NHSN Quarterly Validation Call For State HAI Coordinators

Friday, June 29, 2018

2:00pm – 3:00pm EST

Today's Agenda

- Introduction – HAI Data Validation Team
- Quarterly Validation Calls
- 2018 Validation Guidance & Toolkits
- Presentation - Massachusetts
- Presentation - Nevada
- Question & Answer Session
- Wrap-up

Introduction

- NHSN HAI Validation Team
  - Suparna Bagchi, MSPH, DrPH, HAI Validation Lead
    - iyj9@cdc.gov
  - Bonnie Norrick, MT(ASCP), EdM, CIC, CPHQ
    - ojd8@cdc.gov
  - Jennifer Watkins, RN, BSN, MPH
    - nub7@cdc.gov

Quarterly HAI Validation Calls

- Purpose
  - To provide a forum where state health departments (SHDs) can share their HAI Data Validation results and experiences with their colleagues
- Objectives
  - NHSN will provide SHDs with HAI data validation guidance
  - SHDs will present their successes and challenges with data validation
  - NHSN and SHDs will build a collaborative sharing of validation methodologies and tools
  - SHDs will seek guidance from and provide feedback to the NHSN HAI Data Validation team

2018 Validation Guidance and Toolkits

- 2018 External and Internal Validation Guidance and Toolkits are coming….
  - https://www.cdc.gov/nhsn/validation/index.html
- 2018 External Validation Guidance
  - New facility selection methodology based on CAD method
  - Entire guidance document reformatted for ease of use
  - Updated directions on obtaining data from NHSN application
  - MRATs updated and reformatted
- 2018 Internal Validation Guidance
  - Addition of Data Quality checklists

Today's Speakers

- Christina Brandeburg, MPH
  - HAI Epidemiology Coordinator
  - Massachusetts Department of Public Health
  - Christina.Brandeburg@MassMail.State.MA.US

- Chidinma Njoku
  - Antibiotic Resistance Coordinator
  - Nevada Department of Health and Human Services
  - cnjoku@health.nv.gov

Massachusetts Department of Public Health's External Validation of Long-term Care Facility (LTCF) National Healthcare Safety Network (NHSN) Data

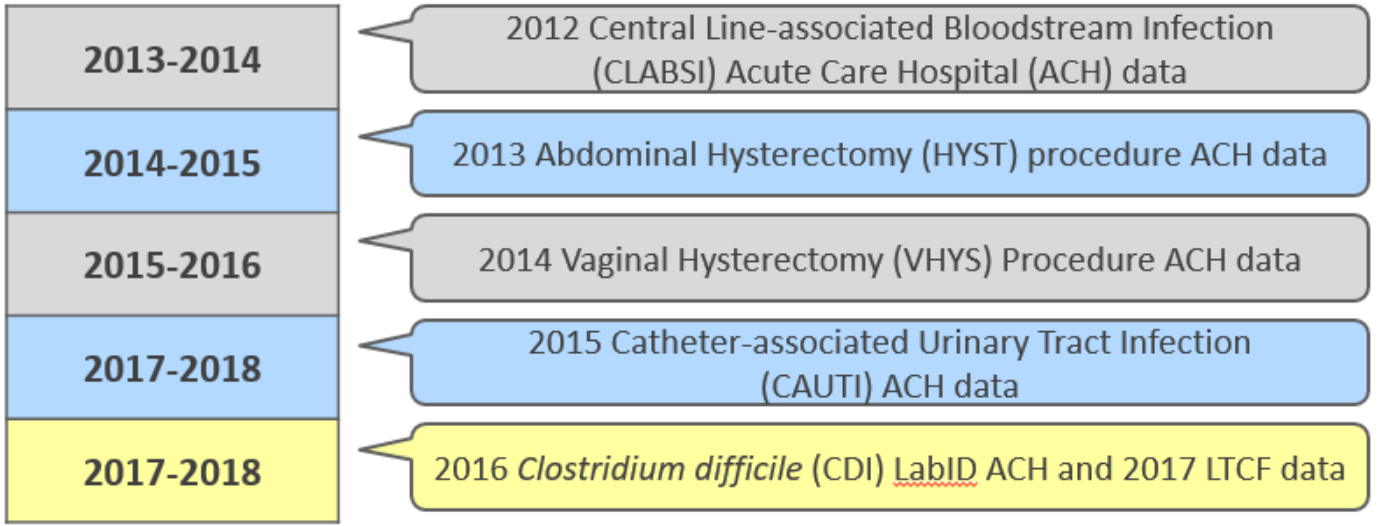
June 2018

Quarterly State HAI Validation Call

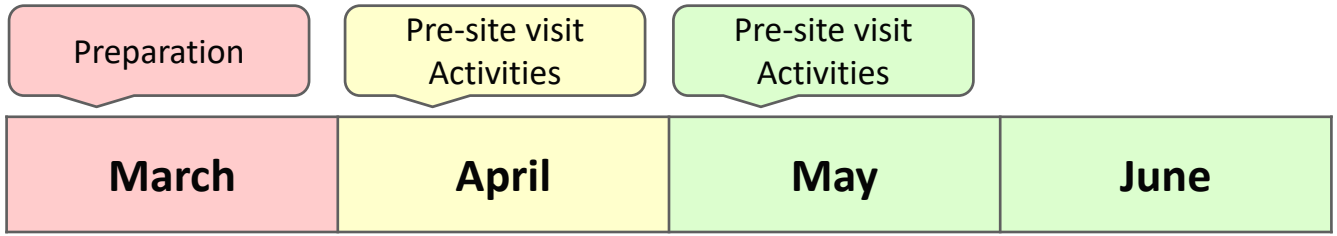
Christina Brandeburg, MPH
Epidemiologist
Massachusetts Department of Public Health
Bureau of Infectious Disease

CDC ELC Grant

August 2013, MDPH received ELC grant funding to conduct external validation of NHSN data using CDC-developed toolkit



LTCF CDI Validation Timeline



Preparation

- Review NHSN definitions and trainings
- Freeze NHSN data and select LTCFs for validation
- Update validation documents
  - Task lists and guidance documents for MDPH staff
  - *C. difficile* result line list instructions and template for selected facilities
  - Medical Record Abstraction Tool (MRAT)
  - Surveillance Method Survey (SurveyMonkey)
- Email notifying LTCF of validation

Facility Selection

- As of March 7th, 89 LTCFs were reporting CDI LabID data in NHSN for at least one month in 2017
  - LTCF CDI LabID reporting is currently voluntary in MA

- Targeted selection approach to identify 10 LTCFs:
  - Reported complete data for at least six months in 2017
  - Transfer residents to or receive residents from a selected acute care hospital

Pre-site Visit Activities

- Phone call with LTCF
  - Request required materials and access to facility medical records
    - Line list of all tested specimens (*positive and negative for C. difficile*)
    - Surveillance methods survey
  - Establish timeline
  - Schedule site visit
- Identify positive *C. difficile* results for review
  - Email facility a list of selected records to be reviewed during site visit
- Prepare materials for visit

LTCF Site Visit Procedure

- At the site visit
  - Review medical records using MRAT
  - Meet with facility staff for discrepancy adjudication and to review facility's Surveillance Methods Survey
  - Provide facility with additional resources (i.e. ICAR Toolkit, One-page "cheat sheet" of important NHSN CDI definitions)

- After the site visit
  - Prepare and share validation summary report with facility
  - Confirm facility has made necessary changes in NHSN

MRAT

2017 CDI LabID Medical Record Abstraction Tool v20180516

This tool follows 2017 CDI LabID definitions and methods for validation of long-term care facility events.

Outcome of audit:

Patient and Medical Record Identifiers		
Facility # (NHSN) «orgid»	Date of Audit:	Reviewer Initials:
Review Start Time:	End Time:	Time spent reviewing this record (minutes):
Resident Name: «First_Name» «Last_Name»		Resident DOB: «Date_of_Birth»
Resident ID:«resID»	Date of First Admission to Facility:	Date of Current Admission to Facility: «Current_Admission_Date»

Positive CDI Toxin-Positive Specimens

Note all *C.difficile* positive laboratory assay results identified for this resident, as defined by the NHSN LTCF CDI LabID Event Surveillance Protocol. Arrange the positive results chronologically. Include all specimens obtained while the resident is receiving care from the LTCF, including specimens collected from an emergency department (ED) or outpatient (OP) setting during a resident's selected admission. Use a calendar to help you to determine which events are duplicate events (< 15 days since the last positive specimen).

Date of specimen collection	Location of specimen collection			Date of prior CDI toxin-positive from the same location		Was this a "duplicate specimen" (collection <15 days since last positive CDI toxin-positive specimen)		Should this event be reported to NHSN†	
	☐LTCF: ____________________	☐ED	☐OP		☐no prior	☐Yes	☐No	☐Yes	☐No
	☐LTCF: ____________________	☐ED	☐OP			☐Yes	☐No	☐Yes	☐No
	☐LTCF: ____________________	☐ED	☐OP			☐Yes	☐No	☐Yes	☐No
	☐LTCF: ____________________	☐ED	☐OP			☐Yes	☐No	☐Yes	☐No
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	☐LTCF: ____________________	☐ED	☐OP			☐Yes	☐No	☐Yes	☐No
	☐LTCF: ____________________	☐ED	☐OP			☐Yes	☐No	☐Yes	☐No

†Note: The LabID Event algorithm for determining duplicate events (<15 calendar days between positive specimens) applies across current admission:

- *No prior C. difficile positive laboratory assay for the resident while receiving care from this LTCF*
- *More than 14 calendar days since the last C. difficile positive laboratory result for the patient*

MRAT

Notes:

Outcome of 2017 CDI audit

☐ (a) Chart review for this resident completed and no CDI LabID events were found during the evaluation time period.

☐ (b) CDI LabID events identified, reportable in NHSN

□ Date of First Admission to Facility _____

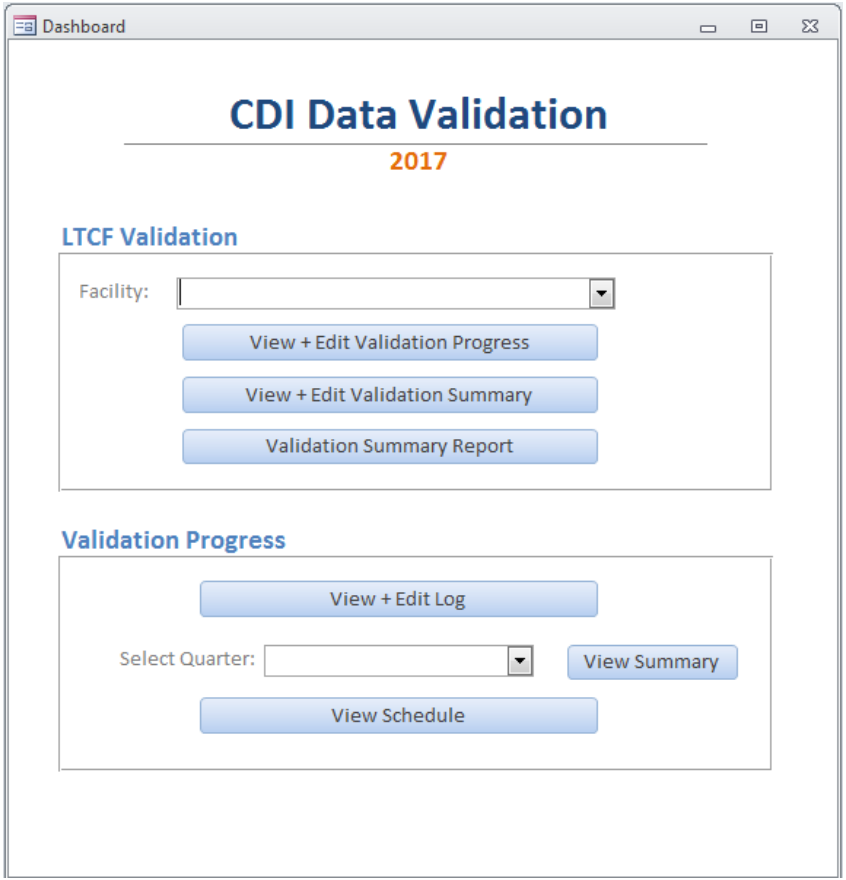
□ Date of Current Admission to Facility _____

	Specimen Date	Resident Care Location	Discordant			Provide detail of/reason for discordance
CDI LabID Event 1			☐Yes	☐Missed ☐Overcalled ☐Event Detail	☐No	
CDI LabID Event 2			☐Yes	☐Missed ☐Overcalled ☐Event Detail	☐No	
CDI LabID Event 3			☐Yes	☐Missed ☐Overcalled ☐Event Detail	☐No	
CDI LabID Event 4			☐Yes	☐Missed ☐Overcalled ☐Event Detail	☐No	
CDI LabID Event 5			☐Yes	☐Missed ☐Overcalled ☐Event Detail	☐No	

- *Potential reasons for missed CDI event: Incorrect understanding of protocol definition; Laboratory records missed*
- *Potential reasons for overcalled CDI events: Incorrect specimen; Duplicate record*

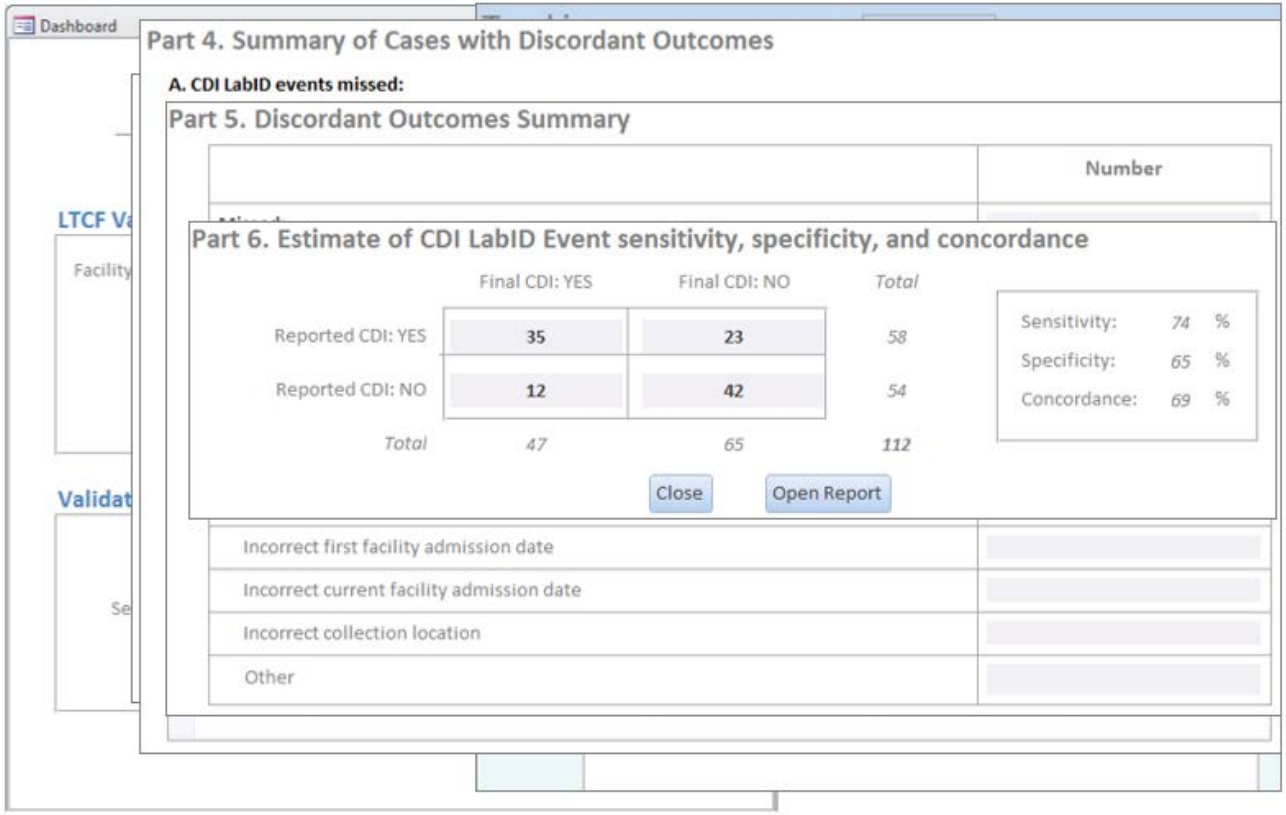
***Don't forget to record the abstraction end time on page 1.

MDPH Validation Database



- Track progress
- Collect aggregate data for each LTCF
- Generate summary report for facility

MDPH Validation Database



MDPH One-page "Cheat Sheet"

NHSN C. difficile LabID Event Reporting Cheat Sheet for Long-term Care Facilities

NHSN LabID Event CDI Reporting Definitions

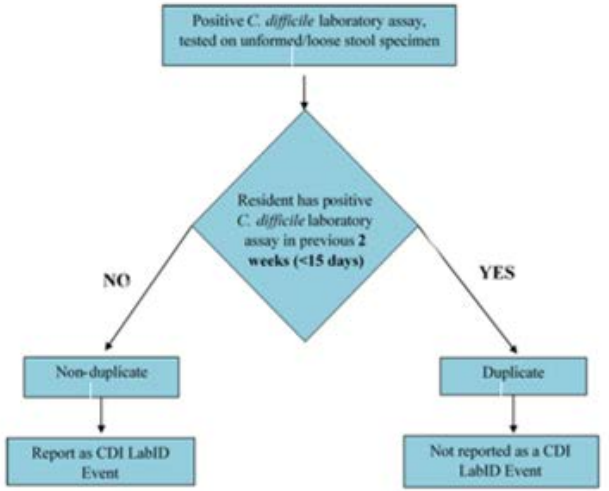
- Date of event: The date of specimen collection.
- *C. difficile* positive laboratory assay: An unformed/loose stool that tests positive for *C. difficile* toxin A and/or B (includes molecular assays [PCR] and/or toxin assays)

  OR

  A toxin-producing *C. difficile* organism detected in an unformed/loose stool sample by culture or other laboratory means.
- Duplicate *C. difficile* positive laboratory assay: Any *C. difficile* positive laboratory assay from the same resident following a previous *C. difficile* positive assay within the past 2 weeks (< 15 days). Duplicate assays should not be reported into NHSN. There should be 14 calendar days with no *C. difficile* positive assay for the resident before another CDI LabID Event is entered into NHSN for the resident (date of specimen collection = Day 1 of count).
- Date of first admission to facility: If the resident leaves the facility for < 30 consecutive days, the date remains the same. If the resident leaves the facility for > 30 consecutive days, the date of first admission should be updated to the date of return to the facility.
- Date of current admission to facility: If the resident leaves the facility for > 2 calendar days (the day the resident left the facility = day 1) and returns, the date of current admission should be updated to the date of return to the facility. If the resident has not left for > 2 calendar days, then the date of current admission should not be changed.
- Number of residents: For each day of the month, record the number of residents present in the facility at the same time each day. The aggregate count for the calendar month should be entered as the total Resident Days. Do not include residents for whom a bed is being held but who are not actually in the facility.
- Number of admissions: For each day of the month, count and record the number of residents admitted to the facility. The aggregate count for the calendar month should be entered as the total Resident Admissions. Include both new admissions and re-admissions when a resident was out of the facility for >2 calendar days (that is, change to the Current Admission Date).
- Number of admissions on *C. difficile* treatment: For each day of the month, count and record the number of residents who are receiving antibiotic therapy for *C. difficile* infection at the time of admission. The aggregate count for the calendar month should be entered as the total Number of Admissions on *C. difficile* Treatment. Include both new admissions and re-admissions when a resident was out of the facility for > 2 calendar days (that is, change to the Current Admission Date).

Note: Residents admitted from an acute care facility always have an admission/transfer medication list (which is verified by an RN/clinician) upon arrival to the facility. The most common medications used to treat Clostridium difficile are oral (PO) vancomycin and/or oral (PO) metronidazole (Flagyl). Fidaxomicin may also be use, although much less frequently. In the absence of CDI documentation, users are encouraged to consult with the physician or nurse to verify treatment for *C. difficile* since these medications could be prescribed for other conditions.

NHSN C. difficile LabID Event Reporting Cheat Sheet for Long-term Care Facilities



Notes:

1. LabID event reporting is based on specimens collected by the LTCF during the care of the resident, and specimens collected in an ED or OP (for example, physician's office) during the current admission. Laboratory results obtained prior to the resident's admission to the LTCF or during an admission in another healthcare facility are excluded. See *Settings*
2. Day of specimen collection equals day one of the specimen count.

Records Reviewed

- 2/10 facilities reported at least 1 CDI event in NHSN

- 6/10 validations completed
  - 22 missing events
  - One facility correctly reported 0 events

MDPH LTCF Validation Lessons Learned

- Frequent staff turnover, necessary to maintain at least two contacts throughout the validation process
- Hybrid medical records systems, paper and EMR
  - Some facilities utilize reports to collect denominator data
  - Many use personal line lists to track positive *C. difficile* results
- Need for additional LTCF staff education in NHSN definitions and accurate reporting of HAI events into NHSN
  - Little distinction between clinical surveillance and reporting surveillance
  - Incorrectly incorporating patient's history of CDI when determining whether a lab is a reportable NHSN event
- Collecting the specimen line list prior to setting up site visit will avoid the need to reschedule

Thank you

Validation Team

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Katie Reilly

Sarah Scotland

Scott Troppy

Brian Sandoval
Governor

Richard Whitley
Director

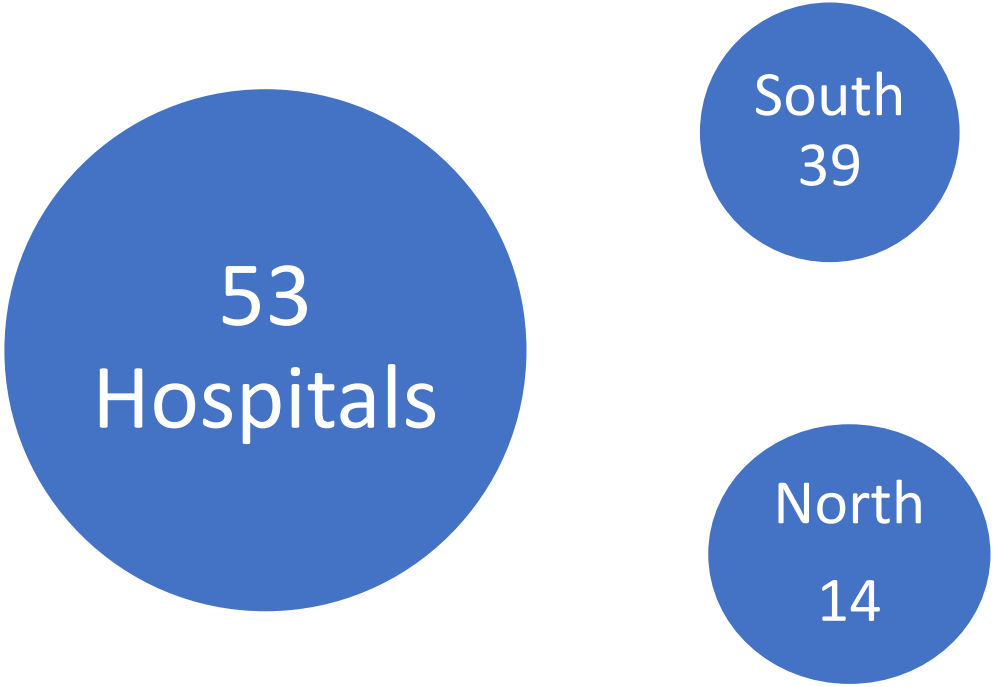
State of Nevada

Department of Health and Human Services

Nevada Division of Public and Behavioral Health

Chidinma Njoku
Nevada CLABSI Validation
Division of Public & Behavioral Health
June 29, 2018

Nevada Facilities



Validation Methodology

- Contractor from Yale New Haven Health System.
- Looked at the 2016 NHSN records and selected top 5, bottom 6, and 1 random facility.
- We sorted through line lists including as many as 3,000 events and broke them down into stratums.

Stratums

Stratum 1	• Infections noted in the facility's report to the NHSN
Stratum 2	• Infections among Newborn ICU (NICU) patients and other patients with infections from specific, targeted pathogens
Stratum 3	• A mixture of remaining infections such that the entire selection includes up to 60 events

Before the Visit

Facilities provide the following in the line lists:

- Patient’s name
- Date of Birth
- MRN, Date of admission
- Date of discharge
- Central line
- Admit to Event Days
- Event ID #
- Date of lab draw
- Reported pathogen
- Location at time of lab draw

During the Visit

- Reviewed data collection method for frequency, reliability, and consistency.
- Looked at definition, reporting, and any data entry issues with 2-3 OPHIE staff members and 1 contractor.
- Electronic Medical Records
  - Familiarity
  - IP guidance

Guidelines

- CDC Guideline
- Central line day counts
- Assess facility reporting
- Discuss case-status

Results

- Out of the 12 we assessed, 3 had a discrepancy from their NHSN report

Facility A	Facility B	Facility C
49 Records Reviewed • 11 unreported • 1 non-CLABSI with incorrect organism attributed	• 31 Records Reviewed • 1 unreported	• 60 Records Reviewed • 4 CLABSIs unreported

60 Record reviews were the target. Some facilities had less than 60 records reviewed after POAs were removed.

Results

Based on IP interviews, IPs were found to have a good understanding of reporting guidelines.

Some findings from the interview:

- No specific time that denominator is taken (each unit has a time that they collect it)
- Denominator count is taken at midnight
- Facilities separate temporary line days and permanent line days
- No mechanism in place for quality control of denominator data (no review process)
- Someone checks denominator data with the records and IP compares for discrepancy

Lessons Learned

- Validation team had to learn how to navigate each medical record system
- IP assistance speeds up EMR navigation process
- Lists had to be narrowed down to central lines only
- Present on Admission (POA) removed from line list

Opportunities:

- TAP reports to highlight units
- Face to face with Infection Prevention staff

HAI Program Contact Information

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Questions??

Wrap-Up

- Next Quarterly Call is scheduled for Friday, September 28, 2018 2-3pm EST
  - Is there anyone else we should invite? Please forward their name and email to Jennifer Watkins at nub7@cdc.gov.
  - Interested in sharing your validation experience? Reach out to the NHSN HAI Validation Team
- Review of External Validation Guidance & Toolkit
  - New CAD methodology for facility selection
  - Updated MRATS
  - Please bring your questions!

Thank You!

Please Join us for the Next

NHSH Quarterly Validation Call for HAI Coordinators

Friday September 28th from 2:00pm—3:00pm EST

For Questions Email NHSN@cdc.gov

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