

2005

# IDCR: Infectious Diseases in Corrections Report, Vol. 8 No. 8

Infectious Diseases in Corrections

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#### 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](http://www.corrdocs.org)).

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## INFECTION CONTROL IN THE CORRECTIONAL SETTING

By Joseph Bick\*, MD, CCHP

**DISCLOSURES:** \*Nothing to disclose

The crowded conditions that exist in most jails and prisons create an ideal environment for the transmission of contagious diseases. Limited availability of clean laundry, soap and water increase the probability that infectious diseases will be transmitted from one person to another. Furthermore, the transient status of inmates who are frequently moved from one location to another can complicate the diagnosis of infection, recognition of an outbreak, interruption of transmission, performance of a contact investigation and eradication of disease.

Many correctional facilities have inadequate information technology, and the linkages between different jurisdictions and agencies responsible for the care of inmates are often poor. Published guidelines for prevention, diagnosis and treatment of communicable diseases are not always readily applicable to the correctional setting.

This article is the second in a two-part series, the first of which appeared in the IDCR July/August 2004 issue.<sup>1</sup> This article will address the following correctional infection control topics: gloves and hand washing, food handling hygiene, keeping food safe during an emergency, ice machines, vending machines, housekeeping and infectious waste. The July/August 2004 issue reviewed the infection control committee, personal protective equipment, blood borne pathogen exposures, post-exposure prophylaxis (PEP), standard precautions and isolation concepts, culinary services, food handlers, laundry and barbering.<sup>1</sup>

Careful attention to the infection control measures discussed in this article will benefit the health of inmates, those who interact with them during their incarceration and the public health at large.

#### Gloves and Hand Washing

Gloves should be worn when one is likely to

have contact with blood, other potentially infectious materials, mucous membranes, non-intact skin, or when touching contaminated surfaces.<sup>2</sup> The appropriate use of gloves and handwashing can reduce the risk of acquiring infections from patients and decrease the transmission of organisms from employees to patients.<sup>3</sup> Inmates should also be educated about the health benefits of frequent hand washing. Staff should be educated that gloves do not provide complete protection, due to defects in gloves and contamination during glove removal.<sup>4,5,6</sup>

The proper selection of glove depends upon the job being performed. Types of gloves include:

**Utility gloves:** These thick gloves are used while handling and cleaning potentially infectious wastes and can be decontaminated for re-use if still intact. Utility gloves may provide an extra measure of protection from sharps injury during cell searches.

**Examination gloves:** These gloves are used during procedures such as bathing patients, handling contaminated linen and other procedures during which contact with body fluids is likely. These gloves are to be disposed of after single use.

**Sterile or surgical gloves:** These gloves are used for procedures that involve contact with a patient's organs or open tissues and should be disposed of after single use.

Hands should be washed or decontaminated after gloves are removed.<sup>7</sup> Health care staff should be reminded that failure to remove

*Continued on page 2*

#### WHAT'S INSIDE

IDCR-o-gram .....	pg 5
ID 101 .....	pg 6
In The News .....	pg 8
Self-Assessment Test .....	pg 9

## INFECTION CONTROL...

(continued from page 1)

gloves between patients might lead to transmission of organisms.<sup>8</sup> Wearing rings and artificial nails leads to an increase in bacterial colonization of the hands, although it is not clear whether this leads to an increased rate of transmission of organisms.<sup>9,10</sup> Even after careful hand washing, a significant number of pathogenic bacteria can be found under fingernails.<sup>11</sup>

Many jails and prisons lack adequate facilities for hand washing with soap and water. Studies have demonstrated that alcohol based hand cleansers can be more effective than soap and water in reducing bacterial counts on hands. These cleansers are available as foams, gels, and liquids. Although these products are flammable, they have been approved for use in hospital settings. If used in a correctional setting<sup>7</sup>, policies should be in place to minimize the potential for misuse of these products by inmates.

As the use of gloves by health care staff has increased, an increasing prevalence of latex sensitivity has been documented. Many officers in the correctional setting wear gloves throughout much of their assigned shift. As a result, the frequency of latex sensitivity among custody staff is likely to increase. Latex gloves with reduced protein contents and non-latex gloves are now available for use by latex-sensitive employees. Additionally, the use of non-latex gloves may help prevent latex-sensitivity from developing. Hence, the use of latex gloves should be minimized to only those applications where they are essential. Gloves should be readily available and staff should be encouraged to carry gloves with them at all times.<sup>1</sup>

### Culinary Services and Food Handlers

Persons involved in the preparation and serving of food have commonly been implicated in food borne outbreaks.<sup>12,13</sup> To minimize this risk, each correctional facility should have policies and procedures in place that encompass the basic infection control aspects of culinary services. Facilities should also have procedures for medical clearance of food handlers.

### Keeping Food Safe During an Emergency

Power outages and floods can compromise the quality and safety of stored foods. It is important to have policies in place that provide guidance for what to do in emergency situations.<sup>14</sup> In the event of a power outage, the refrigerator and freezer doors should be kept closed as much as possible to maintain the cold temperature. Unopened, a refrigerator can keep food safely cold for up to four hours. If the freezer doors are left closed, a full freezer can hold the temperature for approximately 48 hours. Foodstuffs that do not require refrigeration or cooking should be kept available for emergencies.

**Table 1: Important Concepts of Food Handling Hygiene**

<b>Food initial inspection</b>	Upon receipt, all food should be inspected for spoilage and rodent or insect infestation. Observe for broken packages or swollen cans.
<b>Food storage</b>	Food should be stored in a manner that will decrease the likelihood of contamination and infestation.
<b>Location</b>	Food should be stored above the level of the floor and away from walls.
<b>Temperature</b>	Bacteria multiply rapidly at temperatures above 40°F. Always keep meat, poultry, fish, dairy products and eggs refrigerated at or below 40°F and frozen food at or below 0°F. A record should be maintained of all refrigerator and freezer temperatures.
<b>Food preparation</b>	At time of preparation, re-inspect food as above during initial inspection.
<b>Washing</b>	Raw unprocessed fruits and vegetables should be thoroughly washed under clean running water
<b>Handling and Processing</b>	All workers should wear gloves when handling food. Use different sinks, counters, knives, utensils and cutting boards for raw/uncooked meats and for fruits/vegetables. Food handlers should remove gloves, thoroughly wash hands with hot soapy water and put on a clean pair of gloves when moving from uncooked meats to fruits and vegetables and also when moving from uncooked meats to cooked meats.
<b>Cooking</b>	Use a food thermometer to check the internal temperature of meat, poultry and other food. Check temperature in several places to be sure the food is evenly heated. Fresh poultry (chicken, turkey) is to be cooked until it reaches an internal temperature of at least 180°F. Ground chicken and turkey are to be cooked until they reach an internal temperature of at least 165°F. Fresh or ground beef, fresh or ground pork, eggs and egg dishes are to be cooked until they reach an internal temperature of at least 160°F.
<b>Food service</b>	<ul style="list-style-type: none"> <li>◆ Food should be served with clean serving instruments</li> <li>◆ Servers should wear clean gloves while serving food and should avoid direct skin contact with food</li> <li>◆ Steam tables should maintain hot food at a temperature of at least 140°F</li> <li>◆ Cold food should be maintained at a temperature of 45°F or lower</li> </ul>
<b>Dishwashing</b>	<ul style="list-style-type: none"> <li>◆ Loading dirty dishes and emptying clean ones from the dishwasher should either be done by different staff, or employees should wash hands and put on a clean apron when moving from one job to the other</li> <li>◆ Food grinders, choppers and mixers should be cleaned, sanitized and dried between uses</li> <li>◆ The dishwasher should be drained and flushed after each use</li> <li>◆ Water in the dishwasher should be at least 150°F; the final rinse should reach 180°F</li> </ul>
<b>Kitchen and dining hall cleaning</b>	All surfaces should be cleaned and sanitized at least daily.
<b>Outbreak investigation</b>	To facilitate the investigation of an outbreak of food borne illness, a portion of each meal should be refrigerated and saved for 48-72 hours.

Table 1 outlines some of the most important concepts of food handling hygiene. Adherence to these guidelines will decrease the likelihood of food borne outbreaks in institutional congregate living environments.

Continued on page 3

**INFECTION CONTROL... (continued from page 2)**

To avoid contamination by floodwaters and sewer back-ups, all food should be stored on shelves that are safely above floor level. In the event of a flood, all foods that came into contact with water should be discarded, including canned goods, because surfaces have been contaminated by floodwaters.

A thermometer should be kept in all refrigerators and freezers at all times. If refrigerated food rises to a temperature greater than 40°F, it should be discarded. Exceptions include butter, margarine, fresh fruits, raw vegetables, bread, cookies, pasta, peanut butter, jelly, relish, hot sauce, barbecue sauce, soy sauce, mustard, catsup and oil and vinegar salad dressings. If frozen food fully thaws, it should be immediately cooked or discarded rather than refrozen. If frozen meats, cheeses, fruits, vegetables or bread products still contain ice crystals and feel as cold as if refrigerated, they can be safely refrozen.

**Ice and Vending Machines**

Outbreaks of illness and colonization have been linked to ice machines.<sup>15,16</sup> To decrease the chance of contamination, the outside of ice machines should be cleaned and sanitized daily, and the inside cleaned and sanitized at least monthly. On a quarterly basis, the inside of machines should be cultured for bacteria. Nothing should be stored in the ice; scoops should be stored on a clean dry surface and regularly cleaned and disinfected. Vending machines should be maintained by according to the manufacturers specifications for hygiene and temperature. See this month's ID 101 for more information on cleaning ice and vending machines.

**Housekeeping and Infectious Waste**

Each facility should have clearly defined policies and procedures for the performance of housekeeping duties.<sup>14</sup> Surfaces such as examination tables, bed frames, counters, floors, walls, sinks and wastebaskets that may be contaminated with blood or other body fluids should be cleaned on a regular basis. Persons involved in cleaning should wear sturdy gloves to protect themselves from potential exposures. Procedures should describe which cleaning agent and technique should be used. There have been no reports of waste from correctional facilities causing disease in the surrounding community. There are no data to suggest that waste from jails or prisons is more hazardous than that produced in the community, or requires any special handling.<sup>14</sup>

Regulated waste refers to materials such as blood, any visibly bloody fluid, or other potentially infectious materials (OPIM) such as pleural fluid, peritoneal fluid, cerebrospinal fluid, semen and vaginal secretions. Regulated waste also includes contaminated sharps, surgical waste such as body tissues, materials that are saturated with dried blood or OPIMs, and dressings, towels or bandages from which blood or OPIMs can be expressed by squeezing. Regulated waste must be disposed of by being placed in containers that can be closed, are leak proof and puncture proof, are designed for safe transportation and are labeled or color coded (i.e. red bags.)<sup>14</sup>

Spills of blood or other potentially infectious materials should be cleaned by trained staff, utilizing an approved sanitizing agent such as a solution of one part bleach to 10 parts water. During the cleaning of contaminated spills, appropriate personal protective equipment (PPE) should be worn.<sup>14</sup>

Correctional health care professionals can play an important role in the prevention, diagnosis and treatment of infectious diseases among prisoners and correctional employees. A well-planned infection control program will benefit the health of inmates, those who interact with them during their incarcerations and the public health at large.

**Recommended Resources and Readings**

- ♦ **The American Medical Association**  
[www.ama-assn.org/go/foodborne](http://www.ama-assn.org/go/foodborne)
- ♦ **Centers for Disease Control and Prevention**  
[www.cdc.gov/foodsafety/cme.htm](http://www.cdc.gov/foodsafety/cme.htm)
- ♦ **Center for Food Safety and Applied Nutrition, Food and Drug Administration**  
[www.cfsan.fda.gov](http://www.cfsan.fda.gov)
- ♦ **Food Safety and Inspection Service, US Department of Agriculture**  
[www.fsis.usda.gov](http://www.fsis.usda.gov)

**Footnotes:**

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4. Reingold AL, Kane MA, Hightower AW. Failure of gloves and other protective devices to prevent transmission of hepatitis B virus to oral surgeons. *JAMA*. 1988; 259:2558-60
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8. Larson EL, APIC Guidelines Committee. APIC guideline for hand washing and hand antisepsis in health care settings. *Am J Infect Control*. 1995; 23:251-69

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15. Ravn P, Lundgren JD, Kjaeldgaard P, et al. Nosocomial Outbreak of Cryptosporidiosis in AIDS Patients. *Br Med J*. 1991; 302: 277-80.
16. Gebo KA, Srinivasan A, Perl TM, Ross T, Groth A, Merz WG. Pseudo-outbreak of *Mycobacterium fortuitum* on a Human Immunodeficiency Virus Ward: transient respiratory tract colonization from a contaminated ice machine. *Clin Infect Dis*. 2002; 35(1):32-8.

## LETTER FROM THE EDITOR

Dear Colleagues,

Correctional health care is back in the news this month. Last month, the California prison system went into receivership over concerns about HIV care.<sup>1</sup> This month, the Limestone prison in Alabama was on the front page of the New York Times, due to alleged malfeasance by a well-known managed care company.<sup>2</sup>

The lesson? An old one. The only acceptable standard of care in correctional health is the same standard that exists outside of prison and jail walls, per the 8th amendment, which prohibits actions that are incompatible with "the evolving standards of decency that mark the progress of a maturing society."<sup>3</sup> Under these principles the Supreme Court has interpreted the 8th Amendment to include medical treatment, based on the fact that denying medical care would result in unnecessary suffering that could serve no penological purpose. The current test for an 8th Amendment violation is whether correctional staff members have shown deliberate indifference to an inmate's serious medical needs.

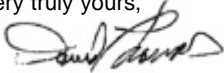
IDCR has stood by that standard for eight years of publication. Our mission has always been to provide the tools and resources that correctional health providers need to improve the standard of medical care in correctional settings. Furthermore, we do not believe that poor health care is inextricably linked with incarceration. Instead, we can point to a number of examples of medical care excellence within prison and jail walls, and a host of excellent correctional care providers. Poor care in prison is not "inevitable", by any means.

The California and Alabama cases recall two almost rhetorical questions that are repeated every time a correctional facility hits the news: (1) When will states recognize the importance of proper levels of funding for the programs that provide medical services to the inmates under their care, and (2) when will the government establish a set of standards below which no correctional facility would be allowed to fall?

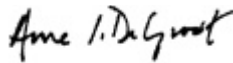
And so we continue our important mission of providing you what you want - and more importantly - what you need, in the area of infectious diseases within corrections. To that end, this month, Dr. Joseph Bick presents the second of a two-part series on infection control in corrections.

The editors are committed to continually supplying the essentials of correctional infectious disease care and we challenge each of you to personally adopt the material laid out in this issue and have the entire staff (medical, correctional, administrative and inmate) of your facility practice it.

Very truly yours,



D. Thomas, MD, JD



Annie De Groot, MD

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2. von Zielbauer, P. *New York Times*. Accessed August 5, 2005 from <http://query.nytimes.com/gst/health/article-page.html?res=9503E3DC1E3FF932A3575BC0A9639C8B63>

3. *Estelle v. Gamble*, 429 U.S. 97, 105 (1976).

### 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.

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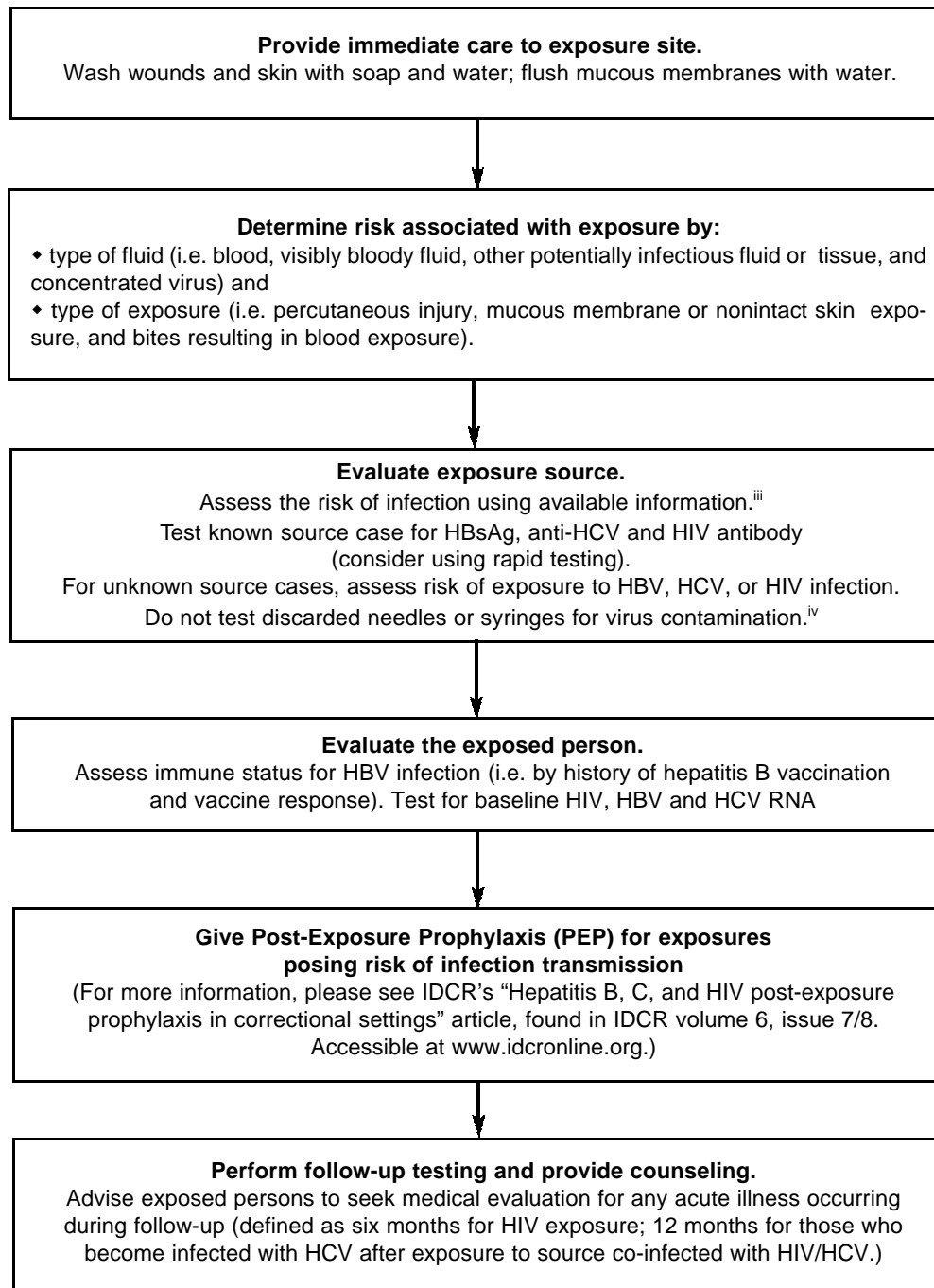
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## IDCR-O-GRAM: Management of Occupational Exposures<sup>i</sup> to Blood or Body Fluids<sup>ii</sup>



1. CDC. Updated U.S. public health service guidelines for the management of occupational exposures to HBV, HCV and HIV and recommendations for postexposure prophylaxis. MMWR. 2001; 50(RR11):1-42.

2. CDC. Appendix B. Management of occupational blood exposures. MMWR. 2001; 50(RR11):45-6.

### References:

*i* An exposure is defined as a percutaneous injury (i.e., a needlestick or cut with a sharp object) or contact of mucous membrane or nonintact skin (i.e., exposed skin that is chapped, abraded, or afflicted with dermatitis) with blood, tissue, or other body fluids that are potentially infectious.

*ii* Semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, peritoneal fluid, pericardial fluid and amniotic fluid are all considered potentially infectious. Feces, nasal secretions, saliva, sputum, sweat, tears, urine and vomit are not considered potentially infectious unless they contain blood.

*iii* Laboratory information (i.e. previous HBV, HCV, or HIV test results or results of immunologic testing [i.e. CD4+ T-cell count]), liver enzymes (i.e. ALT), clinical symptoms (i.e. acute syndrome suggestive of primary HIV infection or undiagnosed immunodeficiency disease) and history of recent (i.e. within 3 months) possible HBV, HCV, or HIV exposures (i.e. injection-drug use or sexual contact with a known positive partner).

*iv* The reliability and interpretation of findings in such circumstances are unknown, and testing might be hazardous to persons handling the sharp instrument.

## Elements of Hand Washing

### Rationale for Hand Hygiene

- ♦ Risks of transmission of microorganisms to patients
- ♦ Risks of health care worker colonization or infection caused by organisms acquired from the patient
- ♦ Morbidity, mortality and costs associated with health care-associated infections

### Indications for Hand Washing

- ♦ Contact with a patient's skin (i.e. taking a pulse or blood pressure, performing physical examinations, lifting the patient in bed)
- ♦ Contact with environmental surfaces in the immediate vicinity of patients
- ♦ After glove removal

### Indications for, and Limitations of, Glove Use

- ♦ Hand contamination may occur as a result of small, undetected holes in examination gloves
- ♦ Contamination may occur during glove removal
- ♦ Wearing gloves does not replace the need for hand washing
- ♦ Failure to remove gloves after caring for a patient may lead to transmission of microorganisms from one patient to another

*Adapted from CDC. Guideline for hand hygiene in health-care settings. MMWR. 2002; 51(RR16):1-44.*

## General Steps for Cleaning Ice Machines, Dispensers, Storage Chests

1. Disconnect unit from power supply
2. Remove and discard ice from bin/storage chest
3. Allow unit to warm to room temperature
4. Disassemble removable parts of machine that make contact with water to make ice
5. Thoroughly clean machine and parts with water and detergent
6. Dry external surfaces of removable parts before reassembling
7. Check for any needed repair
8. Replace feeder lines as appropriate (i.e. damaged, old, difficult to clean)
9. Ensure presence of an air space in tubing leading from water inlet into water distribution system of machine
10. Inspect for rodent/insect infestations under the unit and treat as needed
11. Check door gaskets for evidence of leakage/dripping into storage chest
12. Clean the ice/storage chest or bin with fresh water and detergent, then rinse with fresh tap water
13. Sanitize machine by circulating a 50-100 parts per million (ppm) solution of sodium hypochlorite\* through the ice-making and storage systems for two hours (100 ppm solution) or four hours (50 ppm solution)
14. Drain sodium hypochlorite solution and flush with fresh tap water; allow all surfaces of equipment to dry before returning to service

*Table adapted from: CDC. Guidelines for environmental infection control in health care facilities. MMWR. 2003; 52(RR10):1-42.*

\* Sodium hypochlorite is a solution containing 10% bleach. To make a 50-100 ppm sodium hypochlorite solution, mix 0.5cc regular bleach with 25 gallons of water, which is the approximate amount needed to clean one ice machine.

## SAVE THE DATES

**Centerforce Inside-Out Summit**  
September 10-13, 2005  
San Francisco, CA  
Visit: [www.centerforce.org/summit](http://www.centerforce.org/summit)

**ICAAC Meeting**  
September 21-24, 2005  
New Orleans, LA  
Visit: [www.icaac.org](http://www.icaac.org)

**United States Conference on AIDS**  
September 28-October 2, 2005  
Houston, TX  
Visit: [www.nmac.org](http://www.nmac.org)

**IDSA Conference**  
October 6-9, 2005  
San Francisco, CA  
Visit: [www.idsociety.org](http://www.idsociety.org)

**National Conference on Correctional Health Care (NCCHC)**  
October 8-12, 2005  
Denver, CO  
Visit: [www.ncchc.org](http://www.ncchc.org)

**IDCR Pre-Conference Seminar at NCCHC**  
"Infectious Diseases in Corrections: An Integrated Approach"  
October 8, 2005  
Denver, CO  
Visit: [www.ncchc.org](http://www.ncchc.org)

**Society of Correctional Physicians Annual Meeting**  
October 9, 2005  
Denver, CO  
Visit: [www.corrdocs.org](http://www.corrdocs.org)

**"Drug-drug Interactions and Metabolic Complications of HIV"**  
**Satellite Broadcast**  
October 26, 2005  
12:30-2:30pm EST  
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[www.amc.edu/patient/hiv/hivconf/index.htm](http://www.amc.edu/patient/hiv/hivconf/index.htm)

**APHA Meeting and Exposition**  
November 5-9, 2005  
New Orleans, LA  
Visit: [www.apha.org](http://www.apha.org)

**American Association for the Study of Liver Diseases Meeting**  
November 11-15, 2005  
San Francisco, CA  
Visit: [www.aasld.org](http://www.aasld.org)

## NEWS AND LITERATURE REVIEWS

**Errata:** In the IDCR, "An HIV-Infected Inmate with an abnormal Cervical Pap Test" case study, one error occurred. On page five, column one, paragraph three, the last sentence should read "Of note, moderate to severe cervical dysplasia is considered a symptomatic condition of HIV since it may indicate a defect in cell-mediated immunity and has a clinical course that may be complicated by HIV (AIDS surveillance case definition 1993). If the inmate described in the case has cervical intraepithelial neoplasia (CIN) grade 2 or CIN 3 detected on colposcopy, she would meet the case definition for Stage B HIV infection and should then be offered ART." Corrected pdf version available at [www.idconline.org](http://www.idconline.org)  
*CDC. MMWR. 1992; 41:1-9.*

### High Rates of ART Prevalence, Unrecognized Infection Among MSM

During June 2004-April 2005, 2,261 men sampled from five National HIV Behavioral Surveillance (NHBS) cities were surveyed regarding their sexual and drug-use behaviors, HIV testing behavior, and use of HIV prevention services. Of the 2,261 men sampled, 78% had one or more male sex partner; of these, 25% tested positive for HIV. HIV prevalence among African-Americans, Caucasians and Hispanics was 46%, 21% and 17%, respectively. Unrecognized infection was 64%, 18%, 11% and 6% among African-Americans, Hispanics, Caucasians and multiracial persons, respectively.  
*CDC. MMWR. 2005; 54(24):597-601.*

### Induction/Maintenance Redux?

Markowitz, et al. conducted a randomized, 96-week study to determine if a four-drug induction followed by a three-drug maintenance as initial ART therapy reduces HIV RNA rapidly, while allowing patients to later switch to a more simplified, effective and tolerable regimen. During the 48-week induction period, 448 patients were treated with one fixed-dose tablet of ABC (300mg)/3TC (150mg)/ZDV (300mg) twice daily plus EFV (600mg) once daily. After the induction phase, study participants were randomized to continue 4-drug therapy or discontinue EFV. At 96 weeks, no significant differences were noted for an HIV RNA level <50 copies/mL. Drug-related adverse events were more commonly reported for 4-drug therapy than for ABC/3TC/ZDV and a greater proportion of patients receiving ABC/3TC/ZDV than 4-drug therapy reported perfect adherence. Study authors concluded that after induction with ABC/3TC/ZDV plus EFV, simplification to ABC/3TC/ZDV alone maintained virologic control, reduced ART-associated adverse events and improved adherence.  
*Markowitz, et al. JAIDS. 2005; 39(3):257-64.*

### Moderate, But Climbing, Rates of ART Resistance in ART-Naive Patients

Kaplan-Meier estimation was used in analysis of data from the UK Collaborative HIV Cohort (UK CHIC) study to assess the proportion of patients who experience viral load failure, defined as two consecutive viral load values >1,000 copies/mL at least six months after ART initiation, or one

value followed by the initiation of at least one new drug, by a given time. By Kaplan-Meier estimation, viral load failure occurs in 21%, 30%, and 38% of patients by two, four, and six years after ART initiation, respectively. Kaplan-Meier estimates of the percentage of patients demonstrating at least one resistance mutation two, four, and six years after ART initiation was 9%, 19%, and 27%, respectively. Factors associated with a greater risk of resistance mutations included younger age, unknown HIV exposure, viral load greater than 100,000 copies/mL at ART initiation, and CD4 cell count less than 200 cells/mm<sup>3</sup> at ART initiation.

*Phillips, A. AIDS. 2005; 19(5):487-94.*

### Tipranavir Approved for Treatment-Experienced Patients

Tipranavir was approved by the Food and Drug Administration on June 22, 2005 for treatment-experienced patients. The recommended dose is 500 mg (two 250 mg capsules), co-administered with 200 mg ritonavir, twice daily. Tipranavir should be taken with food; bioavailability is increased with a high fat meal. Consideration should be given to separating tipranavir/ritonavir dosing from antacid administration to prevent reduced absorption of tipranavir. Tipranavir is associated with hepatotoxicity and clinical hepatitis, and is contraindicated in patients with moderate to severe hepatic insufficiency.

*FDA News. (n.d.). Retrieved July 8, 2005 from <http://www.fda.gov/bbs/topics/NEWS/2005/NEW01189.html>*

### New Approval, Old News to AIDS Providers

On July 6, 2005, the Food and Drug Administration approved Megace ES (megestrol acetate), a concentrated oral suspension for the treatment of anorexia, cachexia or unexplained, significant weight loss in AIDS patients. The approval was based on pharmacokinetic studies demonstrating bioequivalence between 625 mg of Megace ES and 800 mg of megestrol acetate oral suspension. Megace ES is taken once-daily at a 625 mg dose.

*Par Pharmaceuticals Featured Products. (n.d.). Retrieved July 14, 2005 from [www.parpharm.com/products/featured\\_product.jsp](http://www.parpharm.com/products/featured_product.jsp)*

### Clinicians Should Monitor for Nephrotoxicity in TDF-Treated Patients

Tenofovir disoproxil fumarate (TDF), a nucleoside reverse transcriptase inhibitor (NRTI) approved for the treatment of HIV disease, may cause nephrotoxicity in TDF-treated patients with prolonged use, particularly in patients with advanced HIV disease, diabetes, or decreased renal function at baseline. While TDF has not been associated with nephrotoxicity in clinical trials, adefovir dipivoxil, a related NRTI, has caused proximal renal tubular dysfunction at a dosage of 60-120 mg/day. Clinicians should assess renal function prior to initiating TDF therapy and continue to monitor renal function in all TDF-treated patients.  
*Gallant J, et al. Clin Infect Dis. 2005; 40: 1194-98.*

*Continued on page 8*



## NEWS AND LITERATURE REVIEWS *(continued from page 7)*

### Risk Factors for TDF-Induced Nephrotoxicity

Antoniou, et al conducted a retrospective study of 172 HIV-infected ARV treatment-experienced adults to describe the incidence and potential risk factors for TDF-associated nephrotoxicity. Baseline viral load, serum creatinine (SCr) and creatinine clearance (CrCl) were 374 log<sub>10</sub> copies/ml, 81.5mmol/L and 101ml/min, respectively. During follow-up, 4% of patients developed grade 1 increases in SCr, no patient developed grade 2 or higher nephrotoxicity and 8.7% of patients had a 1.5-fold or greater increase in SCr relative to baseline. The median SCr at baseline among patients who had a 1.5-fold increase in SCr was significantly lower than that of patients who did not (62µmol/L vs 82µmol/L). The median CrCl at baseline among patients with a 1.5-fold increase was significantly higher than that of patients without the increase (117mL/min vs 100ml/min.) In univariate analysis, only baseline SCr and baseline CrCl were associated with the development of a 1.5-fold or higher increase in serum SCr relative to baseline. Study authors concluded that while baseline SCr and CrCl were significantly associated with nephrotoxicity, clinically significant nephrotoxicity was rare. Study authors were unclear why the results would suggest that patients with seemingly healthier kidneys at baseline were more predisposed to developing this complication.

*Antoniou T, et al. HIV Medicine. 2005; 6:284-90.*

### HCV and Arthritis - Treat with IFN?

Extrahepatic manifestations associated with HCV, including arthritis, are well known. However, HCV-related arthritis in the absence of clinical, biochemical and histological evidence of liver disease is not common. Abbasi, et al reported on a patient with a history of an abrupt onset of bilateral painful swelling of small joints in the hands, elbows, knees and ankle joints, which had persisted for four weeks. Swelling decreased significantly within two weeks after initiation of 300 mu interferon alfa 2b three times weekly. Swelling disappeared completely after six weeks of IFN therapy and HCV RNA titers were undetectable at six months. Study authors concluded that this extrahepatic condition may have been the direct result of HCV infection.

*Abbasi J, et al. Med Sci Monit. 2005; 11(7):37-9.*

### Cultural Competence: Applied to Corrections

While the United States has witnessed dramatic improvements in sciences and technologies in HIV medicine, disparities in access to care persist among ethnic, racial and gender minority populations.

To this end, the National HIV Advisory Council on HIV Health Disparities convened on June 23-25 in San Juan, Puerto Rico in preparation for the Summit on National Guidelines for Culturally and Linguistically Appropriate Healthcare Services in HIV for Ethnic and Gender Minority Communities, which will be held in Washington DC during May 2006. The mission of the Summit Meeting is to create national guidelines for clinical approaches and research, public policy, and prevention and education programs that address disparities in HIV treatment. The Council anticipates the implementation of

these guidelines by clinical and research institutions, funding and public policy agencies, community-based education, prevention, testing and counseling programs, in hopes of supporting the creation of culturally and linguistically appropriate HIV/AIDS services for the ethnic and gender minority populations they serve.

During the three-day event that took place this past June, the Council discussed and evaluated current guidelines and documented evidence on cultural competency and healthcare literacy. Guidelines will be published for three core areas: clinical and research practices, public policy and funding, and community-based education and prevention programs. National and international experts and stakeholders will evaluate these guidelines during the May 2006 Summit and dissemination of the guidelines will begin in fall 2006.

*National HIV Advisory Council on HIV Health Disparities Summit Committee Planning Meeting. San Juan, Puerto Rico. June 23-25, 2005.*

### CA Prison Goes Into Receivership

The California prison health care system recently went into receivership after U.S. District Judge Thelton Henderson of San Francisco ordered that a receiver take control of California's prison health care system and correct what he felt were unacceptable conditions. Henderson's decision came after testimony from medical experts citing that 64 preventable deaths of inmates occur per year in the CA system, while numerous others are injured. Currently, there are 164,000 inmates in California's 33 state prisons and \$1.1 billion is spent per year by the state on prison health care. As of yet, Judge Henderson has not appointed a permanent receiver.

*Sterngold, J. San Francisco Chronicle. Accessed July 3, 2005 from <http://sfgate.com/cgi-bin/article.cgi?file=/c/a/2005/07/01/MNGOCDH-PP71.DTL>*

### HIV Care at Limestone Correctional Facility

The New York Times (NYT) recently reported on alleged inadequate medical care of HIV-infected inmates at the Limestone Correctional Facility, located in Huntsville, Alabama. From 1999 to 2002, 36 male inmates with HIV and AIDS died, prompting inmates to sue and the government to promise change. The local company charged with the medical care of the inmates at Limestone was fired and Prison Health Services (PHS) was hired. PHS then hired Dr. Valda Chijide, an infectious disease specialist, who was suspended after three months of work for reasons PHS would not disclose, after which she quit. PHS has reduced the number of inmate deaths (four during its' two years working at Limestone,) but according to the NYT, there is still much work to be done.

*Von Zielbauer, P. New York Times. Accessed August 5, 2005 from <http://query.nytimes.com/gst/health/article-page.html?res=9503E3DC1E3FF932A3575BC0A9639C8B63>*

## RESOURCES

**CDC. National Center for Environmental Health.** <http://www.cdc.gov/nceh/>

**CDC. Hepatitis B Virus Vaccine Information.** <http://www.cdc.gov/ncidod/diseases/hepatitis/b/factvax.htm>

**CDC. National Institute for Occupational Safety and Health. Latex Allergy Prevention Guide.** <http://www.cdc.gov/niosh/98-113.html>

**University of California San Francisco. National HIV/AIDS Clinicians' Consultation Center.** Current PEP Guidelines. [http://www.ucsf.edu/hivcntr/Clinical\\_Resources/PEPGuidelines.html](http://www.ucsf.edu/hivcntr/Clinical_Resources/PEPGuidelines.html)

**Toll-free HIV Post-Exposure Hotline** 1-888-448-4911 (1-888-HIV-4911)

## SELF-ASSESSMENT TEST FOR CONTINUING MEDICAL EDUCATION CREDIT

Brown Medical School designates this educational activity for one hour in category one 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 January 31, 2006. The estimated time for completion of this activity is one hour and there is no fee for participation.

1. The following statements regarding food handling hygiene are all true except:
  - a. Chicken should be cooked until it reaches a temperature of 180°F.
  - b. Ground chicken should be cooked until it reaches a temperature of 155°F.
  - c. Ground beef should be cooked until it reaches a temperature of 160°F.
  - d. Meat products should be refrigerated at temperatures below 40°F.
  - e. All of the above statements are true
  - f. None of the above statements are true
  
2. Because of the high prevalence rates of infectious diseases within jails and prisons, as compared to the general public, waste from within these institutions is typically more infectious than waste from the general public. True or false?
  - a. True
  - b. False
  
3. When cleaning a blood spill, the following are true:
  - a. Gloves should be worn and then discarded in the nearest waste bin
  - b. Blood spills should be cleaned by the first person available
  - c. Blood spills can be cleaned with bleach
  - d. Masks need not be worn during the clean-up of a blood spill
  - e. All of the above statements are true
  - f. None of the above statements are true
  
4. Place the following statements, regarding ice machine cleaning/maintenance, in the correct order:
  1. Disconnect unit from power supply
  2. Clean machine with water and detergent
  3. Clean machine with bleach and water
  4. Allow unit to warm to room temperature
  5. Remove ice
  - a. 1, 5, 4, 2, 3
  - b. 1, 4, 5, 3, 2
  - c. 1, 4, 5, 2, 3
  - d. 1, 5, 2, 4, 3
  - e. None of the above

5. During a power outage, a full freezer can hold temperature for approximately:
  - a. 10 hours
  - b. 15 hours
  - c. 30 hours
  - d. 45 hours

### 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
In the News	5 4 3 2 1	5 4 3 2 1
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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?

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