Healthy People 2020 Law and Health Policy Project: A Focus on Healthcare-Associated Infections

Tuesday, April 12, 2016
1:00pm-2:30pm ET
Webinar Series Overview

- **Webinar #1** – October 15, 2015
  Healthy People 2020 Law and Health Policy Project: The Role of Law in Advancing Health Outcomes

- **Webinar #2** – November 16, 2015
  Healthy People 2020 Law and Health Policy Project: A Focus on Older Adults

- **Webinar #3** – April 12, 2016
  Healthy People 2020 Law and Health Policy Project: A Focus on Healthcare-Associated Infections
What is Healthy People?

- A *national agenda* that communicates a vision for improving health and achieving health equity
- Creates a comprehensive *strategic framework* uniting health promotion and disease prevention issues under a single umbrella
- A set of science-based, *measurable objectives with targets* to be achieved by the year 2020
- Requires tracking of *data-driven outcomes* to monitor progress and to motivate, guide, and focus action
Healthy People 2020
Healthcare-Associated Infections
Topic Area

Healthcare-Associated Infections

Overview   Objectives   Interventions & Resources   National Snapshots

Expand All Objectives

HAI-1 Reduce central line-associated bloodstream infections (CLABSIs)

HAI-2 Reduce invasive healthcare-associated methicillin-resistant Staphylococcus aureus (MRSA) infections

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Law and Health Policy Project

**Background**

- Law and Health Policy
- Partnering Agencies and Organizations:
  - HHS/ODPHP (Project Lead)
  - Robert Wood Johnson Foundation
  - CDC Foundation
  - CDC

- Started in September 2013
What is the Law and Health Policy Project?

**Purpose:**
- Provide in-depth analysis of evidence-based legal interventions and strategies that may improve health
- Highlight laws and policies related to specific Healthy People 2020 (HP2020) topic areas and objectives
- Develop at least 10 reports over 3 ½ years

**Focus:**
- Feature progress toward HP2020 objectives
- Focus on state and local laws and policies
- Highlight laws with demonstrated outcomes and effects
- Case studies or “bright” spots to bring issues to life
Featured Speakers

- **Speaker 1**: Don Wright - Deputy Assistant Secretary for Health; Director, Office of Disease Prevention and Health Promotion, U.S. Department of Health and Human Services

- **Speaker 2**: Marion Kainer - Director, Healthcare Associated Infections and AntimicrobialResistance Program, TN Department of Health

- **Speaker 3**: Gloria Seidule - Medical Malpractice Attorney and Expert in Infection Control Cases
What are Healthcare-Associated Infections (HAIs)?

- **Healthcare-Associated Infections (HAIs)** - Infections that people acquire while receiving treatment for another condition in healthcare settings:
  - Inpatient Hospitals
  - Ambulatory settings
  - Long-term care facilities
  - Any healthcare setting where people receive care
At any given time, 1 in 25 U.S. hospital patients has a healthcare-associated infection.

$33 billion in potentially preventable healthcare costs annually (2009).

Nearly 3 out of every 4 HAIs that occur in an acute care hospital setting, are a result of the following categories of infection:

- Central line-associated blood stream infections (CLABSI)
- Catheter-associated urinary tract infections (CAUTI)
- Surgical site infections (SSIs)
- Methicillin-resistant Staphylococcus aureus (MRSA)
- *Clostridium difficile* (C. difficile)
Federal Steering Committee for the Prevention of HAIs

Phase 1 (2008-Present)

Prevention & Implementation
Lead: Centers for Disease Control and Prevention (CDC)

Research
Lead: Agency for Healthcare Research and Quality

Incentives and Oversight
Lead: Centers for Medicare and Medicaid Services (CMS)

Information Systems & Technology
Co-Leads: Office of the National Coordinator for Health IT

Evaluation
Lead: Office of Disease Prevention and Health Promotion (ODPHP)

Outreach & Messaging
Lead: ODPHP

Phase II (2009-Present)

Ambulatory Surgical Centers
Co-Leads: Indian Health Service & CDC

End-Stage Renal Disease Facilities
Lead: CMS

Influenza Vaccination of Healthcare Personnel
Co-Leads: CDC & National Vaccine Program Office

Phase III Working Group (2011)

Long-Term Care
Lead: ODPHP & CMS

Federal Steering Committee for the Prevention of Healthcare-Associated Infections
National Action Plan to Prevent Healthcare-Associated Infections: Road Map to Elimination

Phase One
- Acute Care Hospitals

Phase Two
- Outpatient Settings/ Influenza Vaccination HCP

Phase Three
- Long-Term Care Facilities

Phase Four
- TBD

“Maintained as a living document”
Healthcare-associated infections (HAIs) are infections patients can get while receiving medical treatment in a healthcare facility. Working toward the elimination of HAIs is a CDC priority. The standardized infection ratio (SIR) is a summary statistic that can be used to track HAI prevention progress over time; lower SIRs are better. The infection data are reported to CDC’s National Healthcare Safety Network (NHSN). HAI data for nearly all U.S. hospitals are published on the Hospital Compare website. This report is based on 2014 data, published in 2016.

### CLABSIs
**Central Line-Associated Bloodstream Infections**

- When a tube is placed in a large vein and not put in correctly or kept clean, it can become a way for germs to enter the body and cause deadly infections in the blood.
- U.S. hospitals reported a significant decrease in CLABSIs between 2013 and 2014.
- Among the 2,442 hospitals in U.S. with enough data to calculate an SIR, 10% had an SIR significantly higher (worse) than 0.50, the value of the national SIR.

### CAUTIs
**Catheter-Associated Urinary Tract Infections**

- When a urinary catheter is not put in correctly, not kept clean, or left in a patient for too long, germs can travel through the catheter and infect the bladder and kidneys.
- U.S. hospitals reported a significant decrease in CAUTIs between 2013 and 2014.
- Among the 2,880 U.S. hospitals with enough data to calculate an SIR, 12% had an SIR significantly higher (worse) than 1.00, the value of the national SIR.

### MRSA Bacteremia
**Laboratory Identified Hospital-Onset Bloodstream Infections**

- Methicillin-resistant Staphylococcus aureus (MRSA) is bacteria usually spread by contaminated hands. In a healthcare setting, such as a hospital, MRSA can cause serious bloodstream infections.
- U.S. hospitals reported a significant decrease in MRSA bacteremia between 2013 and 2014.
- Among the 2,042 U.S. hospitals with enough data to calculate an SIR, 8% had an SIR significantly higher (worse) than 0.87, the value of the national SIR.

### SSIs
**Surgical Site Infections**

- When germs get into an area where surgery is or was performed, patients can get a surgical site infection. Sometimes these infections involve only the skin. Other SSIs can involve tissues under the skin, organs, or implanted material.

- **SSI: Abdominal Hysterectomy**
  - U.S. hospitals reported no significant change in SSIs related to abdominal hysterectomy surgery between 2013 and 2014.
  - Among the 794 U.S. hospitals with enough data to calculate an SIR, 6% had an SIR significantly higher (worse) than 0.83, the value of the national SIR.

- **SSI: Colon Surgery**
  - U.S. hospitals reported a significant increase in SSIs related to colon surgery between 2013 and 2014.
  - Among the 2,051 U.S. hospitals with enough data to calculate an SIR, 8% had an SIR significantly higher (worse) than 0.98, the value of the national SIR.

### C. difficile Infections
**Laboratory Identified Hospital-Onset C. difficile Infections**

- When a person takes antibiotics, good bacteria that protect against infection are destroyed for several months. During this time, patients can get sick from *Clostridium difficile* (C. difficile), bacteria that cause potentially deadly diarrhea, which can be spread in healthcare settings.
- U.S. hospitals reported a significant increase in C. difficile infections between 2013 and 2014.
- Among the 3,554 U.S. hospitals with enough data to calculate an SIR, 11% had an SIR significantly higher (worse) than 0.92, the value of the national SIR.

*Statistically significant*

National Efforts to Prevent HAIs

- State HAI Action Plans

State-based HAI prevention

Prevention Projects

State Prevention Collaboratives consist of multiple hospitals within a state which:

- Target an infection as a team.
- Implement prevention strategies through culture change.
- Share experiences between facilities.
- Measure their progress as a group.
- Provide feedback to clinicians and staff.

Prevention collaboratives your state may have:

- CLABSIS Central Line-associated Bloodstream Infections
- CAUTI Catheter-associated Urinary Tract Infections
- C. diff Clostridium difficile Infection (CDI, C. diff)
- MRSA Methicillin-resistant Staphylococcus Aureus
- SSI Surgical Site Infections
- VAP Ventilator–associated Pneumonia
- MRSA Multi-drug Resistant Organisms
- Long Term Care/Nursing Homes
- CRISP Comprehensive Unit-based Safety Programs
- Other

Select a state: Select One

Select by activities to prevent HAIs

Select by Epidemiology and Laboratory Capacity (ELC) HAI funded activities

CDC Resources for States

CDC tools and technical assistance support state efforts to prevent HAIs.
HAI-Related Collaborative Efforts

- **Partnership for Patients** initiative is a public-private partnership working to improve the quality, safety and affordability of health care for all Americans.

- Physicians, nurses, hospitals, employers, patients, and the federal and State governments

- Aims to engage 100% of the nation's acute care medical centers participating in making hospital care safer, more reliable, and less costly.
Legal and Policy Levers to Prevent HAIs

- Authorities granted to state health agencies
- Definitions for the infections and facilities covered under state laws
- HAI advisory councils
- Pilot phases for state programs
- Reporting requirements for facilities
- Licensure and training requirements for facilities and providers, including injection safety
- Financial incentives and disincentives
- Protection of HAI data

Example: Preventing CLABSI - Elements of Success

Five Elements Contributed to Success:

1. Reliable and Valid Measurement System
   - Creation of NHSN Database (CDC) (www.cdc.gov/nhsn)

2. Evidence-Based Care Practices & Recommendations

3. Investment in Implementation Sciences

4. Local Ownership and Peer Learning Communities

5. Align and Synergize Efforts
   - HAI National Action Plan
   - Setting 5-year CLABSI goals
   - ACA - Value-Based Purchasing
   - CMS requires ICU CLABSI data reported to Hospital Compare

Emerging Issues in HAI Prevention

Presidential Advisory Council on Combating Antibiotic-Resistant Bacteria (Advisory Council)

- Established by Executive Order 13676 (Sept. 18, 2015)
- Members appointed by HHS Secretary Burwell
- Provides advice, information, and recommendations to the Secretary regarding programs and policies intended to support and evaluate implementation of:
  - National Strategy for Combating Antibiotic-Resistant Bacteria
  - National Action Plan for Combating Antibiotic-Resistant Bacteria
- Established 5 working groups
HAI-Related Federal Resources

General Resources

- U.S. Department of Health & Human Services (HHS) Action Plan to Prevent HAIs
- Agency for Healthcare Research and Quality (AHRQ)
- Centers for Disease Control and Prevention (CDC). Provides links to CDC resources, including estimates of HAIs, lists of infectious diseases in health care settings, and information on antimicrobial resistance. Get a list of other CDC resources [PDF - 41 KB].
- Centers for Medicare & Medicaid Services (CMS) [PDF - 61 KB]
- Food and Drug Administration (FDA) - Provides information on topics of interest to consumers, including infections, medicines, and recalls.
- HHS Resources for Consumers and Providers on HealthCare.gov
- National Institute of Allergy and Infectious Diseases (NIAID) - Provides information on antimicrobial drug resistance, including its causes, diagnosis, and treatment.
- National Library of Medicine (NLM) - Links to information on bacteria, including preventing and treating infections.

HAI Prevention Basics

- Hand Hygiene [PDF - 37 KB]
- Healthcare Personnel Influenza Vaccination [PDF - 78 KB]

More About Specific HAIs

- Central Line-Associated Blood Stream Infections (CLABSIs) [PDF - 41 KB]
- Catheter Associated Urinary Tract Infections (CAUTIs) [PDF - 37 KB]
- Surgical Site Infections (SSIs) [PDF - 33 KB]
- Ventilator Associated Pneumonias (VAPs) [PDF - 37 KB]
- Clostridium difficile (C. difficile) [PDF - 49 KB]
- Methicillin-Resistant Staphylococcus aureus (MRSA) [PDF - 49 KB]

Source: http://health.gov/hcq/resources-general.asp
Law and Health Policy Project: Focus of Reports

• Reports:
  – Feature progress toward HP2020 objectives
  – Focus on state and local laws and policies
  – Highlight laws with demonstrated outcomes and effects

• Reports should include:
  – Background
  – Potential trends
  – Policy surveillance information
  – Case Studies or “Bright Spots”
  – Opportunities and challenges
1. Bernard Black- Chabraja Professor, Northwestern University Law School and Kellogg School of Management

2. Marion Kainer- Director of Healthcare Associated Infections & Antimicrobial Resistance Program, Tennessee Dept. of Health

3. Peter Pronovost – Sr. Vice President for Patient Safety and Quality, Director of the Armstrong Institute for Patient Safety and Quality, Johns Hopkins Medicine
Report Working Group

- **James Battles** – Social Scientist Analyst for Patient Safety, Agency for Healthcare Research and Quality (AHRQ)
- **Mike Bell** – Deputy Director, Division of Healthcare Quality Promotion (DHQP), CDC
- **Jim Cleeman** – Senior Medical Officer, Center for Quality Improvement & Patient Safety, AHRQ
- **Marjory Cannon** - Medical Officer, Quality Improvement Group, Center for Clinical Standards and Quality, CMS
- **Noel Eldridge** - Senior Advisor & Public Health Analyst, Center for Quality Improvement and Patient Safety, AHRQ
- **Daniel Gallardo** – Health Information Specialist, ODPHP, HHS
- **Dennis Maki** – Professor, Univ. of Wisconsin School of Medicine & Public Health
- **Elizabeth Mothershed**- Associate Director for Policy (acting), DHQP, CDC
- **Mike Osterholm** – Director of Center for Infectious Disease Research & Policy (CIDRAP), Professor, Univ. of Minnesota
- **Clydette Powell** – Director, Division of Health Care Quality, ODPHP, HHS
- **Tara Ramanathan** – Public Health Analyst, CDC Public Health Law Program
- **Asel Rysulova** – Epidemiologist, National Center for Health Statistics, CDC
- **Arjun Srinivasan** – Medical Officer, DHQP, CDC
- **Hui-Hsing Wong** - Medical Officer, Office of the Assistant Secretary for Planning and Evaluation (ASPE)
Primary HP2020 Objective for Report

- **HAI-1 Reduce Central Line-Associated Bloodstream Infections (CLABSIs)**
  - Baseline: 1.00 Standardized Infection Ratio (SIR) reported (2006-08)
  - Target: 0.25 SIR or 75% reduction
  - Current Rate: 0.50 SIR (2014)
  - Data Source: CDC’s National Healthcare Safety Network (NHSN)

Central lines:
Used to deliver medication, support blood pressure, provide dialysis, etc.
State Laws
Promote Prevention of HAIs

• Broad authorities for the health department to promote best practices
• Focus on specific, preventable infections
• Identifying responsible facilities, units, and providers
• Reporting of facility-specific infection rates to the health department
• Reporting of facility-specific infection rates to the public
• Immunity for providers and facilities for reporting
• Protection from litigation
• Financial incentives to prevent HAIs or penalties for failure to report or prevent

NY State: 2005

- Use of NHSN
  - Surgical site infections (SSI)
  - Central line associated blood stream infections (CLABSI)
- Allows for addition of other types of HAI (in consultation with advisory group)
- Pilot phase (first year) – only aggregate data, no facility identifiers
- Public reports (after pilot) include facility identifiers
- Audit process to assure accuracy of data
- Protection of patient privacy

We want to drive the train
Do the Right Thing; Proactive

Emphasis was placed on collection of actionable, verifiable data. Use of NHSN.

Tennessee: 2005


Law passed in 2006: Tennessee

- Department must publish public reports
- May identify individual facilities
- Not release patient level data
- Data from report cannot be utilized for civil litigation

Law passed in 2006: Tennessee

- Central line associated blood stream infections (CLABSI) with facility identifiers
- Surgical Site Infections (SSI) following coronary artery bypass graft surgery (aggregate only, no facility identifiers)
- Required use of National Healthcare Safety Network (NHSN)

State Laws
Promote Prevention of HAIs

• Broad authorities for the health department to promote best practices
• Focus on specific, preventable infections
• Identifying responsible facilities, units, and providers
• Reporting of facility-specific infection rates to the health department
• Reporting of facility-specific infection rates to the public
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Example: Preventing CLABSI - Elements of Success

- Five Elements Contributed to Success:
  1. Reliable and Valid Measurement System
     - NHSN (CDC) (www.cdc.gov/nhsn)
  2. Evidence-Based Care Practices & Recommendations
  3. Investment in Implementation Sciences
  4. Local Ownership and Peer Learning Communities
  5. Align and Synergize Efforts
     - HAI National Action Plan
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     - CMS requires ICU CLABSI data reported to Hospital Compare

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Five Elements Contributed to Success:

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National Healthcare Safety Network (NHSN)

- NHSN is a surveillance system that serves multiple users and uses
  - Standardized definitions, protocols
  - Infrastructure for reporting, analysis

- NHSN is used by
  - >17,000 healthcare facilities to track HAIs, antimicrobial use and resistance, and adherence to prevention guidelines; guide prevention efforts; submit data for public reporting and quality measurement purposes
  - Health departments for surveillance, prevention, and public reporting
  - CMS for quality measurement and reporting, reimbursement, and prevention
  - HHS to measure national progress

http://www.cdc.gov/nhsn/
<table>
<thead>
<tr>
<th>Pathogen Category</th>
<th>Mandated States (as of March 1, 2015)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central line-associated bloodstream infections (CLABSIs)</td>
<td>AK, AL, AR, CA, CO, CT, DC, DE, GA, HI, IL, IN, KY, MA, MD, ME, MS, NC, NH, NJ, NM, NV, NY, OK, OR, PA, SC, TN, TX, UT, VA, VT, WA, WV</td>
</tr>
<tr>
<td>Surgical site infections (SSIs)</td>
<td>AK, AL, AR, CA, CO, CT, DE, GA, HI, IL, IN, KY, MA, MD, ME, MS, NC, NH, NJ, NV, OR, PA, SC, TN, TX, UT, VT, WA, WV</td>
</tr>
<tr>
<td>Multidrug-resistant organisms and <em>Clostridium difficile</em> infections</td>
<td>AK, AR, CA, CT, DC, DE, GA, HI, IL, KY, MD, ME, MS, NC, NJ, NM, NV, NY, OK, OR, PA, SC, TN, UT, WV; C. diff LabID FacWide--AK, AR, CA, CO, CT, DE, GA, HI, IL, KY, MD, MS, NM, NC, NY, OK, OR, TN, UT, WV; MRSA Blood LabID FacWide--AK, AR, CA, CT, DC, DE, GA, HI, IL, KY, MD, MS, NC, NJ, NV, OK, OR, SC, TN, UT, WV; VRE Blood LabID FacWide--CA; C. diff Infection--ME; MRSA Infection--ME, NV; MRSA AST--NJ; PA facilities may chose a single pathogen and do infection surveillance/LabID in at least one location; CRE--NY, OK, SC</td>
</tr>
<tr>
<td>Ventilator-associated pneumonias (VAPs)</td>
<td>OK, PA, WA</td>
</tr>
<tr>
<td>Catheter-associated urinary tract infections (CAUTIs)</td>
<td>AK, AL, AR, CT, DE, GA, HI, IN, KY, MD, ME, MS, NC, NH, NJ, OK, OR, PA, TN, UT, WV</td>
</tr>
<tr>
<td>Central line insertion practices (CLIP)</td>
<td>CA, NH</td>
</tr>
<tr>
<td>Dialysis events</td>
<td>CO, HI, TN</td>
</tr>
</tbody>
</table>

Data from CDC; 03-01-2015
Five Elements Contributed to Success:

1. Reliable and Valid Measurement System
   - NHSN
2. Evidence-Based Care Practices & Recommendations
3. Investment in Implementation Sciences
4. Local Ownership and Peer Learning Communities
5. Align and Synergize Efforts
   - HAI National Action Plan
   - Setting 5-year CLABSI goals
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Standardized Infection Ratio (SIR): Risk Adjusted Summary Measure

SIR = \frac{\text{Observed (O) HAIs}}{\text{Predicted (P) HAIs}}

To calculate O, sum the # of HAIs among a group
To calculate P, requires the use of the appropriate aggregate data (risk-adjusted rates) (e.g., national NHSN data for 2006-2008)

- SIR > 1.0: # infections are HIGHER than predicted
  - SIR= 1.5: # infections = 50% HIGHER than predicted
- SIR < 1.0: # infections are LOWER than predicted
  - SIR= 0.4: # infections = 60% LOWER than predicted
- SIR is used to measure progress towards HHS action plan goal (2013) and HP2020
**CLABSI* (Adult/Ped ICU), TN 2008-14**

* Central Line Associated Blood Stream Infections [CLABSI]

**HHS action goal baseline: SIR = 1.0**

**HHS action goal (2013: SIR = 0.5)**

Data Reported as of September 9, 2015
CLABSI* (Adult/Ped ICU), TN 2008-14

Start CLABSI Collaborative

* Central Line Associated Blood Stream Infections [CLABSI]

HHS action goal baseline: SIR = 1.0

HHS action goal (2013: SIR = 0.5)

Data Reported as of September 9, 2015
CLABSI* (Adult/Ped ICU), TN 2008-14

CLABSI collaborative:

- Evidence Based Practices
- Peer learning
- Implementation Science

HICPAC
Healthcare Infection Control Practices Advisory Committee

http://www.cdc.gov/hicpac/
CLABSI* (Adult/Ped ICU), TN 2008-14

* Central Line Associated Blood Stream Infections [CLABSI]

Start CLABSI Collaborative

First report sent to hospitals with hospital specific data

Data Reported as of September 9, 2015
Report: Consumer & Technical

Tennessee’s Report on Healthcare-Associated Infections for Healthcare Consumers
January 1, 2014 – December 31, 2014
Tennessee Department of Health Report | October 2015

http://www.tn.gov/health/topic/hai
### Sample Table (Consumer Report)

<table>
<thead>
<tr>
<th></th>
<th>Bloodstream Infections (CLABSI) in Adult/Pediatric ICUs</th>
<th>Bloodstream Infections (CLABSI) in Neonatal ICUs</th>
<th>Urinary Tract Infections (CAUTI) in Adult/Pediatric ICUs</th>
<th>Surgical Site Infections from Colon Surgeries</th>
<th>Surgical Site Infections from Abdominal Hysterectomies</th>
<th>C. difficile Events†</th>
<th>Methicillin-Resistant Staphylococcus aureus (MRSA) Events†</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>=</td>
<td>N/A**</td>
<td>=</td>
<td>★</td>
<td>No Conclusion</td>
<td>★</td>
<td>X</td>
</tr>
<tr>
<td>No Conclusion</td>
<td>N/A**</td>
<td>No Conclusion</td>
<td>No Conclusion</td>
<td>No Conclusion</td>
<td>No Conclusion</td>
<td>=</td>
<td>No Conclusion</td>
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<tr>
<td></td>
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<td>N/A**</td>
<td>=</td>
<td>★</td>
<td>No Conclusion</td>
<td>=</td>
<td>=</td>
</tr>
</tbody>
</table>

**N/A - Facility was not subject to this reporting requirement during 2014
† These refer to hospital-onset laboratory-identified events. MRSA events include only those identified in the bloodstream.

<table>
<thead>
<tr>
<th>Legend</th>
<th></th>
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<th></th>
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</thead>
<tbody>
<tr>
<td><img src="http://www.tn.gov/health/topic/hai" alt="Star" /></td>
<td>Fewer infections (better) than predicted based on the national experience.*</td>
<td><img src="http://www.tn.gov/health/topic/hai" alt="Equal" /></td>
<td>About the same number of infections as predicted based on the national experience.*</td>
<td><img src="http://www.tn.gov/health/topic/hai" alt="Cross" /></td>
</tr>
</tbody>
</table>

When the number of predicted infections is less than 1, no conclusion can be made.


http://www.tn.gov/health/topic/hai
### Hospital A: CLABSIs in Adult & Pediatric ICU

#### CLABSI - Adult/Pediatric ICU, excluding burn and trauma units

<table>
<thead>
<tr>
<th>YR</th>
<th>N</th>
<th>OBS</th>
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<td>2014</td>
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<td>38.3</td>
<td>18486</td>
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<td>2013</td>
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<td>17338</td>
<td>0.3</td>
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<td>19757</td>
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<td>63</td>
<td>36.7</td>
<td>15982</td>
<td>1.7</td>
</tr>
</tbody>
</table>

**HP2020 goal: SIR: 0.25**
Example: Preventing CLABSI - Elements of Success

• Five Elements Contributed to Success:

1. Reliable and Valid Measurement System
   • NHSN (CDC)

2. Evidence-Based Care Practices & Recommendations

3. Investment in Implementation Sciences

4. Local Ownership and Peer Learning Communities

5. Align and Synergize Efforts
   • HAI National Action Plan
   • Setting 5-year CLABSI goals
   • ACA - Value-Based Purchasing
   • CMS requires ICU CLABSI data reported to Hospital Compare

The Role of Federal Law in HAI Prevention

• American Recovery and Reinvestment Act (ARRA) of 2009
  – State HAI Programs
  – Prevention Collaboratives

• Patient Protection and Affordable Care Act of 2010
  – Pay for Reporting– using NHSN (CMS)
  – Value-based Purchasing- using NHSN (CMS)
National Action Plan to Prevent HAIs
→ Creation of State Plans

Chapter 1200-14-01

- Reportable diseases (1200-14-01-02):
  - (1) All healthcare providers and other persons knowing of or suspecting a case, culture or specimen of a reportable disease or event shall report that occurrence to the Department of Health in the time and manner set forth by the Commissioner in the List...
  - (... at least annually, posted online)

- Event: an occurrence of public health significance and required by the Commissioner to be reported in the List

- List: Means the List of Reportable Diseases and Reporting Mechanisms as set forth by the Commissioner

Emphasis added
Annual Online Posting of List

Reportable Diseases

Communicable diseases are easily spread from person to person. Prompt notification of a communicable disease can allow public health officials to locate and treat exposed persons, identify and contain outbreaks, and interrupt disease transmission. The information obtained from disease notification is also used to monitor disease trends, identify high risk groups, develop policy, and design prevention programs.

2016 Reportable Diseases and Events Matrix (pdf)
Effective January 1, 2016

2016 Reportable Diseases and Events List (pdf)
Effective January 1, 2016

https://apps.health.tn.gov/ReportableDiseases

Category 5: Events will be reported monthly (no later than 30 days following the end of the month) using the designated reporting mechanism. For Healthcare Associated Infections, events should be reported via the National Healthcare Safety Network (NHSN – see http://tn.gov/health/topic/hai for more details): Clostridium difficile Infection and Staphylococcus aureus: Methicillin resistant Invasive Disease (Davidson County residents only) will also be reported monthly to the Emerging Infections Program (EIP). For Neonatal Abstinence Syndrome (NAS), a diagnosis should be reported using the NAS reporting portal (http://tn.gov/health/topic/nas).

[531] Clostridium difficile Infection
[509] Healthcare Associated Infections, Clostridium difficile
[524] Healthcare Associated Infections, Dialysis Events
[510] Healthcare Associated Infections, Methicillin resistant Staphylococcus aureus positive blood cultures

[511] Healthcare Associated Infections, Surgical Site Infections
[535] Healthcare Associated Infections, Ventilator Associated Events
[130] Staphylococcus aureus: Methicillin resistant Invasive Disease
[527] Neonatal Abstinence Syndrome

http://tn.gov/health/article/hai-reporting-requirements
Phased-in Reporting of HAI in Tennessee

http://tn.gov/health/article/hai-reporting-requirements
Alignment of Reporting Requirement in Tennessee with CMS

- **CLABSI**
  - Central Line-Associated Bloodstream Infections (CLABSI)
  - ADC 25 Excluded
  - Burn and Trauma ICUs Excluded
  - Neonatal ICUs
  - Long-Term Acute Care Hospitals (LTACs)
  - Specialty Care Areas

- **CAUTI**
  - Catheter-Associated Urinary Tract Infections (CAUTI)
  - Adult and Pediatric ICU
  - LTACs
  - A/P Wards

- **SSI**
  - Surgical Site Infections (SSI)
  - Coronary Artery Bypass Graft (CABG/C) Procedures
  - HPRO Procedures
  - CARD

- **MRSA/CDI**
  - LabID Events (MRSA/CDI)
  - Ventilator-Associated Events (VAE)
  - ADC 25 Excluded
  - Acute Care Facilities

- **DIALYSIS**
  - Dialysis Events (DE)
  - 2008 - 2016

- **HCW FLU VAX**
  - HCP Influenza Vaccination Summary
  - Some Data Points

*Adult and pediatric medical, surgical, and medical/surgical wards
## Alignment: Measurement, Roles & Responsibilities in Collaboratives

### Tennessee Partnership for Patients

**Alignment Grid 2014**

<table>
<thead>
<tr>
<th>Organization/Initiative</th>
<th>CLABSI</th>
<th>CAUTI</th>
<th>CDI</th>
<th>MRSA</th>
<th>SSI</th>
<th>Care Transitions/Readmissions</th>
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<tr>
<td>Tennessee Hospital Association (THA)/Tennessee Center for Patient Safety (TCP5)*</td>
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<td>Centers for Medicare &amp; Medicaid Services Inpatient Prospective Payment System (CMS IPPS)</td>
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<td>CMS Hospital-Acquired Condition (HAC)/Penalty Programs</td>
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</tbody>
</table>

* Includes Hospital Engagement Network (HEN)

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- Public Health (State Health Department)
- Quality Improvement Organization (QIO)
- Hospital Engagement Network (HEN)
- Hospital Association
- CMS initiatives
Adherence to the Centers for Disease Control and Prevention’s (CDC’s) Infection Definitions and Criteria is Needed to Ensure Accuracy, Completeness, and Comparability of Infection Information

- Review process that overrules the decision of an infection preventionist or hospital epidemiologist to report an infection to NHSN

- Ordering diagnostic tests in absence of clinical symptoms
  - e.g., obtaining urine specimens for culture and sensitivity testing from patients who have no symptoms of a urinary tract infection.

- Discouraging the ordering of diagnostic tests in the presence of clinical symptoms.
  - clinicians discouraged from ordering diagnostic microbiology tests (e.g., blood cultures) recommended by standards of care to avoid test results that would make infections reportable to NHSN.
CMS reminds hospitals that intentionally reporting incorrect data, or deliberately failing to report data that are required to be reported, may violate applicable Medicare laws and regulations. The Department of Health and Human Services’ (HHS’s) Office of Inspector General (OIG) protects the integrity of HHS programs, including Medicare and Medicaid. The Inspector General has the authority to exclude individuals and entities from participation in the Medicare, Medicaid, and other Federal healthcare programs and to impose Civil Monetary Penalties for certain misconduct related to Federal healthcare care programs. Hospital staff who become aware of intentional deviations from NHSN reporting protocols are encouraged to report their concerns to the OIG hotline.

Resources for HAI Legal and Policy Information

• Developed by CDC and the Association of State and Territorial Health Officials (ASTHO)

• Inpatient Settings

• Outpatient Settings

http://www.cdc.gov/HAI/prevent/policy.html
http://www.cdc.gov/phlp/publications/topic/hai.html
Summary:

- Five Elements Contributed to Success in Reducing CLABSI:
  1. Reliable and Valid Measurement System (NHSN)
  2. Evidence-Based Care Practices & Recommendations
  3. Investment in Implementation Sciences
  4. Local Ownership and Peer Learning Communities
  5. Align and Synergize Efforts

- Supported by Federal and State Laws and Policies
Antibiotic-resistant Infections

The Legal Perspective

Carbapenem-resistant enterobacteriaceae (CRE)

Methicillin-resistant Staphylococcus aureus (MRSA)
Antibiotic-resistant Bacteria


a. Antibiotic-resistant bacteria may cause more deaths than cancer.

b. The risk of infection from surgery will outweigh the need for surgery.

c. Modern medicine could revert to the pre-antibiotic period prior to 1928, when penicillin was developed.
The Emergence of Antibiotic Resistant Infections

- Bacteria have learned to become rapidly resistant to newly developed antibiotics.

- Infections cause catastrophic damage.

- Pharmaceutical companies have ceased developing new antibiotics.

- Soon, if current trends continue, we will see the "reemergence of diseases and infections that the world conquered decades ago". President Barack Obama's remarks at the Global Health Security Agenda Summit, September 26, 2014.
The National Strategy Change in the 21st Century

- The focus on the war against antibiotic-resistant infections has changed from infection control and prevention to the front line, last line of defense strategy of:
  - Judicious Use of Antibiotics
  - Governmental required surveillance systems for hospitals and health care providers
  - Development of rapid diagnostic tests to reduce unnecessary antibiotic use
  - Research and development of new antibiotics
  - International collaboration
The Emerging Standard of Care for the Healthcare Industry

- Hospitals will be below standard of care unless they develop an Antibiotic Stewardship Program.

- Hospitals will be below standard of care if they fail to develop and implement an infection control program.

- Hospitals will be below standard of care if they do not implement new technologies available to prevent infections.

- Medicare will continue to penalize hospitals that transmit HAIs.
Past History of Hospital Liability

20 years ago, infection was a known complication, easily treated with antibiotics, reducing damages to the patient. Hence, the legal community largely ignored the case.
21st Century Antibiotic-resistant Bacteria Law

- In the beginning of the 21st Century, damages to patients were becoming catastrophic due to transmission of antibiotic-resistant infections that were difficult or impossible to treat.
- Cluster cases emerged and were required for a viable case.
- Cases were difficult and expensive due to the difficulty in proving causation.
- The CDC, SHEA and APIC published new guidelines for infection control and stricter definitions for what would now be assumed to be a HAI.
- Hospitals developed risk management strategies to avoid antibiotic-resistant infections transmission liability.
- Governmental regulation, reduced reimbursement and legal liability sometimes had the opposite effect in reducing HAls.
Current Need for Lawyers on Both Sides to Become Involved

- The healthcare industry lost the battle with preventing transmission of antibiotic-resistant infections.
- It was impossible to prevent HAIs
- Surgery will become too risky, chemotherapy impossible, common bacterial illnesses untreatable.
- New theories of liability are emerging, providing new theories of liability and new strategies for preventing antibiotic-resistant bacteria transmission to avoid liability and reimbursement penalties.
New Theories of Liability

- Failure to establish and enforce Antibiotic Stewardship Programs.
- Failure to monitor judicious use of antibiotics within the hospital.
- Restricting and controlling antibiotic orders by physicians.
- Failure to adequately report HAIs.
- Failure to report lab results of antibiotic-resistant bacteria.
- Failure to develop epidemiologic surveillance of antibiotic-resistant bacteria cultured in the hospital.
- Failure to implement new technologies that are effective in reducing antibiotic-resistant bacteria.
- Failure to provide adequate post-operative care.
- Failure to culture.
- Failure to prescribe the correct antibiotic.
- Failure to recognize and treat infection.
- Failure to follow standard of care in prescribing antibiotics.
The Stakes are High

- Use of antibiotics will have to drastically change, perhaps used only as a last resort in controlled settings to ensure patient compliance.

- Eventually, antibiotic use may be eliminated in agriculture and medicine.
The Future without Antibiotics at Current Trends

- Surgery may no longer be an option unless medically necessary to prevent catastrophic outcomes or death.
- Medical care financial losses may be high with less surgeries taking place.
- It may be below standard of care to recommend surgery with the risk of infection outweighing the benefit of surgery.
- Common bacterial illnesses, previously treated with antibiotics, may become potentially life threatening.
- Medicare may no longer be able to pay for infection related illnesses.
- Hospitals may no longer be safe, resulting in shorter hospital stays, fewer hospitalizations and places of last resort for only end stage patients.
- Separate facilities for patients with infections may need to be established to prevent transmission to uninfected patients.
- Dedicated healthcare personnel and equipment may have to be assigned to infected patients to prevent spread of infection.
- New laws may be implemented to foster greater transparency and accountability for hospital infection control implementation and reporting.
Lawyers Need to Step up to the Frontline

- Plaintiffs will sue.
- Defense lawyers will advise on strategies to improve patient care and avoid liability.
- New standards of care will develop requiring investment into infection prevention and governmental compliance.
- Hospitals will be required to be transparent to the public regarding infection control activities.
- The end goal for all should be to win the international fight against antibiotic-resistant bacteria.
Question and Answer
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