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NHSN Surveillance Case Studies Published in AJIC

Since 2010, NHSN has collaborated with the American Journal of Infection Control to provide educational case studies aimed at Infection Preventionists, Hospital Epidemiologists and anyone else involved with accurate application of the NHSN healthcare-associated infection definitions. These case studies offer an opportunity for participants to review a patient scenario, and then to assess their understanding of the surveillance definitions and protocols via an on-line test followed by provision of correct answers and rationales. Case studies are developed with specific teaching points in mind, garnered from questions received through the NHSN mailbox and other user-input. All data collected from the on-line survey are anonymous, and the data is analyzed to determine how well the surveillance definitions are understood by those who use them. This information in turn helps NHSN identify teaching points for trainings.

Please take a few minutes to review these case studies when they become available. The subject for the next case study to be published this summer is MRSA Bacteremia Laboratory ID Event reporting. Two others are anticipated to be published in 2016. An MBI-LCBI case study published in 2015 is still applicable in 2016 and available at this link:

<https://www.surveymonkey.com/r/AJIC-NHSN-2015C2>

The case studies are great tools for individuals to assess their knowledge and correct misunderstandings, and for Infection Control Departments within facilities or APIC chapters to assess inter-rater reliability among their team and peers.

Patient Safety Component

What Exactly Does This Mean? New Terms and Concepts

In 2016, new terminology and concepts were introduced within the NHSN protocols. While we have addressed these in Key Terms (Chapter 16 of the Patient Safety Component manual http://www.cdc.gov/nhsn/pdfs/pscmanual/pscmanual_current.pdf) and in the Frequently Asked Question documents found on the respective websites, we would like to highlight a few of the issues that relate to questions commonly submitted to NHSN.

1. What is meant by *identified by culture* or **non-culture based microbiologic testing method** which is performed for purposes of clinical diagnosis and treatment (e.g., not **Active Surveillance Culture/Testing (ASC/AST)**)?

Non-culture based testing

Non-culture based testing refers to identification of microorganisms using a method of testing other than a culture. Culturing requires that a specimen be inoculated to a culture media, incubated and observed for actual growth of microorganisms and can take several days to weeks for a final report depending upon the organism identified. In contrast, non-culture based testing methods generally have quicker turn-around times for results which can assist with early diagnosis and tailoring of antimicrobial therapy. Examples of non-culture based testing would include but are not limited to PCR (polymerase chain reaction) and ELISA (Enzyme-linked immunosorbent assay). Regardless of the test methodology used (culture or non-culture based), a final laboratory report found in the medical record that identifies an organism is eligible for use in meeting an NHSN infection definition with the exception of those performed for Active Surveillance Culture/Testing (ASC/AST).

What Exactly Does This Mean? New Terms and Concepts (continued)

Active Surveillance Culture/Testing (ASC/AST)

For purposes of NHSN surveillance, Active Surveillance Culture/Testing (ASC/AST) refers to a testing that is intended to identify presence/carriage of microorganisms for the purpose of instituting or discontinuing isolation precautions (e.g., nasal swab for MRSA, rectal swab for VRE), or monitoring for eradication of a carrier state. ASC/AST does NOT include identification of microorganisms with cultures or tests performed for diagnosis and treatment purposes.

2. What is meant by *patient has an abscess or other evidence of infection on **gross anatomic** or histopathologic exam?*

Gross Anatomical Exam

NHSN defines gross anatomical exam as physical examination with or without invasive procedure. For example, evidence of infection found on gross anatomical exam may refer to: findings elicited or visualized on physical examination or observed during an operative procedure.

3. Can you clarify if *the date of specimen collection is on or after the date the patient is **declared brain dead AND** the patient is being **supported for organ donation purposes**, the event should not be reported as an HAI* applies to all patients declared brain dead?

This exclusion for reporting is specific and applies only to patients who are declared brain dead **AND** are being supported for organ donation purposes. This does not apply to all patients who are declared brain dead. For example, a patient declared brain dead and for whom treatment is limited to comfort care, is still to be included in surveillance performed in that location. Such patients may remain at this level of care for an extended period of time and efforts to prevent infection should continue for the duration of their length of stay.

4. Clarify what is meant by a *positive blood specimen meeting LCBI criteria, that is accompanied by **documentation of observed or suspected patient accession into vascular access lines**, within the BSI infection window period, will be considered an LCBI, but not CLABSI for NHSN reporting purposes.*

Documentation that the patient has been observed or suspected of accessing their vascular access lines must appear in the medical record. Accession indicates the patient was observed or suspected of injecting into the line. Accession into vascular access lines DOES NOT include manipulation or contamination (e.g., patient disconnects the line, line falls on the floor, etc.).

Let's talk Secondary BSI Assignment!

For purposes of NHSN Bloodstream Infection (BSI) surveillance, to assign a Laboratory Confirmed Bloodstream Infection (LCBI) as a secondary BSI to a primary site of infection, the following must occur:

1. A primary site of infection must be identified and an NHSN site specific infection definition must be met

AND

2. The blood specimen must have a collection date during the site-specific infection's Secondary BSI Attribution Period (Infection Window Period + Repeat Infection Timeframe) or in the case of an SSI the blood specimen must have a collection date during the 17 day SSI Secondary BSI Attribution Period.

AND

3. One of the following must be satisfied (See Chapter 4 Appendix 1: Secondary BSI Guide in the NHSN Patient Safety Component manual http://www.cdc.gov/nhsn/PDFs/pscManual/4PSC_CLABScurrent.pdf).
 - a. An organism identified from the site specific infection is used as an element to meet the site-specific infection criterion, AND the blood specimen contains at least one matching organism to that site specific specimen, and is collected during the secondary BSI attribution period.

OR

- b. The positive blood specimen is an element used to meet the site-specific infection criterion, and is collected during the site specific infection's infection window period.

Remember, the site specific infection definitions available for use include PNEU (Chapter 6), UTI (Chapter 7), SSI (Chapter 9), and the CDC/NHSN Surveillance Definitions for Specific Types of Infections (Chapter 17). These can be found in the NHSN Patient Safety Component manual: http://www.cdc.gov/nhsn/pdfs/pscmanual/pscmanual_current.pdf.

Additionally, for patients in adult locations where VAE surveillance is conducted, a BSI can also be attributed to a VAE (Chapter 10) following the specific VAE protocol guidance for secondary BSI attribution <http://www.cdc.gov/nhsn/acute-care-hospital/vae/index.html>. Remember, in this instance, if unable to attribute a BSI as secondary to VAE and a lower respiratory source of infection is thought to be the primary source of a bloodstream infection, the PNEU definitions are still available for assigning secondary BSI attribution. For example, if PVAP definition is met, a BSI can either be secondary to the VAE (if it meets the VAE secondary BSI criteria outlined in the protocol), or secondary to one of the other major HAI sites (e.g., PNEU, UTI, SSI, another Chapter 17 definition). Likewise, if only the VAC or IVAC definition is met, or if no VAE definition is met, the BSI may be secondary to one of the other major HAI sites (to include PNEU).

If secondary BSI attribution cannot be assigned to an NHSN site-specific infection, the BSI would be determined to be a primary BSI, central line-associated if central-line requirements are met.

Correction to the December 2015 CAUTI Data Entry Update

Although it was reported in the December 2015 NHSN Newsletter that beginning in January 2016, users would be able to edit 2015 CAUTI events to choose the UTI symptoms of urinary urgency, urinary frequency, and dysuria when Risk Factor “In Place” is selected, this is not possible. Selection of these symptoms for situations when the urinary catheter had been removed on the date of event, but prior to the symptoms is only available beginning with January 1, 2016 dates of events. This means the data entry work-around used in 2015 will not be able to be edited. Please note, this will not change the event type. The event will still be a CAUTI, and this is accurate. Therefore, your data can still be used for analysis, and there should be no resulting problems with data validation related to use of the work-around. We apologize that the system will not allow for editing events reported in 2015. Again, there should be no resulting problems with data validation related to use of the work-around.

Surgical Site Infection: Frequently Asked Questions

How do I determine level of infection after an NHSN BRST – breast procedure?

For SSI after a BRST procedure, here is the guidance:

- Apply the superficial incisional SSI criteria if the infection involves the skin or subcutaneous tissue
- Apply the deep incisional SSI criteria if the infection involves the muscle/fascial level
- Apply the organ space BRST criteria 1 or 2 if the infection is deeper than the muscle/fascial level

How do I determine the level of infection for the sternal site after cardiac procedures?

- Apply the superficial incisional SSI criteria if the infection involves the skin or subcutaneous tissue.
- If the infection goes to the sternum but does not involve the bone apply the deep incisional criteria.
- If the infection is of the sternal bone apply the organ/space BONE criteria.
- If the infection is below the sternum in the mediastinal space apply the MED – Mediastinitis criteria. These cultures are often named mediastinal fluid or tissue.

Note: If a patient meets both BONE and MED-mediastinitis criteria, the appropriate determination is organ/space MED.

CLIP Bundle Adherence - Correction and Additional Information

There is a slight correction to the bundle adherence information as published in the January 2016 NHSN Protocol. Specifically, the bundle adherence rules listed in the protocol are effective beginning with **January 1, 2016** insertions (not January 1, 2014).

Data Analyses: Adherence rates for specific insertion practices will be calculated by dividing the number of central line insertions during which the recommended practice was followed by the total number of central line insertions and multiplying the result by 100. Such calculations can also be done for a bundle of practices that have been shown to reduce the incidence of CLABSI (i.e. NHSN CLIP Bundle). In NHSN for CLIP insertions dated **January 1, 2014** and forward, adherence to the bundle requires a “Yes” to all of the following:

- Hand hygiene
- Appropriate:
 - Chlorhexidine gluconate (CHG) for patients ≥ 60 days old unless there is a documented contraindication to CHG
 - Povidone iodine, alcohol, CHG, or other specified for children < 60 days old

skin prep area has completely dried before insertion

CORRECTION: January 1, 2016

In addition, the definition of CLIP Bundle Adherence in NHSN varies slightly, depending on the insertion time period (e.g., ≤ 2013 , 2014-2015, and ≥ 2016). We have developed a table with each time period’s CLIP Bundle Adherence rules. This document is available at: <http://www.cdc.gov/nhsn/pdfs/pscmanual/clip-bundle-adherence-criteria.pdf>.

Reminders: MRSA and *C. difficile* LabID Event Reporting

Based on recent feedback we received during our annual NHSN Training, as well as data quality analyses being performed by CDC, we wish to clarify the following points about overall facility-wide inpatient (FacWideIN) reporting of MRSA and CDI LabID Events from acute care hospitals.

*Note: For information about CMS reporting requirements of MRSA and CDI LabID events for acute care hospitals, long-term acute care hospitals, and inpatient rehabilitation facilities, please visit: <http://www.cdc.gov/nhsn/cms/index.html>. The remainder of this article provides information for **acute care hospitals only**.*

- If your facility is an acute care hospital following FacWideIN surveillance for CMS’ Hospital Inpatient Quality Reporting Program, your facility is required to conduct surveillance in all emergency departments (EDs) and 24-hour observation locations (if your hospital has such locations). EDs and 24-hour observation locations must be mapped in NHSN, and listed *individually* on the monthly reporting plans. Surveillance in NHSN using the “FacWideOUT” location does not constitute the required surveillance of ED and/or 24-hour observation locations.
 - NHSN location definitions can be found here: http://www.cdc.gov/nhsn/pdfs/pscmanual/15locationsdescriptions_current.pdf
 - More information on proper set-up of the monthly reporting plans is here: <http://www.cdc.gov/nhsn/pdfs/cms/how-to-set-up-and-report-mrsa-cdi.pdf>

Reminders: MRSA and *C. difficile* LabID Event Reporting (continued)

- Events from ED and 24-hour observation locations are used in the algorithms to determine which subsequent events from the same patient are considered “duplicates” and are not included in the standardized infection ratio (SIR).
- The current FacWideIN SIRs will not count any hospital-onset LabID event from a patient who had a previous LabID event of the same organism in the prior 14 days, as reported to NHSN. For example, Patient A was positive for MRSA bacteremia in the ED on February 1st. On February 6th, Patient A had been transferred to an ICU and tested positive again for MRSA bacteremia. The LabID events on February 1st and 6th must be reported to NHSN, as these are the first positive specimens in those locations. *However*, the specimen on the 6th will *not* be counted in the SIR, as Patient A had a previous positive MRSA bacteremia in the prior 14 days (i.e., on February 1st).
- Hospitals must select their CDI test method once per quarter on the FacWideIN monthly denominator form. If your laboratory is using PCR to test for *C.difficile*, **do not select “Other” as your facility’s CDI test type**. Doing this may artificially increase your facility’s SIR. PCR is a type of nucleic acid amplification test (NAAT); therefore, **please select “NAAT”** as your choice for CDI test type. Please refer to the NHSN June 2015 Newsletter for more information about CDI Test Type: http://www.cdc.gov/nhsn/pdfs/newsletters/enewsletter_june-2015_final.pdf

Updated National Benchmarks Available

CDC just released the 2014 [National and State HAI Progress Report!](#) This report presents 2014 national and state SIR benchmarks for CLABSIs, CAUTIs, select SSIs, MRSA bacteremia LabID events, and *C.difficile* LabID events. These SIRs are calculated by pooling all applicable data reported into NHSN for calendar year 2014.

For the first time, national SIRs are available for long-term acute care hospitals (LTACH) for CLABSI and CAUTI, and inpatient rehabilitation facilities (IRF) for CAUTI. In addition, we have expanded the procedure types included in the current Progress Report so that national SSI SIRs are available for all 39 NHSN inpatient procedure categories.

More information, including FAQs, state-specific fact sheets, report methodology, and detailed Excel data tables are available at: <http://www.cdc.gov/hai/progress-report/index.html>

Note: the 2014 SIRs included in this report are a comparison between the number of observed HAIs and the number of predicted HAIs, which is calculated based on the historic NHSN baselines. Resources are available if you would like to learn more about the SIR (http://www.cdc.gov/nhsn/pdfs/newsletters/nhsn_nl_oct_2010se_final.pdf) and the baseline time periods (http://www.cdc.gov/nhsn/pdfs/sir/ratessirs-reference_jan2014.pdf).

New Online Tool to Review Antibiotic Resistance Data

Do you ever wonder how much antibiotic resistance has been reported to NHSN in your state, or across the nation? The Division of Healthcare Quality and Promotion at CDC has just released the **Antibiotic Resistance Patient Safety Atlas**, a new web portal that allows you to explore antibiotic resistance among 31 pathogens in your state, Census region, or the entire nation. Review resistance data for CLABSIs, CAUTIs, and SSIs for different time periods (2011-2014) using interactive maps, charts, and data tables. More information about the Atlas, including a “How to Get Started” guide and FAQs, can be found on the Patient Safety Atlas website: <http://www.cdc.gov/hai/surveillance/antibiotic-resistance-patient-safety-atlas.html>

Hint: You can review antimicrobial-resistant pathogen data reported from your individual facility using the Analysis reports within NHSN. More information here: http://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/linelist_qrg.pdf

Friendly Reminder:

Please Complete the 2015 Annual Patient Safety Facility Survey ASAP

The 2015 Annual Patient Safety Facility Survey is due in NHSN. Facilities that have not successfully submitted a survey will no longer be able to create and edit monthly reporting plans until surveys are completed. This mandatory survey is completed by all enrolled facilities participating in the NHSN Patient Safety Component to provide updated information on hospital characteristics and practices. In addition, certain questions on the survey have implications for how facility data are risk-adjusted and could impact SIRs. NHSN has created a short, 5-minute Quick Learn video (formerly known as NHSN Hot Topics) to give facilities a brief update of the changes made to the 2015 form. Topics included in the video are new questions in this year’s survey, the introduction the Ambulatory Surgery Center (ASC) survey, frequently asked questions, and tips on how to accurately complete the survey. The video can be found here: <http://streaming.cdc.gov/vod.php?id=3d4ffcca6f280be4d003454abeaab7c220151208150544075>

For a copy of the survey, as well as guidance on how to complete the survey, please visit the appropriate link below based on your facility type. Within each blank copy of the survey there is a link at the top of the page that will take you to instructions for completion for each survey type.

Acute Care Hospital— http://www.cdc.gov/nhsn/forms/57.103_PSHospSurv_BLANK.pdf

Inpatient Rehabilitation Facility — http://www.cdc.gov/nhsn/forms/57.151_REHABFacSurv_BLANK.pdf

Long Term Acute Care Hospital — http://www.cdc.gov/nhsn/forms/57.150_LTACFacSurv_BLANK.pdf

Ambulatory Surgery Center— http://www.cdc.gov/nhsn/forms/57.400_ascfacsurv_blank.pdf

Please remember, surveys must be completed and submitted in NHSN as soon as possible. Facilities that do not meet this deadline will continue to be unable to complete monthly reporting plans. There are very few changes to this year’s surveys, and we hope the enhancements and additions will aid users in completing it. For guidance and support, contact our support team at nhsn@cdc.gov . Use the words *Annual Survey* in the subject line to expedite the response time.

Quarterly Update on the NHSN Re-baseline Work!

As mentioned in the December 2015 NHSN Newsletter (http://www.cdc.gov/nhsn/pdfs/newsletters/nhsn-enewsletter_dec-2015_final.pdf), CDC will be using data reported to NHSN for calendar year 2015 as a new baseline for the standardized infection ratios (SIRs), which includes updating the risk models for HAIs. This was also discussed in detail during the recent 2016 NHSN Annual training.

During the training, the following highlights, related to the new 2015 baseline, were discussed:

Timeline	CDC will complete the analyses during the summer of 2016. The updated risk models, based on the new 2015 baseline, will become available in the NHSN application in the planned December 2016 release of NHSN (i.e., NHSN v8.6).
MBI and CLABSIs	CLABSI events reported to NHSN as MBI-LCBI will be excluded from the numerator when performing risk-adjustment of 2015 CLABSI data. Hospitals and groups should also expect to see these events removed from the new CLABSI SIRs that will use the 2015 baseline.
PATOS	Under the new 2015 baseline, the Complex 30-day SSI SIRs will exclude SSIs reported as “Present at time of surgery” (PATOS). This variable will be assessed for the other SSI models separately.
Availability of SIRs under the original baseline	<p>When the new SIRs (calculated on the 2015 baseline) become available in NHSN, the previous SIR output will be retained and moved to a new location on the output options screen. In addition, SIRs using the original baseline will be calculated through 2016 data. The new, 2015 baseline will be used for calculation of SIRs for 2015 and forward. This means that there will be two years of data – 2015 and 2016 – for which users can obtain SIRs under the original, as well as the new, baseline.</p> <p>The diagram illustrates the timeline of the re-baseline work. It features two horizontal arrows. The top arrow, labeled 'Original Baselines', points to the left and is divided into three segments: '2014 & prior' (light blue), '2015 data' (yellow), and '2016 data' (yellow). The bottom arrow, labeled 'New Baseline', points to the right and starts at the beginning of the '2015 data' segment, continuing through '2016 data' and '2017+' (light blue). Vertical dashed lines mark the boundaries between these data periods.</p>

An archived video of the NHSN training – including the Re-baseline presentation - will be posted soon. Stay tuned for additional updates on the re-baseline in the coming months, including a new NHSN Rebaseline webpage!

Updates to the NHSN Antimicrobial Use & Resistance (AUR) Module

The 2016 updated NHSN Antimicrobial Use and Resistance Module Protocol and training slides have been posted. We've added information about the Standardized Antimicrobial Administration Ratios (SAARs) introduced in the Antimicrobial Use (AU) Option in January 2016. We've also clarified the Antimicrobial Resistance (AR) Option requirements. The updated documents can be found under the Protocol and Training sections here: <http://www.cdc.gov/nhsn/acute-care-hospital/aur/index.html>.

Additionally, we've developed six new Analysis Quick Reference Guides specifically for AU Option output analysis. These new guides are 2-3 page documents that provide a brief overview of the specific output option, how to make modifications to the output and how to interpret the output results. These documents can be found under the Analysis Resources section here: <http://www.cdc.gov/nhsn/acute-care-hospital/aur/index.html>.

Analysis Resources

- [Antimicrobial Use Line List](#) [PDF - 574 KB]
- [Antimicrobial Use Rate Table - By Location](#) [PDF - 746 KB]
- [Antimicrobial Use Rate Table - FacWideIN](#) [PDF - 648 KB]
- [Antimicrobial Use Bar Chart](#) [PDF - 609 KB] ← NEW!
- [Antimicrobial Use Pie Chart](#) [PDF - 585 KB]
- [Antimicrobial Use SAAR Table](#) [PDF - 651 KB]
- [Patient Safety Analysis Resources](#)
- [Patient Safety Analysis Quick Reference Guides](#)
- [Patient Safety Component - Variable Reference List](#) [PDF - 3 MB]

Screenshot of the Antimicrobial Use Line List Analysis Quick Reference Guide:

Line List

Description

A line list is an organized, detailed list of each record entered into NHSN.

Example (Using: Line Listing - All Submitted AU Data by Location)

Suppose you are interested in looking at all antimicrobial prescribing in the first quarter of 2015 that occurred in the adult Medical Ward (MEDWARD). You would like to produce a line list that includes location, month, and information on each antimicrobial (total antimicrobial days, number of days present), as well as the route of administration (IV count, IM count, digestive count, and respiratory count). You would like the line list sorted by antimicrobial.

Modification Page

Line Listing HELP

Analysis Data Set: SummaryAU

Modify Attributes of the Output:

Last Modified On: 12/04/2015

Output Type: **Line Listing**

Output Name:

Top Section of Modification Page:

- In the top section of the modification page, you can modify the name, title, and output format of the line list. **Note:** If you wish to save your modifications as a template for future reports, you will be required to change the output name.

Tip: For more descriptive variable labels on your line list, check the box to "Use Variable Labels" (recommended).

Reminder! Data for CMS Quality Reporting Programs due Soon!

The following data must be entered into NHSN by **May 15, 2016** for facilities that participate in certain CMS Quality Reporting Programs.

Acute Care Hospitals that participate in the Hospital Inpatient Quality Reporting (IQR) Program:

2015 Quarter 4 (October 1 – December 31) CLABSI and CAUTI data

- All ICU locations
- Adult and pediatric medical, surgical, and medical/surgical wards

2015 Quarter 4 (October 1 – December 31) Inpatient COLO and HYST SSI data

2015 Quarter 4 (October 1 – December 31) MRSA Bacteremia and *C. difficile* LabID Events (all healthcare onset and community onset)

- FacWideIN
- ED, and 24-hour observation locations

2015 Quarter 4 & 2016 Quarter 1 (October 1 – March 31) Healthcare Personnel Influenza Vaccination Summary data

Cancer Hospitals that participate in the PPS-Exempt Cancer Hospital Quality Reporting Program:

2015 Quarter 4 (October 1 – December 31) CLABSI and CAUTI data (all bedded inpatient care locations)

2015 Quarter 4 (October 1 – December 31) Inpatient COLO and HYST SSI data

Inpatient Rehabilitation Facilities (IRFs) that participate in the Inpatient Rehabilitation Facility Quality Reporting Program:

2015 Quarter 4 (October 1 – December 31) CAUTI data (all bedded inpatient locations)

2015 Quarter 4 (October 1 – December 31) MRSA Bacteremia and *C. difficile* LabID Events (all healthcare onset and community onset)

- Freestanding IRFs: Reporting by FacWideIN
- IRF units within acute care or critical access hospitals: Reporting by each CMS IRF unit

2015 Quarter 4 & 2016 Quarter 1 (October 1 – March 31) Healthcare Personnel Influenza Vaccination Summary data

- IRF units within acute care or critical access hospitals must submit a separate summary record specifically for the IRF unit: <http://www.cdc.gov/nhsn/pdfs/training/vaccination/hcp-flu-vaccination-summary-reporting-irf-training-slides.pdf>

Long-Term Acute Care Facilities (LTACs/LTCHs) that participate in the Long-Term Care Hospital Quality Reporting Program:

2015 Quarter 4 (October 1 – December 31) CLABSI and CAUTI data (all bedded inpatient locations)

2015 Quarter 4 (October 1 – December 31) MRSA Bacteremia and *C. difficile* LabID Events (FacWideIN, all healthcare onset and community onset)

2015 Quarter 4 & 2016 Quarter 1 (October 1 – March 31) Healthcare Personnel Influenza Vaccination Summary data

Reminder! Data due for CMS Quality Reporting Programs continued on page 12

Reminder! Data for CMS Quality Reporting Programs due Soon! (continued)

Inpatient Psychiatric Facilities (IPFs) that participate in the Inpatient Psychiatric Facility Quality Reporting Program:

NEW: 2015 Quarter 4 & 2016 Quarter 1 (October 1 – March 31) Healthcare Personnel Influenza Vaccination Summary data

- IPF units within acute care or critical access hospitals must submit a separate summary record specifically for the IPF unit: <http://www.cdc.gov/nhsn/pdfs/training/vaccination/hcp-flu-vax-summary-reporting-ipf-training.pdf>

Ambulatory Surgical Centers (ASCs) that participate in the Ambulatory Surgical Center Quality Reporting Program:

2015 Quarter 4 & 2016 Quarter 1 (October 1 – March 31) Healthcare Personnel Influenza Vaccination Summary data

Critical Access Hospitals (CAHs) that participate in the Medicare Beneficiary Quality Improvement Program (MBQIP):

NEW: 2015 Quarter 4 & 2016 Quarter 1 (October 1 – March 31) Healthcare Personnel Influenza Vaccination Summary data

Dialysis Facilities that participate in the CMS End Stage Renal Disease (ESRD) Quality Incentive Program (QIP):

NEW: 2015 Quarter 4 & 2016 Quarter 1 (October 1 – March 31) Healthcare Personnel Influenza Vaccination Summary data

Please make sure at least one individual at your facility can access NHSN via SAMS and has been assigned appropriate user rights in NHSN so they may enter and view the facility's data. To ensure your data have been correctly entered into NHSN, please make sure to verify that: 1) your monthly reporting plans are complete, 2) you've entered appropriate summary and event data or checked the appropriate no events boxes, and 3) you've cleared all alerts from your NHSN facility homepage. For additional guidance on ensuring your data are accurately sent to CMS for Quality Reporting purposes, please visit our website and navigate to the appropriate section(s) for your facility type: <http://www.cdc.gov/nhsn/cms/index.html>

If you have any questions, please contact the NHSN Helpdesk: NHSN@cdc.gov.

Long-term Care Facility Component

Long-term Care Facility (LTCF) Updates

Component Updates for 2016: As a reminder, the following protocol changes were implemented in the Long-term Care Facility (LTCF) Component for the 2016 calendar year. Additional details are available for each module on the [LTCF Website](#).

Urinary Tract Infection (UTI) Event

- Fever, even if clinically believed due to another cause, should still be included as part of meeting a UTI definition.
- Yeast and other microorganisms, which are not bacteria, will no longer be accepted as UTI pathogens.

LTCF Updates continued on page 13

Long-term Care Facility (LTCF) Updates (continued)

Laboratory-identified Multi-drug Resistant Organism (MDRO) and Clostridium difficile Infection (CDI) Events

- *Has the resident been discharged from an acute care facility in the previous 3 months* has been changed to **4 weeks** to reduce surveillance burden and better align with Acute Care Transfer-Long-term Care Facility-onset (ACT-LO) categorization.
- Clarifications have been made throughout the protocol to explain that LabID event reporting is specific to specimens collected while the resident is receiving care in the LTCF.

C. difficile Reporting and Reduction Project for Nursing Homes

In October 2015, CMS announced the *C. difficile* Infection Reporting and Reduction Project within the nursing home 11th Scope of work for Quality Innovation Networks – Quality Improvement Organizations (QIN-QIO). This is a national project that involves using the National Healthcare Safety Network (NHSN) to submit nursing home data on *C. difficile* laboratory-identified events. Participation in this exciting project will allow the creation of a national nursing home *C. difficile* baseline. Please contact your local QIN-QIO for additional information about this project.

NHSN Annual Training

Thank you to everyone who attended the 2016 NHSN Annual Long-term Care Facility Training in Atlanta on February 29, 2016. More than 123 participants traveled to Atlanta to attend the long-term care facility training, and more than 2,000 additional participants joined NHSN live training via live webstream. The archived webstream video of the training and all presentation slides will be posted to the NHSN website in the coming months. Stay tuned!

Healthcare Personnel Safety Component

Healthcare Personnel Influenza Vaccination Summary

The deadline for reporting healthcare personnel (HCP) influenza vaccination summary data for the 2015-2016 influenza season is May 15, 2016. The following facility types are required to report these data by this deadline:

- **Acute care facilities** participating in the CMS IPPS Hospital Inpatient Quality Reporting Program and Outpatient Quality Reporting Program
[Acute care facility training materials are located at: <http://www.cdc.gov/nhsn/acute-care-hospital/hcp-vaccination/index.html>.]
- **Ambulatory surgery centers (ASCs)** participating in CMS's ASC Quality Reporting Program
[ASC training materials are located at: <http://www.cdc.gov/nhsn/ambulatory-surgery/hcp-vaccination/index.html>]
- **Critical access hospitals** participating in the Medicare Beneficiary Quality Improvement Program (MBQIP)
[Critical access hospital training materials are located at: <http://www.cdc.gov/nhsn/pdfs/hps-manual/vaccination/hcp-flu-vax-reporting-cah.pdf>]

Healthcare Personnel Influenza Vaccination Summary continued on page 14

Healthcare Personnel Influenza Vaccination Summary (continued)

- **Inpatient rehabilitation facilities** (IRFs) participating in CMS’s IRF Quality Reporting Program
[IRF training materials are located at: <http://www.cdc.gov/nhsn/inpatient-rehab/hcp-vacc/index.html>.]
- **Inpatient psychiatric facilities** (IPFs) participating in CMS’s IPF Quality Reporting Program
[IPF training materials are located at: <http://www.cdc.gov/nhsn/ipfs/vaccination/index.html>.]
Information on mapping IPF units as locations of acute care or critical access hospitals is located at: <http://www.cdc.gov/nhsn/pdfs/mrsa-cdi/ipf-locations.pdf>.
- **Outpatient dialysis facilities** participating in CMS’s End-Stage Renal Disease (ESRD) Quality Incentive Program (QIP) [Outpatient dialysis facility training materials are located at: <http://www.cdc.gov/nhsn/dialysis/hcp-vaccination/index.html>.]
- **Long-term acute care** (LTAC) facilities participating in CMS’s LTCH Quality Reporting Program
[LTAC training materials are located at: <http://www.cdc.gov/nhsn/LTACH/hcp-flu-vac/index.html>.]

After your vaccination campaigns are complete, please remember to complete the Seasonal Survey on Influenza Vaccination Programs for Healthcare Personnel. Although this survey is not required, we encourage you to complete this short survey, as the information will be very helpful for CDC.

For questions related to HCP influenza vaccination summary data reporting, please e-mail NHSN@cdc.gov and specify ‘HPS Flu Summary’ in the subject line, along with your facility type.

Dialysis Component

Upcoming Deadlines

The remaining Centers for Medicare and Medicaid Services (CMS) End-Stage Renal Disease (ESRD) Quality Incentive Program (QIP) deadline for 2015 Dialysis Event Data is **March 31, 2016!** Please submit accurate and complete 2015 Quarter 4 data to NHSN by this deadline for the CMS ESRD QIP!

Upcoming CMS ESRD QIP Deadlines for 2016 Dialysis Event Data:

Calendar Year 2016 Dialysis Event data should be submitted to NHSN by the following dates:

Quarter 1 (January 1, 2016 – March 31, 2016): **June 30, 2016**

Quarter 2 (April 1, 2016 – June 30, 2016): **September 30, 2016**

Quarter 3 (July 1, 2016 – September 30, 2016): **December 31, 2016**

Quarter 4 (October 1, 2016 – December 31, 2016): **March 31, 2017**

NEW! Newsblast Archive: News from the Dialysis NHSN Helpdesk

In February 2015, the Dialysis Helpdesk began disseminating short, informational newsblasts that address trending topics in the NHSN inbox. Newsblasts continue to be distributed on a monthly basis, towards the end of each month. As of December 2015, Dialysis Team launched the Dialysis Component Monthly Newsblast Archive (<http://www.cdc.gov/nhsn/dialysis/newsblasts/index.html>)! Users can navigate to the webpage to find answers to frequently asked questions, deadline reminders, and breaking news from the Dialysis NHSN Helpdesk.

Biovigilance Component

Hemovigilance Module Updates

Complete Annual Facility Survey

Each year, facilities should complete the Annual Facility Form during January. If you have not yet completed the form, please do so as soon as possible. This report provides CDC with facility and transfusion services characteristics. CDC uses these descriptive data to provide context for aggregated national analysis.

Clinical Document Architecture (CDA)

In response to user requests and feedback, CDC is developing Clinical Document Architecture (CDA). CDA will allow NHSN-Biovigilance users to upload denominator data to the Hemovigilance Module without manual data entry. CDA will decrease the reporting burden, improve data quality and increase data granularity allowing for rate calculations by product type and combinations of collection method or modification. Users with HL7 membership may download the [CDA Implementation Guide](#) from the HL7 website. User without membership must wait until May 10th, 2016 to download the HL7 CDA® R2 Implementation Guide: Healthcare Associated Infection Reports, Release 3, DSTU Release 1 - US Realm from the website.

CDC will host a webinar in the summer of 2016 with further details.

Closing Out Data

CDC would like to remind facilities to begin addressing any missing data for 2015. Check the alerts on the Biovigilance Component Home Screen to see what data is missing. Please send questions and feedback to nhsn@cdc.gov and include 'Biovigilance' in the subject line for the fastest response.

General NHSN

Training Updates and Opportunities

Interactive Training Modules: **April - May 2016**

APIC Webinar: NHSN Update Spring 2016: **May 5, 2016 at 1:00 PM EDT**. Details: <http://webinars.apic.org/>

Archived Training Videos: **May 2016**

2016 APIC Conference Live Training: **June 2016**

NHSN Training Course in Atlanta

We want to thank everyone for their participation in 2016 NHSN Annual Training in Atlanta on February 29 – March 4, 2016. Three hundred individuals accepted invitations to travel to Atlanta to attend. Participants included infection preventionists, hospital epidemiologists from acute and long term care facilities, as well as staff from Quality Improvement Organizations, Quality Innovation Networks, Health Engagement Networks, and State Health Departments. Speakers discussed 2016 CMS reporting, definition and protocol clarification, and analysis for catheter-associated urinary tract infections (CAUTI), central line-associated bloodstream infections (CLABSI), surgical site infections (SSI), ventilator-associated events (VAE), and laboratory-identified (LabID) event reporting for *Clostridium difficile* (CDI) and methicillin-resistant *Staphylococcus aureus* (MRSA) bacteremia. The week-long training covered Long-term Care Facilities, as well as Acute Care Facilities and closed out with discussion of Antibiotic Stewardship.

Live webstreaming was available for those unable to attend training in-person. Live webstream attendance was as high as 5,700 individuals on any single day of the training.

The archived webstream video of the training and all presentation slides will be posted to the NHSN website in the coming months. We want to thank everyone for the successful turnout and your participation. If you have questions about the training, please contact us at NHSNTrain@cdc.gov.

2016 APIC Conference Live Training

NHSN Subject Matter Experts will be attending the annual Association for Professionals in Infection Control and Epidemiology conference taking place June 11-13 in Charlotte, NC to lead educational workshops on NHSN 2016 updates, CLABSI, CAUTI, and VAE definitions and surveillance, NHSN Analysis, and other topics. Additionally, NHSN will provide a June 10th pre-conference workshop covering SSI and MDRO/CDI surveillance and data analysis.

Additionally, NHSN will hold the **2016 Member's Meeting** on Sunday, June 12th from 4:15 – 5:45pm in the Junior Ballroom C.

Training Updates and Opportunities continued on page 17

Training Updates and Opportunities (continued)

Please see below for APIC 2016 NHSN Presentations and check your conference agenda for dates and times:

NHSN Pre-conference Workshop:

- NHSN Surgical Site Infection (SSI) Surveillance
- NHSN MDRO/CDI Module: Navigating Infection Surveillance and LabID Event Reporting
- NHSN Analysis LIVE!
- Understanding the Importance of Risk-adjustment and Data Quality

APIC NHSN Presentations:

- Incorporating CDC's NHSN into Nursing Home Infection Surveillance Programs
- NHSN Healthcare-associated Infection Surveillance Rules—Basics and Updates for 2016
- To Be or Not to Be a CAUTI
- VAE Protocol Review and Case Study Determinations
- NHSN Antimicrobial Use and Resistance Module
- NHSN Analysis for LTACHs and IRFs
- Sneak Preview: New NHSN Methods for Analyzing HAI Data
- Methods for Assessing Intervention Effectiveness
- Performing Surveillance for CLABSI Accurately in NHSN

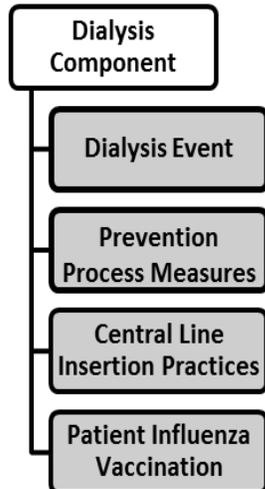
Continuing Education

Continuing Education (CE) credits will be available later in the spring for those who watched the NHSN Training via web stream. NHSN will send an announcement in late April/ early May with instructions on how to obtain CE credits once online training and CE credits are available. The NHSN Patient Safety Component will offer many opportunities to receive continuing education (CE) free of charge through live and online training. CEs that will be available include CME, CNE, CPH, and CEU. Step-by-step directions on accessing the CDC continuing education registration and online system, and a list of upcoming CE offerings can be found here: <http://www.cdc.gov/nhsn/Training/continuing-edu.html>.

Guidance for New Users Added to a Currently Enrolled Facility in NHSN

After an administrative NHSN user at your facility has determined your appropriate level of access to NHSN, follow this 5-step process:

1. You must first complete the appropriate required training. NHSN is composed of 5 components and each component may have several modules. Each module has distinct training requirements. If your facility reports data to a module, complete the corresponding training.



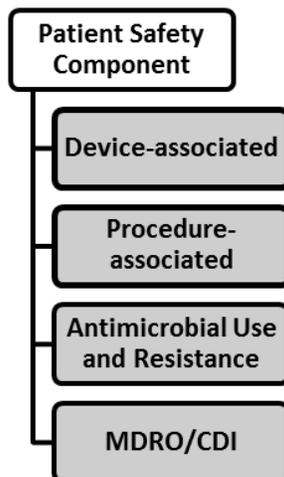
Dialysis Component Modules Training

Dialysis Event: [Dialysis Event Protocol](#) and [Online Dialysis Event Surveillance Training](#)

Prevention Process Measures: [Protocol](#)

Central Line Insertion Practices: [Protocol](#), [Introduction to Device-associated Module Training](#), and [CLIP Training](#)

Patient Influenza Vaccination: [Tables of Instructions](#)



Patient Safety Component Modules Training

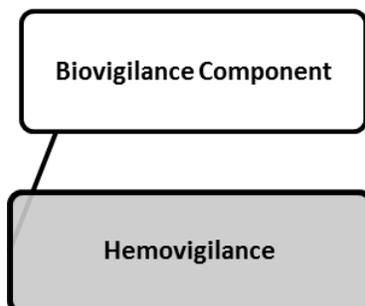
[NHSN Patient Safety Component Manual](#)

Device-associated Module: The following must be completed if this type of surveillance is performed- Introduction to the DA Module, CLABSI, CAUTI, CLIP, VAE, and VAP

Procedure-associated Module: Introduction to the PA Module, SSI

[Antimicrobial Use and Resistance Module](#)

[MRDO and CDI Module](#)



Biovigilance Component Modules New User Trainings

[Facility Enrollment or Component Activation](#)

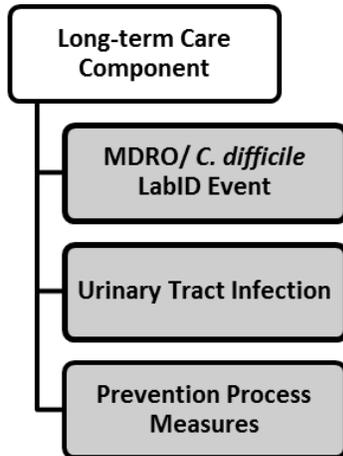
[NHSN Manual: Biovigilance Component Protocol](#)

[Surveillance Requirements and Data Reporting](#)

[Incident Reporting](#)

[Adverse Reaction and Denominator Reporting](#)

Guidance for New Users Added to a Currently Enrolled Facility in NHSN (continued)



Long-term Care Component Modules Training

[Overview of LTCF Component](#)

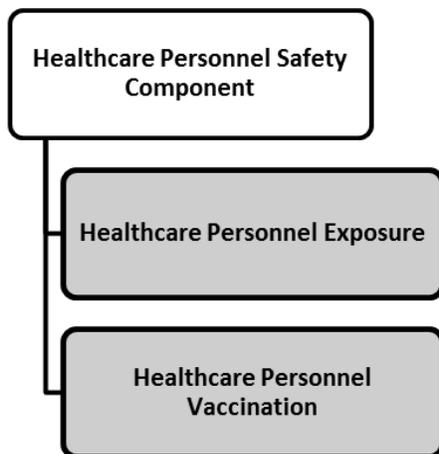
[LTCF Enrollment: Getting access to NHSN](#)

[LTCF Set-up](#)

UTI Event: [protocol](#) and [training slides](#)

LabID Event: [protocol](#) and [training slides](#)

Prevention Process Measures: [protocol](#) and [training slides](#)



Healthcare Personnel Safety Component Modules Training

[Healthcare Personnel Vaccination Module Influenza](#)

[Vaccination Summary](#)

2. Follow the link in the 'Welcome to NHSN!' email to print, read, and agree to the NHSN Rules of Behavior.
3. Receive an 'Invitation to Register' email from 'SAMS No-Reply (CDC).' Follow the instructions to supply basic information about yourself (make sure to include your HOME address for the card to be mailed to you) and choose your personal SAMS password.
4. Once you have completed the online registration, you will receive an email with instructions for identity verification. You will need to supply 2 forms of identification and have your form notarized. Be assured that your registration materials will only be used to help determine your suitability for information access and that these materials will not be shared outside of NHSN.
5. Once your Identity Verification is complete, SAMS will send you an email notifying you with a link to the SAMS portal page where you can access NHSN. You must wait until you receive your grid card in the mail for access.

CDA Corner

NHSN "CDA Submission Support Portal (CSSP)" now live!

NHSN has deployed a new and improved portal for CDA related content: <http://www.cdc.gov/nhsn/cdaportal/index.html>. The CSSP may be accessed from the main NHSN webpage and contains past information shared with you via emails and webinars and much more. The CSSP will be updated periodically. Take a look and let us know what you think!

NHSN CDA Submission Support Portal (CSSP)

Clinical Document Architecture (CDA) is a Health Level 7 (HL7) standard that provides a framework for the encoding, formatting and semantics of electronic documents. CDC's National Healthcare Safety Network (NHSN) supports CDA import of certain healthcare-associated infection (HAI) data. To assist programmers in creating standards for reporting via CDA import, NHSN offers an Implementation Guide and associated materials based fully on HL7-balloted CDA document specifications. Types of data that can be reported include event reports, denominator data, and process-of-care measures.

 ABOUT CDA What is Clinical Document Architecture?	 GETTING STARTED How to implement CDA for HAI reporting.	 FAQS Common questions asked by CDA implementers.
 IMPLEMENTATION TOOLKITS & RESOURCES NHSN HAI Implementation Guides, IDMs and toolkits.	 DATA VALIDATION & TESTING Tools to validate and test your CDA data as per NHSN specifications.	 WEBINARS & TRAINING VIDEOS Webinars on NHSN releases and CDA training.
 IMPORTING DATA How to import your data into NHSN using CDA, CSV or Direct.	 INNOVATION TOOLS Data sets and algorithmic web services.	 MEANINGFUL USE Overview of Meaningful Use Stage 3 for NHSN reporting.

Meaningful Use Stage 3

For 2018, NHSN Antimicrobial Resistance and Antimicrobial Use reporting has been identified as a new option for public health registry reporting under Meaningful Use Stage 3 (MU3).

See <https://www.federalregister.gov/articles/2015/03/30/2015-06612/2015-edition-health-information-technology-health-it-certification-criteria-2015-edition-base>. See certification criterion (§ 170.315(f)(6)).

Beginning January 2017, an NHSN facility will be able to register their intent to satisfy the AUR-MU3 objective using a signup page within the NHSN application. Active engagement for this MU3 objective includes monthly reporting for a full calendar year of R1 Normative Antimicrobial Use Summary, Antimicrobial Resistance Event, and Antimicrobial Resistance Summary data to NHSN.

This summer, the R1 Normative Antimicrobial Use (AU) CDA will become a valid CDA. The R6 AU CDA version will continue to be a valid CDA import. However, a facility will be required to use the R1 Normative AU CDA import if they wish to satisfy the requirements for MU3.

For Vendors Only--MU3 Validation Tool: In order to qualify as certified technology, an EHR or EHR Module must be capable of creating Clinical Document Architecture (CDA) documents for Antimicrobial Use and Resistance conformant to the HL7 Implementation Guide for CDA[®] Release 2—Level 3: Healthcare Associated Infection Reports, Release 1—US Realm—August 2013. See http://www.hl7.org/implement/standards/product_brief.cfm?product_id=20. The AUR Tool Installation Instructions are located here: https://github.com/brhoAtCDC/HAI_Validator_4_MU3.

More detailed information will be posted this summer on the NHSN CDA Submission Support Portal (CSSP): <http://www.cdc.gov/nhsn/cdaportal/meaningfuluse.html>.

CDA Corner continued on page 21

CDA Corner (continued)

Update for DIRECT CDA Automation

At this time, 2427 facilities from seven separate vendors have signed up for DIRECT CDA Automation. If your facility is sending data via CDA and you are interested in learning more about DIRECT CDA Automation, ask your CDA vendor or check out the information on the CSSP site. <http://www.cdc.gov/nhsn/cdaportal/importingdata.html#DIRECTProtocol>

New IG Version for 2017:

For 2017 data, the following Summary Report and Event CDAs will be required to be based on the R3-D1 Implementation Guide. CDAs may be imported after the NHSN Release 8.6 is deployed.

Summary Reports:

- Prevention Process Measures Monthly Monitoring for Dialysis

Events:

- Dialysis Event

New CDA denominator coming!!

The Hemovigilance Module Monthly Reporting Denominator will be a valid CDA import for 2017 data. This CDA will be based on the R3-D1 Implementation Guide. The CDA will include data as seen in the user interface, plus detailed data using ISBT Product codes.

NHSN Help Desk: Activity Update

Quarter 1, 2016

(Averages)

1,100 Email Inquiries per Week

35 Facilities Enrolled per Week

NHSN Enrollment Update

NHSN Enrollment Update (as of March 22, 2016):

6,240 Hospitals (this includes 531 Long-term Acute Care Hospitals and 313 Free-standing Inpatient Rehabilitation Facilities)

6,683 Outpatient Hemodialysis Facilities

4,653 Ambulatory Surgery Centers (ASCs)

301 Long-term Care Facilities

17,877 Total Healthcare Facilities Enrolled

The National Healthcare Safety Network (NHSN) is a voluntary, secure, Internet-based surveillance system that integrates patient and healthcare personnel safety surveillance systems managed by the Division of Healthcare Quality Promotion (DHQP) at CDC.

During 2008, enrollment in NHSN was opened to all types of healthcare facilities in the United States, including acute care hospitals, long-term acute care hospitals, psychiatric hospitals, rehabilitation hospitals, outpatient dialysis centers, ambulatory surgery centers, and long term care facilities.



The Centers for Disease Control and Prevention (CDC)
MS-A24, 1600 Clifton Road, Atlanta, GA 30333
E-mail: NHSN@cdc.gov; CDC's NHSN Website: www.cdc.gov/nhsn