Survey Finds That Many Prisons And Jails Have Room To Improve HIV Testing And Coordination Of Postrelease Treatment

Health Affairs 33, no.3 (2014):434-442
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ABSTRACT

Early diagnosis of HIV and effective antiretroviral treatment are key elements in efforts to reduce the morbidity and mortality associated with HIV. Incarcerated populations are disproportionately affected by HIV, with the disease’s prevalence among inmates estimated to be three to five times higher than among the general population. Correctional institutions offer important opportunities to test for HIV and link infected people to postrelease treatment services. To examine HIV testing and policies that help HIV-positive people obtain treatment in the community after release, we administered a survey to the medical directors of the fifty state prison systems and of forty of the largest jails in the United States. We found that 19 percent of prison systems and 35 percent of jails provide opt-out HIV testing, which is recommended by the Centers for Disease Control and Prevention (CDC). Additionally, fewer than 20 percent of prisons and jails conform to the CDC’s recommendations regarding discharge planning services for inmates transitioning to the community: making an appointment with a community health care provider, assisting with enrollment in an entitlement program, and providing a copy of the medical record and a supply of HIV medications. These findings suggest that opportunities for HIV diagnosis and linking HIV-positive inmates to community care after release are being missed in the majority of prison systems and jails.

Background

The prevalence of HIV among people in correctional facilities is three to five times higher than among the general population, chiefly because many inmates engaged in high-risk behavior such as injection drug use or sex work before being arrested. In 2006, for example, an estimated 14–16 percent of all HIV-infected people in the United States passed through a correctional facility. This translates to approximately 150,000 incarcerated people who are living with HIV. Correctional institutions offer important HIV testing and treatment opportunities for this high-risk population, a large percentage of

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HEALTH AFFAIRS 33, NO. 3 (2014): 434–442
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whom had poor access to health care prior to being incarcerated.

Jails and prisons are markedly different institutions. Prisons are facilities operated by a state or the federal government that typically hold people with sentences of more than a year; however, the sentence length may vary by state.9 Jails, in contrast, confine people who are accused of crimes and awaiting trial as well as those convicted of a crime. The maximum length-of-stay generally is not more than a year, and the median length-of-stay is estimated to be forty-eight hours.10,11

In the United States in 2011, 1.5 million people were in prison, and more than 700,000 were in jail. More people are in prison than in jail, but many more individuals flow through the jail system than the prison system each year.12 The Bureau of Justice Statistics reports that in the period from June 2010 to June 2011, 735,000 individuals were confined in county and city jails. However, 11.8 million admissions occurred during the period—a difference that demonstrates the short periods of incarceration that characterize jail systems.12

Because of the documented benefits of early diagnosis and treatment for people infected with HIV, in 2009 the Centers for Disease Control and Prevention (CDC) released guidance on HIV testing to encourage correctional facilities to adopt more effective HIV testing and programs that link people who test positive with treatment.13 In addition, the Health Resources and Services Administration recently funded a multisite research project to examine the increasing role that jails could play in identifying new cases of HIV infection and engaging newly and previously diagnosed people in their care.14 Similar programs have been funded to link people reentering the community after being released from prison to care and to retain them in care.15

Efforts such as these are designed to increase the capacity of jails and prisons to provide HIV testing and to use strategies that get HIV-positive inmates into treatment programs. However, in a survey in 2007–08 only twenty-four states reported providing HIV testing to all inmates at admission or during incarceration.16

In addition to HIV diagnosis, correctional facilities offer opportunities to provide effective and consistent HIV treatment. For people known to be infected with HIV, many prison facilities provide treatment comparable to that available in community-based clinical settings. Studies of incarcerated populations have shown that inmates are able to achieve high levels of adherence to ART while in prison or jail.18–21

Although HIV care in correctional facilities may prove effective during incarceration, lapses in postrelease care may negate the benefits of such treatment.22,23 Interruption in ART is associated with increased viral burden, antiretroviral resistance, and increased infectiousness.23

Analyses of data from the Texas prison system for the period 2004–07 found that only 5 percent of HIV-positive people filled antiretroviral prescriptions within ten days of being released from prison, and only 17 percent filled prescriptions within thirty days.24 Other analyses of the Texas prison system data for the same period showed that only 20–35 percent of HIV-positive inmates accessed care within thirty days of being released.25

Studies of people leaving jails have also identified significant interruptions in antiretroviral use. For example, in a study of a California jail for the period 2001–03, 59 percent of people who had a history of antiretroviral use and had had a repeat incarceration reported discontinuing their antiretroviral medication during the month before they were reincarcerated.26

HIV testing practices recommended by the CDC for use in correctional facilities include the provision of routine opt-out testing at entry in all facilities (Exhibit 1). The CDC also recommended practices for linking inmates to community-based HIV care that they can access after being discharged.

Several studies have identified strategies associated with fostering better links to care after incarceration and with retention in that care. For example, one of the authors, Jacques Baillargeon, and his colleagues found that people who received assistance in completing a Texas AIDS Drug Assistance Program application before release were three times more likely to fill a prescription within ten days after being released, compared to those who did not receive such assistance.24 Other studies of incarcerated populations have demonstrated that HIV discharge planning programs are associated with former inmates’ being linked to treatment one and six months after their release.20,21

The clinical and public health importance of continuity of HIV care following release from prison or jail is well established.3,4,19 However, there has been no comprehensive evaluation of US prison and jail programs for HIV testing and linking people to HIV care in the community after their release.19

To address this important public health issue, we administered a survey to the medical directors of all fifty state prison systems and a separate survey to the medical directors of forty of the largest jails in the United States. The surveys assessed policies and practices related to programs for HIV testing and linking inmates to postrelease HIV care.
Study Data And Methods

Between February and May 2012, separate surveys were e-mailed to the medical directors of the fifty state prison systems and forty of the largest jails in the United States. Each survey consisted of sixteen questions regarding HIV testing procedures and programs that referred or linked HIV-positive inmates to community-based care after their release. The surveys also explored prison and jail testing policies for hepatitis C. (For the prison survey, see Appendix A; for the jail survey, see Appendix B.) Only data on HIV are presented in this article.

An introductory e-mail message signed by the principal investigators (Liza Solomon and Curt Beckwith) described the project and included a unique link to the survey. The medical directors were informed that all responses would be reported only in the aggregate and that no individually identifiable results would be reported. Directors who did not respond to the initial e-mail were sent reminder messages once a week for up to three weeks. If they did not respond to the reminders, they were contacted by telephone and given the opportunity to complete the survey in a telephone interview.

**ANALYSES** We created summary variables to represent mutually exclusive combinations of HIV testing policies and programs that linked HIV-positive inmates to community-based care after release (see Exhibit 1 for definitions of practices).

To assess the impact of testing and policies linking HIV-positive releases to community care on the state prison populations, we calculated the numbers and proportion of prisoners who were affected by each policy. We used Department of Justice statistics for the 2011 prison population of the responding states. For each question, we summed the prison populations of the responding states and used the denominator of prisoners in the states that responded to the survey to calculate the percentages of affected prisoners.

We did not calculate the proportion of affected jail inmates because our jail sample constituted a small portion of the number of jails in each state. Prison and jail samples were analyzed separately. This study was reviewed by the Institutional Review Boards of Abt Associates and the Miriam Hospital.

**LIMITATIONS** Several limitations to this study must be noted. First, although the survey was sent to the medical directors of state prison systems and large jails, it is possible that these individuals might not have a full understanding of the policies in their jurisdictions.

Second, respondents provided information about the policies for HIV testing and linking HIV-positive inmates to community care after release. These policies may differ from actual practices in their facilities. In addition, we were not able to investigate inmates’ perceptions of policies and practices related to HIV testing or discharge services. Those perceptions would have provided additional insight into how the policies were implemented.

Finally, because of the small sample size and self-selection of the respondents—for example, programs with fewer services may have opted not to respond—there may be a nonresponse bias. Thus, our findings might not be generalizable to all state prison systems and jails.

**Study Results**

HIV TESTING AND REFERRAL SERVICES IN PRISONS Forty-three of the fifty medical directors
of state prison systems (86 percent) responded to the survey. Seventy-four percent of all state prisoners were represented by the survey respondents (data not shown).

Thirty-eight of the responding prison systems (88 percent) reported providing HIV testing under certain circumstances (Exhibit 2). These circumstances included testing because state or federal law made it mandatory, testing as part of a routine policy of the prison system, and testing in response to a possible exposure to HIV in the facility.

Twenty-five of the responding prison systems (58 percent) reported that they perform routine HIV testing—a practice that affects 66 percent of the inmates in the responding prison systems (Exhibit 2). Routine testing is defined as testing conducted on all people not known to be infected with HIV. Routine testing may be mandatory, in which case an inmate cannot refuse to be tested, or voluntary. Voluntary testing includes opt-in testing (in which inmates are asked if they want an HIV test) and opt-out testing (in which inmates are informed that an HIV test will be performed unless they decline to have one).

Twenty-four prison systems (56 percent) reported routine testing at intake, and eight (19 percent) reported routine testing at both intake and exit, or release (Exhibit 2). No prison systems reported offering HIV tests for clinical or diagnostic reasons only; at exit only; or at intake, exit, and other times during incarceration.

Only six prison systems (14 percent) reported providing HIV testing in accordance with the CDC’s recommendations (Exhibit 2). Only 13 percent of prisoners in the responding state systems are held in the systems that use these best practices.

Thirty-six of the responding prison systems (84 percent) reported that they provide each inmate being released with a list of community providers or information about community health resources, which affects 84 percent of the inmates in the responding prison systems (Exhibit 3). The only service provided by more prison systems (forty-one, or 95 percent) is giving prisoners HIV medications when they are released.

To assess the range of discharge planning services that were provided, we created summary variables to represent an array of combinations of services provided. Twenty-four prison systems (56 percent) reported providing inmates with a list of providers and a supply of medications at release; this combination of services—which we categorized as the least comprehensive—affects 47 percent of individuals incarcerated in the responding systems (Exhibit 3). Twelve prison systems (28 percent), representing 23 percent of

<table>
<thead>
<tr>
<th>TESTING ACTIVITIES</th>
<th>Responding systems</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>All facilities provide testing under certain circumstances</td>
<td>38 88 89</td>
<td>25 58 66</td>
<td></td>
</tr>
<tr>
<td>All facilities test routinely</td>
<td></td>
<td></td>
<td></td>
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</tbody>
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<thead>
<tr>
<th>TESTING POLICIES</th>
<th>Responding systems</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Testing is mandatory for all inmates</td>
<td>16 37 34</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Routine testing is offered as opt-out</td>
<td>8 19 16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Routine testing is offered as opt-in</td>
<td>9 21 34</td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>TIMING OF ROUTINE TESTING</th>
<th>Responding systems</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>At intake only</td>
<td>24 56 59</td>
<td></td>
<td></td>
</tr>
<tr>
<td>At release only</td>
<td>0 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>At intake and release</td>
<td>8 19 24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>By clinical order only</td>
<td>0 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>At intake, release, and points during incarceration</td>
<td>0 0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>BEST PRACTICES</th>
<th>Responding systems</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Conforms to best practices in testingb</td>
<td>6 14 13</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source**: Authors’ analysis of findings from a survey of medical directors of state prison systems. **Note**: Forty-three of the fifty directors responded to the survey. *Not applicable, as no prisons reported this policy.* †Best practices are having routine testing in all facilities, allowing for opt-out testing, and testing at intake at least (see Note 13 in text).
prisoners in the responding systems, provided what we categorized as a more comprehensive combination of services: an appointment with a community provider, a copy of the medical record, and a supply of medications.

Only eight prison systems (19 percent) reported conforming to the CDC’s best practices: providing the released inmate with an appointment with a community clinician, giving the person a copy of his or her medical record and a supply of HIV medications, and enrolling him or her in an entitlement program (Exhibit 3). Ten percent of prisoners are incarcerated in state prison systems that use these best practices.

HIV Testing And Referral Services In Jails

All twenty-three of the responding jails reported providing HIV testing under certain circumstances, and thirteen reported that they test routinely (Exhibit 4). None of the responding jails required mandatory testing or provided routine testing at both intake and release or as a result of a clinical or diagnostic order. Only one jail reported routine testing at intake, release, and other times. However, seven of the responding jails (30 percent) reported conforming to the CDC’s best practices for HIV testing.

Seventeen of the responding jails (74 percent) reported that they provide each inmate being released with a list of community providers or information about community health resources (Exhibit 5). As was the case with prisons, only one other service was more commonly provided by jails. However, in contrast to prisons, where the most frequent service provided is giving prisoners HIV medications on release, the most fre-
quent service provided by jails is making an appointment with a community provider for the released inmate.

Thirteen jails (57 percent) reported giving released inmates a list of HIV community providers and a supply of medications; the same number of jails provided an appointment with a community health care provider and a supply of medications (Exhibit 5). Only four jails (17 percent) reported conforming to the CDC’s best practices.

Discussion

This is the first study to examine the policies and practices of US prison systems and jails for HIV testing and for providing HIV-positive people being released with links to community-based HIV care. We found that the majority of responding correctional facilities provided some degree of HIV testing. However, fewer than one-quarter of the facilities provided the full array of discharge services that might be needed to avoid disruptions in HIV clinical care when people released from incarceration reenter the community.

The period of incarceration presents an opportunity to reach people who are at high risk for HIV infection and who have limited access to health care in the community. Many inmates are offered HIV testing for the first time during incarceration, and three-quarters of HIV-positive inmates initiate treatment for HIV during incarceration.

Data from multiple studies demonstrate that HIV testing programs in correctional facilities are effective in identifying previously undiagnosed HIV-positive individuals and in reengaging in their care those who had previously been diagnosed as HIV-positive. In recognition of the importance of correctional facilities in identifying HIV-positive individuals, in 2009 the CDC recommended routine opt-out HIV testing in prisons and jails to increase both inmates’ knowledge of their HIV status and rates of treatment.

Our study found that although most prisons and jails currently provide some HIV testing, only 19 percent of the responding prison systems and 35 percent of the responding jails provide routine opt-out testing. Thus, the majority of facilities do not conform to current CDC recommendations.

In a study of testing policies of prisons in Washington State, researchers found that HIV testing increased from 5 percent in 2006–2007 to 72 percent in 2010, when the testing policy was changed from on-request to opt-in. Testing increased to 90 percent in December 2010, when the policy was changed again, to opt-out. A 2007 study of HIV testing practices in state and local correctional facilities found that 7 percent of federal and state prison facilities and no jails reported providing HIV testing.

Our study suggests that substantial progress has been made in correctional HIV testing in recent years. However, jails and prisons must do more to comply with the CDC’s recommendations.

### Exhibit 5

**Discharge Planning Services For HIV-Positive People Released From Jails**

<table>
<thead>
<tr>
<th>Individual Planning Services</th>
<th>Responding Jails</th>
</tr>
</thead>
<tbody>
<tr>
<td>List of providers or information about community resources provided to releasee</td>
<td>17 (74)</td>
</tr>
<tr>
<td>Appointment with community provider made for releasee</td>
<td>18 (78)</td>
</tr>
<tr>
<td>Copy of medical record provided to releasee</td>
<td>7 (30)</td>
</tr>
<tr>
<td>Written prescription provided to releasee</td>
<td>10 (43)</td>
</tr>
<tr>
<td>Releasee enrolled in entitlement program</td>
<td>10 (43)</td>
</tr>
<tr>
<td>Medications provided to releasee</td>
<td>16 (70)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Combination of Planning Services</th>
<th>Responding Jails</th>
</tr>
</thead>
<tbody>
<tr>
<td>List of providers and medications provided to releasee</td>
<td>13 (57)</td>
</tr>
<tr>
<td>Appointment made for and medications provided to releasee</td>
<td>13 (57)</td>
</tr>
<tr>
<td>Appointment made for and medications provided to releasee; releasee enrolled in entitlement program</td>
<td>7 (30)</td>
</tr>
<tr>
<td>Appointment made for, and medical record and medications provided to, releasee</td>
<td>5 (22)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Best Practices</th>
<th>Responding Jails</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conforms to best practices in discharge planning</td>
<td>4 (17)</td>
</tr>
</tbody>
</table>

_**Source**_ Authors’ analysis of findings from a survey of medical directors of jails. _**Note**_ Twenty-three of forty directors responded to the survey. ‘A system may offer more than one of these services. ‘Best practices are making an appointment for the releasee, enrolling him or her in an entitlement program, and giving the releasee a copy of his or her medical record and a supply of HIV medications (see Note 13 in text).
The period of incarceration presents an opportunity to reach people who are at high risk for HIV infection.

Correctional facilities face substantial barriers to changing HIV testing policies. Concerns about the potential costs of providing medications might discourage the adoption of more expansive HIV testing programs in prisons. The annual estimated cost of highly active antiretroviral therapy (HAART), about $10,500 per patient, could put a serious drain on the already limited budgets of correctional facilities. Medication costs are even higher for patients requiring treatment for both HIV and hepatitis C.

A significant number of prisoners have been on Medicaid or eligible for the program prior to incarceration, but in most cases, Medicaid eligibility is terminated or suspended during incarceration. Only a minority of states have developed initiatives to suspend rather than terminate Medicaid during incarceration and to allow Medicaid to cover the costs of care that is provided when an inmate is hospitalized outside the correctional health care system.

**Mandatory or Voluntary HIV Testing?** A surprising number of responding prison systems (37 percent) reported routine mandatory HIV testing for all inmates (Exhibit 2). This practice is opposed by the American Public Health Association Task Force on Correctional Health Care Standards,34 the World Health Organization in conjunction with the United Nations Office on Drugs and Crime,35 and the National Commission on Correctional Health Care.36 These organizations have all issued policy recommendations supporting voluntary HIV testing and opposing mandatory or compulsory testing.

The opposition to mandatory testing is based on the belief that such testing violates a fundamental ethical principle: the basic right of an individual to make autonomous decisions. Although individual rights are not inviolable, mandatory testing should not be considered before all other noncoercive methods have been tried. Furthermore, the expected benefits of mandatory testing must be weighed against its effect on individual rights.

Extensive evidence shows that routine voluntary HIV testing—offering all inmates the opportunity to be tested—achieves satisfactory levels of HIV testing in correctional facilities. In the Washington State prison system, 90 percent of inmates who were offered voluntary testing agreed to be tested.32 Given the efficacy of voluntary HIV testing programs in prisons and jails, the further adoption of voluntary testing may provide the best opportunity for the diagnosis and care of HIV-positive inmates, while avoiding the ethical issues associated with mandatory testing.30,37

**Discharge Services For HIV-Positive Inmates** The services provided at discharge by the responding prison systems and jails for HIV-positive people varied considerably. The majority of prisons and jails provided HIV medications to people when they were released. However, many facilities did not provide the additional services that would make the former inmate more likely to get postrelease care. Fewer than 20 percent of responding prison systems and jails reported providing discharge services that met the CDC’s criteria for best practices.

Seventy percent of responding prison systems and 57 percent of responding jails provided inmates being released with an appointment with a community-based provider and a supply of HIV medications. But it might take several weeks for a former inmate to establish eligibility for state or federal Medicaid or AIDS Drug Assistance Programs. Thus, discharge services that do not include helping inmates enroll in entitlement programs on release might result in disruptions in their supply of medications.
opportunities to improve the health of incarcerated people both in prisons and jails and following their release into the community. However, a more comprehensive approach to providing diagnostic and treatment services is needed. Specific policies that would ensure increased rates of treatment, include the adoption of the CDC guidelines for HIV testing and providing transitions to postrelease care in the community. Adoption of these guidelines alone would markedly increase the number of people receiving treatment for HIV both inside and outside the correctional system.

Additionally, an effective health care response to HIV must address the underlying mental health and substance abuse problems that result in the incarceration of so many HIV-positive people. The ACA will provide insurance coverage to large numbers of these people, and it offers the possibility of interrupting the cycle of untreated mental health and substance abuse that results in reincarceration. Programs that link HIV-positive people released from jail or prison to comprehensive substance abuse and mental health treatment will be critical to efforts to treat them.38

Conclusion

Despite the importance of retaining HIV-positive people in treatment, our study found that few prison systems or jails have comprehensive programs to provide and support critical treatment services for HIV-positive inmates after their release. Given the high prevalence of HIV in incarcerated populations, facilitating the continuity of care from prisons and jails to the community setting is particularly important.

Efforts to provide ongoing HIV care to people leaving correctional facilities must include more comprehensive services to ensure that the benefits of treatment obtained during incarceration, including improvements in the patient’s health and the reduced risk of transmission, are maintained following release.

This research was supported by the grants from the National Institutes of Health (NIH) (Nos. R01DA030778 and R01DA030747 and K24DA022112). The research was also supported by the infrastructure and resources provided by the Lifespan/Tufts/Brown Center for AIDS Research (Grant No. P30AI42853) and the District of Columbia Developmental Center for AIDS Research (Grant No. 5P30AI087714-02), both of which are programs funded by the NIH. The content of this article does not necessarily reflect the views or policies of the Department of Health and Human Services, the National Institute on Drug Abuse, or the National Institute of Allergy and Infectious Diseases. Responsibility for the content of this article rests solely on the authors.

NOTES

10 Centers for Disease Control and Prevention. Assessment of sexually transmitted diseases services in city and county jails—United States, 1997. MMWR Morb Mortal Wkly