



Infectious Disease Exposures and Control Practices

Health care workers are occupationally exposed to a variety of infectious diseases during the performance of their duties. These diseases include MRSA (Methicillin-Resistant Staphylococcus Aureus), HIV (Human Immunodeficiency Virus), hepatitis, tuberculosis (TB), influenza and a range of other infectious agents.

The delivery of health care services requires a broad range of workers, such as physicians, nurses, technicians, clinical laboratory workers, first responders, building maintenance, security and administrative personnel, social workers, food service, housekeeping and mortuary personnel. The diversity among health care workers and their workplaces makes occupational exposure to infectious diseases especially challenging.

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Nurse Exposures

In a study of 60 U.S. hospitals in a 4-year period, nurses were the most likely to experience a blood or bodily fluid exposure. Most exposures involve percutaneous injuries (e.g., needlesticks), although mucocutaneous (e.g., spray or splashes to the eyes or mouth) and direct contact of infected blood with broken skin are also common routes of exposure.

Biosafety in Microbiological and Biomedical Laboratories

CDC's Office of Safety, Health and Environment and the National Institutes of Health periodically publish and update several national publications on Biosafety, including "Biosafety in Microbiological and Medical Laboratories (BMBL)" and "Primary Containment for Biohazards: Selection, Installation, and Use of Biosafety Cabinets." The 5th and 3rd editions of these publications, respectively, are considered national guidelines to promote the safety and health of workers in biological and medical laboratories. Free e-versions of these documents are available to download via the respective links below.

- <http://www.cdc.gov/biosafety/publications/bmb15/index.htm>
- http://www.cdc.gov/biosafety/publications/bmb15/BMBL5_appendixA.pdf

How Infectious Diseases Are Transmitted

The primary routes of infectious disease transmission in U.S. health care settings are contact, droplet and airborne. Contact transmission can be subdivided into direct and indirect contact. Direct contact transmission involves the transfer of infectious agents to a susceptible individual through physical contact with an infected individual (e.g., direct skin-to-skin contact). Indirect contact transmission occurs when infectious agents are transferred to a susceptible individual when the individual makes physical contact with contaminated items and surfaces (e.g., door knobs, patient care instruments or equipment, bed rails, examination table).

According to the Centers for Disease Control and Prevention (CDC), work-acquired infectious diseases are among the risks all health care workers face with bloodborne pathogens figuring prominently among these. Occupational exposure to blood and bodily fluids is well documented among health care workers. Annual exposure prevalence rates range from less than 10% to 44%, depending on the occupational subgroup. Every year, approximately 600,000 to 800,000 occupational needlestick injuries occur in the United States.

Emerging infectious diseases and outbreaks of recognized contagious illnesses have highlighted other concerns about the safety of health care workers.

The CDC's National Healthcare Safety Network

The Center for Disease Control's National Healthcare Safety Network (NHSN) is the nation's most widely-used health care-associated infection (HAI) tracking system. NHSN provides facilities, states, regions and the nation with data needed to identify problem areas, measure progress of prevention efforts and ultimately eliminate health care-associated infections.

NHSN also allows health care facilities to track blood safety errors and important health care process measures, such as health care personnel influenza vaccine status and infection control adherence rates.

NHSN provides medical facilities, states, regions and the nation with data collection and reporting capabilities needed to:

- Identify infection prevention problems by facility, state or specific quality improvement project
- Benchmark progress of infection prevention efforts
- Comply with state and federal public reporting mandates
- Drive national progress toward elimination of HAIs.



'Emerging Infectious Diseases' Journal

The CDC leads efforts to address emerging infectious disease issues such as AIDS, antimicrobial resistance, food safety, hantavirus pulmonary syndrome, influenza, travel health, tuberculosis, West Nile virus infection and zoonoses. The CDC's efforts encompass improvements in disease surveillance, the public health infrastructure and epidemiologic and laboratory training. The journal, "Emerging Infectious Diseases", represents the scientific communications component of the CDC's efforts against the threat of emerging infections.

The goals of the journal include:

- Recognition of new and re-emerging infections and understanding of factors involved in disease emergence, prevention and elimination. Toward this end, the journal:
 - Investigates factors known to influence emergence: microbial adaptation and change, human demographics and behavior, technology and industry, economic development and land use, international travel and commerce and the breakdown of public health measures.
 - Reports laboratory and epidemiologic findings within a broader public health perspective.

- Provides swift updates of infectious disease trends and research: new methods of detecting, characterizing or subtyping pathogens; developments in antimicrobial drugs, vaccines and prevention or elimination programs; and case reports.
- Fast and broad dissemination of reliable information on emerging infectious diseases. Toward this end, the journal:
 - Publishes reports of interest to researchers in infectious diseases and related sciences, as well as to public health generalists learning the scientific basis for prevention programs.
 - Encourages insightful analysis and commentary, stimulating global interest in and discussion of emerging infectious disease issues.
 - Harnesses electronic technology to expedite and enhance global dissemination of emerging infectious disease information.

For easy access to current information on this topic an "Emerging Infectious Diseases" widget is available for use on your website at <http://wwwnc.cdc.gov/eid/pages/widgets.htm>.

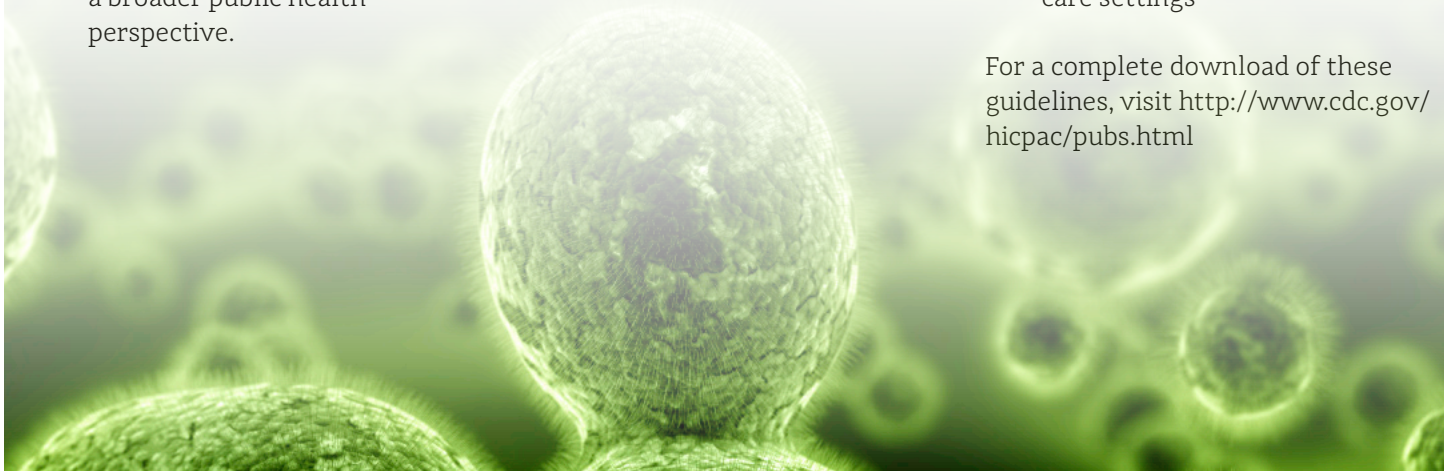
Resources Available Through HICPAC

The Healthcare Infection Control Practices Advisory Committee (HICPAC) is a federal advisory committee assembled to provide advice and guidance to the Centers for Disease Control and Prevention (CDC) and the Secretary of the Department of Health and Human Services (HHS) regarding the practice of infection control and strategies for surveillance, prevention and control of health care-associated infections, antimicrobial resistance and related events in U.S. health care settings. The primary activity of the Committee is to provide advice on periodic updating of existing CDC guidelines and development of new CDC guidelines.

HICPAC publishes many guidelines related to infection control practices, including the following:

- Disinfection and sterilization in health care facilities
- Isolation precautions: preventing transmission of infectious agents in health care settings
- Environmental infection control in health care facilities
- Device-associated infection prevention
- Procedure-associated infection prevention
- Prevention and control of drug-resistant organisms in health care settings

For a complete download of these guidelines, visit <http://www.cdc.gov/hicpac/pubs.html>



For more information

United Heartland is committed to providing and directing our customers to helpful resources regarding exposures to infectious diseases and bloodborne pathogens. For questions or more information, contact us at 800-258-2667.

Web Resources and Links

American Nurses Association (ANA)

- **Needlestick Prevention Guide:** <http://www.nursingworld.org/MainMenuCategories/WorkplaceSafety/Healthy-Work-Environment/SafeNeedles/NeedlestickPrevention.pdf>
- **Needle Safety:** <http://www.nursingworld.org/safeneedles>

Centers for Disease Control and Prevention (CDC)

- **Bloodborne Infectious Diseases:** HIV/AIDS, Hepatitis B & C: <http://www.cdc.gov/niosh/topics/bbp/emergnedl.html>
- **Guideline for Isolation Precautions:** <http://www.cdc.gov/hicpac/pdf/isolation/Isolation2007.pdf>
- **Health Care-Associated Infections (HAI):** <http://www.cdc.gov/hai/>
- **Health Care Infection Control Practices Advisory Committee (HICPAC):** <http://www.cdc.gov/hicpac/pubs.html>
- **Long-Term Care Facilities and Assisted Living:** <http://www.cdc.gov/longtermcare/>
- **National Healthcare Safety Network (NHSN):** <http://www.cdc.gov/nhsn/about.html>

Occupational Safety and Health Administration (OSHA)

- **Infectious Diseases:** https://www.osha.gov/SLTC/healthcarefacilities/infectious_diseases.html

