

Research

Open Access

HIV education in a Siberian prison colony for drug dependent males

Kate A Dolan*¹, Murdo Bijl² and Bethany White¹

Address: ¹Program of International Research and Training (PIRT), National Drug and Alcohol Research Centre, Sydney, NSW 2052, Australia and ²AIDS Foundation East-West, Moscow, Russia

Email: Kate A Dolan* - k.dolan@unsw.edu.au; Murdo Bijl - murdo_bijl@afew.org; Bethany White - b.white@unsw.edu.au

* Corresponding author

Published: 21 June 2004

Received: 10 February 2004

International Journal for Equity in Health 2004, **3**:7 doi:10.1186/1475-2875-3-7

Accepted: 21 June 2004

This article is available from: <http://www.equityhealthj.com/content/3/1/7>

© 2004 Dolan et al; licensee BioMed Central Ltd. This is an Open Access article: verbatim copying and redistribution of this article are permitted in all media for any purpose, provided this notice is preserved along with the article's original URL.

Abstract

Aim: To evaluate the effectiveness of an HIV peer training program conducted in a colony for drug dependent male prisoners in Siberia, Russia.

Method: Questionnaires were used to collect data pre and post peer training sessions. Three peer training sessions were conducted between questionnaires. Fifteen to twenty inmates were trained as peer educators at each week-long health education training session.

Results: In 2000 and 2001, 153 and 124 inmates completed the questionnaire respectively. Respondents in both years reported similar health and injecting histories and comparable levels of sexual activity. Respondents in 2001 were significantly more likely to correctly identify both how HIV can and cannot be transmitted compared to respondents in 2000. The prevalence of tattooing in prison decreased significantly between questionnaires. However, there was virtually no reported use of bleach to clean tattooing or injecting equipment in either 2000 or 2001. Access to condoms increased significantly between questionnaires.

Conclusions: While this training program was associated with improved HIV knowledge, the Ministry of Justice should consider improved and additional harm reduction strategies. These include increased availability of bleach and condoms and the introduction of methadone treatment and syringe exchange in prison.

Background

Among the general population, the number of new HIV infections in Russia has increased dramatically in the past decade [1]. National statistics show an explosive rise from 24 new HIV cases in 1987 to 88,494 in 2001 [1]. Among all registered HIV cases with known risk factors, 94% were attributed to injecting drug use [2].

During this same period, Russia's prison population has experienced epidemics in both tuberculosis [3] and HIV

[4]. During the first half of 2002 alone, 17 percent of registered HIV cases in Russia were among prison inmates [1]. In 2002, there were 34,000 HIV positive prisoners in Russia, 95 percent of whom were injecting drug users [5].

Russia has the second highest rate of imprisonment in the world at 665 per 100,000 [6]. Nationwide there are hundreds of penal facilities and close to one million prisoners [6]. The prevalence of HIV and other infectious diseases are typically higher among prison populations than the

surrounding communities [7-9], and numerous studies have demonstrated high levels of HIV risk behaviours in prison such as injecting drug use [10-12], tattooing [13] and sexual activity [14]. Research has found that inmates worry about contracting HIV while in prison [15] and that prison can be an ideal setting for HIV education [16].

In Russia, all inmates are screened for HIV infection upon admission to a remand centre and sometimes upon their transfer from a remand centre to a prison. A majority of those who have tested HIV positive has been diagnosed while in prison. HIV positive prisoners are usually segregated, officially for their own safety and the confidentiality of prisoners' HIV status is a legal requirement. Similarly, federal law stipulates that bleach must be available to all prisoners for the sterilisation of injecting equipment. However, segregation, confidentiality and the availability of bleach differ from institution to institution. Prisoners use needle and syringes they have managed to smuggle in, or in rare instances, fashion their own using ballpoint pen tips and ink tubes [17]. The legality of condom possession in Russian prison remains unclear and consequently availability varies. Generally, condoms are only given to inmates upon their release into the community.

Methods

In 2000 Médecins Sans Frontiers (MSF) implemented an HIV educational program across in Russian prisons: a male colony in Penza, a female colony in the Krasnodar region, a juvenile colony and a male colony for drug dependent prisoners in the province of Omsk, Siberia. The aim of the current study was to evaluate the impact of the MSF program in the colony for drug-dependent male prisoners. The study received support from the Russian Ministry of Justice and approval from the Main Directorate of Corrections (GUIN) and colony administration.

Baseline data was collected in eight colonies and two pre-trial facilities using the same methods reported here. These results are published elsewhere [18].

Eligibility

Prisoners were chosen by prison staff to participate in peer training based on the following criteria: being a) non-violent, b) respected leaders within their colony, c) intelligent, and d) serving a prison sentence longer than two years. Prisoners in the hospital ward were ineligible.

Training procedure

A team from MSF consisting of trainers and consultants trained selected peer educators in health issues including how best to disseminate information to other prisoners. Lectures, interactive games, role-plays and practical exercises were used as teaching tools. Information leaflets and

general health care booklets were distributed after each training session. Condoms were given to staff to make available to inmates. Between 15 and 20 inmates were trained as peer educators in each training session.

Three peer training sessions were conducted between 2000 and 2001. Each session ran for one week. The training sessions covered the transmission of blood borne viral infections (BBVIs) such as HIV as well as prevention strategies including condom use and the cleaning of injecting equipment with bleach. By the end of the training session, the new trainers could train other inmates.

Leaflets distributed after the training sessions included information on HIV/AIDS, hepatitis C virus (HCV), tuberculosis (TB), sexually transmissible infections (STIs), syringe cleaning, vein care and tattooing. The program booklet 'Defend Yourself' addressed topics including dental hygiene, skin disease, prophylaxis of infectious diseases, first aid, STIs, hepatitis and HIV/AIDS and was distributed to inmates.

Design

After pilot testing in a male prison in another region for clarity and acceptability, the baseline questionnaire was administered in July 2000 and the second questionnaire between July and September 2001, (four months after the third MSF peer training session). Questions included demographic characteristics, knowledge of HIV transmission, STI and BBVI status, drug use, sexual activity, tattooing and access to bleach and condoms.

Subjects

Four of the ten main cellblocks in the colony were chosen at random. In each chosen cellblock, all prisoners were brought into a large meeting room. Researchers explained the purpose of the research and emphasised participation was voluntary and that responses were confidential and anonymous. Inmates willing to complete the questionnaire were included in the study.

Data analysis

Analysis was conducted using EPI INFO 6.0. *Chi-squared* was used to analyse categorical data. For continuous variables *t-tests* were conducted and means reported. The level of significance was set at $p = 0.05$.

Results

There were 153 respondents who completed the questionnaire in 2000 and 124 in 2001. The number of respondents to each question in both years is reported. In both years similar proportions (59%, 63%) reported seeing the program booklet 'Defend yourself' and participating in peer training education (9%, 14%).

Table 1: Demographic characteristics of respondents in 2000 and 2001

Variable	2000	2001
Mean age yrs (range)	24 (18–30) (n = 133)	27 (18–41) (n = 98)
Russian native language %	94 (n = 135)	92 (n = 109)
Married %	13 (n = 144)	20 (n = 114)
Have children %	22 (n = 144)	30 (n = 116)
First time in prison %	63 (n = 144)	67 (n = 113)
Mean years already served (SD)	1.2 (0.7) (n = 98)	1.3 (0.6) (n = 56)
Imprisoned for drug-related offence %	66 (n = 140)	76 (n = 112)

Table 2: Inmates' history of STIs, hepatitis B, hepatitis C and HIV

	2000 (n = 153) Yes %	2001 (n = 124) Yes %
Ever had an STI	27	35
Ever diagnosed with hepatitis B	33	22*
Ever diagnosed with hepatitis C	20	15
Ever been tested for HIV	76	78
<i>Of those tested,</i>		
Received any pre-test counselling	22 (n = 116)	20 (n = 97)
Received post-test counselling	15 (n = 116)	13 (n = 97)
Ever diagnosed with HIV	4 (n = 116)	0
<i>Of those diagnosed with HIV,</i>		
Diagnosed within last 12 months	60 (n = 5)	-

*p = .03

Demographics

Demographic characteristics of respondents were comparable between years (Table 1). Being a colony for drug dependent prisoners, the majority of both samples were imprisoned for a drug-related offence, and approximately two-thirds were serving their first prison sentence.

Knowledge of HIV transmission

Respondents in 2001 were significantly more likely to correctly identify both how HIV can and cannot be transmitted compared to respondents in 2000. Inmates were significantly more likely to correctly identify needle sharing and tattooing with an unsterile needle as risk factors for HIV transmission in the 2001 questionnaire than in 2000.

Health status

Respondents in 2000 and 2001 had comparable levels of previous viral infections (Table 2).

Injecting drug use

Virtually all respondents in 2000 (95%) and 2001 (95%) had a history of injecting drug use (Table 3). Approximately 13% of these reported having injected in their current prison. In 2000, approximately half those who

reported injecting in their current prison reported injecting in the preceding four weeks although only one person reported doing so in 2001.

The proportion of prisoners who injected in prison was too small for comparison in terms of sharing or cleaning injecting equipment. In both the 2000 and 2001 questionnaires, over half who reported injecting in prison (56%, 62%) said they cleaned the injecting equipment prior to passing it to someone else. Reported cleaning methods were comparable across years. Cleaning methods used were mainly washing with boiled water (5 respondents in 2002 and 4 respondents in 2001), washing with cold tap water (2 and 3) and boiling the equipment (2 and 1).

Slightly higher proportions reported cleaning injecting equipment after taking it from someone in both 2000 (61%) and 2001 (89%) although similar methods were used. Cleaning methods used were washing with boiled water (3 and 5), washing with cold tap water (4 and 3), medical spirit (1 and 0), boiling the equipment (1 and 2) and bleach (0 and 1).

Table 3: Injecting drug use

	2000 Yes %	2001 Yes %
Ever injected	95 (n = 140)	95 (n = 114)
<i>Of those who had ever injected,</i>		
Injected in this prison	14 (n = 133)	12 (n = 108)
Injected in past four weeks	8 (n = 133)	1 (n = 108)
Clean equipment prior to passing on	56 (n = 18)	62 (n = 13)
Clean equipment after taking it from someone	61 (n = 18)	89 (n = 9)

Table 4: Availability of condoms and bleach

	2000 (n = 147) Yes %	2001 (n = 117) Yes %	P
Condoms available 'always'	4	11	
Condoms available 'sometimes'	15	27	.02
Condoms available 'never'	61	57	
Bleach/disinfectant available 'always'	26	15	.03

Sexual activity

Similar proportions of inmates reported having had sex in prison in 2000 (10%) and in 2001 (12%). There were some reports of 'survival sex' (i.e. trading sex for money, drugs, goods, or protection). Among those who had sex in prison, one (8%) in 2000 and four (31%) in 2001 reported using condoms. The numbers were too small for comparison.

Tattooing

The prevalence of tattooing in prison significantly decreased between 2000 and 2001 (42% vs 19%, $p = .003$). In 2000, of the 31 persons who received a tattoo in prison, seven (23%) reported the needle was new, five (16%) used an old needle but cleaned it and 12 (39%) said they were unsure whether the needle was cleaned. In 2001, ten inmates reported receiving a tattoo of whom five (50%) said the needle was new, and five (50%) said the needle was used but cleaned.

In 2000 and 2001 respondents reported a variety of methods to clean tattoo needles, including boiled water (7 and 3 respondents), using a flame from matches or a lighter (5 and 2), tap water (4 and 2), wiping on clothes (3 and 0), medical spirit (1 and 0), cologne (1 and 0) and bleach (0 and 3).

Access to condoms and bleach

Reported access to condoms increased significantly between 2000 and 2001, although over half respondents

in both years reported condoms 'never' were available (Table 4). A slightly higher proportion of respondents reported bleach was 'always' available in 2001 compared to 2000.

Discussion

In this study we found that four months after the completion of the third educational program, the majority of inmates reported having seen the program booklet. Inmates' knowledge of HIV transmission improved between years, with significantly higher proportions of inmates reporting better knowledge of both how HIV can and cannot be transmitted. The provision of educational materials and training peer educators can be an inexpensive way to reach a population that is difficult to access outside prison. Our results were similar to others [19] who found peer education was a suitable format for improving inmates' knowledge of HIV.

Respondents represented a group at high risk for HIV infection, drug dependent prisoners. Additionally, many reported a history of STIs, hepatitis B and hepatitis C infection. Few respondents reported being diagnosed with HIV in 2000, and no infections were reported in 2001. Although this finding suggests the rate of HIV transmission is low, the threat of a potential HIV epidemic in Russian prisons remains high given reported risk behaviors.

A small proportion of prisoners reported injecting and sharing needles in prison. Although most inmates who

shared needle and syringes cleaned them, this was almost always only with water, which is likely to be inadequate to prevent HIV transmission [20]. It will be difficult to reduce needle and syringe sharing risk behavior without providing methadone treatment or supplying sterile injecting equipment on an exchange basis. Methadone treatment provision in prison has been demonstrated to decrease rates of injecting drug use and needle and syringe sharing [21]. Similarly, prison based needle exchange programs have been found to be effective in Switzerland, Germany and Spain [22].

Men who have sex with men in prison are at risk of HIV infection. A small proportion of respondents reported engaging in sexual activity in prison, with some respondents trading sex for money or protection. Of those who reported sex in prison, less than a third reported using condoms. The proportion of respondents who reported condoms were available to them increased significantly between 2000 and 2001, however over half respondents in both years reported condoms were never available. The availability of bleach was difficult to determine due to the lack of data. Provision of condoms and bleach appear to be available to inmates on an irregular basis. Studies have shown that bleach [23] and condom provision [24] to inmates can be simple and effective harm reduction strategies that can be implemented without harm to either officers or other inmates.

In 2001, the prevalence of tattooing had decreased while the proportion of respondents reporting the use of new tattoo needles increased. This is further evidence that when the means are available for prisoners to protect themselves, they will make the effort to do so [23].

Some respondents reported that they were not tested for HIV, which suggests they did not know they were tested, or that testing was unavailable at their remand centre. Only a small proportion of inmates received any pre- or post-test counselling. The lack of counselling represents an important missed opportunity to inform and educate prisoners on their health risks and rights. Unfortunately prisoners are generally tested *en masse* in an assembly line type situation in Russia where mandatory testing has traditionally been the approach to controlling HIV in prison [4].

The small number of respondents reporting specific risk behaviours such as injecting drug use or sexual activity limited the conclusions which can be drawn from the study. Participation was voluntary, and many of the questions dealt with behaviours that inmates may have been reluctant to report as indicated by the low response rate for some questions. This is likely to have resulted in the under reporting of risk behaviour. The reportedly low HIV

prevalence should encourage prison authorities to increase the availability of bleach and condoms and consider the implementation of methadone treatment and needle exchange in prison.

Conclusions

Early response in HIV epidemics is necessary to prevent widespread transmission in prison [25]. The Ministry of Justice has taken steps to address the potential HIV epidemic in Russian prisons, such as requiring bleach to be available. A series of amnesties to reduce the prison population have been introduced. Training and presentations to inmates and prison staff will continue. However, much more will be needed to prevent an HIV epidemic in Russian prisons.

Competing Interests

None declared.

Authors' Contribution

KD led the writing of the report.

MB designed the study, collected the data, conducted data analysis and contributed to the writing of the report.

BW contributed to the writing of the report and data analysis.

Acknowledgments

The Program of International Research and Training (PIRT) at the National Drug and Alcohol Research Centre, UNSW, provided assistance with the preparation of this manuscript. Natalia Khodakevich and Nelly Kamaletdinova (AIDS Foundation East-West) assisted with data analysis.

References

1. Pokrovsky VV, Ladnaia NN, Buravtsova EB, Sokolova EV: **HIV-Infection Surveillance in Russia in 2001 (statistics)**. In *Russian Federal AIDS Centre Informational Bulletin Volume 24*. Russian Federal AIDS Centre, Moscow; 2002.
2. Russian Federal AIDS Centre HIV-Infection: *Russian Federal AIDS Informational Bulletin Volume 22*. Russian Federal AIDS Centre, Moscow; 2001.
3. Holden C: **Stalking a killer in Russia's prisons**. *Science* **286**:1670. 1999, Nov 26
4. Monitoring the AIDS Pandemic (MAP) Network: **The determinants of the HIV/AIDS epidemic in Eastern Europe**. 1998 [<http://www.unaids.org/en/default.asp>]. Veyrier du Lac, France June 28–July 3
5. Kononets A: **Some Facts about HIV in prisons**. In *Prison Health Care News Issue 2* International Centre for Prison Studies and Kings College, London; 2002.
6. Walmsley R: **World Prison Population**. 3rd edition. Home Office, London; 2002.
7. Centres for Disease Control and Prevention (CDC): **Prevention and Control of Infections with Hepatitis Viruses in Correctional Settings**. *Morbidity and Mortality Weekly Report* 2003, **52**:. January 24
8. Spaulding A, Stephenson B, Macalino G, Ruby W, Clarke JG, Flanigan TP: **Human immunodeficiency virus in correctional facilities: a review**. *Clinical Infectious Diseases* 2002, **35**:305-312.
9. UNAIDS Prison and AIDS: **UNAIDS Technical Update (UNAIDS Best Practice Collection: Technical Update)**. Geneva; 1997. April

10. Butler T, Levy M, Dolan K: **Drug use and its correlates in an Australian prison population.** *Addiction Research and Theory* 2003, **11**:89-101.
11. Dolan K, Hall W, Wodak A, Gaughwin M: **Evidence of HIV transmission in an Australian prison. Letter.** *Medical Journal of Australia* 1994, **160**:734.
12. Maden A, Swinton M, Gunn J: **Drug dependence in prisoners.** *British Medical Journal* 1991, **302**:880.
13. Dolan K, Wodak A, Hall W: **A bleach program for inmates in NSW: An HIV prevention strategy.** *Aust NZJ Public Health* 1998, **22**:838-840.
14. Gaughwin MD, Douglas RM, Wodak AD: **Behind bars – risk behaviours for HIV transmission in prisons, a review.** In *HIV/AIDS and Prisons Conference Proceedings* Edited by: Norberry J, Gerull SA, Gaughwin MD. Australian Institute of Criminology, Canberra; 1991.
15. Viadro CI, Earp JA: **AIDS education and incarcerated women: A neglected opportunity.** *Women & Health* 1991, **17**:105-117.
16. Farabee D, Leukefeld CG: **Opportunities for AIDS prevention in a rural state in criminal justice and drug treatment settings.** *Substance use and Misuse* 1999, **34**:617-631.
17. Bijl M, Frost L: **Establishing an HIV/AIDS prevention and health promotion program in Russian prisons.** *11th International conference on the reduction of drug related harm.* Jersey, Channel Islands, British Isles 2000. April 9–13
18. Frost L, Tchertkov V: **Prisoner risk taking in the Russian Federation.** *AIDS Edu and Prev* 2002, **14**(Supplement B):7-23.
19. Vaz RG, Gloyd S, Trindade R: **The effects of peer education on STD and AIDS knowledge among prisoners in Mozambique.** *Int J STD AIDS* 1996, **7**:51-4.
20. Millstein R: **Community alert bulletin.** *US Department of Health and Human Services, Public Health Service, Alcohol, Drug Abuse, and Mental Health Administration* 1993 [http://www.aegis.com/pubs/Cdc_Fact_Sheets/1993/CDC93175.html]. National Institute on Drug Abuse, Rockville, Maryland March 25
21. Dolan K, Shearer J, MacDonald M, Mattick RP, Hall W, Wodak A: **A randomised controlled trial of methadone maintenance treatment versus waitlist control in an Australian prison system.** *Drug and Alcohol Dependence* 2003, **72**:59-65.
22. Dolan K, Rutter S, Wodak A: **Prison based syringe exchange programs: A review of the international research and development.** *Addiction* 2003, **98**:153-158.
23. Dolan K, Wodak A, Hall W: **HIV risk behaviour and prevention in prison: A bleach programme for inmates in NSW.** *Drug and Alcohol Review* 1999, **18**:39-143.
24. Dolan K, Shearer J, Lowe D: **Evaluation of the condom distribution program in NSW prisons, Australia.** *J Law Med Ethics* 2004, **32**(1):124-128.
25. Choopanya K, Des Jarlais DC, Vanichseni S, Kitayaporn D, Mock PA, Raktham S, Hireanras K, Heyward WL, Sujarita S, Mastro TD: **Incarceration and risk for HIV infection among injection drug users in Bangkok.** *J AIDS* 2002:86-94.

Publish with **BioMed Central** and every scientist can read your work free of charge

"BioMed Central will be the most significant development for disseminating the results of biomedical research in our lifetime."

Sir Paul Nurse, Cancer Research UK

Your research papers will be:

- available free of charge to the entire biomedical community
- peer reviewed and published immediately upon acceptance
- cited in PubMed and archived on PubMed Central
- yours — you keep the copyright

Submit your manuscript here:
http://www.biomedcentral.com/info/publishing_adv.asp

