### University of Rhode Island

# DigitalCommons@URI

Infectious Diseases in Corrections Report (IDCR)

9-2004

# IDCR: Infectious Diseases in Corrections Report, Vol. 7 No. 9

Infectious Diseases in Corrections

Follow this and additional works at: https://digitalcommons.uri.edu/idcr

#### **Recommended Citation**

Infectious Diseases in Corrections, "IDCR: Infectious Diseases in Corrections Report, Vol. 7 No. 9" (2004). *Infectious Diseases in Corrections Report (IDCR)*. Paper 59. https://digitalcommons.uri.edu/idcr/59

This Article is brought to you by the University of Rhode Island. It has been accepted for inclusion in Infectious Diseases in Corrections Report (IDCR) by an authorized administrator of DigitalCommons@URI. For more information, please contact digitalcommons-group@uri.edu. For permission to reuse copyrighted content, contact the author directly.

# **FORMERLY HEPP Report**



Sept. 2004 Vol. 7, Issue 9

## NFECTIOUS DISEASES IN CORRECTIONS REPORT

SPONSORED BY THE BROWN MEDICAL SCHOOL, OFFICE OF CONTINUING MEDICAL EDUCATION

#### **ABOUT IDCR**

IDCR, a forum for correctional problem solving, targets correctional physicians, nurses, administrators, outreach workers, and case managers. Published monthly and distributed by email and fax, IDCR provides up-to-the moment information on HIV/AIDS. hepatitis, and other infectious diseases, as well as efficient ways to administer treatment in the correctional environment. Continuing Medical Education credits are provided by the Brown University Office of Continuing Medical Education, IDCR is distributed to all members of the Society of Correctional Physicians (SCP) within the SCP publication, CorrDocs (www.corrdocs.org).

#### **CO-CHIEF EDITORS**

Joseph Bick, MD

Chief Medical Officer, California Medical Facility, California Department of Corrections

> Anne S. De Groot, MD Director, TB/HIV Research Lab, Brown Medical School

### **DEPUTY EDITORS**

Frederick L. Altice, MD

Director, HIV in Prisons Program, Yale Univ. AIDS Program

#### David P. Paar, MD

Director, AIDS Care and Clinical Research Program, Univ. of Texas, Medical Branch

#### Bethany Weaver, DO, MPH

Acting Instructor, Univ. of Washington Center for AIDS and STD Research

Renee Ridzon, MD
Bill & Melinda Gates Foundation

#### **SUPPORTERS**

IDCR is grateful for
the support of the following
companies through unrestricted
educational grants:
Major Support: Abbott Laboratories,
Boehringer Ingelheim and
Roche Pharmaceuticals.
Sustaining: Pfizer Inc., Gilead
Sciences, Inc., GlaxoSmithKline, Merck
& Co., Schering-Plough and ViroLogic.

#### **IDCR MISSION STATEMENT**

We changed our name from HEPP Report to IDCR (Infectious Diseases in Corrections Report) to encompass all infectious diseases that impact the correctional setting. IDCR's goal is to educate correctional health care providers about the appropriate medical management of prisoners infected with HIV, hepatitis, TB, and other infectious diseases; to encourage these providers to improve their networks with correctional, academic or community-based infectious disease experts; and to promote a level of infectious disease care in correctional facilities that is equivalent to the "community standard."

# IS THE WORLD FINALLY WAKING UP TO HIV/AIDS IN PRISONS? A REPORT FROM THE XV INTERNATIONAL AIDS CONFERENCE

Ralf Jürgens\*, LL.M., Dr.jur, Executive Director, Canadian HIV/AIDS Legal Network

Issues related to HIV/AIDS in prisons have traditionally received little attention at the International AIDS Conference. Yet, it is a wellknown fact that HIV prevalence within prison populations tends to be much higher than in the general population both in the United States and worldwide. This year's conference, "AIDS 2004," held in Bangkok, Thailand, (July 11-16) may, however, represent a turning point. Before the official conference started, a one-day satellite meeting debated issues related to HIV/AIDS in prisons in great depth. At the conference itself, two oral sessions and a large number of poster presentations were dedicated to HIV/AIDS in prisons. In addition, three United Nations agencies released an important policy brief on reduction of HIV transmission in prisons. Although most activities focused on HIV prevention, delegates also debated the question of how HIV treatment, including antiretrovirals (ARVs), can best be made available to inmates. This was particularly important in light of current efforts spearheaded by the World Health Organization to make effective treatments available to three million people in developing countries by 2005.1 While it is impossible to provide a detailed overview of all the prison-related developments presented at AIDS 2004, this article will first provide some background information on HIV/AIDS in prisons worldwide, and then highlight some of the relevant findings presented at the conference.

# HIV/AIDS IN PRISONS WORLDWIDE HIV Prevalence

In most countries, prevalence of HIV infection within prison populations is much higher than in the general population, with some countries reporting rates in the range of 10 to 25 percent.<sup>2</sup> The jurisdictions with the highest HIV-prevalence within prisons are those where rates of HIV infection among injection drug users (IDUs) are high, as this group is dramatically over-represented in correctional institutions.

#### **HIV Transmission in Prison**

Incarceration has been associated with HIV infection in several countries, <sup>3</sup> including Thailand, where the first wave of HIV infections occurred in 1988 among IDUs. From a negligible percentage at the beginning of the year, the infection rate among IDUs rose to over 40 percent by September, fueled in part by transmission of the virus as many IDUs moved in and out of penal institutions. <sup>4</sup> A more recent study concluded that IDUs in Bangkok continue to be "at significantly increased risk of HIV infection through sharing

Continued on page 2

#### WHAT'S INSIDE

Spotlight	pg 7
In The News	pg 8
Self-Assessment Test	pg 9

Brown Medical School | Providence, RI 02912 | 401.863.6128 | fax: 401.863.6087 | www.IDCRonline.org

# IS THE WORLD FINALLY WAKING UP... (continued from page 1)

needles with multiple partners while in holding cells before incarceration."<sup>5</sup>

Additional evidence for rapid HIV transmission in prisons was documented in Scotland in 1993.6 Among 227 Scottish inmates participating in a study of HIV risk behavior and infection at Glenochil institution, 76 (33 percent) reported a history of injection, and 33 (43 percent) of those individuals reported injecting while in the prison. Thirty-two (97 percent) of those who admitted to injecting in prison also reported sharing syringes. Of the 162 individuals who were tested for HIV, twelve (7 percent), tested positive for HIV antibodies. All of these individuals had reported injecting while in the prison. Evidence derived from serial HIV testing and prison admission records confirmed that at least eight of these inmates contracted HIV during the first six months of 1993.

Another example of a documented outbreak occurred in a prison in Lithuania. During random checks undertaken in 2002 by the state-run AIDS Center, 263 prisoners at Alytus prison tested positive for HIV antibodies. Tests at Lithuania's other 14 prisons, which house 11,700 convicts, found only 18 cases of HIV infection. Before the tests at Alytus prison, Lithuanian officials had listed only 300 cases of HIV infection in the whole country, or less than 0.01 percent of the population, the lowest prevalence in Europe. It is believed that the outbreak at Alytus prison was also due to sharing of drug injection equipment.7

#### **HIV Risk Behaviors**

Despite the sustained efforts of prison systems to prevent drug use by prisoners, the reality is that drugs can and do enter prisons. Many inmates come to prisons with their drug habits already established. In fact, many inmates are sentenced in the first place because of drug-related crimes. People who used drugs outside often find a way to continue drug use on the inside. Others start using drugs in prison as a way to release tensions and to cope with being in an overcrowded and often violent environment.<sup>8</sup>

Studies have shown that ongoing injection drug use is also prevalent in prisons in many countries. As in the United States, imprisonment is a common event for IDUs worldwide. In a 12-city World Health Organization study of HIV risk behavior among IDUs, between 60 and 90 percent of respondents reported a history of imprisonment since commencing drug

injection. <sup>10</sup> For IDUs who continue to use while incarcerated, imprisonment increases the risk of contracting blood-borne infections, including HIV and hepatitis C virus (HCV) and hepatitis B virus (HBV). This is because those who inject drugs in prison almost always share needles and syringes. IDUs have contributed to significant risk-reduction in the community through introduction of a variety of mea-

IDUs have contributed to significant risk-reduction in the community through introduction of a variety of measures that include needle exchange, education, and provision of treatment.

sures that include needle exchange, education, and provision of treatment. On the other hand, risk behavior in prisons (with the exception of prisons that have introduced the preventive measures described below) has remained unchanged over the last decade. In one Australian study, six of the 36 participants who reported injecting and sharing needles when last in prison also reported that it was the first time they had ever shared syringes. Most often, only a handful of needles will circulate among a large population of prisoners who inject drugs.

Because sharing of injection equipment is inherently a high-risk activity, and in some prisons a more common occurrence, sexual activity is considered to be a less significant risk factor in prisons for HIV and HCV transmission. Nevertheless, it does occur and puts prisoners at risk of contracting HIV infection. Homosexual activity occurs inside prisons, as it does outside, as a consequence of sexual orientation. In addition, prison life produces conditions that encourage homosexual activity and the establishment of homosexual relationships between inmates who do not identify themselves as homosexuals. The prevalence of sexual activity in prison is based on such factors as whether the accommodation is single-cell or dormitory. the duration of the sentence, the security classification, and the extent to which conjugal visits are permitted. Studies of sexual contact in prison have shown "inmate involvement to vary greatly." 13

#### **Responses of Prison Systems**

Initially, response to the issues raised by HIV/AIDS, HCV, and drug use in prisons was slow. In many prison systems worldwide, only small steps were made to develop policies and to provide educational programs for staff and prisoners. However, in recent years a growing number of prison systems have started adopting a pragmatic, public health approach to HIV/AIDS. These systems are making condoms, bleach and even sterile injection equipment and methadone maintenance treatment available, in addition to providing substance abuse treatment and educational programs delivered or supplemented by community-based outside organizations and/or peers.

#### Responding to Injection Drug Use

Recognizing that drugs, needles, and syringes permeate the most secure of prison walls, and while continuing and often stepping up drug interdiction efforts and substance abuse programs, prison systems around the world are taking steps to reduce the risk of the spread of HIV and other diseases. Some of these measures are not necessarily easy to implement, and there are legal, ethical, as well as practical problems associated with them. These steps have usually been undertaken as a pilot project, but their success to date has led to their continuation, and indeed extension into other prisons and other countries.14

One strategy to reduce the risk of HIV transmission through the sharing of injection equipment is to provide liquid bleach to sterilize needles and syringes. Already in 1991, 16 of 52 prison systems surveyed in Europe made bleach available to prisoners.15 Significantly, no system that has adopted a policy of making bleach available in penal institutions has ever reversed the policy, and the number of systems in Europe that make bleach available has continued to grow every year. 16 Bleach is also available in many other prison systems, including in most Canadian prisons 17 and in many prisons in Australia.18

While making bleach available to inmates may reduce the spread of HIV from injection drug use in prisons, sterile, neverused needles and syringes are safer than bleach-disinfected, previously-used needles and syringes. The probability of effective decontamination is decreased further in prison. Because prisoners can be discovered at any moment by prison staff since injecting and cleaning is a hurried affair. Studies have shown that bleach disinfection takes more time than most

Continued on page 3

# IS THE WORLD FINALLY WAKING Up... (continued from page 2)

prisoners allow. In addition, even when bleach is provided, prisoners may find it difficult to access.<sup>20</sup> Finally, bleach is not fully effective in killing HCV.<sup>21</sup>

Therefore, an increasing number of prison systems have introduced needle exchange or distribution programs. Outside prisons, in many countries such programs have become an integral part of a pragmatic public health response to the risk of HIV transmission among IDUs (and ultimately, to the general public). Extensive studies on the effectiveness of these programs have been carried out. For many years, there has been scientifically sound evidence showing that they are an appropriate and important preventive health measure.<sup>22</sup>

Introducing needle exchange programs in prisons has been recommended.<sup>23</sup> At AIDS 2004, the first comprehensive survey of the experience with existing prison-based needle exchange programs was presented (see below).

Finally, worldwide, an increasing number of correctional systems have introduced methadone maintenance treatment (MMT). Outside prisons, MMT programs have rapidly expanded in many countries over the last decade. There are ample data supporting their effectiveness in reducing high-risk injecting behavior and in reducing the risk of contracting HIV. There is also evidence that MMT is a highly effective treatment available for heroindependent IDUs in terms of reducing mortality, heroin consumption, and criminality. Further, MMT attracts and retains more heroin injectors than any other form of treatment. Finally, there is evidence that people who are on MMT and who are forced to withdraw from methadone because they are incarcerated often return to narcotic use, often within the penal institutions, and often via injection.<sup>24</sup>

As in the community, MMT, if made available to prisoners, has the potential of reducing injecting and syringe sharing in prisons. Evaluations of MMT programs in prisons have shown positive results. For example, in Canada, the federal prison system expanded access to MMT after evaluation demonstrated that MMT has a positive impact on release outcome and on institutional behavior.<sup>25</sup>

Preventing sexual transmission of HIV Many prison systems worldwide are also

making condoms available to prisoners. In 1991, 23 of the 52 European prison systems surveyed allowed condom distribution.26 Making condoms available has not resulted in any significant security problems.<sup>27</sup> and no system that has adopted a policy of making condoms available in prisons has reversed the policy. The number of systems that make condoms available has continued to grow every year. For example, in a number of surveys undertaken in Europe, the proportion of prison systems that made condoms available rose from 53 percent in 1989 to 75 percent in 1992 and 81 percent in 1997. In the most recent survey, condoms were

As in the community,
Methadone Maintenance
Treatment, if made
available to prisoners,
has the potential
of reducing injecting
and syringe sharing
in prisons.

available in all but four systems.<sup>28</sup> In 1995 in Australia, 50 prisoners launched a legal action against the state of New South Wales (NSW) for non-provision of condoms, arguing that "[it] is no proper part of the punishment of prisoners that their access to preventative means to protect their health is impeded."<sup>29</sup> Since then, at least in part because of the legal action, the NSW government has decided to make condoms available. Other Australian systems, most Canadian systems, a growing number of facilities in the U.S. and elsewhere also make condoms available.

# AIDS 2004 HIGHLIGHTS The Satellite Conference on HIV/AIDS in Prisons

A one-day pre-conference seminar, which brought together 150 people from many different countries and backgrounds, debated issues related to HIV/AIDS in prisons at great length. Entitled "Human Rights at the Margins: HIV/AIDS, Prisoners, Drug Users and the Law," and organized by a group of organizations including the Canadian HIV/AIDS Legal Network and UNAIDS, the conference provided an overview of the state of the

HIV/AIDS epidemic in prisons worldwide. Also discussed were responses by prison systems; key public health, human rights, legal and ethical issues; and recommendations about how to increase HIV education, prevention, care, treatment and support efforts in prisons worldwide. A background paper prepared for the conference argues that increased efforts are necessary not only for public health reasons, but are required by international law. With regard to availability of prevention measures, the paper states:

"Measures undertaken to prevent the spread of HIV and other infections will benefit prisoners, staff, and the public. They will protect the health of prisoners, who should not, by reason of their imprisonment, be exposed to the risk of a deadly condition. They will protect staff: lowering the prevalence of infections in prisons means that the risk of exposure to these infections will also be lowered. They will protect the public. Most inmates are in prison only for short periods of time and are then released into their communities. In order to protect the general population, prevention measures need to be available in prisons, as they are outside." 31

With regard to treatment, the paper argues that in high income countries, the right to enjoyment of the highest attainable standard of physical and mental health, in concert with the principle of equivalence, dictates that inmates should have access to a high standard of care, including specialist consultation, diagnostic testing (CD4, viral load, viral resistance) and the full range of ARVs licensed for sale within a particular country.<sup>32</sup> The paper is currently being finalized based on feedback received at the conference and peer review."<sup>33</sup>

# Oral Sessions on HIV/AIDS in Prisons at AIDS 2004

The first of two major oral sessions on HIV/AIDS in prisons was entitled, "Not hard-to-reach, but still hard-to-serve? What works in HIV prevention and care in prisons." It included presentations from prison officials from Indonesia, 34 Thailand, 35 and Iran, 36 as well as a presentation on the first comprehensive survey of prison-based needle exchange programs. The presenter from Thailand focused on his country's efforts to deal with the problem of TB and HIV coinfection in prisons. The officials from Indonesia and Iran discussed the measures, including condoms, bleach, and

Continued on page 4

# IS THE WORLD FINALLY WAKING Up... (continued from page 3)

MMT, that have been introduced in their countries to respond to HIV/AIDS in prisons. It was encouraging to hear senior officials speak openly about heavily stigmatized and prohibited behaviors such as injection drug use and homosexual activity, and discuss the pragmatic response to prevent the greater evil: the spread of HIV among inmates and ultimately to the community. While Indonesia and Iran have not yet introduced prison-based needle exchange programs, other countries such as Switzerland, Germany, Spain and an increasing number of countries in Eastern Europe have. The survey of such programs that was presented at the session revealed that a steadily increasing number of prisons have established and evaluated needle and syringe exchange or distribution programs. All evaluations of such programs have been favorable. In particular, they have shown improvement in the health of prisoners and reduction of syringe sharing. Feared negative consequences have not materialized: needles have not been used as weapons, and there has been no reported increase in drug consumption. The presentation concluded that prison-based needle exchange programs have proven safe and effective, and the presenters opined that there remain no valid reasons not to introduce them in other prison systems.<sup>38</sup>

The second oral session was entitled "Preventing HIV spread in prisons" and included presentations from the U.S., Canada, Pakistan, and Thailand:

Barry Zack from California presented on the role of non-governmental organizations (NGOs) as partners of prison systems in the fight against HIV/AIDS.<sup>39</sup> He emphasized that a unique opportunity for collaboration exists between penitentiaries and NGOs when it comes to the provision of prevention, social support and transitional HIV services for inmates. He concluded that "prison officials who have worked with NGOs have shown that the collaboration can work for the prison, the NGO, the prisoner and the community."

Richard Wolitski presented the results of "Project START," funded by CDC to develop an HIV, STD, and hepatitis prevention program for young men aged 18-29 who are leaving prison and to test the effectiveness of a number of interventions in reducing sexual risk after leaving prison. Results showed that those prisoners who received enhanced interventions consisting of two pre-release, four post-release, and optional sessions based on participant need were less likely to engage in unprotected sex

than prisoners who only received a single pre-release session intervention.<sup>40</sup>

A Canadian study showed that of 1,475 IDUs enrolled in the Vancouver Injection Drug Users Study (VIDUS), 1,123 (76 percent) reported a history of incarceration since they first began injecting drugs. Of these, 351 (31 percent) reported, via interviews, ever injecting in prison. Among all those interviewed, including those with and without HIV infection, incarceration during the six months prior to the interview was associated with syringe borrowing during that period. The researchers concluded that "incarceration was independently associated with risky needle sharing for HIV-infected and HIV-negative IDUs," and

..."prison officials who have worked with NGOs have shown that the collaboration can work for the prison, the NGO, the prisoner and the community."

that the "strong evidence of HIV risk behavior should reinforce public health concerns about blood-borne diseases transmission in prisons."

Both the presentations from Pakistan<sup>42</sup> and Thailand<sup>43</sup> focused on the growing population of children and juveniles in prisons, and emphasized the need for programs aimed at reducing their vulnerability to HIV/AIDS.

#### A New Resource

A final important development at AIDS 2004 was the release of a policy brief on reduction of HIV transmission in prisons by three United Nations agencies (the World Health Organization, UNAIDS, and the UN Office on Drugs and Crime).44 Consistent with the message of the satellite conference and most oral presentations at AIDS 2004, the document calls upon governments to step up HIV prevention measures in prisons by adopting comprehensive programs that include all the measures against HIV transmission that are carried out in the community, including needle exchange. It concludes with the following "policy and programming implications":

The prevention of HIV transmission in prisons is mostly hampered by the denial of governments of the existence of injection drug use and sexual intercourse in prisons, rather than by a lack of evidence that key interventions work. There is ample evidence that drug use in general, injecting drug use in particular, and sexual intercourse among inmates are widespread in such institutions. Furthermore, there are data indicating that the risk of HIV infection in prisons is usually higher than in the general community. Once this has been accepted, governments have a wide range of program options for preventing HIV transmission in prisons.

The evidence shows that such programs should include all the measures against HIV transmission, which are carried out in the community outside prisons, including HIV/AIDS education, testing and counseling performed on a voluntary basis, the distribution of clean needles, syringes and condoms, and drug-dependence treatment, including substitution treatment. All these interventions have proved effective in reducing the risk of HIV transmission in prisons. They have also been shown to have no unintended negative consequences. The available scientific evidence suggests that such interventions can be reliably expanded from pilot projects to nationwide programs.45 At the end of the conference, some delegates expressed satisfaction that issues surrounding HIV/AIDS in prisons are starting to receive the attention they deserve. The hope is that by the time of the next International AIDS Conference, to be held in Toronto, Canada in 2006, the world will have better appreciated and responded to the reality of HIV/AIDS in prisons.

#### **DISCLOSURES:**

\*Nothing to disclose.

#### **REFERENCES:**

1. For more information, see www.who.int/hiv/en/ 2. Burattini, M et al. 2000, Correlation between HIV and HCV in Brazilian Prisoners: Evidence for Parenteral Transmission inside Prison, Rev Saude Publica, 34, 431-6; Babudieri, S et al. 2003, [HIV and Related Infections in Italian Penal Institutions: Epidemiological and Health Organization Note], Ann Ist Super Sanita, 39, 251-7; Kallas, EG et al. 1998, HIV Seroprevalence and Risk Factors in a Brazilian Prison, Braz J Infect Dis, 2, 197-204; Raufu, A. 2001, Nigerian Prison Authorities Free HIV Positive Inmates. AIDS Analysis Africa. 12. 15. 3. Rich, JD et al. 1999, Prevalence and Incidence of HIV among Incarcerated and Reincarcerated Women in Rhode Island, J Acquir Immune Defic Syndr, 22, 161-6; Tyndall, MW et al. 2003, Intensive Injection Cocaine Use

#### IS THE WORLD FINALLY WAKING UP...(continued from page 4)

as the Primary Risk Factor in the Vancouver Hiv-1 Epidemic, AIDS, 17, 887-93; Choopanya, K et al. 2002, Incarceration and Risk for HIV Infection among Injection Drug Users in Bangkok, J Acquir Immune Defic Syndr, 29, 86-94.

- 4. Jürgens, R. (1996) HIV/AIDS in Prisons: Final Report. Montréal: Canadian HIV/AIDS Legal Network and Canadian AIDS Society, at 45, with reference to Wright et al. Was the 1988 HIV epidemic among Bangkok's injecting drug users a common source outbreak? AIDS 1994; 8: 529-532.
- 5. Buavirat et al. (2003) Risk of prevalent HIV infection associated with incarceration among injecting drug users in Bangkok, Thailand: case-control study. British Medical Journal 326(7384): 308; see also Thaisri et al. 2003, HIV Infection and Risk Factors among Bangkok Prisoners, Thailand: A Prospective Cohort Study, BMC Infect Dis, 3, 25.
- 6. Taylor, A. et al. (1995). Outbreak of HIV Infection in a Scottish Prison. British Medical Journal 310(6975): 289-292.
- 7. Dapkus L. Prison's rate of HIV frightens a nation. Associated Press 29 September 2002.
- 8. Ibid.
- 9. European Monitoring Centre on Drugs and Drug Addiction. (2002). 2002 Annual Report on the State of the Drugs Problem in the European Union and Norway. Luxembourg: Office for Official Publications of the European Community; Correctional Service Canada. (1996a) 1995 National Inmate Survey: Final Report. Ottawa: The Service, Correctional Research and Development; Ford, P.M. (1999) HIV and Hep C seroprevalence and associated risk behaviours in a Canadian prison. Canadian HIV/AIDS Policy & Law Newsletter 4(2/3); Dolan, K. (1999). The epidemiology of hepatitis C infection in prison populations. National Drug and Alcohol Research Centre, UNSW; Medecins Sans Frontieres. (2000) Health Promotion Program in the Russian Prison System: Prisoner Survey 2000. Cited in International Harm Reduction Development. Drugs, AIDS, and Harm Reduction: How to Slow the HIV Epidemic in Eastern Europe and the Former Soviet Union. Open Society Institute, New York, 2001; Magis-Rodriguez, C et al. (2000). Injecting drug use and HIV/AIDS in two jails of the North border of Mexico. Abstract for the XIII International AIDS
- 10. Ball, A., et al. (1995) Multi-centre Study on Drug Injecting and Risk of HIV Infection: a report prepared on behalf of the international collaborative group for the World Health Organization Programme on Substance Abuse. Geneva: World Health Organization.
- 11. Dolan, K. (1999). The epidemiology of hepatitis C infection in prison populations. National Drug and Alcohol Research Centre, UNSW, at 6. 12. Ibid.
- 13. Saum, C.A., et al. (1995) Sex in Prison: Exploring the Myths and Realities. Prison Journal December 1995.
- 14. UNAIDS. (1997) Prisons and AIDS UNAIDS Point of View. Geneva: Joint United Nations Programme on HIV/AIDS.
- 15. Harding, T.W. and Schaller, G. (1992b) HIV/AIDS and Prisons: Updating and Policy Review. A Survey Covering 55 Prison Systems in 31 Countries. Geneva: WHO Global Programme on AIDS.
- 16. European Network on HIV/AIDS and Hepatitis Prevention in Prisons. Final Report on the EU Project European Network on HIV/AIDS Prevention in Prisons. Bonn and Marseille: The Network, 1997.
- 17. Lines R. (2002) Action on HIV/AIDS in Prisons: Too Little, Too Late A Report Card. Montreal: Canadian HIV/AIDS Legal Network.
- 18. Dolan (1999), supra.
- 19. US Department of Health & Human Services, Public Health Service, Centers for Disease Control and Prevention. HIV/AIDS Prevention Bulletin, 19 April 1993.
- 20. Dolan, K., et al. (1996b) Bleach Easier to Obtain But Inmates Still at Risk of Infection in New South Wales Prisons. Technical Report. Sydney, National Drug and Alcohol Research Centre.
- Hagan, H. and Thiede, H. 2003, Does Bleach Disinfection of Syringes Help Prevent Hepatitis C Virus Transmission? Epidemiology, 14, 628-9.
   See, eg, Centers for Disease Control and Prevention. (1993) The Public Health Impact of Needle Exchange Programs in the United States and Abroad. Summary, Conclusions and Recommendations. The Centers.

- 23. See, eg, WHO. (1993) Guidelines on HIV Infection and AIDS in Prisons. Geneva: WHO Global Programme on AIDS.
- 24. Dolan, K. and Wodak, A. (1996) An International Review of Methadone Provision in Prisons. Addiction Research, 4(1), 85-97.
- 25. Correctional Service Canada. Research Report: Institutional Methadone Maintenance Treatment: Impact on Release Outcome and Institutional Behaviour. Ottawa: CSC Research Branch, 2002 (No R-119). Available via www.csc-scc.gc.ca/text/rsrch/reports/reports\_e.shtml. See also T Kerr, R Jürgens. Methadone Maintenance Therapy in Prisons: Reviewing the Evidence. Montreal: Canadian HIV/AIDS Legal Network, 2004. Available via www.aidslaw.ca/Maincontent/issues/prisons.htm.
- 26. Harding and Schaller, (1992), supra.
- 27. K Dolan, D Lowe, J Shearer. Evaluation of the condom distribution program in New South Wales prisons, Australia. Journal of Law, Medicine & Ethics 2004; 32: 124-128.
- 28. European Network on HIV/AIDS and Hepatitis Prevention in Prisons. 2. Annual Report European Network on HIV/AIDS Prevention in Prisons. Bonn and Marseille: The Network, 1998.
- 29. Jürgens, R. (1996) HIV/AIDS in Prisons: Final Report. Montreal: Canadian HIV/AIDS Legal Network and Canadian AIDS Society, at 48.
- 30. Betteridge, G. Prisoners' Health & Human Rights in the HIV/AIDS Epidemic. Montreal: Canadian HIV/AIDS Legal Network, 2004. Available via www.aidslaw.ca/bangkok2004/e-bangkok2004.htm.
- 31. Ibid.
- 32. Ibid.
- 33. Readers of HEPP Report who would like to provide comments on the paper can do so by sending an email to gbetteridge@aidslaw.ca by 30 September 2004.
- 34. D Soejoto. First things first: Overcoming policy challenges to HIV programming in prisons. The XV International AIDS Conference, 2004, Abstract no WeCs211, MedGenMed. 2004 Jul 11;6(3):WeCs211 [eJIAS. 2004 Jul 11;1(1):WeCs211].
- 35. P Akarasewi. TB and HIV coinfection: Implications for prophylaxis and treatment. Abstract no WeCs213.
- 36. Pafshar. Going national: Experiences in developing nationwide harm reduction in Iran's prisons. Abstract no WeCs214.
- 37. Jürgens R et al. Prison needle exchange: A review of international evidence and experience. Abstract no ThPeC7472.
- 38. See also, Lines, R Jürgens, H Stöver, D Latishevschi, J Nelles. Prison Needle Exchange: A Review of International Evidence and Experience. Montreal: Canadian HIV/AIDS Legal Network, 2004; Kerr, T, R Jürgens. Syringe Exchange Programs in Prisons. Reviewing the Evidence. Canadian HIV/AIDS Legal Network, 2004 (available via www.aidslaw.ca/Maincontent/issues/prisons.htm); H Stöver, J Nelles. 10 years of experience with needle and syringe exchange programmes in European prisons: A review of different evaluation studies. International Journal of Drug Policy 2003; 14: 437-444; K Dolan, S Rutter, A Wodak. Prison-based syringe exchange programmes: a review of international research and development in Addiction 2003, 98, 153-158.
- 39. B Zack. Control of HIV/AIDS in prisons/jails: The international experience and role of non-governmental organizations as collaborative partners. Abstract no. WeOrE1295.
- 40. RJ Wolitski et al. Project START reduces HIV risk among prisoners after release. Abstract no. WeOrC1296.
- 41. E Wood et al. Incarceration is independently associated with syringe lending and borrowing among a Canadian cohort of injection drug users. Abstract no. WeOrC1297.
- 42. AYB Ayub. Prevention of HIV/AIDS and STDs among juvenile prisoners in north west frontier province, Pakistan. Abstract no. WeOrC1299.
- 43. E Ireland, N Chaiphech. Reducing children's vulnerability to HIV/AIDS and drugs in detention facilities in Thailand. Abstract no. WeOrC1300.
- 44. World Health Organization. Evidence for action on HIV/AIDS and injection drug use Policy brief: Reduction of HIV transmission in prisons. Geneva: WHO, 2004 (WHO/HIV/2004.05). Available via www.who.int/en/45. Ibid.

## LETTER FROM THE EDITOR

Dear Correctional Colleagues:

Many of us didn't make the International AIDS Conference in Bangkok this year. If you're like me and feel remorse over missing out on International AIDS issues, you read any updates you can get your hands on to try and assuage your guilt. This month's Bangkok Conference Update by Ralf Jürgens discusses HIV prevention efforts, such as condom distribution; AIDS service organizations and CBO involvement in corrections; HIV/AIDS counseling and testing; needle-exchange programs (NEPs) and provision of bleach for sterilization of shared injector equipment in prisons; and methadone maintenance programs (MMPs). Indeed, it was nice to see different parts of the world catching up.

At Rikers, our MMP requires patients to be involved in methadone maintenance on the outside and to qualify by criminal charges before continuation of methadone. We implement methadone detoxification for heroin-addicted patients experiencing withdrawal and for patients being transferred to prison facilities where methadone is not continued. Many of us see methadone utilization as compassionate care with the now acknowledged benefit of discouraging needle sharing.

I had a hard time imagining our jail actually implementing NEPs in prisons and provision of bleach for sterilization of shared injector equipment. I read with interest the recognized realization that injector equipment is considered contraband and there are security concerns regarding its use as weapons. Now I'm reminded *we're* behind.

The importance of prison/jail HIV/AIDS issues cannot be over-emphasized. The reality that jails and prisons are a significant part of communities is clear and undeniable. Learning that other countries grapple with these issues, and that some go leagues beyond us in their interventions, is heartening even for those institutions that have implemented different strategies to diminish the spread of HIV within corrections, and hopefully influence safer behavior outside our walls. It helps to remind us of why we have these critical prevention efforts to begin with. I once read that a prison system in Scotland actually provides a "shoot-up gallery" for their inmates. Now that's really thinking outside the box.

Karl Brown, MD FACP Infectious Diseases Supervisor- Rikers Island

# **Subscribe to HEPP Report**

EMAIL:

Fax to <b>617-7</b>	70-3339 for any of the follo	wing: <i>(please print cl</i>	learly or type)
	ould like to add/update/correct (circle ion of HEPP Report fax/email news	, -	on for my complimentary
	uld like to sign up the following colle port fax/email newsletter.	eague to receive a complim	nentary subscription of
	uld like my HEPP Report to be delivither than have a fax).	vered in the future as an at	tached PDF file in an
NAME:	FACIL	.ITY:	
CHECK ONE	:		
O Physician O Pharmacist	O Physician Assistant O Medical Director/Administrator	O Nurse/Nurse Practition O HIV Case Worker/Cour	
ADDRESS:_	CIT	Y:	STATE: ZIP:
FAX:	PHO	ONE:	

#### **Faculty Disclosure**

In accordance with the Accreditation Council for Continuing Medical Education Standards for Commercial Support, the faculty for this activity have been asked to complete Conflict of Interest Disclosure forms. Disclosures are listed at the end of articles. All of the individual medications discussed in this newsletter are approved for treatment of HIV and hepatitis unless otherwise indicated. For the treatment of HIV and hepatitis infection, many physicians opt to use combination antiretroviral therapy which is not addressed by the FDA.

#### **Senior Advisors**

Karl Brown, MD Rikers Island Jail

John H. Clark, MD, MPH, F.S.C.P. Los Angeles County Sheriff's Department

Ralf Jürgens Canadian HIV/AIDS Legal Network

Joseph Paris, PhD, MD CCHP Georgia Dept. of Corrections

Abby Dees, JD CorrectHELP: Corrections HIV Education and Law Project

David Thomas, MD, JD Division of Correctional Medicine, NovaSoutheastern University College of Osteopathic Medicine

Louis C. Tripoli, MD, F.A.C.F.E. Correctional Medical Institute, Correctional Medical Services

Lester Wright, MD New York State Department of Corrections

#### **Associate Editors**

Scott Allen, MD Rhode Island Department of Corrections

Dean Rieger, MD
Indiana Department of Corrections

Josiah Rich, MD Brown University School of Medicine, The Miriam Hospital

> Steven F. Scheibel, MD Regional Medical Director Prison Health Services, Inc.

> David A. Wohl, MD University of North Carolina

> Michelle Gaseau
>
> The Corrections Connection

#### Layout

Kimberly Backlund-Lewis
The Corrections Connection

#### Distribution

Screened Images Multimedia

#### **Managing Editor**

Julia Noguchi

HIV/Hepatitis Education Prison Project

# SPOTLIGHT: Abstracts from "AIDS 2004": Highlights in Clinical Care

Rick Altice\*, MD

The fifteenth International AIDS Conference held in Bangkok was the largest AIDS conference in history. Almost 20,000 individuals from 152 countries attended this conference and presented 8,641 abstracts in five distinct tracks. These included basic science, clinical care, social and economic issues, epidemiology and prevention and policy and program implementation. While there was considerable interest in all of the above-mentioned areas, this article will focus solely on the clinical care track in order to provide new information that may be used for the care of HIV-infected patients in the correctional system.

Several studies were presented that used existing licensed antiretroviral therapy (ART). In the CONTEXT study, PI-experienced patients (patients who failed one or two PIs previously) were randomized to receive one of two ritonavir boosted PI treatments: fosamprenavir (f-APV) vs. lopinavir (LPV). All subjects must have had a viable nucleoside analogue backbone available to them using resistance testing. There were two f-APV arms: 700mg/100mg BID and 1400mg/200mg QD. The once-daily f-APV arm was discontinued prematurely because of low efficacy outcomes, suggesting that for PI-experienced patients, f-APV should be administered twice-daily. The primary 48-week outcomes demonstrated similar efficacy between the f-APV and LPV arms with a mean VL reduction of 1.49 and 1.76 log, respectively. The proportion with a VL<50 was 46% and 50%, respectively.

Three studies addressed the concern about renal toxicity in patients receiving tenofovir (TDF). These studies range from very healthy antiretroviral naïve patients without baseline renal insufficiency to patients with preexisting renal disease. In the pivotal GS 903 trial that compared TDF to D4T in healthy ART-naïve patients receiving EFV+3TC, patients receiving TDF were no more likely to have laboratory changes in creatinine, phosphorus, proteinuria or glycosuria after three years.<sup>2</sup> An evaluation of Kaiser Permanente patients in five clinical care settings where 199 subjects received TDF for at least three months, subtle mean increases in creatinine were noted, however no increase in phosphaturia or proteinuria was noted.3 In a case control study of patients with mild renal insufficiency, 74 patients that received TDF were compared to 84 patients who did not. Patients with other known causes for renal insufficiency were excluded (e.g., diabetes, hypertension). The proportion with a decreased GFR (34% vs. 21%) and proteinuria (36% vs. 16%) was higher among those receiving TDF compared to those not on TDF.4 These data suggest that TDF rarely causes renal toxicity in patients without underlying renal disease. For those with baseline renal disease, renal disease remains uncommon. Renal function, however, should be carefully monitored.

Another study clearly established the inferiority of triple NRTI therapy. The ESS40013 study examined 448 ART-naïve patients who had a sustained VL<50 copies/mL at the end of 48 weeks after receiving the four-drug combination of AZT/3TC/ABC+EFV. Patients were randomized to either reduce their regimen to AZT/3TC/ABC or continue with AZT/3TC/ABC+EFV. Patients were followed for an additional 48 weeks. Efficacy measured by VL<50 was equivalent for both groups (77% vs. 79%), however subjects receiving AZT/3TC/ABC were more likely to have virological failure (16% vs. 8%) and less likely to experience medication toxicity (6% vs. 15%) than patients continuing on the four-drug regimen. These data suggest that virological potency is low in patients receiving triple nucleoside therapy, even in patients who were successfully inducing using a potent four-drug regimen that initially included EFV.<sup>5</sup>

New data from BMS 045 were presented in highly ART-experienced patients randomized to ATV/r vs. LPV/r. Efficacy regarding reduction in VL was equivalent between the two groups, however metabolic complications were reduced in patients receiving ATV/r. Metabolic syndrome was diagnosed (Metabolic syndrome: abdominal obesity, TGs ≥150 mg/dL, BP (≥30 mm Hg systolic or ≥85 diastolic), fasting glucose ≥110 mg/dL, low HDL (≤40 mg/dL in men, ≤50 mg/dL in women)) in 20% of LPV/r patients, compared to 10.7% of ATV/r patients and more patients receiving LPV/r initiation lipid-lowering medications (17.9% vs. 7.5%).<sup>6</sup>

The use of LPV/r was found to be associated with increased hepatoxicity in patients coinfected with either HBV or HCV in 816 patients in eight clinical trials. Patients with HBV/HCV coinfection had similar virological and immunological response rates as those with viral hepatitis, however the proportion with ALT >5 times the upper limit of normal was 16% compared to only 5% in patient without HBV/HCV. Death (1-2%) and discontinuation of medication due to adverse side effects (7%) did not differ between those with and without HBV/HCV infection.<sup>7</sup>

Important new data regarding pregnancy and HIV treatment were available. The complications of pregnancy were evaluated in 472 patients at one U.S. medical center from 1985 to 2003. Dramatic increase in preeclampsia (0.4% to 6.4%) and fetal death (0% to 4.2%) in 2001-2003 period compared to earlier time periods when less than three combination therapies were used. The only factor associated with this increased morbidity was duration of HAART therapy. Fortunately, there were no HIV transmissions in the most recent time period suggesting that HAART markedly reduces HIV transmission, however at increased risk for women on prolonged therapy.

Two studies examined pharmacokinetics of ART therapy in pregnant women in the third trimester. LPV levels (AUC and Cmin) in third trimester were significantly lower during the third trimester than in post-partum and historical controls. Ten out of the 12 women studied did not meet the target AUC exposure, suggesting the need for increased dosing. Until data are available using increased doses, LPV/r should not likely be used during this time period, and if it is, it should be used with guidance from therapeutic drug monitoring. In another study, NVP AUC levels were decreased with pregnancy, however the Cmin was not adversely affected. This suggests that NVP may be used in pregnancy, but used with extreme caution in women with higher CD4 counts.

#### DISCLOSURES:

\*Consultant and Speaker's Bureau: Pfizer, Abbott, BMX, Boehringer Ingleheim, DuPont, Roche, GlaxoSmithKline, Gilead, OrthoBiotech, Merck

#### REFERENCES:

- 1. Elston: MoOrB1055
- 2. Stazweski: WePeB5917
- 3. Horberg: WePpB2066
- 4. Mauss: WePeB5941
- 5. Markowitz: LbOrB14
- 6. U Iloeje. WePeB5957.
- 7. Chihrin: MoPeB3281
- 8. Stek, LbOrB08
- 9. Haberl, TuPeB4644

## SAVE THE **D**ATES

#### Infectious Disease Society of **America**

September 30 - October 3, 2004 Boston, MA www.idsociety.org

#### ProVisions IX, the Northeast **Multicultural Conference on HIV/AIDS**

October 13 - 15, 2004 New Haven, CT Call: Carla Giles, Program Committee Co-Chair 203.688.3184

Email: Carla.Giles@ynhh.org or Leif.Mitchell@yale.edu. Visit: www.provisionsct.org

#### Chest 2004

October 23 - 28, 2004 Seattle, WA Call: 847.498.1400 Fax: 800.343.2227

Visit: www.chestnet.org/CHEST/

program/index.php.

#### **Practical Management of HIV:** A One Day Regional Workshop Covering the **Practical Aspects of HIV** Management

October 25, 2004 Sturbridge, MA Call AAHIVM: 310.278.6380 or NEAETC: 617.262.5657 Visit: www.aahivm.org or www.neaetc.org.

#### 44th Annual ICAAC

October 30 - November 2, 2004 Washington, DC Call: 800.974.3621

Visit: www.asm.org

#### 7th International Conference on Healthcare Resource Allocation for HIV/AIDS

October 3 - 4, 2004 Washington, D.C. Visit: www.iapac.org

#### **HIV Mini-fellowship Program**

November 8, 9, 10, 2004 University of Texas Medical Branch, Galveston, TX Call Victoria Korschgen: 409.772.8799

Email: vikorsch@utmb.edu

## In The News

#### FDA Approves Truvada™ (One Pill Once Daily)

Gilead Sciences recently announced that the FDA has approved Truvada™ (emtricitabine and tenofovir disoproxil fumarate), a fixed-dose combination of the company's anti-HIV medications of Emtriva® and Viread®. Truvada™ combines 200 mg of emtricitabine and 300 mg of tenofovir disoproxil fumarate in a single tablet, taken once daily in combination with other antiretroviral agents, potentially making it easier to construct convenient combination regimens. Press Release, Gilead Sciences, August 2,

2004.

#### FDA Approves Epzicom™ (One Pill Once Daily)

Epizcom™, a new product by GlaxoSmithKline combining two HIV medicines into one tablet dosed once a day with no food or fluid requirements, was recently cleared for prescription use by the FDA. Epzicom™ combines two widelyused nucleoside reverse transcriptase inhibitors (NRTIs), Epivir® (lamivudine, 3TC) and Ziagen® (abacavir sulfate, ABC) for use in combination with other antiretroviral drugs. Epizicom™ tablets are recommended for use in combination with antiretroviral drugs from different pharmacological classes and not with other nucleoside/nucleotide reverse transcriptase inhibitors.

Press Release, GlaxoSmithKline, August 2, 2004.

#### Invirase® 500 mg Tablet Granted FDA **Priority Review**

Roche announced that the FDA has granted priority review status to the New Drug Application (NDA) for a 500 mg tablet formulation of its HIV protease inhibitor, Invirase® (saguinavir mesvlate). If approved, the new formulation of Invirase may simplify dosing regimens by reducing pill count for each dose by more than half (from five pills to two, twice-daily). Ritonavir should be taken at the same time as Invirase. Invirase and ritonavir should be taken within two hours after a meal.

Press Release, Roche, August 17, 2004.

#### Study: High prevalence and late diagnosis of HIV among Black men aged 40-54 in NYC

Of 40-54-year-old Black males living with HIV/AIDS (PLWHA) diagnosed since June 2000 (n=1,523), nearly one in three had concurrent HIV/AIDS (31.4% of new HIV diagnoses) according to a study reported at the Bangkok International AIDS Conference. Since New York City began HIV reporting in June 2000, non-Hispanic Black men have comprised the largest group of PLWHA and new HIV and AIDS diagnoses. Prevalence among Black men varies by age and geography, as do concurrent HIV/AIDS diagnoses, suggesting barriers to access to testing and care. The authors concluded that prevalence of HIV/AIDS is high in Black men aged 40-54, particularly in Manhattan, while Brooklyn has the greatest number of PLWHA. The high rate of concurrent diagnoses in 40-54 year-old Black male PLWHA, especially among those born outside the U.S., indicates that many were long-infected but not tested until symptomatic. Late diagnosis may delay entry to primary care and preventive counseling. NATAP - www.natap.org

#### Study: Prednisone Ineffective Against HIV-**Associated Pleural Tuberculosis**

Prednisone, a glucocorticoid that is sometimes added to anti-tuberculosis drug regimens, should not be used to treat HIV-infected patients who have pleural tuberculosis, nor is it recommended for those with pleural tuberculosis who are not coinfected with HIV, according to a recent study. In a double-blind, placebo-controlled study of prednisolone in 197 patients with HIV-1-associated pleural tuberculosis. Investigators found that the drug had no effect on survival but did increase the risk of AIDSrelated cancer Kaposi's sarcoma. This recommendation does not extend to other uses of prednisolone, such as treatment of pericardial tuberculosis or Pneumocystis carinii pneumonia, for which the drug can prolong or save lives, regardless of the patient's HIV status.

The Journal of Infectious Diseases, August 5.

## RESOURCES

Official online abstracts of the XV International AIDS Conference published by eJIAS: www.aids2004.org

#### Information on prison-based needle exchange programs:

http://www.aidslaw.ca/Maincontent/issues/prisons.htm

#### Information on harm reduction in prisons:

www.aidslaw.ca/Maincontent/issues/prisons/NEP\_150604.PDF

#### Updated series of 13 info sheets on HIV/AIDS in prisons:

www.aidslaw.ca/Maincontent/infosheets.htm#isohaap

#### SELF-ASSESSMENT TEST FOR CONTINUING MEDICAL EDUCATION CREDIT

Brown Medical School designates this educational activity for 1 hour in category 1 credit toward the AMA Physician's Recognition Award. To be eligible for CME credit, answer the questions below by circling the letter next to the correct answer to each of the questions. A minimum of 70% of the questions must be answered correctly. This activity is eligible for CME credit through March 31, 2005. The estimated time for completion of this activity is one hour and there is no fee for participation.

1.	Cor	rection	onal	systems	that	have	impl	lemented	cond	lom	distribu	ution
aı	nd/or	nee	dle e	exchange	hav	e:						

- a) Experienced a surge in use of condoms and needles as weapons
- b) Increased HIV transmission among inmates
- c) Frequency of rape among inmates
- d) None of the above
- 2. According to the World Health Organization study of risk behavior among injection drug users (IDUs), over half of respondents reported a history of imprisonment since commencing drug injection. True or False.
  - a) True
  - b) False
- 3. Outside prisons, the implementation of needle exchange or distribution programs is:
  - a) Supported by evidence showing that they are an appropriate and important public health measure
  - b) Recognized by the CDC as one component of a pragmatic public health response to the risk of HIV transmission among IDUs
  - c) Mentioned in a policy brief by three United Nations agencies as a means of stepping up HIV prevention measures in prisons
  - d) All of the above
- 4. According to a recent study, the percentage of European prison systems that make condoms available to inmates is closest to:
  - a) 0
  - b) 25
  - c) 50
  - d) 100
- 5. All of the following statements are true except:
  - a) Methadone maintenance treatment (MMT) is a highly effective treatment for heroin-dependent IDUs in terms of reducing mortality, heroin consumption, and criminality.
  - b) MMT may increase high-risk injecting behavior and the spread of HIV in prisons.
  - c) The Canadian federal prison system expanded access to MMT after demonstrating that it has a positive impact on release outcome and institutional behavior.
  - d) People who are on MMT prior to incarceration and who are then forced to withdraw from methadone because they are incarcerated often return to narcotic use within the correctional system.

- 6. Studies have shown that among IDUs, incarceration leads to a decreased risk of needle-sharing behavior. True or False.
  - a) True
  - b) False

#### **IDCR EVALUATION**

5 Excellent 4 Very Good 3 Fair 2 Poor 1 Very Poor

1. Please evaluate the following sections with respect to:

	educational value	clarity				
Main Article	5 4 3 2 1	5	4	3	2	1
Spotlight	5 4 3 2 1	5	4	3	2	1
Save the Dates	5 4 3 2 1	5	4	3	2	1

- 2. Do you feel that IDCR helps you in your work? Why or why not?
- 3. What future topics should IDCR address?
- 4. How can IDCR be made more useful to you?
- 5. Do you have specific comments on this issue?

BROWN MEDICAL SCHOOL • OFFICE OF CONTINUING MEDICAL EDUCATION • BOX G-A2 • PROVIDENCE, RI 02912
The Brown Medical School is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education activities for physicians.

The use of the Brown Medical School name implies review of the educational format and material only. The opinions, recommendations and editorial positions expressed by those whose input is included in this bulletin are their own. They do not represent or speak for the Brown Medical School.

For Continuing Medical Education credit please complete the following and mail or fax to 401.863.2660 or register online at www.IDCRonline.org. Be sure to print clearly so that we have the correct information for you.

Name	Degree
Address	
City	StateZip
Telephone	Fax