2012

U.S. Prisoner Reentry Health Care Policy in International Perspective: Service Gaps and the Moral and Public Health Implications

Daniel P. Mears and Joshua C. Cochran

The version of record can be found at https://www.doi.org/10.1177/0032885512438845.

PRINT VERSION CITATION: Mears, Daniel P., and Joshua C. Cochran. 2012. "U.S. Prisoner Reentry Health Care Policy in International Perspective: Service Gaps and the Moral and Public Health Implications." The Prison Journal 92(2):175-202.

U.S. Prisoner Reentry Health Care Policy in International Perspective: Service Gaps and the Moral and Public Health Implications*

Daniel P. Mears and Joshua C. Cochran

* Direct correspondence to Daniel P. Mears, Mark C. Stafford Professor of Criminology, Florida State University, College of Criminology and Criminal Justice, 634 West Call Street, Tallahassee, FL 32306-1127, phone (850-644-7376), fax (850-644-9614), e-mail (dmears@fsu.edu). Joshua C. Cochran, doctoral candidate, Florida State University, College of Criminology and Criminal Justice, 634 West Call Street, Tallahassee, FL 32306-1127, phone (850-644-4050), fax (850-644-9614), e-mail (jcochran@fsu.edu).

BIOGRAPHICAL NOTES

Daniel P. Mears, Ph.D., is the Mark C. Stafford Professor of Criminology at Florida State University's College of Criminology and Criminal Justice, 634 West Call Street, Tallahassee, FL 32306-1127, phone (850-644-7376), fax (850-644-9614), e-mail (dmears@fsu.edu). He conducts theoretical and policy research on a range of crime and justice topics, including juvenile justice reforms, supermax prisons, domestic violence, homicide, and prisoner reentry. His work has appeared in *Criminology*, the *Journal of Research in Crime and Delinquency*, and *Law and Society Review*, among others, and in a recent book, *American Criminal Justice Policy* (Cambridge University Press, 2010).

Joshua C. Cochran, M.S., is a doctoral candidate at Florida State University's College of Criminology and Criminal Justice, 634 West Call Street, Tallahassee, FL 32306-1127, phone (850-644-4050), fax (850-644-9614), e-mail (jcochran@fsu.edu). His research interests include theory, international comparative analyses of criminal justice systems, and prisoner reentry. He has published in *Crime and Delinquency*, *Justice Quarterly*, and other crime and justice journals.

U.S. Prisoner Reentry Health Care Policy in International Perspective: Service Gaps and the Moral and Public Health Implications

ABSTRACT

The United States releases over 735,000 inmates from prison each year, many of whom have mental and physical health problems that go largely unaddressed during their terms of incarceration and that likely will go unaddressed after their return to society. That situation has led some scholars and policymakers to imply that this problem is specific to the U.S. and to call for greater attention to reducing the health needs-services gap among inmates and ex-prisoners. The goal of this paper is to argue that (1) the magnitude of this gap, while likely large, remains unknown, (2) the U.S. is far from unique in having a needs-services gap, (3) the decision to provide health care to inmates and ex-prisoners constitutes a moral policy decision that can have profound public health and cost impacts on offenders, their families, and the communities to which individuals released from incarceration return, and (4) research on health care needs-services gaps among inmate and reentry populations should become a priority for developing cost-effective, evidence-based responses for addressing such gaps. After presenting these arguments, the paper concludes with a discussion of implications for research and policy.

Key words: prisoner reentry health care

The dramatic increase in the United States prisoner population and, by extension, the population experiencing reentry—over 735,000 inmates are released annually (Sabol et al. 2009)—presents a new and pressing problem for society. Specifically, what is to be done to address the health care needs of inmates and ex-prisoners and what are the consequences of failing to do so (Hammett et al. 2001; Greifinger 2007a)? That question, however, presupposes that these populations have substantial health problems and that insufficient services and treatment exist to address these problems. Many studies and commentaries proceed as if these assumptions are valid and then call for more services and treatment. The accounts also typically assume that the U.S. is unique in failing to address inmate and ex-prisoner health needs.

Juxtaposed against these assumptions remain a number of critical questions. How large is the health care needs-services gap among U.S. inmates and ex-prisoners? How large must the gap be to be considered problematic? Assuming that the gap is, by some definition, large, is it larger in the U.S. than elsewhere and if so, are there lessons that can be learned from other countries about ways to reduce the gap? Not least, why should society care about reducing this gap and, more generally, about addressing the health care needs of inmates and ex-prisoners?

Answers to such questions are critical if U.S. policy discussions are to proceed in a balanced, empirically-based manner that accords with calls for an evidence-based criminal justice system (Cullen and Gendreau 2000; Sherman et al. 2002; Gaes et al. 2004; Sherman 2003, 2004; Farabee 2005; Welsh and Farrington 2006; Lipsey and Cullen 2007). For example, if the needs-services gap in the U.S. is comparable to what exists in other countries, a solution might be found by investigating challenges that all of these countries face. However, if the gap is larger, an effective solution may be more likely to emerge from focusing more on factors that are unique to the U.S. In addition, if failing to address needs-services gaps has the potential to produce widespread societal harm, considerable policy attention presumably should be given to addressing these gaps. If, however, such a failure does not affect society, little practical need may exist to address them. Even so, moral arguments may exist that argue for reducing, if not eliminating, health needs-services gaps among inmate and ex-prisoner populations.

Against this backdrop, the goal of this paper is to argue that (1) the magnitude of the health

care needs-services gap among U.S. inmates and ex-prisoners, while likely large, remains unknown, (2) the U.S. is far from unique in having a large needs-services gap, (3) the decision to provide health care to inmate and reentry populations constitutes a moral policy decision that can have profound public health and cost impacts on offenders, their families, and the communities to which they return, and (4) research on health care needs-services gaps among prisoner and reentry populations should become a central priority for developing evidence-based assessments of need and responses to it. Ultimately, for example, the failure to identify accurately the prevalence of health care problems and the shortfall in addressing them risks creating a situation in which society misallocates resources through under- or over-treatment.

We begin first with a discussion of incarceration trends and the health problems of inmates and ex-prisoners. We then discuss the conceptual and empirical foundation needed for developing a credible assessment of health care needs-services gaps. The paper next examines the mental health care and physical health care needs of inmates and ex-prisoners in the U.S. and other developed countries and the needs-services gaps that may exist. With that context established, we argue that important moral and public health implications result from allowing large health care needs-services gaps to exist among inmate and ex-prisoner reentry populations, and then conclude by discussing implications for research and policy.

INCARCERATION TRENDS AND INMATE AND EX-PRISONER HEALTH

Despite a steady decline in violent and property victimization over the past thirty years—with the exception of an increase in violent crime during the 1980s—America's prison population grew by 375 percent during this time period. In 1980, there were 319,598 prisoners nationally and by 2008 there were 1,518,559 prisoners (Sabol et al. 2009; Bureau of Justice Statistics 2010a). That growth far exceeded increases in the general population. During the same time period, the incarceration rate increased from 139 inmates per 100,000 population to 504 per 100,000 (Bureau of Justice Statistics 2010c). Not surprisingly, criminal justice system expenditures increased dramatically, rising from $36 billion to $214 billion between 1982 and

2006, the most recent year for which national statistics exist (Bureau of Justice Statistics 2010b).

These changes have contributed not only to large-scale increases in the prison population but also to dramatic growth of the population experiencing reentry. As Travis (2005:xvii) has emphasized, almost all inmates—excepting those who die while incarcerated—return to society. The result? At present, more than 735,000 U.S. prisoners are released annually from state and Federal prisons (Sabol et al. 2009). Seven years ago, Petersilia (2003:v) remarked that "never before in U.S. history have so many individuals been released from prison." At that time, 635,000 inmates were released annually. Her assessment today thus still holds, only the reentry population has increased another 100,000 annually and shows no signs of diminishing.

Worldwide, many countries have toughened their responses to crime (see, however, Tonry 2007) and done so by, among other things, expanding their prison systems (Walmsley 2003; Brodeur 2007). Viewed from that perspective, the U.S. is far from unique. However, the scale of the increase in the U.S. prison population sets it apart from other countries. As Hartney (2006:2) has noted, "the U.S. incarcerates at a rate 4 to 7 times higher than other western nations such as the United Kingdom, France, Italy, and Germany and up to 32 times higher than nations with the lowest rates such as Nepal, Nigeria, and India" (see also Mauer 2003). It is estimated that the U.S. incarcerates one-fourth of prisoners worldwide (Walmsley 2007:1).

The dramatic increases in prisoner and reentry populations have prompted scholars and legislators to examine a number of critical policy issues (Useem and Piehl 2008). Large-scale increases in prison systems, for example, create the potential for increased disorder and violence among inmates. They also create challenges in providing programs and services at comparable, much less increased, levels; for example, the percentage of inmates receiving vocational, educational, and other services declined during the peak years of incarceration growth in the U.S. (Lynch and Sabol 2001; Petersilia 2005). Large-scale increases in the numbers of inmates released to society also create concerns about recidivism, unemployment, and homelessness among ex-prisoners and the impacts that these can have on the families and communities to which they return (Travis and Visher 2005; Clear 2007). Ex-prisoner recidivism alone constitutes a critical problem—the Bureau of Justice Statistics, for example, conducted a 15-state

study and found that, in 1994, 68 percent of prisoners were rearrested for a new offense within 3 years (Langan and Levin 2002:1). The study also revealed, notably, that the recidivism rate increased 5 percentage points in the span of one decade, up from 63 percent in 1983 (p. 11).

Although scholars have drawn attention to recidivism, employment, and homelessness as key dimensions of the prisoner reentry experience, another critical policy domain—the medical needs of inmates and ex-prisoners—has increasingly garnered attention (Hammett et al. 2001; World Health Organization 2003; Petersilia 2005; Travis and Visher 2005; Greifinger 2007a). The prevalence of medical problems among inmates and ex-prisoners is but one part of the concern expressed by scholars; the relative lack of programs and services to address these problems is the other. Together, the widespread need and the seemingly insufficient response to it has created what by many accounts amounts to large-scale health care needs-services gaps among inmate and prisoner reentry populations; these gaps have profound implications for correctional systems and society (Hammett et al. 2001; Petersilia 2005; Greifinger 2007a; Wilper et al. 2009). A failure to treat disease can be viewed, for example, as morally wrong and as a missed public health opportunity to prevent the spread of the disease. Such implications depend heavily, however, on the extent to which health care needs-services gaps exist.

The presumed fact of health care needs-services gaps has contributed to critiques of American prisons. For example, David Satcher, a former Assistant Secretary for Health and U.S. Surgeon General, has written that "America's health care system is failing those who are incarcerated" (2007:v). Implicit in such critiques is the idea not only that substantial gaps exist but also that the U.S. is unique in having them. Both assumptions are, as we discuss below, open to debate. Writing about the U.S., for example, Maruschak and Beck (2001:2), have emphasized that "most state prison systems lack comprehensive and accessible data on the health status of their inmates." The situation is not appreciably better in other countries (Levy 2007:81).

In short, and juxtaposed against a context in which inmate and ex-prisoner populations have dramatically increased, there exist claims about health care needs-services gaps and their ubiquity among American inmates and ex-prisoners that do not appear to be consistent with the available empirical evidence. At the same time, the likelihood that prominent health care needs-

services gaps exist among these populations suggests that policymakers and practitioners do not have the luxury of waiting for precise estimates of these gaps to emerge. Even so, responding to problems of unspecified amount and character is, as we argue, inefficient.

ASSESSING NEEDS-SERVICES GAPS

To clarify what is and is not known about health care needs-services gaps among inmates and ex-prisoners and to inform the discussion about why such gaps matter, we focus here on a critical conceptual issue—the assessment of the need for health care services. The very concept of need suggests that a problem exists that merits attention through a policy, program, or service of some kind. That idea is easy to overlook in policy debates, in part because need frequently is assumed to exist. Accordingly, attention turns to various interventions or strategies for addressing the need. The result then can be the implementation of policies when there may be no need.

Any assessment of need ideally documents empirically the size and nature of a social problem, the populations most affected by it, and the location and causes of it (Rossi et al. 2004). These dimensions are relevant to determining not only whether policy intervention is warranted but also what type of policy should be implemented. For example, a study might show that in one county 25 percent of inmates have a serious mental illness. That county has a larger problem than one where 10 percent of inmates have a serious mental illness. However, the former county might incarcerate only a few hundred inmates whereas the latter might incarcerate thousands and so warrant more attention because of the much greater number of affected individuals.

Serious mental illness constitutes a problem distinct from, say, tuberculosis or HIV. Any assessment of need thus ideally would identify the amount of different types of illnesses or conditions. The risk otherwise is that, for example, two counties might appear to have similar percentages of health care needs when, in reality, one has a much greater prevalence of critical needs (e.g., serious mental illness) that merit intervention, or perhaps different critical needs (e.g., serious mental illness versus HIV) that require different interventions.

The social or geographic location of a problem and its causes also matter. Serious mental

illness might be more prevalent among a particular social or demographic group, which in turn would suggest the importance of targeting a response more intensively toward that group. This socio-demographic variation in turn might vary across counties or parts of the correctional system, in turn highlighting the need for greater attention to such counties or the most affected components of the correctional system and the most affected groups within them. For example, serious mental illness might be more prevalent among minority inmates in maximum-security facilities and so warrant more treatment. Elsewhere, serious mental illness might be greater among other groups, which in turn would suggest the need to allocate resources accordingly.

The causes of a social problem can vary, and so an effective policy response ideally should also target the most relevant cause. Consider a state that has a higher proportion of inmates with a serious mental illness as compared to another state. This difference may result from reductions in mental health services statewide, insurance reforms that limit health care treatment, shifts in policing practices or judicial philosophies in metropolitan counties that process large volumes of criminal defendants, and so on. Each cause suggests a "need" for a different type of policy response. Clearly, one might respond by increasing treatment services for incarcerated inmates. A different response, however, would be to address the root cause, whatever it may be. For example, improved officer training about mental illness might result in more cases being referred to local mental health clinics, thereby reducing the likelihood that incarceration will result.

A critical part of any assessment of need is an analysis of the adequacy of currently offered services and treatments. Are they proportional to the size of the problem? Do they reach the target populations? Do they address the problem? Is more of the same needed, is a supplemental initiative needed, or is a new effort warranted? Consider, for example, that a shortfall in services might vary greatly within and across counties or states. In two states, 12 percent of inmates might have a physical impairment, but in one of those states only 40 percent of such inmates receive appropriate treatment while in the other 80 percent receive it. Both states suffer from a needs-services gap, but the gap is larger in one than the other and is driven not by a difference in the prevalence of the problem but instead by the amount of services available to address it. Consider another situation—services exist but they target the wrong population. Here, a needs-

services shortfall exists, but its cause is different. New services are not necessarily needed. Instead, existing services need to be targeted better to reach the appropriate population.

More complicated approaches to needs and services assessments can be undertaken (Rossi et al. 2004; Mears 2010). For example, when assessing current services, it would be important to identify whether the services target the appropriate individuals and are implemented well and in the correct dosage. Similarly, we would want to identify the extent to which trends in medical conditions and services changed over time and what contributed to the changes.

Regardless of how complicated the approach, an assessment of need—and, by extension, assessment of needs-services gaps—should involve measurement of the characteristics and dimensions of the problem and its causes. Otherwise, it is difficult to know when a "need" exists for a particular policy response. Put differently, the presence of health care problems among inmates and ex-prisoners does not itself establish need (Rossi et al. 2004:108). Rather, need is determined based on knowledge about the size, location, and cause of health care problems, and the adequacy of current or alternative responses to them. Such information provides a foothold for developing responses that effectively address the scope and characteristics of the problem.

HEALTH CARE NEEDS OF INMATES AND EX-PRISONERS

With these observations in mind, we discuss what is known about mental and physical health care needs among inmates and ex-prisoners in the U.S. and internationally. In the next section, we discuss the assessment of needs-services gaps and then present arguments that view treatment of health problems as a moral imperative and those that view it as a public health imperative.

Mental Health Problems

The near-universal consensus in studies of mental health among inmate populations is that the prevalence of serious mental illness greatly exceeds that among the non-incarcerated population. The differences vary by type of illness. One of the most widely cited sources for estimating mental illness among inmate populations is a BJS study based on data from the 2004 Survey of Inmates in State and Federal Correctional Facilities and the 2002 Survey of Inmates in

Local Jails (James and Glaze 2006). Each of the surveys included structured clinical interviews aimed at providing mental disorder diagnoses based on the Diagnostic and Statistical Manual of Disorders, fourth edition. The BJS study indicated that, in the 12 months prior to being interviewed, 49 percent of state prison inmates had symptoms of a mental health disorder, 24 percent had symptoms consistent with a diagnosis of a major depressive disorder, 43 percent had symptoms consistent with a diagnosis of a mania disorder, and 15 percent had symptoms consistent with a diagnosis of a psychotic disorder. The corresponding estimates for jail inmates were substantially greater (60 percent, 30 percent, 55 percent, and 24 percent, respectively), reflecting the fact that, among their many functions, jails "hold mentally ill persons pending their movement to appropriate mental health facilities" (James and Glaze 2006:3).

Both sets of 12-month prevalence estimates described above well exceed those for members of the general population. Drawing on data from the 2001-2002 National Epidemiologic Survey on Alcohol and Related Conditions, the BJS report noted that, among the general adult (18-years-or-older) population, 11 percent had symptoms of a mental disorder, 8 percent had symptoms of a major depressive disorder, 2 percent had symptoms of a mania disorder, and 3 percent had at one time exhibited symptoms of a psychotic disorder (James and Glaze 2006:3). (The estimate of psychotic disorders was based on a life-time occurrence.)

Put differently, among state prison inmates and as compared to the general population, the prevalence of mental disorders among state prison inmates was substantially greater—3 times greater in the case of major depressive disorders, 5 times greater in the case of psychotic disorders, and 21 times greater in the case of mania disorders. The prevalence of mental health problems among inmates was found to be substantially greater among female, white, and younger inmates (p. 4). Drug abuse disorders were also found to be endemic; 42 percent of state prison inmates had both a mental health and a substance dependence or abuse problem (p. 5).

Other studies and reviews find the same general patterns (see, e.g., Monahan and Steadman 1983; Council of State Governments 2002; Veysey and Bichler-Robertson 2002; Mears 2004; Osher and Steadman 2007; Wilper et al. 2009). They also highlight the complexities involved in identifying why the patterns exist. In part, the overrepresentation of the mentally ill in prisons

may derive from the fact that the mentally ill and those who are involved in the criminal justice system are more likely to come from areas of disadvantage; such disadvantage may contribute both to increased mental illness and to increased crime (Veysey and Bichler-Robertson 2002). Indeed, individuals in prison, especially those with a mental illness, typically come from highly impoverished backgrounds. In the BJS study, inmates with mental health problems were more likely than those without such problems to have ever received public assistance (43 percent vs. 31 percent), to have experienced physical or sexual abuse (27 percent vs. 11 percent), to have parents or guardians who abused alcohol and/or drugs (39 percent vs. 25 percent), and to have a family member who was ever incarcerated (52 percent vs. 41 percent) (James and Glaze 2006:4).

The reduced capacity among American psychiatric institutions may also be a contributing factor to the overrepresentation of the mentally ill in prisons (Baillargeon et al. 2009; see also Shenson et al. 1990; Liska et al. 1999). Another explanation is that the mentally ill may act in ways that draw greater attention to them; thus, they may be no more likely than those who are not mentally ill to commit crime, but they may be more likely to be noticed, reported, arrested, convicted, and sentenced to incarceration. Not least, it is possible that the mentally ill commit more crime than do non-mentally-ill populations, although evidence in support of that view is, at best, mixed (Monahan and Steadman 1983; Mears 2004; Hirschfield et al. 2006; Langan 2010).

These estimates only scratch the surface of what is known about mental illness among the inmate and reentry population, but they serve to highlight several critical points. First, in the U.S., mental illness does appear to be substantially greater among incarcerated individuals. Second, the BJS study notwithstanding, we lack precise estimates of the prevalence of a wide range of mental disorders, both nationally and at state and local levels. Certainly, case studies exist, but they typically provide a one-time snapshot of the prevalence of general categories of mental illness in specific locales. Third, the causes of the overrepresentation are complex. As such, assessing the "need" for mental health treatment in prisons is equally complex. For example, if inadequate diversion efforts exist during the front-end processing in the criminal justice system, more mentally ill will penetrate further into the system, creating greater overrepresentation in prisons (Osher and Steadman 2007). The "need" then, in the long term, is

arguably not for greater treatment services in prison per se but for better diversion efforts. To date, there is no systematic national-level or state-level system for identifying and monitoring the precise causes of overrepresentation of the mentally ill at various stages of the criminal justice system. By extension, then, it remains unclear what strategies are needed to reduce, in the long-term, the overrepresentation of the mentally ill in prisons. What can be said is that, in the short-term, a greater percentage of ex-prisoners suffer from mental illnesses than is the case among the general populations and, accordingly, may merit greater attention.

Below we return to that argument but here first want to explore the question of whether, in the U.S., there is a greater need, based on the prevalence of mental health disorders, for treatment. Put differently, is the prevalence of mental disorders greater among inmate populations in the U.S. as compared to other countries? The relevance of the question derives from the fact that policy discussions in the U.S. at times imply that the U.S. is unique in having an overrepresentation of mentally ill among its prisoners and that less is done to treat them.

Despite inconsistency in the diagnostic criteria and methods used across countries in identifying mental disorders prison populations, as well as the limited number of studies that establish credible prison system prevalence estimates of various disorders, some broad generalizations can be made based on research to date. For example, Fazel and Danesh (2002) conducted a systematic review of evidence about mental disorders among prisoners in western countries, including Australia, New Zealand, Denmark, Finland, Netherlands, Norway, Sweden, Spain, the United Kingdom, Ireland, Canada, and the United States. They found that rates of depression, psychotic disorders (e.g., schizophrenia, delusional disorder), and antisocial personality disorder were roughly comparable among these countries. Specifically, they estimated that "one in seven prisoners in western countries have psychotic illnesses or major depression . . . and about one in two male prisoners and one in five female prisoners have antisocial personalities" (p. 548). In each instance, the prevalence of disorders was much greater among the prison population than about the general population. Among American and British prisoner populations, for example, age-adjusted rates of depression and psychotic disorders were two to four times greater than among the general population and rates of antisocial personality

disorder were ten times greater (p. 548). Other reviews, which examine these and other disorders (e.g., anxiety disorders), gender differences in the prevalence of such disorders, or a systematic focus on specific countries (e.g., Russia, Scotland) have arrived at a similar assessment (see, e.g., Blaauw et al. 2000; Reed 2003; Bobrik et al. 2005; Graham 2007; Mackie and Morling 2009).

The pattern, then, that emerges is one that suggests that the U.S. is more similar than not to other western countries—they all have a substantial overrepresentation of mentally disordered prisoners relative to the prevalence of mentally disordered individuals in the general population. That said, many factors conspire to create substantial variation in country-specific, or within-country, estimates. Any two studies, for example, may vary with respect to the diagnostic instruments and classification systems used, the populations examined (e.g., arrested individuals, jail inmates, prison inmates, juveniles versus adults, males versus females), the periods examined (e.g., past year versus lifetime occurrences), and the disorders examined (e.g., some studies include personality disorders and some do not) (Blaauw et al. 2000:650). Thus, while the broad-based generalization about the overrepresentation of mentally ill in prisons across western countries holds, it nonetheless is built upon considerable methodological variability.

The same observations likely would hold true if our scope included non-western countries. Unfortunately, few studies of mental illness in non-western prison systems exist. As Fazel and Danesh (2002:548) have emphasized, "although only about one-third of the world's prisoners live in western countries, about 99 percent of available data from prison surveys are derived from western populations." Accordingly, it is difficult to know how, if at all, the prevalence of mental disorders differs among western and non-western countries.

Physical Health Problems

As with mental health disorders, reviews suggest that physical health problems are far more prevalent among U.S. prisoners than among the general population even after adjusting for age and gender differences (see, generally, Maruschak and Beck 2001; Hammett et al. 2002; Petersilia 2005; Greifinger 2007a; Wilper et al. 2009). According to the Bureau of Justice Statistics (BJS), drawing on data from a 2004 survey of state correctional facilities, 44 percent of

state prison inmates suffer from a medical problem other than a cold or virus; 15 percent of inmates suffer from arthritis, 14 percent from hypertension, 9 percent from tuberculosis, 9 percent from asthma, 6 percent from hear problems, 5 percent from hepatitis, 4 percent from diabetes, 3 percent from kidney problems, 3 percent from stroke, 1.6 percent from HIV, .9 percent from cancer, and .8 percent from a sexually transmitted disease; 36 percent reported having an impairment (e.g., speech, vision, hearing), 23 percent reported having a learning impairment, 16 percent reported that they had multiple impairments; 44 percent reported having a drug dependency or drug abuse problem; and 50 percent reported having a dental problem since admission (Maruschak 2008). Because the BJS studies relied on inmate self-reports, the estimates likely understate the true prevalence of many health problems (Petersilia 2005:35).

The precise disparities in physical health problems between prisoners and the general population vary by type of disease. In some cases, however, the differences are pronounced. For example, the prevalence of AIDS is roughly five times higher among inmates as compared to the general population (Bick 2007). Notably, in 1997, "20 to 26 percent of all people living with HIV, 29 to 43 percent of all those infected with hepatitis C virus, and 40 percent of those with active tuberculosis in the United States passed through correctional facilities" (Greifinger 2007b:3; see also Hammett et al. 2002:29). Put differently, inmates account for at least one-fourth of people who are HIV-infected, have hepatitis C, or tuberculosis, respectively.

When we turn to the international arena, the medical needs of U.S. inmates do not appear to differ greatly from those of inmates in western or developed countries. Recall that 1.6 percent of inmates in U.S. prisons had HIV in 2004. Prevalence estimates in other countries' prison systems are comparable to or exceed this percentage. For example, the percentage of inmates with HIV is estimated to be 3 percent in China, 3 percent in Mexico, and to range from .8 to 4.8 percent in Russia, 1.6 to 27 percent in African countries, 2.5 to 12 percent in Switzerland, and 7 percent in Italy (Voho 1999; Bollini et al. 2002; Gerlich et al. 2008). A similar pattern emerges when we examine other types of diseases. Alcohol and drug abuse or dependency, for example, are widely prevalent in most countries' prison systems at a level commensurate with that in the U.S. (Fazel et al. 2006). By one estimate, roughly 40 percent of all European inmates suffer

from a substance-related disorder (Blaauw et al. 2000). The prevalence of drug abuse and addiction in English, Scottish, Australian, and Russian prisons (Butler 2003; Reed 2003; Bobrik et al. 2005; Graham 2007; Mackie and Morling 2009) generally matches or is greater than the prevalence of such problems in U.S. prisons (Maruschak 2008) and, as in America, well exceeds what is found in the general (non-incarcerated) population in each country.

In short, although prevalence estimates for various medical problems vary within and across countries, it appears reasonable to conclude that the U.S. is similar to most other western and developed countries in having an inmate population—and, by extension, a prisoner reentry population—whose health problems are substantial. In general, it appears that mental health and physical health problems are roughly two to three times greater among prisoners than among the general population. As discussed above, however, any targeted response to health problems requires precise estimates not only of the prevalence of various health problems, but also their distribution across different populations and places and the causes of the problems.

HEALTH CARE NEEDS-SERVICES GAPS

Claims that a need exists for more and better health care treatment and services to inmate and reentry populations may be correct, but they do little to provide clear policy guidance. For example, as discussed earlier, a needs-services gap stems both from the prevalence of a problem and the availability of services to address the problem. Resolution of the situation thus can be had either through efforts to reduce the problem (e.g., a policy might target the causes of the problem) or to increase services for treating it. To illustrate, a prison system might be receiving increasingly more individuals with serious mental illness because of reduced funding in a state's mental health system (Liska et al. 1999). This situation could be addressed by better funding of the mental health system or by increasing mental health services in the criminal justice system.

Consider a similar example. A prison system might be confronted with an increasingly large number of inmates with HIV/AIDS, tuberculosis, viral hepatitis B and C, and so on. The drug abuse typical among many inmates may contribute to this problem, and so, too, might a range of

other factors, including "poor access to health care, poverty, substandard nutrition, poor housing conditions, and homelessness" (Greifinger 2007b:3). Many of these factors are highly prevalent among individuals in the criminal justice system. For example, 51 percent of inmates report being homeless in the year prior to the arrest that led to their incarceration (Maruschak 2008). One solution is to focus attention outside of the prison system to address the causal factors that contribute to the health problems among those who offend. Observe here that one is not necessarily reducing crime. For example, two communities might have similar criminogenic conditions and thus similar crime rates, but the health of offenders might be better in the first community as compared with the second due to the availability of medical services. In this situation, policymakers in the second community might want to focus on increased health care for the general population. Alternatively, they could focus on the end result of not doing so—more prisoners with health care problems—and increase funding for treating these individuals.

The more efficient approach here and in similar scenarios would depend heavily on what forces produced the increased numbers of inmates with health problems. If, for example, prison mismanagement turned out to be a primary cause of increased rates of inmate mental disorders, policymakers might want to target this problem rather than apply a "band aid" approach that addresses the consequence (increased mental illness) of a root cause (e.g., mismanagement).

At the most general level, the simplest way to address a needs-services gap with correctional populations is to assess empirically the distribution of various health problems and to quantify the availability and provision of various services to address them. For example, in an assessment of a nationally representative sample of prisoners, Wilper et al. (2009) found that nearly 14 percent of federal inmates and 20 percent of state inmates received no medical examination during their term of incarceration; they also found that 26 percent of federal inmates and 29 percent of state inmates who were taking prescription medications when they entered prison were no longer taking those medications while incarcerated. However, as illustrated previously, while such information is helpful, basing policy on it alone can be inefficient. By contrast, if we not only know the prevalence and distribution of needs-services gaps but also the cause of the gaps, we have the opportunity to allocate resources in an efficient manner.

Even so, any such effort requires the type of information that few countries currently compile. The specific gaps in information include inadequate or non-existent assessments across several domains. First, few countries, or states or jurisdictions within countries, consistently compile accurate information about the prevalence of specific health problems among inmates and reentry populations, the relative distribution of these health problems across specific groups of these populations (e.g., young versus old, males versus females, whites versus different minority groups), or trends in these problems or the areas where they are most concentrated or changing the most (Greifinger et al. 2007a). Second, few countries or jurisdictions monitor the factors that contribute to the varying prevalence or trend estimates. Third, they also do not readily compile information on the types, levels, or quality of services and treatment provided for various inmate or reentry populations (Wilper et al. 2009). Fourth, and by extension, they do not systematically examine the likely causes of any identified needs-services gaps.

In such a context, it is difficult to assert credibly what the magnitude of any needs-services gap is, much less the causes of it or, in turn, the most efficient solution to it. In addition, because of variation within and across countries in the diagnosis and classification of health problems, it is unclear which countries suffer from the greatest needs-services gaps and why. Thus, while it appears safe to assert that health care needs-services gaps in the U.S. are substantial (Greifinger 2007a), it is unclear to what extent the gaps exceed those in other countries. Indeed, critiques of the health care afforded (or not) to inmates and reentry populations can readily be found when one looks outside the U.S. English prisons, for example, have been criticized for failing to provide sufficient health care for special needs populations in prison, including women, young prisoners, elderly prisoners, and ethnic minorities (Hughes 2000; Reed 2003; Wilson 2004; Harris et al. 2006; Plugge et al. 2008). Similar assessments have been rendered for countries in Europe and elsewhere (World Health Organization 2003, 2005; Gatherer et al. 2005).

According to these and most other reviews, it appears that a substantial need exists for more and better health care for inmates in prisons worldwide (Greifinger 2007a; Wilper et al. 2009). However, ideally a response would be commensurate with the magnitude of the needs-services gap and, again, the causes of it. To proceed otherwise is to undertake policies and investments of

scarce resources without a clear basis for knowing how much of an improvement can be, should be, or has been made. A better route consists of proceeding based on accurate information about the contours of a problem, its causes, and the level, quality, and effectiveness of current services.

MORAL AND PUBLIC HEALTH IMPLICATIONS OF NEEDS-SERVICES GAPS

A failure to measure the health care needs-services gaps among inmates and ex-prisoners creates a fundamental moral quandary for society and correctional systems. It is not simply that more and better research would be ideal. Rather, it is that a moral decision is implicitly—by proceeding without research—being made, one that says, in effect, it does not matter whether 5 percent or 50 percent of inmates do not receive needed medical treatment or whether the prevalence of hepatitis in society is increased by 5 percent or 20 percent, due to untreated hepatitis among released prisoners and the spread of the disease to the general population.

The point can be made in a different way by highlighting the fact that within and across states and countries there appear to be substantial differences in the extent to which inmate and ex-prisoner health problems are addressed (Bollini et al. 2002; Hammett et al. 2002; Reed 2003; World Health Organization 2003; Freudenberg 2004; Greifinger 2007a; Mackie and Morling 2009; Hawkins et al. 2010; Tkatchenko-Schmidt et al. 2010). That variation underscores that states and countries make policy decisions about inmate health care. Such decisions typically implicate or delineate the views that society holds about what is moral or, more generally, what morality requires. Accordingly, a failure to address fully the health care needs of inmates, or even to measure the extent to which such needs are addressed, raises questions about societal values. Of course, for some citizens, treatment of health care problems may not be viewed as a moral obligation that society owes to inmates. Most citizens, however, likely would agree that when society inflicts harm on society—even if indirectly, such as failing to provide health care to inmates and thus allowing the spread of tuberculosis—a moral decision of sorts is being made.

The more fundamental moral consideration consists of the argument that the criminal justice system, as an administrator of state-sponsored control over individuals, has an obligation to

provide care to individuals who have a mental or physical illness (World Health Organization 2003; Mears 2004; Plugge et al. 2008; Ruffin 2010). From this perspective, the fact of a crime is irrelevant except in so far as it leads to a situation in which the state assumes control over an individual. An illness exists and so should be treated, regardless of who the individual is. Such a view is, ultimately, not right or wrong, but one that depends on societal values and views.

This perspective is to be contrasted with one that says that the criminal justice system, with proper support and funding from government, has a moral obligation to do what it can to reduce harms to society. It thus should undertake steps not only to reduce recidivism but also to ensure that inmates and ex-prisoners receive services and treatment that will reduce the likelihood that diseases such as tuberculosis are not spread or that others, such as mental illness, do not adversely affect families. Since many ex-prisoners remain under correctional system supervision, there arguably remains a continuing moral imperative to ensure that these individuals receive needed services and treatment. This approach requires a different one than has prevailed in American corrections in recent decades (Cullen and Gendreau 2000; Clear 2007; Ruffin 2010). For example, although states are legally obliged to provide health care to inmates, the level and quality of care has varied dramatically (Hammett et al. 2001; Greifinger 2007a). But that fact does not vitiate the relevance of the argument that government has a moral responsibility to prevent harm to society, especially when the risk of harm may be great. Any such argument, however, rests in part on accurate assessments of the potential for such harm.

Juxtaposed against these considerations stands an important caution—many inmates likely would never have sought or had access to health care if they had been out in the free world (Greifinger 2007a; Ruffin 2010). What, then, is the moral obligation that the correctional system faces? To provide care that society does not force upon citizens? To provide care that individuals otherwise would not want or accept? Moreover, by what moral calculus does it make sense to prioritize health care for inmate and ex-prisoner populations when health care access and use is limited among at-risk populations (e.g., the homeless or economically disadvantaged)?

To date, discussions of inmate and ex-prisoner health care have not featured prominently in debates about correctional system policy (Hammett et al. 2001). The point here is that policy

decisions, whether implicit or explicit, about addressing health care needs among inmates and ex-prisoners—or measuring the needs-services gaps that exist—carry with them inescapable moral implications that reflect not only on how society views such populations but also how it views the individuals and communities most affected by them.

Moral considerations aside, unaddressed health care needs among inmates and ex-prisoners can pose substantial health care risks to public health. As Greifinger (2007b:5) has emphasized: "Every inmate who leaves a correctional facility with untreated sexually transmitted disease, viral hepatitis, HIV, or tuberculosis might be a source of transmission to the community." Untreated mental illness, too, can adversely affect not only the individuals with the illness but also their families, friends, and the communities to which they return (Monahan and Steadman 1983; Mears 2004; Travis 2005). Mental illness may not have such effects, of course, and concerns about stigmatizing the mentally ill are warranted (Langan 2010). At the same time, left untreated, some types of mental illness, such as substance dependence disorder, may contribute to homelessness, create financial or emotional strain on families or, less frequently, abuse or violence (Monahan et al. 2001; Bonnie et al. 2009).

From a public health perspective, it can be efficient to focus on populations where disease is most prevalent (Brownson et al. 2009; see also Rossi et al. 2004). Accordingly, the fact that many health problems—including infectious and non-infectious diseases—are overrepresented among prison populations presents a unique opportunity to improve the health of these populations and that of the families, friends, and communities to which these individuals return.

CONCLUSION

Summary

At a time when prison populations have increased dramatically, policymaker and scholarly attention has justifiably focused on the impacts of incarceration policies on recidivism and crime rates. Even so, and as an emerging body of work attests, health problems among inmate and ex-prisoner populations bear attention because they present both a challenge to correctional systems

and an opportunity to improve public health. The challenge stems from many factors, including the limited resources of the correctional system, its overriding mandate to ensure public safety, and the fractured nature of health care services in the U.S. The opportunity lies in the fact that any public health endeavor is likely to have greater success when it targets problems that are large and concentrated. Viewed in this light, individuals in prisons and under correctional system supervision constitute an obvious target for health care services and treatment. The benefits include not only reducing disease and illness among these populations but also reducing health problems among the general population (Greifinger 2007a).

As compelling as such arguments may be, the risk at present is that governmental agencies will make inefficient decisions about allocating resources to address health problems among inmates and ex-prisoners. Why? To date, local and state governments, including correctional system agencies, have not collected the types of data required to provide accurate estimates of the prevalence of a wide range of health problems, the level and quality of services and treatments provided, and, in turn, the precise needs-services gap. They also have not, by extension, systematically monitored trends along each dimension or the causes of them.

This situation creates a conundrum for policymakers. Expending resources on a problem without understanding the magnitude, distribution, or causes of it, as well as the level, quality, and effectiveness of existing efforts to address it, is risky. The most critical problems might be missed, for example, and new services or treatments may be added that are not needed or that are less effective than what would be achieved by improving the implementation or amount of existing efforts. The implications are substantial. From some moral perspectives, health care problems should be addressed, regardless of whether someone has committed a crime. But a problem cannot be treated if it is not first identified. In addition, there are public health implications—including increased rates of disease, crime, homelessness, and unemployment—of failing to treat mental and physical illness among inmates and ex-prisoners.

Research Implications

To improve policy discussions about health care for inmates and ex-prisoners, research is

needed that provides an evidence-based platform for justifying policy decisions. The research should address many dimensions, including but not limited to the following. First, and not least, a uniform system of classifying and measuring mental and physical illness is needed (Greifinger 2007a). Otherwise, it is difficult to arrive at meaningful comparisons about the prevalence of or trends in different types of illnesses within and across states and countries.

Second, the distribution of illness within correctional system populations—with a focus on variation across age groups, sex, race, and ethnicity—should be monitored. It can be more efficient and effective to target particular services and treatments to those groups most likely to experience particular health problems (Mrazek and Haggerty 1994).

Third, the provision and quality of services and treatment should be monitored (Wilper et al. 2009). Without information about current practice, the risk is that we misallocate resources or fail to make improvements in program delivery that can greatly increase health care.

Fourth, research should identify the causes of health care problems and service shortfalls. Such work could identify, for example, if low-quality implementation of services exists and whether it is due to inadequate coordination of services and treatment or some other reason (Garlanda and McCarty 2010). Studies that pursue this line of work also can help to identify whether existing efforts are sufficient or what types of new efforts may be warranted.

Fifth, such research should constitute a core activity of local and state correctional systems since the types of needs-services gaps, and the causes of them, may well vary from one setting to the next. The limited research to date clearly establishes that the prevalence of particular health problems may vary greatly within and across correctional settings.

One benefit of such research, especially if implemented cross-nationally, would be the ability to assess empirically claims about health care problems among correctional populations and how well these problems are addressed. That in turn would allow for investigation of why variation in needs-services gaps exist and what approaches work best to minimize such gaps and, in turn, to improve inmate and ex-prisoner as well as public health (Gatherer et al. 2005; Levy 2007).

Finally, greater attention is needed toward identifying evidence-based practices. What is effective for one group of inmates may not be effective for another; similarly, what is effective in

one prison system or community may not be as effective in another (Urban Institute 2002; Freudenberg 2005; Greifinger 2007a; Mears 2010). At the same time, the growing body of work on evidence-based medical practices underscores the importance of using approaches that research shows produce the greatest health improvements (Levy 2007).

Policy Implications

To the extent that a large health problem exists among inmates and ex-prisoners under correctional system supervisions, and to the extent that this problem is not being met, efforts are needed to reduce the problem and minimize harms to individuals and communities (Urban Institute 2002; Freudenberg et al. 2005). Fortunately, existing scholarly work has highlighted a wide range of recommendations. Here, again, however, the specific changes that should be enacted in any given local jurisdiction, state, or even country, ultimately will depend on the actual health problems, existing health care provision, and the causes of both the problems and any shortfalls within a specific area or setting. First, correctional systems should develop a prevention emphasis rather than a "sick call" one (Greifinger 2007b). Such an approach would have the potential to reduce the prevalence of mental and physical illness, including communicable diseases, among prisoners released back into society. It would however, stand in stark contrast to the prevailing model of responding only when inmates develop acute illnesses. It likely would also lead to a greater focus on providing health care services to disadvantaged communities where health problems may be greater and where many inmates are likely to have resided prior to being incarcerated.

Second, institutionalize screening and assessment of inmates, as well as regular monitoring of inmates, for a range of mental and physical illnesses (Marshall et al. 2001). Such an approach allows for a prevention approach to be implemented and for correctional systems to allocate resources in a more efficient manner. It allows, for example, prison systems to better identify those inmates with co-occurring mental disorders and ensure that such individuals receive appropriate treatment before the disorders worsen or lead to adverse outcomes (Mears 2004). It also allows prisons to create discharge plans that identify inmates with infectious diseases who

may pose a threat to themselves or to public health (Hammett et al. 2002).

Third, develop a better system for coordinating the diverse set of health care systems prevalent in many states and countries and for developing better linkages not only between them but also between the health care provided in prisons and the care that is available in local communities (Hammett et al. 2001; Gatherer et al. 2005). The transfer of critical medical information from communities to correctional providers, and vice versa, is typically inefficient at best and can result in a lack of continuity of care as well as inappropriate treatment.

Fourth, create reentry programming that explicitly emphasizes the health care needs of ex-prisoners. Such programming would involve identifying inmates with communicable diseases as well as illnesses that place themselves or others at risk. It also would include treatment plans that described their history of health problems and treatment, medications currently in use, and contact information for community-based treatment (Greifinger 2007b).

Fifth, implement strategies that will ensure that inmates and ex-prisoners seek care and adhere to treatment protocols. Compliance with treatment regimes cannot be assumed; indeed, inmates and ex-prisoners may resist treatment (Hammett et al. 2001). Steps such as ensuring adequate supplies of medication and supporting correctional system health care staff may reduce these possibilities (Garlanda and McCarty 2010).

Sixth, increase resources and funding for health care services and treatment, where appropriate, in prisons and in the communities where ex-prisoners return. Ultimately, if services and treatment cannot meet demand, even the best reentry planning and programs for ensuring continuity of care will fail to have an appreciable impact (Hammett et al. 2001; Greifinger 2007a). Access to treatment is critically important as well. For example, even though states are supposed to ensure that released prisoners have Medicaid coverage, if eligible, "incarceration does often lead to termination of benefits without review" and "reenrollment often requires completion of a lengthy recertification process" (Freudenberg 2004:378). There are legal issues associated with coercing treatment (Wood 2008) and also with not providing treatment (Wool 2007), but there are also processes for ensuring that inmates' legal rights are respected while affording opportunities for treatment where necessary or desired.

Seventh, support efforts to facilitate successful reentry transitions. Ex-prisoners typically have profiles—low education, poor employment history, homeless, drug abuse—that reduce the likelihood that they will be able or willing to seek out treatment or consistently follow a treatment regime (Petersilia 2005). For this reason, efforts to increase education, employment, and housing among ex-prisoners may create the preconditions that allow mental and physical illness to be identified and successfully treated.

There is, ultimately, no single best way to improve health care among inmate and ex-prisoner populations (Greifinger 2007a). Instead, there are many different ways to do so, and the precise combination will depend on the unique problems these populations have and the unique contexts of the prison systems and the communities to which they return. The fact that almost all countries confront a similar challenge—and that the U.S. is far from unique in this regard—presents an important opportunity to glean lessons from other countries as they struggle to address their correctional system populations' health care problems (Levy 2007). At the same time, political context invariably will factor heavily into any approach to addressing such problems. To some, for example, the notion of providing health care to inmates and ex-prisoners who otherwise would not seek or have access to it may seem inappropriate. To others, it may accord with political views about how to structure health care. Those who endorse national health care plans might support providing quality health care services to inmates, whereas those who oppose such plans might also oppose the provision of these services. In the end, if progress is to be made, it will be critical to develop the research foundation for creating more informed discussions and debates—ones that rise above ideology and assumed levels of need or policy effectiveness—about improving inmate and public health.

REFERENCES

Baillargeon, Jacques, Ingrid A. Binswanger, Joseph V. Penn, Brie A. Williams, and Owen J. Murray. 2009. "Psychiatric Disorders and Repeat Incarcerations: The Revolving Prison Door." American Journal of Psychiatry 166:103-109.

Bick, Joseph. 2007. HIV and Viral Hepatitis in Corrections: A Public Health Opportunity. Pp. 103-126 in Public Health Behind Bars, edited by Robert Greifinger. Springer: New York.

Blaauw, Eric, Ronald Roesch, and Ad Kerkhof. 2000. "Mental Disorder in European Prison Systems: Arrangements for Mentally Disordered Prisoners in the Prison Systems of 13 European Countries." International Journal of Law and Psychiatry 23:649-663.

Bobrik, Alexey, Kirill Danishevski, Ksenia Eroshina, and Martin Mckee. 2005. "Prison Health in Russia: The Larger Picture." Journal of Public Health Policy 26:30-59.

Bollini, Paola, Jean-Dominique Laporte, and Timothy W. Harding. 2002. "HIV Prevention in Prisons: Do International Guidelines Matter?" European Journal of Public Health 12:83-89.

Bonnie, Richard J., James S. Reinhard, Phillip Hamilton, and Elizabeth L. McGarvey. 2009. "Mental Health System Transformation After the Virginia Tech Tragedy." Health Affairs 28:793-804.

Brodeur, Jean-Paul. 2007. "Comparative Penology in Perspective." Crime and Justice 36:49-91.

Brownson, Ross C., Jonathan E. Fielding, and Christopher M. Maylahn. 2009. "Evidence-Based Public Health: A Fundamental Concept for Public Health Practice." Annual Review of Public Health 30:175-201.

Bureau of Justice Statistics. 2010a. Correctional Populations in the United States. Washington, D.C.: Department of Justice.

——. 2010b. Justice Expenditure and Employment Extracts. Washington, D.C.: Department of Justice.

——. 2010c. U.S. Incarceration Rate, 1980-2008. Washington, D.C.: Department of Justice.

Butler, Tony, Michael Levy, Kate Dolan, and John Kaldor. 2003. "Drug Use and Its Correlates

in an Australian Prisoner Population." Addiction Research and Theory 11:89-101.

Clear, Todd R. 2007. Imprisoning Communities: How Mass Incarceration Makes Disadvantaged Neighborhoods Worse. New York: Oxford University Press.

Council of State Governments. 2002. Criminal Justice/Mental Health Consensus Project. Lexington, KY: Council of State Governments.

Cullen, Francis T., and Paul Gendreau. 2000. "Assessing Correctional Rehabilitation: Policy, Practice, and Prospects." Pp. 109-175 in Policies, Processes, and Decisions of the Criminal Justice System, edited by Julie Horney. Washington, D.C.: National Institute of Justice.

Farabee, David. 2005. Rethinking Rehabilitation: Why Can't We Reform Our Criminals? Washington, D.C.: The AEI Press.

Fazel, Seena, and John Danesh. 2002. "Serious Mental Disorder in 23,000 Prisoners: A Systematic Review of 62 Surveys." The Lancet 359:545-550.

Fazel, Seena, Parveen Bains, and Helen Doll. 2006. "Substance Abuse and Dependence in Prisoners: A Systematic Review." Addiction 101:181-191.

Freudenberg, Nicholas. 2004. "Community Health Services for Returning Jail and Prison Inmates." Journal of Correctional Health Care 10:369-397.

Freudenberg, Nicholas. 2005. "Coming Home from Jail: The Social and Health Consequences of Community Reentry for Women, Male Adolescents, and their Families and Communities." American Journal of Public Health 95:1725-1736.

Gaes, Gerald G., Scott D. Camp, Julianne B. Nelson, and William G. Saylor. 2004. Measuring Prison Performance: Government Privatization and Accountability. New York: AtlaMira Press.

Garlanda, Brett, and William McCarty. 2010. "Rating the Prison Boss: Examining Supervision among Prison Health Care Staff." Journal of Criminal Justice 38:69-76.

Gatherer, Alex, Lars Moller, and Paul Hayton. 2005. "The World Health Organization European Health in Prisons Project After 10 Years: Persistent Barriers and Achievements." American Journal of Public Health 95:1696-1700.

Gerlich, Miriam G., Ulrich Frick, Lynn Pirktl, and Ambros Uchtenhagen. 2008. "Detection and

Treatment of HIV and Hepatitis Virus Infections in Swiss Correctional Facilities." International Journal of Public Health 53:268-271.

Graham, Lesley. 2007. Prison Health in Scotland: A Health Care Needs Assessment. Edinburgh, Scotland: Scottish Prison Service.

Greifinger, Robert, ed. 2007a. Public Health Behind Bars. New York: Springer.

——. 2007b. "Thirty Years Since *Estelle v. Gamble*: Looking Forward, Not Wayward." Pp. 1-10 in Public Health Behind Bars, edited by Robert Greifinger. New York: Springer.

Hammett, Theodore H., Cheryl Roberts, and Sofia Kennedy. 2001. "Health-Related Issues in Prisoner Reentry." Crime and Delinquency 47:390-409.

Hammett, Theodore M., Patricia Harmon, and William Rhodes. 2002. "The Burden of Infectious Disease Among Inmates and Releasees from Correctional Facilities." Pp. 13-37 in The Health Status of Soon-to-be-Released Inmates: A Report to Congress. Vol. 2. Chicago, IL: National Commission on Correctional Health Care.

Harris, Francesca, Gill Hek, and Louis Condon. 2006. "Health Needs of Prisoners in England and Wales: The Implications for Prison Healthcare of Gender, Age and Ethnicity." Health and Social Care in the Community 15:56-66.

Hartney, Christopher. 2006. U.S. Rates of Incarceration: A Global Perspective. Oakland, CA: National Council on Crime and Delinquency.

Hawkins, Anita S., Anne M. O'Keefe, and Xanthia James. 2010. "Health Care Access and Utilization among Ex-Offenders in Baltimore: Implications for Policy." Journal of Health Care for the Poor and Underserved 21:649-665.

Hirschfield, Paul, Tina Maschi, Helene R. White, Leah G. Traub, and Rolf Loeber. 2006. "Mental Health and Juvenile Arrests: Criminality, Criminalization, or Compassion?" Criminology 44:593-630.

Hughes, Rhidian A. 2000. "Health, Place and British Prisons." Health and Place 6:57-62.

James, Doris J., and Lauren E. Glaze. 2006. Mental Health Problems of Prison and Jail Inmates. Washington D.C.: Bureau of Justice Statistics.

Langan, Joan. 2010. "Challenging Assumptions about Risk Factors and the Role of Screening

for Violence Risk in the Field of Mental Health." Health, Risk, and Society 12:85-100.

Langan, Patrick A., and David J. Levin. 2002. Recidivism of Prisoners Released in 1994. Washington, D.C.: Bureau of Justice Statistics.

Levy, Michael. 2007. "International Public Health and Corrections: Models of Care and Harm Minimization." Pp. 73-87 in Public Health Behind Bars, edited by Robert Greifinger. New York: Springer.

Lipsey, Mark W., and Francis T. Cullen. 2007. "The Effectiveness of Correctional Rehabilitation: A Review of Systematic Reviews." Annual Review of Law and Social Science 3:297-320.

Liska, Allen E., Fred E. Markowitz, Rachel Bridges-Whaley, and Paul E. Bellair. 1999. "Modeling the Relationships between the Criminal Justice and Mental Health Systems." American Journal of Sociology 104:1742-1773.

Lynch, James P., and William J. Sabol. 2001. Prisoner Reentry in Perspective. Washington, D.C.: The Urban Institute.

Mackie, Phil, and J. Morling. 2009. "Commissioning Prison Health: Opportunities and Challenges for Creating a New Prison Public Health System in Scotland." Public Health 123:434-437.

Marshall, Tom, Sue Simpson, and Andrew Stevens. 2001. "Health Care Needs Assessment in Prisons: A Toolkit." Journal of Public Health Medicine 23:198-204.

Maruschak, Laura M. 2008. Medical Problems of Prisoners. Washington, D.C.: Bureau of Justice Statistics.

Maruschak, Laura M., and Allen E. Beck. 2001. Medical Problems of Inmates, 1997. Washington, D.C.: Bureau of Justice Statistics.

Mauer, Marc. 2003. Comparative International Rates of Incarceration: An Examination of Causes and Trends. Washington, D.C.: The Sentencing Project.

Mears, Daniel P. 2010. American Criminal Justice Policy: An Evaluation Approach to Increasing Accountability and Effectiveness. New York: Cambridge University Press.

——. 2004. "Mental Health Needs and Services in the Criminal Justice System." Houston

Journal of Health Law and Policy 4:255-284.

Monahan, John, and Henry J. Steadman. 1983. "Crime and Mental Disorder: An Epidemiological Approach." Crime and Justice 4:145-189.

Monahan, John, Henry J. Steadman, Eric Silver, Paul S. Appelbaum, Pamela C. Robbins, Edward P. Mulvey, Loren H. Roth, Thomas Grisso, and Steven Banks. 2001. Rethinking Risk Assessment: The MacArthur Study of Mental Disorder and Violence. New York: Oxford University Press.

Mrazek, Patricia J., and Robert J. Haggerty, eds. 1994. Reducing Risks for Mental Disorders: Frontiers for Preventive Intervention Research. Washington, D.C.: National Academy Press.

Osher, Fred C., and Henry J. Steadman. 2007. "Adapting Evidence-Based Practices for Persons with Mental Illness Involved with the Criminal Justice System." Psychiatric Services 58:1472-1478.

Petersilia, Joan. 2005. "From Cell to Society: Who Is Returning Home?" Pp. 15-49 in Prisoner Reentry and Crime in America, edited by Jeremy Travis and Christy Visher. New York: Cambridge University Press.

——. 2003. When Prisoners Come Home: Parole and Prisoner Reentry. New York: Oxford University Press.

Plugge, Emma, Nicole Douglas, and Ray Fitzpatrick. 2008. "Patients, Prisoners, or People? Women Prisoners' Experiences of Primary Care in Prison: A Qualitative Study." British Journal of General Practice 58:e1-e8.

Reed, John L. 2003. "Mental Health Care in Prisons." British Journal of Psychiatry 182:287-288.

Rossi, Peter H., Mark W. Lipsey, and Howard E. Freeman. 2004. Evaluation: A Systematic Approach. 7th edition. Thousand Oaks, CA: Sage.

Ruffin, John. 2010. "The Science of Eliminating Health Disparities: Embracing a New Paradigm." American Journal of Public Health 100:S8-S9.

Sabol, William J., Heather C. West, and Matthew Cooper. 2009. Prison Inmates, 2008. Washington, D.C.: Bureau of Justice Statistics.

Satcher, David. 2007. "Foreword." Pp. v-vi in Public Health Behind Bars, edited by Robert Greifinger. New York: Springer.

Shenson, Douglas, Nancy Dubler, and David Michaels. 1990. "Jails and Prison: The New Asylums?" American Journal of Public Health 80:655-656.

Sherman, Lawrence W. 2004. "Research and Policing: The Infrastructure and Political Economy of Federal Funding." Annals of the American Academy of Political and Social Science 593:156-178.

——. 2003. "Misleading Evidence and Evidence-Led Policy: Making Social Science More Experimental." Annals of the American Academy of Political and Social Science 589:6-19.

Sherman, Lawrence W., David P. Farrington, Brandon C. Welsh, and Doris Layton MacKenzie, eds. 2002. Evidence Based Crime Prevention. London: Routledge.

Tkatchenko-Schmidt, Elena, Rifat Atun, Martin Wall, Patrick Tobi, Jürgen Schmidt, and Adrian Renton. 2010. "Why Do Health Systems Matter? Exploring Links between Health Systems and HIV Response: A Case Study from Russia." Health Policy and Planning 25:283-291.

Tonry, Michael H. 2007. "Determinants of Penal Policies." Crime and Justice 36:1-48.

Travis, Jeremy. 2005. But They All Come Back: Facing The Challenges of Prisoner Reentry. Washington, D.C.: The Urban Institute Press.

Travis, Jeremy, and Christy Visher, eds. 2005. Prisoner Reentry and Crime in America. New York: Cambridge University Press.

Urban Institute. 2002. The Public Health Dimensions of Prisoner Reentry: Addressing the Health Needs and Risks of Returning Prisoners and their Families. Washington, D.C.: The Urban Institute.

Useem, Bert, and Anne M. Piehl. 2008. Prison State: The Challenge of Mass Incarceration. New York: Cambridge University Press.

Veysey, Bonita M., and Gisela Bichler-Robertson. 2002. "Prevalence Estimates of Psychiatric Disorders in Correctional Settings." Pp. 57-80 in The Health Status of Soon-to-be-Released Inmates: A Report to Congress. Vol. 2. Chicago, IL: National Commission on Correctional Health Care.

Voho, Medard. 1999. "Prison Health in Burkina Faso." Pp. 18-20 in Health in African Prisons. Kampala, Uganda: Prisoner Reform International.

Walmsley, Roy. 2007. World Prison Population List. 8th edition. London, England: International Centre for Prison Studies.

——. 2003. Global Incarceration and Prison Rates. London, England: International Centre for Prison Studies.

Welsh, Brandon C., and David P. Farrington, eds. 2006. Preventing Crime: What Works for Children, Offenders, Victims and Places. New York: Springer-Verlag.

Wilper, Andrew P., Steffie Woolhandler, J. Wesley Boyd, Karen E. Lasser, Danny McCormick, David H. Bor, and David U. Himmelstein. 2009. "The Health and Health Care of U.S. Prisoners: Results of a Nationwide Survey." American Journal of Public Health 99:666-672.

Wilson, Simon. 2004. "The Principle of Equivalence and the Future of Mental Health Care in Prisons." British Journal of Psychiatry 184:5-7.

World Health Organization. 2005. Mental Health and Prisons. Geneva, Switzerland: World Health Organization.

——. 2003. Prison Health as Part of Public Health. Geneva, Switzerland: World Health Organization.

Wood, Peter. 2008. "The Right to Refuse Medical Treatment: Courts' Disparate Treatment of Incarcerated Patients." Penn State Law Review 112:1167-1183.

Wool, Jon. 2007. "Litigating for Better Medical Care." Pp. 25-41 in Public Health Behind Bars, edited by Robert Greifinger. New York: Springer.