HIV and Corrections

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Section 6: Key Populations
Topic 5: HIV and Corrections

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Overview of United States Correctional System

Background

The United States correctional system is comprised of local and tribal jails, state prisons, federal prisons, military and immigration facilities, and community correctional facilities, which includes probation and parole programs. Jails mainly house accused persons awaiting trial or transfer, as well as those convicted who have sentences of less than 1 or 2 years. Persons leaving jail are often supervised on probation for a defined period of time. In contrast, prisons house convicted felons serving longer sentences. Whether the offense committed involves federal law or state law determines whether the inmate is sent to a federal or a state prison. Parole refers to conditional release from prison prior to completing a sentence with the responsibility of completing the remainder of the sentence in the community. Upon leaving prison, many people continue to be monitored by the correctional system on parole. At any point in time, about twice as many persons are incarcerated in prisons in the United States than in jails (Figure 1), but over the course of a year the number of individuals incarcerated in the jail system far exceeds those incarcerated in prisons (Figure 2); this difference over a year results from the low turnover rates in prisons (longer stays and infrequent releases) versus high turnover rates in jails (shorter stays and frequent releases).[2] The landmark Supreme Court Estelle v. Gamble decision in 1976, which established that all incarcerated individuals have the right to adequate healthcare, provides the constitutional mandate for HIV care within the correctional setting.[3,4]

United States Prison Statistics

In 2018, the United States had the highest prison population rate (prisoners per 100,000 population) in the world and the total prison population in the United States was higher than any other country (Figure 3).[5] The total adult population in the correctional system in the United States, including local jails, state prisons, and federal prisons, increased significantly during the 1980s and 1990s (largely as a result of the crackdown on illegal drug use), peaked in 2008, and then leveled off (or slightly decreased) (Figure 4) and (Figure 5).[6,7] According to the Bureau of Justice Statistics, at the end of 2015 the United States had approximately 2,162,400 adults in correctional facilities,[6], with more than half of them in a prison facility. The state prisons account for more than 90% of those in prison and the majority are males (Figure 6).[8] From 2005-2015, blacks consistently had higher prison incarceration rates than whites (Figure 7).[6,8] In 2012, 58% of persons incarcerated in prisons were blacks or Hispanics, which is striking considering blacks and Hispanics comprised only approximately 30% of the United States population in that same year.[9]
Epidemiology of HIV in Correctional Setting

Prevalence of HIV in Prisons

In the United States, during the years 1991-2015 the annual number of persons with diagnosed HIV in state or federal prisons ranged from a high of 25,976 in 1998 to a low of 17,146 in 2015; from 1998 to 2015 the number and rate of persons with HIV in state or federal prisons declined (Figure 8).[10] Since the state prison population is much larger than the federal prison population, it is not surprising the number of state prisoners with HIV far outnumbers the number in federal prison (Figure 9).[10] Epidemiologic surveys indicate the prevalence of HIV in 2015 was approximately 1.3% among inmates in correctional facilities, which is markedly higher than the 0.3 to 0.4% HIV prevalence in the general United States population.[2,10,11] The prevalence of HIV among inmates in state prisons varies significantly by geographic region, with New York, Louisiana, and Florida having the highest prevalence (3.0% or greater) (Figure 10).[10]

Injection Drug Use and HIV in Prisons

The higher prevalence of HIV, chronic hepatitis B, and chronic HCV within correctional facilities can partially be explained by the high percentage of inmates with a history of injection drug use. Although injection drug use may directly result in transmission of HIV, it is also associated with high-risk sexual activity that can result in HIV acquisition.[12] Although the number of persons who have ever injected drugs is not routinely assessed in prison populations, a 2004 Bureau of Justice Special Report noted that 23% of state prisoners and 18% of federal prisoners reported ever having used heroin/opiates.[13] Unfortunately, few correctional facilities currently offer medication-assisted treatment for opioid addiction, and many inmates continue to use illicit drugs while incarcerated if they are able to access the drugs.[14,15,16] Available data suggest that for persons with HIV and a history of opioid dependence, receipt of opiate agonist therapy within an HIV clinic upon release from prison improves HIV treatment outcomes in the community.[17,18]

Gender Differences in HIV Prevalence in Prisons

In the United States, the absolute number of men with HIV in state or federal prisons is consistently greater than the number of women by a ratio of more than 10 to 1, which is not surprising given the prison population is predominantly male. In contrast, when analyzing by the rate of persons diagnosed with HIV in state or federal prison, the HIV rate in women (range, 1.3-1.8%) was similar to the HIV rate in men (range, 1.3-1.4%) (Figure 11).[10] The relatively high HIV seropositivity rates among incarcerated women has been associated with higher rates of specific HIV risk factors, including past sexual abuse, exchange of sex for drugs or money, multiple sex partners, low rates of condom use, and injection drug use.[19] In addition, when compared with men, incarcerated women have higher rates of unemployment (45.8% versus 26.7%), homelessness (17.4% versus 12.1%), and psychiatric comorbidities (43.6% versus 21.6%).[20] Transgender women in particular have high rates of HIV and incarceration.[21]

Racial Disparities in HIV Prevalence in Prisons

It is important to recognize the overlap of incarceration and HIV, particularly for low-income people of color.[22] Incarcerated black men are at least twice as likely as incarcerated white men to have HIV. One study that involved 1,207 men and women who entered jails at 10 sites found that among all subjects who identified as HIV-seropositive, 65% were black.[22,23] Although the overall rate of AIDS-related deaths in prison has declined since 2001, the rate of AIDS-related deaths among black inmates has remained higher than in white or Hispanic inmates.[24]

Intra-Prison HIV Transmission

Although consensual sex, rape, tattooing, and injection drug use occur within the correctional setting, available data suggest that most persons with HIV who are incarcerated acquired HIV prior to entering prison.
or, for those with multiple incarcerations, between periods of incarceration.[12, 25, 26] A large meta-analysis estimated the incidence of transmission of viral infections within prisons and found rates of 0.08 per 100 person-years with HIV.[12] In a study conducted among male inmates in a Georgia state prison system, intra-prison transmission of HIV was associated with male-male sex in prison, receipt of tattoos while in prison, age older than 26 years, having served at least 5 years of the current sentence, black race, and low body mass index upon entry to prison.[25] Many have called for a comprehensive strategy to help stop HIV transmission within the correctional system, through interventions such as voluntary counseling and testing, disease prevention education, and treatment for substance use disorders.[27] Other strategies include access to condoms, regulated tattoo parlors in prison, and facility-based needle exchange programs. All of these infection control strategies would also provide an opportunity to address prevention of infection with hepatitis C virus (HCV), which is important given that as many as 41% of inmates have chronic HCV.[15] The same meta-analysis noted above in the Georgia state prison system also reported an intra-prison HCV transmission rate of 0.75 per 100 person-years, which was significantly higher than the intra-prison HIV rate.[12] The transmission of HBV within prisons could be reduced by immunizing all HBV-non-immune inmates with hepatitis B vaccine.[12, 15]
HIV Testing Practices in Correctional Facilities

Upon entry into jail or prison, it is estimated that approximately 22% of HIV-seropositive individuals who enter jail or prison are unaware they have HIV; in the United States overall, an estimated 15% of persons with HIV have not yet been diagnosed.[11,28] In 2006 the Centers for Disease Control and Prevention (CDC) recommended that correctional facilities perform routine opt-out HIV testing (the HIV test is offered and performed unless the inmate declines the HIV test).[29] Despite this recommendation from the CDC, HIV testing practices and policies in the correctional setting vary significantly from state to state.[30] Available data on state prison HIV intake testing practice for 2015 showed that 15 states (30%) performed mandatory HIV testing (tested all prisoners regardless without the need for consent) and 17 states (34%) provided opt-out HIV testing (offered the HIV test and the test was performed unless the prisoner declined) (Figure 12).[10] An opt-in HIV testing approach is when the prisoner requests the test or the test is offered and performed only if the prisoner consents to the test. The use of an opt-out HIV testing approach increases the number of persons tested for HIV when compared with use of opt-in HIV testing approach.[31,32] Jails, prisons, and community corrections are important settings in which to test individuals for HIV, especially given that many persons involved with the criminal justice system may be hard to reach with routine community-based testing and incarcerated populations have a higher HIV prevalence than the general population.[33,34,35]

Studies of HIV Testing in Correctional Facilities

Studies have shown that HIV testing within the structured environment of corrections is effective and feasible; the cost-effectiveness of testing incarcerated populations varies with the prevalence of undiagnosed HIV among inmates in any given testing area, but, overall, is on par with the cost of testing in the non-correctional setting.[33,36,37,38,39] One HIV testing project that included more than 33,000 inmates in four states (Florida, New York, Wisconsin, and Louisiana) identified 269 (0.8%) previously undiagnosed HIV infections, and 40% of them were among inmates whose only reported risk was heterosexual contact; this study underscores why HIV testing based only on reported risk factors will fail to identify a significant proportion of incarcerated persons with HIV.[39] A more recent CDC HIV corrections testing project conducted from 2009-2013 found 0.3-0.4% of inmates tested in a broad range of correctional facilities were newly diagnosed with HIV (Figure 13).[40] The CDC has released a comprehensive document to guide the implementation of opt-out HIV testing in the correctional setting.[23]
Linkage to HIV Medical Care and Referral to Partner Services

Receiving a new diagnosis of HIV while in a jail or prison can be difficult for an incarcerated person; thus, appropriate counseling and linkage to care during incarceration are essential components to any correctional testing program, just as in the noncorrectional settings. The 2009 CDC document on HIV Testing Implementation Guidance for Correctional Settings provides specific recommendations on management of persons newly diagnosed in a correctional facility, including recommendations that address immediate clinical management issues and linkage to appropriate medical care during incarceration. The immediate clinical management issues that should be addressed include HIV prevention counseling, referral for mental health treatment if needed, initial evaluation and staging of HIV, and referral for HIV treatment (Table 1). The linkage to appropriate medical care during incarceration can be challenging since HIV specialists may not be available to provide medical services on-site at the correctional facility. Some inmates with newly diagnosed HIV may require outside expert medical consultation. In a study of CDC-funded HIV tests conducted in adult correctional facilities the percentage of persons newly diagnosed with HIV who were linked to HIV medical care within 90 days improved from 37.8% in 2009 to 67.5% in 2013 (Figure 14).
Antiretroviral Therapy in the Correctional Setting

Initiation and Continuation of Antiretroviral Therapy

Considering the high HIV prevalence in the correctional settings, it is imperative that strategies and systems are in place to maximize initiation and uninterrupted administration of antiretroviral therapy within jails and prisons. Indeed, for some individuals, the structured environment of incarceration may lead to better adherence to antiretroviral treatment than with their adherence in a community setting, regardless of how the medications are dispensed.[14, 42] Several studies evaluating the impact of directly observed antiretroviral therapy in prisons have found that directly observed antiretroviral therapy does not necessarily lead to better medication adherence than self-administration. Directly observed antiretroviral therapy is less convenient, decreases patient control, and may inadvertently jeopardize confidentiality.[14, 43] In addition, directly observed antiretroviral therapy in the corrections setting does not empower inmates to develop the discipline and habits for eventually taking antiretroviral medications on their own—skills they will need in the community.

Barriers to Antiretroviral Therapy Success in Correctional Settings

Many of the barriers to successful antiretroviral therapy within prison are similar to those outside the correctional system. These include untreated mental illness, medication side effects, lack of trust in the medical provider or in the benefit of taking antiretroviral medications, and social isolation.[44, 45] In Connecticut, psychiatric disorders were common in the HIV-seropositive prisoner cohort and 45.6% were taking either antidepressants or antipsychotic medications.[14] Incarcerated women with HIV have an even higher prevalence of psychiatric disorders than their male counterparts.[46] In the prison setting, unique barriers to antiretroviral adherence exist, such as frequent transfers between facilities or assignments within the facility that can interfere with continuity of care.[45] Some prison-specific barriers include unauthorized medication confiscation, medication theft, medication stock-outs, and inability to access medications during lockdowns.[41] Prisoners may have concerns about confidentiality and/or lack trust in the prison health care system; these may compromise adherence and deter inmates from acknowledging their HIV status and accessing HIV care.[41, 45]

Access to Antiretroviral Therapy in Correctional Settings

By law, antiretroviral therapy must be available to all inmates who have HIV. The ability of correctional facilities to successfully provide antiretroviral treatment for inmates is variable.[35] One analysis found that antiretroviral therapy sales totaled only 29% of the amount necessary to treat all eligible HIV-seropositive inmates with antiretroviral therapy, exposing a huge treatment gap.[47] Financial barriers also prevent timely initiation or continuation of antiretroviral therapy in correctional settings. Antiretroviral medications are expensive and insurance no longer covers these medications after conviction; annual budgets in small- to moderate-sized jails are often too small to support payment for antiretroviral medications for even a limited number of persons with HIV.[47] Jails and temporary detention settings pose the most challenges in terms of accessing antiretroviral therapy. Persons with HIV who have incarceration periods for fewer than 7 days have the highest risk of treatment interruption; this is likely due to the chaotic nature of the jail setting, with rapid prisoner turnover, unpredictable lengths of stay, and lack of communication with regular care providers.[48] Also, with short stays there may be inadequate time to collect a medical history, inquire about and verify current and previous medication regimens, or obtain the necessary antiretroviral medications before an individual is released.
HIV Care Cascade and Outcomes in the Correctional Setting

The HIV care cascade model has been applied to the correctional system in order to identify disparities and improve performance at every stage along the HIV care continuum, from HIV diagnosis to linkage and retention in care to antiretroviral therapy and virologic suppression (Figure 15).[28] Fewer than 30% of persons with HIV in the United States who enter the correctional system do so with an undetectable HIV RNA level.[14,28] For some inmates with HIV, the correctional setting may be their first engagement in HIV care, and during incarceration substantial gains may be made along all steps in the HIV care cascade, including increasing the percentages of persons taking antiretroviral therapy and achieving virologic suppression. In a retrospective review involving 882 prisoners with HIV in the Connecticut Department of Corrections system, virologic suppression (less than 400 copies/mL) improved from 29.8% at entry to 70.0% by release.[14] For many inmates, the greater ability to achieve viral suppression in prison is likely influenced by access to HIV care and mental health services, a structured daily routine, and decreased use of alcohol and illicit drugs.[14] As a result of improvements in antiretroviral therapies over time, the number of AIDS-related deaths in corrections has plummeted since the mid-1990s, similar to the trend in the general population; in recent years, fewer than 75 AIDS-related deaths per year have occurred in prisons (Figure 16).[10] Unfortunately, large declines in the HIV care cascade are seen after release from incarceration, often to levels even lower than before incarceration.[28,49]
Maintaining Confidentiality in the Correctional Setting

Privacy and Confidentiality in Correctional Settings

Maintaining confidentiality in jails and prisons can be challenging since the health information of prisoners is not always considered a protected entity. In the typical noninstitutional medical setting, confidentiality in the context of healthcare is a protected entity under the Health Insurance Portability and Accountability Act (HIPAA). In the correctional context the relationship between inmate privacy and institutional “right-to-know” remains contested, since correctional institutions are generally not considered covered entities under HIPAA. Within a correctional facility, the health and safety considerations for an inmate may take priority over the right to confidentiality, but some have interpreted this to mean that all officers should know the HIV status of individuals who are incarcerated. In this setting, however, the use of universal precautions should negate the need for correctional staff outside of health services to know the HIV status of any individual patient. The privacy of the individual inmate should be protected to the greatest extent possible, which typically means that medical interviews of inmates should be conducted out of earshot of correctional officers, and the disclosure of protected health information should be limited to situations that directly impact the health and safety of other inmates and/or correctional staff.

Disclosure of HIV Status

Because individuals with HIV in the correctional system often perceive that accessing HIV care may increase their risk of being subjected to violence due to stigma or homophobia, maintaining adequate privacy measures within the correctional system is of paramount importance. In a small exploratory study of 42 men and transgender women with HIV who were recently released from correctional centers in Illinois, only about one-half of the men said they reported their HIV status to at jail or prison entry and some study participants only disclosed their HIV status to the correctional officers when their health deteriorated. Fear of interpersonal violence, stigma, and lack of safety and privacy were cited as key reasons for HIV non-disclosure.

Cohorting of HIV-Seropositive Inmates

Because of limited access to HIV specialists, some prison systems have attempted to cohort persons with HIV in one or two facilities that have the easiest access to the specialists they needed. Unfortunately, this practice limits inmates with HIV from transferring to facilities that may have unique work or school programs, and may result in persons with HIV being imprisoned far from visitors, thereby limiting or preventing visitations. In addition, this process is stigmatizing to the inmates with HIV and the cohorting process likely identifies them as a person with HIV. Further, efforts to cohort HIV-seropositive inmates also have in some cases led to adverse health outcomes, due to close proximity of multiple persons with immune suppression. In one instance, a single case of tuberculosis rapidly spread among the inmates living with HIV in one facility and ultimately 31 individuals developed tuberculosis. Some correctional administrators and officials have thought that placing all inmates known to have HIV together in special units—and in some cases identifying them by an armband or special clothing—would reduce HIV transmission to both staff and other inmates. This has never been shown to be true, and few facilities continue this stigmatizing practice.
Chronic Medical Conditions Among Inmates Living with HIV

Complexity of Care

Prevalence studies of incarcerated populations in the United States have found higher rates of multiple chronic medical conditions, including hypertension, cardiovascular disease, asthma, arthritis, and malignancies, when compared with the general population in the United States, even with adjustment for sociodemographic factors and alcohol consumption.[54,55,56] Inmates with HIV have a very high rate of HCV coinfection, mental illness, and illiteracy:

- **HCV**: Various studies have determined that HCV prevalence among the general inmate population in the United States ranges from 15% to 40% depending on the region of the country.[15,57] Rates of HCV are considerably higher among those with HIV.[32,57] In a study of inmates entering the Maryland Department of Corrections, HCV infection was five times more common in inmates with HIV compared with inmates without HIV, with 65% of inmates with HIV found to have HCV coinfection.[58] High rates of injection drug use in these study populations underlie this dual epidemic.

- **Mental Illness**: People with HIV have higher rates of mental illness compared with the general population and incarcerated populations also show a high prevalence of mental health disorders.[59,60] The Justice Department estimates that 50% of inmates have a mental health disorder, and this percentage is likely even more prevalent among inmates with HIV.[61] The need to link inmates exiting the corrections setting to needed mental health services in the community is the basis of the Special Projects of National Significance (SPNS) initiative called Enhancing Linkages to Primary Care and Services in Jail Settings (EnhanceLink), which works to connect individuals with community counseling and support services.[62]

- **Lack of Education**: The lack of education is a pervasive and often overlooked issue among inmate populations. It is estimated that 3 out of 5 incarcerated persons have difficulty reading and writing, and 85% of juvenile inmates have difficulty reading. Lack of education has been linked to higher rates of crime and poverty; the lack of basic education also complicates the delivery of quality medical care since persons with low literacy may be less able to follow medical advice or even read their prescription labels.[63] Due to stigma and shame, many patients do not disclose their inability to read to their medical provider unless asked directly.

Use of Telemedicine for HIV Care in Correctional Settings

Correctional inmates with HIV often presenting complex management challenges to prison medical staff who lack HIV expertise. As noted earlier, other non-HIV-related chronic medical conditions may also complicate care. Treatment by experts in HIV medicine is strongly correlated with better medical outcomes, so one solution to the knowledge gap has been to introduce HIV subspecialty care to the prison setting through telemedicine.[64,65] Developing new models of prison healthcare, such as telemedicine, that can effectively deliver best-practice HIV medicine to inmates living with HIV, is crucial to ensuring the constitutionally protected right of prisoners to adequate healthcare.
Transition from the Correctional Setting to the Community

Importance of Transition Planning

The transition from a correctional facility to the community is a critical event for inmates with HIV. The CDC report on HIV Testing Implementation Guidance for Correctional Settings includes recommendations on linkage to appropriate medical care upon release from custody (Table 2).\(^{[23]}\) Adequate discharge planning and linkage to community medical care upon release often fall short of practices recommended by the CDC and only 30% of individuals are retained in HIV medical care after 6 months in the community.\(^{[28,32]}\) Release from prison has been associated with increases in HIV RNA levels and decreased CD4 counts, which reflect some of the challenges with engaging in medical care and adhering to antiretroviral therapy while trying to reintegrate into society.\(^{[45,66]}\) In a study that involved released prisoners in Texas, only 30% filled a prescription for antiretroviral therapy within 60 days of release.\(^{[67]}\) Programs that enhance linkage and entry into HIV care are crucial.\(^{[28,68]}\) Multiple potential interventions can improve linkage to care, including HIV education during incarceration, careful discharge planning, securing stable housing, availability of transportation, employment opportunities, and care for substance use and mental health disorders.\(^{[28,69]}\) Individuals taking antiretroviral therapy at the time of discharge should receive an adequate supply of antiretroviral medication as a bridge from jail or prison release to an appointment with a community provider. Most systems provide 30 days or less of antiretroviral medications, which is problematic since the wait time for an appointment at many community clinics often exceeds a month. Community clinics and correctional systems need to work together to find ways to adequately meet the needs of this population upon re-entry into the community.

HIV Transmission Risk After Release

After release from prison or jail into the general community, persons with HIV may engage in sex activities that may increase their risk of transmitting HIV to other, particularly with their pre-incarceration sex partners.\(^{[70,71]}\) Several studies have shown that women have an increased risk of acquiring HIV when they have sex with a male partner with HIV who is released from prison; this appears to be particularly problematic for black women in the South.\(^{[72,73]}\) Therefore, in this setting, it is important to utilize a range of HIV prevention strategies that include keeping released prisoners engaged in medical care, assisting them in taking antiretroviral therapy consistently achieving suppressed HIV RNA levels, identifying and treating sexually transmitted infections (since sexually transmitted infections can increase the risk of HIV transmission to partners), and facilitating the use of preexposure prophylaxis (PrEP) for community serodifferent partners.\(^{[69,70]}\) Adherence counseling is particularly important, as studies have demonstrated that adherence to antiretroviral therapy is low in persons who have experienced multiple incarcerations.\(^{[74]}\) Moreover, some investigators have also demonstrated that incarceration disrupts primary intimate relationships, suggesting that use of prison-based programs to help prisoners and their partners maintain their relationship during incarceration may reduce the number of sexual contacts after release.\(^{[75]}\)
Community Corrections

Community corrections refers to adults on probation or parole. At the end of 2016, approximately 4.5 million adults in the United States were in community corrections (Figure 17). The demographics of community corrections closely mirrors that of jail and prison settings, with disproportionate representation of poor, disadvantaged, and racial and ethnic minorities. Inadequate data exist regarding HIV prevalence in community corrections and HIV testing rates are low in this setting. Nevertheless, the community corrections population represents an important target for HIV screening and prevention services. For persons with HIV, the community or parole officer can often play a key role in keeping an individual engaged in care. These officers are an underutilized resource, perhaps because of the public’s misunderstanding of their role. The officers can help provide guidance, support, and program opportunities to persons in the community correctional system while helping them remain accountable to their imposed conditions as they transition back into the community. Obtaining a release of information from a patient to discuss their care with the community corrections officer or parole officer is an important step in coordinating medical care.
Summary Points

- As of year-end 2016, the United States had approximately 2.2 million persons housed in correctional facilities and had an incarcerated population that exceeded that of all other countries, in large part due to the justice system's approach to illegal drugs.
- Among different racial/ethnic groups, blacks have the highest incarceration rates.
- In the United States, the HIV prevalence among incarcerated individuals is 1.3%, which is more than three times higher than among the general population.
- Fewer than half of state prison systems have implemented routine HIV screening programs, despite the 2006 CDC recommendation for universal screening in correctional health care facilities.
- Incarceration offers a structured environment to initiate and continue antiretroviral therapy.
- Barriers to successful antiretroviral therapy within the correctional setting include high rates of substance use and mental health disorders, lack of continuity of medical care, distrust of prison-based medical care, and concerns about confidentiality and safety.
- The transition from a correctional facility to the community is a critical event for persons with HIV. After release drop offs occur at every step of the HIV care cascade; linkage to HIV care and programs for reentry into HIV care are very important.
- Since individuals often engage in activities that may increase risk for HIV acquisition following release from the correctional setting, secondary prevention is a critical component of transitional care planning.
- High rates of HIV risk activity coupled with low rates of HIV testing make the community corrections population an important priority for HIV screening and prevention services.
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Figures

Figure 1 Persons Incarcerated in Prisons or Jails at Single Point in Time

This graphic illustrates the concept that on any given day in the United States, there are significantly more individuals incarcerated in prisons than in jails. Typically, at any single point in time, the number of incarcerated adults housed in prisons is approximately twice those in jails.
Figure 2 Persons Incarcerated in Prisons or Jails Over Time

This graphic illustrates the concept that many more persons in the United States move through jails over time than in prisons. On any given day, more persons are housed in prisons than in jails, but over the course of a year the jail system encounters and houses many more distinct individuals; the higher total annual volume in a jail is due to much higher admission and release rates in jails than in prisons, where inmates typically have long sentences.
Figure 3 Global Prison Population Totals, by Country, 2018


- United States: 2,121,600
- China: 1,649,804
- Brazil: 746,532
- Russian Federation: 527,216
- India: 450,696
- Thailand: 367,162
- Indonesia: 265,159
- Turkey: 264,842
- Iran: 240,000
- Philippines: 215,000
Figure 4 Estimated Number of Incarcerated Adults in United States, 1980 through 2016

The numbers for each year represent a sample taken at one point in time.

Figure 5 Estimated Number of Incarcerated Adults in United States, by Correctional Status, 1980 through 2016

The numbers for each year represent a sample taken at one point in time.

The numbers for each year represent a sample taken at one point in time during that year.

Figure 6 (Image Series) - United States Prisoners Under the Jurisdiction of State or Federal Correctional Authorities, 2007 through 2017
Image 6B: United States Prisoners, by State or Federal Corrections, 2007 through 2017

The numbers for each year represent a sample taken at one point in time during that year.

Figure 6 (Image Series) - United States Prisoners Under the Jurisdiction of State or Federal Correctional Authorities, 2007 through 2017
Image 6C: United States Prisoners Under the Jurisdiction of State or Federal Correctional Authorities, by Sex, 2007 through 2017

The numbers for each year represent a sample taken at one point in time during that year.

Figure 7 United States Prisoners Under the Jurisdiction of State or Federal Correctional Authorities, by Race, 2007 through 2017

These data are for persons 18 years of age and older. The numbers for each year represent a sample taken at one point in time.

Figure 8 Number of Prisoners with HIV and HIV Rate per 100,000 in State and Federal Prisons Combined, 1991–2015

The numbers for each year represent a sample taken at one point in time and represent persons with diagnosed HIV.

Figure 9 Number of Prisoners with HIV in State Versus Federal Prisons, 1991-2015

The numbers for each year represent a sample taken at one point in time and represent persons with diagnosed HIV.

Figure 10 HIV Prevalence in State Prisons, 2015

Figure 11 Estimated Number and Percentage of Prisoners with HIV in State and Federal Prisons, by Sex, United States, 2010 through 2015


<table>
<thead>
<tr>
<th>Year End</th>
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<th>Female</th>
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<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent*</td>
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<tr>
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</tr>
<tr>
<td>2015</td>
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</table>

*Represents the percentage of all inmates of that sex diagnosed with HIV, including inmates in the custody of state and federal prison authorities with a confirmed diagnosis of HIV or AIDS.
**Figure 12 HIV Testing Practices During the Prison Intake Process, 2011 and 2015**


<table>
<thead>
<tr>
<th>Intake HIV Practice</th>
<th>Jurisdictions that Tested</th>
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</tr>
</tbody>
</table>

Note: Jurisdictions include 50 states and the Federal Bureau of Prisons.
Figure 13 CDC-Funded HIV Testing in Correctional Facilities and Percentage HIV Positive, United States, 2009-2013

These data are from correctional facilities in 59 CDC-funded Health Department jurisdictions.

Figure 14 Number of Prisoners in Correctional Facilities Newly Diagnosed with HIV and Percentage Linked to Medical Care, United States, 2009-2013

These data are from correctional facilities in 59 CDC-funded Health Department jurisdictions.

**Figure 15 The HIV Care Cascade Before, During, and After Incarceration**

This graphic represents systematic review and data synthesis compiled up to January 13, 2015. For this analysis, undetectable HIV RNA was defined as HIV RNA level of less than 500 copies/mL.

Figure 16 Number of AIDS-Related Deaths Among State Prisoners, 1991-2015

Figure 17 Estimated Number of Persons Supervised by United States Adult Correctional Systems, by Correctional Status, 2016

Note: the numbers listed do not match the total listed since parolees who were also on probation were not included in the total listed.

### Table 1. CDC HIV Testing Implementation Guidance for Correctional Setting

**Linkage to Services for Inmates Newly Diagnosed with HIV: Immediate Clinical Management Issues**

<table>
<thead>
<tr>
<th>Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV prevention counseling</td>
<td></td>
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<tr>
<td>Referral for mental health support as indicated.</td>
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<tr>
<td>Medical evaluation including staging of HIV and diagnosis of comorbidities and opportunistic infections.</td>
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</tr>
<tr>
<td>Referral to an HIV provider or specialist depending on the HIV medical provider's experience, the stage of HIV, and complexity of medical issues.</td>
<td></td>
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<tr>
<td>Expedited HIV care may be necessary for special clinical circumstances including acute HIV, an acute opportunistic infection, and HIV during pregnancy.</td>
<td></td>
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</tbody>
</table>

**Source:**

**Table 2. CDC HIV Testing Implementation Guidance for Correctional Setting**

**Linkage to Appropriate Medical Care Upon Release from Custody**

- Develop a list of medical providers in the community to which the inmates will be returning. Many states have resource manuals listing HIV care providers.

- Contact your local or state health department for assistance with locating providers who are willing to accept uninsured persons.

- Most inmates with HIV will qualify for free or low-cost medical treatment at clinics federally funded through the Ryan White HIV/AIDS Treatment Modernization Act of 2006.

- Assist the inmate with scheduling an appointment with the community care provider. If possible, allow the community care provider to visit the inmate before release. Research has shown that face-to-face contact before release results in increased likelihood of continuity in the community. Having the inmate talk to a provider, a nurse, or a counselor at the follow-up clinic may help with concrete linkage to services. If appointments cannot be made in advance, make walk-in arrangements with clinical providers.

- Provide the inmate with date, time, and location of first post-release appointment in writing. Stress to inmates the importance of attending their first scheduled appointment in the community, and the appointment should be as early as possible after release.

- Provide the inmate with a copy of the relevant medical record or clinical summary free of charge. Alternatively, send information to the community provider after obtaining written consent for release of information from the inmate.

- Collaborate with state and local offices administering benefit and entitlement programs to facilitate pre-release applications and benefit reinstatements. Some correctional systems have arranged partnerships to allow processing of Social Security Administration (SSA) and Medicare applications before release, as recommended by the SSA and the Centers for Medicare and Medical Services.

- Complete applications for medical services in conjunction with the inmate.

**Source:**
