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SPECIAL FEATURE: CONTINUITY OF CARE FROM CORRECTIONS TO COMMUNITY

Jails, Prisons, and the Health of Urban Populations: A Review of the Impact of the Correctional System on Community Health

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ABSTRACT *This review examined the interactions between the correctional system and the health of urban populations. Cities have more poor people, more people of color, and higher crime rates than suburban and rural areas; thus, urban populations are overrepresented in the nation's jails and prisons. As a result, US incarceration policies and programs have a disproportionate impact on urban communities, especially black and Latino ones. Health conditions that are overrepresented in incarcerated populations include substance abuse, human immunodeficiency virus (HIV) and other infectious diseases, perpetration and victimization by violence, mental illness, chronic disease, and reproductive health problems. Correctional systems have direct and indirect effects on health. Indirectly, they influence family structure, economic opportunities, political participation, and normative community values on sex, drugs, and violence. Current correctional policies also divert resources from other social needs. Correctional systems can have a direct effect on the health of urban populations by offering health care and health promotion in jails and prisons, by linking inmates to community services after release, and by assisting in the process of community reintegration. Specific recommendations for action and research to reduce the adverse health and social consequences of current incarceration policies are offered.*

KEYWORDS *Criminal Justice Policy, Health of Incarcerated Populations, Jail Health Services, Urban Health.*

INTRODUCTION

Jails and prisons have a profound influence on the health of urban communities, especially low-income and minority neighborhoods. They collect and concentrate individuals at high risk of violence, substance abuse, mental illness, and infectious diseases; remove from the community people who may pose a threat to public safety; create incentives and penalties for health-related behavior; adversely affect employment opportunities for ex-offenders; disrupt family life and push children into foster care; and have the potential to link vulnerable populations to needed health and social services. This issue of the *Journal of Urban Health* explores the

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ecology of the correctional system within urban communities in the United States, especially as it affects health. The goals of this issue are to describe and assess some current health efforts within this system, encourage additional research, and spur the development of new interventions and policies that will increase the capacity of the correctional system to play a positive role in health promotion and disease prevention in urban communities.

GROWTH AND DEMOGRAPHICS OF CRIMINAL JUSTICE POPULATIONS

Since 1980, the number of inmates in the United States more than tripled; the state prison population increased by 299%, the federal prison population increased by 417%, and the number of local jail inmates increased by 225%.[1] The United States now has the second highest national rate of incarceration in the world[2]; if current incarceration rates remain unchanged, 5% of the population can expect to serve time in a federal or state prison in the course of their lifetime.[3] About 2 million people in the United States are behind bars on any given day; last year, 600,000 inmates were released from state and federal prisons, a 353% increase from 1980.[4] This explosive growth in incarceration rates is unprecedented in United States history or, for that matter, in the history of any other industrial democracy.[5]

Men constitute the largest proportion of the incarcerated, but the proportion of women has been increasingly dramatically and at a faster rate than that of men. Since 1980, the number of women in prison has increased at nearly double the rate for men,[6] and between 1990 and 1998, the number of jailed women increased by 71%, primarily due to increasing arrests of drug-using women. In 1998, women constituted 16% of the correctional population in the United States; 950,000 women were under the care, custody, or control of correctional agencies, about 1 of every 109 women in the country.[7] While young adults constitute the largest proportion of those in the correctional system, the numbers of adolescents and those over the age of 50 are increasing rapidly.

As many observers have noted, blacks and Latinos are disproportionately represented in the criminal justice system.[8,9] If current levels of incarceration persist, a black man has a greater than 1 in 4 chance of going to prison in his lifetime, a Hispanic man has a 1 in 6 chance, and a white man has a 1 in 23 chance of serving time.[3] In 1996, people of color constituted 63% of all US jail inmates, almost three times their proportion in the US population as a whole.[10]

Cities have more poor people, more people of color, and higher crime rates than suburban and rural areas[11,12]; thus, urban populations are overrepresented in the nation's jails and prisons. As a result, US incarceration policies and programs have a disproportionate impact on urban communities, especially black and Latino ones.

The various components of the correctional system affect urban communities in different ways. State and federal prisons remove convicted offenders from their communities for long periods of time, preventing them from committing other offenses and separating them from their families and friends. Prison programs provide varying levels of substance abuse, educational, and mental health services, but most studies show that only a small proportion of inmates receives such services.[13,14] Each year, more than half a million people are released from prison[15] and must become reintegrated into their communities, finding housing, employment, and health care. Released prison inmates can either resume (or assume for the first time) productive

roles in their community as parents, workers, taxpayers, and citizens or return to crime, substance abuse, or dependency. State and local policies and programs can either facilitate or impede successful reintegration. Because of state cutbacks in prison education, job training, and rehabilitation programs, newly released inmates are "far less likely then their counterparts two decades ago to find jobs, maintain stable family lives, or stay out of the kind of trouble that leads to more prison."[4(pA1)]

Jails detain individuals awaiting trial and also those sentenced to less than 1 year. They also house probation, parole, and bail bond violators and absconders. Each year, more than 10 million people pass through U.S. jails.[16] Most inmates return to their communities from jail within a few weeks of arrest. While some big-city jails have on-site health, mental health, and drug treatment, most of these programs can serve only a small portion of those with needs. In New York City, for instance, which has one of the most extensive jail-based drug treatment programs, urine tests show that 75% of males and 81% of female inmates have used illicit drugs in the days before their arrest,[17] yet fewer than 25% enroll in any drug treatment services while incarcerated.[18] Most smaller city and county jails have no such services. Since jails process many more people each year than prisons, since cities have a high volume of arrests, and since most jail inmates return to their communities within a few weeks of arrest, compared to state and federal prisons, jails have a particularly significant influence on urban neighborhoods.

Probation and Parole

Probation and parole are two forms of criminal justice supervision that offer an alternative to incarceration. Probation offers conditional release under the supervision of a probation officer. In 1999, there were 3.7 million Americans on probation.[2] Parole provides for early release from prison for inmates who meet certain conditions. At the end of 1997, there were 685,033 Americans on parole.[2] Due to growing restrictions on parole, this group was growing more slowly than other sectors of the criminal justice population.

In recent years, both probation and parole have come under attack from a variety of sources for failing to provide adequate supervision and being insufficiently tough on criminals.[15,19] About 40% of felony probationers were rearrested for new felony offenses within 3 years of being placed under community supervision.[2] Parole violators now play an important role in increasing rates of incarceration, constituting 34% of all admissions, double the rate in 1980.[2] According to the Bureau of Justice Statistics, 82% of those on parole who are returned to prison are drug or alcohol abusers, 40% are unemployed, 75% have not completed high school, and 19% are homeless.[4]

Both parole and probation play a critical role in low-income urban communities since they are responsible for supervising those returning from encounters with the criminal justice system. In some urban communities, more than a quarter of the male population is under the supervision of the criminal justice system.[9] Strengthening the capacity of probation and parole to facilitate successful reentry can help improve both public safety and public health.[15]

Alternatives to Incarceration

In recent years, a variety of other criminal justice options have emerged, including drug courts, community courts, gun courts, domestic violence courts, and "reentry programs."[15,20] These types of programs vary widely, but they share certain elements that distinguish them from more traditional approaches: greater attention to public

safety and "restorative justice" than to punishment alone; more intensive interaction with other systems, such as drug treatment, mental health, and child protective services; and a willingness to consider harm reduction and relapse prevention as goals in addition to abstinence and "zero tolerance." While these alternatives still account for only a small proportion of encounters with the criminal justice system, their rapid growth makes them an important part of the system with significant implications for public health.

HEALTH CONDITIONS IN INCARCERATED POPULATIONS

Criminal justice policies such as mandatory minimum sentences and the war on drugs, deinstitutionalization of the mentally ill, and the growing concentration of poverty and people of color in metropolitan areas have contributed to the creation of an incarcerated population that is mostly urban, mostly minority and with a high prevalence of various health problems.

Substance Use

Because of the nation's reliance on the criminal justice system to address problems of substance use, the correctional system houses more serious drug users than any other institution. According to the National Center on Addiction and Substance Abuse at Columbia University,[21] two fifths of first offenders and more than four fifths of those with five or more prior convictions have histories of regular drug use. According to surveys conducted by the National Institute of Justice, more than 70% of federal inmates and 80% of state and local jail inmates reported a history of drug use.[17,22,23] Female inmates generally report higher rates of substance use than males.[17] Between 1980 and 1996, the proportion of state prison inmates sentenced for drug law violations increased from 6% to 23%, and for jail inmates, the increase was from 9% in 1983 to 24% in 1996.[13] Urine toxicologies conducted in 1999 on jail inmates in 34 sites throughout the United States by the National Institute of Justice showed that 67% of women and 64% of men tested positive for recent illegal drug use.[17] In 1998, 17% of a representative sample of jail inmates reported use of intravenous drugs at some time in their lives.[22]

Although an estimated 75% of state inmates are in need of substance abuse treatment, fewer than 20% actually receive it, and then it is usually short term and nonintensive.[21] Even fewer jail inmates receive help for their drug problems. A 1996 survey of US jail inmates found that 29% had participated in some form of treatment while under correctional supervision.[10] Self-help groups and educational programs were the most common types of treatment. About 14% of inmates who reported regular drug use prior to arrest participated in some form of treatment. According to the Bureau of Justice Statistics,[4] the number of state prison inmates participating in drug treatment programs dropped from 1 in 4 in 1991 to 1 in 10 in 1997.

Infectious Diseases

According to a national survey of jails and prisons, compared to the general population, rates of human immunodeficiency virus (HIV) infection among incarcerated individuals are 8 to 10 times higher, rates of hepatitis C are 9–10 times higher, and rates of tuberculosis are 4–17 times higher.[24] Hammett has estimated that one quarter of all people with HIV infection and one-third of those with tuberculosis have been released from prison or jail in the past year.[4] These data demonstrate the role

correctional facilities play in concentrating people with infectious diseases, providing opportunities not only for control, but also for amplification, of epidemics.

A 1994 national survey of jails and prisons showed that acquired immunodeficiency syndrome (AIDS) is almost six times more prevalent among inmates than in the total US population.[25] In 1996, 2.3% of state and federal inmates were known to be HIV positive; about a quarter of these individuals had confirmed AIDS cases. Females had higher rates of HIV infection than males (3.5% vs. 2.3%).[24] In 1993, the prevalence of HIV infection in US jails was 1.8%, but it was 3% in the 25 largest jurisdictions, the nation's major metropolitan areas.[24]

In New York City, blinded seroprevalence studies[26] showed that the prevalence of HIV infection declined among men in jail, from 16.2% in 1989 to 6.6% in 1996, and for jailed women, it declined from 25.1% in 1989 to 19% in 1996. However, in 1996, HIV prevalence among jailed inmates was 66 times higher than for military recruits, 27 times higher for jailed women than for women using abortion clinics (in 1997), and almost two times higher than among individuals using clinics for sexually transmitted diseases (STDs) or enrolled in drug treatment programs.[26]

Several studies have documented high levels of HIV risk behavior among inmates prior to and after, as well as during, incarceration.[27–33] While most studies show limited HIV transmission within US correctional facilities, observers agree that inmates continue to engage in risky sexual behavior and drug use while behind bars, even though at a lower rate than in the "free world." Recent increases in HIV infection rates among young men who have sex with men, combined with increasing incarceration rates, suggest the importance of understanding better same-sex sexual behavior in prisons and jails, but this phenomenon has been little studied. Few US correctional systems make condoms available to inmates,[24] and none distribute sterile injection equipment.

A Centers for Disease Control and Prevention (CDC) survey of STDs among women in US jails found that 35% of the women had syphilis, 27% had chlamydia, and 8% had gonorrhea.[34] A study of the incidence of syphilis among women with multiple admissions to jail in New York City between 1993 and 1997 found that the early syphilis incidence in this population exceeded the 1997 rate among all women in New York City by more than a thousand-fold.[35] These findings confirm earlier studies that showed high rates of STDs among urban incarcerated women.[36,37] As syphilis incidence declines overall, jails and prisons constitute an increasingly important venue for testing and treatment,[38,39] especially if the United States is to achieve its goal of syphilis elimination.[40] A 1997 CDC survey of STD testing and treatment policies and practices in jails found that most facilities treat for STDs based on symptoms or at the request of the arrestee, but do not routinely screen asymptotic persons.[34] Other studies have found high rates of vaginal trichomoniasis among female inmates, with the evidence suggesting that these infections are acquired prior to incarceration.[41]

Hepatitis C virus (HCV) is also prevalent in correctional facilities. Epidemiologic data suggest that 30% to 40% of the nation's inmates are HCV infected, primarily though drug use.[42] HCV seroconversion while in prison is estimated at 1.1 per 100 person-years in prison, a relatively low rate. Few correctional facilities have adequate HCV control programs.[42]

As tuberculosis spread in the United States in the 1980s and early 1990s, correctional facilities, especially in urban areas, experienced a growing prevalence of tuberculosis-related problems. A study of tuberculosis in New York City in the early 1990s found that 1 year of jail time increased the odds of tuberculosis by 2.2,

suggesting that the jail system may have been an important amplification point in New York City's tuberculosis epidemic.[43] In California and South Carolina, tuberculosis outbreaks began in prison housing units for HIV-infected inmates, then spread to correctional or medical staff and the wider community.[44,45] Based on an evaluation of an outbreak of tuberculosis in a large urban jail in 1996, CDC investigators concluded that "aggressive measures to screen for active tuberculosis upon incarceration are important for preventing the spread of disease in jails and to the surrounding community."[46(p561)] Inadequate treatment for tuberculosis in correctional facilities can contribute to the spread of drug-resistant tuberculosis strains.

Violence

Removing violent individuals from their communities to incapacitate them and protect future victims is a key goal of the criminal justice system. Thus, it is not surprising that jails and prisons contain many individuals with a history of violence. Researchers have addressed three questions about the relationships between correctional facilities and violence: What are inmates' rates of prior victimization? What are inmates' experiences of violence within facilities? and, To what extent does incarceration contribute to violent behavior after release? Given the concentration of violent crime within cities, these questions have a particular salience for understanding the impact of correctional facilities on violence within urban communities.

Between 1980 and 1998, violent felony arrests increased by 42%, while drug felony arrests increased by 168%; in 1998, there were 2.3 times more drug felony arrests than violent felony arrests.[2] Thus, violent offenders constitute a shrinking portion of inmates. As violent crime rates continue to decline, especially in big cities, this trend is expected to continue. While most criminal justice experts agree that increased incarceration rates played some role in reducing violence in the late 1990s, they disagree about its overall significance, and few assign a primary role to this factor.[47–49]

Both national and local studies find victimization rates are much higher among the incarcerated than in the general population. Several studies show that between a third and a half of incarcerated women report childhood abuse, childhood or adult sexual abuse or rape, or involvement in abusive relationships,[10,28,50–52] significantly higher than the prevalence in the general populations of women. Male inmates also report higher levels of prior abuse than nonincarcerated men do. Of male state prison inmates, 12% reported physical or sexual abuse prior to incarceration,[50] and in a study of jail inmates in Florida, 17% of men reported prior emotional abuse, 6% reported physical abuse, and 2% reported sexual abuse. The comparable rates for the Florida female jail inmates were 24%, 16%, and 19%, respectively.[53] Studies of adolescent offenders also show high rates of prior victimization.[54,55]

Given research evidence that prior victimization is associated with perpetration of violence in later years,[56,57] correctional facilities have the potential to interrupt the generational cycle of violence. Given the links between prior victimization and risk of HIV[58,59] and substance abuse,[60,61] especially for women, the public health benefits of using correctional facilities to assist inmates to overcome the psychological damage from these experiences may be substantial.

A significant body of literature, recently reviewed by Bottoms,[62] examines violence within prisons. Among the conclusions are that homicide rates within US prisons have declined significantly in the last 25 years; that younger prisoners, those with mental health problems, and blacks are more likely to be involved in violent

incidents; and that white inmates are more likely to be victimized than other races. Correctional facilities are often characterized by a culture of violence in which both inmates and staff use violence or the threat of violence to settle conflicts.[63] Some studies show that assaults and injuries in juvenile facilities have become more common, especially in overcrowded institutions.[64,65]

Some facilities have reduced violence through administrative procedures and increased control,[62] but research evidence is lacking as to whether these reductions reflect real declines in violence or only reported incidents and whether declines in reported violence lead to an increased feeling of safety. Anecdotal reports suggest that many inmates, especially first-time offenders and adolescents, continue to experience terror and victimization within correctional facilities.

Some evidence suggests that the experience of incarceration may contribute to subsequent violent or criminal behavior. The police superintendent of Boston, a city that experienced large declines in crimes in the late 1990s, suggested that a cause of the 13% increase in firearms-related crime in the first half of 2000 may be prison grudges or gang affiliations that former inmates brought back to the streets.[4] Some studies show that anger predicts aggression among juvenile offenders,[66] suggesting that an incarceration experience that provokes anger may contribute to recidivism. In fact, more than two thirds of juvenile offenders are arrested again within 18 months of their release.[67] Abusive practices in juvenile facilities and "boot camps" have led to legal action or closure of some facilities.[68] It is possible that the anger and shame generated by abusive practices in boot camps contribute to their disappointing results in reducing recidivism.[69]

Mental Health Problems

Each year almost 700,000 mentally ill people are admitted to US jails.[70] Since deinstitutionalization and psychotropic drugs have emptied mental hospitals, and "quality-of-life" police campaigns have arrested people for disorderly behavior, drug use, and related crimes, jails and, to a lesser extent, prisons have become the "new asylums" in the United States.[71] The nation's largest mental health facilities are now found in urban jails in Los Angeles, New York, Chicago, and other big cities.[72]

Epidemiologic studies of jail-based populations have found much higher than average prevalence of mental illness. Studies in Chicago have found that 9% of male inmates had a severe disorder (schizophrenia or major affective disorder) sometime during their lifetime; and 6% had an episode within 2 weeks of their arrest.[73,74] These rates were two to three times higher than the general population rates, even after controlling for demographic differences between the jail sample and the general population.[73] Among women in jail in Chicago, 80% met criteria for one or more lifetime psychiatric disorder, and 70% were symptomatic within 6 months of their arrest.[75] Except for schizophrenia, all rates were significantly higher than for women in the general population. The authors noted that a "striking percentage of women," more than one third, had a diagnosis of posttraumatic stress disorder.[75]

According to the Bureau of Justice Statistics 1998 survey of correctional facilities, 16% of state prison inmates, 7% of federal inmates, 16% of those in local jails, and 16% of probationers—a total of 831,600 individuals—reported either a mental condition or an overnight stay in a mental hospital.[76] Mentally ill inmates were more likely to be homeless, to have a history of physical or sexual abuse, and to have been arrested for a violent crime than other inmates.[76] In another national

survey, 10% of jail inmates reported a learning disability such as dyslexia or attention deficit disorder.[10] A study in Houston, Texas, found that 10.9% of those arrested and incarcerated in a single week were listed on that city's mental health service files, and that the odds of arrest for individuals with a mental health record were five times higher for males and six times higher for females than for the general population.[77]

Suicide is the leading cause of death in jails and prisons,[78] and inmates have a suicide rate 11 to 14 times higher than the general population.[79] Researchers suggest that high suicide rates in correctional facilities are associated with high rates of untreated depression. Intervention programs can play a role in lowering prison suicides.[80]

Several studies suggest that jails have insufficient mental health resources to meet the needs of inmates, and that many are discharged without appropriate referrals or follow-up care.[76,81,82] The 1998 Bureau of Justice Statistics survey found that 41% of jail inmates with mental health problems had received some treatment while in jail: 34% had received medication, and 16% received counseling or therapy.[76]

Chronic Diseases

Few studies have examined the prevalence of chronic illness among jail or prison inmates. Anecdotal reports, commentaries, and facility case histories suggest that health conditions such as asthma, diabetes, seizure disorders, and hypertension may be more prevalent among inmates than the general population.[16,83–85] In one study, about 10% of adolescents admitted to a detention facility had a significant medical problem that required follow-up.[86] Similarly, the 1996 survey of US jail inmates found that 10% reported some physical disability.[10] As the prison population ages, the prevalence of chronic conditions is expected to increase.[87]

Reproductive and Sexual Health

As the number and proportion of females involved in the criminal justice system increase, so does the need for reproductive health care. In 1997, 6% of US women admitted to jails and 5% of those admitted to prisons were pregnant; slightly more than half received some prenatal care while incarcerated.[8] Given the high rates of substance abuse and sexually transmitted diseases among incarcerated women, these pregnancies carry additional risk for both women and their babies. A few jails and prisons provide nurseries for women who deliver behind bars, but most require women to be separated from their infant after a few days in the hospital.[88] In some jurisdictions, public policies hinder the access of incarcerated women to abortion services.[88]

High rates of sexually transmitted diseases suggest the need for regular Pap smears and other gynecological services; a national survey in 1997 found that, while 90% of women admitted to US prisons received a gynecological examination on admission, only 22% of women admitted to US jails did.[8] Women arrested for prostitution face unique threats to health. While some special alternatives to incarceration programs have addressed these needs,[89] few correctional facilities offer services for this population.

Perceptions of Health

Inmates generally report poorer health status and more health problems than the general population. In the 1996 survey of a sample of US jail inmates, 37% re-

ported that they had some disability—a physical, mental, or emotional condition or difficulty seeing, learning, hearing, or speaking.[10] In the general population, 26% report such a disability. In a survey of 198 inmates in a county jail in a southern city, 28% rated their health as poor or fair, and inmates reported a mean 6.3 physical health problems.[90] In this sample, the experience of incarceration appeared to influence adversely the physical health of inmates, with self-reported health problems increasing with duration of incarceration.[90] In addition, female inmates reported not only more difficulty gaining access to jail services, but also higher satisfaction with the quality of services received.[90] In another study, half of 1,198 male and female inmates admitted to a correctional facility in western Massachusetts rated their health as only good, fair, or poor.[91] Half the men and two thirds of the women in this sample had used an emergency room in the last year.

IMPACT OF CORRECTIONAL POLICIES ON URBAN COMMUNITIES

Correctional policies have both intended and unintended effects on urban communities. To understand better the full impact of jail, prison, and related policies on health, it may be helpful to summarize these effects. The primary purpose of jails is to detain individuals who have been charged with a crime prior to sentencing and to house those sentenced to less than 1 year. Incarceration in a jail ensures that the individual will be available for adjudication and punishes those that have been convicted of less serious crimes. Although "preventive detention" is not a constitutional practice in the United States, incarceration also "incapacitates" those behind bars, preventing them from committing other crimes in the community and thus presumably contributing to public safety. Recently, police officials and researchers have also suggested that swift punishment for minor crimes deters other more serious offenses, thus improving public safety.[92] Health and social service providers have emphasized that correctional facilities can also link people to services, including drug treatment, health care, and social services.[93] As noted, however, data suggest that few inmates actually receive such needed services.[13,76]

Prisons, which house inmates sentenced to terms of more than 1 year, play a greater role than jails in punishment, deterrence, and incapacitation. The research evidence is contradictory on the extent to which current correctional policies have achieved these goals.[47,94] Historically, prisons have also at times emphasized rehabilitation, preparing people for community reintegration following release by addressing underlying mental health, substance abuse, and educational problems.[95] In the last 10 years, resources dedicated to prison rehabilitation have diminished, often by legislative mandate.[4]

The unintended consequences of high incarceration rates in some urban communities may be as important as the intended ones.[94,96] Incarceration has a variety of labor market effects. According to Western and Beckett,[97] high incarceration rates reduce unemployment by shrinking the pool of those seeking work. Western and Beckett present data that suggest that low unemployment rates in the United States, as compared to western Europe, are in part due to the high incarceration rate of young males in this country. At the same time, however, incarceration also reduces the employability of young men, contributing to high rates of unemployment in disadvantaged communities.[96] A survey of employers in five US cities found that 65% of all employers said that they would not knowingly hire an ex-offender,

regardless of the crime.[98] A recent review concluded that imprisonment reduces offenders' subsequent income and employment.[99]

High incarceration rates also have numerous effects on families and family structure. More than 1.5 million children in the United States have parents in prison,[96]; many more have parents in jail. The disproportionate incarceration rates of males compared to females leads to a reduction in the number of males available for marriage, contributing (with male joblessness) to higher rates of female-headed households in disadvantaged communities.[100] For men and women, incarceration leads to family breakup or disruption, pushing children into formal or kinship foster care.[101] Children of incarcerated parents are five times more likely to spend time in prison as adults than are children of nonincarcerated parents.[96] Male incarceration deprives children of contact with their father and may undermine the ability of young men to become effective fathers when they leave prison or jail.[102] Incarceration can also precipitate homelessness by removing a wage earner from the home, reducing family income, and leading to missed rent payments.

In the 1980s and the 1990s, the HIV and crack cocaine epidemics and high rates of incarceration associated with the war on drugs had a devastating and synergistic impact on the physical and mental health of families in urban neighborhoods in the United States.[103–107] Some research suggests that releasing many inmates into crowded urban communities may destabilize neighborhoods, contributing to social isolation and lack of social cohesion, factors associated with increased crime.[96]

Incarceration also affects political participation. Inmates are prohibited from voting while serving a felony sentence in 46 states and the District of Columbia; 32 states prohibit felons on parole and 29 prohibit those on probation from voting; and 10 states disenfranchise all ex-offenders who have completed their criminal sentence, while 5 others restrict some felony offenders after release.[108] According to the Sentencing Project,[108] almost 4 million Americans have currently or permanently lost their voting rights due to a felony conviction, and 13% of black men are disenfranchised, a rate seven times the national average. Given current rates of incarceration, 3 in 10 of the next generation of black men can expect to be disenfranchised at some point in life, a prospect that the Sentencing Project reports has "serious implications for democratic processes and racial inclusion."[108(p1)]

Disenfranchisement of those with criminal records contributes to lower rates of citizen participation in the political process. Because ex-offenders are concentrated in metropolitan areas, denying them voting rights may further impair the ability of urban areas to compete with the suburbs for resources in state legislatures. In addition, many states build prisons and incarcerate urban inmates in rural counties, leading some observers to charge that the prison expansion boom is a job development program for mostly white rural populations at the expense of mostly urban communities of color.[109] These economic, political, and racial dimensions of criminal justice policies may exacerbate urban/rural and black/white conflicts, reducing regional and national social cohesion.[8,9]

Spending time in jail or prison can also have adverse effects on the inmate. Gangs often recruit within prisons, and some inmates join to protect themselves, thus establishing a long-term involvement in antisocial networks. A sociologist who has studied gangs in California has observed that, "In California, I don't think gangs would continue existing as they are without the prison scene" (cited in Ref. 96, page 3). She warns that, as more young inmates are released from correctional facilities after joining gangs, they will exert strong negative influences on their communities.

Within correctional facilities, some inmates, especially those with stigmatizing characteristics such as mental illness or the perception of homosexuality or the growing proportion of juveniles in adult facilities, are subject to physical and sexual violence by other inmates or correctional officers.[110] For some, the brutalization of inmate life may lead to posttraumatic stress syndrome or aggressive behavior after release. Researchers disagree about the long-term impact of imprisonment on mental health.[80,111]

When the proportion of young adults in jail reaches a "tipping point," jail and prison culture can dominate a community or various subpopulations.[112] Recent national trends in clothing and music have their origins in urban jails and prisons, creating a spillover in which jail culture is normative—or at least an acceptable alternative—to what is perceived as racist mainstream culture.[113] Social critic Nelson George observed that, in the 1980s and 1990s, "The dispassionate view of violence and overall social alienation that incarceration fosters was spread by prisoners and infected the rest of the community."[114,p44] This trend may undermine the deterrent effect of incarceration.[115]

The exponential expansion of the correctional system has also had the unintended consequence of diverting resources from other social needs, especially education and health. In the 1990s, many states cut funding for higher education while increasing support for corrections. By 1995, there were more black men in prison and jail in the United States than in colleges and universities.[9] In many cities and states, correctional services have been the fastest growing sector of the budget, and many cities spend more on jails than on public health. In New York City, for example, in fiscal year 1998, the Department of Correction spent almost $800 million, while the Department of Health spent $470 million.[18]

Within public health, the rapid expansion of the correctional system can also have unintended consequences. Initiating antibiotic treatment for tuberculosis, HIV, or other sexually transmitted diseases without adequate follow-up to ensure completion of treatment can lead to the development of drug resistance, a peril to the community as a whole.[116] In some cases, incarceration can amplify epidemics by facilitating transmission, as was the case with tuberculosis in New York City.[43]

ROLES OF CORRECTIONAL SYSTEMS IN PUBLIC HEALTH IN URBAN COMMUNITIES

Correctional facilities also play direct public health roles in urban communities. First, they provide screening and treatment for infectious diseases, including HIV, syphilis, gonorrhea, tuberculosis, and others.[24,35,43,93] The goal of such screening programs is to identify undetected cases of disease and provide treatment, preferably while the person is incarcerated to ensure completion of therapy. Higher rates of many infectious diseases in incarcerated populations compared to other low-income populations makes for higher yields for screening programs at correctional facilities.[117] Several articles in this issue of the *Journal* describe findings from HIV screening programs based in jails and prisons and describe the strengths and limitations of this approach to both identifying HIV-positive inmates and linking them to services in the jail and after release.[118–121] In his commentary, Hammett[122] summarizes current knowledge on HIV testing and counseling in correctional facilities and suggests directions for future research and service delivery.

Second, correctional health services can provide primary health care, links to treatment, and access to medications both within the facility and postrelease.[85,88,90,91,123] For

example, some jails and prisons provide antiretroviral therapy for HIV, antibiotic treatment for STDs, multidrug therapy for tuberculosis, or methadone detoxification or treatment for heroin addiction. The article by Rich et al. in this issue describes such a program for inmates with HIV infection leaving prisons in Rhode Island.[124] Less frequently, correctional health services can screen, identify, and treat or refer individuals for treatment for chronic conditions such as hypertension, diabetes, or asthma.

In the past 5 years, public health and correctional officials have emphasized the importance of integrating drug treatment services into the correctional system,[13,21,125–127] and several evaluation studies suggest promising results.[13,128] Few systems, however, have yet been able to develop the systematic and comprehensive programs that can reach a significant proportion of inmates in need with services of sufficient intensity and duration to make a difference.

With the deinstitutionalization of patients from mental hospitals, jails and prisons have become a major provider of mental health services, offering crisis intervention, pharmacotherapy, or referrals for community services.[71,72,76,82,110,128] Most observers agree that, while correctional facilities can better respond to the mental health needs of inmates than they do now, the goal of policy should be to divert most mentally ill inmates, especially those who are nonviolent, into community-based treatment facilities.[71,72,110,129–131]

Third, correctional facilities can offer health education and health promotion services. Common approaches include self-help programs, which generally provide social support, information, and referrals, and often address issues related to substance abuse and HIV infection; and peer education programs, in which inmates or former inmates are trained to present information, make referrals, and provide support to other inmates. Frequently addressed topics include smoking, alcohol and drug use, HIV and STD prevention, and violence prevention.[13,29,93,132–136] Few jails or prisons have established comprehensive health education programs despite their ability to have ongoing contact with vulnerable populations.

Finally, correctional facilities can assist in the process of community integration following release from jail or prison.[15,96,134,137] In this issue, Richie et al. describe one such program that seeks to reintegrate women leaving jail in New York City.[138] Community reentry is a critical moment for health, requiring returning offenders to decide whether to return to drug use, crime, and violence—acts that often lead to reincarceration—or to choose a different path. Individuals must also decide whether to seek health and mental services or drug treatment and whether to continue or terminate any medical regimens initiated while incarcerated. In addition, those leaving jail or prison return to intimate relationships and must make decisions about sexual behavior, the use of threats and violence, and parenting.

Corrections systems can assist individuals to make healthier choices by providing discharge planning, community aftercare, and other postrelease supportive services. Evaluation studies suggest that postrelease services are associated with reduced recidivism.[13,52,134,137] The most common strategy for community reintegration is case management, in which professional or paraprofessional staff provides counseling, referrals, and ongoing coordination of multiple services. Various authors have described its application to offenders in general[139,140] and to individuals with substance abuse problems,[137] mental health needs,[82,129,130] and HIV infection,[124] as well as to women.[52,134,141–143] Effective community reintegration interventions protect the health of both inmates and their peers, families, and communities.

While correctional facilities offer a wide variety of health programs, most can

be characterized on a few relevant dimensions, including setting, staffing, intensity and duration of services, and intervention strategy. Correctional health programs can offer services inside the jail or prison, in the community after release, or both. The most common services offered behind bars include physical assessment, screening, and referrals, as well as direct health services, substance abuse treatment, mental health care, and discharge planning. Postrelease services include case management, drug treatment and aftercare, and various forms of supportive services. Programs that provide services on both sides of the bars offer several advantages: Their staff can develop trusting relationships with inmates during incarceration that can help maintain involvement after release, continuity of care can be improved, and services can be better tailored to meet individual needs.

Few correctional health programs have been systematically evaluated and a comprehensive assessment of these interventions is beyond the scope of this review. Evaluating the relative effectiveness of these approaches and determining their advantages and disadvantages in various settings is an important research priority. Assessing the impact of varying intensities, duration, mix of services, and staffing of interventions will help develop a body of literature that can guide practice.

AGENDA FOR ACTION

The correctional system has profound and complex effects on the health of communities, especially urban neighborhoods with a high prevalence of individuals placed in the system. Given the disproportionate burden of morbidity and mortality that urban populations experience,[143,144] devising new strategies to improve the health of those involved in the correctional system and to forge new partnerships between the criminal justice and public health systems is an important priority. The nation's ability to meet the health objectives in Healthy People 2010 will be increased by such strategies,[145] many of which depend on reducing the disparities experienced by the low-income population most heavily involved in the correctional system. Given that the jails in the 25 largest jurisdictions in the nation account for 27% of all US jail inmates,[146] development of new approaches in a relatively few facilities may have a significant public health impact.

To achieve these goals, public health professionals can advocate for the following actions:

1. Improve health and social services for inmates
2. Emphasize community reintegration for released inmates
3. Support research and evaluation
4. Support alternatives to incarceration

Health and Social Services for Inmates

Jails and prisons serve among the most vulnerable populations in the nation, individuals often not reached by other systems. They provide an opportunity to engage populations at the center of the urban epidemics of the late 20th century. Despite the fact that model programs have been established, and in a few cases demonstrated to be effective, the majority of inmates still receive inadequate or no care for HIV infection or other STDs, substance abuse, perpetration of or victimization by violence, mental health problems, or a range of other conditions. This lost opportunity exacts a high cost on inmates, their families, their communities, and taxpayers.

The priorities for improved services include

- greater emphasis on reaching the majority of inmates with needs, not just a select handful;
- a focus on quality of care to ensure that services that are delivered in fact help to achieve public health goals;
- a reduction of the organizational and attitudinal barriers that make it difficult for many inmates to gain access to the services they need.

While these changes will require additional resources, shifting even a modest proportion of current correctional budgets to health and social services should result in overall savings to society. A variety of studies have documented that some types of health and social services for inmates, especially substance abuse services, save more than they cost.[13,20,128,127,147,148] As Hammett notes in this issue,[122] presenting convincing cost-benefit data to policymakers is an important part of a strategy to change policy.

Community Reintegration for Released Inmates

Speaking from a public safety perspective, Travis[15(p2)] has proposed that a primary objective of the criminal justice system should be "to prevent the recurrence of antisocial behavior" among those leaving incarceration. To achieve this end, he argues, will require new approaches to managing reentry to the community, a task that has been neglected in recent years. From an economic perspective, society's failure to protect the investment it has made in arrest, trial, and incarceration by not providing adequate discharge planning and aftercare for newly released inmates represents a costly and negligent business practice.

From a public health perspective as well, community reintegration urgently requires more attention. The first hours, days, and weeks after inmates return to their community pose maximum peril to themselves, their families and peers, and their community. By investing greater resources in using this vulnerable time to achieve socially desirable outcomes (e.g., less drug use, risky sexual behavior, and violence or abuse), public health workers can interrupt the health-damaging cycle of relapse and recidivism. On a population level, failure to integrate ex-offenders may reduce social cohesion and increase community disruption, contributing to other health and social problems,[149,150] especially in urban communities with many returning inmates.

Effective community reintegration programs will require new partnerships among correctional facilities, public health departments, health care institutions, universities, faith-based groups, and community and advocacy organizations. While promising models for such partnerships exist, the practical obstacles that face systems with different missions and cultures will prove challenging.

Research and Evaluation

To improve the health of populations involved in the correctional system will require new research, as well as new programs and policies. On one level, more systematic and rigorous evaluation studies are needed. What types of programs are most effective in linking inmates to services, reducing risk behavior, and reintegrating the inmates into their communities? How can effective demonstration projects be institutionalized with a sufficient reach and intensity to have an impact on population health? How best can programs be tailored to meet the needs of subpopula-

tions such as women, adolescents, recent immigrants, and other groups? Answers to these questions will help public health and correctional officials make more informed choices.

On another level, more fundamental social science questions need to be studied. How does stigma against ex-offenders block community reintegration? What types of policy and media interventions are most effective in reducing stigma? What is the ecology of jails in the HIV epidemic in US cities today, and what types of jail interventions can most effectively interrupt transmission? To what extent do current criminal justice policies disrupt social cohesion in urban neighborhoods, and what are the specific health consequences of such disruptions? Do current criminal justice policies exacerbate health disparities, and if so, through what pathways? What are the underlying political and economic determinants of current correctional policies, and what political strategies are needed to change these policies? What can we learn from studying the experiences of other nations? These questions cry for systematic social science research.

Developing a research agenda on correctional health will also require new partnerships involving policymakers, funders, public health and social science researchers, advocacy organizations, community residents, and inmates.

Alternatives to Incarceration

Improving the effectiveness of health programs in correctional facilities and better reintegrating offenders into their communities after release are important goals, yet neither addresses directly our nation's heavy reliance on incarceration to solve social problems such as substance abuse, violence, or community disorder. Already, the United States has the dubious distinction of having the world's second highest incarceration rate, and continued expansion of this strategy may exacerbate the adverse health, economic, political, and social justice consequences described in this review. Given current patterns of incarceration, urban populations, especially low-income and minority communities, will bear the disproportionate burden of these adverse effects.

Moreover, since these populations already experience poorer health outcomes, continued expansion of jails and prisons threatens to exacerbate further the disparities in health between the poor and the better off and between blacks and Latinos and whites.

Thus, it is imperative for public health professionals to join the effort to find alternatives to incarceration. In the shorter run, several recent developments promise new ways to keep people out of jail: drug courts, community justice programs, and restorative justice approaches. In the last year, both New York and California have initiated new programs for drug users involved in the criminal justice system,[151–153] showing that it is possible to win public support for change. Reducing the number of people in jail and prison by diverting them into alternative programs will also allow correctional facilities to offer more services to those who remain.

In the longer run, reducing reliance on incarceration will require a new emphasis on social justice. As the President's Commission on Law Enforcement and the Administration of Justice[154(pvi)] observed in 1967, "Crime flourishes where the conditions of life are worst," and therefore, "the foundation of a national strategy against crime have to be an unremitting national effort for social justice."

The fundamental causes of crime and incarceration are the same as for poor health: poverty, racism, income inequality, and lack of opportunity. Public health historically has had reducing injustice as part of its mission; finding ways to revital-

ize this dimension of our discipline is an important task. By joining with others to find new avenues to promote both community health and public safety, urban public health professionals can help create healthy and just cities for the 21st century.

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