Chicago, 1996," *Morbidity and Mortality Weekly Report* 147 (1998): 432–433; Blank, S., D.D. McDonnell, S.R. Rubin, J.J. Neal, M.W. Brome, M.B. Masterson, and J.R. Greenspan, "New Approaches to Syphilis Control: Finding Opportunities for Syphilis Treatment and Congenital Syphilis Prevention in a Women's Correctional Setting," *Sexually Transmitted Diseases* 24 (1997): 218–228.
13. "Community-Level Prevention of Human Immunodeficiency Virus Infection Among High-Risk Populations: The AIDS Community Demonstration Projects," *Morbidity and Mortality Weekly Report* 45 (RR-6) (1996): 1–24; Wiebel, W.W., A. Jimenez, W. Johnson, L. Ouellet, B. Jovanovic, T. Lampinen, J. Murray, and M.U. O'Brien, "Risk Behavior and HIV Seroincidence Among Out-of-Treatment Injection Drug Users: A Four-Year Prospective Study," *Journal of AIDS* 12 (1996): 282–289.
14. Hammett, T.M., P. Harmon, and L. Maruschak, *1996–1997 Update: HIV/AIDS, STDs, and TB in Correctional Facilities*, Washington, DC: U.S. Department of Justice, National Institute of Justice, Centers for Disease Control and Prevention, and Bureau of Justice Statistics, 1999, NCJ 176344: 33–44; Grinstead, O., B. Faigeles, and B. Zack, "The Effectiveness of Peer HIV Education for Male Inmates Entering State Prison," *Journal of Health Education* 28 (November–December, 1997, Supplement): S31–S37; Kelly, J.A., J.S. St. Lawrence, Y.E. Diaz, L.Y. Stevenson, A.C. Hauth., T.L. Brasfield, S.C. Kalichman, J.E. Smith, and M.E. Andrew, "HIV Risk Behavior Reduction Following Intervention With Key Opinion Leaders of Population: An Experimental Analysis," *American Journal of Public Health* 81 (1991): 168–171; DiClemente and Wingood, "A Randomized Controlled Trial" (see note 11); Wiebel, Jimenez, Johnson, et al., "Risk Behavior and HIV Seroincidence" (see note 13); "Sexual Risk Behaviors of STD Clinic Patients Before and After Earvin 'Magic' Johnson's HIV-Infection Announcement—Maryland," *Morbidity and Mortality Weekly Report* 42 (1993): 45–48.
15. Brown, A.E., and D.S. Burke, "Cost of HIV Testing in the U.S. Army," *New England Journal of Medicine* 332 (1995): 963.
16. Daley, C.L., P.M. Small, G.F. Schecter, G.K. Schoolnik, R.A. McAdam, W.R. Jacobs, and P.C. Hopewell, "An Outbreak of Tuberculosis With Accelerated Progression Among Persons Infected With the Human Immunodeficiency Virus," *New England Journal of Medicine* 326 (1992): 231–235.
17. Riley, R.L., and A.S. Moodie, "Infectivity of Patients With Pulmonary Tuberculosis in Inner City Homes," *American Review of Respiratory Disease* 110 (1974): 299–308.
18. "Controlling TB in Correctional Facilities," Rockville, MD: U.S. Department of Health and Human Services, 1995, 1–58; "Prevention and Control of Tuberculosis in Correctional Facilities," *Morbidity and Mortality Weekly Report* 45 (RR-8) (1996): 1–27.
19. "Prevention and Control of TB," *Morbidity and Mortality Report* (see note 18).
20. Alcabes, P., P. Vossenas, R. Cohen, C. Braslow, D. Michaels, and S. Zoloth, "Compliance With Isoniazid Prophylaxis in Jail," *American Review of Respiratory Disease* 140 (1980): 1194–1197.
21. Layton, M., T. Frieden, and K. Henning, "Screening of Inmates for Tuberculosis by Chest X-Rays," presentation to the 34th Interscience Conference on Antimicrobial Agents and Chemotherapy, Orlando, FL, October 4–7, 1994.
22. American College of Physicians, Task Force on Adult Immunization, and Infectious Diseases Society of America, "Guide for Adult Immunization," Philadelphia, PA: Author, 1994: 32.

23. R. Lyerla, "What Is the Value of Immunizing Prison Inmates Against Hepatitis B?" presentation prepared for the National Commission on Correctional Health Care, Chicago, IL, 1998. (Copy in volume 2 of this report.)

24. McHutchison, J.G., S.C. Gordon, E.R. Schiff, M.L. Schiffman, W.M. Lee, V.K. Rustgi, Z.D. Goodman, M.H. Ling, S. Cort, and J.K. Albrecht, "Interferon Alfa-2b Alone or in Combination With Ribavirin as Initial

Treatment for Chronic Hepatitis C," *New England Journal of Medicine* 339 (1998): 1493–1499.

25. "Recommendations for Prevention and Control of Hepatitis C Virus (HCV) Infection and HCV-Related Chronic Disease," *Morbidity and Mortality Weekly Report* 47 (RR-19) (1998): 1–39; Omata, M., "Treatment of Chronic Hepatitis B Infection," *New England Journal of Medicine* 339 (1998): 114–115.

Chapter 6. Barriers to Prevention, Screening, and Treatment—and Overcoming Them

The previous chapter demonstrated that it would be cost effective and, in some cases, save money to initiate or expand programs to prevent, screen for, and treat a number of communicable and chronic diseases among inmates. Even when it is not possible to demonstrate that prevention or treatment would be cost effective—as with mental illness—prisons and jails should improve their efforts to address these conditions because of the large number of inmates who suffer from them and because of constitutional obligations of correctional systems to provide adequate health care.¹

Despite the compelling reasons for improving the prevention, screening, and treatment of disease among inmates, significant barriers make it difficult for prisons and jails to improve these services. This chapter identifies some of these barriers and discusses how they can be overcome, using examples of successful correctional health care programs.

Barriers to Improved Prevention, Screening, and Treatment

As summarized in “Selected Barriers to Improved Prevention, Screening, and Treatment of Inmates” and discussed below, the four principal barriers to improved correctional health care for inmates are the following: obstacles related to lack of leadership, the logistics of operating a prison or jail, limited resources, and correctional policies regarding treatment and security.

Lack of leadership

Some corrections administrators may not believe that inmates are entitled to the level of health care that this report suggests is needed. Other administrators are unaware of the need for improved care or of how it could save them or their communities money in the long run. Many administrators may still be reluctant to consider that protecting public health through comprehensive medical and mental health care is a correctional responsibility.

Similarly, some public health officials may not believe that it is their mission to advocate and work with prison and jail administrators to improve correctional health care, may not understand that such improvements can more effectively protect public health in their communities, or may feel they do not have the resources to provide assistance.

Logistical barriers

Very short periods of incarceration are a serious barrier to identifying jail inmates with health problems, particularly communicable diseases. Many jail inmates are held for no more than 48 hours pending a probable cause hearing. Others are jailed a few days until they can post bond.² Short stays create three impediments to effective disease screening and treatment in jails:

- Even in facilities with routine screening policies, screening may be delayed for up to 14 days after intake. Correctional health care staff lose the opportunity to treat inmates who are released before they can be tested.
- Because certain tests, such as TB skin tests, take time to show results, inmates may return to the community without ever learning the results—and may therefore be unaware that they are infected and need treatment.
- Inmates who are screened and diagnosed may be released before a course of treatment can be initiated or completed.

A concrete example illustrates the potential seriousness of these problems. A study found that of 93 inmates with latent tuberculosis (TB) infection who were released from the San Francisco County Jail in 1994 before their prescribed isoniazid therapy was completed, only 3 went to the public health TB clinic for more medication in the month after their release.³ The public health implications of this lack of followup are serious. Incomplete TB treatment may result in increased transmission of latent TB

Selected Barriers to Improved Prevention, Screening, and Treatment of Inmates

Lack of leadership

- Lack of awareness of need for improved health care services.
- Reluctance to consider improving public health as a correctional responsibility.
- Unwillingness of public health agencies to collaborate or become advocates for improved corrections health care.

Logistical barriers

- Short periods of incarceration.
- Safety-encumbered administration procedures for distributing medications.
- Difficulty coordinating discharge planning.
- Inmate difficulties attending to health problems after release.

Limited resources

- High cost of health care services.
- High cost of some medications.
- Lack of sufficient space.

Correctional policies

- Failure to specify minimum levels of required care in contracts with private health care vendors.
- Requirements that inmates be escorted to medical treatment.
- Poor communication between public health agencies and prisons and jails.
- Lack of adequate clinical guidelines.

infection and active disease, and the development of drug-resistant strains. The cost to the Nation of failure to control the spread of TB can be high. Efforts to control the resurgence of TB in the early 1990s cost New York City alone more than \$1 billion.⁴

There are logistical barriers to the efficient distribution of medications in prisons and jails. Medication administration schedules and inmates' inability to go to a pharmacy or telephone a physician can impose extra steps in securing approval for a medication.⁵ "Pill lines"—prescribed times during the day when inmates pick up their medicines—can prevent proper administration of medications that must be taken at specific times (e.g., with meals).

The rapid and unpredictable manner in which jail inmates are typically processed limits a jail's ability to provide meaningful discharge planning that would help ensure a continuum of care for inmates after release into the community. In many instances, jail health care personnel do not know when an inmate will be released. By the time they find out, it may be too late to develop effective linkages with community providers.

Providing case management and discharge planning in prisons can also be difficult to coordinate. Because prisons are often located in rural areas far from the cities that are home to many inmates, prison health care staff may have difficulty establishing close ties

with health care providers in inmates' home communities, and these providers may be unable to visit the prison to establish relationships with inmates who are nearing release. Of all the potential problems that prisons and jails may encounter in discharge planning, one of the most difficult to negotiate is continuity of mental health treatment, particularly providing uninterrupted medication.

Many inmates require not only ongoing medical and mental health treatment after release but also other community-based services, including substance abuse treatment and assistance with housing, child care, and public assistance programs. Ex-offenders often find it very difficult to obtain these services. Problems in these other areas of their lives can hamper releasees' motivation and ability to attend to their health problems after release. Compounding these personal problems, inmates released from prisons and jails—even with help from corrections staff—often encounter serious bureaucratic obstacles to becoming eligible for Medicaid after release, delaying their access to immediate and ongoing treatment.

Limited resources

Correctional systems often face serious resource limitations in providing inmate health care services. Meeting inmate health care needs can be expensive. Inmates have high rates of many diseases that require medical attention. In part, this is due to the lack of health care they have typically received before incarceration. Changes in inmate demographics—an aging population and increasing numbers of substance abusers—also create greater demands for correctional health care services (see chapter 1, "Introduction").

Current correctional budgets are often too small to pay for the staff, equipment, medicines, or space needed to provide all the prevention, screening, and treatment services that should be made available or to provide all these services in the recommended manner. Among the problems encountered are the following:

- The Centers for Disease Control and Prevention (CDC) recommends that staff directly watch

inmates with tuberculosis disease or latent TB infection swallow each dose of medication.⁶ Given that up to 9 percent of inmates may be infected with TB, thousands of inmates per year would be candidates for directly observed therapy. In part because of the cost of this approach, compliance with this CDC recommendation has been inconsistent.

- Many correctional systems may find it expensive to provide all eligible inmates all the medications that current U.S. Public Health Service guidelines recommend for treating HIV,⁷ and must therefore make difficult budgeting choices.
- The current standard of treatment for hepatitis C (combination therapy with interferon and ribavirin) costs about \$12,000 per patient per year. As a result, potential treatment costs for correctional systems with large numbers of eligible patients may be extremely high. Given the uncertainties regarding the treatment's efficacy, few correctional systems have instituted widespread treatment for hepatitis C.
- A relatively new class of medications known as selective serotonin reuptake inhibitors (SSRIs), such as sertraline, paroxetine, and fluoxetine, has been shown to be more effective than older medications in treating some mentally ill patients. Some correctional systems cannot afford the higher cost of these newer medicines, resulting in inferior treatment for many mentally ill inmates.

Because of the high cost of treating every inmate who is found to have a treatable medical condition, correctional administrators (including some health care managers) may prefer to avoid screening inmates for some medical and mental conditions. Administrators know that, once an inmate has been found to have a disease, case law and professional ethics require them to provide treatment that meets community standards.

Because of limited resources, some correctional facility medical departments are cramped. With insufficient space, maintaining confidentiality is difficult, and the environment may not be conducive to adequate care.

Policy barriers

Some correctional systems have rules or policies that interfere with providing proper health care to inmates.

Many correctional systems prohibit inmates dually diagnosed with both a substance abuse problem and a mental illness from participating in drug treatment programs. These programs frequently require complete abstinence from all drugs, including prescription medications these inmates may be taking for their mental illness. As a result, these inmates are precluded from participating.

An increasing number of correctional systems are contracting with private vendors for inmate medical care. Some systems do not explicitly include in their request for proposals all the minimal requirements for services that every bidder must agree to provide. As a result, the successful bidder may cut costs by reducing inmate access to medical staff, minimizing disease screening, or excluding newer, more expensive medications from their formularies of approved drugs.

Understandably, correctional agencies' first priorities are facility security and staff safety. Some systems require two correctional officers to accompany every inmate on every visit to an outside hospital or clinic for special testing or treatment. Other departments require that inmates be transported individually in agency vans. Typically, correctional officers must escort inmates moving within a facility. Some correctional systems require that two or three officers accompany high-risk inmates for medical screening or treatment within a prison or jail. The limited number of available correctional officers or vehicles may create long delays if more than one or two inmates need to be transported for medical care at the same time.

Some correctional systems have policies that impose unpleasant requirements on inmates with certain conditions, making them reluctant to disclose that they have the diseases. Courts have upheld the right of correctional systems to segregate inmates with AIDS in separate housing.⁸

Correctional systems' lack of appropriate policy or practice protecting the confidentiality of inmates' medical status also discourage disclosure and acceptance of testing.

Correctional systems' lack of clinical guidelines or inadequate guidelines for prevention, screening, and treatment practices can result in inadequate medical care. Few of the 41 State departments of corrections surveyed as part of *The Health Status of Soon-To-Be-Released Inmates* project (see chapter 2, "History of the Project") submitted complete and up-to-date clinical guidelines for HIV, hypertension, diabetes, asthma, or mood-altering medications for treating mental illness. Only five States returned guidelines for treating HIV, none of which had been updated to reflect current standards for combination therapies. Four of the thirteen States that submitted guidelines for diabetes did not require annual eye examinations, which are well known to help prevent blindness in diabetics. Only one State submitted clinical guidelines for prescribing mood-altering medications for mental illness.

Public health agency policies may also hamper effective treatment. When county health departments test or screen inmates for communicable diseases, poor interagency communication may prevent inmates from learning their test results. Jail inmates may have left the facility by the time the public health department communicates the test results, and correctional health care staff may be unable or may not try to locate releasees to provide the results.

Ethical dilemmas related to providing correctional health care can present correctional and public health administrators with difficult choices in attempting to provide inmates with adequate services. Issues in correctional health care that may present ethical dilemmas include mandatory clinical testing and forced treatment of inmates; cost-based formulary decision making; pharmaceutical company sponsorships; recruitment of inmates in clinical research; use of health care professionals whose credentials may not meet community standards; and the role of correctional clinicians in decisionmaking by reentry courts and parole boards.

Solutions

Most of these barriers to improved health care for inmates can be overcome. As discussed below:

- Position statements on appropriate health care for inmates developed by professional organizations can encourage correctional administrators to eliminate barriers to proper care.
- Correctional systems should not have to shoulder the burden alone for filling gaps in inmate health care, but should collaborate with public health agencies and community-based organizations to improve the prevention, screening, and treatment of diseases among inmates.
- “Success stories” provide models for how communities can overcome barriers to improving inmate health care services.

Correctional health care position statements

A number of professional groups have developed guidelines describing appropriate health care for inmates. These position statements can be used as leverage to encourage correctional administrators to find ways of resolving barriers to providing adequate care. The National Commission for Correctional Health Care has prepared guidelines for the administrative management of HIV-positive individuals in correctional facilities.⁹ The American Correctional Association Delegate Assembly passed a resolution in 1999 supporting nonsmoking facilities and smoking cessation classes for both inmates and correctional staff. The American Psychiatric Association and the American Public Health Association have also developed guidelines for inmate health care (see chapter 4, “Improving Correctional Health Care: A Unique Opportunity to Protect Public Health”).

Linkages among corrections, public health care agencies, and community-based organizations

Collaboration between correctional agencies and public health agencies can help overcome the lack of funds and staff that make it difficult for many prisons and jails to address adequately the health care needs of all inmates. Public health departments may be willing to contribute funds, staff, and

expertise if they understand that this use of their resources can advance the cause of public health in their communities. Correctional agencies have a stake in convincing public health officials and other government decisionmakers of the public health importance of improving the prevention, screening, and treatment of diseases among inmates. Community-based organizations and community providers may be qualified and interested in working with inmates and releasees.

Public health and correctional agencies are already working together to improve the health care of inmates and, at the same time, the health of the larger community. This was the finding of a 1997 survey conducted jointly by the U.S. Department of Justice’s National Institute of Justice and the Centers for Disease Control and Prevention to learn about the extent and nature of public health/corrections collaborations in the prevention and treatment of HIV/AIDS, sexually transmitted diseases, and TB.¹⁰ According to the study, almost all correctional systems collaborate to some extent with public health agencies. Some jurisdictions have established extensive collaborations to help fill gaps in the prevention and treatment of these diseases.

The collaborations have found ways to overcome many of the barriers that make it difficult for prisons and jails to provide these services by themselves. In particular, the partnerships helped to overcome correctional departments’ lack of resources by involving public health departments in initiating or expanding the following:

- Testing and screening of inmates.
- Prevention and treatment programs in prisons and jails.
- Following up inmates after release to ensure a continuum of care.

Researchers visited six States and five cities or counties with promising approaches to collaboration. The researchers found that several factors facilitated collaboration:

- The availability of data on the prevalence of diseases among inmates and in the community, or dramatic events, such as outbreaks of disease that demonstrated the need for collaboration.

- Legislation or regulatory requirements that make public health departments responsible for providing health care services in corrections facilities or for reporting disease among inmates.
- Correctional system willingness to open its facilities to outside organizations.
- Sensitivity on the part of correctional administrators and public health staff to each other's missions, challenges, priorities, and perspectives.
- Health department funding of programs in correctional facilities.
- The presence of health department personnel in correctional facilities and liaison staff in correctional and public health agencies, formal agreements for collaboration, and the development of interagency relationships over time.
- Frequent communication and information exchanges, such as serving on joint committees, holding meetings at leadership and operating levels, and exchanging important databases and information about patients.

State and local public health agencies and service providers are the most appropriate and likely collaborators in any effort designed to improve inmate health care. Barriers to inmate health care can be addressed still more effectively if collaborative efforts include other organizations, such as probation and parole agencies, community-based organizations, academic medical centers and universities, and substance abuse treatment programs and other service providers. As the following section suggests, some communities have established broader based collaborations.

Two collaborations that have overcome barriers

The State of Rhode Island and Hampden County, Massachusetts, have established partnerships that illustrate how joint endeavors can overcome many of the barriers to improving correctional health care services for inmates.

Collaboration in Rhode Island.¹¹ Rhode Island has developed a collaboration among the State Department of Health, the State Department of Corrections, an academic medical center (Miriam

Hospital, affiliated with Brown University), and approximately 40 community-based organizations and service agencies. In addition to regular meetings, the partners work together on disease surveillance; inmate disease prevention services; discharge planning; and policies, legislative proposals, and union issues related to health care issues.

The Department of Health provided much of the initial funding for staffing the program. Over time, however, the Department of Corrections has picked up an increasing share of the personnel costs, funding two public health educator positions from its regular budget.

The collaboration initially focused on treatment and support services for inmates with HIV and on continuity of care between providers in prison and in the community. Pretest and posttest counseling, discharge planning, transitional services, and community linkages for HIV-infected inmates were added later. The collaboration has added sexually transmitted diseases and tuberculosis to its purview.

The collaboration's focus on prerelease planning and followup is especially important in light of the failure of most prisons and jails to provide continuity of care. The following steps have been established:

- Inmates with HIV are treated in prison by the same physician who will treat them after they return to the community.
- The Rhode Island Department of Corrections notifies the State health department's TB unit when an inmate with active or suspected TB, or an inmate receiving TB therapy, is being released, so that continuity of care can be arranged.
- Postrelease services for inmates with HIV infection and inmates at risk for HIV infection include housing, substance abuse treatment, job development, psychosocial support, and long-term case management.
- At a weekly case assignment meeting, program staff involved in the collaboration meeting discuss community linkages and placements for inmates nearing release. The four community-based organizations that participate in these meetings are mentors to employable women

who are being released and arrange services for cocaine- and alcohol-involved releasees, long-term sex workers, injection drug users, and HIV-infected releasees.

- A disease investigation specialist, funded by the Department of Health and based in the prison, locates HIV-positive individuals who have been released to the community before they received their test results to link them to services at Miriam Hospital or another equally qualified provider of HIV services.

Compliance with postrelease medical and other appointments for services increased dramatically as a result of the collaboration. Evaluation results suggested that recidivism among female inmates who participated in these postrelease programs was lower than in a comparison group who did not participate.¹²

Collaboration in Hampden County, Massachusetts.¹³

The Hampden County Correctional Center, which serves Massachusetts' second largest metropolitan area, has developed a public health model of correctional health care that focuses on disease screening, patient health education, prevention, treatment, discharge planning, and continuity of care for releasees. The program costs about \$6 per inmate day, or 9 percent of the facility's budget.

Significant features of the program include the following:

- Based on ZIP Code of residence, inmates with HIV/AIDS and other serious medical and mental health conditions are assigned to one of four health teams that work jointly in the correctional center and in four community health centers. (Eighty percent of the inmates come from the catchment areas of these four community health centers.) In 1997 more than 70 percent of releasees with HIV/AIDS kept their first appointments with their assigned community health center.
- Case managers who work in both agencies provide case management and discharge planning services for all inmates with HIV/AIDS and serious mental health problems. A discharge planning nurse at the facility provides similar services for inmates with chronic diseases.
- Releasees are linked with community-based agencies that address issues of family reintegration, housing, employment training and readiness, and benefit programs.

The Hampden County program serves a metropolitan area of 500,000. Because 80 percent of metropolitan areas in the United States have populations of between 100,000 and 1 million, the Hampden County model should be replicable in many other communities. The Massachusetts Department of Public Health is using a CDC grant to establish case management, discharge planning, and community linkage programs in other Massachusetts county jails. These programs will also serve HIV-positive inmates being released from State prisons.

The success of the Rhode Island and Hampden County models depended on the political will, commitment, and leadership of correctional and public health officials in these jurisdictions.

Promising practices in jails for treating mental illness

A number of programs in jails provide comprehensive mental health services.¹⁴ Erie County, Pennsylvania, has developed an integrated network of criminal justice and mental health professionals to create a community-based forensic program. The program provides a continuum of care that begins during incarceration in the county prison and extends to the community upon discharge or parole.¹⁵ Some jails appear to have incorporated innovative features of a comprehensive mental health care system:

- Two jails contract for psychiatric services with the community psychiatry program at their local medical school. The medical college's community psychiatry rotation includes assignments at the local jail. This arrangement ensures that trained medical personnel are in the jail on a regular basis.¹⁶
- A number of jails employ crisis intervention specialists or teams. The primary responsibilities of these specialists and teams are to stabilize inmates experiencing mental health crises as quickly as possible, house them appropriately,

and provide them with direct mental health services. Providing crisis intervention specialists in the jail frees correctional officers from having to handle difficult situations and allows for timely and appropriate solutions.¹⁷

Local policymakers have worked with officials in the Maryland Department of Health and Mental Hygiene and other State officials to establish the Maryland Community Criminal Justice Treatment Program, a multiagency collaboration that provides shelter and treatment services to mentally ill jail offenders in their communities.¹⁸ Operating in 18 of the State's 24 jurisdictions, the program includes the following features:

- Case management services, such as crisis intervention, screening, counseling, discharge planning, and followup in the community.
- Services for mentally ill offenders who are homeless or have a substance abuse problem.
- Routine training for criminal justice and treatment professionals.
- Diversion after booking for qualified mentally ill defendants.

Criminal justice and treatment professionals credit the program with improving the identification and treatment of jailed mentally ill individuals, increasing communication between mental health and corrections professionals, improving coordination of in-jail and community-based services, and reducing disruption in local jails.

The Fairfax County (Virginia) Jail has also overcome the pervasive barriers to discharge planning for mentally ill inmates.¹⁹ The jail uses a private nonprofit organization to link detainees with mental health-related services upon release and to maintain the detainee's family ties while the inmate is incarcerated. This affords the inmate a source of additional support after release. The organization's eight staff also:

- Provide transportation and housing assistance to mentally ill releasees upon release.
- Provide emergency services for releasees without plans at release.

- Teach, mentor, and tutor classes in the facilities.
- Teach life skills that inmates will need after release.
- Provide group therapy for inmates and their families.
- Arrange support groups for families and close friends of inmates.
- Offer families emergency funds for food and clothing while their providers are in jail.

The jail provides discharge planning for every inmate, but detainees with mental illnesses work with the same staff person from intake through discharge.

A review of seven programs developed in State and Federal prisons for mentally ill inmates who also have a substance abuse problem (the "dually diagnosed") found that the programs' key components included an extended assessment period, motivational activities, psychoeducational groups, cognitive-behavioral interventions (such as restructuring of criminal thinking errors), self-help groups, medication monitoring, relapse prevention, and transition into institution or community-based after-care facilities.²⁰ Many programs used therapeutic community approaches that had been modified to provide greater individual counseling and support, less confrontation, smaller staff caseloads, and staff cross-training. Capsule descriptions of two of these programs follow.

- The Alabama Department of Corrections, with funding from the U.S. Department of Health and Human Services' Center for Substance Abuse Treatment, established a separate dormitory for the dually diagnosed in the Venteress Correctional Facility. Treatment includes group therapy, psychoeducational groups, 12-step groups, AIDS prevention and education activities, psychiatric medications, relapse prevention training, and community reentry services including development of an aftercare treatment plan. The program's highly regimented schedule of activities includes several core modules drawn from the facility's 8-week treatment program combined with 10 weeks of additional treatment services to address management of emotional problems.

- The Delaware Department of Corrections' Chronic Care Program, located in the State's maximum security facility, houses 25 dually diagnosed inmates. A private vendor provides treatment services 7 days a week. Treatment includes individual and group therapy, drug education, medications, psychoeducational groups, AIDS prevention education, relapse prevention, and individual case management and planning for community reentry. Inmates participate for 8 weeks in a "Medication/Mental Illness" group designed to help them to understand their mental illness and their psychotropic medications. Behavioral reinforcement is provided through a system in which inmates progress to higher levels of responsibility and privilege based on compliance with treatment goals and community rules.

Conclusion

This chapter has identified several barriers to improving health care for inmates in prisons and jails. With political will and commitment from corrections and public health administrators, most of these obstacles can be overcome. The policy recommendations for improving correctional health care provided in the following and final chapter recognize that improving prevention, screening, and treatment in prisons and jails will not be easy. The recommendations represent feasible steps correctional systems can take and that, as described above, at least some prisons and jails have already implemented.

Notes

1. *Estelle v. Gamble*, 429 U.S. 97 (1976), held that "deliberate indifference" (not mere medical malpractice) to "serious medical needs" of inmates violates the eighth amendment's prohibition against cruel and unusual punishment.
2. The U.S. Department of Justice, Bureau of Justice Statistics (BJS), does not collect information regarding length of stay of presentenced inmates. A BJS survey of more than 6,000 sentenced inmates from 431 jails found that the median length of stay for sentenced inmates was 5.7 months. Because the data on time served were restricted to persons in jail, the data overstates the median time served. Persons with shorter sentences leave jail more quickly, resulting in a longer average sentence among persons in the inmate sample. Harlow, C.W., *Profile of Jail Inmates 1996*, Special Report, Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics, April 1998, NCJ 164620.
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5. Greifinger, R.B., and M. Horn, "Quality Improvement Through Care Management," in M. Puisis, (ed.), *Clinical Practice in Correctional Medicine*, St. Louis, MO: Mosby, 1998.
6. Centers for Disease Control and Prevention, "Prevention and Control of Tuberculosis in Correctional Facilities," *Morbidity and Mortality Weekly Report* 45 (RR–8) (1996): 1–27.
7. U.S. Department of Health and Human Services, *Guidelines for the Use of Antiretroviral Agents in HIV-Infected Adults and Adolescents*, Washington, DC: Public Health Service, January 28, 2000.
8. See, for example, *Onishea v. Hopper*, 126 F.3d 1323 (11th Cir. 1997).
9. See appendix E, "Information About NCCHC and Its Position Statements." The current copy of the position statement on the Management of HIV in Correctional Facilities can be accessed at: <http://www.ncchc.org>.
10. Hammett, T.M., *Public Health/Corrections Collaborations: Prevention and Treatment of HIV/AIDS, STDs, and TB*, Research in Brief, Washington, DC: U.S. Department of Justice, National Institute of Justice, and U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, July 1998, NCJ 169590.
11. *Ibid.*
12. Vigilante, K.C., M.M. Flynn, P.C. Affleck, J.C. Stunkle, N.A. Merriman, T.P. Flanigan, J.A. Mitty, and J.D. Rich, "Reduction in Recidivism of Incarcerated Women through Primary Care, Peer Counseling, and Discharge Planning," *Journal of Women's Health* 8 (1999): 409–415.

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14. Carr, K., B. Hinkle, and B. Ingram, “Establishing Mental Health and Substance Abuse Services in Jails,” *Journal of Prison and Jail Health* 10 (2) (1991): 77–89; Nielsen, E.D., “Community Mental Health Services in the Community Jail,” *Community Mental Health Journal* 15 (1) (1979): 27–32; Dvoskin, J.A., “Jail-Based Mental Health Services,” pp. 64–90 in H.J. Steadman (ed.), *Effectively Addressing the Mental Health Needs of Jail Detainees*, Washington, DC: National Institute of Corrections, June 1990, NCJ 151850: 80–83.
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16. Morris, S.M., H.J. Steadman, and B.M. Veysey, “Mental Health Services in United States Jails: A Survey of Innovative Practices,” *Criminal Justice and Behavior* 24 (1) (1997): 3–19.
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Chapter 7. Policy Recommendations

The expert panels assembled for *The Health Status of Soon-To-Be-Released Inmates* project (see chapter 2, “History of the Project”) developed policy recommendations for improving the health care of prison and jail inmates. The project steering committee refined the panels’ list of recommendations. This chapter presents the final list of recommendations organized by major topic areas.

Background to the Policy Recommendations

The policy recommendations are based on an expert consensus that sufficient—if not always definitive—scientific evidence exists to justify their implementation. Much of this scientific evidence has been presented in previous chapters of this report. Recommendations related to general immunization programs, expansion of correctional treatment programs for alcohol and other drugs, and smoking cessation programs, while not substantiated in this report, have strong empirical justification in the scientific literature.¹ Several of these recommendations also reflect guidelines developed by the Centers for Disease Control and Prevention (CDC) that have been applied by the expert panels and steering committee to correctional settings. Endnotes after the pertinent recommendations provide the relevant CDC guidelines. It is important to note, however, that the endnotes refer to current CDC recommendations. These recommendations may change over time.

Other recommendations derived from the literature on correctional health care and aids to ethical decisionmaking, although not “empirically” supported, were felt by the expert panels and steering committee to be unquestionably warranted.

The expert panels considered many other interventions and policy changes that the steering committee did not include in the final set of recommendations listed below because currently too little scientific evidence exists to recommend their implementation.

Many jails and prisons, however, have implemented interventions that reflect these missing recommendations. That the report does not include an intervention that correctional agencies are currently implementing does not mean that these agencies should discontinue the intervention or that other systems should not consider introducing it. The recommendations presented here are not exhaustive. The National Commission on Correctional Health Care (NCCHC) and other professional organizations will develop other recommendations in the future as clinical studies demonstrate the effectiveness of additional interventions.

The policy recommendations are followed by actions that the steering committee proposes specified Government agencies take in order to support implementation of the recommendations. A bibliography at the end of the chapter identifies publications that provide additional information related to selected policy recommendations.

Policy Recommendations

The expert panels and the steering committee recommend that the actions presented below (summarized in “Summary of Policy Recommendations”) be taken on nationwide to improve the physical and mental health of inmates, protect the public from communicable disease, and reduce the huge cost to society of inmate illnesses that go untreated or undertreated.

Surveillance²

The principal use of disease surveillance in correctional facilities is to monitor disease incidence, prevalence, and outcomes in the inmate population. Surveillance includes collecting health data and evaluating the data collection system to assist correctional health officials in characterizing the health status of the inmate population. The information obtained from the surveillance system is used to plan, implement, and evaluate health needs of the

Summary of Policy Recommendations

- I. Promote surveillance of selected communicable diseases, chronic diseases, and mental illnesses among inmates in all correctional jurisdictions.
- II. Promote the use of nationally accepted evidence-based clinical guidelines for prisons and jails to assure appropriate use of resources for preventing, diagnosing, and treating selected communicable diseases, common chronic diseases, and mental illnesses that are prevalent among inmates.
- III. Establish a federally funded national vaccine program for inmates to protect them and the public from selected vaccine-preventable communicable diseases.
- IV. Develop and maintain a national literature database for correctional health care professionals, including a compendium of policies, standards, guidelines, and peer-reviewed literature.
- V. Establish a national advisory panel on ethical decisionmaking by correctional and health authorities to help them address ethical dilemmas encountered in correctional health care.
- VI. Identify and eliminate barriers to successful implementation of public health policy.
- VII. Support research in correctional health care to identify and address problems unique to correctional settings.
- VIII. Improve the delivery of inmate health care in correctional systems.
- IX. Implement primary and secondary disease prevention measures.
- X. Provide prerelease planning of health care and related services for all soon-to-be-released inmates.

inmate population and their anticipated health needs upon release.

- I. Congress should promote surveillance of selected communicable diseases, chronic diseases, and mental illnesses among inmates in all correctional jurisdictions. Appropriate Federal agencies in partnership with national health-related organizations should:
 - A. Develop surveillance guidelines to promote uniform national reporting of selected conditions to enhance epidemiologic research of these conditions and assist with accurate health care planning. Ensure that data collected in prisons and jails as part of the surveillance program are collected in the same manner as they are collected in the community.³ Surveillance guidelines should incorporate processes for protecting confidentiality of data.
 - B. Create a national correctional health care database.
 1. Develop standardized definitions and measures for reporting to assess the prevalence of selected communicable diseases, chronic diseases, and mental illnesses.⁴

2. Mandate national reporting of these prevalence data.

3. Design an information system and make it available for use by local, State, and Federal correctional authorities to measure and report the data with the ability to categorize the data by age, race, and gender.

- C. Produce statistical reports of local, State, and national rates of selected communicable diseases, chronic diseases, and mental illnesses in prisons and jails to aid in planning correctional and public health programs and allocating local resources.⁵

- D. Evaluate the utility of surveillance activities and implement improvements as appropriate.

Clinical guidelines

Clinical guidelines provide definitions and abbreviated decision trees for the diagnosis and management of various diseases and conditions. They guide the clinician in areas where scientific evidence of the value of selected interventions exists to improve survival and clinical outcomes and to reduce mor-

bidity and the cost of care. Clinical guidelines are widely used outside corrections.

II. Congress should promote the use of nationally accepted evidence-based clinical guidelines for prisons and jails. This will help assure appropriate use of resources to prevent, diagnose, and treat selected communicable diseases, common chronic diseases,⁶ and mental illnesses that are prevalent among inmates. Appropriate Federal agencies in partnership with national health-related organizations should:

- A. Ensure that the clinical guidelines are consistent with nationally accepted disease definitions and evidence-based guidelines used for the nonincarcerated population.⁷
- B. Disseminate the clinical guidelines to correctional health care professionals, public health agencies, and public policymakers.
- C. Update the clinical guidelines as often as needed.
- D. Develop standardized performance measures for State and local correctional authorities to determine adherence to nationally accepted clinical guidelines.
- E. Train correctional health and public health professionals in the use of these clinical guidelines and performance measures.
- F. Develop tools for correctional systems to assess over-prescribing and under-prescribing of psychotropic medications.

Immunizations

Immunizations prevent the development of a variety of communicable diseases in individuals. In the case of diseases such as hepatitis B, poliomyelitis, measles, mumps, or rubella, immunizations prevent the transmission of disease to susceptible individuals in the general population. Such immunizations are nationally accepted and promoted by the Centers for Disease Control and Prevention. Some immunizations are directly cost saving and others are highly cost effective.

III. Congress should establish and fund a national vaccine program for inmates to protect them and

the public from selected vaccine-preventable communicable diseases.

- A. The vaccination program should be similar to the National Vaccine Program for Children.
- B. The program should conform to the recommendations of the CDC's Advisory Committee on Immunization Practices (ACIP).⁸

National correctional health care literature database

To function competently, correctional health care clinicians require access to the medical literature, especially as it relates to correctional health care issues. Existing resources do not provide this level of specificity.

IV. Congress, through appropriate Federal agencies and health-related national organizations, should develop and maintain a national literature database for correctional health care professionals, including a compendium of policies, standards, guidelines, and peer-reviewed literature.

Ethical decisionmaking

Correctional health care professionals function in a uniquely restrictive environment with limited opportunity for peer review of medical policies and administrative actions. A national forum is needed to discuss issues such as confidentiality, informed consent, clinical management of hepatitis C⁹ and HIV, and the availability of biomedical research.

V. Congress should establish a national advisory panel on ethical decisionmaking among correctional and health authorities to assist those authorities in addressing ethical dilemmas encountered in correctional health care.

Eliminate barriers to inmate health care

In correctional facilities, health care professionals face unique barriers to the delivery of health services. These include constraints on policy, budgets, priorities, and staffing. Correctional institutions are positioned to provide individual care to inmates and protect the public health through aggressive health promotion and disease prevention efforts. At all levels of government, public policymakers should

recognize that eliminating barriers to health care for inmates provides long-term public health benefits.

VI. Congress, through appropriate Federal and State agencies and health-related national organizations, should identify and eliminate barriers to the successful implementation of public health policy.

- A. Reduce obstructions to effective public health programs within correctional facilities and in the community.
- B. Promote continuity of inmate health care by maintaining Medicaid benefits for eligible inmates throughout their incarceration.
- C. Promote continuity of ex-offender health care by mandating immediate Medicaid eligibility upon release.
- D. Provide incentives to jails and prisons to expand their alcohol and other drug treatment programs. These services should be gender specific and made available to inmates from admission through release, with special attention paid to inmates with both mental illness and substance abuse problems.

Correctional health care research

Too little is known about the epidemiology of disease in correctional populations and too little has been done to evaluate programs designed to improve inmate health.

VII. Congress, through appropriate Federal agencies and health-related national organizations, should support research in correctional health care to identify and address problems unique to correctional settings.

- A. Fund projects to evaluate models that emphasize creative, cost-effective options for continuity of care following release.
- B. Fund research programs to define effective health education and risk reduction strategies for inmates. These strategies need to deal with relevant differences between inmate and noninmate populations. The research programs should work through public, private, and community-based health care agencies.

- C. Fund research programs to identify correctional system barriers that prevent correctional health care staff from implementing prudent medical care and public health recommendations.

Improve delivery of health care

For a variety of reasons, the scope and content of correctional health care services vary.¹⁰ The quality of care is not as high as it might be, resulting in unnecessary morbidity, premature mortality, and increased costs.

VIII. Congress, through appropriate Federal agencies and medically based accrediting organizations, should promote improvements to the delivery of inmate health care.¹¹

- A. Require Federal, State, and local correctional systems to adhere to nationally recognized standards for the delivery of health care services in corrections.¹² These standards should include access to care, quality of care, quality of service, and appropriate credentialing of health care professionals.
- B. Provide sufficient resources for correctional systems to adhere to national standards.
- C. Weigh the correctional system's adherence to national standards for health care delivery whenever determining funding levels for the system.

Disease prevention

Primary prevention is designed to keep disease from occurring. Examples include lifestyle choices and vaccination against selected communicable diseases. Primary prevention is widely believed to be the best and most cost-effective use of health care dollars. In some cases, it is also cost saving—that is, the prevention program saves more money than it costs to implement. Secondary prevention (screening) is the early detection of disease that already exists but may not be apparent to the patient.¹³

IX. Congress, through appropriate Federal agencies and national organizations, should encourage primary and secondary disease prevention efforts.

- A. Promote primary disease prevention measures by requiring Federal, State and local correctional agencies to:
1. Provide all inmates with a smoke-free correctional environment. Offer tobacco cessation programs for all staff and inmates as a method of achieving tobacco-free facilities.
 2. Offer heart-healthy choices on institutional menus and in commissaries.
 3. Make daily aerobic exercise available to all inmates.
 4. Consistent with the recommendations of the ACIP, make hepatitis B vaccines available to all inmates, even when their length of incarceration is short or indeterminate.
 5. Screen all females for pregnancy. Test those women found to be pregnant for hepatitis, HIV infection, syphilis, gonorrhea, and chlamydia. Provide HIV treatment in HIV-infected mothers to prevent transmission of the disease to the newborn.
 6. Although not a correctional system responsibility, administrators should seek to collaborate with community health care providers to ensure the timely immunization of all infants born to mothers who test positive for hepatitis B.
 7. Offer scientifically based risk-reduction education on HIV infection and STD to all inmates.
- B. Promote secondary disease prevention measures by using nationally accepted evidence-based clinical guidelines as appropriate.
1. Provide hypertension, obesity, asthma, and seizure disorder screening for all prison inmates.
 2. Provide diabetes and hyperlipidemia screening for jail and prison inmates at high risk.
 3. Provide suicide prevention programs, including timely screening for inmates at high risk for suicide.
 4. Prevent the spread of tuberculosis.
 - a. Consistent with nationally accepted guidelines,¹⁴ routinely screen inmates for TB disease and infection, and provide preventive treatment for inmates with latent TB infection.
 - b. Promote the use of short-course preventive therapy (delivered over 2 months) in correctional settings.
 - c. Strengthen the link of TB control efforts between correctional facilities and public health departments.
 - d. On employment and annually thereafter, screen all correctional staff who have inmate contact for latent TB infection.
5. Prevent the spread of HIV infection.
- a. Encourage voluntary HIV counseling and testing of inmates.
 - b. Provide appropriate treatment for HIV-positive, pregnant inmates to prevent HIV transmission to their babies.¹⁵
6. Screen inmates for syphilis, gonorrhea, and chlamydia routinely upon reception at prisons and jails, and treat inmates who test positive for these infections.¹⁶
- ### Prerelease planning
- Many inmates are released into the community while still being treated for communicable and chronic diseases or mental illness. Ensuring continuity of care upon release can reduce health risks to the public such as in cases of tuberculosis and sexually transmitted diseases. Continuity of care upon release for inmates with co-occurring mental illness and substance abuse disorders can reduce the risk of illicit drug use in the community. It is cost effective to the community to provide continuity of care on release for inmates with chronic disease.
- X. Congress, through appropriate Federal agencies and national organizations, should encourage Federal, State, and local correctional facilities to provide prerelease planning for health care for all soon-to-be-released inmates.
- A. Address the medical, housing, and postrelease needs of inmates in prerelease planning, and make use of appropriate resources and new technologies.

- B. Coordinate discharge planning efforts between appropriate public agencies—such as correctional, parole, mental health, substance abuse, and public health agencies—to prevent disease transmission and to reduce society’s costs resulting from untreated and under-treated illness.

Recommended Actions by Government Agencies

The steering committee and expert panels recognized that many Federal agencies have a role in affecting the health status of soon-to-be-released inmates. Within the Department of Health and Human Services, for example, agencies such as the Centers for Disease Control and Prevention (CDC), the Health Resources and Services Administration (HRSA), the Substance Abuse and Mental Health Services Administration (SAMHSA), the National Institute on Drug Abuse (NIDA), the Office of Women’s Health (OWH), the Public Health Service (PHS), the Indian Health Service (IHS), and the Office of Minority Health (OMH) are actively engaged in health services programs that impact on inmates. In addition, within the Department of Justice, agencies such as the National Institute of Justice (NIJ), the Immigration and Naturalization Service (INS), the Bureau of Prisons (BOP) including the National Institute of Corrections (NIC), the Corrections Program Office (CPO), and the Office of Justice Programs (OJP) conduct programs and activities that ultimately influence inmate health. Finally, the Office of the Surgeon General (OSG) and the White House Executive Office of National Drug Control Policy (ONDCP) also impact the health care of inmates.

The steering committee and expert panels recommend that Congress provide the necessary authorization, funding, and other assistance to the appropriate agencies to implement the following recommendations.

- I. The Secretary of the U.S. Department of Health and Human Services (DHHS) should direct appropriate agencies to collaborate with other agencies in analyzing the potential economic benefits to the community of early diagnosis and treatment of communicable diseases, chronic diseases, and mental illnesses.
- II. The Secretary should direct CDC to collaborate with NIJ, NIC, CPO, and other Department of Justice divisions in developing tools to assist State and local agencies in deciding when and whom to screen for communicable diseases in correctional settings.
- III. The Secretary should direct all appropriate agencies within the department to work toward reducing interagency regulatory and bureaucratic barriers to testing and counseling for HIV, TB, and STDs among inmates.
- IV. The Secretary and the Attorney General should involve correctional health professionals in public health planning and the evaluation of correctional health care programs.
- V. The Secretary and the Attorney General should direct appropriate agencies to support field tests of innovative medical information systems to improve the continuity of care for inmates transferred between correctional facilities or released into the community. These efforts should concentrate on removing barriers that impede the transfer of appropriate medical information.
- VI. The Secretary and the Attorney General should direct appropriate agencies to develop educational programs to inform policymakers and the public about the public health and social benefits of investing in health care for inmates.
- VII. A Federal interagency task force, currently established and co-chaired by CDC and NIJ, should report annually to the Secretary and the Attorney General on the status of correctional health care in the Nation and on progress made toward implementing the recommendations included in this report.

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Communicable Disease Panel

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Appendix B. Biographies of Contributors

FREDERICK L. ALTICE, M.D., is associate professor of medicine, AIDS Program, at Yale University School of Medicine. He is also director of the HIV in Prisons Program in the State of Connecticut and the Community Health Care Van Project. A graduate of Emory University, he is a researcher, writer, and lecturer who is active in the American Public Health Association, the Infectious Disease Society of America, and the Society for Correctional Physicians. He is also one of the founders of HEPP News (HIV Education Prison Project), a forum for correctional problem solving. He has written numerous articles and papers. His chapters, “Overview of HIV Care” and “Use of Antiretroviral Agents in the Treatment of HIV,” in the 1998 publication *Clinical Practice in Correctional Medicine* were cited for distinction. He served as a member of the NCCHC–NIJ expert panel on communicable disease.

B. JAYE ANNO, Ph.D., CCHP–A, is a criminologist specializing in correctional health administration and compliance with national correctional health care standards. She operates a correctional health care consulting firm. Dr. Anno is an experienced researcher, lecturer, and author in correctional health care. She is the principal author of the major reference book for the field, *Prison Health Care: Guidelines for the Management of an Adequate Delivery System*, and has written numerous other articles and reports on correctional health care topics. She is a past editor of the *Journal on Correctional Health Care* and currently writes a column, “Q & A on NCCHC Standards,” for the quarterly newspaper *CORRECTCARE*. Dr. Anno received the Distinguished Service Award of the American Correctional Health Services Association and the NCCHC’s Award of Merit. In 1999, she received the “Award of Excellence in Correctional Health Care Communications” from the National Commission on Correctional Health Care. She served on the steering committee of the NCCHC–NIJ project on *The Health Status of Soon-To-Be-Released Inmates*.

CARL C. BELL, M.D., FAPA, CCHP, FAC Psych., is president and chief executive officer, Community Health Council & Foundation, Inc., and a Clinical professor of psychiatry and public health, University of Illinois. He is coprincipal investigator of the Chicago African-American Youth Health Behavior Project, Health Research and Policy Center. He is a collaborator of the Chicago HIV Prevention and Adolescent Mental Health Project (CHAMP) and a coprincipal Investigator of the Informed Consent in Urban AIDS and Mental Health Research Project, University of Illinois Department of Psychiatry. He is a founding and current member and past board chairman of the National Commission on Correctional Health Care. During his 30 years of psychiatric practice, Dr. Bell has published more than 200 articles on mental health issues. He is author of many publications including *Getting Rid of Rats: Perspectives of a Black Community Psychiatrist*, and coauthor of *Suicide and Homicide Among Adolescents*. He is a member of the Violence Against Women Advisory Council appointed by Janet Reno, Attorney General, and Donna Shalala, Secretary, Department of Health and Human Services, 1995–2000. He served as a member of the NCCHC–NIJ expert panel on mental illness.

ERAN BELLIN, M.D., is the director of the Montefiore Medical Center Department of Outcomes Analysis and Decision Support and an associate professor of epidemiology and social medicine at the Albert Einstein College of Medicine. From 1974 to 1977, Dr. Bellin directed the Montefiore Rikers Island Health Program, which provided ongoing medical care for approximately 100,000 inmates. He served as director of infectious disease services on Rikers from 1989 to 1994, developing the plans for and serving as consultant to the 140-bed negative pressure respiratory isolation facility built in the jail. His case control study published in 1993 in the *Journal of the American Medical Association* demonstrated the risk of clinical tuberculosis from incarceration in the New York City jail. He served

as a member of the NCCHC–NIJ expert panel on communicable disease.

ELISSA P. BENEDEK, M.D., is clinical professor of psychiatry at the University of Michigan Medical Center. She is past president of the American Psychiatric Association (1990–91). She served as director of research and training at the Center for Forensic Psychiatry in Ann Arbor, Michigan, for 25 years. The center trains psychiatric fellows to work in correctional psychiatry and forensic psychiatry. Her research interest focuses on violence and violent behavior in child, adolescent, and adult populations. She served as a member of the NCCHC–NIJ expert panel on mental illness.

R. SCOTT CHAVEZ, M.P.A., PA–C, CCHP, is vice president for the National Commission on Correctional Health Care and served as project coordinator for the NCCHC–NIJ *The Health Status of Soon-To-Be-Released Inmates* project. Mr. Chavez’s responsibilities with NCCHC include technical assistance on health care standards, quality improvement, risk management, and organizational development in correctional health care systems. Mr. Chavez is principal investigator for a CDC grant to the NCCHC on “Hepatitis Curricula for Correctional Officers and Inmates.” He has authored chapters on physician assistant utilization in corrections for *Health Care Management Issues in Corrections* and *Physician Assistant: A Guide to Clinical Practice*. He has a master’s degree in public administration from the University of Nebraska, Omaha, and is a Ph.D. candidate at the Health Services Division of Walden University. His dissertation is on the differences, trends, and predictors of quality health care in public and private correctional health care systems.

JOHN H. CLARK, M.D., M.P.H., CCHP–A, is the chief medical officer for the Los Angeles County Sheriff’s Department. Dr. Clark graduated from Meharry Medical College in 1971 and trained at the University of Southern California Medical Center and Martin Luther King Jr., General Hospital in Los Angeles, California. He received a master’s in health services and hospital administration from the University of California–Los Angeles. His professional activities include the American Correctional Health Services Association (Past President), American Jail Association (Board of Directors), and he is a Certified Correctional Health

Professional–Advanced. Dr. Clark has published on a variety of topics in the correctional health profession including managing tuberculosis, paraplegics, inmate self-medication programs, and developing HIV disease policies for the correctional environment. He has lectured nationally and has served as a consultant and expert witness dealing with civil rights litigation related to correctional health care issues. He served as a member of the NCCHC–NIJ expert panel on communicable disease.

THOMAS J. CONKLIN, M.D., CCHP–A, is currently director of health services at the Hampden County Correctional Center in Ludlow, Massachusetts. He has developed a public health model of care for corrections that effectively stresses assessment, effective treatment, education, prevention, and continuity of care by referring inmates to their neighborhood health centers following discharge. Dr. Conklin is board certified in psychiatry and is certified in administration by the American Psychiatric Association. Dr. Conklin was the first chairman of the department of psychology and neurology in the Touro Infirmary in New Orleans, Louisiana. He is a fellow of the American Psychiatric Association. He also has numerous publications and presentations focusing on health care in hospitals and in corrections. He served as a member of the NCCHC–NIJ expert panel on mental illness.

CHERYL CRAWFORD, M.P.A., J.D., is Deputy Director, Office of Development & Communications, National Institute of Justice (NIJ). NIJ was established by Congress to develop and disseminate knowledge that will reduce crime, enhance public safety, and improve the administration of justice. She coordinates project management and integrative services for three divisions (Communications, Development, and International) in NIJ’s Office of Development & Communications. From 1987 to 1998, Ms. Crawford managed NIJ’s correctional health care research and dissemination portfolio. She has spoken and written extensively on correctional health care issues, including the impact of HIV/AIDS and TB in corrections and the costs of correctional health care. Currently, she manages the Reentry Partnership Initiative, a multiagency, multisite effort focused on transitioning offenders from prison to community; this effort includes health components. She received her B.A. in criminal justice from the

University of Wisconsin–Platteville and her master's in public administration and J.D. from the University of Wisconsin–Madison. Ms. Crawford served as a member of the steering committee of the NCCHC–NIJ project on *The Health Status of Soon-To-Be-Released Inmates*.

PHYLLIS E. CRUISE, B.A., received her B.A. in education in psychology from Southern Illinois University. She has been employed at Centers for Disease Control and Prevention since 1978. She is the senior public health advisor assigned to the Texas Department of Health Tuberculosis Elimination Division. Ms. Cruise developed and implemented the Texas legislation that mandates TB screening for staff and inmates. Ms. Cruise supervises the project that monitors the mandated screening activities, and includes contact, followup, tracking and continuity of care of inmates and staff with active TB disease or who have been exposed to active tuberculosis. Ms. Cruise is the author of *Prevention and Control of Tuberculosis in Correctional Facilities—Recommendations of the Advisory Council for the Elimination of Tuberculosis*. She has appeared as an expert panel member and developed national satellite programs, training seminars, and videos addressing issues affecting the control of tuberculosis in correctional facilities. She has also provided consultation to local, State and Federal correctional agencies. She served as a member of the NCCHC–NIJ expert panel on communicable disease.

HAZEL D. DEAN-GAITOR, Sc.D., M.P.H., earned her B.S. in biology from Spelman College and her M.P.H. and Sc.D. from Tulane University School of Public Health and Tropical Medicine. She is an epidemiologist at the Centers for Disease Control and Prevention (CDC) in the National Center for HIV, STD, and TB Prevention. She is responsible for formulating, implementing, and evaluating CDC's national HIV/AIDS surveillance system among racial/ethnic minorities and special populations (e.g., incarcerated persons). She conducts complex statistical and epidemiological analyses of racial/ethnic minorities and special populations collected through this surveillance system. She serves as the HIV/AIDS Surveillance Branch's primary technical resource on surveillance of racial/ethnic minorities and special populations. Dr. Dean-Gaitor represents the CDC on the United States Department of Health and Human Services Crisis Response

Team to Combat HIV/AIDS in Racial and Ethnic Minority Populations and the NCCHC–NIJ expert panels on Communicable and Chronic Disease. She has written or contributed to numerous reports, papers, and presentations on HIV/AIDS, with special emphasis on persons reported from correctional settings, trends among foreign-born persons with AIDS, and AIDS in bisexual minority men.

ANNE DE GROOT, M.D., is the head of the TB/HIV research laboratory at the International Health Institute, where she and colleagues are working on the development of HIV and TB vaccines. She received her B.A. from Smith College in 1978 and her M.D. from the University of Chicago. She trained in internal medicine at the New England Medical Center in vaccine research, and received her specialized training in infectious diseases at the New England Medical Center. She is a faculty member of the Brown University School of Medicine. Dr. De Groot has provided HIV care to incarcerated individuals at a number of different corrections institutions since 1989. She founded and directed the HIV clinic at the Massachusetts Correctional Institution at Framingham. She also served on the Governor's AIDS Task Force. Dr. De Groot has been working on developing a standard of care for HIV-infected and at-risk incarcerated women. She founded and cochairs the HIV Education Prison Project (HEPP) at the Brown University AIDS Program, which publishes a monthly newsletter on HIV management in prisons and jails that reaches more than 2,000 correctional HIV professionals. She served as a member of the NCCHC–NIJ expert panel on communicable disease.

LORI DE RAVELLO, M.P.H., has more than 9 years of experience in international and domestic public health program operations and management. Since 1996, she has worked as a public health advisor in the Division of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion at the Centers for Disease Control and Prevention in Atlanta, Georgia. Her duties include that of project officer for an HIV-prevention training intervention in U.S. reproductive health settings, primary investigator for a retrospective research study looking at the reproductive health status of pregnant inmates in the State of Georgia, and chair of the Cross-Center Corrections Work Group. She has a bachelor's degree in international relations/Latin

American studies from the University of New Mexico and a master's degree in international public health with a concentration in administration and management from the University of Alabama at Birmingham. She served as a U.S. Peace Corps volunteer in Honduras from 1990 to 1991. Ms. de Ravello served as a member of the NCCHC–NIJ expert panel on chronic disease.

PETER FINN, M.A., is a research associate at Abt Associates Inc. He received his B.A. in history from Harvard College and M.A. in history from the University of California at Berkeley. The U.S. Department of Justice, National Institute of Justice (NIJ), has published his series of reports on life skills programs for prison and jail inmates and job placement programs for ex-offenders. In 2000, NIJ published *Addressing Correctional Officer Stress: Programs and Strategies*, a companion report to his study, *Developing a Law Enforcement Stress Program for Officers and Their Families*, also published by NIJ. Mr. Finn was part of the research team that visited prisons and interviewing health care administrators and providers as part of Abt Associates' comprehensive assessment of prison health services in Washington State. He served as technical writer for the NCCHC–NIJ *The Health Status on Soon-To-Be-Released Inmates* project.

JUARLYN L. GAITER, Ph.D., is a supervisory behavioral scientist in the Behavioral Intervention Research Branch at the Center for Disease Control and Prevention. She received her master's and Ph.D. in experimental child psychology from Brown University and certification as a clinical psychologist at the George Washington University. Dr. Gaiter initiated and established the first HIV/AIDS Prevention research project for prison populations at the CDC. She has written and coauthored articles in this area and has held a number of research and management positions during her 10-year career in public health. Her research interests focus on maternal and child health, faith, health and healing, pediatric and developmental psychology, and the effects of racism on health outcomes for African-Americans. She served as a member of the NCCHC–NIJ expert panel on mental illness.

ANDREW L. GOLDBERG, M.A., is a social science analyst in the Office of Research and Evaluation

at the National Institute of Justice. He received his B.A. from Drew University in political science in 1990 and his M.A. from the University at Albany (NY) in criminal justice in 1992. At NIJ, Mr. Goldberg's areas of focus include correctional health care, sentencing, and adjudication research projects. He served as a member of the steering committee for the NCCHC–NIJ project on *The Health Status of Soon-To-Be-Released Inmates*.

RODERIC GOTTULA, M.D., is an assistant professor in the department of family medicine at the University of Colorado Health Sciences Center. He is immediate past president of the Society of Correctional Physicians. He received his M.D. at the University of Nebraska College of Medicine in 1975, and completed his family medicine residency at Iowa Lutheran Hospital in Des Moines, Iowa, in 1978. From 1991 to 1995, Dr. Gottula served as the medical director for the Colorado Department of Corrections. He has remained active in the area of health care and criminal justice. He has lectured at national and local conferences on criminal justice and health care. He served as a member of the NCCHC–NIJ expert panel on chronic disease.

ROBERT B. GREIFINGER, M.D., is a medical management consultant. His work focuses on the design, management, quality improvement, and utilization management systems in managed care organizations and correctional health care systems. He has extensive experience in the development and management of complex community and institutional health care programs, and demonstrated strengths in leadership, negotiation, communication, and the bridging of clinical and public policy interests. His current clients include managed care organizations and state and local correctional systems. He has a variety of assignments as a court-appointed expert to investigate and design remedies for ailing correctional health care systems. Dr. Greifinger has published extensively in the area of correctional health care. He is a frequent speaker on public policy, communicable disease control, and quality management in corrections. He works closely with the National Committee for Quality Assurance (NCQA) and sits on a variety of national health care advisory committees. Through NCCHC, Dr. Greifinger is the principal investigator for the NIJ-funded project on *The Health Status of Soon-To-Be-Released Inmates*.

THEODORE M. HAMMETT, Ph.D., is a Vice President at Abt Associates Inc., a leading policy research firm with headquarters in Cambridge, Massachusetts. Dr. Hammett's work has focused on public health, corrections, and criminal justice. Since 1985, he has directed a series of nine national studies of HIV/AIDS, STDs, and TB in correctional facilities under the joint sponsorship of the National Institute of Justice, U.S. Department of Justice and the Centers for Disease Control and Prevention (CDC). He is coprincipal investigator of the evaluation and program support center for seven grants to States for enhancement of HIV prevention, treatment, and continuity of care in correctional settings. He is also directing an evaluation of the Hampden County (Massachusetts) correctional centers public health model of correctional health care. Dr. Hammett has spoken before national and international conferences, testified before the National Commission on AIDS, and participated in an invited consultation on HIV/AIDS in Prisons at the World Health Organization in Geneva. He has published many books, articles, and reports on HIV/AIDS, TB, and STDs as they affect criminal justice agencies, inmates, and drug-involved populations. Dr. Hammett served as a member of the NCCHC–NIJ expert panel on communicable disease.

EDWARD A. HARRISON, M.M., CCHP, is president of the National Commission on Correctional Health Care, overseeing a not-for-profit organization that develops programs and policies aimed at improving the delivery and quality of health services in detention and correctional facilities throughout the United States. He has spoken and written extensively on public health and correctional health care matters, addressing State legislatures; county commissioners; the United States Congress; and public and private local, State, and national agencies. In advocating higher quality correctional medical services, Mr. Harrison has focused the NCCHC's resources on improved standards for health services delivery, more educational opportunities and better recognition for correctional health care professionals, increased quality assessment and improvement programs for the field, and greater research and better understanding of all aspects of correctional health care. He earned his master's of management from Northwestern University's J.L. Kellogg Graduate School of Management. Mr. Harrison served as a member of

the steering committee for the NCCHC–NIJ project on *The Health Status of Soon-To-Be-Released Inmates*.

HOLLY A. HILLS, Ph.D., is an associate professor in the department of community mental health at the Louis de la Parte Florida Mental Health Institute, University of South Florida (USF). She is a licensed clinical psychologist who received her Ph.D. in clinical and health psychology from the University of Florida. Since joining the USF faculty in 1990, Dr. Hills has conducted research and supervised clinical work that focused on individuals with comorbid mental illness and substance use disorders. Over much of the past decade she has worked with the Florida Department of Corrections as a lead consultant in the development and evaluation of prison-based residential treatment programs for male and female inmates with co-occurring disorders. Dr. Hills has been a collaborator and consultant on the national GAINS Center project, a Federal partnership that promotes improved services for people with co-occurring disorders in the justice system. Her recent efforts include being awarded funds by the Center for Substance Abuse Treatment (CSAT) as a coinvestigator to develop a practice and research collaborative (PRC) in the Tampa Bay area. This initiative seeks to improve collaboration among researchers, practitioners, policymakers, and criminal justice personnel who work with substance-involved individuals in the justice system. Dr. Hills served as a member of the NCCHC–NIJ expert panel on mental illness.

MARTIN F. HORN, M.A., is the former Pennsylvania Secretary of Corrections. He has 30 years of varied corrections experience, having served as a parole officer, senior parole officer, director of parole operations and executive director and chief operating officer for the New York State Division of Parole. He also was assistant professor of criminal justice at State University College at Utica, N.Y. Mr. Horn served as director of temporary release, assistant commissioner, and prison superintendent for the New York Department of Correctional Services. He earned a bachelor's in government from Franklin and Marshall College in Lancaster, Pennsylvania, and a master's in criminal justice from John Jay College, City University of New York. He serves as vice chairman of the Law Enforcement and Corrections Technology Advisory Committee, and is a member of the American Correctional Association, the

Association of State Corrections Administrators, and the Pennsylvania Prison Wardens Association. Mr. Horn served as a member of the NCCHC–NIJ expert panel on mental illness.

CARLTON A. HORNUNG, Ph.D., M.P.H., is professor of medicine; director of the Center for Epidemiology and Clinical Investigation; and director of the clinical research, epidemiology, and statistics training program at the University of Louisville School of Medicine. Dr. Hornung completed his bachelor's at the State University of New York at Buffalo, his master's and Ph.D. degrees at the Maxwell Graduate School of Syracuse University, and his postdoctoral and master's of public health training at the Johns Hopkins University. Before moving to the University of Louisville in 1997, Dr. Hornung was professor of medicine and adjunct professor of epidemiology and biostatistics at the University of South Carolina. He has served as visiting professor of medicine at the University of Medicine and Pharmacy in Cluj-Napoca, Romania, and as member of the Romanian National Advisory Committee on Cardiovascular Disease. His research interests focus on atherosclerotic vascular disease. He was a vanguard investigator for the NIH Antihypertensive, Lipid Lowering to Prevent Heart Attack Trial (ALLHAT) and a coinvestigator in the New Approaches to Coronary Intervention (NACI) Registry. He has authored or coauthored more than 70 peer-reviewed publications and more than 200 abstracts. Dr. Hornung served as a member of the NCCHC–NIJ expert panel on chronic disease.

T. STEPHEN JONES, M.D., M.P.H., has been the associate director for science of the Centers for Disease Control and Prevention (CDC), Division of HIV/AIDS Prevention—Intervention Research and Support since 1997 and has been the special assistant for substance abuse and HIV prevention in the Division of HIV/AIDS Prevention since 1990. He has worked on HIV prevention related to drug injection since 1987, with major interests in HIV serologic studies of injection drug users (IDUs), HIV counseling and testing in drug treatment programs, evaluation of syringe exchange programs, and making sterile injection equipment more available to IDUs. From 1979 to 1987 he worked on CDC international health programs promoting childhood immunization in Latin America and child survival programs in Africa. He participated in the World Health Organization's smallpox eradication programs

in India, Bangladesh, and Somalia. He received his M.D. from Columbia University, and his M.P.H. at the University of Michigan. Dr. Jones served as a member of the NCCHC–NIJ expert panel on communicable disease.

CAPTAIN NEWTON KENDIG, M.D., Medical Director, Federal Bureau of Prisons (BOP), began his career with the Bureau of Prisons as the chief physician and the chief of infectious diseases at the Central Office in 1996. Before transferring to the BOP, Captain Kendig was the medical director of the Maryland Division of Corrections from 1991 to 1996. He completed his internship/residency in internal medicine at the University of Rochester Strong Memorial Hospital in Rochester, New York, in 1986. He completed his fellowship in infectious diseases at Johns Hopkins University in Baltimore, Maryland, and was a clinical associate of the U.S. Public Health Service at the National Institute of Aging, National Institutes of Health, Baltimore, Maryland. Captain Kendig has received numerous awards, including Outstanding Service Medal 1998, Outstanding Unit Citation 1998, Commendation Medal 1997, Unit Commendation 1997, and Alpha Omega Alpha Honor Society 1983. Captain Kendig served as a member of the NCCHC–NIJ expert panel on communicable disease.

LAMBERT N. KING, M.D., Ph.D., is the medical director and senior vice president for medical and academic affairs of St. Vincent's Hospital and Medical Center of New York. He is also vice dean and professor of clinical community and preventive medicine at New York Medical College. Dr. King received his B.A. in the honors program from the University of Kentucky where he was elected to Phi Beta Kappa. Dr. King received his M.D. and Ph.D. in experimental pathology from the University of Chicago in 1971. He completed a residency in internal medicine at Cook County Hospital in 1974 and is a Diplomate of the American Board of Internal Medicine. He is a Fellow of The New York Academy of Medicine. Dr. King has made numerous presentations and published extensively concerning health care delivery needs and systems in jails and prisons. He contributed to the identification of B19 parvovirus as a treatable cause of aplastic anemia in patients with HIV infection. Dr. King has been a consultant or director for numerous advisory boards and committees, and has served as a member of a court-appointed physician panel and as special master reviewing the

medical care provided at Menard Correction Center in Illinois. He has served as cochairman of the New York State AIDS Center Liaison Committee since 1988 and the New York AIDS Center Advisory Committee since 1997. Dr. King served as a member of the NCCHC–NIJ expert panel on chronic disease.

JULIE R. KRAUT, Ph.D., is a prevention effectiveness postdoctoral fellow at the Centers for Disease Control and Prevention. She received her Ph.D. in economics from Pennsylvania State University in 1998. She is based in a health services research and evaluation group in the Division of Sexually Transmitted Diseases (STD) Prevention. During her tenure at CDC, she has conducted economic and demographic analyses of access to care and health care utilization issues, and taught economic analysis methods including cost-benefit, cost-effectiveness, and cost-utility analysis methods. Dr. Kraut was a facilitator for the preconference skill-builder at the Prevention '99 Conference and for the Prevention Effectiveness Methods Course taught at CDC. Dr. Kraut presented at the 1999 Population Association of America Meeting and did a poster presentation at the 1999 International Society for Sexually Transmitted Diseases Research Meeting. Her work on estimating the costs and benefits of various screening and treatment strategies for STDs in incarcerated populations resulted in her serving as a consultant to the NCCHC–NIJ expert panel on communicable disease.

ROBERT LYERLA, Ph.D., is an epidemiologist in the Hepatitis Branch, Division of Viral and Rickettsial Diseases at the Centers for Disease Control and Prevention. He received his B.S. in biochemistry from Bradley University, and his Ph.D. in Statistics from Southern Illinois University. He is a former member of the CDC's Epidemic Intelligence Service, Class of 1995, serving in Russia (diphtheria epidemic), Copenhagen, and Madrid as well as with the Atlanta Olympic Games Health Staff. His research focuses on hepatitis in dialysis units, among injecting drug users, incarcerated individuals, and other high-risk groups. He is an officer in the Commissioned Corps of the United States Public Health Service. Dr. Lyerla served as a member of the NCCHC–NIJ expert panel on communicable disease.

MAUREEN MANGOTICH, M.D., M.P.H., is a medical director for Pfizer Health Solutions (PHS). She works on clinical content development for a proprietary disease management application and other custom development projects and provides clinical sales and implementation support for PHS disease management programs. Before joining Pfizer, Dr. Mangotich developed procedure-based appropriateness guidelines at Value Health Sciences (now Protocare Sciences). Her medical management experience includes positions at Health Alliance Plan (associate medical director for quality improvement) and Aetna Health Plans (corporate medical director for provider quality). She frequently lectures on quality improvement in health care. She has been a National Committee for Quality Assurance (NCQA) surveyor since 1991, is a member of the NCQA Review Oversight Committee (ROC), and serves on the planning committee and faculty for NCQA's Credentialing and Delegation conferences. Dr. Mangotich is a board-certified general internist who completed her internal medicine residency and a master's in public health at University of California, Los Angeles. She received her M.D. from the University of Arizona. She served as a member of the NCCHC–NIJ expert panel on chronic disease.

FRED A. MARTICH, B.S., has been the deputy chief of the Behavioral Interventions and Research Branch, Division of STD Prevention, Centers for Disease Control and Prevention in Atlanta, Georgia, since October 1998. He has served as chairman of CDC's Cross Centers Correctional Work Group and is currently a member of the Planning Committee for this group. Before his current position, he was deputy chief of HIV Prevention Operations for 2 years. Before that, he served as project officer for STD/HIV prevention with State health departments and community-based organizations for 10 years. He worked in STD prevention field assignments with CDC for 23 years in Ohio, Chicago, Wisconsin, and Alabama. He received his B.S. from Duquesne University in Pittsburgh, Pennsylvania, and attended graduate studies in public administration at Oshkosh University in Oshkosh, Wisconsin. He served as a member of the NCCHC–NIJ expert panel on communicable disease.

ERIC E. MAST, M.D., M.P.H. is chief of the Surveillance Unit, and acting chief of the Prevention Research Unit in the Hepatitis Branch at the Centers for Disease Control and Prevention. He received his A.B. in Biology at the University of Illinois in Urbana, his M.D. at the University of Illinois in Chicago/Peoria, and his M.P.H. at the Harvard School of Public Health. His postgraduate training included a pediatric residency at the University of Wisconsin and a preventive medicine residency at the Centers for Disease Control and Prevention (CDC). From 1985 to 1987 he was medical program director for Save the Children in UmRuwaba, Sudan. He joined the CDC in 1987 as an epidemic intelligence service officer and he has worked in the Hepatitis Branch since 1990. He has published numerous articles on the epidemiology and prevention of viral hepatitis. Dr. Mast served as a member of the NCCHC–NIJ expert panel on communicable disease.

W. PAUL MCKINNEY, M.D., is the V.V. Cooke Professor of Medicine and chief of the Division of General Internal Medicine and Geriatrics, Department of Medicine, at the University of Louisville. He is also the director, Center for Health Services and Policy Research, and acting director of the Institute for Public Health Research at that institution. Dr. McKinney completed his M.D. at the University of Texas/Southwestern Medical School at Dallas and his internship and residency at the University of Minnesota, Minneapolis-St. Paul. From 1996 through 1999 he was editor of the *SGIM Forum*, the national newsletter for the Society of General Internal Medicine and served as an ex officio member of their council. In 1999, he also served as a U.S. Public Health Service Primary Care Policy Fellow representing SGIM. He has active interests in health services research and research involving medical informatics, clinical epidemiology, and preventive services delivery. Since 1998, Dr. McKinney has been a liaison member of the Advisory Committee on Immunization Practices of the Centers for Disease Control and Prevention. He served as a member of the NCCHC–NIJ expert panel on chronic disease.

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33 years and have included diverse public health program development and management experiences from grassroots community crossroads to the large urban centers of Chicago and New York City. Before his assignment with CDC in Atlanta, he spent 12 years with the New York City Department of Health as Program Coordinator STD Control, AIDS Program Director, and Assistant Director and Director of the Bureau of STD Control. As Special Assistant for Corrections and Substance Abuse, he works to develop and strengthen effective intra-agency collaborations between the Department of Health and Human Services and Department of Justice agencies, and national, State, and local organizations to effect policies that will improve access and continuity of care for HIV, STD, and TB among drug users and incarcerated populations. Mr. Miles received his master's of public administration from Baruch College, City University of New York, and a B.A. from the University of Kansas. He served on the steering committee for the NCCHC–NIJ project on *The Health Status of Soon-To-Be-Released Inmates*.

MARILYN C. MOSES, M.S., has been a social science program analyst with the National Institute of Justice (NIJ) since June 1991. Ms. Moses has been the NIJ program manager for “The Health Status of Soon-To-Be-Released Inmates” project. Ms. Moses has a bachelor's in paralegal studies from the University of Maryland and a master's in criminal justice from the University of Baltimore. She is working on a second master's in publication design. Ms. Moses specializes in correctional health care, female offenders, children of incarcerated parents, correctional industry enhancement, the development of public-private criminal justice partnerships, correctional training and education, offender job training and placement, offender reentry, mental health in corrections, correctional officer stress, and rural crime and policing. Ms. Moses has published widely in these areas. Ms. Moses was cited as one of the “Best in the Business” by the American Correctional Association for her work on behalf of children of incarcerated parents. She is the creator and editor for Civic Research Institute's *Offender Employment Report*—a first-of-its-kind publication that is published six times per year. She served on the steering committee for the NCCHC–NIJ project on *The Health Status of Soon-To-Be-Released Inmates*.

PRADAN A. NATHAN, M.D., is the associate division director for health services at the Texas Department of Criminal Justice. He received his medical degree from Madurai University Medical College in India. He completed residencies in psychiatry at the National Institute of Mental Health and Neurosciences in India and the Texas Research Institute of Mental Sciences at Houston, Texas, and he completed a fellowship in forensic psychiatry at University Hospitals, Cleveland, Ohio. Dr. Nathan has worked in court psychiatric clinics, community mental health centers and state hospital systems, and private practice. He has been associated with the Texas Department of Criminal Justice as a unit psychiatrist, a regional psychiatrist, and a clinical director of a 550-bed psychiatric inpatient unit. He is an instructor in institutional and correctional health, Departments of Preventive Medicine and Community Health at University of Texas Medical Branch at Galveston. He is board certified in general psychiatry and forensic psychiatry by the American Board of Psychiatry and Neurology. Dr. Nathan served as a member of the NCCHC–NIJ expert panel on mental illness.

MARGARET J. OXTOBY, M.D., is director of the Bureau of Tuberculosis Control at the New York State Department of Health. Since coming to the TB Program in 1993, she has worked closely with the New York State Department of Correctional Services in developing effective TB prevention and control activities in the state prison system. She received her B.A. from Harvard University and her M.D. from Case Western Reserve University. She completed a pediatric residency at Duke University and a preventive medicine residency at the Centers for Disease Control and Prevention, where she worked as a medical epidemiologist focusing first on bacterial diseases and later on pediatric AIDS. Dr. Oxtoby served as a member of the NCCHC–NIJ expert panel on communicable disease.

JOSEPH E. PARIS, Ph.D., M.D., CCHP, obtained his M.D. from Boston University and is board certified in internal medicine. He began his career in correctional medicine in 1985 in the Florida Department of Corrections. In 1995, he came to the Georgia Department of Corrections in Atlanta and became statewide medical director. Dr. Paris is a founding member and the 1999–2000 President of the Society

of Correctional Physicians. He is a past president of the Florida Chapter of the American Correctional Health Services Association (ACHSA), a Certified Correctional Health Professional, and the author of more than 50 specialized correctional publications or national presentations, including three chapters in *Clinical Practice in Correctional Medicine*. He organized and hosted the 1999 ACHSA Multidisciplinary Conference in Atlanta, Georgia. Dr. Paris served as a member of the NCCHC–NIJ expert panel on chronic disease.

MICHAEL PUISIS, D.O., is corporate medical director for Addus HealthCare's Correctional Division. He is the editor of *Clinical Practice in Correctional Medicine*. He participated on the task force for standards revision for the 1996 NCCHC jail standards and served on the committee to revise the correctional health care standards for the American Public Health Association. Dr. Puisis served as a member of the advisory board for the evaluation of the Centers for Disease Control and Prevention guidelines for TB control in jails in 1999. Dr. Puisis served as a member of the NCCHC–NIJ expert panel on chronic disease.

DIANNE RECHTINE, M.D., CCHP–A, is a medical executive director for the Florida Department of Corrections. Her duties include managing the health care for approximately 15,000 offenders housed in several major institutions. Dr. Rechline received her undergraduate and medical education at West Virginia University. She is a Fellow of the American Academy of Family Physicians and practiced in southwest Florida before coming to work for the prison system 14 years ago. She has been a physician surveyor for the National Commission on Correctional Health Care for several years and serves on their Surveyor Advisory Committee. She has served as a member of the Standards Revision Committee for the American Correctional Association. Dr. Rechline is a charter member of the Society of Correctional Physicians and serves as chairman of the Council of Chapters of the American Correctional Health Services Association. She is certified as a Correctional Health Professional and has achieved Advanced status. She is chairman of the Florida Department of Corrections Continuing Medical Education, was chairman of the Committee for Chronic Care, and has been a faculty member of

the Mini-Residency Program for Correctional HIV since its inception 3 years ago. Dr. Rehtine served as a member of the NCCHC–NIJ expert panel on chronic disease.

BETTY RIDER, M.A., M.S., is director of managed care services for the North Carolina Division of Prisons Health Services Section. Her correctional health care experience includes senior management positions with major national managed care companies providing health care to correctional facilities and the uniformed services. In 1999 Ms. Rider served on the joint CDC–National Tuberculosis Center task force that developed new guidelines for TB education/training in corrections. She is an associate editor of *HEPP News*, a national journal published by the Brown University School of Medicine's Correctional HIV Program. She has presented and published extensively on correctional managed care issues, pharmacoconomics of antiretroviral therapies, and correctional health care delivery systems. Ms. Rider received a M.S. in healthcare administration from Trinity University, a M.A. in counseling psychology from Eastern Kentucky University, and a B.A. in social science/economics from Trinity University. She is a member of the American Correctional Association, the American Correctional Health Services Association, the American College of Health Care Executives, and the Healthcare Financial Management Association. She is a member of the National Minority HIV Council's advisory board and served as a member of the NCCHC–NIJ expert panel on communicable disease.

CLYDE B. SCHECHTER, M.A., M.D., is director of medical education and associate professor in the Department of Community & Preventive Medicine at Mount Sinai School of Medicine, New York City. He received his B.A. and M.A. in mathematics and his M.D. from Columbia University. He is board certified in internal medicine, general preventive medicine, and public health. He has published extensively on simulation modeling of screening and treatment of chronic diseases including hypertension, tuberculosis, and cervical cancer. His research interests focus on mathematical models of health processes, and cost-effectiveness analysis, particularly as applied to population screening. He has served on the editorial boards of *Medical Decision Making* and the *Mount Sinai Journal of Medicine*,

and is a regular reviewer of research grants submitted to the National Board of Medical Examiners. He has been a consultant to many corporations on aspects of health benefit management. Dr. Schechter served as an expert consultant to the NCCHC–NIJ expert panel on chronic disease.

GEORGE P. SCHMID, M.D., M.Sc., is assistant branch chief for Science, Program Development, and Support Branch, Division of STD Prevention, Center for HIV, STD, and TB Prevention, Centers for Disease Control and Prevention (CDC). He is a subspecialist in infectious diseases, with training in internal medicine and family medicine, and has a M.Sc. in Health Services Management from the London School of Hygiene and Tropical Medicine. Dr. Schmid has spent 20 years at CDC, the past 16 in the Division of STD Prevention. He has considerable experience in the epidemiologic, clinical, laboratory, programmatic, and economic aspects of STD prevention. His position centers on the transfer of research findings into clinical practice. He is the coordinating editor of the STD Collaborative Review Group within the Cochrane Collaboration; section editor on sexual health, *Clinical Evidence*; and chairman, CDC Institutional Review Board for Emergency Response. Dr. Schmid served as a member of the NCCHC–NIJ expert panel on communicable disease.

RONALD M. SHANSKY, M.D., M.P.H., is a consultant in correctional medicine and the Federal court-appointed receiver for medical and mental health services for the Washington, D.C. jail. He received his B.S. in philosophy at the University of Wisconsin and his M.D. from the Medical College of Wisconsin. He has obtained a master's in public health and is Board certified in internal medicine and quality assurance. He has been a surveyor for the JCAHO and is currently a board member of the National Commission on Correctional Health Care (NCCHC). Dr. Shansky is a Fellow of the Society of Correctional Physicians and was the first recipient of the Society's Armond Start Award for Excellence in Correctional Medicine. He is an associate editor and contributor to the textbook *The Clinical Practice of Correctional Medicine*. He served as a member of the NCCHC–NIJ expert panel on chronic disease.

JONATHAN SHUTER, M.D., is the director of clinical research in the AIDS Center of Montefiore Medical Center. He received his M.D. from Boston University School of Medicine. He is a member of the Division of Infectious Diseases in the Department of Medicine at Montefiore Medical Center. He is an assistant professor of internal medicine at the Albert Einstein College of Medicine. Dr. Shuter was the director of infectious diseases for Rikers Island Health Services between 1994 and 1997. He has published a number of articles pertaining to tuberculosis, sexually transmitted diseases, and HIV infection in the correctional setting. In 1998–99, Dr. Shuter served as an expert consultant to the NCCHC–NIJ expert panel on communicable disease.

HAL SMITH is the executive director and chief executive officer of Central New York Psychiatric Center and its satellite mental health clinics that provide a comprehensive system of mental health services to the New York State and local correctional systems. He is associate professor of administrative psychiatry at the SUNY Upstate Health Science Center and adjunct professor of law at the Syracuse University College of Law. He was director of forensic services for the New York State Office of Mental Health and has held a variety of clinical and administrative positions in forensic and correctional mental health settings. He provides mental health/criminal justice consultation services. He was appointed to the NCCHC–NIJ expert panel on Mental Illness.

ANNE SPAULDING, M.D., graduated from Brown University and Medical College of Virginia. After a residency at Brown, she moved on to a fellowship in infectious diseases at the University of Massachusetts Medical Center, Worcester, Massachusetts, where she pursued bench research in flaviviruses. She is now on the staff at Rhode Island Hospital and attends in an HIV clinic. She is a clinical assistant professor at Brown University School of Medicine. She also serves as the medical program director for the Rhode Island Department of Corrections. Dr. Spaulding is president-elect of the Society of Correctional Physicians. Dr. Spaulding served as a member of the NCCHC–NIJ expert panel on communicable disease.

HENRY T. STEADMAN, Ph.D., is president of Policy Research Associates, Inc. Previously Dr.

Steadman ran a nationally known research bureau for 17 years for the New York State Office of Mental Health. His work has resulted in 6 books, over 100 articles in a wide range of professional journals, 18 chapters, and many reports. Dr. Steadman's major research focus is persons with co-occurring disorders in the justice system, violence risk assessment, homelessness and mental illness, and women with co-occurring disorders. Dr. Steadman received his B.A. and M.A. in sociology from Boston College and his Ph.D. in sociology at the University of North Carolina at Chapel Hill. In 1987 Dr. Steadman received the Amicus Award from the American Academy of Psychiatry and the Law. He also received the Philippe Pinel Award from the International Academy of Law and Mental Health in 1988, the Saleem A. Shah Award in 1994 from the State Mental Health Forensic Directors, the 1998 Distinguished Contribution to Forensic Psychology from the American Academy of Forensic Psychology, and the 1999 Isaac Ray Award from the American Psychiatric Association for his outstanding contributions to the psychiatric aspects of jurisprudence. Dr. Steadman served as a member of the NCCHC–NIJ expert panel on mental illness.

STEVEN SZEBENYI, M.D., is the former head of the Division of HIV Medicine and professor, Department of Medicine, at Albany Medical College in Albany, NY. He was also director of the AIDS Treatment Center at Albany Medical Center Hospital and medical director of the correctional health program at Albany Medical Center. He was extensively involved with HIV/AIDS education programs for correctional health practitioners, including a nationally broadcast videoconference series, an HIV fellowship program, a telemedicine project and frequent lecturing. Dr. Szebenyi was a member of the New York State Department of Health AIDS Institute Medical Care Criteria Committee and the New York State Department of Correctional Services HIV Practice Guidelines Committee. He is medical director for Blue Shield of North-eastern New York in Albany, NY. He served as a member of the NCCHC–NIJ expert panel on communicable disease.

ZACHARY TAYLOR, M.D., M.S., is chief of the Prevention Effectiveness Section, Division of Tuberculosis Elimination, National Center for HIV,

STD, and TB Prevention, Centers for Disease Control and Prevention. He received his B.S. in chemistry at LaGrange College, his M.S. at the University of Maryland at Baltimore, and his M.D. at the Medical College of Georgia. His research interests focus on the cost-effectiveness of screening for tuberculosis and evaluation of tuberculosis control programs. Dr. Taylor served as a member of the NCCHC–NIJ expert panel on communicable disease.

LINDA A. TEPLIN, Ph.D., is professor of psychiatry and director of the Psycho-legal Studies Program at Northwestern University Medical School. She received her Ph.D. from Northwestern University in 1975. She has done research on the criminalization of the mentally ill, epidemiologic characteristics of jail detainees, and correlates of violence. Her honors include the American Psychological Association’s career award for “Distinguished Contributions to Research in Public Policy” (1992), the MERIT Award from the National Institute of Mental Health (1995), and the Young Scientist Award from the National Alliance for the Mentally Ill (1990). Dr. Teplin is conducting two studies: (1) the Northwestern Juvenile Project and (2) the Northwestern Victimization Project. The Northwestern Juvenile Project is a longitudinal study of a sample of 1,800 youth who previously had been subjects in a study of juvenile detainees. The project examines the changing alcohol, drug, and mental health service needs of these high-risk youth, their use of services, and the behaviors that put them at increased risk for violence, IV drug use, and HIV/AIDS. The Northwestern Victimization Project is a unique study of criminal victimization patterns among severely mentally ill persons who live in the community. Both studies are funded by a consortium of Federal agencies and private foundations. Dr. Teplin served as a member of the NCCHC–NIJ expert panel on mental illness.

DAVID L. THOMAS, M.D., J.D., began his correctional career as an institutional physician, later as a regional physician, and the Chief of Clinical Services, and is now the Director of Health Services, all within the Florida Department of Corrections. From 1984 until 1994 he was a member of the Florida House of Representatives, and he served as the Republican Whip for 6 years. Dr. Thomas is a Vietnam veteran who achieved the rank of Permanent Captain (Acting Major) in the U.S. Army and was

awarded the Bronze Star. Dr. Thomas has published two novels on drug smuggling in Florida and the Gulf Coast, and has been lead author on several publications in peer-reviewed medical journals. Dr. Thomas served as a member of the NCCHC–NIJ expert panel on communicable disease.

DONNA TOMLINSON, M.D., M.Sc., is a research fellow in preventive cardiology at Beth Israel Medical Center in New York. She graduated from St. George’s University, School of Medicine in 1996. She completed a preventive medicine residency at Mount Sinai Medical Center and received her M.Sc. in community medicine from Mount Sinai School of Medicine in 1999. She is board certified in general preventive medicine and public health. Her clinical interest is in the prevention of cardiovascular disease through lifestyle modifications. Her research interests are in simulation modeling and cost benefit analysis. Dr. Tomlinson served as a consultant on the NCCHC–NIJ expert panel on chronic disease.

BEENA VARGHESE, Ph.D., is a health economist with the Division of HIV/AIDS Prevention at the Centers for Disease Control and Prevention. She is also member of the International Health Economic Association and Cochrane Economics Methods Group. She received her M.S. in agriculture economics from North Dakota State University in 1993 and her Ph.D. in health economics from the University of Memphis in 1997. In 1997–98, she was a short-term consultant for UNAIDS, Geneva, and the Ministry of Health, Kazakhstan. She has presented her work at various national and international conferences. Her research interests include decision analysis, cost-effectiveness and prevention effectiveness methods. Dr. Varghese served as a consultant to the NCCHC–NIJ expert panel on communicable disease.

BONITA M. VEYSEY, Ph.D., is an assistant professor in the Rutgers University School of Criminal Justice and the director of the Center for Justice and Mental Health Research. Dr. Veysey worked as a researcher in mental health services and corrections policies for 15 years before joining the Rutgers faculty. She served as both the associate director and the director of the Women’s Core of the National GAINS Center for Persons with Co-occurring Disorders in the Criminal Justice System. She has

participated in several national advisory groups on issues relating to the supervision and treatment of offenders' mental illnesses. Her research interests include interactions between the mental health and criminal justice systems, correctional supervision of female offenders, and public health risks as they relate to continuity of care. She received her doctorate in sociology from the State University of New York at Albany in 1993. Dr. Veysey served as a consultant to the NCCHC–NIJ expert panel on mental illness.

RICH VOIGT, M.A., is assistant to the branch chief, Division of STD Prevention, Centers for Disease Control and Prevention. He received his M.A. in sociology at Wichita State University, Wichita, Kansas. His program interests focus on providing technical assistance for implementing early health screening and treatment services for incarcerated people. He served as a member of the NCCHC–NIJ expert panel on communicable disease.

HENRY C. WEINSTEIN, M.D., is the director of the program in Psychiatry and the Law at New York University Medical Center and the Bellevue Hospital Center. For more than 20 years he was the director of the Forensic Psychiatry Service (the psychiatric prison ward) at Bellevue. He represents the American Psychiatric Association on the Board of Directors of the National Commission on Correctional Health Care and is the president of the Caucus of Psychiatrists Practicing in Criminal Justice Settings. He chaired the APA Task Force that revised the APA Guidelines on Psychiatric Services in Jails and Prisons. Dr. Weinstein served as a member of the NCCHC–NIJ expert panel on mental illness.

LAURA WINTERFIELD, Ph.D., joined the Office of Research and Evaluation of the National Institute of Justice in August 1997 where she managed the drug treatment portfolio and developed researcher-practitioner partnerships. She has been Division Director for the Justice Systems Divisions since mid-1999. From 1984 to 1993, she worked at the Vera Institute researching career criminals, evaluating prosecutorial and court-based innovations, and assessing the appropriateness and effectiveness of New York City's alternative-to-incarceration programs. From 1993 to 1997, she worked at the New York City Criminal Justice Agency. She developed a release-on-recognizance prediction tool for adult court arraignment judges and predictive tools for identifying offenders most likely to receive a sanction within the range targeted for an alternative disposition. She has been actively involved in all aspects of criminal justice research since the early 1970s, including courts, field services, alternatives to incarceration, and treatment approaches. Her areas of expertise include delinquency and crime prevention, the development of prediction models for criminal justice decisionmaking, estimating the impacts of diversion programs on incarceration, and evaluation research. She received her Ph.D. in sociology from the University of Colorado. Dr. Winterfield served on the steering committee for the NCCHC–NIJ project on *The Health Status of Soon-To-Be-Released Inmates*.

Appendix C. Prevalence of Chronic Diseases and Chronic Mental Disorders in Prisons: NCCHC/NIJ Survey Instrument

Name of Prison System: _____

Person Responding:

Name: _____

Title: _____

Address: _____

Telephone: Voice (____) _____ - _____ Fax (____) _____ - _____

E-mail: _____

I. Population

Number of Facilities: _____

Today's Population: _____ (Total)

Avg. Daily Census: _____ (Total)

Total Annual Intake: _____ (Most recent year available: _____)

Total Annual Releases: _____ (Most recent year available: _____)

Is there a computerized system for recording inmate demographic data? _____ Yes _____ No

Do you have the capability of determining the *current* population by their demographic characteristics? _____ Yes _____ No

If yes,

Can you determine the population by gender? Yes No

Can you determine the population by race (e.g., White, African American, Hispanic, other)? Yes No

Can you determine the population by age? Yes No

Can you break down the population by age, race, and gender (i.e., number of white males less than 40 yrs old)? Yes No

II. Chronic Diseases

In this section we are interested in collecting information about inmates with chronic conditions (particularly asthma, diabetes, hypertension, and heart disease).

1. Some systems designate certain facilities for housing inmates with specific chronic diseases or cluster inmates with chronic conditions in certain facilities. Does your system designate one or more facilities to manage inmates with chronic diseases, or do you cluster inmates with chronic conditions in certain facilities or, do all of your facilities usually manage all of their own inmates with chronic medical conditions?

- In our system, certain facilities are designated for inmates with chronic diseases.
- We do not designate facilities for care of chronic conditions but we cluster inmates in certain facilities.
- We do not transfer or house inmates in specific facilities for routine care of chronic medical conditions such as asthma, diabetes, hypertension, or heart disease.

2. Except for those who refuse, do you routinely test or screen inmates at intake for:

Fasting Blood Sugar Yes No Blood Pressure Yes No

3. By policy, do you provide hepatitis B vaccine to all susceptible inmates? Yes No

4. Do you have data on the number of inmates (i.e., the prevalence) with chronic diseases by diagnoses?
 Yes No

If yes, how many, or what percent, of inmates in your system have been diagnosed with the following chronic conditions?

	Number of Inmates	-or-	Percent of Inmates
Asthma	<input type="text"/>		<input type="text"/> %
Diabetes (Types 1 and 2)	<input type="text"/>		<input type="text"/> %
Hypertension	<input type="text"/>		<input type="text"/> %
Heart Disease	<input type="text"/>		<input type="text"/> %

5. Can you determine the number of inmates in your system with chronic diseases according to their age, race, gender, and diagnosis? Yes No

If yes, please complete the following table with the most recent data you have available.

PREVALENCE OF CHRONIC DISEASES

			Number of Inmates	-or-	Percent of Inmates
Asthma	Gender:	Male	_____		_____ %
		Female	_____		_____ %
	Age:	<40	_____		_____ %
		≥40	_____		_____ %
	Race:	White	_____		_____ %
		Black	_____		_____ %
		Hispanic	_____		_____ %
Other		_____		_____ %	
Diabetes (Type 1 and 2)	Gender:	Male	_____		_____ %
		Female	_____		_____ %
	Age:	<40	_____		_____ %
		≥40	_____		_____ %
	Race:	White	_____		_____ %
		Black	_____		_____ %
		Hispanic	_____		_____ %
Other		_____		_____ %	
Hypertension	Gender:	Male	_____		_____ %
		Female	_____		_____ %
	Age:	<40	_____		_____ %
		≥40	_____		_____ %
	Race:	White	_____		_____ %
		Black	_____		_____ %
		Hispanic	_____		_____ %
Other		_____		_____ %	
Heart Disease	Gender:	Male	_____		_____ %
		Female	_____		_____ %
	Age:	<40	_____		_____ %
		≥40	_____		_____ %
	Race:	White	_____		_____ %
		Black	_____		_____ %
		Hispanic	_____		_____ %
Other		_____		_____ %	

Please indicate the source and time period from which the above data are taken.

Time Period _____ intake History and Physical _____ other Medical Record Data _____

6. Do you have systemwide clinical protocols for the management of:

Asthma _____ Yes _____ No Diabetes _____ Yes _____ No

Hypertension _____ Yes _____ No Heart Disease _____ Yes _____ No

If yes, please include a copy of the relevant protocols with your completed survey.

7. For the most recent time period for which data are available, can you provide the number of inmates who were taking the following medications?

a. Inhaled asthma meds (e.g., beta-agonists) _____

b. Insulin or oral hypoglycemic _____

c. Anti-hypertensive medications _____

d. Anti-ischemic agents _____

e. Anti-arrhythmic _____

Indicate time period for the above data: _____

8. Are your pharmacy data computerized? _____ Yes _____ No

9. Do you have a policy and procedure on discharge planning for patients with chronic diseases? _____ Yes _____ No

If yes, please include a copy of the relevant discharge planning policies and procedures with your completed survey.

10. Are inmates with chronic medical conditions given a supply of medication when they are released? _____ Yes _____ No

If yes, please include a copy of your policies and procedures for releasing inmates with medications with your completed survey.

11. Could you determine which inmates have been released within the past 6 months? _____ Yes _____ No

If yes, please provide a list of inmates released within the past 6 months broken down by age, race, and gender. _____ Yes _____ No

Could you identify inmates released within the past 6 months by diagnosis of chronic conditions? _____ Yes _____ No

Name of person completing this section: _____

Telephone number (_____) _____ - _____

III. Mental Health

In this section we are interested in collecting information about inmates with mental disorders in your system.

1. Some systems designate certain facilities for housing inmates with mental disorders. Does your system designate one or more facilities to manage inmates with mental disorders, or do all or most of your facilities manage all of their own inmates with mental disorders?

_____ In our system, certain facilities are designated for inmates with mental disorders.

_____ We do not transfer or house inmates in specific facilities for routine care of mental disorders.

2. Do you have data on the number of inmates with mental disorders by diagnoses (i.e., prevalence)? _____ Yes _____ No

If yes, are diagnoses classified by DSM-IV using Axis 1, 2, and 3? _____ Yes _____ No

If no, how are diagnoses classified?

3. How many inmates are there in your system with each of the following diagnoses?
(Count only one diagnosis per person.)

		Number	-or-	Percent
A. Chronic Mental Illness	1. Schizophrenia	_____		_____%
	2. Schizo/Affective Disorder	_____		_____%
	3. Psychotic Disorder (NOS)	_____		_____%
B. Affective Disorders	1. Major Depression	_____		_____%
	2. Bipolar Disorder	_____		_____%
	3. Dysthymic Disorder	_____		_____%
C. Anxiety	1. Panic Disorder	_____		_____%
	2. PTSD	_____		_____%
D. Delusions, Dementia, and Amnesia	1. Cognitive Disorders	_____		_____%
	2. Organic Brain Syndrome	_____		_____%

Please indicate the source and time period from which the above data are taken.

Time Period _____ intake History and Physical _____ other Medical Record Data _____

4. Among the inmates with diagnosed mental disorders, how many or what percent have a co-occurring:

A. Alcohol Disorder _____ or _____%

B. Substance Dependency Disorder _____ or _____%

5. Is the information on the mental disorders kept in a computerized database?

_____ Yes _____ No

If no, please indicate the period and source of the information on prevalence given above (i.e., record review, etc.). _____

6. Could you determine the prevalence of the mental disorders listed in item 3 according to:

A. Age of inmate _____ Yes _____ No

B. Gender _____ Yes _____ No

C. Race _____ Yes _____ No

D. Age/race/gender (e.g., number of white males less than 40 years old) _____ Yes _____ No

7. Do you have statewide protocols or guidelines for the management of inmates with mental disorders?

_____ Yes _____ No

If yes, please forward a copy of these protocols or guidelines for the conditions in item 3 along, with your completed survey.

8. Do you have statewide policies and procedures for discharge planning of inmates with mental disorders?

_____ Yes _____ No

If yes, please forward a copy of these protocols or guidelines for the conditions in item 3 along with your completed survey.

9. Is it your policy to give inmates with chronic mental disorders a supply of medication on release? _____Yes _____No

If yes, please forward a copy of these protocols or guidelines for the conditions in item 3 along with your completed survey.

10. Can you identify inmates with chronic mental disorders who have been released within the past:
- A. 3 months _____Yes _____No
 - B. 6 months _____Yes _____No
 - C. 12 months _____Yes _____No

Name of person completing this section: _____

Telephone number (_____) _____ - _____

Appendix D. Sample Draft Clinical Guidelines

The sample guideline “Asthma Chronic Care” was drafted by Ronald M. Shansky, M.D., M.P.H., and is presented here in draft form. Once adopted by the National Commission on Correctional Health Care, it will become part of the NCCHC Clinical Guideline Series. The Clinical Guideline Series is spearheaded by a panel of correctional health physicians representing the NCCHC and The Society of Correctional Physicians (SCP), including Glenn Johnson, M.D., CCHP–A (chair); Lannette Linthicum, M.D.,

CCHP; James McAuley, M.D., M.P.H.; Joseph Paris, M.D., Ph.D., CCHP; Michael Puisis, D.O.; John Robertson, M.D.; and Ronald Shansky, M.D.

The sample guideline “Minimum Standards for Care of Chronic Disease in Prison” was prepared by Robert B. Greifinger, M.D., for this project and is currently under consideration for adoption by the NCCHC and the SCP.

National Commission on Correctional Health Care

Recommended Correctional Clinical Guideline

Asthma Chronic Care

Ronald M. Shansky, M.D., M.P.H.

March 12, 2000

Introduction

Correctional settings tend to house large numbers of patients with asthma, and the phenomenon can lead to serious problems with morbidity and mortality. This Recommended Correctional Clinical Guideline on Asthma Chronic Care is the result of modifications to *The Expert Panel Report: Guidelines for the Diagnosis and Management of Asthma, National Asthma Education Program*. The modifications were designed to simplify and be more cautious due to the special challenges of providing services in the correctional setting.

Background

Over the last two decades, much has been learned about asthma. In particular, health professionals have come to understand that asthma is primarily an inflammatory process that results in susceptible individuals having recurrent episodes of coughing, wheezing, chest tightness, and difficulty in breathing. Inflammation is thought to sensitize the airways to a variety of stimuli, such as tobacco smoke, allergens, chemical irritants, cold air, and exercise.

In treating patients, asthma specialists have learned of the critical need to form a partnership with their patients. Such a partnership, based on imparting to the patient an understanding of the disease process, better enables the patient to become aware of those things that trigger attacks, record the use of medications and the frequency of attacks, learn proper technique for inhaler use, learn proper use of a peak flow meter, and learn when to consult a physician regarding management concerns. The result has been a significant improvement in long-term morbidity and mortality.

Diagnosis

Asthma is defined as a disease process manifested by reversible airway obstruction. The elements used to make the diagnosis include history, symptomatic

episodes such as wheezing or coughing, physical examination with findings of obstruction on auscultation, and abnormal diagnostic results such as from peak flow meter readings, pulmonary function tests, or chest x-rays.

Management Overview

To successfully manage this illness in the corrections environment, NCCHC recommends categorizing patients according to the severity of their illness. In general, out of 100 patients with asthma, about 80–85 percent will have **mild** asthma. These individuals may occasionally use a beta-agonist inhaler on an as-needed basis or may have symptoms only during a particular allergy season, but in general do not require a great deal of attention. On the other hand, 15–20 percent of patients can be categorized as having **moderate** or **severe** disease, and it is these patients on whom the correctional health care programs should focus their energies and attention. By educating these patients and working carefully with them, correctional settings can also achieve much improved clinical outcomes.

It is critical that all patients be categorized on entry to the system, and be reassessed on an ongoing basis. The patient's problem list should contain not just the diagnosis of asthma, but the categorization of the disease with regard to severity. Further, correctional health care professionals should understand the need to educate and work with patients in a therapeutic partnership as vital to successful outcomes.

Treatment Goals

The object in working with a patient who has asthma is to assist him or her in diminishing the frequency of symptoms. This includes:

- decreasing the frequency and severity of asthma episodes,
- minimizing medication use and side effects,

- preventing emergency visits and hospitalization,
- normalizing exercise capacity,
- minimizing nocturnal symptoms, including wheezing, and
- preventing progression to acute respiratory failure and death.

Success in minimizing symptoms requires provider-patient teamwork in understanding what is needed regarding medications, patient education, monitoring with peak flow meters, and environmental controls (e.g., smoking cessation, smoke-free environments, etc.).

Assessment on Entry to the System

There are three aspects of assessment upon a patient's entry into the correctional system.

1. **Initial History.** The history with regard to asthma should include age of onset, hospitalizations, intubations, frequency of emergency room visits, prior use of inhaled steroids, prior use of systemic steroids, current medication use including the number of canisters of beta-agonist inhalers per month and the number of puffs of inhaled steroids per day, as well as the personal best peak flow measure at home. The history should also include questions regarding sinus infections, allergies, seasonal attacks, smoking history, and a history of gastrointestinal reflux.
2. **Physical Exam.** The physical exam should include a complete set of vital signs, a full physical exam with a focus on the respiratory exam, and a peak expiratory flow measurement.
3. **Diagnostic Studies.** A baseline chest x-ray is recommended.

Categorization of Severity of Disease

Using the information collected from the intake history, physical exam, and chest x-ray, the patient's severity of disease should be documented. NCHC recommends the use of three categories as defined below.

1. **Mild asthma.** Mild asthma is characterized by use of a beta-agonist inhaler no more than 2–3 days per week on average, and use of no more than one beta-agonist canister every 4–6 weeks.

2. **Moderate asthma.** A patient can be categorized as moderate if any of the following are true:
 - a. use of 1–1.5 canisters of beta-agonist inhaler per month,
 - b. use of inhaled steroids, or
 - c. the observation of peak flow decrease during an acute attack to 40 percent or less of personal best.
3. **Severe asthma.** A patient should be categorized as severe if any of the following are true:
 - a. history of intubation or ICU admission,
 - b. more than two hospitalizations in previous year,
 - c. use of systemic steroids for greater than a 2-week period of time,
 - d. decrease of peak flow to less than 30 percent of personal best during acute attack, or
 - e. use of more than two canisters of beta-agonist inhalers per month.

Over time, the severity categorization of a given patient may be upgraded or downgraded based on the degree of symptoms and disease control that the patient manifests.

Frequency of Followup Visits

Based upon the patient's category of illness as defined above, the following frequency for followup visits is recommended.

1. **Mild asthma**—The frequency of followup visits should be based on the categorization of the severity of the disease. Patients with mild disease who are controlled should initially be seen every 3–4 months. If their control persists, this may decrease to twice per year.
2. **Moderate asthma**—Patients should be seen at least every 2–3 months, if they are controlled.
3. **Severe asthma**—Patients should be seen at least every 1–2 months, if they are controlled.

For all of these, if the disease process is not adequately controlled, the patients should be seen more frequently.

Content of Followup Visits

1. **History.** During followup visits, the patient's recent history should be obtained and documented. The history should focus on whether or not the patient knows how and when to effectively use medications, i.e., inhaler technique, frequency of use of each type of canister, such as PRN use for beta-agonist and fixed regimes for inhaled steroids. For patients who by history appear to be inadequately controlled, they should be encouraged to record the frequency, time of day of attacks, and beta-agonist use in a diary.
2. **Objective Data.** At each followup visit, vitals should be taken, peak flow meter results should be documented, and a lung exam should be recorded.
3. **Assessment.** At each followup visit, the doctor should record:
 - a. the degree of control as being *good, fair, or poor*; and
 - b. the status in relationship to the previous visit as *improved, unchanged, or worsened*.
4. **Vaccination.** Pneumococcal vaccine should be offered once, and influenza vaccine should be offered in the flu season.

Definitions of Control

Good control. No more than one beta-agonist canister used per month. No visits to onsite ER. No nighttime coughing or awakening from asthma symptoms.

Fair control. No more than one beta-agonist canister inhaler used per month. No more than once per week awakening with asthma symptoms. No more than one onsite ER visit in the past month.

Poor control. Use of more than one canister of beta-agonist inhaler per month. More than one onsite ER visit per month. More than three awakenings with asthma symptoms per week.

Definitions of Status

Improved status. Less use of beta-agonist inhalers and less frequent symptom presentation.

Unchanged status. Both the use of beta-agonists and frequency of symptoms have not changed.

Worsened status. Greater use of beta-agonist, more acute symptoms, or an increase in emergency room visits.

Use of the Assessment to Guide Treatment Efforts

If the assessment of the patient is either fair or poor or if the status of the patient is worsened, the clinician's plan should reflect new efforts to work with the patient to improve these outcome measures.

A. Treatment Strategies

1. **Mild asthma.** Patients with mild disease should require no more than beta-agonist inhalers on an "as-needed" basis. Ordinarily, the treatment would be two puffs of beta-agonist inhaler as needed.
2. **Moderate asthma.** Patients with moderate disease should be using beta-agonist inhalers, two puffs as needed. In addition, these patients require inhaled steroids, and inflammation is best controlled by starting at a high routine dose, e.g., Aerobid, 4 puffs b.i.d., and then decreasing the dose as the patient's clinical presentation warrants. If the patient is known to take his or her medications as prescribed and is not well controlled with high-dose inhaled steroids, he or she should be reclassified as having severe disease.
3. **Severe asthma.** These patients should use beta-agonist inhalers as needed, as well as inhaled steroids to be used as described above. If they are still not controlled, they should be started on systemic steroids, e.g., prednisone 40 mg daily times 2 weeks. This regimen is used to gain control of the inflammation. After achieving control as measured by reduced symptoms and improved peak flow measurements, attempts should be made to reduce the systemic steroids while adequately controlling the patient with inhaled steroids and beta-agonist regimens. The addition of further medication such as long-acting Theophylline, Leukotriene inhibitors or long-acting beta-agonist inhalers is presently unsettled. There are not yet good data available to recommend one strategy over another. Most patients can be controlled without their use. If it is thought that a patient needs one of those

third-line drugs, an asthma specialist should be consulted.

B. Immunizations

1. Pneumococcal vaccine should be offered once, and
2. influenza vaccine should be offered in the flu season.

C. Environmental controls

1. For patients who smoke, smoking cessation programs can be an effective way of reducing symptoms of asthma.
2. Smoke-free environments in housing, eating areas, and work or recreation areas can eliminate a common cause of asthma irritation.
3. Work-related chemical irritants can be a major contributor to inflammatory episodes, and should be eliminated or the patient should be reassigned to work projects not involved with such irritants.

Understanding the Therapeutic Process

Any decrease in control of the disease as manifested by the use of two canisters of beta-agonist inhalers in a month or a visit to an emergency room setting is cause for review of previous care and implementation of appropriate corrective measures. Particularly for newer patients in the system, an attack or emergency room visit usually exists against a background of relatively easily correctable problems. The most common of these problems are:

- a. underassessment of prior degree of control,
- b. inadequate strategies to encourage adherence to medication use,
- c. underestimation of frequency of beta-agonist use,
- d. delay in increasing inhaled steroid dosage or in the use of early systemic steroids, and
- e. problems like sinus infections, seasonal allergies, gastroesophageal reflux disease, or irritant exposures.

Correctional Barriers

Impediments commonly found in the correctional environment to treating asthma include the following.

- lack of smoke-free housing
- inadequate ventilation systems
- restrictions on “keep-on-person” medication programs
- lack of timely urgent care access
- lack of adequate system to ensure medication continuity
- lack of followup assessment and treatment modification by the primary care physician following emergency room visit

Simple Quality Improvement Monitors

The following quality improvement monitors are suggested, but are not intended to be an exhaustive list of steps that could be taken to assure a successful chronic asthma disease management program.

1. The ratio of beta-agonist inhalers issued by the pharmacy to the patient in comparison to the number of inhaled steroid canisters issued to the patient over a month. This ratio of beta-agonist to inhaled steroid inhaler should not exceed 1:1.
2. If under the assessment part of the note, control is categorized as *fair* or *poor*, or the status of the patient is listed as *worsened*, the plan should include a strategy for gaining control by working with the patient.
3. Immunizations offered.

Minimum Standards for Care of Chronic Disease in Prison (evidence based on current, nationally accepted guidelines—January 25, 2000)

Robert B. Greifinger, MD

Parameter	Diabetes Type 1 & 2 ^{1,2}	Asthma ³	Hypertension ⁴	HIV ^{5,6}
Definition	untreated preprandial blood glucose >110 mg/dL	on or should be on medication; $\geq 1\beta$ -agonist inhaler/month	systolic >140 or diastolic >90 mm Hg or on Rx (130/85 for diabetics)	known infection
Applies	all diabetics, both insulin & non-insulin dependent	limited to moderate persistent, and severe persistent	all risk groups	all; asymptomatic and symptomatic
Initial history	complete, including nutrition, medications, monitoring, known complications	complete, including triggers, medications, use of PEFR	complete, including nutrition, medications, known complications, smoking, alcohol	complete, including nutrition, medications, TB infection status, STD status, known complications
Admission physical examination	complete, including BP, EKG, cardiovascular, dilated retinal referral, and foot	complete, including peak flow	complete, including BP, weight, EKG fundoscopy	complete, all systems
Physician, NP or PA visits (controlled disease)	At least quarterly until controlled, then at least every 6 months	At least quarterly until controlled, then at least every 6 months	At least quarterly until controlled, then at least every 6 months	3 mos CD4+ <500 6 mos CD4+ >500
Office procedure each visit	foot exam, including monofilament testing, weight, annual EKG	peak flow measure (PEFR)	blood pressure weight annual EKG	system review weight
Laboratory, initial every 3 months, until controlled, then at least every 6 months	glycated hemoglobin fasting glucose	theophylline level (if on)		CD4+ & RNA viral load
Laboratory, initial and annual for controlled disease	fasting lipid, urinary microalbumin		fasting lipid, urine protein	RPR+ GC & Chlamydia screen, Pap (6 months)
Vaccine	annual influenza 1 pneumococcal	annual influenza 1 pneumococcal		annual influenza 1 pneumococcal
Medication as appropriate	insulin, oral hypoglycemics, aspirin	inhaled steroid if on $\geq 1\beta$ -agonist inhaler/month	b-blocker, diuretic add appropriate ACE inhibitor, Ca+ blocker, aspirin, etc.	with symptomatic disease; as appropriate for viral load & trend; OI prophylaxis <500 CD4+ HIV knowledgeable physician
Routine referral	annual dilated retinal exam by eye care specialist			
Special needs	daily access to glucose monitor, exercise, diet, insulin timed with meals	daily access to peak flow monitoring, environmental control	exercise, diet	diet, exercise, appropriately timed medications

- Standards of Medical Care for Patients with Diabetes Mellitus, Clinical Practice Recommendations 2000, Diabetes Care, American Diabetes Association 2000; vol 23 supp 1: pp 1–23.
- Management of Diabetes in Correctional Institutions, Clinical Practice Recommendations 2000, Diabetes Care, American Diabetes Association 2000; vol 21 supp 1: pp 1–3.
- National Asthma Education and Prevention Program, Expert Panel Report 2: Guidelines for the Diagnosis and Management of Asthma*, National Heart, Lung, and Blood Institute, NIH, February 1997.
- The Sixth Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure*, National Heart, Lung, and Blood Institute, NIH, November 1997, NIH 98–4080.
- Report of the NIH Panel to Define Principles of Therapy of HIV Infection and Guidelines for the Use of Antiretroviral Agents in HIV-Infected Adults and Adolescents*, May 5, 1999, update.
- Centers for Disease Control, 1999 USPHS/IDSA Guidelines for the Prevention of Opportunistic Infections in Persons Infected with Human Immunodeficiency Virus, Morbidity and Mortality Weekly Report 48 (RR–10), August 20, 1999.

Appendix E. Information About the National Commission on Correctional Health Care and Its Position Statements

The National Commission on Correctional Health Care (NCCHC) is a not-for-profit, 501(c)(3) organization committed to improving the quality of care in our nation's jails, prisons, and juvenile detention and confinement facilities. The NCCHC is supported by national organizations listed below representing the fields of health, law, and corrections.

In the early 1970s the American Medical Association (AMA) studied the conditions in jails. Finding inadequate, disorganized health services and a lack of national standards to guide correctional institutions, the AMA in collaboration with other organizations established a program that eventually, in the early 1980s, became the National Commission on Correctional Health Care. The NCCHC's early mission was to evaluate, formulate policy, and develop programs for a floundering area clearly in need of assistance.

Today, NCCHC's leadership in setting standards for health services and improving health care in correctional facilities is widely recognized. NCCHC's *Standards for Health Services* are written in separate volumes for prisons, jails, and juvenile confinement facilities. The *Standards* represent NCCHC's recommended requirements for the management of a correctional health services system, covering the general areas of care and treatment, health records, administration, personnel, and medical-legal issues. The *Standards* have helped the Nation's correctional and detention facilities improve the health of their inmates, staff, and the communities to which they return; increase the efficiency of their health services delivery; and strengthen their organizational effectiveness.

As well as establishing standards, each year NCCHC sponsors correctional health care's major educational and scientific conferences. Each fall the annual National Conference on Correctional Health Care draws physicians, nurses, psychologists, scientists, and other health care providers and researchers to learn about contemporary practices and issues in the

field of correctional health care. Each spring the Clinical Updates conference provides the latest information on infectious and chronic disease research and treatments, as well as other timely clinical issues in correctional health care.

With a network of nationally recognized experts in health care administration and delivery, NCCHC offers an accreditation program for correctional facilities that meet NCCHC standards, provides technical assistance and quality improvement reviews on correctional health care management and policy issues, and develops and publishes research on the correctional health care field. In addition, NCCHC operates the national certification program for correctional health professionals, sponsors other educational and training programs, and publishes numerous support texts.

The members of the NCCHC volunteer Board of Directors set policies and guide the organization's program efforts. Each is appointed to the board by one of 34 supporting organizations.

American Academy of Child & Adolescent Psychiatry
Louis Kraus, M.D.

American Academy of Pediatrics
James W.M. Owens, M.D., M.P.H., CCHP

American Academy of Physician Assistants
Peter C. Ober, PA-C, J.D., CCHP

American Academy of Psychiatry & the Law
Charles A. Meyer, Jr., M.D., CCHP-A

American Association of Physician Specialists
Jere G. Sutton, D.O.

American Association of Public Health Physicians
Jonathan B. Weisbuch, M.D., M.P.H.

American Bar Association
Susan L. Kay, J.D.

American College of Emergency Physicians
William Haeck, M.D., CCHP

American College of Healthcare Executives
Eugene A. Migliaccio, Dr.P.H., CCHP

American College of Neuropsychiatrists
Bernard Feigelman, D.O.

American College of Physicians
John M. Robertson, M.D., M.P.H.

American Correctional Health Services Association
JoRene Kerns, B.S.N., CCHP

American Counseling Association
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American Dental Association
Thomas E. Shields, II, D.D.S., CCHP

American Diabetes Association
Samuel Eichold, II, B.S., M.D.

American Dietetic Association
Jenny Roper, M.S., R.D.

American Jail Association
Beverley Wilber

American Medical Association
Alvin J. Thompson, M.D., M.A.C.P., CCHP

American Nurses Association
Kleanthe Caruso, R.N., M.S.N., CCHP

American Osteopathic Association
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National Association of County and City
Health Officials
Douglas A. Mack, M.D.

National Association of Counties
Kenneth J. Kuipers, Ph.D.

National District Attorneys Association
The Honorable Richard A. Devine

National Juvenile Detention Association
David W. Roush, Ph.D.

National Medical Association
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National Sheriffs' Association
Sheriff Richard L. Warren

Society for Adolescent Medicine
Ronald Feinstein, M.D.

Society of Correctional Physicians
Ronald M. Shansky, M.D.

In addition to the standards, NCCHC periodically adopts position statements that address issues of importance in the management of health care in corrections. The following are available as of the date of this publication.

Automated External Defibrillators in Correctional Settings

Charging Inmates a Fee for Health Care Services

Competency for Execution

Continuity of Care

Correctional Health Care and the Prevention of Violence

DNA Analysis

Drug Testing of Correctional Staff

Health Care Funding for Incarcerated Youth

Health Services to Adolescents in Adult Facilities

Licensed Health Care Providers in Correctional Institutions

Management of Hepatitis B in Correctional Facilities

Management of Hepatitis C in Correctional Facilities

Management of HIV in Correctional Facilities

Management of Tuberculosis in Correctional Facilities

Mental Health Services in Correctional Settings

Telemedicine Technology in Correctional Facilities

Third Party Reimbursement for Correctional Health Care

Women's Health Care in Correctional Settings

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