

What's New in Hospital-Associated Infections and Infection Control

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HAI in California

- HAI are today by far the most common complications affecting hospitalized patients
- 5 -10 % of patients admitted to acute care hospitals acquire one or more infections
- In California, using conservative estimates from national 2001 data:
 - 240,000 HAI per year in hospitals
 - Patient care cost of ~\$600 million per year

Contributors to Increasing HAI

Changes in Acute Care Practice

- Fewer and smaller acute care hospitals
- Relative number of intensive care unit beds increased
- Severity of illness increased
- Increasing proportion of hospitalized patients immunosuppressed, medical devices
- Number of infection control practitioners not increased, responsibilities expanded
 - 60% California hospitals <200 beds, part-time ICP

Contributors to Increasing HAI

Shift Away from Acute Care

- Sicker patients in long-term care facilities
- Major surgery in ambulatory surgery centers
- Few or no infection control resources
- Reimbursement rates lower
- No CDC recommendations
- Lack of epidemiologic information
 - 5 million surgical procedures/year in 450 ambulatory surgery centers compared to 1 million inpatient and outpatient surgeries each in GACH
 - 12,000 residents in 1200 nursing homes

Contributors to Increasing HAI

Changing Microorganisms

- Increasing proportion HAI caused by opportunistic and/or antibiotic resistant organisms
 - Intensive care unit infections 70% resistant
- 50% of antibiotics unnecessary, inappropriate, or incorrect timing
 - >1 hour prior to start and/or continued >24 hours after completion of surgery

Initiatives to Prevent HAIs

- Agency for Healthcare Research and Quality
- Institute for Healthcare Improvement
- DHHS/Centers for Medicare & Medicare Services (CMS)

**Consumers
Union**

Publisher of Consumer Reports

**End hospital secrecy
and save lives.**

**Stop
Hospital Infections.org**

Petition your hospital for information about its hospital-acquired infections!

One in 20 hospital patients get an infection while being treated for an unrelated health care problem. That translates to almost 2 million patients each year.

Serious cases of antibiotic resistant infections cannot be cured, may destroy flesh and bones, require multiple surgeries, and often result in death. Annually, almost 90,000 people die from hospital-acquired infections.

Hospitals do not want the public to know about their infections. Across the country hospitals have strongly opposed legislative efforts to publish their infection rates, and in the states where reporting laws have passed, not all hospitals are cooperating with those laws.

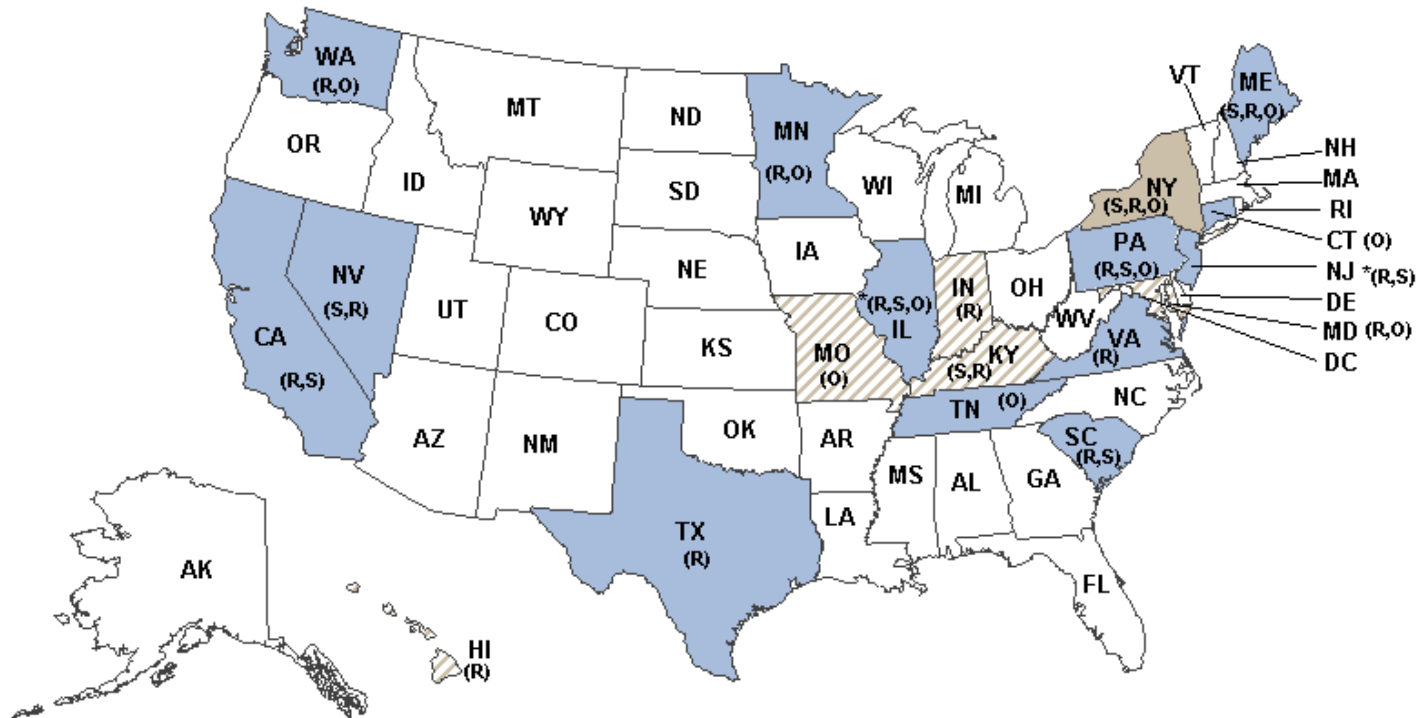
“Report cards assessing nosocomial infections are a reality. Their success will require interdisciplinary collaboration, a greater commitment of resources to infection-prevention practices, and conspicuous inclusion of these efforts in patient-safety programs. Research is needed to identify the most meaningful metrics, determine the best way to report them, and assess whether such reporting improves patient safety. These challenges present unprecedented opportunities to improve patient care, if we can only put our anxieties to rest and move forward.”

Source: Weinstein RA, Siegel JD, Brennan, PJ. Infection-control report cards – Securing patient safety (Perspective.). N Engl J Med;2005;353(3):225-227.

Leapfrog Report – 9/18/07

- 87% hospitals (n=1256) do not take all recommended steps to prevent HAIs
 - Ventilator-associated pneumonias: 38.5%
 - Central venous catheter-related bloodstream infections: 35.4%
 - Surgical site infections: 32.3%
- 35.6% do not always follow hand hygiene practices
- 30.7% vaccinate staff against flu

MRSA Laws & Pending Legislation - 2009



■ Enacted MRSA Law

■ Pending MRSA Legislation

■* Enacted MRSA Law & Pending MRSA Legislation

■ Legislature Adjourned Without Enactment

R – Reporting Laws or Bills

S – Screening Laws or Bills

O – Other Laws or Bills (e.g., studies, pilots, other infection control requirements)

SB 739 Mandates

- Implement an HAI surveillance program
 - Electronic database: NHSN
- By July 1, 2007
 - Appoint an HAI Advisory Committee
 - Hospitals must implement respiratory hygiene/cough etiquette program, employee flu vaccine program, disaster plan w/ pandemic flu component in conjunction w/ local health dept
- Educate health facility evaluators in HAI
- Revise infection control-related portions of Title 22
- Jan 1, 2008, GAC shall implement process measures to be reported publicly July 1, 2008
 - Central line insertion practices
 - Surgical antimicrobial prophylaxis
 - Influenza vaccination of patients and HC personnel

SB 1058 Reporting Mandates

- All cases of health-care-associated MRSA bloodstream infection, clostridium difficile infection, and VRE bloodstream infection and number of inpatient days – public 2011
- All central line associated bloodstream infections and the total central line days – public 2011
- Deep or organ space infections of surgical sites following orthopedic, cardiac, and gastrointestinal surgery - public 2012

SB 1058 MRSA Screening Mandates

- Each patient admitted to a hospital shall be tested for MRSA within 24 hours if:
 - scheduled for inpatient surgery and medical condition making susceptible to infection
 - previously discharged from hospital within 30 days prior to current hospital admission
 - admitted to an intensive care unit or burn unit
 - receives inpatient dialysis treatment
 - transferred from a skilled nursing facility

SB 158 Requirements

- Develop, implement, and comply with a patient safety plan
- No later than January 1, 2010, a physician designated as a hospital epidemiologist or infection control committee chairperson shall participate in a CME training program offered by CDC and SHEA. Documentation of attendance shall be placed in the physician's credentialing file

SHEA-CDC Fundamentals of Healthcare Epidemiology

- Berkeley Doubletree Hotel, September 10, 2009
- Tentative Agenda
 - **Healthcare Epidemiology: the Cornerstone of Hospital Infection Prevention & Control**
 - **Implementing Recommendations from the Compendium: Evidence in Real-World Settings**
 - **Managing Controversies in Evidence**
 - **Leading the Way on Antimicrobial Stewardship**
 - **California Mandates: Review with the Expert**
 - **Isolation Precautions & Hand Hygiene**
 - **The Hot Zone: Outbreak Investigation & Management**
 - **Clean Enough? Adventures in Environmental Hygiene & Disinfection/Sterilization**

Approaches to Prevention

Organizations and/or Approaches

- CHART
- IHI
- CalNOC
- Keystone Project
- Leapfrog
- NHSN/NQF
- SCIP
- CMS
- Maryland Hosp Project

- Bundles
 - Hygiene
 - Environment
 - Judicious use of antibiotics
- Technology
- Data Mining
- Mandatory Reporting
 - Standardization of definitions
 - Process vs. outcome measures
- Accountability/competency of healthcare workers

Scope of Duties of Infection Prevention and Control

THEN

- Surveillance
- Epidemiology & Statistics
- Infectious Diseases
- Microbiology
- Disinfection/Sterilization
- Employee Health
- Principles of Adult Learning
- Outbreak investigations/
communicable disease
reporting
- Product evaluation
- Policies & procedures

PLUS NOW

- More care in given in more settings across continuum
- Quality Improvement/
prevention of other adverse events
- Waste Management
- Construction
- Bioterrorism Planning
- Pandemic Planning
- Technology – both @ bedside and informatics
- Mandatory reporting
- Other legislative issues

Making the Business Case

Murphy D, Whiting J. Dispelling the Myths:
The true cost of Healthcare-Associated
Infections, APIC, February 2007

- HAIs erode the bottom line (>\$5000/infected patient)
- Greater cost impact where reimbursement is lower
- Tool available on line for ICPs to calculate these costs for their hospital

http://www.apic.org/Content/Navigation-Menu/PracticeGuidance/Reports/hai_whitepaper.pdf

Events of the Past 3 Months

- Influenza H1N1 and the central importance for infection control
- ARRA Grant: \$10 million to bolster NHSN and \$40 million to state Health Departments
- DHHS HAI Action Plan and Congressional mandate for state HAI action plans

House Healthcare Reform Legislation

- Federal public reporting of HAIs for hospitals and ASCs as a condition of participation under Medicare and Medicaid, with HAIs to be determined by CDC and reported via NHSN
- Expansion of CMS' hospital-acquired conditions payment provisions to Medicaid
- Reporting of the number of certified infection control professionals within each facility
- Creation of a Center for Quality Improvement to develop and implement best practices in healthcare delivery
- \$88.7 billion for implementation