



# National Healthcare Safety Network Members' Meeting

**APIC 2019**

June 13, 2019

5:00-6:30 p.m.

Location: Pennsylvania Convention Center, 109AB

# Agenda

- **Welcome** – Maggie Dudeck
- Training and Education Update- Katherine Allen-Bridson
- Federal Register Notice Pilot- Katherine Allen-Bridson
- MDRO/CDI Update- Denise Leaptrot
- Surgical Site Infection Update- Vicki Russo
- Central Line-associated Bloodstream Infection Update- LaTasha Powell
- Neonatal and Pediatric Work- Susan Cali
- Analysis Updates- Maggie Dudeck
- Antimicrobial Use & Resistance Module Updates- Amy Webb
- Clinical Document Architecture Updates- Ahmed Tahir
- Long-term Care Facility Component Updates- Angel Anttila

# Welcome

Maggie Dudeck

**NEW!!**



# NHSN



**Coming Soon!**

Neonatal Late Onset Sepsis

## NHSN Participation – as of June 10, 2019

Facility Type	# of Active, Enrolled Facilities
Acute Care Hospitals	4,700
Critical Access Hospitals	1,282
Long Term Acute Care Hospitals	471
Inpatient Rehab Facilities	363
Outpatient Dialysis Facilities, Home Peritoneal Dialysis	7,509
Ambulatory Surgery Centers	4,639
Long Term Care Facilities	2,995
<b>TOTAL</b>	<b>21,959</b>

# 2017 National and State HAI Progress Report

- <https://www.cdc.gov/hai/data/portal/progress-report.html>

Nationally, among acute care hospitals, the highlights in this report include:

- About 9% statistically significant decrease in CLABSI between 2016 and 2017
  - Largest decrease in wards (10%)
- About 5% statistically significant decrease in CAUTI between 2016 and 2017
  - Largest decrease in ICU (8%)
- About 3% statistically significant decrease in VAE between 2016 and 2017
- About 1% statistically significant decrease in SSI related to the 10 select procedures tracked in the report between 2016 and 2017.
  - The 10 select procedures are Surgical Care Improvement Project (SCIP) procedures. For a list of the SCIP procedures, please see: <https://health.gov/hcq/pdfs/ssi2012.pdf>  [PDF - 2 pages] 
- No significant changes in abdominal hysterectomy SSIs
- No significant changes in colon surgery SSIs
- About 8% statistically significant decrease in MRSA bacteremia between 2016 and 2017
- About 13% statistically significant decrease in *C. difficile* infections between 2016 and 2017

# 2017 National and State HAI Progress Report

- Also available via the Patient Safety Atlas:  
<https://gis.cdc.gov/grasp/PSA/HAIreport.html>

Select your healthcare-associated infection (HAI) data for various healthcare settings.

National Acute Care Hospitals 2017

DATA LEGEND

- SIR is significantly higher (worse) than comparison group.
- SIR increase or decrease is not significantly different than comparison group.
- SIR is significantly lower (better) than comparison group.
- Significant increase from the previous year.
- No significant change from the previous year.
- Significant decrease from the previous year.

## National Data for Acute Care Hospitals, Year 2017

Card View Table

**CLABSI** **-19%**  
LOWER COMPARED TO NAT'L BASELINE

U.S. hospitals reported a significant decrease in CLABSIs between 2016 and 2017.

**9%** Among the 2,337 hospitals in U.S. with enough data to calculate an SIR, 9% had an SIR significantly higher (worse) than 0.81, the value of the national SIR.

### 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.

**CAUTI** **-12%**  
LOWER COMPARED TO NAT'L BASELINE

U.S. hospitals reported a significant decrease in CAUTIs between 2016 and 2017.

**11%** Among the 2,589 hospitals in U.S. with enough data to calculate an SIR, 11% had an SIR significantly higher (worse) than 0.88, the value of the national SIR.

### 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.

# NHSN Training and Education

Katherine Allen-Bridson

# NHSN Available Training – Overview

- ❑ 2019 NHSN Training Archived Webstream Videos - available now!
  - CLABSI, CAUTI, VAE, pedVAE, PNEU, LabID Events, SSI, Analysis, AUR, Validation, and OPC sessions, as well as an introduction to the upcoming Neonatal Component
- ❑ Quick Learns
  - 5 – 15 minute videos addressing specific NHSN topics
- ❑ Self-paced Interactive Trainings - CBTs
  - Self-paced activity with detailed protocol information, step-by-step examples of form completion, practice questions, and case study examples
  - Available for: Device and Procedure-associated Modules, MDRO/CDI LabID Events, Outpatient Procedure Component, Dialysis Event, and Biovigilance

# NHSN Training Website: <http://www.cdc.gov/nhsn/training/>

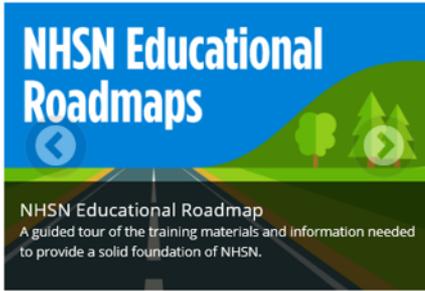
## National Healthcare Safety Network (NHSN) Training

CDC > NHSN Home

Our mission is to offer learning opportunities in a variety of formats that enhance the knowledge and skills of NHSN facility- and group-level participants and their partners in order that they may effectively use the data obtained from the surveillance system to improve patient and healthcare personnel safety.

### Objectives

- Convey NHSN data collection methods, submission requirements, and analysis options to participants so that they may acquire, submit, and disseminate high quality, actionable data.
- Prepare participants to use the NHSN reporting application accurately and efficiently.
- Enhance participants' and their partners' understanding of data quality and the value of adverse event monitoring.
- Encourage collaboration among participants and partners to improve the patient and healthcare personnel safety across the spectrum of care.



### Patient Safety Component



Self-paced Interactive Trainings, Annual Training Videos and Quick Learns

### Biovigilance Component



Self-paced Interactive Trainings, Annual Training Videos and Quick Learns

### Healthcare Personnel Safety Component



Self-paced Interactive Trainings, Annual Training Videos and Quick Learns

### Long-term Care Facility Component



Self-paced Interactive Trainings, Annual Training Videos and Quick Learns

### Dialysis Component



Self-paced Interactive Trainings, Annual Training Videos and Quick Learns

### Outpatient Procedure Component



Self-paced Interactive Trainings, Annual Training Videos and Quick Learns



**Resources for Users New to NHSN**  
Self-paced training for new NHSN enrollment and existing facility set-up.



**NHSN Educational Roadmap**  
A guided tour of NHSN training materials and information.



**NHSN Analysis**  
Self-paced training for introductory and advanced NHSN analysis.



**Continuing Education**  
Free CE available for all NHSN education course work.



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**Request CDC Led Training**  
Webinar / In-person training policy and request.

# 2019 NHSN Live Training: Slidesets and Webstream Videos

## National Healthcare Safety Network (NHSN) Training

CDC > NHSN Home

 NHSN Home

NHSN Training

NHSN Demo +

Resources for Users New to NHSN +

NHSN Educational Roadmaps +

NHSN Analysis

Biovigilance Component

Dialysis Component

## Continuing Education



NHSN Web streaming / Webinar Events

National Healthcare Safety Network provides online access to the continuing education process. This process includes registration for a course on the topic, completing the course posttest and assessment, and printing a certificate of completion to complete this process online.

### Expiration

You must submit your answers online before the stated expiration date to receive credit. Please check each course for expiration dates.

## NHSN Training Videos

Presentations from the annual NHSN live training hosted at CDC are recorded and posted as archived videos. You can view presentation on how to identify, report, and analyze VAE, PedVAE, CAUTI, CLABSI, Secondary Bloodstream Infection (BSI) and Site-Specific Infections, SSI, MRSA Bacteremia and C. difficile LabID events, as well as presentations on validation of healthcare-associated infection data and data quality, reporting and analysis of antibiotic use and resistance data, the Outpatient Procedure Component (OPC), and information on the upcoming NHSN Neonatal Component.

### Overview



General NHSN Definitions for 2019 – May 2019

- [YouTube Link \[Video – 52 min\]](#)
- [Slideset](#)  [PDF – 5 MB]



Internal Data Validation and Data Quality – May 2019

- [YouTube Link \[Video – 29 min\]](#)
- [Slideset](#)  [PDF – 1 MB]



AJIC NHSN Case Study Session – May 2019

- [YouTube Link \[Video – 44 min\]](#)
- [Slideset](#)  [PDF – 1 MB]

### On This Page

[Overview](#)

[AUR](#)

[BSI](#)

[CAUTI](#)

[MRSA & CDI LabID](#)

[NICU](#)

[OPC](#)

[PNEU](#)

[PedVAE](#)

[SSI](#)

[VAE](#)

[PSC Analysis](#)

[LTCF](#)

# 2019 Self-paced Interactive Trainings

National Healthcare Safety Network (NHSN) Training

## Self-paced Interactive Trainings

Training courses that are self-paced and computer-based. The online courses provide instructional slides with detailed graphics, screen shots with step-by-step examples of form completion for instructional purposes, practice questions, and case study examples. Hyperlinks to the forms, protocols and NHSN manual are available throughout the course and available for printing if needed.

Open All

Close All

### Device-associated Module

[Introduction to Device-associated Module Training](#) [CBT - 60 min]

[CLABSI Training](#) [CBT - 60 min]

[CAUTI Training](#) [CBT - 60 min]

[Ventilator Associated Pneumonia](#) [CBT - 60 min]

[CLIP Training](#) [CBT - 60 min]

[Ventilator-associated Events Part 1](#) [CBT - 60 min]

[Ventilator-associated Events Part 2](#) [CBT - 60 min]

[WB2594 Continuing Education Information](#) [PDF - 343 KB]

[WB4103 Continuing Education Information](#) [PDF - 521 KB]

## Education

Training / Webinar



Self-paced Interactive Trainings

Work provides online access to complete the continuing education (CE) certificate registration for a course on the CDC Training and Continuing Education Online system, and assessment, and printing of the CE certificate. To receive CE, participants must

- **NEW** – Ventilator-associated Events and Outpatient Procedure Component
- **Coming soon** – PedVAE and LOS/MEN

# NHSN Continuing Education

<https://www.cdc.gov/nhsn/training/continuing-edu.html>

❑ Continuing Education is available for Self-paced Interactive Training and is pending for Archived Webstreaming Training

❑ CE available: CNE, CEU, CME, CPH

## Continuing Education



NHSN Web streaming / Webinar Events



Self-paced Interactive Trainings

National Healthcare Safety Network provides online access to complete the continuing education (CE) certificate process. This process includes registration for a course on the CDC Training and Continuing Education Online system, completing the course posttest and assessment, and printing of the CE certificate. To receive CE, participants must complete this process online.

### Expiration

You must submit your answers online before the stated expiration date to be eligible to receive continuing education credit. Please check each course for expiration dates.

### Obtaining Continuing Education for NHSN Training Events

1. Once you completed viewing the courses, go to CDC [Training and Continuing Education Online](#).
  - a. If you have not registered as a participant, click on **New Participant** to create a user ID and password; otherwise click on **Participant Login** and login.
  - b. If you have registered in this system before, please use the same login name and password. This will ensure an accurate transcript.
2. Once you have logged in, you will be on the Participant Services page. Click on **Search and Register**. Then click on the second option **keyword search** and enter the course number. You can only register and enter one course at a time.
3. Click on the course title (at the bottom of the page). The course information page will come up. Scroll down to **Register Here**. Click on the type of CE that you would like to receive and then **Submit**. Three demographic questions will come up. Complete the questions and then **Submit**.

# Quick Learns

NHSN Quick Learns are 5-15 minute learning resources addressing specific NHSN topics. The Quick Learns may define a specific part of a protocol or deliver approaches for data analysis within the NHSN application.

**Example:** <https://www.cdc.gov/nhsn/training/patient-safety-component/index.html>

**BSI – Bloodstream Infections**

**Training Videos**

- Central Line-associated Bloodstream Infection (CLABSI) – May 2019
  - [YouTube Link \[Video - 89 min\]](#)
  - [Slideset](#) [PDF - 7 MB]
- CLABSI Surveillance and Analysis Group Exercise – May 2019
  - [YouTube Link \[Video - 23 min\]](#)
  - [Slideset](#) [PDF - 1 MB]
- Secondary BSI and NHSN Site-specific Infections – May 2019
  - [YouTube Link \[Video - 67 min\]](#)
  - [Slideset](#) [PDF - 3 MB]
- Secondary BSI and NHSN Site-specific Infections Group Exercise – May 2019
  - [YouTube Link \[Video - 14 min\]](#)
  - [Slideset](#) [PDF - 1 MB]

**Self-paced Training**

- [CLABSI Training](#) [CBT - 60 min]

**Quick Learns**

- Denominator Device Day and Central Line Day Counts for Device Attribution
  - [YouTube Link \[Video - 17 min\]](#)
- BSI Definition Changes for January 2015
  - [YouTube Link \[Video - 14 min\]](#)
- Secondary Bloodstream Infections May 2016
  - [YouTube Link \[Video - 9 min\]](#)

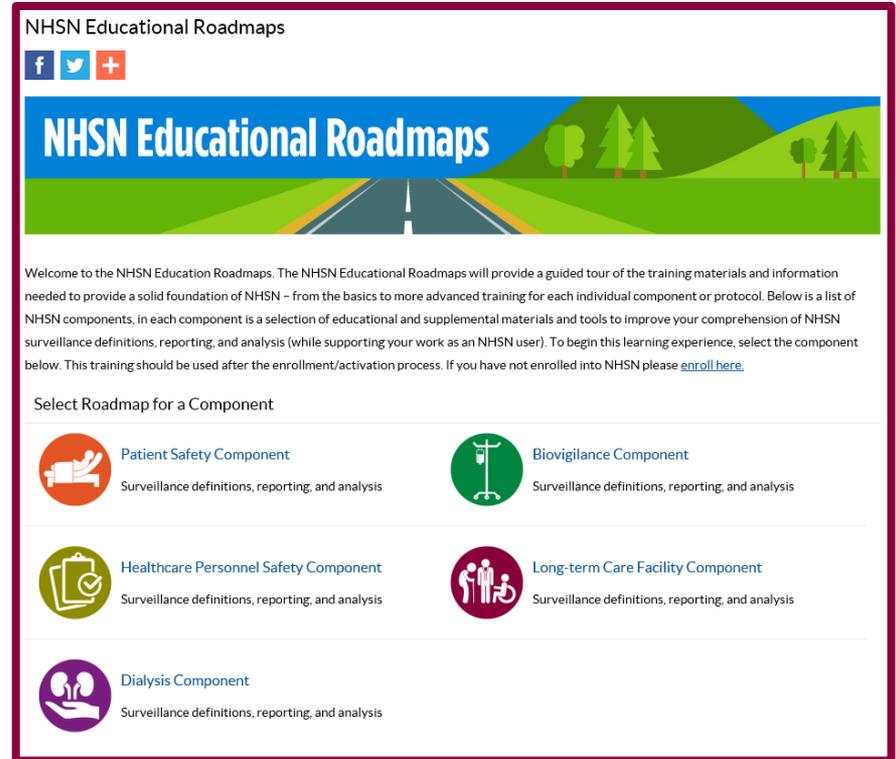
## Quick Learns Coming Soon...

- ❑ SAAR Part 1
- ❑ SAAR Part 2
- ❑ Tapping into HAI Prevention Targeted Assessment for Prevention (TAP) Strategy Using Data for Action

# NHSN Educational Roadmaps

<http://www.cdc.gov/nhsn/training/roadmap>

- NHSN Educational Roadmaps for each NHSN component updated for 2019
- Tools to improve your comprehension of NHSN surveillance definitions, reporting, and analysis
- Guided tour of the NHSN training materials and information – from the basics to more advanced training for each individual component and protocol



The screenshot shows the NHSN Educational Roadmaps website. At the top, there is a header with the title "NHSN Educational Roadmaps" and social media icons for Facebook, Twitter, and a plus sign. Below the header is a banner image featuring a road leading through a green landscape with trees and hills, with the text "NHSN Educational Roadmaps" overlaid. The main content area contains a welcome message: "Welcome to the NHSN Education Roadmaps. The NHSN Educational Roadmaps will provide a guided tour of the training materials and information needed to provide a solid foundation of NHSN – from the basics to more advanced training for each individual component or protocol. Below is a list of NHSN components, in each component is a selection of educational and supplemental materials and tools to improve your comprehension of NHSN surveillance definitions, reporting, and analysis (while supporting your work as an NHSN user). To begin this learning experience, select the component below. This training should be used after the enrollment/activation process. If you have not enrolled into NHSN please [enroll here](#)." Below the welcome message is a section titled "Select Roadmap for a Component" with five options, each with an icon and a description: "Patient Safety Component" (orange icon of a person in bed), "Biovigilance Component" (green icon of a person with a microscope), "Healthcare Personnel Safety Component" (green icon of a clipboard with a checkmark), "Long-term Care Facility Component" (purple icon of a person in a wheelchair), and "Dialysis Component" (purple icon of a person with a dialyzer).

# Decennial 2020 - Charting the Future of Prevention

- ❑ 6th International Conference on Healthcare Associated Infections  
Marriott Marquis, Atlanta, GA  
March 26 – 30, 2020
- ❑ Co-Hosted By SHEA & CDC

*There will be no 2020  
NHSN Patient Safety  
Annual Training*

# Federal Register Notice Pilot

Katherine Allen-Bridson

# Federal Register Notice

## ■ 2019 Request for Information Pilot Tests

### — February 15-April 15, 2019

- Bloodstream Infection (BSI)
- Outpatient Procedure Component
- Healthcare-associated Bacteremia

### — April 15-May 31, 2019

- Surgical Site Infection surveillance
- Requiring billing code data for surgical procedures
- >45 submissions

**ADDRESSES:** You may submit comments, identified by Docket No. CDC-2019-0008 by any of the following methods:

• **Federal eRulemaking Portal:** <http://www.regulations.gov>. Follow the instructions for submitting comments.

• **Mail:** Centers for Disease Control and Prevention, Attention: Regulatory Mailstop 0202, 1600 Clifton Road NE, Atlanta, Georgia 30333. All comments must include the agency name and Docket Number. All relevant comments received will be posted without change to <http://www.regulations.gov>.

• **FOR FURTHER INFORMATION CONTACT:** Ashley C. Altenburger, JD, Centers for Disease Control and Prevention, 1600 Clifton Road NE, Mailstop H16-4, Atlanta, Georgia 30329; telephone 404-498-1600; email [dgmnpolicyoffice@cdc.gov](mailto:dgmnpolicyoffice@cdc.gov).

**SUPPLEMENTARY INFORMATION:**

**Public Participation**

Interested persons or organizations are invited to participate by submitting written views, recommendations, and data.

Please note that comments received, including attachments and other supporting materials, are part of the public record and are subject to public disclosure. Comments will be posted on <https://www.regulations.gov>. Therefore, do not include any information in your comment or supporting materials that you consider confidential or inappropriate for public disclosure. If you include your name, contact information, or other information that identifies you in the body of your comments, that information will be on public display. CDC will review all submissions and may choose to redact, or withhold, submissions containing requests of nonpublic information such

No later than February 21, 2019, the Secretary or Director will publish and seek comment on a report evaluating the burden of this section on affected entities and duplication of activities in relation to mandatory passenger data submissions to [U.S. Department of Homeland Security Customs and Border Protection].

On February 12, 2019, CDC published a report to its website evaluating the burdens these regulatory provisions may have generated on the airline and ship industries since they became effective on March 21, 2017. The report can be found at <https://www.cdc.gov/quarantine/final-rule-communicable-diseases.html>. The public comment period will end on March 14, 2019.

**Sandra Cashman,**  
Executive Secretary, Centers for Disease Control and Prevention.  
[FR Doc. 2019-02035 Filed 2-11-19; 8:45 am]

**BILLING CODE 4160-16-P**

**DEPARTMENT OF HEALTH AND HUMAN SERVICES**

**Centers for Disease Control and Prevention**

**Notice of Closed Meeting**

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meeting:

The meeting will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended, and the Determination of the Chief Operating Officer, CDC, pursuant to Public Law 92-463. The

For Further Information Contact: Jaya Raman, Ph.D., Scientific Review Officer, CDC, 4770 Buford Highway, Mailstop F80, Atlanta, Georgia 30354. Telephone: (770) 488-6511. [kva5@cdc.gov](mailto:kva5@cdc.gov).

The Chief Operating Officer, Centers for Disease Control and Prevention, has designated the authority to sign Federal Register notices pertaining to

and other activities, for both the Centers for Disease Control and Prevention and the Agency for Toxic Substances and Disease Registry.

**Sherri Berger,**  
Chief Operating Officer, Centers for Disease Control and Prevention.  
[FR Doc. 2019-01959 Filed 2-11-19; 8:45 am]

**BILLING CODE 4160-16-P**

**DEPARTMENT OF HEALTH AND HUMAN SERVICES**

**Centers for Disease Control and Prevention**

**[Docket No. CDC-2019-0007]**

**The National Healthcare Safety Network's Outpatient Procedure Component (OPC) Surveillance Protocol and the Bloodstream Infection (BSI) Surveillance Protocol: Request for Information**

**AGENCY:** Centers for Disease Control and Prevention (CDC), Department of Health and Human Services (HHS).

**ACTION:** Request for information.

**SUMMARY:** The Centers for Disease Control and Prevention, in the Department of Health and Human Services, seeks information related to the surveillance protocols for the National Healthcare Safety Network's (NHSN) Outpatient Procedure Component (OPC) and Bloodstream Infection (BSI) Module of the Patient Safety Component. CDC is opening this

>70 submissions



# Plan

- Use software to collate input by topic, criteria, issue
- Identify themes, quantify
- Considerations:
  - Scientific merit
  - Feasibility for surveillance
    - Objectivity
    - Accessibility of necessary data by all facilities
    - Simplicity of definitional update
    - Juice is worth the squeeze

# Modification Considerations

- Division of Healthcare Quality Promotion/Surveillance Branch
  - Operational decisions
  - Slippery slope
  - Opportunities for gaming
- External Working Groups
  - More comprehensive definitional reviews
  - Subject matter experts
  - Literature reviews

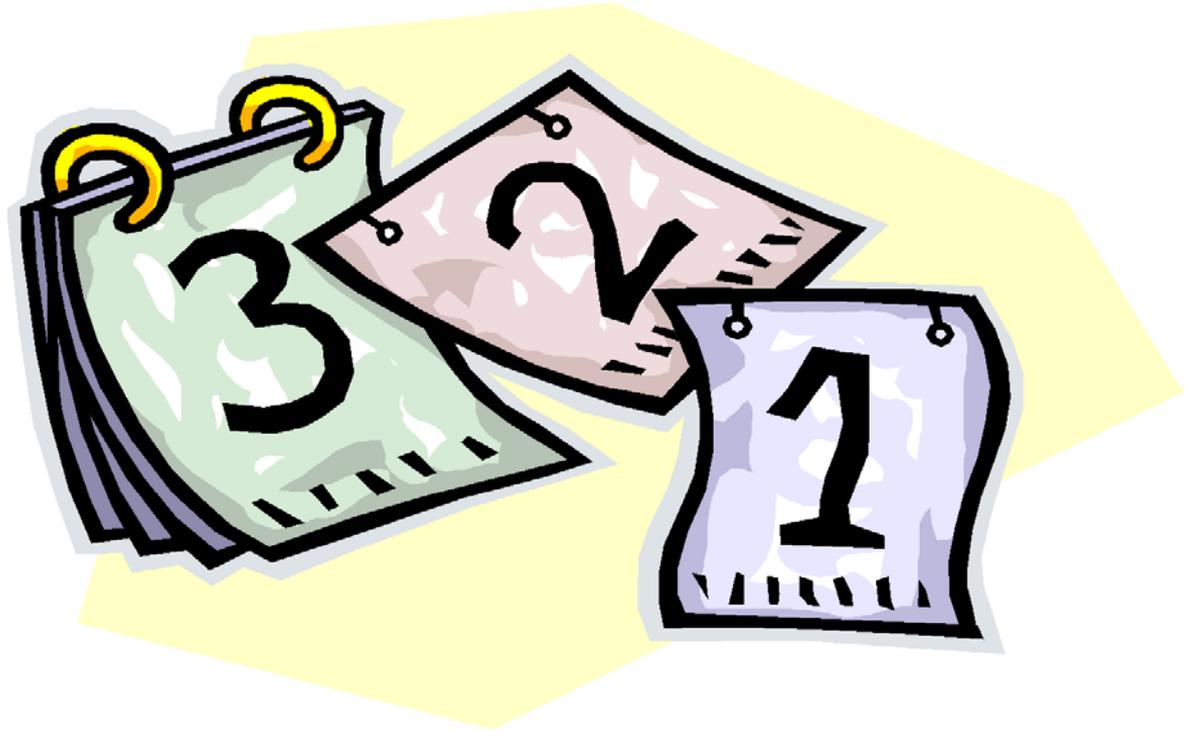


# Types of User Communications/Concerns/Requests

- CLABSI
  - Exclusion Requests/Clinical vs. surveillance
    - Unique and “Unique” scenarios
    - Patient populations
    - Diagnostic testing modalities
    - NHSN timeframes
- Healthcare-onset Bacteremia
- Outpatient Procedure Component

# Timeline

- Earliest incorporation of modifications-  
January 2021
- Complex modifications-  
January 2022



# MDRO/CDI Update

Denise Leaptrot

***Clostridioides difficile* = C. difficile = C. Diff = CDI or CD**

# No change to MDRO/CDI reporting guidance or definitions

- Clarification note added for CDI multistep testing, pg. 12-24
- Multistep testing occurs on same unformed stool specimen.

## CD-positive laboratory assay:

A positive laboratory test result for *C. difficile* toxin A and/or B, (includes molecular assays [PCR] and/or toxin assays) tested on an unformed stool specimen (must conform to the container)

OR

A toxin-producing *C. difficile* organism detected by culture or other laboratory means performed on an unformed stool sample (must conform to the container).

## Note:

- When using a multi-step testing algorithm for CDI **on the same unformed stool specimen**, the finding of the last test performed on the specimen that is documented in the patient medical record will determine if the CDI positive laboratory assay definition is met.

# Updated format for FacWideIN Denominator Data

- **Line 1:** Counts from all inpatient locations in the facility
- **Line 2:** Counts from all inpatient locations in the facility except CMS-certified Rehab and Psych units (formerly labeled MDRO row 2)
- **Line 3:** Counts from all inpatient locations in the facility except CMS-certified Rehab and Psych units, NICUs, and well-baby units (formerly CDI row 3)

## General

Line 1: Setting: Inpatient Total Facility Patient Days \* : 1514 Total Facility Admissions \* : 1514

1

Line 2: If your facility has a CMS-certified rehab unit (IRF) or CMS-certified psych unit (IPF), please subtract these counts from  
**Counts= [Total Facility - (IRF + IPF)]**

Patient Days \* : 1000 Admissions \* : 1000

2

Line 3: If your facility has a CMS-certified IRF, CMS-certified IPF, NICU, or Well Baby Unit, please subtract those counts from  
**Counts= [Total Facility - (IRF + IPF + NICU + Well Baby Unit)]**

Patient Days \* : 200 Admissions \* : 100

3

# SSI Update

Victoria Russo

## Chapter 17 – Spinal Abscess/Infection (SA)

- Title **“Spinal Abscess without Meningitis” (SA)** has been renamed to **“Spinal Abscess/infection” (SA)** to be inclusive of infections where “abscess” is not documented.
  - “purulent material” added to criterion 1 as possible source of organism identification
  - SA criteria include “infection” in addition to “abscess”
  - SSI Reporting Instruction will continue to state: Report as SA if meningitis (MEN) and spinal abscess/infection (SA) are present together after operation

# Central Line-associated Bloodstream Infection

LaTasha Powell

# CLABSI Exclusions for 2020

CLABSI Exclusion	Exclusion Field Marked Yes or No	Central Line Field Marked Yes or No	Exclusion Reporting Requirement in 2020
Extracorporeal life support (ECMO)	-	-	-
<ul style="list-style-type: none"> <li>ECMO present &gt;2 days on BSI DOE and in place on the DOE or the day before</li> </ul>	Y	Y	Required
<ul style="list-style-type: none"> <li>NOT present &gt; 2 days on BSI DOE, or NOT present on DOE or day before</li> </ul>	N	Y	Required
Ventricular assist device (VAD)	-	-	-
<ul style="list-style-type: none"> <li>VAD present &gt;2 days on BSI DOE and in place on the DOE or the day before</li> </ul>	Y	Y	Required
<ul style="list-style-type: none"> <li>NOT present &gt; 2 days on BSI DOE, or NOT present on DOE or day before</li> </ul>	N	Y	Required
Epidermolysis Bullosa (EB)	Y	Y	Required
Munchausen's syndrome by proxy (MSBP)	Y	Y	Required
Patient self-injection	Y	Y	Required
Pus at vascular site	Y	Y	Required
Group B Streptococcus BSI- 1st 6 days of life	Y	Y	Required

# Neonatal and Pediatric Work

Susan Cali

# Current Neonatal and Pediatric Work

- NHSN recognized the need to review neonatal and age-specific pediatric definitions
- Formed a workgroup of neonatal and pediatric specialists across the country. The group includes pediatric ID, neonatologists, pediatricians, pediatric infection preventionists, pediatric intensivists, and other pediatric specialists
- Approximately 40 -45 participants
- Addressing site specific infection definitions in Chapter 17
- Will then move to LCBI, CAUTI, PNEU and SSI

# Additions to Criteria

- Specific signs and symptoms that occur in neonatal and pediatric patients
- Specific health conditions that may need to be addressed
- Age-specific and not psychosocial specific
- Evidenced based criteria
- Must be objective

# Neonatal Component

Susan Cali

# Neonatal Component

- Late Onset Sepsis and Meningitis
- Possible Future modules
  - Early Onset Sepsis
  - Necrotizing Enterocolitis

# Late Onset Sepsis/Meningitis

# Definition of LOS/MEN Event

- A laboratory-confirmed bloodstream infection or a laboratory-confirmed meningitis caused by a fungal or bacterial organism in a eligible neonate who is older than day of life (DOL) 3 but younger than DOL 121 on the date of the event
- Eligible infant in a Level II/III, III and IV neonatal nurseries
- Electronic data capture and submission

# Analysis Updates – PS Component

Maggie Dudeck

# Improvements to Dataset Generation

- Current options include:
  - Data for 3 most recent full calendar years through current date; or
  - Include all data

## Generate Patient Safety Analysis Data Sets

Datasets generated will include data for the 3 most recent full calendar years up until today's date for the Patient Safety Component. To include all years check the box below.

For all other components, datasets generated will include all years. Note that any analysis options you run will be limited to the time period shown on the date range bar.

Include all data reported to NHSN for this component within the parameters of rights conferred.



# Improvements to Dataset Generation

- Improvements will be made to allow a user to select a specific time period
  - All datasets within that component will be constricted to that time period until datasets are regenerated with a different time period.
- **Additional updates for Group Users:**
  - Group users can select if they want to generate the Participation Alerts analysis datasets

# SIR and SUR Percentiles

- SIR and SUR reports will be updated to include your facility's percentile based on the National distributions in the National and State HAI Progress Report\*
  - Based on facility type and HAI
  - Will be updated annually

## EXAMPLE:



orgID	Year	infCount	numPred	numCLDays	SIR	SIRpval	SIR 95CI	SIR_pctl
10000	2017	2	2.63	2300	0.76	0.7726	0.127, 2.512	54

# Changes to CLABSI Numerators

- CLABSIs reported with an event date  $\geq$  1/1/2020 will be excluded from all CLABSI numerators (i.e., rates and SIRs) if patient has one of the following<sup>1</sup>:

Mucosal barrier injury (MBI)	Munchausen's syndrome by proxy (MSBP)
Extracorporeal membrane oxygenation (ECMO) <sup>3</sup>	Patient self injection
Ventricular assist device (VAD) <sup>3</sup>	Pus at vascular site
Epidermolysis Bullosa (EB)	Group B Strep within 6 days of life

1. Per NHSN Patient Safety Component Manual
2. Began with events reported in 2015 and forward
3. Began with events reported in 2019 and forward

## Addition of Level IV NICU

- Currently, the NHSN definition of a Level III NICU includes both Level III and Level IV NICUs, as defined by the American Academy of Pediatrics.
- In the **December 2019** release, NHSN will include a separate location code and designation for Level IV NICUs
- Units mapped as Level IV NICU will be included in existing CLABSI and pedVAE reports
  - This unit will be considered as a separate unit for future risk-adjustment efforts

# Save Incomplete Survey!

- The length of the PS annual survey has increased
  - Most questions are required
  - Currently, all required questions must be answered before saving
- In mid-2020, NHSN will allow saving of an incomplete PS survey
  - Data will be stored in a different database table until completed
  - **IMPORTANT:** NO survey data will be available in Analysis, including for risk adjustment, until entire survey is complete
  - Facilities will receive an Alert in NHSN until survey is complete
  - Groups will see incomplete survey alerts in Analysis



# Update on PSC Data Quality Activities

- NEW Soft alert – if patient days = device days in a single location/month

Mandatory fields marked with \*

**Facility ID \***: DHQP MEMORIAL HOSPITAL (ID 10018) ▼

**Location Code \***: ICU2 - ICU2 ▼

**Month \***: January ▼

**Year \***: 2019 ▼

Denominator Data		Report No Events
Total Patient Days :	<input type="text" value="1000"/>	
Central Line Days :	<input type="text" value="1000"/>	CLABSI : <input type="checkbox"/>
Urinary Catheter Days :	<input type="text"/>	CAUTI : <input type="checkbox"/>
Ventilator Days :	<input type="text"/>	VAE : <input type="checkbox"/> PedVAE : <input type="checkbox"/> PedVAP : <input type="checkbox"/>
APRV Days :	<input type="text"/>	
Episodes of Mechanical Ventilation :	<input type="text"/>	

**Alert**

One or more entries have the same number of device and patient days. It is possible, but also rare to have the same number of patient days as device days. Please review entries and revise if necessary.

Select OK to continue or Cancel to revise your entry.

## Update on PSC Data Quality Activities (cont'd)

- Missing ED and/or 24-Observation Units from FACWIDEIN
  - ED and 24-Obs Units are required for MDRO/CDI FACWIDEIN LabID surveillance
  - Recent analysis and outreach targeted facilities with active ED and/or 24-Obs units, but no in-plan LabID reporting from these units
  - For details, please see:
    - MDRO/CDI chapter of NHSN PS Manual
    - Reminder in June 2019 NHSN Newsletter (coming soon)

# Update on PSC Data Quality Activities (cont'd)

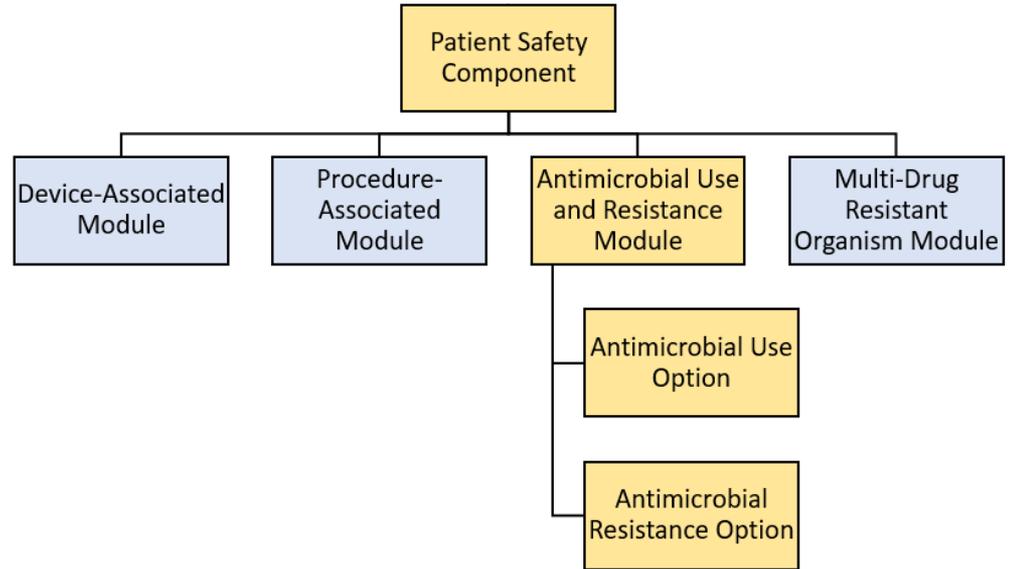
- NHSN analysts also regularly assess:
  - Outliers
  - Significant change within a facility in denominators and/or survey elements
- Measures required for CMS programs are prioritized, ahead of future deadlines
  - Facilities are contacted and asked to review and update data, if appropriate
- THANK YOU to all users who have responded to data quality outreach efforts!

# Antimicrobial Use & Resistance (AUR) Module Updates

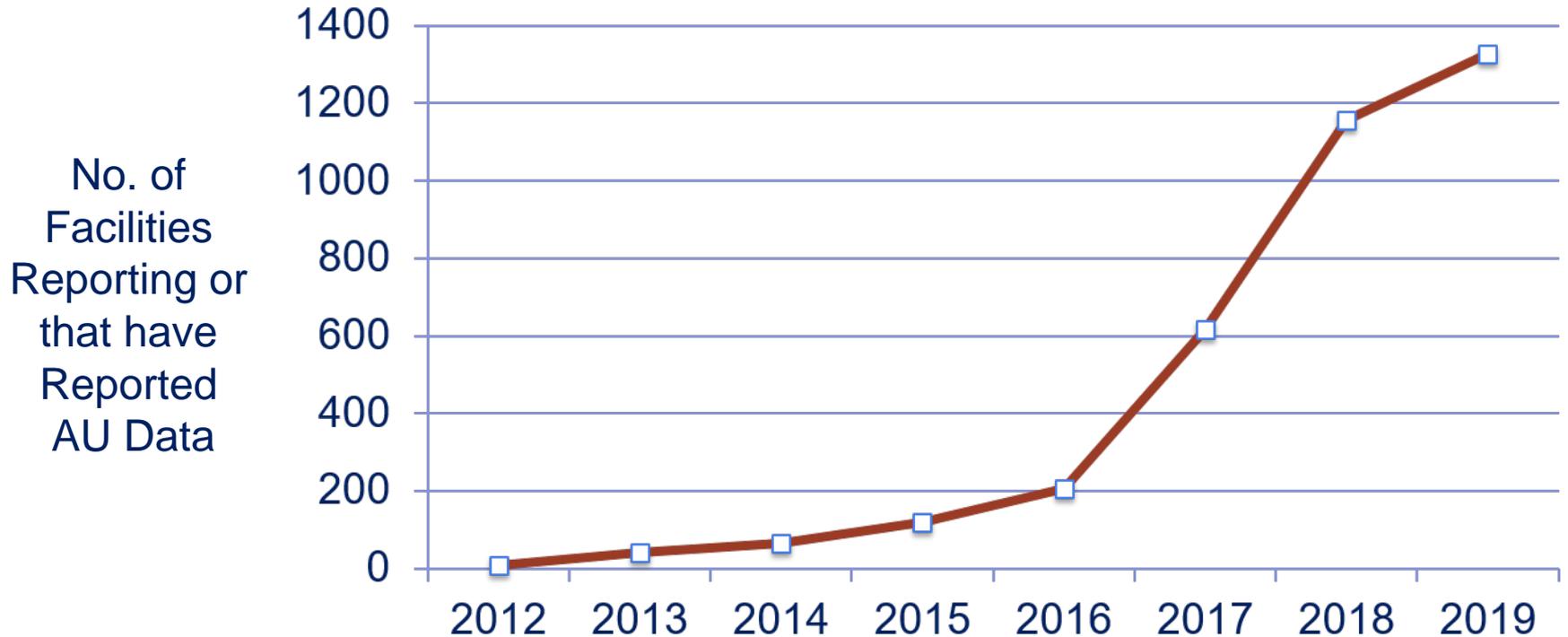
Amy Webb

# AUR Module

- Within the Patient Safety Component
- Voluntary reporting except for MO (and soon TN)
- Can be used to satisfy a CMS' Promoting Interoperability (aka Meaningful Use) Program requirement

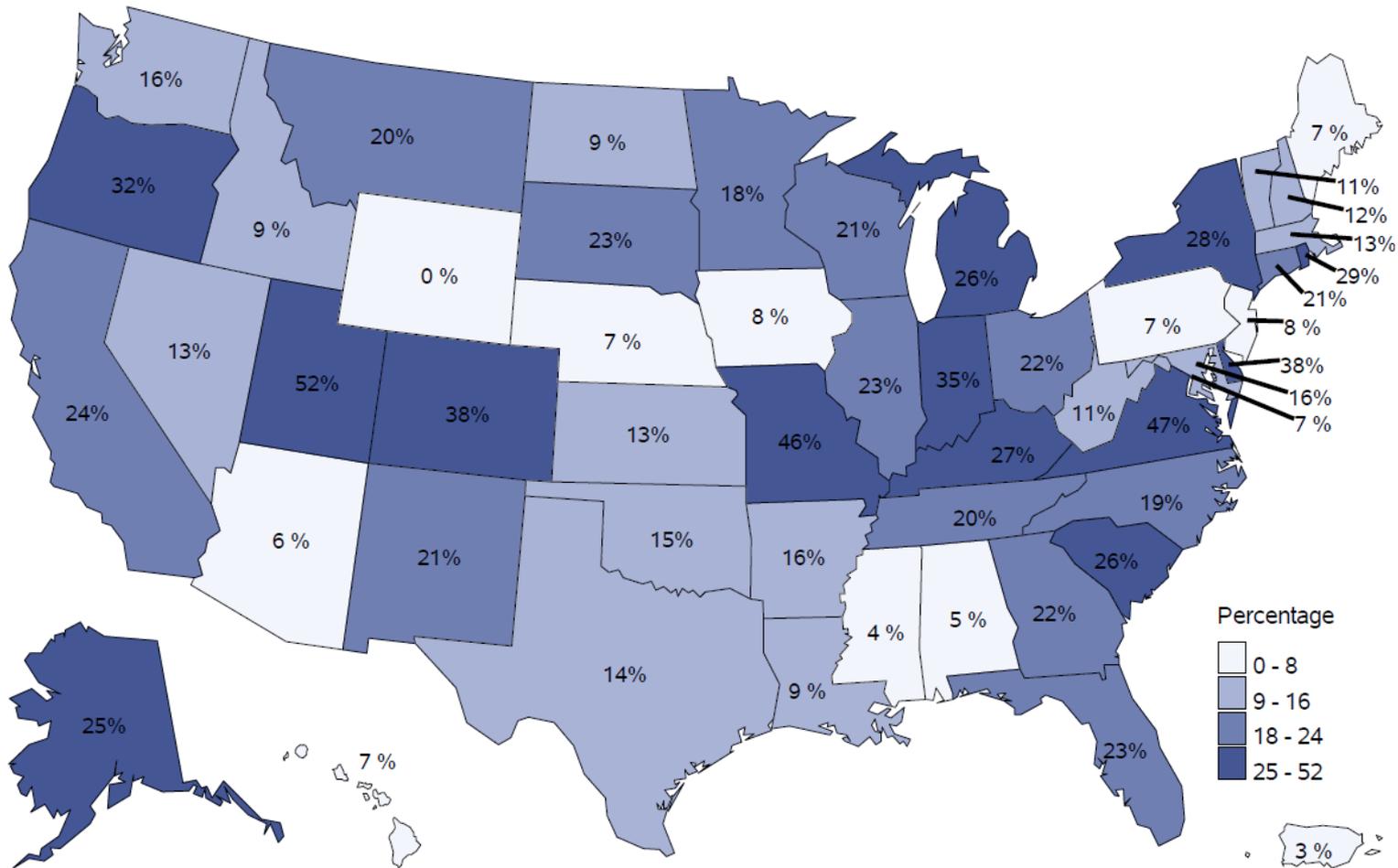


# Yearly Submission into the AU Option\*



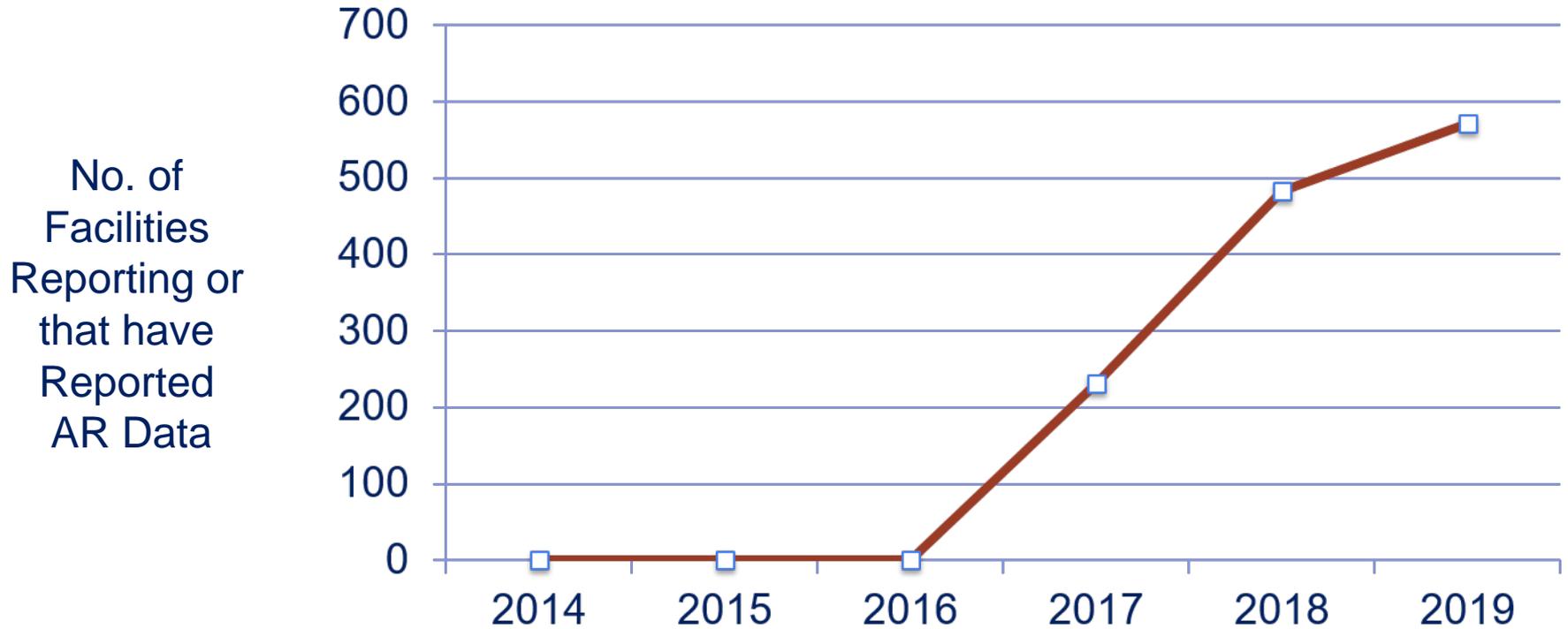
\*As of June 1, 2019

# Percentage of facilities reporting at least one month of data to NHSN's AU Option



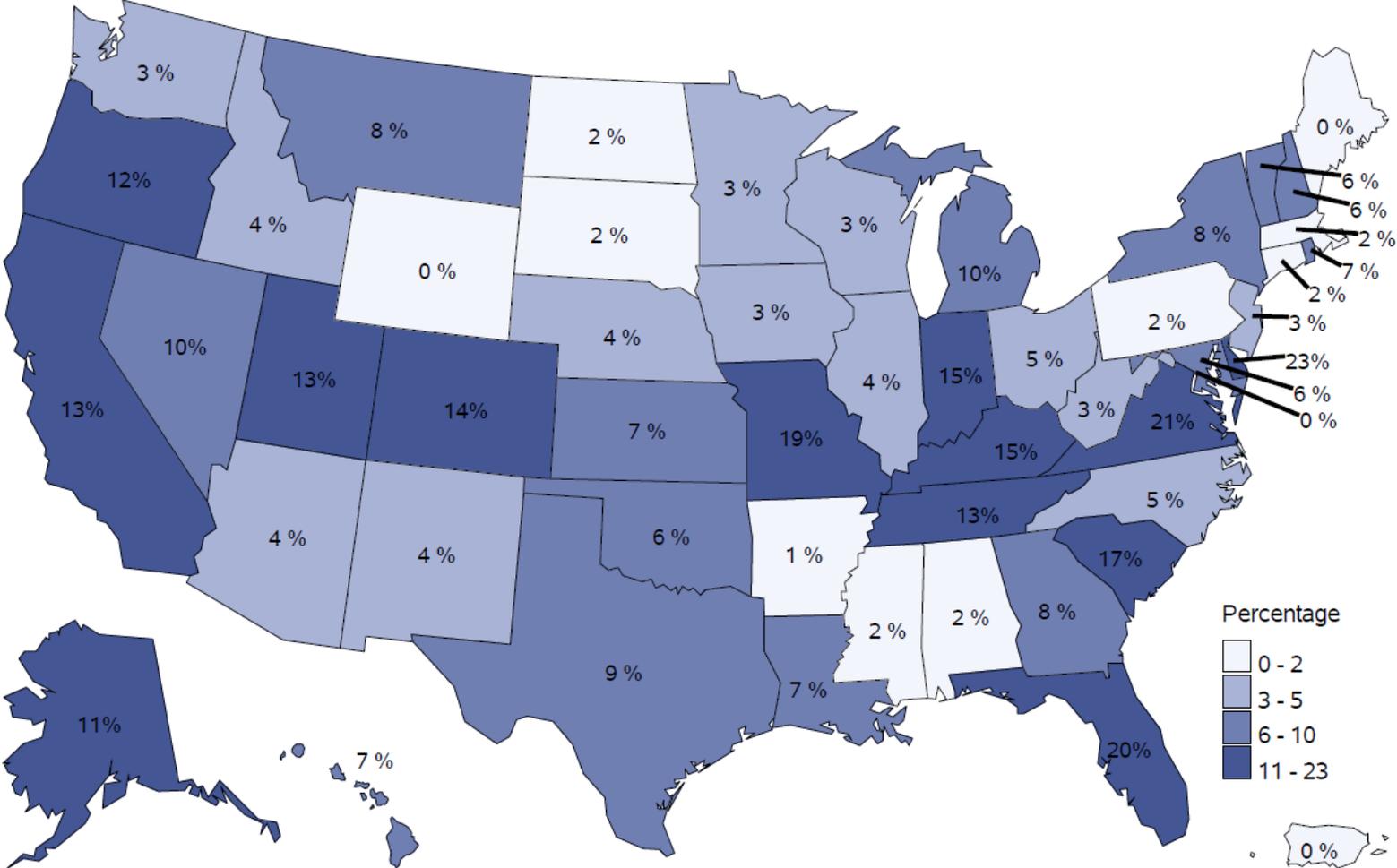
\*As of  
6/1/19

# Yearly Submission into the AR Option\*

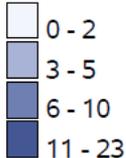


\*As of June 1, 2019

# Percentage of facilities reporting at least one month of data to NHSN's AR Option



Percentage



\*As of 6/1/2019

# AU Option Updates

- New 2017 baseline SAARs now available!
  - New locations added
  - New antimicrobial groupings
  - New models
- Future:
  - Adding 6 new drugs for 2020 reporting
  - Adding new data quality analysis reports
  - Adding SAARs for neonatal locations

# AR Option Updates

- Now: Updated drug panels for 2019
  - In line with CLSI testing recommendations
- Future:
  - Adding “Report No Events” check box
  - Updating reportable organisms

# New & Updated Resources

- Visit our webpage: <https://www.cdc.gov/nhsn/acute-care-hospital/aur/index.html>
- New resources posted!
  - 2019 Annual Training
  - AU case examples
  - Analysis quick reference guides

## Surveillance for Antimicrobial Use Antimicrobial Resistance Options

### Resources for NHSN Users Already Enrolled

Training 	+
Protocols	+
Frequently Asked Questions	+
Data Validation	+
Data Collection Forms	+
Supporting Material 	+
Analysis Resources 	+

New Users - Start Enrollment Here



Step 1: Enroll into NHSN

Step 2: Set up NHSN

Step 3: Report

# Tomorrow: 2:45-3:45!

★ Favorite    👍 Like    Facebook    Tweet This

NHSN    Concurrent Education Session - 60 minutes

## 3509 - NHSN Antimicrobial Use Option - Implementation, Validation & Analysis

📅 Friday, June 14    ⌚ 2:45 PM - 3:45 PM    📍 Location: Pennsylvania Convention Center, 102AB    ✍️ CE: 1.0

**Primary Invited Speaker-(CDC/NHSN)(s)**



**Amy Webb, MPH, CHES**  
Public Health Analyst  
Centers for Disease Control and Prevention  
Nothing to disclose

**Moderator(s)**



**Elizabeth Monsees, PhD, MBA, RN, CIC, FAPIC**  
Antibiotic Stewardship Program Manager  
Children's Mercy Hospital  
Kansas City, Missouri  
Nothing to disclose

# Clinical Document Architecture (CDA) Update

Ahmed Tahir

# Overview of CDA

- Stands for Clinical Document Architecture
- Standard format developed by HL7 (Health Level 7)
- Used for electronic reporting of data into NHSN
- XML programming language

```
<recordTarget>
  <patientRole>
    <id root="2.16.840.1.113883.3.117.1.1.5.1.1.1" extension="123456"/>
    <id root="2.16.840.1.113883.3.117.1.1.5.1.1.1" extension="2ND ID"/>
    <id root="2.16.840.1.113883.4.1" extension="546465465"/>
    <id root="2.16.840.1.113883.4.338" extension="465465465T"/>
    <patient>
      <name>
        <family>last</family>
        <given>first</given>
        <given>mid</given>
      </name>
      <administrativeGenderCode codeSystem="2.16.840.1.113883.5.1" code="F"/>
      <birthTime value="19951209"/>
    </patient>
  </patientRole>
</recordTarget>
```

# Using CDA

- Many infection control/EHR software systems can create CDAs for NHSN import
  - NHSN does not rank, evaluate, or endorse any software vendor!
  - APIC maintained list of [HAI CDA Vendors](#)
  - SIDP maintained list of [AU CDA Vendors](#)
- Can also use “Homegrown” solutions to develop CDAs

# NHSN Data Currently Accepted via CDA

- DA Module
  - CLABSI
  - CAUTI
  - CLIP
  - VAE
  - ICU/Other Denom
  - SCA/ONC Denom
  - NICU Denom
- PA Module
  - SSI
  - Procedures
- MDRO Module
  - LabID
  - MDRO Denom
- AUR Module
  - AU
  - AR Event
  - AR Denom
- Dialysis
  - Dialysis Event
  - Dialysis Denom
- Hemovigilance
  - HV Denom
- Healthcare Personnel Safety
  - Flu Summary

# Future CDAs

- Planned for 2020
  - Neonatal Component
    - Late Onset Sepsis – event and summary
- Planned for 2021
  - Dialysis Event
  - NICU Summary
  - Antimicrobial Resistance (AR) Summary
    - Add “Report No Events” and summary data from outpatient locations
  - Outpatient Procedure Component
    - Same Day Outcome Measures (Event and Denominator)
    - Surgical Site Infection (SSI) Event
    - Denominator for Procedure



# CDA Imports as a Percentage of All Reports Submitted to NHSN, Jan 1, 2018 - Dec 31, 2018

NHSN Numerator Data	
Bloodstream Infections (BSIs)	47%
Urinary Tract Infections (UTIs)	44%
Surgical Site Infections (SSIs)	40%
Laboratory Identified Events (LabID Events)	62%
Dialysis Events (DEs)	73%

NHSN Denominator Data	
ICU/Other Summary	25%
SCA/ONC Summary	30%
NICU Summary	26%
Surgical Procedure	33%
MDRO Summary	7%
Dialysis Denominator	54%

# Manually Importing CDAs

- For importing all CDA file types, user must have Administrator rights!
- If only importing AU/AR, then you need either: custom rights, all rights, or administrator rights



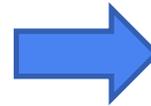
## Edit User Rights

User ID: **MDQ1 (ID 5939)**

Facility List:

Rights	Patient Safety	Healthcare Personnel Safety
Administrator	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
All Rights	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Analyze Data	<input type="checkbox"/>	<input type="checkbox"/>
Add, Edit, Delete	<input type="checkbox"/>	<input type="checkbox"/>
View Data	<input type="checkbox"/>	<input type="checkbox"/>

Customize Rights





## Import/Export Data

Select import/export type

Select import/export type

-  Patients
-  Procedures
-  Surgeons
-  Events, Summary Data, Procedure Denominators
-  SSI events (requires link to procedure)

# DIRECT CDA Automation

- Over 6,400 facilities from 16 vendors using DIRECT
- “Automated” sending of CDA files from vendor/homegrown solution to NHSN
  - Facility must already be able to send CDAs to NHSN
  - Data sent securely using Health Information Services Provider (HISP)
  - Advantages:
    - Not required to log into each facility
    - Send data for multiple facilities at once
    - Notification of submission success/failure sent via email
- Learn more here: [DIRECT information](#)

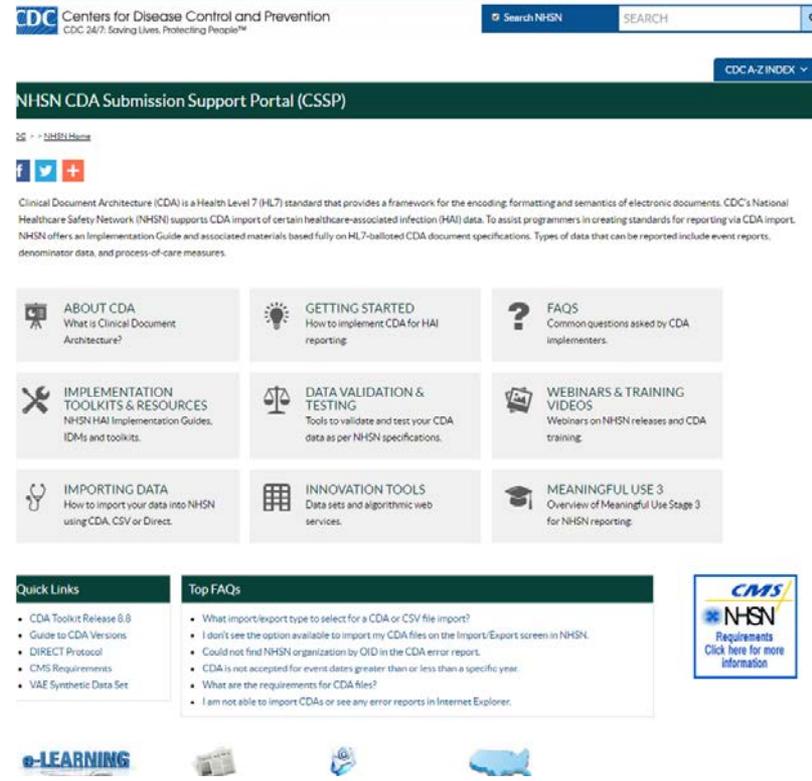
# Updating/Replacing Data via CDA

- Data uploaded via CDA can be easily updated or replaced
- Re-export from vendor software then re-upload into NHSN
  - Automatically updates version number in CDA file so NHSN knows which record to update

# CDA Submission Support Portal

## ■ CSSP

 <p><b>About NHSN</b></p> <p>CDC's NHSN is the largest HAI reporting system in the U.S.</p>	 <p><b>Data and Reports</b></p> <p>See national and state reports using NHSN data.</p>	 <p><b>Guidelines and Recommendations</b></p> <p>Review CDC HAI prevention guidelines.</p>	 <p><b>NHSN Member Login</b></p>
 <p><b>New to NHSN? Enroll Facility Here</b></p> <p>For first time facility enrollment.</p>	 <p><b>Reporting and Surveillance for Enrolled Facilities</b></p> <p>Training, protocols, forms, support materials, analysis resources and FAQs.</p>	 <p><b>Group Users</b></p> <p>View resources for group users.</p>	 <p><b>CDA Submission Support Portal (CSSP)</b></p> <p>Toolkits, FAQs, webinars and resources for testing and validation for CDA implementers.</p>



The screenshot shows the NHSN CDA Submission Support Portal (CSSP) interface. At the top, there is the CDC logo and the text "Centers for Disease Control and Prevention CDC 24/7. Saving Lives. Protecting People™". A search bar is located on the right. Below the header, the page title is "NHSN CDA Submission Support Portal (CSSP)". There are social media icons for Facebook, Twitter, and YouTube. A navigation menu includes "About NHSN", "Data and Reports", "Guidelines and Recommendations", and "NHSN Member Login". The main content area is divided into several sections: "ABOUT CDA", "GETTING STARTED", "FAQS", "IMPLEMENTATION TOOLKITS & RESOURCES", "DATA VALIDATION & TESTING", "WEBINARS & TRAINING VIDEOS", "IMPORTING DATA", "INNOVATION TOOLS", and "MEANINGFUL USE 3". At the bottom, there are "Quick Links" and "Top FAQs" sections. The "Quick Links" section includes links to "CDA Toolkit Release 8.8", "Guide to CDA Versions", "DIRECT Protocol", "CMS Requirements", and "VAE Synthetic Data Set". The "Top FAQs" section includes questions about import/export types, import options, finding NHSN organizations, import dates, and requirements for CDA files. The footer features the "e-LEARNING" logo and a map of the United States.



# Long-Term Care Facility Component Updates

Angela Anttila

# Save the Date! Annual LTCF Training

- July 9-11, 2019
- CDC campus in Atlanta, Georgia
- Variety of surveillance and prevention topics will be covered
- Onsite NHSN enrollment with SAMS identify proofing team!
  - Open to new users and long-term care facilities interested in joining NHSN
  - Identity verification and notary services offered on 7/9-7/10; receive SAMS grid card prior to leaving CDC on 7/11/19
  - Dedicated support to assist users through the process

# Guided Enrollment for LTC Users!

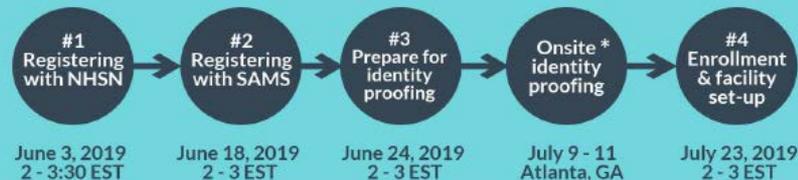
## Guided enrollment for Long-term Care Facilities into NHSN

Are you a long-term care facility (LTCF) or a new user interested in joining CDC's National Healthcare Safety Network (NHSN)?



If so, join us for a facilitated approach to enrollment through an interactive webinar series, including the option to complete Secure Access Management Services (SAMS) identity proofing **ONSITE** during NHSN LTCF Component Annual Training (July 9-11, 2019 in Atlanta, GA).

### Webinar Dates:



Note: These are to be attended in sequential order.

\*SAMS identity proofing and grid card issuance will be provided onsite during the NHSN LTCF Annual Training for those who attend in-person with the required identity verification documents.

Use the following website to register for the annual training [www.regonline.com/lctcf2019](http://www.regonline.com/lctcf2019). Registration opens on May 15th.

### Registration Links

- |           |   |
|-----------|---|
| Webinar 1 | <a href="https://cc.readytalk.com/r/r03v8ajuupbf&amp;eom">https://cc.readytalk.com/r/r03v8ajuupbf&amp;eom</a> |
| Webinar 2 | <a href="https://cc.readytalk.com/r/fkuv27rvun4k&amp;eom">https://cc.readytalk.com/r/fkuv27rvun4k&amp;eom</a> |
| Webinar 3 | <a href="https://cc.readytalk.com/r/xaufvh19p44e&amp;eom">https://cc.readytalk.com/r/xaufvh19p44e&amp;eom</a> |
| Webinar 4 | <a href="https://cc.readytalk.com/r/wg3sndorlx3o&amp;eom">https://cc.readytalk.com/r/wg3sndorlx3o&amp;eom</a> |

### Audio Dial-In Number

U.S. Toll: 303.248.0285; Access Code: 6393927

Questions? Email [NHSNtrain@cdc.gov](mailto:NHSNtrain@cdc.gov)

# Coming soon – LTC Dashboard!

- Interactive dashboard for quick graphic visualization of data entered into NHSN
- Currently, the dashboard shows data for:
  - MDRO/CDI module
  - HAI module (UTI)
  - Prevention Process Measures module
- Graphs are adjustable and easily printable to print or add into presentations

# LTC Dashboard



## Long Term Care Dashboard

Generate New Last Generated: Apr 11 2019 9:19AM

Summary MDRO/CDI HAI Prevention Process

View Last 5 Quarters

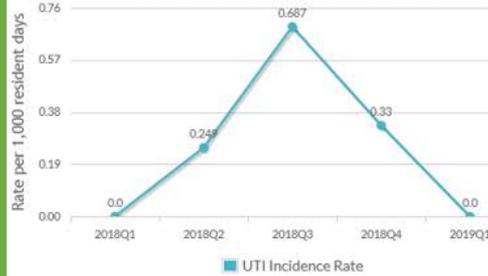
Facility-Wide Multidrug Resistant Organism (MDRO) and *Clostridioides difficile* (CDI) Laboratory-identified Event (LabID Event) Count



### Footnotes

- Graph represents complete events entered for any month or any organism in the quarter
- Counts exclude duplicate laboratory assays
- CRE LabID events include CRE- *E.coli*, CRE- *Klebsiella* spp., and CRE- *Enterobacter* spp.
- ACINE = *Acinetobacter* spp.; CDI = *Clostridioides difficile*; CEPHRKLEB = Cephalosporin-Resistant *Klebsiella* spp.(CephR-Klebsiella); CRE = Carbapenem-Resistant *Enterobacteriaceae*; MRSA = Methicillin-resistant *Staphylococcus aureus*; MSSA = Methicillin-susceptible *Staphylococcus aureus*; VRE = Vancomycin-Resistant *Enterococcus* spp.

Facility-Wide Healthcare Associated Infection (HAI) Rates



Quarter ↑	UTI Count	Resident Days	UTI Incidence Rate
2018Q1	0	3360	0.00
2018Q2	1	4010	0.249
2018Q3	0	4369	0.687
2018Q4	2	6060	0.33
2019Q1	0	5049	0.00

### Footnotes

- Only completed monthly reports for each quarter is shown
- UTI Incidence rate includes CA-SUTI, SUTI, and ABUTI
- UTI = Urinary Tract Infection; SUTI = Symptomatic Urinary Tract Infection; CA-SUTI = Catheter-associated Urinary Tract Infection; ABUTI = Asymptomatic Bacteremic Urinary Tract Infection

Prevention Process Measures Adherence



### Footnotes

- Only completed monthly reports for each quarter is shown
- Hand Hygiene Adherence Rate = Number of contacts for which hand hygiene was performed / Number of contacts for which hand hygiene was indicated X 100
- Gown and Glove Use Adherence Rate = Number of contacts for which gown and gloves were used / Number of contacts for which gown and gloves were indicated X 100

# LTC Dashboard

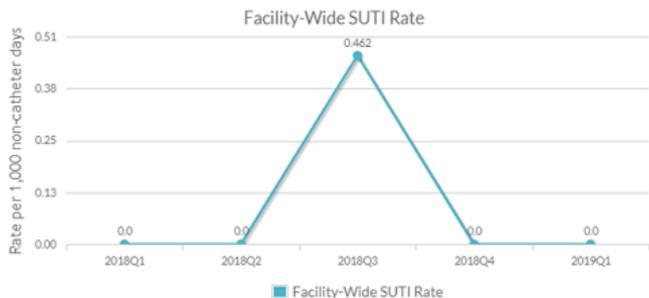


## Long Term Care Dashboard

Generate New Last Generated: Apr 11 2019 1:16PM

Summary MDRO/CDI HAI Prevention Process

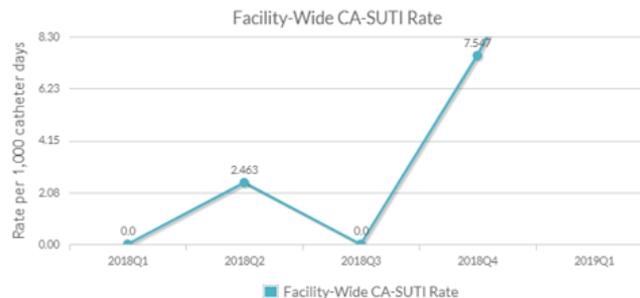
View Last 5 Quarters



Quarter	SUTI Count	Non-Catheter Days	SUTI Rate
2018Q1	0	2930	0.00
2018Q2	0	3604	0.00
2018Q3	2	4325	0.46
2018Q4	0	7385	0.00
2019Q1	0	4988	0.00

Print

Back



Quarter	CA-SUTI Count	Catheter Days	CA-SUTI Rate
2018Q1	0	430	0.00
2018Q2	1	406	2.46
2018Q3	0	44	0.00
2018Q4	2	265	7.55
2019Q1	1	61	16.39

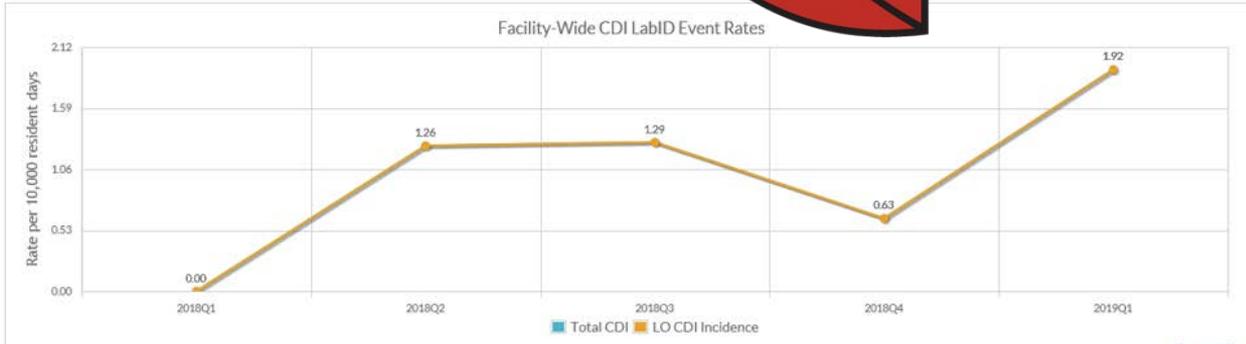
Print

Print

# LTC Dashboard



View Last 5 Quarters



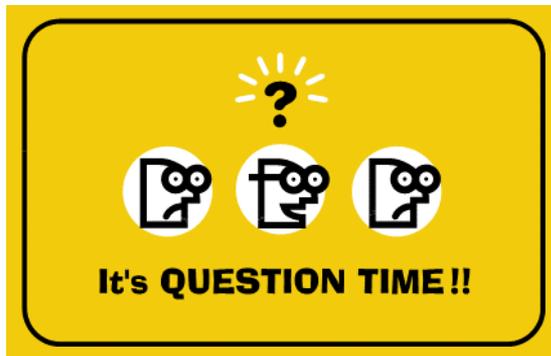
Print

Quarter ↕	Resident Days	Total CDI Count	Total CDI Rate	LO CDI Incidence Count	LO CDI Incidence Rate
2018Q4	15765	1	0.63	1	0.63
2018Q1	15633	0	0.00	0	0.00
2018Q3	15533	2	1.29	2	1.29
2018Q2	15930	2	1.26	2	1.26
2019Q1	15600	3	1.92	3	1.92

1. Only completed monthly reports for each quarter is shown
2. Total CDI equals the sum of community-onset (CO) and long-term care facility-onset (LO) LabID events
3. LO CDI incidence equals number of LO CDI LabID events. Excludes recurrent CDI events.
4. LO LabID event is defined as specimen collected > 3 calendar days after date of current admission to the facility (specifically, on or after day 4)
5. LO Incidence Rate excludes Recurrent CDI LabID events
6. Counts and rates exclude duplicate laboratory results

Back

Print



For more information, contact CDC  
1-800-CDC-INFO (232-4636)  
TTY: 1-888-232-6348 [www.cdc.gov](http://www.cdc.gov)

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.