



# HEPP NEWS

## HIV Education Prison Project

February 1999 • Volume 2, Issue 2

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### About Hepp

HEPP News, a forum for correctional problem solving, evolved out of ongoing discussions among HIV specialists based at the Brown University AIDS Program about the need for HIV updates designed for practitioners in the correctional setting. The board of editors includes national and regional correctional professionals, selected on the basis of their experience with HIV care in the correctional environment and their familiarity with current HIV treatment. HEPP News targets correctional administrators and HIV/AIDS care providers including physicians, nurses, outreach workers and case managers. Published monthly and distributed by fax, HEPP News provides up-to-the-moment information on HIV treatment, efficient approaches to administering such treatments in the correctional environment, national and international news related to HIV in prisons and jails, and correctional trends that impact HIV treatment. Continuing Medical Education credits are provided by the Brown University Office of Continuing Medical Education to physicians who accurately respond to the questions on the last page of the newsletter; please see last page for details.

The editorial board and contributors to HEPP News are well aware of the critical role prisons and jails play in the treatment and prevention of HIV. The goal of HEPP News is to provide reports of effective and cost-conscious HIV care that can truly be implemented within the correctional environment. We hope this newsletter achieves that goal.

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#### 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 beneath the authors' names.

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## Occupational Exposure To Blood Borne Pathogens:

### Post Exposure Prophylaxis (PEP) For Correctional Employees

By Joe Bick, M.D.\*

*Chief Medical Officer, HIV Treatment Services at California Medical Facility in Vacaville, California Department of Corrections.*

It's late in the afternoon on Christmas Eve, and you receive a call that a correctional officer has just suffered a deep needle stick from a syringe found during a cell search. Are you prepared?

Managing a successful blood borne pathogen (BBP) exposure control program within a correctional setting can be very challenging. Ensuring that exposed employees have 24-hour access to PEP knowledgeable clinicians, educating staff about appropriate policies and procedures, and ensuring compliance with union agreements and applicable departmental, state and federal laws requires a great deal of planning. The rewards, however, can be great: creating an environment in which employees trust that all possible measures are in place to protect them from communicable diseases, avoiding sanctions from relevant agencies, and most importantly, preventing the transmission of serious and potentially fatal BBPs to your colleagues. This article will address some of the key features of a correctional BBP PEP program.

#### • The Law

Each program must ensure that they are in compliance with applicable federal and state OSHA regulations. These include the existence of an exposure control plan dealing with BBPs including

- 1) training of all at-risk employees
- 2) provision of free hepatitis B vaccination to staff (all at-risk employees must either accept HB vaccination or sign a waiver form),
- 3) provision of personal protective equip-

ment and devices,

- 4) provision of free post exposure care to exposed employees, and
- 5) maintenance of OSHA logs documenting exposures.

BBP exposure incidents must be regularly evaluated with an eye towards ensuring compliance with BBP policies and, where possible, modifying procedures to decrease risk to staff.

#### • The Risks

In the correctional setting the primary risks for transmission of hepatitis B (HBV), hepatitis C (HCV) and HIV are percutaneous or mucosal exposure to blood or other potentially infectious body fluids.

Significant exposures to correctional staff can occur in the course of providing healthcare, contact with sharps while cleaning or searching cells, during physical altercations, and by intentional "gassing" in which staff members are deliberately exposed to a patient's body fluids. A rough estimation of the risk following one percutaneous exposure to infectious material is 1/20 for HBV (1/3 if HB e Ag +), 1/33 for HCV, and 1/333 for HIV. The risk of HIV transmission following a mucous membrane exposure is estimated to be 1/1100.

Given the nationwide high prevalence of BBP, in corrections, prevention must be

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# LETTER FROM THE EDITOR

Letter From the Guest Editor:

This issue of HEPP Newsletter focuses on Post-Exposure Prophylaxis (PEP) in the prison setting. The lead article, by Dr. Bick, discusses occupational PEP. What should be done if a correctional officer suffers a deep needle stick injury from a needle found during a cell search? This question raises many difficult issues. The article demonstrates how important it is to be prepared, to create an environment in which, as Bick says, "employees trust that all possible measures are in place to protect them from communicable diseases." It describes how to evaluate the exposure incident, the source, and the exposed individual, and provides information about how to determine the need for PEP after an occupational exposure. Dr. Mayer touches upon a more controversial issue: non-occupational PEP. Interest in non-occupational PEP and its utilization has increased in past years, but many questions remain unanswered: Who should be given access to this yet unproven prevention strategy? While many have argued that victims of sexual assault should, others suggest that PEP should be available to all who engage in high-risk behavior. The immediate follow-up question is: would this lead to increased willingness to take risks? And what about providing inmates who engage in forbidden activity, such as sex and/or injection drug use, with access to PEP if they fear having been exposed to HIV?

Finally, there is an even more controversial issue: providing access to pre- rather than post-exposure prophylaxis. Prison systems in most countries have long offered inmates access to condoms. Sexual activity remains forbidden, but everyone knows that it nevertheless happens and carries a high risk of transmission of HIV and other infections. Providing condoms to prisoners to reduce that risk is a pragmatic public health measure now widely accepted in most countries. Some countries have even started providing inmates with access to sterile injection equipment. The rationale is the same: injection drug use remains forbidden and cannot be condoned. It does, nevertheless, happen, and does so with severe risks of infections further spreading among inmates and their families. Where access to injection equipment has been provided, this has not lead to increased drug use in prison, has significantly reduced transmission of HIV and hepatitis B and C, has not created any risk to the security of staff and has been well accepted by inmates, the staff, and the prison administration -- even after often vehement initial opposition.

After reading the February edition of HEPP News, you should be able to: Identify procedures for providing PEP following a high-risk injury including guidelines for management of PEP issued by the U.S. Public Health Service and federal OSHA regulations; discuss the specific differences between a high and low risk injury requiring PEP; identify complications associated with non-occupational PEP and discuss the protocol for possible blood borne pathogen exposure to staff.

In closing, one should consider the roles to be taken in efforts to overcome institutional resistance to efficient yet controversial preventative care, and thus better prevent the spread of HIV and other blood borne pathogens.

Sincerely,

Ralf Jürgens, LL.M., Dr.jur.

*We have invited Ralf Jürgens, JD to be guest editor of this month's issue of HEPP News. Jürgens is Executive Director of the Canadian HIV/AIDS Legal Network, a member of the Canadian Ministerial Council on HIV/AIDS, and was coordinator of the Canadian Expert Committee on AIDS in Prisons. He played a pivotal role in the implementation of condom and sterile injection equipment distribution in the Canadian correctional system. We are all aware that there is a little (if not a lot) of hesitation on this side of the Canadian border regarding "pre"-exposure prophylactic measures. However, a variety of uncontrolled events such as drug use, sexual contact, and violence do sometimes occur in correctional settings. We the HEPP News editors, felt it would be worthwhile to address these topics in the context of this issue on Post-Exposure Prophylaxis. Bear with us and rest assured, we will be addressing more mainstream topics, such as Tuberculosis, in the next issue. For more information about the Canadian HIV/AIDS Legal Network and pre-exposure prophylaxis in the correctional setting, visit the network's website at [www.aidslaw.ca](http://www.aidslaw.ca). We thank Mr. Jürgens for joining us as guest editor for this issue, and we remind our readers that we welcome feedback.*

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# Occupational Exposure To Blood Borne Pathogens

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the cornerstone of an exposure control plan and will go a long way toward decreasing those late afternoon calls. For HBV, an aggressive vaccination program for at-risk employees is essential. HBV is the #1 infectious cause of cancer worldwide (hepatoma), and more healthcare workers die each year from complications of occupationally acquired HBV than the total number who have acquired HIV on the job in the entire history of the epidemic. If possible, obtain HBV serology on all incoming employees, as this data will greatly simplify future PEP evaluations.

### • The Tough Stuff

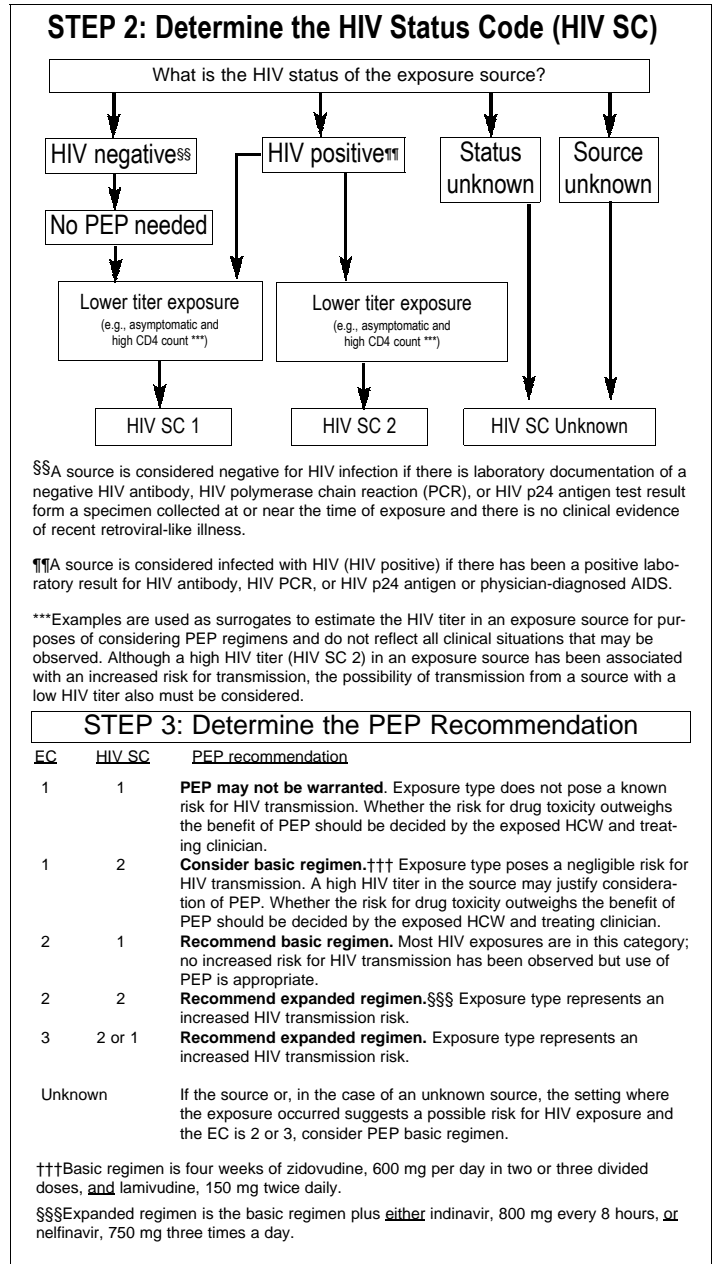
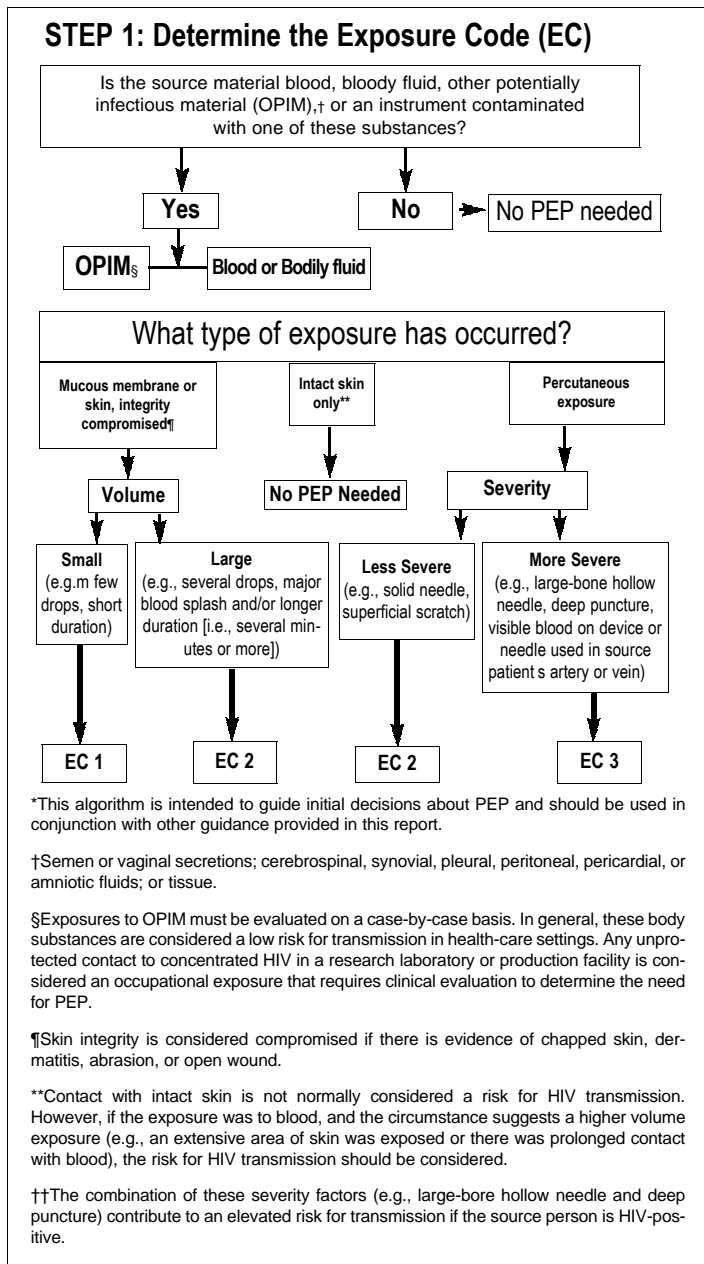
No, it's not the science, nor the treat-

ment algorithms described below. In the correctional setting, the main difficulty is creating a mechanism for delivering PEP to employees within the recommended time frames (1-2 hours in the case of HIV). Is the closest emergency room 3 hours away? Do you have physicians on site 24-hours per day? Each facility and system will need to address these questions individually, based upon the available resources and any applicable union agreements. For those facilities with 24-hour physician availability, the fastest approach is to provide HIV PEP, HBIG, and HBV vaccine on site. For HIV PEP, following an initial dose, employees will also need 2-3 days worth of medications and a prescription to be filled later for a full four

weeks. Keep in mind that not all pharmacies stock these medications, and for maximal effectiveness no doses can be missed.

A mechanism for obtaining baseline and follow-up labwork as well as monitoring for side effects of PEP must be in place. If the decision is made to utilize a nearby emergency room, the initial wound care and information collection should rapidly take place at your facility. Protocols must be in place with the receiving ER to triage these cases as emergencies, to provide initial and follow-up doses of PEP, and to arrange follow-up appointments with Occupational Health clinics.

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## Occupational Exposure To Blood Borne Pathogens

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### • Management of Exposures

**STEP 1: Wash the site.** The initial management of all BBP exposure is the same: immediately wash with soap and water all wounds and skin sites that have been in contact with blood or body fluids. For mucous membranes, flush copiously with water or saline.

**STEP 2: Evaluate the type of exposure.** Ask yourself: Did it involve tissue or fluids capable of BBP transmission? If not, no further treatment is necessary. If yes, evaluate the exposed body site. Was the site intact skin, hair, or clothing? If so, no further treatment is needed. If, however, the potentially infectious material made contact with an infectable body site (non-intact skin, mucous membrane like the mouth or eyes, or was parenteral, such as a needle stick or bite), transmission of a BBP is possible.

**STEP 3: Evaluate for other source factors.** Is the source known? If the source is *not* known, in a correctional setting it is prudent to proceed as if the source is infected with HIV, HBV, and HCV. If the source *is* known, review the source's chart for HIV, HBV, and HCV serology. Recent negative serology and a lack of evidence of high-risk behaviors since the negative test make the presence of BBPs much less likely.

In the absence of recent negative serology, proceed as if the source is infected and initiate whatever measures are allowable within your system to obtain stat HIV, HCV and HBV testing of the source. For those facilities that do not do labwork on site, it is imperative to have a contract that allows for 24-48 hour reporting in stat situations.

**STEP 4: Evaluate the exposed individual.** Is the exposed person already infected with HBV, HCV, or HIV? Has the individual been vaccinated for HBV? If so, was an antibody response documented?

### STEP 5: HIV PEP (see algorithms)

#### HIV RISKS:

The risk for transmission of HIV is increased in cases of deep injuries. Those with large gauge hollow bore needles, those involving devices visibly contaminated with the patient's blood or used directly in the source's artery or vein, and exposure to blood with a high titer of HIV (as in late stage AIDS) are

examples. Among healthcare workers with documented seroconversions, over 80% experienced a syndrome consistent with primary HIV infection median of 25 days after exposure. Of those who seroconverted, 95% did so within 6 months.

#### WHY PEP?:

The evidence for efficacy of PEP comes from both animal studies with SIV and ACTG 076, which demonstrated that AZT decreased the transmission of HIV to the offspring of HIV infected pregnant women. A retrospective analysis of exposed healthcare workers demonstrated a 81% reduction in HIV transmission among those given AZT. The recommendations for expanded regimens are extrapolated from what is known from trials for treatment of established HIV infection.

#### WHICH PEP?:

Once the evaluations of the exposure incident, the source, and the exposed individual have taken place as described above, proceed to the following algorithms 1-3 included in this article.

Employees with occupational exposure to BBPs require follow-up counseling, post exposure testing, and medical evaluation regardless of whether they receive PEP. Monitoring of medication toxicities and the management of side effects must be performed.

### STEP 6: Hepatitis B PEP (see HEPPigram)

### STEP 7: Hepatitis C

Thus far, there is no effective PEP for the prevention of transmission of HCV. Exposed individuals should have blood drawn for HCV Ab at baseline, and, if negative, it should be repeated at 6 weeks, 3 months, and 6 months. If they are infected, they should be counseled about the possibility of transmitting HCV to others. Early treatment with Interferon may be appropriate in some cases if seroconversion occurs. Not all aspects of BBP PEP are covered in this article. Issues such as PEP for those exposed to drug resistant viruses and management of PEP for pregnant workers can complicate the picture. For an excellent recent reference, the reader is referred the Public Health Service Guidelines for PEP published in the MMWR vol. 47/No.RR-7 from May 15, 1998.

\* Joseph Bick, M.D., Consultant: Agouron, Bristol-Meyers Squibb; Speaker's Bureau: Agouron, Bristol-Meyers Squibb.

## HEPPigram . . . Algorithm for HBV treatment after exposure

HEPPigram: A feature of HEPP News providing concise solutions to correctional HIV-related problems

<b>If exposed inmate is:</b>	<b>And source is: HBsAg+</b>	<b>And source is: HBsAg-</b>	<b>And source is: unknown</b>
<b>Not HBV vaccinated</b>	HBIG x1 and vaccinate	Vaccinate	In correctional settings, treat as if source were HBsAg+
<b>HBV vaccinated, unknown response</b>	Test exposure for HBsAb. If + , no RX. If - and vaccine booster	No treatment	Test exposed for HBsAB. If +, no RX. If - revaccinate
<b>HBV vaccinated, known non responder</b>	HBIG x 2 or HBIG x 1 and revaccinate	No treatment	In correctional settings, treat as if source were HBsAg+
<b>HBV vaccinated, known responder</b>	No treatment*	No treatment*	No treatment*

(\*see how much easier it is when all of your staff are vaccinated?)

adapted from MMWR vol. 46/No. RR-18, December 26, 1997

# Ask The Experts . . .

This case is adapted from a true "high risk" needle stick exposure in a correctional setting: A nurse was stuck with a needle after drawing blood from a "high risk" inmate during intake. The nurse was assisting another nurse with the blood draw because the inmate's veins were difficult to access. She pulled the tourniquet as the second nurse brought the needle out of the vein. At this time, the 21-gauge needle tip went through her glove and into a vein on the top of her hand, resulting in a large hematoma. The patient was not known to be HIV seropositive but had a history of intravenous drug use. He was known to have had a sexual partner who was diagnosed with AIDS and was treated with AZT/3TC oral combination therapy. He had shared needles and had unprotected sex with this partner. When the patient's labs came back, he had an undetectable viral load, his HIV serology and western blot were pending, and his T cell count was 150.

## What Would You Do?

### Expert #1

**Anne Spaulding, M.D.\***

*Medical Director*

*RI Department of Corrections*

The RI DOC Health Services has had a protocol for responding to potential bloodborne pathogen exposure of staff and inmates since 1996. I'll treat the nurse using our guidelines...

1. After cleaning the site with soap and water, I evaluate the nature and severity of the exposure. A needle stick from a patient likely to be HIV positive represents a high-risk exposure. I ask the inmate patient for permission to evaluate him for HIV/HBV/HCV.

2. After counseling the nurse about the exposure's significance, I encourage HIV/HBV/HCV testing (at an outside facility to maintain confidentiality) to document baseline seronegative status, for workman's compensation, in the rare event of seroconversion. I encourage repeat testing at 6 weeks, 3 and 6 months postexposure. She should report any symptom of seroconversion to her outside provider. Until she has HIV infection ruled out, I recommend that she use barrier methods during sex and refrain from blood donation.

3. During initial evaluation, I give the first dose of HIV prophylaxis. In every facility, we maintain emergency packets of AZT/3TC/Indinivir. She takes this first dose in my presence. I refer her for further management to an outside facility to maintain confidentiality at her work site.

Our guidelines take a "one size fits all" approach. AZT, 3TC, and Indinavir may not represent the best HIV prophylaxis. The sexual partner of the source patient could transmit a virus resistant to her AZT/3TC.

Tolerance of Indinavir may be less than Nelfinavir. However, RI DOC has made PEP uniform to maximize the number of potential candidates who take the first dose rapidly.

With the institution of the emergency packet system, health care workers, correctional officers and inmates have received PEP within one hour of potential exposure. Previously, staff went to local hospitals, which sometimes tarried before administering any medication. During follow-up with an HIV specialist, who will oversee a four-week regimen of PEP, individualization of further treatment (perhaps D4T and DDI as reverse transcriptase inhibitors) can occur.

*\*No Industry Affiliation*

### Case Follow Up

Immediately following the stick, the nurse washed the area with soap and water and reported it to her supervisor. The physician supervisor immediately called the National Clinicians' Post-Exposure Prophylaxis Hotline in San Francisco (888-448-4911). She was started on triple therapy, and within 30 minutes had taken her first doses of DDI, D4T, and Nelfinavir. The prison pharmacy issued medications for the next 2 days and central pharmacy overnighted the amount needed for the 28 days. She now says: "DDI was awful but I finally managed to dissolve it in H2O in order to get it down. I took all of the medications at the times suggested and finished all 28 days. I had slight side effects, the worst being severe bouts of diarrhea, but I was able to take another pill for that." Her HIV and Hep C tests were initially negative (taken at 6 weeks). We will give you an update on her situation in next month's issue.

### Expert #2

**David Alain Wohl, M.D.\***

*Clinical Assistant Professor, University of North Carolina*

*HIV Services Co-Director, NC Department of Corrections*

The clock is ticking! The few animal data that actually demonstrate any effectiveness of post-exposure prophylaxis (PEP) following retroviral infection indicate that the earlier the administration of PEP (ideally within 1 hour), the greater the chance of aborting infection (1).

First Aid, in this case, should consist of simply washing the wound with soap and water. Use of caustic agents such as bleach has no role in cleansing needlestick injuries.

Documentation of the exposure is required by OSHA and is essential if the health care worker seeks Workman's Compensation. Confidentiality of the HCW and the source patient must be strictly respected.

Assess the risk. The injury in this case was substantial. To the nurse's credit, she was wearing gloves, which may have reduced the amount of blood carried by the needle. The source patient and HCW must be tested as described in Joe Bick's article (See page 1). This HCW should be tested for pregnancy. Pregnancy status may influence her decision regarding initiation of PEP. The lack of detectable HIV RNA by PCR in the plasma of the source patient does not rule out HIV infection, but probably lessens the risk of HIV transmission. It should be assumed the patient is HIV infected.

PEP should be offered if the results of the source patient's HIV status are unavailable within a few hours. The US Public Health Service guidelines recommend that either 2 or 3 agents be administered based on the severity of the exposure and infectiousness of the source. Many find this abiguous. When offering PEP I try to provide the best chance of preventing infection with 2 nucleosides and a protease inhibitor.

Selection of PEP regimen in this case is clouded by the history of the source patient's partner's use of ZDV and 3TC, but it is wise to assume resistance to ZDV and 3TC is likely. I would offer D4T, DDI and nelfinavir (1,250 mg BID). This combination should be potent and unaffected by cross resistance to ZDV and/or 3TC. Nelfinavir's manageable major side effect of diarrhea should be considered. DDI must be taken on an empty stomach. I recommend a single dose of DDI be taken before bed. If DDI is not tolerated, 3TC could be substituted in its place, recognizing the concern for resistance and its use with ZDV in treating HIV infected persons with previous ZDV experience.

The HCW should be counseled to be alert to signs of acute seroconversion and safe sex and should have psychological support services available. All HCW receiving PEP should be registered with the PEP Registry (888-737-4448).

*\*David Alain Wohl, M.D.*

*Speaker Bureau:*

*Roche,*

*Bristol Myers Squibb,*

*Glaxo and Roxane*

# Non-Occupational Post-Exposure Prophylaxis (PEP)

By **Kenneth H. Mayer, MD\***

Chief, Infectious Disease Division  
Memorial Hospital of Rhode Island  
Director, Brown University AIDS Program

On a global basis, more than ¾ of all

new HIV infections are due to sexual transmission, which is more than 8,000 every day. Although a randomized, controlled study of antiretroviral drug use after a high-risk

exposure appears to be impossible for logistical and ethical reasons, interest in this adjunctive means of HIV prevention has been growing.

The rationale for PEP is based on animal model data, the efficacy of methods about other viral infections (e.g. hepatitis A with immunoglobulin), and the use of antiretroviral therapy in preventing perinatal HIV transmission. Also, the results of a CDC retrospective case-control study suggested that health care workers who took some AZT after an occupational exposure were one fifth as likely to become HIV-infected as those who did not use medication. Despite the prohibition of sexual activity in correctional facilities, the occurrence of HIV exposure due to sexual contact makes PEP a relevant topic for correctional health care.

## • Questions Raised

More than 2 years ago, I received my first call from an emergency room asking me how to manage a survivor of a sexual assault whose assailant was an IDU, hence judged to be at increased risk for HIV. This encounter raised many questions that are still useful today, which include:

1. Who should receive non-occupational PEP?
2. How certain do providers need to be that the source of exposure is HIV (+) or at increased risk?
3. What are appropriate regimens?
4. For how long should it be administered?
5. Will the assumption that PEP is available and efficacious result in increased HIV risk taking behavior?

The answers to these and other important questions remain unclear, but over the past few years, the interest in non-

occupational PEP and its utilization have definitely increased. However, many providers have been concerned that knowledge of the existence of a "morning after" pill, or a "chemical condom" would result in increased risk taking behavior among high risk HIV (-) people. Also, the CDC/US Public Health Service (MMWR, September 25, 1998) recommen-

dations that regimens of multiple antiretrovirals be used for a month's duration, plus the lack of significant publicity about PEP, may be responsible for the relatively small number of people utilizing this yet unproven prevention strategy.

## • Fenway's Experience

Over the past year, at the Fenway Community Health Center where more than 1,000 HIV (+) men and women receive primary care in Boston, we have tracked the utilization of non-occupational PEP and have had the following observations:

1. PEP utilization is, albeit slowly, increasing from one or fewer calls per week to more than one a week.
2. Most of the exposures involve high-risk activities, e.g. unprotected anal or vaginal intercourse, but only about 1/3 of the exposures were with partners known to be HIV infected. Of almost 50 requests for PEP, almost 30% were due to lower risk exposures (e.g. semen in the eye with a partner of unknown serostatus).
3. The vast majority of people who receive PEP (usually AZT+3TC +Indinavir or Nelfinavir) reported side effects (usually nausea, myalgias, fatigue, insomnia, diarrhea) but were able to complete a one-month regimen.
4. The majority of participants come back for follow-up at 3 and 7 months, and there have been no new infections thus far.
5. Much of the cost of this expensive intervention was due to the need for on-going supportive counseling services for the men and women who presented

for PEP, including triage because of domestic trauma, sexual assault, +/- on-going substance use. Despite this triage, almost 10% of the cohort presented for a repeat course of PEP within one year.

## • Messages

The "take home" messages from the Fenway Community Health Center and that of other programs like the San Francisco Health Department, regarding non-occupational PEP are:

1. There is a growing awareness among men and women engaging in high-risk behavior that PEP may help prevent an exposure from resulting in an infection. The Fenway did not advertise its program, so contacts with the center were via provider triage or word of mouth.
2. The need for these programs will grow over time until we have an effective vaccine and/or microbicide.
3. Many of the persons who access PEP will need to be referred to competent mental health professionals, because:
  - a. They have sustained a traumatic experience, e.g. sexual assault.
  - b. They are overly anxious, and do not need PEP, but rather need to deal with their guilt about what they perceive so risky.
  - c. They are likely to use PEP as an excuse to avoid

modifying recurrent risk-taking behaviors.

In the correctional setting, other questions will emerge such as the feasibility of prompt access, the ability to maintain confidentiality, and the net effect on risk taking behavior among incarcerated individuals. These need to be assessed. While it is unlikely that the efficacy of non-occupational PEP will ever be able to be studied in a controlled environment, it seems likely that its utilization will grow as part of the increasing array of responses to prevent HIV transmission.

\*Kenneth H. Mayer, M.D.,  
Grant Research/Support:  
Triangel, Roche, Immune Response Corp.  
Speaker's Bureau:  
Agouron, Bristol Myers Squibb, Glaxo Wellcome

*Despite the prohibition of sexual activity in correctional facilities, the occurrence of HIV exposure due to sexual contact makes PEP a relevant topic for correctional health care.*

*Many providers have been concerned that knowledge of the existence of a "morning after" pill, or a "chemical condom" would result in increased risk taking behavior among high risk HIV (-) people.*

## Conference Updates . . . . .

**AIDS Pathogenesis Meeting . . . . January 7-13, 1999****ACA Winter Conference . . . . January 16-21, 1999****AIDS Pathogenesis Meeting****Keystone, CO****January 7-13, 1999**

...was the bucolic setting for the HIV Vaccine Development: Opportunities and Challenges and AIDS Pathogenesis meetings from January 7-13, 1999.

Five hundred scientists and researchers attending the joint symposia heard the keynote address given by Dr. Robert Gallo, Institute of Human Virology, University of Maryland. Gallo hit the highlights of AIDS research performed or published in the past year, noting the work of Wayne Hendrickson and Joe Sodroski, who determined the crystal structure of the HIV-1 protein gp 120 complexed with a fragment of human CD4. Gallo summarized the dynamic cellular interaction that occurs during the entry of human immunodeficiency virus (HIV) into CD4+ T cells. He speculated that drugs that interfered with one of the three key components of viral entry (gp120, CD4, and the chemokine receptor) would have a significant impact on the control of HIV disease in the near future. Expanding on this theme, Dr. Peter Kim of the Whitehead Institute, Cambridge, MA, presented his model of viral entry. Binding of HIV-1 gp120 to CD4 of the target cell membrane results in a quick molecular rearrangement that facilitates subsequent binding of gp120 to the appropriate chemokine receptor. It is clear that understanding of the mechanisms of HIV entry into cells is useful in employing strategies for blocking viral infection at a cellular level. One such strategy developed by Jack Nunberg, et al from Montana Biotechnology Center, University of Montana, proposes that the conformational changes which occur during binding and fusion may expose "critical targets," that are not otherwise available to the immune system, to prime antibodies capable of neutralizing the virus. Nunberg showed that anti sera raised against these targets are active against many different HIV-1 strains. These new findings suggest that the virus may have an "Achilles heel" vulnerable to attack by preventive and therapeutic vaccines.

In other news, Doug Nixon of the Aaron Diamond AIDS Research Center in New York City described the relationship between broad immune responses to HIV and control of infection. He reported on 12 patients who were given extremely early (within 120 days of HIV infection) Highly Active Antiretroviral Therapy (HAART). This relatively small clinical trial suggested that extremely early initiation of HAART may disarm the natural immune response to HIV by limiting the immune system's exposure to the virus. In this study, patients who had broad immune responses to HIV (as measured using the new tetramer assay) appeared to have better control of their HIV infection. Dr. Nixon concluded that broad immune responses appeared to be related to better control of HIV infection, that early initiation of HAART may limit the amount of immune system training that appears to occur during the early phase of HIV infection, and he suggested that post-

HAART therapeutic vaccination may be one "safe" way to broaden the immune system's repertoire of weapons against HIV. These hypotheses are under study.

During one of the final talks of the meeting, Neal Nathanson, the new Director of the Office of AIDS Research, emphasized the broad theme of the conference by stating that a broad understanding of HIV immunopathogenesis was required to develop the "broad" range of weapons we will need to combat HIV infection and disease. He warned researchers against adopting a "holy grail" approach to the search for new treatments and vaccines. He suggested that we keep in mind that we may need multiple barriers to HIV infection and to prevent development of disease. He was extremely optimistic about the prospects for HIV vaccine development, stating that prospects for the development of a polio vaccine, in the 1940's, were equally bleak as the prospects for developing an AIDS vaccine appear to be at present.

While most speakers agreed with the keynote speakers at the joint Vaccines and Immunopathogenesis meetings that combination antiretroviral therapies have led to major advances in the clinical care of AIDS patients, many speakers stated that adherence, availability, resistance, and cost are still major obstacles in HIV treatment. There was consensus among this group that the desired approach was to further integrate the latest knowledge about HIV pathogenesis into vaccine development with the ultimate objective to prevent or control HIV infection through immunologic intervention.

*contributed by Judy George and Anne DeGroot*

**ACA Winter Conference****Nashville, TN****January 16-21, 1999**

The American Correctional Association held its annual Winter Conference January 16-21, 1999 at the Opryland Hotel and Conference Center in Nashville, where Newton Kendig, M.D., Chief of Infectious Disease for the Federal Bureau of Prisons and John Miles, Special Projects Manager for Corrections and Substance Abuse Activities at the Centers for Disease Control, spoke on managing infectious disease.

Kendig discussed exposure risks for HIV, Hepatitis B and Tuberculosis among corrections officers and other staff and recommended post-exposure prophylaxis in high-risk scenarios and precautions, such as barrier protection.

Miles discussed the correlation between substance abuse and infectious disease among inmates and, in particular, described the need to view disease management in prisons as a public health duty. He recommended collaborations with public entities and community organizations to help direct inmates to treatment once they are released from prison and pre-release and discharge planning in facilities.

*contributed by Michelle Gaseau*

# Save The Dates . . . . .

**1999 National Conference on African-Americans and AIDS**

*February 25-26, 1999*

Sponsored by: Rollins School of Public Health of Emory University, the Johns Hopkins medical institutions and the Institute of Human Virology at the University of Maryland. Financial support is from Bristol-Myers Squibb.

Renaissance Washington DC Hotel

Contact: Ms. Mary Hess,  
Senior Territory Manager, Bristol-Myers-Squibb Immunology  
tel: 410.995.0599  
fax: 410.995.0610  
voice mail: 800.492.7016, ext. 1340

**Improving the Management of HIV Disease**

*February 20, 1999 Los Angeles, CA*

*March 6, 1999 Boston, MA*

*March 24, 1999 New York, NY*

*April 21, 1999 Chicago, IL*

This course, sponsored by International AIDS Society-USA (IASUSA), reviews the most recent development in the field of HIV disease pathogenesis and antiretroviral management. Expert faculty will speak on timely and clinically relevant issues in the management of HIV disease.

Contact: IASUSA  
1001 B O'Reilly Ave  
PO Box 29916  
San Francisco, CA 94129-0916  
tel: 415.561.6720  
fax: 415. 561.6740  
e-mail: info@iasusa.org  
website: www.iasusa.org

**HIV in Prisons Conference**

*Thursday, February 25, 1999 - from 9:00am to 4:00pm.*

One of a series of conferences targeted to service providers in New York. Topics include HIV therapies in prison and in discharge planning, the former inmate and barriers to HIV treatment, and policy considerations. Speakers will be Harry Schuman, MD, medical director at Rikers, Steven Nesselroth from Osborne, and Liz Mastroieni from AIDS Counseling and Education at Bedford Hills Correctional Facility.

Contact: Carlos Arboleda  
fax: 212.367.1528

**American Correctional Health Services Association 1999 Training Conference**

*March 11-14, 1999*

Sheraton Gateway  
Atlanta, GA

Contact: ACHSA  
PO Box 10  
Glenn Dale, MD 20769  
website: www.corrections.com/achsa

**11th National HIV/AIDS Update Conference: Partnering Science and Practice**

*March 23-26, 1999*

Sponsored by: AmFar (www.nauc.org)  
Bill Graham Civic Auditorium  
San Francisco, CA  
Contact: KREBS Convention Management Services  
tel: 415.920.7000  
fax: 415.920.7001  
e-mail: krebsconv@aol.com  
website: www.citysearch.com/sfo/krebs

**1999 Community Planning Leadership Summit for HIV Prevention**

*March 24-27, 1999*

Sponsored by: AED, CDC, NASTAD, NMAC  
Pittsburgh Hilton & Towers, Pittsburgh PA  
Contact: Harry Williams at NMAC  
tel: 202.483.6622  
fax: 202.483.1127

**Bureau of Justice Assistance (BJA): National Partnership Meeting**

*April 6-8, 1999 Washington DC*

Contact: National Criminal Justice Association  
444 N. Capitol Street, Suite 618  
Washington, DC 20001  
tel: 202.624.1440  
website: http://www.sso.org/ncja

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- Yes, I would like to order the following back issues (please include volume/HIV Internet Resources).

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TITLE: \_\_\_\_\_

FACILITY: \_\_\_\_\_ (Optional) # of Inmates: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

FAX: \_\_\_\_\_ PHONE: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

### Self-Assessment Test for Continuing Medical Education Credit

Brown University School of Medicine 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 April 15, 1999. The estimated time for completion of this activity is one hour and there is no fee for participation in this activity.

1. The first step in the initial management of a potential HIV exposure is to:

- A) administer an initial start dose of medication
- B) evaluate the serostatus of the exposed individual
- C) wash contact sites with water and either soap or saline, depending on site
- D) administer HBV vaccine booster
- E) do not treat

2a. Each year, more deaths result from HIV acquired on the job than from complications of occupationally acquired HBV. TRUE or FALSE?

2b. The risk of transmission following a percutaneous exposure to HCV is estimated to be roughly 100 times that of a percutaneous exposure to HIV. TRUE or FALSE?

3. The risk for transmission of HIV is increased in cases involving the following:

- A) deep injuries
- B) injuries with large, gauge, hollow, bore needles
- C) injuries caused by devices visibly contaminated with the patient's blood or used directly in the source's artery or vein
- D) exposure to blood with a high titer of HIV (as in late stage AIDS).
- E) all of the above

4. Federal and state OSHA regulations require that correctional BBS exposure control programs include which of the following:

- A) training of all at risk employees
- B) provision of free Hepatitis B vaccination to staff
- C) provision of personal protective equipment and devices
- D) provision of free post exposure care

- E) documentation of exposures
- F) regular evaluation for compliance
- G) all of the above

5. Of almost 50 requests for PEP over the past year at the Fenway Community Health Center, approximately how many were due to lower risk exposures?

- A) 50
- B) 30
- C) 25
- D) 15
- E) 0

6. For which of the following components of PEP protocol did Dr. Spaulding and Dr. Wohl describe different responses?

- A) evaluation of HBV
- B) drug regimen
- C) follow-up HIV testing at 6 months
- D) an initial start dose at 1 hour

#### HEPP News Evaluation

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

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case study	5 4 3 2 1	5 4 3 2 1
HEPPigram	5 4 3 2 1	5 4 3 2 1
updates	5 4 3 2 1	5 4 3 2 1
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