New Hampshire
Healthcare-Associated Infections (HAI)
Annual NHSN Workshop: February 22, 2017

NH State HAI Program Overview

Katrina Hansen, MPH, Chief, Infectious Disease Surveillance
Healthcare-Associated Infections Program
Bureau of Infectious Disease Control
Infectious Disease Surveillance Section
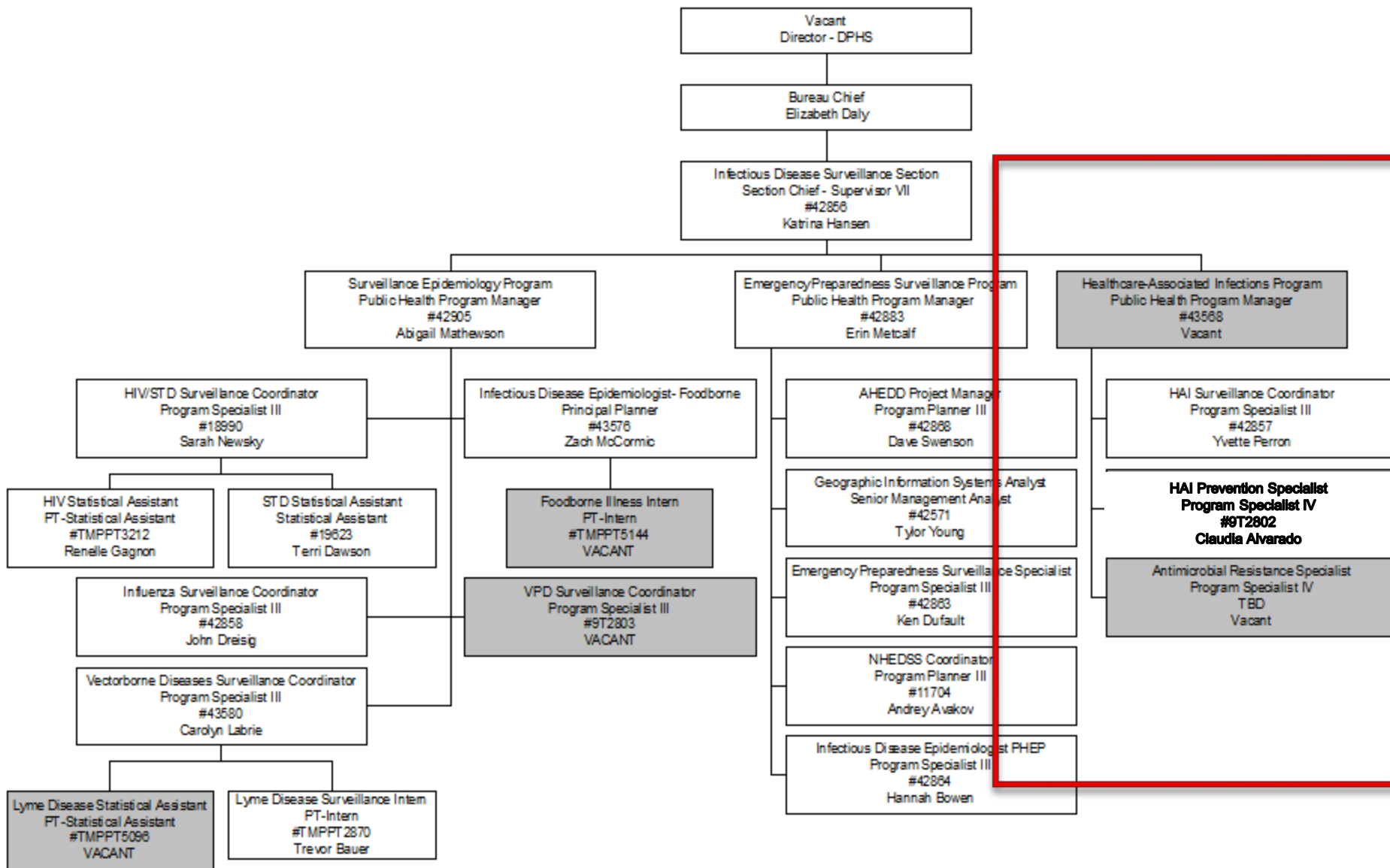NH Division of Public Health Services, DHHS

Updates:

- Program staffing
- HAI legislation
- HAI funding
- Current activities
  - Antimicrobial resistance surveillance/antibiograms
  - Program reports
  - Ebola and infectious disease readiness
  - Investigations
- Drug diversion discussion

HAI Program Staffing

- HAI Program Surveillance Coordinator/epidemiologist
  - Yvette Perron
- HAI Prevention Specialist (Ebola)
  - Claudia Alvarado
- HAI Program Manager
  - In external recruitment
- HAI Antimicrobial Resistance Specialist Position
  - In process of creating and posting position
- CDC public health associate
  - Hannah Leeman

Bureau of Infectious Disease Control
Infectious Disease Surveillance Section

Vacant
Director - DPHS

Bureau Chief
Elizabeth Daly

Infectious Disease Surveillance Section
Section Chief - Supervisor VII
#42856
Katrina Hansen

Surveillance Epidemiology Program
Public Health Program Manager
#42905
Abigail Mathewson

Emergency Preparedness Surveillance Program
Public Health Program Manager
#42883
Erin Metcalf

Healthcare-Associated Infections Program
Public Health Program Manager
#43568
Vacant

HIV/STD Surveillance Coordinator
Program Specialist III
#18990
Sarah Newsky

Infectious Disease Epidemiologist- Foodborne
Principal Planner
#43576
Zach McCormic

AHEDD Project Manager
Program Planner III
#42868
Dave Swenson

HAI Surveillance Coordinator
Program Specialist III
#42857
Yvette Perron

HIV Statistical Assistant
PT-Statistical Assistant
#TMPPT3212
Renelle Gagnon

STD Statistical Assistant
Statistical Assistant
#19623
Terri Dawson

Foodborne Illness Intern
PT-Intern
#TMPPT5144
VACANT

Geographic Information Systems Analyst
Senior Management Analyst
#42571
Tylor Young

HAI Prevention Specialist
Program Specialist IV
#9T2802
Claudia Alvarado

Influenza Surveillance Coordinator
Program Specialist III
#42858
John Dreisig

VPD Surveillance Coordinator
Program Specialist III
#9T2803
VACANT

Emergency Preparedness Surveillance Specialist
Program Specialist III
#42863
Ken Dufault

Antimicrobial Resistance Specialist
Program Specialist IV
TBD
Vacant

Vectorborne Diseases Surveillance Coordinator
Program Specialist III
#43580
Carolyn Labrie

NHEDSS Coordinator
Program Planner III
#11704
Andrey Avakov

Lyme Disease Statistical Assistant
PT-Statistical Assistant
#TMPPT5096
VACANT

Lyme Disease Surveillance Intern
PT-Intern
#TMPPT2870
Trevor Bauer

Infectious Disease Epidemiologist PHEP
Program Specialist III
#42864
Hannah Bowen

Legislation Update

- HAI legislation:
  - RSA 151 or HAI Law (SB 512)
    - Revived statute after recommendation of study committee
    - Added dialysis and HCP flu vaccination reporting in LTC and the veterans home
      - http://gencourt.state.nh.us/bill_Status/default.aspx
    - Working to update administrative rules
      - We will communicate any public hearings and engage stakeholders for feedback
      - On hold till March 31st
  - Reportable disease and conditions list
    - Passed and effective as of 11/3/2016

Legislation Update

- HAI legislation:
  - Reportable disease and conditions list, continued

Summary of Key Changes

1. Reportable Diseases

   The new reportable disease list is available online at:
   http://www.dhhs.nh.gov/dphs/cdcs/documents/reportablediseases.pdf

Conditions Removed:	Conditions Added:
• Group A/B Streptococcus • Vancomycin-resistant enterococci • Latent tuberculosis Infection reporting from healthcare providers • Hepatitis B laboratory reporting	• Acute flaccid myelitis • Dengue, Chikungunya virus, Powassan virus, Zika virus • Carbapenem-resistant enterobacteriaceae (CRE) • Leptospirosis • Newly diagnosed infections of Hepatitis C from healthcare providers only (no laboratory reporting) • Newly diagnosed infections of Hepatitis B from healthcare providers only (no laboratory reporting) • Any suspected, investigation of suspected, or actual incident of drug diversion of injectable medications in a health care setting that may pose a threat to patient health and safety

Funding

- Federal funding
  - ELC Grant
    - Applied for funds to support program infrastructure and additional activities
    - Awarded all of requested funds = $458,845
  - ELC supplemental grant
    - $589,632 for Ebola preparedness and infectious disease readiness over course of 3 years
- Facility fees
  - Need to calculate for 2016- <u>much</u> less due to receipt of federal funds

Funding

- ELC Grant activities
  - Increase staffing/expertise
    - Hire a full-time NH DPHS position titled 'antimicrobial resistance specialist' or ARS; and
    - Contract to provide clinical subject matter expertise through 'antimicrobial resistance clinical advisor(s)' or ARCA
    - Attend and present activities at HAI TAW
  - Convene Antimicrobial Resistance Advisory Workgroup (ARAW) New multidisciplinary workgroup discuss AR in NH and coordinate plans

Funding, activities cont

- Collaborate with other statewide partners regarding AR (e.g., CMS QIO-QIN, Foundation for Healthy Communities)
- Review surveillance data and guide data for action, including
  - CDC NHSN TAP reports
  - CRE
  - Antibiogram data
  - Voluntarily reported AUR and CDI data through NHSN
- Develop plans for coordinated approach to reduce AR
  - http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6430a4.htm

HAI Activities

- HAI reports
- HCP Influenza Vaccination
  - Reports and NIOSH study
- HAI investigations and outbreak response
- Ebola and infectious disease readiness
- Antimicrobial Resistance
  - CRE reporting
  - Antibiogram reporting/analysis
- HAI protocols/guidelines
  - CJD protocol
- National HAI workgroups

Antibiograms

- Antibiogram analysis
  - Analyzing voluntarily reported antibiograms
  - Lessons from other states with reporting :
    - Use consistent Adobe form for reporting
    - Provide benchmarking reports for facilities for stewardship efforts
- Next steps:
  - Plan to present preliminary findings next meeting
  - Analyze 2016 reported data
  - Outstanding questions:
    - Data quality and reviewing outliers
    - Format
    - Standardization

NH DIVISION OF
Public Health Services
Improving health, preventing disease, reducing costs *for all*
New Hampshire Department of Health & Human Services

Influenza Brief Key Points-preliminary

- Hospitals: highest HCP influenza vaccination rate
  - Except for 2010-11, when ASCs had the highest vaccination rate (82.7%)
- ALFs: lowest vaccination rates during all seasons during which these data were collected
- Hospital data shows gradual increase in coverage since 2008
- ASCs and ALFs observed more constant rates
- Facilities with policies had higher vaccination rates than facilities of the same type without policies

Influenza Brief Key Points- Preliminary
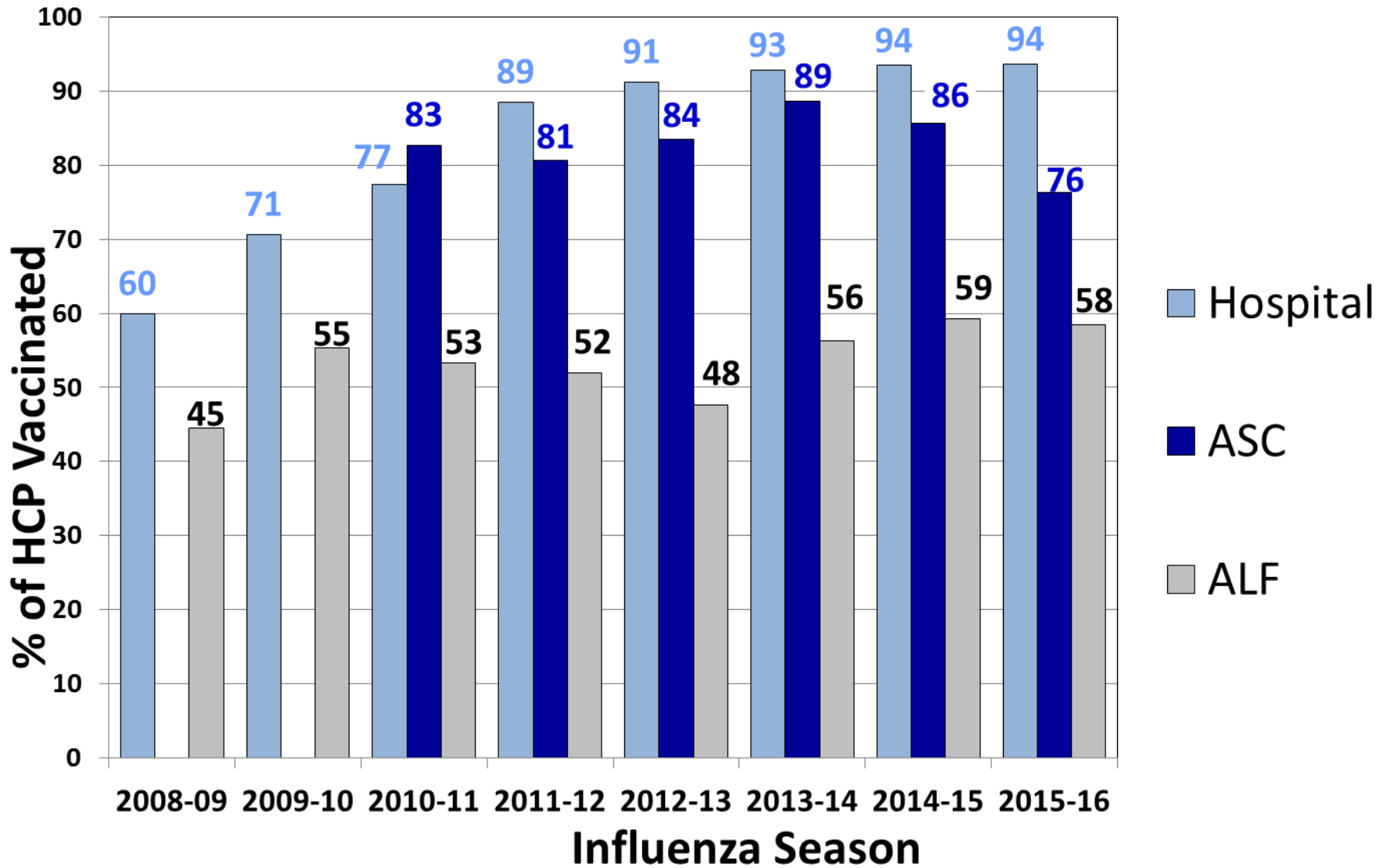
HAI Reports: HCP Flu

- Considering changing presentation of HCP flu data- will revisit for next year.
  - 3 options: 1) use current/prior method (compare facilities to state pooled mean), 2) compare to Healthy People 2020 goal or 90%, or 3) compare to national pooled mean

1a: Recommended Comparison Group

The Department of Health and Human Services (HHS) Healthy People 2020 goal for healthcare worker influenza vaccination percentage is 90% for the entire facility. The workgroup recommends using this metric as the standard against which facilities' vaccination percentages should be compared. Benefits to this approach are that the benchmark stays standard from year to year and that a state's facilities can show progress toward a goal that is shared among all states in the nation.

HAI Reports

- HAI report format
    - Short and separate healthcare consumer report in addition to technical report
    - Considering updating technical report with suggestions from HAI data analysis workgroup

Healthcare-Associated Infection Data Analysis and Presentation Standardization Toolkit

CSTE
COUNCIL OF STATE AND TERRITORIAL EPIDEMIOLOGISTS

NOVEMBER 2015

- For more info see the toolkit here or visit blog
    - http://cste.site-ym.com/?HAIToolkit
    - http://cste.site-ym.com/blogpost/1084057/CSTE-Features

NH DIVISION OF
Public Health Services
Improving health, preventing disease, reducing costs *for all*
New Hampshire Department of Health & Human Services
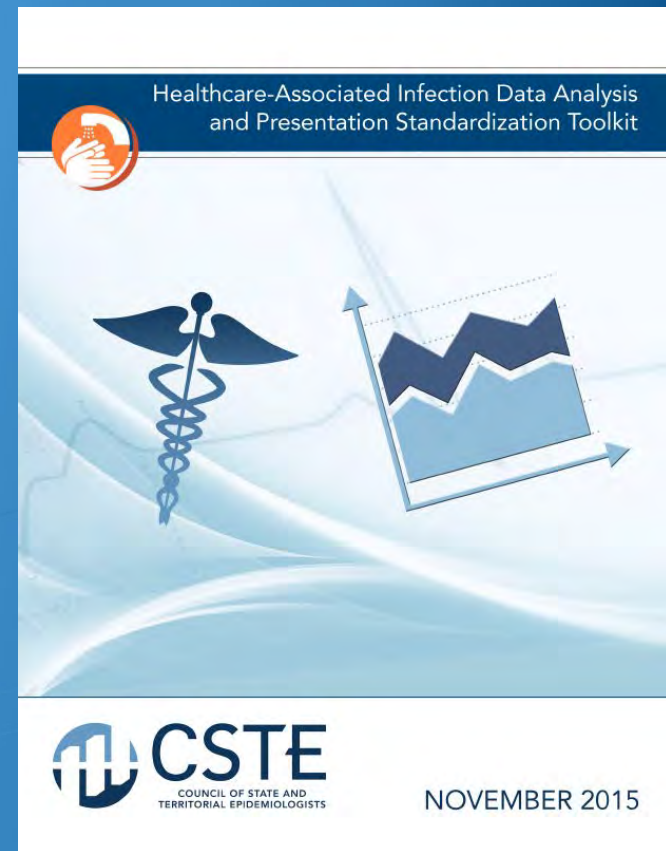
Tennessee's Report on Healthcare-Associated Infections for Healthcare Consumers

January 1, 2014 – December 31, 2014

Tennessee Department of Health | Report | October 2015

TN HAI Consumer report:
http://tn.gov/assets/entities/health/attachments/TN_HAI_Report_Consumer_October_2015.pdf

Results

Reading Guide to the HAI Data Tables: An Explanation of Each Variable

Below is a list of all variables shown in the HAI data tables:

- **Title**: The title of the table gives you information about the infection type, time period, geographic location, and facility type included in the table.

- **Facility Name:** This is the name of the facility. Facilities with multiple campuses will have each campus identified separately.

- **Procedure Type:** This is the specific type of surgery for which the surgical site infection (SSI) data are presented (such as abdominal hysterectomy or colon surgery). If acronyms are used, you can find the full name of the surgery in the legend or in the table's title.

- **Number of Procedures:** This is the total number of surgeries performed by a facility during 2014.

- **Observed Infections (or Observed Events):** This is the number of infections (or events, for LabID measures) that was reported by the facility.

- **Predicted Infections (or Predicted Events):** This is a calculated value that reflects the number of infections (or events, for LabID measures) that we have "predicted" to occur in this facility, based on the national experience.

- **"How Does This Facility Compare to the National Experience?"** Colors and symbols are used to help you quickly understand and interpret the facility's data. This is the "take-home message" about healthcare-associated infections in this facility.

  ★ Indicates that the facility had fewer infections than were predicted (better than the national experience)

  = Indicates that the facility had about the same number of infections as were predicted (same as the national experience)

  ✗ Indicates that the facility had more infections than were predicted (worse than the national experience)

No Conclusion: Indicates that this facility reported data, but there was not enough information to make a reliable comparison to the national experience (number of predicted infections was less than 1).

Table 2: Central Line-Associated Bloodstream Infection (CLABSI) in Adult and Pediatric Intensive Care Units (ICU) in Tennessee Acute Care Hospitals, 01/01/2014 - 12/31/2014

Facility Name	Observed Infections	Predicted Infections	How Does This Facility Compare to the National Experience?
Baptist Memorial Hospital - Collierville	0	Less than 1.0	No Conclusion
Baptist Memorial Hospital - Huntingdon	0	Less than 1.0	No Conclusion
Baptist Memorial Hospital - Memphis	36	24.2	✗ Worse
Baptist Memorial Hospital - Union City	0	Less than 1.0	No Conclusion
Baptist Memorial Hospital - Tipton	0	Less than 1.0	No Conclusion
Baptist Memorial Hospital for Women	0	Less than 1.0	No Conclusion
Blount Memorial Hospital	1	4.0	= Same
Bristol Regional Medical Center	11	8.3	= Same
Centennial Medical Center	9	17.4	★ Better
Claiborne Medical Center	1	Less than 1.0	No Conclusion
Cookeville Regional Medical Center	6	6.2	= Same
Cumberland Medical Center	6	1.9	✗ Worse
DeKalb Community Hospital	0	Less than 1.0	No Conclusion
Delta Medical Center	0	Less than 1.0	No Conclusion
Dyersburg Regional Medical Center	0	Less than 1.0	No Conclusion
East Tennessee Children's Hospital	1	3.4	= Same
Erlanger Medical Center	6	23.1	★ Better
Fort Loudoun Medical Center	0	Less than 1.0	No Conclusion
Fort Sanders Regional Medical Center	4	8.0	= Same
Franklin Woods Community Hospital	0	Less than 1.0	No Conclusion
Gateway Medical Center	2	2.6	= Same

TN HAI Consumer report: http://tn.gov/assets/entities/health/attachments/TN_HAI_Report_Consumer_October_2015.pdf

Legend				
★ Fewer infections (better) than predicted based on the national experience.*	= About the same number of infections as predicted based on the national experience.*	✗ More infections (worse) than predicted based on the national experience.*	No Conclusion	When the number of predicted infections is less than 1, no conclusion can be made.

National experience contains data from 2006-2008 for CLABSI.

Catheter-Associated Urinary Tract Infections (CAUTI)

A *urinary catheter* is a tube placed in the bladder to drain urine. A *catheter-associated urinary tract infection (CAUTI)* can occur when bacteria or other germs travel along a urinary catheter, resulting in an infection in the bladder or the kidney.

Only hospitals with eligible intensive care units during 2014 are included in the following tables. In the following tables, hospitals are compared to the national experience from 2009, national data used by CDC for comparison.

Table 4: Catheter-Associated Urinary Tract Infections (CAUTI) in Adult and Pediatric ICUs in Tennessee Hospitals Overall, 01/01/2014 – 12/31/2014

Location Type	Observed Infections	Predicted Infections	How do Tennessee Hospitals Compare to the National Experience?
Adult/Pediatric ICUs	803	658	✕ Worse

Comparison to the National Experience	Number of Hospitals
★ Better	2
= Same	60
✕ Worse	9
No Conclusion	20

Legend			
★ Fewer infections (better) than predicted based on the national experience.*	= About the same number of infections as predicted based on the national experience.*	✕ More infections (worse) than predicted based on the national experience.*	No Conclusion When the number of predicted infections is less than 1, no conclusion can be made.
National experience contains data from 2009 for CAUTI			

TN HAI Consumer report: http://tn.gov/assets/entities/health/attachments/TN_HAI_Report_Consumer_October_2015.pdf

HAI Consumer report template

- Brief discussion
- What do you like about it? Not like?
  - Colors, symbols, text, layout, language?

Ebola and Infectious Disease Readiness

- Activity A: Focus on infection control assessment program and Ebola preparedness
  - ✓ A.1. Expand State HAI plan and advisory group
  - A.2. Improve coordination between department of health and healthcare settings (facility inventory)
  - ✓ A.3: Assess readiness of designated Ebola facilities
    - Onsite assessments, CDC Infection Control Assessment and Response Program (ICAR) Ebola ready by March?
  - A.4. Assess and improve HAI outbreak reporting

Ongoing

NH DIVISION OF
Public Health Services
Improving health, preventing disease, reducing costs *for all*
New Hampshire Department of Health & Human Services

Ebola and Infectious Disease Readiness

- Activity A: Focus on infection control assessment program and Ebola preparedness
  - A.4. Assess and improve HAI outbreak reporting (cont)
    - Report back to CDC regarding tracking system(s)
    - Currently track in Excel and can use NHEDSS for certain pathogens.
    - Some states using RedCap or other tools that allow them to automatically generate reports

Ebola and Infectious Disease Readiness, cont.

- Activity B: Beyond Ebola
  - B.1. Expand assessment
    - Assess all acute care hospitals using tool provided by CDC
      - Coordinating with QIO (6 facilities)
      - Not regulatory
    - Assess urgent care facilities using outpatient tool
  - B.2. Increase infection control competency and practice
    - Contract for mixed level and facility trainings

Ongoing for 2 more years

NH DIVISION OF
Public Health Services
Improving health, preventing disease, reducing costs *for all*
New Hampshire Department of Health & Human Services

CRE Update

- Reportable starting 11/3/16
- 4 cases reported since rules took effect
- Using updated CDC case definition:
  - *Resistant to imipenem, meropenem, doripenem, or ertapenem OR documentation that the isolate possess a carbapenemase*
- Currently updating surveillance system to track data
  - Discussion:
    - Data points we should collect (e.g., how case meets definition, specimen source, etc)?

HAI Protocols:

- Drug diversion
    - National meeting in NH
    - EMS group still meeting
- Creutzfeldt-Jakob Disease (CJD)
    - Started conference calls, drafting protocol
- IC breach
    - Protocol document highlighting steps to investigate and further public health actions
- CRE reporting protocol

Investigations-

- 2016
  - 7 investigations
    - 2 Multistate outbreaks
      - Heater-Cooler Systems
      - Organ Preservation Solutions
    - 5 infection control breach /concerns
      - 2 in dental settings
- 2017
  - 3 suspected drug diversion investigations
  - 4 CRE
  - 1 CDI cluster investigation

Drug diversion

1) Prevent further risk to patients at the facility	**a.** Remove the implicated health care professional from the clinical environment and revoke any previously authorized access to controlled substances (e.g., suspend computerized access to automated medication dispensing machines) pending further investigation **b.** Evaluate security of controlled substances to address gaps in adherence to recommended and required practices c. Identify any previous or current discrepancies in narcotics oversight

2) Prevent risk to patients at other health care facilities	**a.** Contact law enforcement
	    i. Local law enforcement
	    ii. Drug Enforcement Administration (DEA)
	        a. DEA registrants are required to notify the DEA of the theft or significant loss of any controlled substance within 1 business day of discovery of such loss or theft
	    iii. Food and Drug Administration Office of Criminal Investigation, particularly if product tampering, including substitution is suspected
	
	b. File report with applicable licensure agencies (e.g., Board of Medicine, Board of Nursing, Board of Pharmacy)
	
	c. File report with the New Hampshire Division of Public Health Services to ensure no patient risk to blood-borne pathogens

3) Assess retrospective risk to patients	**a.** Assess the mechanism(s) of diversion used by the implicated health care professional
	    i. Were injectable medications diverted? Or did implicated health care professional have access to injectable medications?
	    ii. Was any type of tampering with injectable medication performed? If yes, assess potential for patients to be exposed to the healthcare professional's blood (e.g., through swapping with syringes previously used by health care professional)
	    ii. Convene a response team that includes infection control and prevention employee(s)
	b. If tampering with injectable medication is suspected, pursue blood-borne pathogen testing of the implicated health care professional.
	    i. If implicated health care professional tests negative: test again 6 months last date of employment to account for a window period

Drug diversion- public health steps

- Contact facility to understand situation and assess patient risk
  - Type of medication, injectable, tamper resistant, how diverted (e.g., substitution and tampering),
- Look in surveillance systems to see if there is any clustering of BBP
- Work with facility to provide testing recommendations and options for implicated HCW if status unknown
- Work with facility to encourage reporting to other regulatory authorities
- Provide additional information and resources
- Table top exercises

Drug diversion

- Are you involved as ICPs?
- Any suggestions or ideas that you are implementing in your facility?
  - BBP testing during drug screen?
  - IP included to assess patient risk?

Questions?

NHSN experience
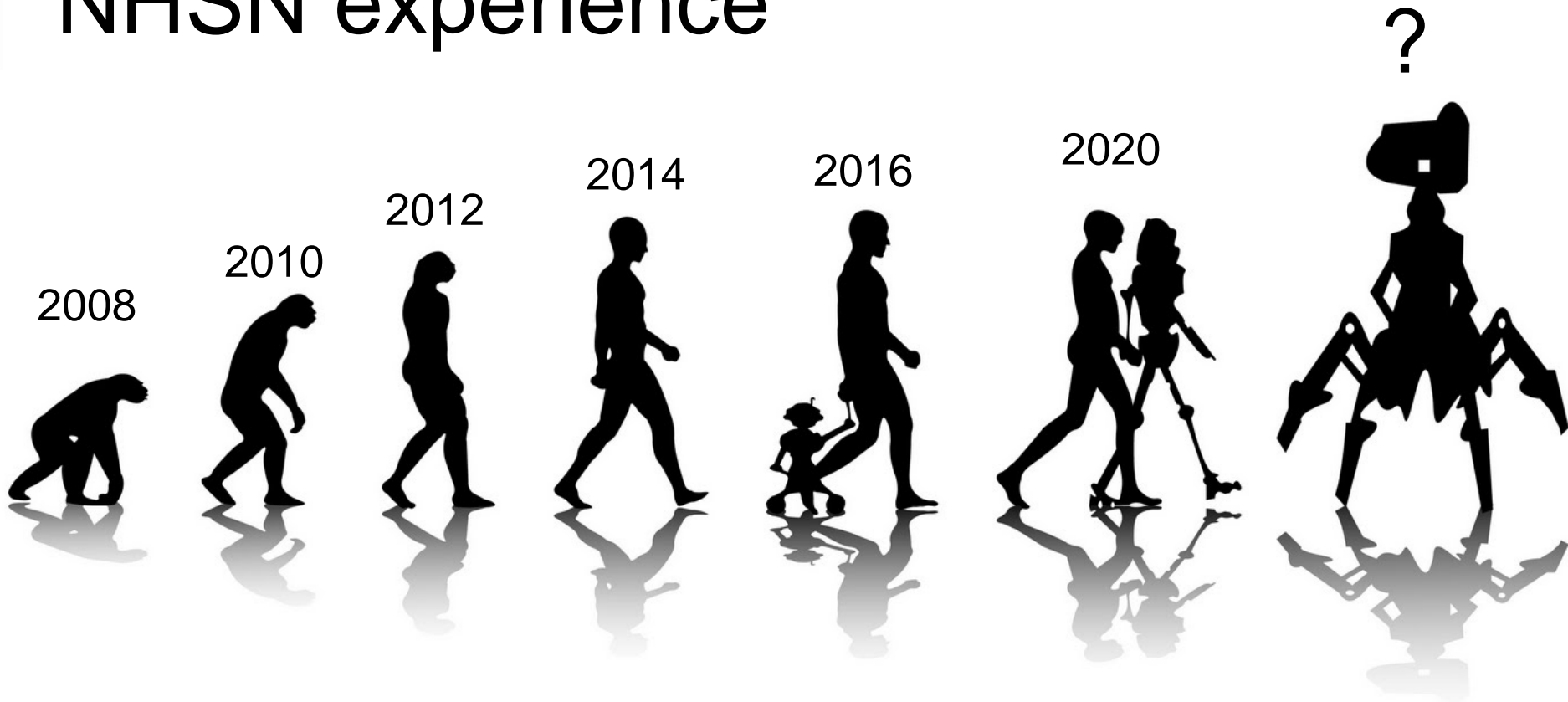
2008 2010 2012 2014 2016 2020 ?

For More Information:

Katrina Hansen, MPH
Chief, Infectious Disease Surveillance Section
603-271-8325
Katrina.hansen@dhhs.nh.gov

Yvette Perron
HAI Surveillance Coordinator
603-271-5927
Yvette.perron@dhhs.nh.gov

Claudia Alvarado, RN, BSN
HAI Prevention Specialist
603-271-8075
Claudia.alvarado@dhhs.nh.gov

Hannah Leeman
CDC Public Health Associate
603-271-1058
Hannah.leeman@dhhs.nh.gov

NH DIVISION OF
Public Health Services
Improving health, preventing disease, reducing costs *for all*
New Hampshire Department of Health & Human Services

NH DIVISION OF
Public Health Services
Improving health, preventing disease, reducing costs *for all*
New Hampshire Department of Health & Human Services