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 employees[11]—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 syphilis[28] 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 project[31] 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.

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.)