

Preventing Transmission of Infection: Competencies for all Healthcare Personnel

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Objectives

- Describe the current healthcare realities concerning infection prevention
- Review initial infection prevention competencies for hospital-based healthcare personnel

Current Healthcare Realities

- March-April 2007 *Public Health Reports*
 - In 2002, estimated HAIs in US= 1.7 million
 - >33,000 in high risk nurseries
 - >19,000 in well-baby nurseries
 - >417,000 in ICUs (adults and children)
 - >1.2 million among adults and children outside ICUs

Klevens et al. *Public Health Reports*. Mar/Apr 2007

Current Healthcare Realities

- First nationwide MRSA study
- Funded by APIC Research Foundation
- Findings significantly exceed previous estimates (8-11 times more)
- 1200 healthcare facilities in all 50 states
- 46/1000 patients are colonized or infected with MRSA
- 67% were in medical units
- 37% had MRSA skin/soft tissue infection

Current Healthcare Realities

- CDC estimated that 94,000 MRSA infections occurred in the US during 2005
 - 85% of all invasive MRSA infections were associated with healthcare settings
 - Frequently among patients undergoing invasive medical procedures or weakened immune systems
 - 13% considered to be community-associated
 - 3% could not be determined

Klevens et al. Invasive Methicillin-Resistant *Staphylococcus aureus* Infections in the United States. *JAMA*. 2007;298:1763-1771.

Reality Check

- The number of healthcare-associated infections exceed the number of cases of any current reportable disease
- Deaths associated with HAIs in hospitals exceed the number attributable to several of the top ten leading causes of death reported in US vital statistics

Daily Practice v. Emergency Response

- Do our healthcare workers know what to do in order to prevent infection transmission?
- Are the activities that prevent infection in healthcare facilities different than the activities needed to address infection prevention during emergencies?
- If healthcare personnel cannot adequately address daily infection prevention activities, is it reasonable to expect a different response during an emergency?

Historic Truths

- HAI is a long standing and unsuccessfully addressed risk to patients, HCWs, & community
- No single criterion standard to address core competencies involved in prevention of infectious organism transmission
- Ongoing gaps in ability to consistently provide preventive measures for avoiding HAI transmission poses a risk to adequate emergency response

Infection Prevention: A New Paradigm



- Key:

- Ensure that there are standardized and basic foundational competencies and associated activities

- You can build up if you have a firm foundation

Adult Learner Theory



- **Andragogy: Methods/techniques used to teach adults**
 - Assumptions
 - Educational programs should be organized around life application sequences
 - Learning experiences should be organized around competency development categories
- **Multigenerationals: Complicating Factors**

Competency

- An individual measure of ***applied skills and knowledge that enable people to perform work***
- Consists of
 - Action verb (observable or measurable performance of a worker)
 - Content (subject matter, type of performance, specific task)
 - Context (limitations or conditions of work environment)

Competency *(Cont'd)*

- Focuses on what is required of personnel in the workplace rather than on the learning process.
 - Embodies the ability to transfer and apply skills and knowledge to new situations/environments.
 - Integrated knowledge, skills, attitude, and judgment expected of the practitioner.

Fixing What is Broken

- Draft list of core competencies with associated measurable terminal objectives
 - Based on extensive literature review + practical experience of investigators
- Use of Delphi process
 - Panel of recognized experts
 - Review, evaluate, and refine initial competencies plus associated terminal objectives
 - Assign competencies & terminal objectives → variety of specific HCW job categories
- Develop core training materials for providing category-specific education in support of the terminal objectives

Implementing Competency-Based Practice and Education

- Key element is determining what types of materials are needed in the toolkit
 - Games
 - Worksheets and handouts
 - Pictures, posters, video clips
 - Interactive demonstrations
 - Web-based education
 - Virtual exercises of knowledge application and decision-making
 - Pod casts
 - Screen savers

Next Steps

- Translation and Dissemination
 - Get the information out to the professions
 - Accepted into each discipline
 - Incorporated into curricula

- Strategic Partners
 - APIC
 - SHEA
 - CDC
 - Others



- [Forum](#)
- [Kentuckiana Chapter](#)
- [Bluegrass Chapter](#)
- [Western KY Chapter](#)

Welcome to the Kentucky APIC Chapters.

Working to impact Infection Prevention and Control in healthcare facilities for Kentucky and Southern Indiana.

APIC's vision is to improve the health of people worldwide, serving as the pre-eminent voice for excellence in the prevention and control of infections and related adverse outcomes. This website serves to connect the three APIC chapters in Kentucky. We all share the same challenges in addressing infection and improving patient outcomes. This site will link our three chapters and provide easy access to documents that are of common benefit.

**Please be patient as our site is currently under development.
If you have any questions, comments or concerns, please visit our Forum.**

Hot Topics

[International Infection Prevention Week October 14-20, 2007](#)

["NEW" ACIP recommendations for Hepatitis A post-exposure prophylaxis](#)

[Healthcare Associated Infections - Consequences](#)

[Addressing Environmental Contamination: A Patient Safety Issue](#)

[Cough Simulation](#)

[Demonstration of Respiratory Particle Dispersal During Human Cough](#)

[Newly Released Isolation Guidelines](#)

[MRSA Prevalence Study](#)

During the APIC conference in San Jose, results from the national MRSA prevalence study was released. This study, funded by the APIC Research Foundation, is the largest study of its kind and the results were very intriguing. The document posted on the website contains the official press release and information about the study. Although more information will be forthcoming, this may help if you receive questions from the media or from your organization. If you have questions, [Ask Them Here](#).

[Botulism Release](#)

Statewide Release - Cabinet for Health and Family Services

[Botulism MMWR Vol. 56](#)

Botulism Associated with Commercially Canned Chili Sauce - Texas and Indiana, July 2007

[Hand Hygiene](#)



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Online Module

Preventing Transmission of Infections

- Registration required
<http://ky.train.org>
- Course ID – 1006060
- **FREE** Course
- 1.5 CME and 1.8 CEU
- Unique self-paced experience
- Uses video and case scenarios



The screenshot shows a web page for an online module. At the top, there is a navigation bar with a 'Logout' button. Below that is a banner for 'CHHP Center for Health Hazard Prevention' with the title 'Preventing Transmission of Infections' and a 'Print' button. The main content area is divided into two columns. The left column is titled 'Table of Contents' and lists various topics such as 'About the Module', 'CEU Information', 'Technical Guide', 'Course Overview', 'Using Prescriptions', 'Standard Precautions', 'Transmission-based', 'Modes of Transmission', 'Airborne', 'Droplet', 'Contact', 'Combined', 'PPE Types', 'PPE Use and Removal', 'Role of the Environment', 'Performance Measures', and 'Conclusion'. The right column is titled 'ABOUT THE MODULE' and contains a welcome message: 'Welcome! We appreciate your commitment to learning more about disease transmission. Because this module has the potential to impact your safety as well as the safety of your patients, you must view the module in its entirety in order to receive continuing education credits.' Below the message is a green button that says 'Click here to get started!'. At the bottom right of the page, there is a small text block providing production information: 'Preventing Transmission of Infections was produced by the University of Louisville School of Public Health and Information Sciences and the Center for Health Hazards Preparedness with funds from the Health Resources and Services Administration (HRSA), Bioterrorism Training and Curriculum Development Program (BTCDF)'.