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 communityassociated
 - 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 that the activities needed to address infection prevention during emergencies?
- If healthcare personnel cannot adequately address daily infection prevention activities, is 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

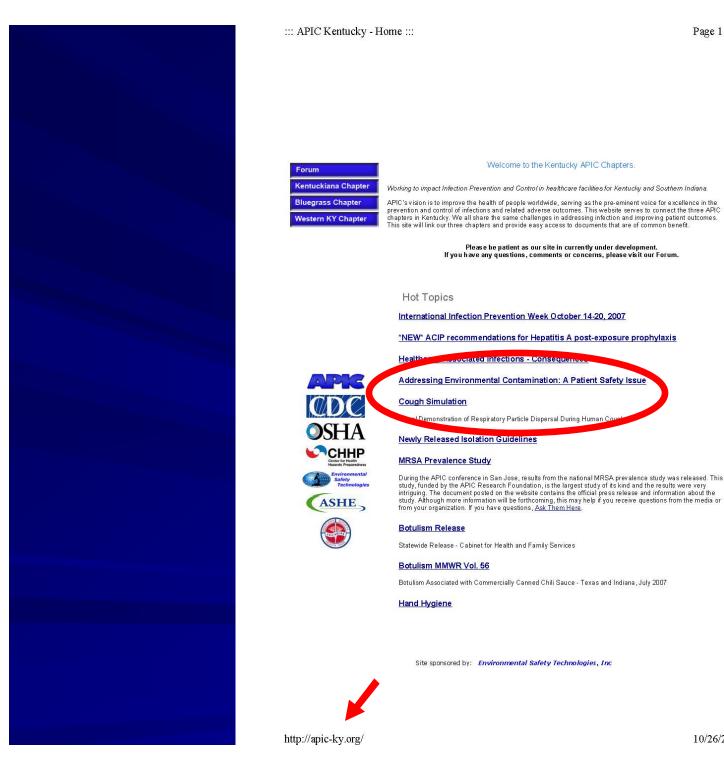
- Key element is determining what types of materials are needed in the toolkit
 - Games
 - Worksheets and handouts
 - Pictures, posters, video clips
 - Interactive demonstrations
 - Web-based education
 - Virtual exercises of knowledge application and decision-making
 - Pod casts
 - Screen savers

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



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10/26/2007

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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

