

## Medical News

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### CDC Draft Guideline for Hand Hygiene

The CDC recently issued a draft of the "Guideline for Hand Hygiene in Healthcare Settings," and comments in response currently are being reviewed. The final guideline will be published following revisions. The guideline was developed for practitioners who provide care for patients and who are responsible for monitoring and preventing infections in healthcare settings. It is intended to replace the hand-hygiene recommendations in the "CDC Guideline for Handwashing and Hospital Environmental Control, 1985."<sup>1</sup>

The draft guideline is designed to provide healthcare practitioners with a thorough review of evidence dealing with hand washing and hand antisepsis in healthcare settings and specific recommendations to promote improved hand-hygiene practices and to reduce transmission of pathogenic microorganisms to patients and personnel in healthcare settings. "Part I: Review of Scientific Data on Hand Hygiene Practices in Healthcare Settings" provides an historical perspective on hand hygiene and reviews in detail the efficacy of various agents used for hand washing and hand antisepsis and factors affecting adherence of healthcare personnel to recommended hand-hygiene practices. Part I also discusses evidence documenting transmission of pathogens on hands, the relation between hand hygiene and acquisition of healthcare-acquired pathogens, and methods for improving hand hygiene. "Part II: Recommendations" provides consensus recommendations from the Healthcare Infection Control Practices Advisory Committee and other professional societies for the practice of hand hygiene in healthcare settings, including hospitals and ambulatory care, home care, and long-term-care settings.

#### REFERENCE

1. Garner JS, Favero MS. CDC Guideline for handwashing and hospital environmental control, 1985. *Infect Control* 1986;7:231-243.

### CDC Teleconference on Bioterrorism and Epidemiology

The CDC, in collaboration with SHEA, APIC, IDSA and other healthcare organizations, hosted a teleconference on November 16 and 19, 2001, entitled "CDC Responds: Bioterrorism and the Healthcare Epidemiology/Infection Control Team." Faculty included CDC staff James M. Hughes, MD; Julie L. Gerberding, MD, MPH; Lisa D. Rotz, MD; Lynn Steele, MS, CIC; Michele Pearson, MD; and Healthcare Infection Control Advisory Committee Chair, Robert A. Weinstein, MD.

The program presented an update of the events related to bioterrorism, including a summary of the current

investigation and an overview of practical preparedness guidance for the healthcare epidemiology team. Also included was a discussion of clinical syndromes for which surveillance should be heightened to identify anthrax and smallpox, recommendations for disinfection practices, mail-handling guidance, and other infection control issues.

To order a copy of this broadcast, call the Public Health Foundation at 1-877-252-1200 (US) or 301-645-7773 (International), 9:00 AM-5:00 PM EST, or go to <http://www.phppo.cdc.gov/PHTN>. The CDC has an extensive web site of key documents and news on bioterrorism and disaster preparedness at <http://www.bt.cdc.gov>.

### Anthrax Update and Resources

by Judene Bartley

As of November 23, 2001, the CDC reported 18 confirmed cases of anthrax with 5 deaths; 11 cases were inhalational and 7 were cutaneous. The fifth and most recent death was a 94-year-old Connecticut woman. It still remains a puzzle as to how she came into contact with anthrax. The death of 61-year-old Kathy Nguyen of New York City on October 31 remains a mystery as well, although mail contact remains highest on the list as the possible source of exposure for both cases. The other three inhalational deaths include a 63-year-old photo editor in Florida and two postal workers in Washington, DC, aged 47 and 55. The remaining 6 people who contracted inhalational anthrax are recovering.

The CDC posts updated information on the status of the US anthrax investigation in a special section of their bioterrorism web site, [www.bt.cdc.gov](http://www.bt.cdc.gov). This anthrax section provides updates on the status of the anthrax investigation, information on the agent, case definitions, and advisories for protecting investigators, first responders, and mail handlers. Clinical and laboratory information is also available in the form of fact sheets, slides from recent programs (.pdf format), and links to related sites, including *MMWR* reports on anthrax. The CDC bioterrorism web site also provides a media link that includes daily press releases and transcripts of telephone press briefings.

The CDC's Public Health Training Network provides access to programs on diagnosis, treatment, and patient management at <http://www.phppo.cdc.gov/PHTN>.

### PVC-Containing Devices: FDA Update

The FDA recently released a Consumer Update on the human health exposure risks of di-(2-ethylhexyl)phthalate (DEHP). DEHP is a plasticizer used in many PVC

(polyvinyl chloride) plastic products, including some medical devices such as IVs, blood bags, and the tubing used for dialysis, respiratory therapy, heart-bypass machines, and nasogastric feedings.

Although the current risks associated with DEHP are based on animal studies and apparent adverse developmental effects on the testicles or the production of normal sperm in young animals, the FDA cautions that very young male infants who are critically ill and have prolonged exposure to multiple devices containing DEHP may be at risk also.

Additional information on the human health risks of exposure to medical devices containing DEHP and on the FDA's efforts to assess and communicate these risks to healthcare providers adequately is available on the Internet at <http://www.fda.gov/cdrh/ocd/dehp.html>.

## MRSA in Rural US

Until recently, methicillin-resistant *Staphylococcus aureus* (MRSA) infections were acquired primarily in nosocomial settings. In 1999, four deaths among children in Minnesota and North Dakota, one of which occurred in an American Indian, were attributed to community-acquired MRSA infection. These findings suggested that MRSA was being acquired outside nosocomial settings. Groom and colleagues conducted a study to document the occurrence of community-acquired MRSA infections and to evaluate risk factors for community-acquired MRSA infection compared with methicillin-susceptible *S aureus* (MSSA) infection.

This retrospective cohort study, using medical record review, was conducted in an Indian Health Service facility in a rural Midwestern American Indian community and included patients whose medical records indicated laboratory-confirmed *S aureus* infection diagnosed during 1997. The primary outcome measure was the proportion of MRSA infections classified as community-acquired, based on standardized criteria; risk factors for community-acquired MRSA infection, compared with those for community-acquired MSSA infection; and relatedness of MRSA strains, determined by pulsed-field gel electrophoresis (PFGE). The results indicated that, of 112 *S aureus* isolates, 62 (55%) were MRSA and 50 (45%) were MSSA. Forty-six (74%) of the 62 MRSA infections were classified as community-acquired. Risk factors for community-acquired MRSA infections were not significantly different from those for community-acquired MSSA. PFGE subtyping indicated that 34 (89%) of 38 community-acquired MRSA isolates were clonally related and distinct from nosocomial MRSA isolates found in the region.

The authors concluded that community-acquired MRSA may have replaced community-acquired MSSA as the dominant strain in this community. Antimicrobial-susceptibility patterns and PFGE subtyping support the finding that MRSA is circulating beyond nosocomial settings in this, and possibly in other, rural US communities. Based on these findings, the authors recommended that healthcare practitioners in rural communities in the Midwest consider the possibility of

MRSA infection among young, healthy patients without a history of nosocomial exposure. Obtaining cultures of suspected *S aureus* infections and conducting antibiotic-susceptibility testing, particularly in communities with known high rates of MRSA infection, are important measures to ensure that appropriate antibiotic therapy is provided.

FROM: Groom AV, Wolsey DH, Naimi TS, Smith K, Johnson S, Boxrud D, et al. Community-acquired methicillin-resistant *Staphylococcus aureus* in a rural American Indian community. *JAMA* 2001;286:1201-1205.

## FDA Approves First Nucleic Acid Test for HIV and HCV

The FDA licensed the first nucleic acid test (NAT) systems intended for screening of plasma donors. These test systems are expected to ensure further the safety of plasma-derived products by permitting earlier detection of human immunodeficiency virus (HIV) and hepatitis C virus (HCV) infections in donors. The newly approved test systems were developed by National Genetics Institute, Los Angeles, for screening plasma used in manufacturing of products such as clotting factors and immune globulins. Alpha Therapeutic Corporation, Los Angeles, also was approved to use new testing systems at its plasma collection facilities.

NAT is a recently developed technology that allows detection of very small amounts of genetic material (DNA or RNA) by a process of massive copying (amplification) of a gene fragment. The approved test systems permit highly sensitive detection of RNA from HIV, type 1 (the HIV variant that is responsible for the vast majority of acquired immunodeficiency virus (AIDS) cases in the United States), and HCV in test pools of 512 plasma samples obtained from multiple donors. The use of pooled plasma samples for testing makes use of the NAT system cost-effective. However, if a test pool is positive for either virus, the individual donation that is suspected of containing a virus can be identified and would not be used for further manufacturing, and the donor can be deferred and notified.

Although effective procedures for virus inactivation are required in the manufacturing of all US-licensed plasma derivatives, removal of potentially infectious donations through donor screening adds a safeguard by limiting the amount of virus contamination that the manufacturing process must clear. Currently, donors of blood and plasma are tested for antibodies to HCV, antibodies to HIV, and HIV-1 antigens, which are the virus's own proteins. However, there is still a "window period" during which a donor can be infected but have negative screening tests. With the use of NAT for HCV, the window period for detection of HCV is reduced by 57 days (from an average of 82 days to 25 days). For HIV-1, the average window period with antibody tests is 22 days. Antigen testing cuts the window period to approximately 16 days, and NAT further reduces this period to 12 days.

FROM: FDA Press Release. FDA approves first nucleic acid test (NAT) systems to screen plasma for human immunodeficiency virus (HIV) and hepatitis C virus