

Implementing a Routine, Voluntary HIV Testing Program in a Massachusetts County Prison

Rebecca V. Liddicoat, Hui Zheng, Jeanne Internicola,
Barbara G. Werner, Arthur Kazianis, Yoav Golan, Eric P. Rubinstein,
Kenneth A. Freedberg, and Rochelle P. Walensky

ABSTRACT *Although U.S. prison inmates have higher rates of HIV infection than the general population, most inmates are not routinely tested for HIV infection at prison entry. The study objective was to implement a routine, voluntary HIV testing program in a Massachusetts county prison. During admission, inmates were given group HIV pre-test counseling and were subsequently offered private HIV testing. This intervention was compared to a control period during which HIV testing was provided only upon inmate or physician request. Between November 2004 and April 2005, 1,004 inmates met inclusion criteria and were offered routine, voluntary HIV testing. Of these, 734 (73.1%) accepted, 2 (0.3%) were HIV-infected, and 457 (45.5%) had been tested for HIV in the previous year. The testing rate of 73.1% was significantly increased from the rate of 18.0% (318 of 1,723) during the control period ($p < 0.001$). Among the inmates tested for HIV in the prior year, 78.2% had received their last HIV test in the prison setting. Careful attention should be paid to prevent redundancy of testing efforts in the prison population. Implementing a routine HIV testing program among prison inmates greatly increased testing rates compared to on-request testing.*

KEYWORDS *HIV, HIV testing, Prison, Screening.*

INTRODUCTION

Of the estimated 1.1 million persons living with HIV in the US, many are unaware of their positive serostatus.¹ Prisons have higher rates of HIV-infected persons than the general population.² As many as one third of inmates entering prisons have a history of injection drug use (IDU), and up to 85% of HIV infection among inmates is due to IDU.²⁻⁴ About 18 state prison systems have mandatory HIV testing, and the remaining have testing available on-request or on some other voluntary basis.⁵ Most Massachusetts prisons and jails offer HIV testing on inmate or physician request.⁶

Liddicoat is with the Department of Medicine, Greater Los Angeles Veterans Administration, Mail 111G, 11301 Wilshire Boulevard, Los Angeles, CA 90073, USA; Zheng, Freedberg, and Walensky are with the Division of General Medicine, Department of Medicine, Massachusetts General Hospital, Harvard Medical School, Boston, MA, USA; Freedberg and Walensky are with the Division of Infectious Disease, Department of Medicine, Massachusetts General Hospital, Harvard Medical School, Boston, MA, USA; Zheng, Freedberg, and Walensky are with the Partners AIDS Research Center, Department of Medicine, Massachusetts General Hospital, Harvard Medical School, Boston, MA, USA; Internicola and Golan are with the Suffolk County House of Corrections, Boston, MA, USA; Golan is with the Department of Infectious Disease, Tufts University Medical School, Boston, MA, USA; Rubinstein is with the HIV/AIDS Bureau, Massachusetts Department of Public Health, Boston, MA, USA; Werner and Kazianis are with the Massachusetts State Laboratory Institute, Boston, MA, USA.

Correspondence: Rebecca V. Liddicoat, Department of Medicine, Greater Los Angeles Veterans Administration, Mail 111G, 11301 Wilshire Boulevard, Los Angeles, CA 90073, USA. (E-mail: rebecca.liddicoat@med.va.gov)

In 2003 the U.S. Centers for Disease Control and Prevention set forth an initiative calling for increased HIV testing outside the medical arena in settings of high HIV prevalence, particularly in prisons.⁷ We offered routine, voluntary testing in a prison system that had previously had on-request testing to (1) demonstrate the acceptability of a new, routine testing program among inmates, (2) increase HIV testing rates and case identification, and (3) reduce the number of HIV-infected persons unaware of their diagnosis.

METHODS

We implemented a routine, voluntary HIV testing program in a Boston, MA, USA, county prison from November 15, 2004, to April 29, 2005. The prison includes both un-sentenced (detainee) and sentenced inmates serving less than 2.5 years.

Upon incarceration, a trained HIV counselor provided group counseling to sentenced inmates followed by a brief, private informed consent session to offer HIV testing. Phlebotomy was mandatory for syphilis, and if inmates agreed to HIV testing, their blood for the HIV test was drawn simultaneously. Inclusion criteria were >18 years old, fluent in English or Spanish, not known to be HIV-infected (by self-report with subsequent verification of medical records) and with a minimum sentence of 30 days. Detainees, who were often illegal immigrants, were excluded because possible prison release or deportation limited the ability to ensure receipt of test results.

Standard confidential HIV serologic testing was performed by the Massachusetts Department of Public Health State Lab Institute. The HIV counselor provided results to inmates privately 7–14 days after phlebotomy. The intervention was compared to a 12-month control period in 2003.

RESULTS

During the intervention period, 1,033 of 2,886 (35.8%) inmates entering the prison met the sentencing criteria for testing. Of those, 29 inmates (2.8%) were excluded due to known HIV infection. The remaining 1,004 sentenced inmates were offered routine HIV testing. Seven hundred thirty-four inmates (73.1%) accepted; the most common reason for refusal was “tested in the prior 1 year” (47.5%), followed by “not at risk” (29.4%). During the control period, 1,723 inmates were informed during prison orientation that HIV testing was available on inmate or physician request, the current standard of care in Massachusetts. Eighteen percent (318) were tested for HIV during the control period, a significantly smaller percentage than in the intervention period (73.1%, $p < 0.001$). Fewer than 30 inmates, all with negative tests, were released prior to receiving their results.

Of those inmates offered HIV testing in the intervention period, 91.1% were male, 48.1% African American, 17.9% had previously injected drugs, and 45.5% had been tested for HIV in the prior year (Table 1). Of the inmates who accepted HIV testing, 77.9% reported previous HIV testing. Among the inmates who had been tested for HIV in the prior year, 78.3% (358 of 457) had received their last test in the prison setting. Over 75% of inmates had multiple sex partners in the prior 3 years, and 41.0% had five or more sex partners during that time. During the study period, two inmates were found to be HIV-infected (HIV prevalence 0.3%). Both were male, African American and from 35 to 40 years old. Neither had been tested for HIV within the prior 3 years.

TABLE 1. Risk factors and HIV testing history of the inmate population in a Massachusetts county prison

Inmates offered testing, <i>n</i> = 1,004 (%)	
Risk factors	
History of IDU*	180 (17.9)
Known hepatitis C	82 (8.2)
Previous HIV test	
Last 3 months	228 (26.7)
Last 1 year	457 (45.5)
Last 3 years	617 (61.5)
Ever tested	703 (70.0)
HIV test acceptors, <i>n</i> = 734 (%)	
Site of last HIV test (572 data available)	
Primary care	204 (27.8)
Prison	328 (44.7)
Detoxification unit	23 (3.1)
Other	17 (2.3)
Self-reported risk factors in the last 3 years (734 data available)	
MSM*	6 (0.8)
IDU	129 (17.6)
Shared needles	91 (12.4)
Sex with IDU	114 (15.5)
Sex under influence of drugs/alcohol	523 (71.2)
Sex with HIV+ partner	13 (1.8)
Sex with prostitute	83 (11.3)
Exchanged sex for drugs/money	51 (6.9)
STD* diagnosis	91 (12.4)
2–4 sex partners	252 (34.3)
≥5 sex partners	301 (41.0)

IDU Injection drug user, *MSM* men sex with men, *STD* sexually transmitted disease.

DISCUSSION

This study implemented a routine, voluntary HIV testing program in a Massachusetts prison which had previously offered HIV testing only upon inmate or physician request. When HIV testing was offered to all sentenced inmates at prison entry, nearly three quarters were tested, a significant increase over the previous on-request testing. A high percentage of inmates had been recently tested for HIV, often in a prison setting. Two inmates were identified with newly diagnosed HIV infection.

Prisoners in this study were likely at higher risk for HIV infection than the general public. In a telephone survey of the general US population, 4.2% of respondents admitted to at least one of the following: IDU, history of a sexually transmitted disease (STD) and/or anal intercourse. The rate of IDU and STD in the prior 3 years alone among the population of HIV test acceptors was over six times (28.2%) that of the general population.⁸

The study showed a high rate of HIV test acceptance. Previous studies of correctional routine HIV testing showed 46–47% acceptance rates, much lower than our rate of 73%.^{9,10} The higher test acceptance rate in the current study may be due

either to improvements in treatment for HIV disease or to testing a population with a high background testing rate.

There are several limitations to this study. The use of a historical control may have artificially increased the difference in testing rates between the control and intervention. However, there were no secular or policy changes in the institution that should have otherwise increased HIV testing rates during that time. The high rate of background HIV testing may have been a confounder, as this population is accustomed to requests for HIV testing, which may have fostered the high HIV test acceptance rate. The study did not include rapid HIV testing due to cost constraints.

The study demonstrated that routine HIV counseling, testing and referral in prisons is acceptable to inmates and results in high rates of testing. This may be due, in part, to the availability of improved treatment for HIV infection, leading to increased test acceptance. As HIV testing programs expand in the prison setting, caution should be taken to prevent over-testing and redundancy among inmates. However, inmates have behaviors that put them at risk for HIV infection. Therefore, policies are needed to optimize re-testing frequency.

ACKNOWLEDGEMENTS

Supported in part by: Massachusetts Department of Public Health, HIV/AIDS Bureau; the Massachusetts State Laboratory Institute; Harvard Medical School Faculty Development and Fellowship Program in General Internal Medicine T32 HP11001 (RVL) and CFAR Scholar Award P30 AI060354 (RVL), National Institute of Allergy and Infectious Diseases R01 AI42006, K23 AI01794, K24 AI062476 and National Institute of Mental Health R01 MH65869. Presented in part at the Society of General Internal Medicine National Meeting, New Orleans, LA, USA, May 14, 2005.

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