

Chapter 10

HIV Prevention: Behavioral Interventions in Correctional Settings

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To date, preventive care and prevention services have not been included in our conceptualization or operationalization of prisoners' "right to health care." Given the potential public health impact of focusing on prevention for prisoners, however, the time has come to examine this issue. Although not specifically a right under the Constitution, correctional systems should be obligated to offer comprehensive HIV prevention services to those in custody. The justification for this obligation, at a minimum, has to do with some of the basic tenants of public health disease control: target your prevention dollars on illnesses with high morbidity and mortality rates among populations with the highest rates and whom you can access.

With the prevalence of HIV at least five times higher among the incarcerated compared to those who are not incarcerated, providing effective prevention programs would have a powerful impact on incidence rates in this population. Furthermore, in one well-referenced study, in 1997, 25% of all HIV-positive people in the United States reportedly serve some time in a correctional facility (Hammett et al., 2002) and 90% of prisoners, representing an estimated 7.5 million prisoners annually, return to the free community at some point (Bureau of Justice Statistics Correctional Surveys, 1996). As approximately 51.8% of those individuals are reincarcerated within 3 years (Bureau of Justice Statistics Correctional Surveys, 1996), it is clear that providing effective disease prevention programs to those who are incarcerated would not only help protect them, but would also likely have a synergistic impact on HIV rates in our communities. If departments of corrections were to adopt evidence-based prevention measures, prisoners would simultaneously be returning from incarceration less likely to be infected with HIV and armed with the knowledge and skills to play an important role in reversing the current epidemic trends. This role includes protecting themselves and their loved ones by reducing their own risk behaviors and protecting their communities by educating others and changing norms.

Background

Since its discovery in the early 1980s, more than 25 million people have died worldwide of HIV/AIDS, including more than 500,000 in the United States (World Health Organization, 2005; Centers for Disease Control and Prevention,

2006a). Geographically, this disease has levied its toll most heavily in sub-Saharan Africa. However, in almost every corner of the world, HIV has infiltrated the poorest communities and/or those with the least political power to the greatest degree.

In the United States, HIV/AIDS initially emerged most extensively in the largely white, gay/MSM (men who have sex with other men and do not identify as gay or bisexual) communities of New York City, Los Angeles, and San Francisco. Overall, MSM account for 54% of the cumulative AIDS diagnoses since the start of the epidemic and are estimated to be currently acquiring 45% of incident cases (Centers for Disease Control and Prevention, 2004, 2006c). However, HIV has long since penetrated non-white, gay/MSM communities and is now characterized more by the race and ethnicity of those it has infected than by any single behavior. Although African Americans represent 13% of the U.S. population, they accounted for 51% of newly diagnosed cases of HIV in 2001–2004, resulting in rates 8.5 times higher than for whites. Also at disproportionate risk, Hispanics are infected with HIV at rates 3.3 times higher than for whites (Centers for Disease Control and Prevention, 2006a). The estimated rate of HIV and AIDS among African-American women in 2005 was nearly 24 times and 4 times, respectively, that of white and Hispanic women (Centers for Disease Control and Prevention, 2006d).

The most current information suggests that African-American men who are diagnosed with AIDS are more likely to have been infected by male–male sex than by other behaviors (accounting for 46% of cases compared to 25% and 23%, respectively, for IV drug use and heterosexual sex)(Centers for Disease Control and Prevention, 2006b). Like their male counterparts, African-American women most often contract HIV from their male sexual partners (with heterosexual contact representing 72% of diagnosed AIDS cases among black women in 2003) (Centers for Disease Control and Prevention, 2006b).

In recent years, there has been a great deal of speculation in the scientific as well as lay press suggesting that women are disproportionately burdened with HIV and AIDS as a result of their partnerships with currently and formerly incarcerated men (Johnson, 2006). In addition to any contribution that recently released men may make to the HIV epidemics in their communities, there is also the indirect effect of sentencing laws and other policies which disproportionately incarcerate those engaging in behaviors that are associated with both crime and HIV risk (injection drug use and sex work). With so many men in these communities incarcerated, the result of these policies is likely a decreased “pool” of eligible partners thus creating a smaller sexual and drug network and, consequently, a greater opportunity for disease transmission in these communities.

In-Prison Risk

Although less frequent than risk behaviors in the community, in-prison risk behaviors (including sex, use of intravenous drugs, and tattooing) may place the prison population at greater risk for contracting HIV. Compounding the risk inherent in any act that may expose a person to the blood and/or semen/vaginal fluid of another is the fact that in prison, the person to whom

one is being exposed is more likely to be infected with HIV, simply due to the higher prevalence rates both among prisoners and in the communities from which the majority of prisoners emerge. With 21% of state prisoners incarcerated for drug-related crimes (Bureau of Justice Statistics, 2000) and the incarceration of a disproportionate number of African Americans, it is not surprising that AIDS and HIV affects state prisoners at rates that are approximately 3 times and 10 times greater, respectively, than the U.S. population as a whole (Hammett et al., 1999; Bureau of Justice Statistics, 2004; Maruschack, 2005). Two percent and 1.1% of state and federal prisoners, respectively, are estimated to be infected with HIV (Hammett et al., 1999; Bureau of Justice Statistics, 2004). Regionally, prison populations in the Northeast have a much higher prevalence of HIV (4.5%) than in other areas of the country (Midwest 1.0%; South 2.2%; West 0.7%)(Bureau of Justice Statistics, 2004).

Regardless of the efforts to prevent sexual activity and drug use inside our prisons and jails, sex and drugs (including intravenous drug paraphernalia) as well as tattooing occur every day in these institutions. Estimates of the percentage of the incarcerated population that engages in sexual activity range from 2 to 65% (Krebs, 2002; Weinbaum et al., 2005). Types of sexual interactions range from romantic, consensual relationships to violent acts of power/domination and rape, and everything in-between. In 2005, there were 2.83 allegations of sexual violence reported to the department of corrections per every 1000 prisoners. More than half of these involved staff (Beck & Harrison, 2005). When including events that are officially reported and those that are not, studies have found that 3–28% of prisoners are sexually assaulted at least once while inside (Krebs & Simmons, 2002) and that 7–12% of male respondents report being raped an average of nine times while doing time (Robertson, 2003).

If a sexual or needle-sharing partner is infected with HIV, the risk of acquisition is greatly reduced by the use of condoms or sterile syringes and/or cleaning needles with bleach. Despite the fact that the WHO and UNAIDS recommend that condoms, bleach, and, possibly, needle exchange programs be made available to prisoners, these items are classified as contraband in most U.S. correctional facilities (Hammett et al., 1999) and therefore are not often used as methods of HIV prevention.

The Evidence for Educational and Behavioral Interventions

Despite the longstanding recognized need for both primary and secondary HIV prevention within the prison system, there have been few quantitative evaluations of HIV prevention interventions with incarcerated populations. In 2006, Bryan and colleagues reviewed this literature and, although the authors did not list their search criteria, they found a total of seven studies published since 1991, only four of which were found to be effective (El-Bassel et al., 1995; Grinstead et al., 1997; St Lawrence et al., 1997; Grinstead, Zack, Faigeles, et al., 2001). In evaluating the quality of these seven studies, the authors used the following criteria: (a) whether it was “a

randomized controlled design that compared a theoretically guided HIV prevention intervention to an attention-placebo intervention or standard-of-care control”; (b) the genders included; (c) whether constructs and outcomes were measured immediately prior to the intervention, immediately after the intervention, and a final assessment of behavior after release; (d) and whether the intervention measured constructs that are theoretically and empirically related, and proximal, to HIV prevention behavior. Based on these criteria, the authors came to the following conclusions:

1. Due to the constraints of “working within the corrections systems, only one of the interventions to date (Baxter S. 1991) (which was not found to be effective) has met [the] stringent design requirements”;
2. Despite the “disproportionate number of men who are incarcerated as compared to women,” only one of the interventions was exclusively among men (Grinstead, et al., 1997);
3. None of the studies collected measures at all of the desired time-points;
4. “Only half of the interventions reviewed assessed changes in intentions, and none specifically asked about post-release intentions” (Grinstead et al., 1997; St Lawrence et al., 1997; West, 2000).

In addition to this literature review of four effective interventions and three interventions with negative findings, Bryan, Ruiz, and O’Neill (2006) also wrote of their own study that influenced beliefs and intentions related to condom use. There are at least four additional published prevention interventions that have shown significant effects (Grinstead et al., 1999b; Bauserman et al., 2001; Ross, Scott, McCann, & Kelley, 2006; Wolitski, 2006) resulting in a total of nine known effective HIV prevention interventions involving prisoners (see Table 10.1). Only one of these interventions was limited to HIV-positive participants (Grinstead, Zack, Faigeles, 2001; Zack et al., 2004). Interventions that were not included in the Bryan et al. (2006) review are highlighted in gray in the table.

In-Prison and Jail Interventions Showing Effect on Postrelease Risk Behavior

Four (El-Bassel et al., 1995; Grinstead, Zack, et al., 1999b; Grinstead, Zack, Faigeles, et al., 2001; Wolitski, 2006) of the nine effective interventions found significant reductions in postrelease HIV risk behavior. These four interventions were equally divided in terms of the format of the interventions, with two providing group sessions and two providing interventions with individuals and centered on the clients’ specific challenges, barriers, and concerns. Furthermore, these four interventions were consistent neither in their theoretical approach nor in the amount of “dose” provided, ranging from one 30-minute prerelease session (Grinstead, Zack, et al., 1999b) to 16 sessions lasting 2 hours each (El-Bassel et al., 1995). Three of the four interventions were facilitated by professionals and one by HIV-positive peers and most intervened with participants only during the prerelease period. All four of these interventions were gender-specific and only one included women.

It is important to note that the two individual-level interventions that showed reductions in risk behavior were not exclusively disease or health focused, but emphasized individualized planning for housing, employment

Table 10.1 Behavioral HIV prevention interventions for incarcerated adults with evidence of effectiveness.

Study	N	HIV status	Age	Other participant characteristics	Intervention	Length and location	Delivery	Deliverer	Evaluation design	Outcomes
El-Bassel et al. (1995)	145	HIV-?	33	Women drug users (within 10 weeks of release)	Skills building and social support enhancement (SS) vs. HIV/AIDS information (AI)	16 sessions, 2hr/session (SS) vs. 3 sessions, 2hr/session (AI) (all prerelease)	Group	Experienced facilitators with ethnic similarity	Randomized, compared 2 groups 1 month postrelease	No difference between SS and AI in AIDS knowledge, perceived vulnerability to HIV/AIDS, and sexual self-efficacy; SS group had significantly more use of coping skills, emotional support, and safer sex behavior (consistent condom use or abstinence) than AI group
Grinstead, Zack, et al. (1999b)	178	HIV-?	36	Men	Individualized risk assessment and development of a postrelease risk reduction plan	1 session, 30 min; prerelease	Individual	HIV-positive peers	RCT, follow-up surveys completed with 43% of 414 total participants	Men who received intervention were more likely to use a condom the first time they had sex after release and were less likely to use drugs, inject drugs, or share needles within 2 weeks of release
Grinstead, Zack, Faigles et al. (2001)	123	HIV+	38	Men (within 6 months of release)	HIV information, HIV treatment, HIV and sex, substance use, nutrition, and community service referrals	8 sessions, 2 hr/session (all prerelease)	Group	Community service providers	Compared men who volunteered for the program AND attended (intervention) vs. men who volunteered but were not able to attend due to scheduling problems or transfer (comparison); evaluated at preintervention, postintervention, and 1 month following release	Intervention participants were: more likely to have used a condom the first time they had sex postrelease (81% vs. 68%); less likely to have injected drugs (46% vs. 67%); among those who injected drugs, less likely to have shared injection equipment (6% vs. 25%). All participants reported difficulty obtaining health care and meds after release

Wolitski (2006)	522	HIV –	18–29	Men (within 14–16 days of release)	HIV, hepatitis, and other STI education only vs. HIV, hepatitis, and other STI education (comparison + transitional interventions bridging incarceration and community reentry (e.g., housing, employment) (intervention); both interventions used prevention case management, motivational interviewing, and harm reduction)	1 session (pre-release), 60–90 min vs. 6 sessions (2 prerelease and 4 at 1, 3, 6, and 12 weeks post-release)	Individual	Interventionists	Systematically assigned to the pre-release single session or the pre/post-release enhanced	Significant differences between the groups were observed at the 24-week assessment (12 weeks after last intervention): the intervention group was significantly less likely to report unprotected intercourse (vaginal or anal) during their most recent sexual encounter. They were also less likely to report any unprotected sex in the reporting period. The observed effects were explained by differences in unprotected intercourse with main, but not nonmain, partners
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Interventions that only measured constructs known to be associated with reduced risk behavior

	90	HIV-?	32	Women	Social Cognitive Theory vs. Theory of Gender and Power	6 sessions; 90 min/ session (all pre-release)	Group	Same gender facilitators	RCT. Baseline assessment, second assessment immediately after intervention, third assessment 6 months after intervention and still inside	Both groups showed increases in self-efficacy, self-esteem. Attitudes Towards Prevention scale scores, AIDS knowledge, communication skills, and condom application skills
St Lawrence et al. (1997)	90	HIV-?	32	Women	Social Cognitive Theory vs. Theory of Gender and Power	6 sessions; 90 min/ session (all pre-release)	Group	Same gender facilitators	RCT. Baseline assessment, second assessment immediately after intervention, third assessment 6 months after intervention and still inside	Both groups showed increases in self-efficacy, self-esteem. Attitudes Towards Prevention scale scores, AIDS knowledge, communication skills, and condom application skills
Grinstead et al. (1997)	2295	HIV-?	32	Men	HIV education, perceived risk for HIV, intentions to engage in HIV risk behavior	1 session (inside at entry)	Group	Peer vs. professional educators	Randomly assigned to peer-led or professional educator-led or no-treatment control group	Both interventions outperformed control in intention to use condoms and being tested for HIV, and the peer intervention was preferred by participants compared to the intervention led by professional educators

(continued)

Table 10.1 (continued)

Study	N	HIV status	Age	Other participant characteristics	Intervention	Length and location	Delivery	Deliverer	Evaluation design	Outcomes
Bauserman et al. (2001)	745	HIV-?	32	50% men and 50% women (within 6 months of release)	Prevention Case Management; AIDS Risk Reduction Model (AARM), Health Belief Model (HBM), Social Cognitive Theory (SCT), Information, Motivation, Behavior (IMB)	9 sessions; 11 hr total (all pre-release)	Individual + small group	Staff from local health departments	Pre-Post	Significant changes in condom attitudes, self-efficacy for condom use, for injection drug use risk, and for other substance use risk, and in intentions to practice safer sex post release
Bryan et al. (2006)	196	HIV-?	60% 20–35	90% men and 10% women	Social Cognitive Theory, Health Belief Model, cultural sensitivity, and problem solving	6 sessions, 1x/week, 90 min/session (all pre-release)	Group	Peers	Pre-Post	Influenced beliefs and behaviors related to peer education and influenced beliefs and intentions related to condom use
Ross et al. (2006)	257	97% HIV-	34–43	84% men and 16% women	Stages of Change	5 sessions; 40 hr total (all inside)	Group	Reps from CBOs	Pre-Post	Total knowledge scale significantly improved; a significantly lower proportion of peer educators reported never having had an HIV test at follow-up compared with baseline.

and education within the context of disease prevention (Grinstead, Zack, et al., 1999b; Wolitski, 2006). Most recently, Wolitski (2006) showed a significant difference in risk behavior at 6 months postrelease as a result of an intervention based on prevention case management, in which the participant and intervention staff created an individualized prevention plan for the post-release period. Myers, Kramer, Gardner, Rucobo, and Costa-Taylor (2005) also documented that pre- and postrelease case management support can facilitate healthy behaviors.

Interventions Showing Effect on Knowledge, Attitudes, and Beliefs Related to Risk Behavior

Although utilizing different theoretical approaches, five interventions to date have shown that prevention education efforts can impact attitudes, self-efficacy, and intentions among incarcerated individuals (Grinstead et al., 1997; St Lawrence et al., 1997; Bauserman et al., 2001; Bryan et al., 2006; Ross et al., 2006). All five of these interventions intervened, at least in part, in a group setting, but there are no other commonalities. The combinations of genders differ across the interventions, the deliverer of the interventions varied, and the range of dose provided by each intervention is wide, from one to nine sessions.

Despite the variety of approaches, this evidence suggests that both HIV-related risk behavior and factors known to be related to these risk behaviors can be reduced as a result of intervention in these populations. Furthermore, though far from conclusive, there is evidence that prevention programs should not be “disease specific,” but rather should focus on multiple health issues and the factors that directly impact prisoners’ ability to enact prevention behaviors on the outside. In other words, comprehensiveness increases effectiveness.

Other than the published data, there are numerous community-based organizations, departments of corrections, and county jails implementing programs that address these issues. Since most of these programs are not evaluated and/or published in the public health or criminal justice literature, we remain at a disadvantage in neither being able to summarize their methodologies nor being able to identify their potential effective outcomes.

With only nine studies with evidence of effectiveness in the past 20 years, we need to replicate evidence-based interventions in the field while at the same time incorporating innovative community-based intervention strategies that show great promise and which have not yet been tested or evaluated. The following set of core components is an attempt to combine lessons both from the literature and from the field.

Core Components of Behavioral Interventions

HIV prevention program development and implementation in the correctional setting requires four distinct components to be taken into consideration: (1) type of intervention, (2) the timing of the program, (3) the content, and (4) the messenger.

Type of Intervention

There are multiple vehicles to intervene with this population. Some institutions put up posters or distribute brochures and call it “education,” when it is really just “information sharing.” Education goes beyond the sharing of information. Education should be initiated through individual, group, or institutional programming. Peer-facilitated, multisession group or individual sessions that are comprehensive and client-centered are most effective. Different learning and literacy capacities should be taken into consideration, as should cultural issues, so that the content and delivery is intellectually appropriate for those receiving it.

Individual-level interventions that are client-centered are increasingly showing evidence and promise of effectiveness (Grinstead, Zack, et al., 1999b; Myers et al., 2005; Wolitski, 2006). In both individual- and group-level intervention, the deliverer should never assume that the recipient engages/does not engage in certain behaviors nor demand that he or she reveal this behavior either to the program staff or to a group. The participant must choose what to reveal to others. However, providing people with the necessary tools and motivations are keys to success.

Timing

The more HIV prevention can be integrated into other health and related programs, the more effective it will be. HIV-specific programming can be counterproductive as attendance and engagement are affected by stigma, perception of risk, and competing life priorities of the incarcerated population.

As people engage in risk behaviors preincarceration, during their incarceration, and on release, it is important that prevention programs occur on a continual basis. Prevention education must occur on entry at reception centers to inform prisoners of “risks inside,” as well as including the institutional/department policies about both behavior risks and screening/testing procedures. This education needs to be ongoing as the population is often shifting. Equally, if not more important is the prerelease period. It is well documented that high-risk behavior occurs at the time period immediately following release (Zack et al., 2000). Optimally, prevention education should be initiated at the onset of incarceration, be reinforced during incarceration, strongly emphasized during prerelease planning, and continued on release.

Transitional case management is one model that is increasingly being implemented. This model creates a “partnership” between the prisoner (prerelease from custody) and a community service provider (often from a nonprofit organization). The intervention, therefore, starts prerelease and continues into the community reentry period. The overarching intervention goal is to “plug” the client (now, ex-prisoner) into community services. Specific goals could include (1) entry into a drug treatment program, (2) mental health counseling, (3) access to partner testing and counseling, (4) syringe exchange information, and (5) ongoing support for prevention services.

Content

Just as the HIV epidemic is not equally distributed throughout the country, neither is the basic knowledge or skills necessary to prevent HIV. For some,

basic HIV information is still required before a more in-depth program can be initiated. If the basic information is not there, the perception of risk is nonexistent and the program itself is less likely to be approved or accepted by the institution or the prison population.

The basic information gives the incarcerated population the necessary understanding and options for next steps. At a minimum, efforts must be made to inform the individual of:

- modes of transmission;
- risk reduction (for both pre- and postrelease risks);
- the “window period”;
- prison/jail and department/jurisdictional specific policies and procedures;
- counseling and voluntary testing; and
- available treatment options.

This basic information, often called “HIV 101,” is a critical first step with those who require this basic knowledge and is typically offered in jails and prisons in reception centers. Although important and necessary, this education does little to impact behavior; for change to occur, health behavior theory posits that other factors and conditions need to be developed (e.g., skills, self-efficacy, access to prevention tools).

Once there is a common knowledge base, the next phase of education includes increasing one’s perception of risk and skills specifically around risk behaviors (sexual, injection drug, and other blood-to-blood risk behaviors). Increased perception of risk is achieved by the participant examining his or her own behaviors and understanding the risks involved. Skill development usually focuses on the proper use of condoms, strategies for encouraging condom use with partners, understanding and practicing syringe hygiene, increasing awareness of needle exchange programs, and other methods of prevention activities (including not sharing tattooing equipment). One strategy that has been successful in increasing one’s perception of risk are the many prisoner peer education programs that use HIV-positive prisoners as educators; it is very powerful to hear a peer state “last year, I was thinking it’s everyone else, not me. Then I tested positive.”

It is also critically important that the content is addressed in the context of the prison/jail setting. For example, an institution’s condom availability program should be considered in recommending specific prevention behaviors.

The Messenger

The “messenger” of the HIV prevention message is critical in this environment. Mistrust is pervasive in many correctional facilities. This mistrust is rooted in differing priorities between prisoners, correctional custody staff, and other correctional support staff. There may also be mistrust within each of these groups; therefore, a trustworthy messenger viewed as neutral and trustworthy is critical. Examples of messengers include staff from prison medical, local health department, or community agencies. Over the past 10 years, peer education has increased in both acceptability and effectiveness.

By using current prisoners as peer educators, the language is more relevant, trustworthiness is increased, and, as a result, the messages are more easily communicated and more likely to be considered. This methodology is not

limited to prisoners; the same peer education approach can be effective with medical, correctional, and custody staff. One study (Grinstead et al., 1997) documented that prisoners prefer peers as educators.

Many prevention programs currently in practice do use peer educators as “the messenger.” However, different groups have defined peers differently. Peer education in the prison system could be existing prisoners, staff/volunteers from local community groups who have a history of incarceration, and “near” peers, individuals who are able to personally “relate” to the prison experience. If peers are not available, community support could provide the necessary resources (health educators) to conduct/facilitate these sessions.

Models of prisoner peer education have increased in the past 5 years. Many of the peer education programs of today were developed specifically for the prison population, rather than modifying a community curriculum. Examples include Bedford Hills Women’s Prison (ACE: AIDS Counseling and Education), Canadian Federal Penitentiary Model (CAN: Con AIDS Network), AFH (Walk Talk), and Centerforce (Reach One Teach One).

Concluding Thoughts on Behavioral Interventions

There are multiple levels of comprehensiveness in correctional prevention programs. These include assessing health behavior and working together to create a prevention plan that is not disease specific and looking beyond the typical health issues to include family reunification, housing, employment, and education. Disease-specific programming has the potential for stigma and “outing” of those involved. Often times, staff is identified by their work and program involvement. The HIV program coordinator becomes the “AIDS person” and everyone interacting with him or her becomes suspect. This has been shown to prevent individuals from approaching the staff with questions or concerns. By expanding the scope of the topic, this staff could be identified as the “health person” and heighten the degree of accessibility and effectiveness of the prevention program.

On the most basic level, the prevention literature shows that knowledge, although not sufficient, is necessary for behavior change (Institute of Medicine, 1997). Research has also shown that skill-building (van Empelen, van Kesteren, van den Borne, Bos, & Schaalma, 2003), increased normative support (Pedlow & Carey, 2004), and modeling (Albarracin, Klein, Mitchell, & Kumkale, 2003; van Empelen et al., 2003) may also be fundamental to risk reduction. However, experience suggests that transmission takes place in a context and that by intervening more broadly (comprehensively) in that context, new infections are more likely to be prevented. This context goes “beyond the condom” and, indeed, “beyond the body” to include the issues of gender power, economics, and community capacity. HIV has infiltrated the poorest communities and those with the least political power to the greatest degree. Without intervening with respect to the contextual factors that directly impact HIV risk behavior, we cannot hope to have a long term impact on the incidence of this disease. To stem the tide of this epidemic, prevention interventions, whether focused on HIV, STIs, hepatitis, or any other health issue, must address the issues of housing, employment, health care access (including access to substance abuse and mental health treatment), and education.

There is a dearth of information documenting the essential components of effective HIV prevention programs for the incarcerated. The evaluation

of the success of these programs should include not only sexual and drug-related risk behaviors, but also recidivism, access and utilization of community health services and case managers, housing, employment, education, and, for those who are HIV-positive, medication adherence and health status.

Other Important Opportunities for HIV Prevention

The focus of this chapter is on educational and behavioral interventions as a method of HIV prevention. Other opportunities are presented below. Each one of these options is a documented form of HIV prevention.

Counseling and Testing

Counseling and testing has been shown to be an effective prevention strategy (Kamb et al., 1998). The intent of testing is to become aware of one's HIV status (taking the "window period" into account). The purpose of the counseling component of HIV testing is to reinforce positive health behaviors, with an emphasis on risk reduction. These risk reduction messages are equally important among those who test positive as among those who test negative. In addition, among those who test positive, information about the options available needs to be provided.

In the correctional setting, both the pre- and posttesting counseling are critical components of HIV prevention. Pretesting counseling is critical in the correctional setting as the setting in which it takes place requires additional attention; before one voluntarily consents to be tested for HIV in a correctional setting, the provider should incorporate "setting" into the consent process. For example, if one tests positive, one may be housed in a different location or transferred to a different institution; if one tests positive, one may have access to treatment opportunities and support both during incarceration and on release.

Condom Distribution and/or Availability

It is well documented that with consistent and proper condom use, HIV transmission can be prevented (National Institutes of Health 2001; Hearst, 2004; Holmes & Weaver, 2004). There have been legislative efforts to pass condom availability programs for correctional settings and many in the public and correctional health communities have advocated for such distribution programs. However, currently, few such programs are available.

The WHO and UNAIDS have recommended for more than a decade that condoms be made available to prisoners. As of February 2007, condoms are banned or unavailable in over 90% of U.S. prisons and jails. Currently, the state prisons in Mississippi and Vermont make condoms available, as do county jails in New York City, Philadelphia, Washington, D.C., San Francisco, and Los Angeles. Of those correctional institutions where a condom availability program exists (in both the United States and elsewhere), there have been no security or custody issue that resulted in closing the program (Dolan & Wodak, 2003).

Studies in Europe have documented the increasing acceptability of condom availability in the correctional setting (these state-sponsored programs increased from 53% in 1989 to 81% in 1997; Nerenberg, 2002). The United

States is one of the few industrialized countries that do not make condoms available to the correctional population (Canadian HIV/AIDS Legal Network, 2005). Human Rights Watch reports that these jurisdictions have distributed condoms for years without violence or other incidents that might compromise security, demonstrating that denying condoms to prisoners cannot be justified on public safety grounds.

Access to Clean Injection Equipment

Though there are no sanctioned in-prison/jail syringe exchange programs in the United States, it is well documented that (1) injection drug use occurs in the correctional setting, (2) sterile IDU paraphernalia is extremely difficult to obtain, and (3) as with sexual activity, the risk is greater on the inside as a result of higher prevalence.

An evaluation of programs in Switzerland, Spain, and Germany that provide sterile needles and syringes found “no increase in drug use, a dramatic decrease in needle sharing, no new cases of infection of HIV or Hep B or C, and no reported instances of needles being used as weapons” (Dolan & Wodak, 2003; Okie, 2007).

If a safe syringe/needle exchange program is not legal or feasible, both the World Health Organization and the U.S. Centers for Disease Control and Prevention are on record as stating that other measures should be made available to prevent further transmission. WHO states that the provision of other cleaning techniques (e.g., bleach) should be used “where there is implacable opposition to NSP (Needle Syringe Programs).” The Centers for Disease Control and Prevention states that bleach should be made available “where no other safer options are available.” The WHO and UNAIDS also recommend that drug-dependence treatment and methadone maintenance programs be offered in prisons if they are provided in the community, and that needle-exchange programs be considered (Okie, 2007).

HIV Treatment as Prevention

Treatment of STDs can be a method of HIV prevention (Fleming & Wasserheit, 1999). By suppressing viral load, HIV treatment is also a clinical form of HIV prevention (Porco et al., 2004). Physicians and other medical staff also can play a direct or indirect role in prevention with their patients. If time/resources do not allow for this, correctional medical staff can advocate for others to take on this responsibility.

Treatment of Substance Use (Misuse, Abuse, and Addiction)

Through the documentation of the strong relationship between substance use and sexual risk behavior, and the high percentage of substance use of those in the criminal justice system (Bureau of Justice Statistics, 1997), substance abuse treatment is HIV prevention (and very few correctional systems provide substance abuse treatment) (Rich et al., 2001; Fiscella et al., 2004; World Health Organization, 2005; Okie, 2007).

Though there is ample evidence of the history of drug use and need for drug and alcohol treatment inside our prisons and jails, very few treatment programs exist and many of those do not have the capacity to treat all who

voluntarily sign up. There are more substance abusers in our prisons and jails than in alcohol/drug treatment programs in the community. An estimated 42% of state prisoners have the comorbidity of substance dependence and mental health problem (Human Rights Watch, 2006).

Mental Health Treatment

A 2006 Bureau of Justice Statistics report documented the quadrupling of the number of mentally ill prisoners in the past 6 years. Rates of mental health disorders among state prisoners are five times higher than the community rates (Bureau of Justice Statistics, 2006); rates among female prisoners were even greater. Prisoners with mental health disorders are significantly more likely to have been physically and sexually abused, to have had family members with substance abuse problems, and to have a family member with an incarceration history.

There is evidence that a large percentage of those who engage in substance use are “self-medicating” a mental health disorder. This feeds the cycle of mental health disorder to substance use to high-risk sexual behavior.

Prevention Outcomes Measures

Different educational HIV prevention efforts have measured their successes with different outcomes. Though the bottom line outcome is not getting infected, there are a myriad of other outcomes that indirectly impact HIV incidence. Outcomes that should be considered for evaluation of programs include condom use and use of sterile injection equipment both inside and after release. The next “level” of outcomes among those who are released include: decreased alcohol/drug use with sexual activity, and if available, use of needle exchange programs, substance abuse and mental health treatment. Finally, with many prisoners not “connected” with community services, working with community case managers (including parole/probation) to access services and stay out of the criminal justice system should be considered as outcome measures. For someone with HIV, success would also include access and utilization of community health services. A successful community reintegration would also include housing, employment, and education. Finally, social support systems (family and friends) can be the critical link between staying healthy or going back inside.

Conclusion

This chapter advocates for the need for HIV prevention programs in the correctional setting; it should be noted that HIV is but one of many health conditions that are disproportionately impacting the incarcerated population. Comprehensive prevention education should include other infectious diseases such as hepatitis, chlamydia, and gonorrhea, all of which are found at greater rates among the incarcerated populations. These interventions should be available at every level targeting every possible audience in order to build a comprehensive, culturally sensitive and feasible HIV prevention program for each institution.

Most HIV prevention programs focus on encouraging the individual to make behavior changes (i.e., the person engaging in high-risk behavior). This is but one strategy for prevention. Other strategies include structural interventions (e.g., condom and clean needle availability), environmental interventions, and policy-level interventions. These efforts would have a synergistic impact on HIV rates in our communities. By providing effective prevention programs to individual prisoners, the results would be felt not only by the individual program participant/client, but also by other prisoners (through diffusion), prison staff (either through observing the program for security reasons or through osmosis), prison visitors, and volunteers. Most importantly, the family members of the prisoners (Grinstead, Zack, Faigeles, et al., 2001) and the free community would be at decreased risk from the effective behavior change of the individual prisoner.

To improve our efforts we need to be mindful of the context of prevention in the correctional setting. The goal for in-prison/jail prevention must include both in-prison and postrelease prevention behaviors. To have the greatest impact on the HIV/STD/hepatitis rates of prisoners, former prisoners, and the communities to which they are released, we should strive to make our prevention programs as comprehensive as possible.

Available data indicate that prevention works. However, we need a commitment by both correctional and medical administrators to increase and improve our prevention efforts. The courts are not looking at the lack of prevention as “deliberate indifference.” This commitment must begin with those of us working in the field of correctional health.

Recommendations for HIV Prevention in the Correctional Setting

The following recommendations are based on the aforementioned review of the literature, current prevention research efforts, and the author’s more than 20 years of behavioral research in the correctional setting.

1. Comprehensive prevention education, including behavioral interventions, should be available to all prisoners; whenever possible, this should be integrated into existing educational programs throughout their incarceration (e.g., on entry, at any/all institutional transfers, during the course of their incarceration, and, with an added emphasis, in the pre-release period).
2. Counseling (both pre and post) and testing should be voluntary only, requiring opt-in consent with an additional component to allow the individual to understand the ramifications of testing (either positive or negative) in the correctional setting.
3. Policies should be adopted that will allow for preventive practices and disease prevention (condom availability, syringe exchange, and tattoo cleaning).
4. Comprehensive treatment for HIV/STD infection that includes ongoing monitoring of health status including medication adherence and health status should be available to all prisoners.
5. Substance abuse, alcohol, and mental health treatment must be primary, secondary, and tertiary prevention effort priorities.
6. Comprehensive pre- and postrelease transition support with proactive community reentry efforts, including (1) continuity of any/all treatment,

- (2) support with housing, employment, and education, (3) family and social support, (4) “plugging” into the community service network, (5) working with community law enforcement (e.g., parole and/or probation) to understand conditions of one’s release, must be offered to all releasing prisoners.
7. All in-custody prevention efforts should have a seamless transition to postrelease community prevention services; this must integrate the specific conditions of parole/probation together with reentry efforts and comprehensive community prevention services.

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