

MDHHS SHARP NHSN USERS CONFERENCE CALL
Wednesday, January 25th, 2017

Thank you to those who were able to join our bi-monthly NHSN users' conference call. If you were unable to participate on this call, we hope that you will be able to participate next month. Any healthcare facility is welcome to participate in these calls, whether they are sharing NHSN data with us or not. These conference calls are voluntary. Registration and name/facility identification are **not** required to participate.

Our monthly conference calls will be held on the 4th Wednesday **every other** month at 10:00 a.m. **Our next conference call is scheduled for April 26th, 2017.**

Call-in number: 877-336-1831

Passcode: 9103755

Webinar: <http://breeze.mdch.train.org/mdchsharp/>

Suggestions for agenda items and discussion during the conference calls are always welcome! Please contact Allie at murada@michigan.gov to add items to the agenda.

HIGHLIGHTS FROM CONFERENCE CALL

Welcome & Introductions

Allie welcomed participants on the call and SHARP staff in the room were introduced. Participants were reminded to put their phones on mute or to press *6.

Update on Surveillance and Reports

Allie informed the group that 106 hospitals are currently sharing data with the SHARP Unit via NHSN. The 2015 Annual and 2016 Q1 and Q2 TAP Reports will be available soon.

NHSN Updates and Correspondence

Allie presented a powerpoint with NHSN newsletter and v8.6 release information.

SHARP Updates

See powerpoint below.

Next Meeting

The next SHARP Unit NHSN conference call is scheduled for April 26th, 2017 at 10:00am (no March 2017 call).

Attachments

Attachments to these minutes are included below and include the powerpoint referenced in the call, important documents, a sample presentation created by Ascension regarding the rebaseline, and documents assisting with questions related to CMS IQR HAI measures.

Michigan NHSN User Group Call

January 25, 2017

10am-11am

Allison Murad, MPH

murada@Michigan.gov

517-284-4944

Surveillance Updates

- 106 Hospitals Sharing Data
- 2015 Annual Report, 2016 Q1 and Q2 TAP Reports
- 2016 Q3 TAP Report to be published by February 22nd
(data pull February 16th after February 15th CMS
reporting deadline)

NEW! NHSN v8.6 Issues

- Scheduled maintenance last night (some of these may now be fixed)
- Notes:
 - Some NHSN pages do not render properly if cached content is stored within the browser. The current recommended workaround is for an NHSN user to press the “Shift key along with the F5 key” to clear the cache, and then “Ctrl key along with the F5 key” to refresh the page. This must be done on each page that does not render properly.
 - There have been some issues with the browser IE11 – if the user has access to the browser Chrome, NHSN will perform without issue.

NEW! NHSN v8.6 Issues

- Unusual susceptibility reports are being triggered incorrectly
- Device-Associated Infections:
 - SIRs blank or excluding locations
 - VAE and PedVAP not options on reporting plan
 - Some locations are missing for VAE
- SSI
 - Procedures reported with closure technique of “other than primary” should not be excluded under new baseline; they are incorrectly being excluded
- LabID
 - Reporting plan issue
 - FacWideIn denominator is not always saving and/or “report no events” isn’t recognizing old events

NHSN v8.6 Revisions

- Organism lists updated to include additional organisms:
 - NHSN All Organism List
 - NHSN Mucosal Barrier List
 - NHSN Common Commensal List
- Complete lists available: <http://www.cdc.gov/nhsn/acute-care-hospital/clabsi/index.html>

NHSN v8.6 Revisions

- Chapter 2 Additions
 - Appendix with flow diagram for NHSN event determination
 - Reference to BSI chapter: non-reporting of Group B Strep CLABSI during first 6 days of life
 - Reference to info in Chapter 17 Surveillance Definitions regarding lengthened IWP, RIT, and Secondary BSI when meeting ENDO definition
- Chapter 2 Clarifications
 - Infection Window Period guidance
 - Eligibility to exclude HAI event when patient declared brain dead
 - Hospice patients not excluded from surveillance
 - Post mortem specimens/results not eligible except for CNS/IC and PNEU (using lung tissue immediately post-mortem)
 - Inclusion of observation patient housed in an inpatient location

NHSN v8.6 Revisions

- Chapter 4 (BSI) Additions:
 - LCBI-2: “include but are not limited to” organisms
 - List of organisms excluded from CLABSI reporting
 - No Group B Strep CLABSIs should be reported during first 6 days of life
 - SUR information
- Chapter 4 (BSI) Clarifications
 - List of devices which are not central lines (more detailed info)
 - Define “access” for central lines
 - Suspected or observed accession into central line (changed to injection)
 - Additional guidance to determine if organisms are considered “matching” for the purposes of meeting the NHSN definitions

NHSN v8.6 Revisions

- Chapter 6 (Pneumonia)
 - Added clarification to imaging test evidence requirements meeting PNEU definition
 - Algorithms and flow diagrams updated to better define steroid use duration
- Chapter 7 (UTI)
 - Suprapubic tenderness elicited by palpation or provided as a subjective complaint is acceptable as part of SUTI with documentation during IWP

NHSN v8.6 Revisions

- Chapter 9 (SSI) Additions
 - “Summary of Operative Procedure Code Changes” which outlines status of each procedure code
- Chapter 9 (SSI) Changes
 - Emergency definition for the denominator for procedure was updated so field will match facility documentations
 - ICD-10 and CPT codes reviewed and updated

NHSN v8.6 Revisions

- Chapter 10 (VAE) Additions
 - Reference to NHSN 2014 VAE rates
- Chapter 10 (VAE) Clarifications
 - Non-acute care locations in acute care facilities no longer eligible location
 - Instruction to emphasize VAE not to be upgraded
- Chapter 11 (AU/AR) Additions
 - Outpatient AR events can be submitted from ED, Pediatric ED, and 24-hr OBS
 - List of organisms has expanded

NHSN v8.6 Revisions

- Chapter 12 (MDRO/CDI) Change
 - Reporting event questions "Last physical overnight location of patient immediately prior to arriving into facility (applies to specimen(s) collected in outpatient setting or <4 days after inpatient admission)" and "Has patient been discharged from another facility in the past 4 weeks?" will be optional for 2017
- Chapter 16 (Key Terms)
 - Definitions added for: IWP and "non-culture based microbiologic testing" Chapter 16 (Key Terms) Clarifications/Deletions
 - Definitions clarified for: ASC/AST, clinical correlation, gross anatomical, RIT, secondary BSI attribution period, surveillance cultures
 - Definitions deleted for: trauma (can be found in SSI protocol)

NHSN v8.6 Revisions

- Chapter 17 (Surveillance Definitions) Additions
 - ORAL: "from mucosal scrapings or exudate" added to criterion 3a (omitted in previous version)
 - LUNG and NEC (necrotizing enterocolitis): guidance to account for imaging test results
 - ENDO (endocarditis): IWP extended to 21 days (date first positive diagnostic test, 10 days before and 10 days after)
 - RIT will extend to entire patient admission
 - Secondary BSI attribution period will extend through entire patient admission
 - SA (spinal abscess): provided guidance to account for imaging test results equivocal for spinal abscess
 - VASC (vascular): added ECMO, VAD, and midlines to those devices, which may exclude an LCBI from being a CLABSI if requirements are met

NHSN v8.6 Revisions

- Chapter 17 (Surveillance Definitions) Clarifications
 - Guidance to determine if organisms are considered “matching”
 - GIT (gastrointestinal tract infection) Criterion 2c and IAB (intra-abdominal infection) Criteria 2b and 3b updated with MBI-organisms
- Chapter 17 (Surveillance Definitions) Deletions
 - GE (gastroenteritis) removed criteria 2c and 2d
 - HEP (hepatitis) removed as protracted incubation period does not agree with definition for HAI
 - SA (spinal abscess): removed “without meningitis”

December 2016 Newsletter

- NHSN version 8.6 had approximately 150 changes including:
 - CDA enhancements
 - Enhancements to analysis and reporting functionality
 - Updates to Annual Surveys
 - Specific modifications to application and information data model (IDM) to synchronize to 2017 protocols
 - Implementation of 2015 baseline
 - Changes to interface
 - Expanded browser support beyond only internet explorer

December 2016 Newsletter

- 2017 Protocols posted to NHSN website
- 2016 Protocol (entire Manual) available on the left navigation bar on the NHSN website until May 15, 2017
 - Will eventually be posted to NHSN validation website

December 2016 Newsletter

- 2015 Rebaseline page has been updated at <http://www.cdc.gov/nhsn/2015rebaseline/index.html>
- Includes webinar recordings from both webinars
- Now includes a “CMS Related Resources” section containing examples and recommendations for reviewing SIRs on Hospital Compare/Quality Net using new baseline

December 2016 Newsletter

- Endocarditis Definition (more detailed):
 - IWP extended to 21 days (day of diagnostic test, 10 days before, and 10 days after)
 - Because testing and clinical diagnosis required for endocarditis can routinely exceed the 7 days included in the normal IWP
 - RIT extended to include the remainder of facility admission
 - Because disease can be protracted, even in the face of treatment
 - Therefore, no more than a single ENDO event should be reported during a single patient admission
 - Secondary BSI attribution period extended for remainder of facility admission
 - Because organisms can be identified in blood specimens for extended time periods with endocarditis
 - Note: this applies ONLY to organism(s) in the originally identified ENDO event
 - All other organisms (even if accompanied by the original ENDO organisms) will be eligible as primary BSIs and potentially CLABSI
 - Changes go into effect for ENDO events with a date of diagnostic test on or after January 1, 2017

December 2016 Newsletter

- New option for CDI test type
 - Two-step algorithm (NAAT plus EIA, if NAAT positive)
 - Does not change reporting rules for LabID CDI events
 - If new NAAT plus EIA option is selected, data from this quarter will be given the same level of risk adjustment as the NAAT (PCR) category
 - Can begin to select this with 2017 Q1
 - Do not need to edit previously-saved records
 - If a specimen tests positive for CDI at any step in the algorithm, a CDI LabID event should be reported to NHSN
 - Most methods can be categorized accurately using the drop-down menu (“Other” should not be selected if a more appropriate option is available)
 - “Other” should not be selected to specify name of laboratory or brand name of test

December 2016 Newsletter

- 2016 Patient Safety Facility Survey
 - Should now be available
 - Must be completed and submitted by March 1, 2017
- Chronic Care Units
 - Previously, only map if they share the same CCN
 - Now, regardless of CCN, chronic care units should be mapped to the same location code if the units are physically located within the walls of the hospital

December 2016 Newsletter

- NHSN Pathogen Code Update
 - Organism list was last updated in 2013
 - Organisms without an active SNOMED CT code will no longer be available
 - Display names of NHSN organisms will match more closely the descriptions for Preferred Terms and Synonyms in SNOMED CT
 - Unspecified and NOS will be eliminated
 - MBI and CC lists updated
- All Organism list will grow from 1,956 to 3,458
- MBI Organism list will expand from 498 to 1,003
- CC list will expand from 431 to 540

December 2016 Newsletter

- CDA Update
 - Naming convention rules have been enforced (names of individual CDA files as well as zip files cannot include special characters)
 - Some facilities have been submitting HAI event records with an incorrect facility admission date
 - AU Option and Reporting for Meaningful Use Stage 3
 - <https://www.federalregister.gov/articles/2015/10/16/2015-25595/medicare-and-medicaid-programs-electronic-health-record-incentive-program-stage-3-and-modifications>.

Rebaseline Webinars

- NHSN Rebaseline Webpage:
<https://www.cdc.gov/nhsn/2015rebaseline/index.html>
- Webinar Parts 1 and 2 are available:
<https://www.cdc.gov/nhsn/2015rebaseline/index.html>

Baseline Dates

HAI Type	Original National Baseline Data			2015 Rebaseline
	Acute Care Hospitals (ACH)	Long-term Acute Care Hospitals (LTACH)	Inpatient Rehabilitation Facilities (IRF)	
CLABSI	2006-2008	2013	2013	2015
CAUTI	2009	2013	2013	2015
SSIs	2006-2008	None	None	2015 (ACH only)
Hospital-onset <i>C. difficile</i>	2010-2011	None	None	2015
Hospital-onset MRSA bacteremia	2010-2011	None	None	2015
Ventilator-associated events (VAE)	New - No Previous National Baseline Data			2015
Mucosal Barrier Injury (MBI)				2015
Standardized Utilization Ratio (SUR) (all device types)				2015

Baseline Important Notes

- CLABSI
 - MBI-LCBI will be removed when comparing data to the new baseline
 - MBI-LCBI will still remain reportable, and separate MBI measures will be available in early 2017
 - Data sent to CMS on and after August 16, 2016 will use the CLABSI SIRs with MBI-LCBIs removed
 - Previously submitted 2015 data will be resubmitted to CMS using the 2015 rebaseline data
- SSI
 - SSIs reported as PATOS will be excluded
- MDRO/CDI
 - Some variables will be included in MRSA risk adjustment but not CDI risk adjustment and vice versa

Rebaseline Highlights

- Models used:
 - Negative binomial regression: CLABSI, MBI, CAUTI, VAE, MRSA LabID, CDI LabID
 - Logistic regression: SSI, SURs

Rebaseline Highlights

Factors Included in the Model: Acute Care Hospitals (ACHs)

Factor	CLABSI	CLABSI (NICU)	CAUTI	VAE	CDI	MRSA
CDC Location	✓		✓	✓		
Facility Type	✓		✓	✓	✓	✓
Medical School Affiliation	✓		✓	✓	✓	✓
Inpatient quarterly CO prevalence rate					✓	✓
CDI Test Type					✓	
Birthweight		✓				
Length of Stay						✓
Reporting from ED/Obs locations					✓	✓
Facility Bedsize	✓		✓	✓	✓	
ICU Beds					✓	✓

Rebaseline Highlights

Factors Included in the Model: Acute Care Hospitals (ACHs)- SSI Complex 30-day

Factor	COLO	HYST
Cancer hospital	✓	✓
Patient level factors		
Age	✓	✓
ASA Score	✓	✓
BMI	✓	✓
Closure technique	✓	
Diabetes	✓	✓
Gender	✓	

Rebaseline Highlights

- Acute Care Hospitals Exclusions
 - CLABSI: MBI
 - CDI: quarterly CO prevalence rate >2.6
- SSI Exclusions
 - ASA score is missing
 - If BMI is less than 12 or greater than 60 (adult patients)
 - If Medical affiliation is missing or medical affiliation is 'Y' and medical type is missing
 - If number of beds missing
 - Procedure duration cut off points (If procedure duration is greater than Q3+5IQR for each procedure respectively after applying all the above inclusion and exclusion criteria)
 - PATOS = 'Y' from both numerator and denominator
 - Age at the time of procedure is greater than 109
 - Procedure duration less than 5 minutes
 - If closure technique is missing
 - If gender is missing or gender is 'O'

Rebaseline Highlights

Factors Included in the Model: Critical Access Hospitals (CAHs)

Factor	CLABSI	CAUTI	CDI	VAE	MRSA
Medical School Affiliation		✓			
Quarterly CO inpatient prevalence rate			✓		

Rebaseline Highlights

Factors Included in the Model: Long Term Acute Care Hospitals (LTACHs)

Factor	CLABSI	CAUTI	VAE	CDI	MRSA
Location Type (i.e., ICU, Ward)	✓	✓	✓		
Inpatient quarterly CO prevalence rate				✓	
CDI Test Type				✓	
Setting		✓			
% single occupancy rooms				✓	
Facility Bedsize	✓		✓		
Length of Stay	✓	✓	✓		
Proportion of Admissions on Hemodialysis			✓		
Proportion of Admissions on a Ventilator			✓	✓	✓

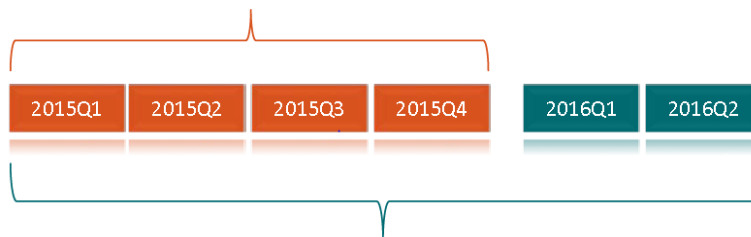
Rebaseline Highlights

Factors Included in the Model: Inpatient Rehabilitation Facilities (IRFs)

Factor	CLABSI	CAUTI	VAE	CDI	MRSA
Community onset (CO) prevalence rate				✓	
Setting		✓		✓	
Proportion of Admissions within each diagnostic category		✓		✓	
primary diagnosis of stroke				✓	
primary diagnosis of orthopedic conditions				✓	
traumatic spinal cord dysfunction		✓		✓	
nontraumatic spinal cord dysfunction		✓		✓	

CMS Implications of New Baseline

Sent using the original baselines



6 Quarters of data sent to CMS using
the new baseline data and risk models

Changes from Baseline 1 to Baseline 2

SIR	Change in Numerator	Change in Denominator
Central Line-Associated Bloodstream Infection (CLABSI)	All Facility Types <ul style="list-style-type: none"> Exclude MBH-LCBIs Acute Care Hospitals ONLY: <ul style="list-style-type: none"> Events from additional locations, as defined in the Appendix, will be included 	Acute Care Hospitals ONLY: <ul style="list-style-type: none"> Central line days from additional ICUs, as defined in the Appendix, will be included
Catheter-Associated Urinary Tract Infection (CAUTI)	Acute Care Hospitals ONLY: <ul style="list-style-type: none"> Events from additional locations, as defined in the Appendix, will be included 	Acute Care Hospitals ONLY: <ul style="list-style-type: none"> Urinary catheter days from additional ICUs, as defined in the Appendix, will be included
Facility-Wide Inpatient (FacWideIn) Clostridium difficile Infection (CDI) Laboratory-Identified (LabID) Event	Acute Care Hospitals: <ul style="list-style-type: none"> No Changes LTACHs and IRFs: <ul style="list-style-type: none"> SIRs will now be available Acute Care Hospitals: <ul style="list-style-type: none"> No Changes 	Acute Care Hospitals: <ul style="list-style-type: none"> No Changes LTACHs and IRFs: <ul style="list-style-type: none"> SIRs will now be available Acute Care Hospitals: <ul style="list-style-type: none"> No Changes
Facility-Wide Inpatient (FacWideIn) Methicillin-Resistant Staphylococcus aureus (MRSA) Blood Specimen (Bacteremia) Laboratory-Identified (LabID)	LTACHs and IRFs: <ul style="list-style-type: none"> SIRs will now be available 	LTACHs and IRFs: <ul style="list-style-type: none"> SIRs will now be available
Surgical Site Infection/Colon Surgery (CCLO) and Abdominal Hysterectomy (HYST) (Complex 30-day Model)	<ul style="list-style-type: none"> Exclude SSIs where PATOS = YES 	<ul style="list-style-type: none"> Procedures meeting the following criteria will be excluded from the SIRs: <ul style="list-style-type: none"> BMI: If BMI > 60 or BMI < 12 Age: If age at procedure greater than 109 Gender: If gender is missing or gender is "O" ASA: If ASA is missing Additional procedures, regardless of the closure technique reported, will be included.

SHARP Updates and Outbreaks

- Updates from Brenda, Noreen, and Mike

HAIs in the News

- CRE (*Klebsiella pneumoniae*) – Nevada woman died in September when infection was resistant to all antibiotics available in the US
- <http://abcnews.go.com/Health/deadly-superbug-infection-resistant-fda-approved-antibiotics/story?id=44806424>

Upcoming in state conferences

- **2/16**- MSIPC CIC review, Crowne Plaza, Lansing
- **3/20**- MDHHS TB Conference- Kellogg Center, Lansing
- **3/31**- MPHA Epidemiology Conference, Grand Rapids
- **4/11**- MPHA Nursing Conference, Ingham County Health Department, Lansing
- **5/4**- MDHHS CD Conference, Kellogg Center, East Lansing
- **5/17-5/19**- MSIPC Infection Prevention Fundamentals, Crowne Plaza, Lansing
- **6/20**- MDHHS CRE Conference, Inn at St. John's, Plymouth
- **10/19-10/20**- MSIPC Fall Conference, Crowne Plaza, Lansing

Upcoming out of state conferences

- **3/20-3/24**- NHSN training, Atlanta, GA
- **3/29-3/31**- SHEA, St. Louis, MO
- **6/4-6/8**- CSTE, Boise, ID
- **6/14-6/16**- APIC, Portland, OR

Next Call

- April 26th, 2017 at 10am
- ****Note: no March call****
- Future Calls:
 - June 28th
 - August 23rd
 - October 25th
 - December 20th

Known Issues Impacting NHSN Patient Safety Data Entry and Analysis Reports Related to the Upcoming February 15th CMS Quality Reporting Deadline*

NHSN is aware of several issues impacting the data entry and analysis reports obtained from NHSN. The issues mentioned below impact the data entry, as well as the reports within the NHSN Patient Safety Component that hospitals use to check their data for the upcoming CMS Quality Reporting Program deadline. **The issues related to the analysis reports mentioned below are part of a process that is separate from the file submissions from CDC to CMS on behalf of hospitals. Therefore, the data submitted on behalf of hospitals is not impacted by the analysis report issues mentioned below.** Please refrain from running these reports (unless noted otherwise below) until the issues have been resolved.

We appreciate your patience while our developers work to resolve these issues by the end of January.

Multi-module Issues

- Unusual Susceptibility Reports are being triggered incorrectly.

Device-associated Infections (i.e., CLABSI, CAUTI, and VAE)

- CLABSI SIR report for acute care hospitals: Oncology units are being excluded from the SIR reports.
- CLABSI and CAUTI SIRs for acute care hospitals were showing blank reports. This was fixed on 1/20/17.
- CLABSI SIR report for Long Term Acute Care (LTAC) hospitals: ward locations are being excluded from the SIR report.
- VAE SIRs are including pediatric locations that have reported ventilator days for pedVAP. This includes pediatric ICU and pediatric Ward locations reported in the LTAC setting.
- On the Monthly Reporting Plan page, VAE and PedVAP are not options for entry.
- Some locations are missing when entering VAE events, and therefore cannot be saved accurately.

Surgical Site Infections (SSIs)

- In-plan SSI events must be linked to a procedure. Right now, NHSN is aware that SSIs can be saved *without* linking to a procedure, which will cause the event to be excluded from the SSI SIR calculations.
- Procedures reported with a closure technique of “Other than Primary” are incorrectly being excluded from the SIRs calculated under the new baseline. This impacts the “Complex 30-day SSI SIR” used for the CMS Hospital Inpatient Quality Reporting Program.

MRSA Bacteremia and *Clostridium difficile* (CDI) LabID Event

- The application is allowing LabID events to be reported when there is no monthly reporting plan in place for the time period reported. Once the record is saved, the specimen date is cleared from the record.
- The FacWideIN (facility-wide inpatient) monthly denominator form is not saving in some situations. The “Report No Events” checkbox is not recognizing prior events, and users are being prompted to check this box when it is otherwise not appropriate to do so. This is causing “Incomplete Summary Data” alerts on the home screen, and the affected months are excluded from the MRSA and/or CDI LabID Event SIR. NHSN expects this to be fixed next week (the week of January 23rd). If you have encountered this issue, please wait until this issue has been resolved before running the MRSA and CDI LabID event SIRs.

- When editing a FacWideIN monthly denominator form, the “Encounters” field is enabled; the application is not allowing the edited record to be saved with the “Encounters” field blank.
- The numerator of the FacWideIN (facility-wide inpatient) Acute Care Hospital CDI SIR and incidence rate was incorrectly counting CDI events from inpatient rehabilitation (IRF) and inpatient psychiatric (IPF) units. This was fixed on 1/19/17. **Please generate new analysis datasets and re-run the SIR reports.**
- The incident/recurrent CDI categorization was incorrect for some CDI events. This caused some events to be counted in the CDI SIR that should have been labeled as “recurrent” and excluded from the SIR. This was fixed on 1/15. **Please generate new analysis datasets and re-run the SIR reports.**
- The CMS Acute Care Hospital CDI SIR report is labeled as “Critical Access Hospital” on the output report. The report and its calculations/risk adjustment are correct for acute care hospitals. Users can manually update the title by clicking “Modify” on the report, and then updating the report title on the first section of the Modify Screen.

***This is not an exhaustive list of all known issues reported to NHSN.**



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Reminder: Release of New 2016 Patient Safety Annual Facility Survey [5](#)

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Long Term Care Facility (LTCF) Component

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Healthcare Personnel Safety Component

No updates at this time —

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Reminder! Hold 2017 Data Entry

While the new 2017 NHSN protocols have been posted on our website, the new data entry fields and business rules will not be applied (for all NHSN components) until after the release of the NHSN version 8.6 update, scheduled for January 7, 2017. Please use the 2017 paper data-collection forms which will be posted to the NHSN website on or around January 2, 2017 to collect and hold all 2017 data until after the NHSN update. Any 2017 events or procedures that are entered prior to this date will be marked “incomplete”, and will require a secondary review and confirmation or update before they can be completed and included in any final data analysis. **This means that all 2017 Patient Safety Component, Healthcare Personnel Safety Component, Dialysis Component, Biovigilance Component, and LTCF Component reporting plans, surveys, events, summary data and procedures should not be entered into NHSN until after that release.**

Facilities can continue to enter 2016 data as well as update user information and locations within their NHSN facility. Note: 2016 facility surveys will not be available for entry until after the NHSN version 8.6 release.



Update on Planned Release of NHSN version 8.6

On January 7, 2017, the 8.6 version of NHSN will be deployed. The development scope for Release 8.6 contains approximately 150 changes across every NHSN component. The following is a summary listing of all changes included with the release. Detailed Release Notes will be made available shortly after the release.

- Clinical Document Architecture (CDA) enhancements and updates for existing CDA functionality
- Enhancements to existing Analysis and Reporting (A&R) functionality
- Updates to the Annual Surveys for all components (Patient Safety, Long Term Care, Dialysis, Bio-vigilance and HPS)
- Specific modifications to the application and Information Data Model (IDM) that synchronize to the 2017 NHSN protocols
- Implementation of the 2015 baseline for HAI SIRs in the Patient Safety Component, as well as analysis updates for the Dialysis Component
- Changes to the user interface of the NHSN application, impacting all components
- Supporting browser neutrality (expanding browser support beyond only Internet Explorer), optimized processing, and work to improve the look of NHSN application screens using the current CDC templates and resolve issues related to compliance with Section 508 of the Rehabilitation Act

Patient Safety Component

2017 NHSN Patient Safety Component Protocols and Data Collection Forms

The 2017 NHSN Patient Safety Component protocols have been posted to the NHSN website. The individual protocols are located on the site of the specific infection type (e.g., BSI protocol found under “Protocols” on the BSI surveillance webpage). On Friday, November 18th, an email was sent to all NHSN Users, along with an accompanying document identifying the major changes to the protocols. This document may be found at: <http://www.cdc.gov/nhsn/commup/index.html>. The 2017 surveillance protocols should be used beginning on January 1, 2017. Until that time, please follow the 2016 NHSN protocols as written. Please note that the 2017 NHSN organism lists have been posted to the NHSN website so that you may review them before instituting their use in 2017. There are differences between the 2016 and 2017 versions, but the 2016 lists must be used until 2017. Please email NHSN@cdc.gov with any questions.

The 2016 PSC Manual as a whole is available on the left navigation bar on the NHSN website. Please note that the 2016 PSC Manual as a whole will only be available on the NHSN website until May 15, 2017. After that time the manual will be removed to avoid confusion on the part of users. 2016 protocols will be posted to the NHSN validation website in the near future, and will remain for healthcare-associated infection validation.

Data collection forms for 2017 events have been approved by the Office of Management and Budget. They will be posted to the NHSN website on or around January 3, 2017, and should be used for any event, surgical procedure, or summary data in 2017. NHSN PSC users will receive an email when the forms are posted to the website.

The 2015 Rebaseline Webpage has been updated!

The 2015 Rebaseline webpage, <http://www.cdc.gov/nhsn/2015rebaseline/index.html>, continues to be the source of the most current information regarding the ongoing process to update the baseline data used by NHSN. The **NHSN Rebaseline Webinar, Part 1 – October 2016** is now available on the Rebaseline webpage. This webinar provides important updates on the new risk adjustment models, including the variables used in each model, a list of new measures, and an introduction to the Standardized Utilization Ratio (SUR): <https://www.youtube.com/watch?v=aRZUi04goCg>. The slides for NHSN Rebaseline Webinar, Part 1 can be found here: <https://www.cdc.gov/nhsn/pdfs/rebaseline/rebaseline-webinar-p1.pdf>.

Slides for **NHSN Rebaseline Webinar Part 2 – November 2016** are now posted on the Rebaseline webpage as well. This webinar previews changes to the NHSN interface that will take effect when NHSN v8.6 is implemented in January 2017. It also provides pertinent information about performing SIR analyses that span different baseline periods and details about upcoming trainings and educational materials. The slides are available here: <https://www.cdc.gov/nhsn/pdfs/rebaseline/rebaseline-webinar-p2.pdf>.

Additionally, the Rebaseline webpage now includes a “CMS Related Resources” section. This new section contains examples and recommendations for reviewing SIRs on Hospital Compare/Quality Net that are calculated using the new baseline. In addition, a reference guide is available that lists the changes to the SIRs under the new baseline as they apply to CMS Quality Reporting Programs.

List of 2015 Rebaseline SIR Changes Applicable to CMS Quality Reporting Programs

<http://www.cdc.gov/nhsn/pdfs/rebaseline/2015-rebaseline-sir-changes-applicable-to-cms-grp.pdf>

Verification of Hospital Compare/Quality Net Data: CLABSI Example

<http://www.cdc.gov/nhsn/pdfs/rebaseline/hospital-compare-verification-clabsi.pdf>

Verification of Hospital Compare/Quality Net Data: SSI Example

<http://www.cdc.gov/nhsn/pdfs/rebaseline/hospital-compare-verification-ssi.pdf>

Please continue to check the Rebaseline webpage for additional updates in the coming months. New Rebaseline guidance and documentation will be posted soon.

ENDO (endocarditis) Surveillance Definition Updates for 2017 and Implications for Laboratory Confirmed Bloodstream Infection Surveillance

In response to input received from NHSN users, the surveillance definition for endocarditis (ENDO) will be modified for 2017. Because the testing and clinical diagnosis required for endocarditis can routinely exceed the 7 days included in the NHSN infection window period (IWP), the IWP will be extended to 21 days for ENDO only. This 21-day period will include the day of the diagnostic test, the 10 days before and the 10 days after. Additionally, because the disease can be protracted, even in the face of treatment, the repeat infection timeframe (RIT) will be extended to include the remainder of the facility admission. This means that no more than a single ENDO event should be reported during a single patient admission. Finally, because organisms can be identified in blood specimens for extended time periods with endocarditis, the secondary BSI attribution period (SBAP) will also be extended for the remainder of the facility admission for the organism associated with the ENDO infection. Note: This SBAP extension applies only for **organism(s) in the originally identified ENDO event**. **All other organisms (even if accompanied by the original ENDO organism[s]), will be eligible as primary BSIs, and potentially CLABSI.** Hospitalized endocarditis patients are at risk for healthcare-associated infections, and a change in organisms may suggest a healthcare-associated infection. All of these changes go into effect for ENDO events with date of diagnostic test on or after January 1, 2017.

Updates to CDI Test Type and Reminders for LabID Event Reporting

The January update to NHSN will introduce a new option for *C.difficile* (CDI) test type, as reported on both the annual facility survey and the facility-wide inpatient (FacWideIN) monthly summary record. The new option is for a two-step algorithm: NAAT plus EIA, if NAAT positive. The addition of this reporting option does not change reporting rules for Laboratory confirmed CDI events (see Reminders about LabID Event Reporting, below). Note that CDI test type is used in the calculation of the *C.difficile* LabID event SIR, and if this new option for “NAAT plus EIA” is selected, data from this quarter will be given the same level of risk adjustment as the “NAAT” (PCR) category. See screen shot below for location of the new CDI test type option on the FacWideIN summary record:

For this quarter, what is the primary testing method for *C. difficile* used most often by your facility's laboratory or the outside laboratory where your facility's testing is performed? *

EIA - Enzyme immunoassay (EIA) for toxin
Cyto - Cell cytotoxicity neutralization assay
NAAT - Nucleic acid amplification test (NAAT)
NAATEIA - NAAT plus EIA, if NAAT positive (2-step algorithm)
GDH - Glutamate dehydrogenase (GDH) antigen plus EIA for toxin
GDHNAAT - GDH plus NAAT
GDHEIA - GDH plus EIA for toxin, followed by NAAT for discrepant results
ToxiCul - Toxigenic culture
OTH - Other (specify)

If your facility's laboratory is using this algorithm for CDI testing, you can begin to select this option with first quarter 2017. It is not required to edit previously-saved records to select the new CDI test type.

Reminders about LabID Event Reporting:

NHSN protocol defines a *C.difficile* LabID event as: **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).**

Updates to CDI Test Type and Reminders for LabID Event Reporting continued on page 5

Updates to CDI Test Type and Reminders for LabID Event Reporting (continued)

Thus, if a specimen tests positive for *C.difficile* toxin at any step in the testing algorithm, a CDI LabID event should be reported to NHSN. The selection for CDI test type on the March, June, September, and December FacWideIN summary record should be based on the testing method used most often by the laboratory during that reporting quarter.

The pre-populated options for CDI test type, as shown in the screen shot above, contain the most common testing methods used. Most methods can be categorized accurately using the pre-populated test types in the drop-down menu. “Other” should not be selected if a more appropriate option is available. Furthermore, “Other” should not be used to specify the name of the laboratory or the brand name of a CDI test. If “Other” is selected when a more appropriate response is available on the form, your facility’s CDI data will not be accurately risk adjusted.

If you have any questions about which CDI test type applies to your facility, please contact us at NHSN@cdc.gov.

Reminder: Release of New 2016 Patient Safety Annual Facility Survey

NHSN will release the annual patient safety facility survey in early 2017. 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. As in years past, users will not be able to submit surveys until NHSN makes them available in a release of the application. Please wait to enter the 2016 Patient Safety Annual Survey until you receive notification that NHSN version 8.6 is available (expected January 7, 2017); failing to wait until after the next release of NHSN will result in the loss of any 2016 survey information submitted into NHSN. We will provide copies of the surveys and instructions on how to complete them at the start of the new year.

Please remember, surveys must be completed and submitted in NHSN by March 1, 2017.

Facilities that do not meet this deadline will 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 the form. For guidance and support, contact our support team at nhsn@cdc.gov. Use the words “PS Annual Survey” in the subject line to expedite the response time.

NHSN Locations Definition Clarification- Chronic Care Units

One of the few updates to the CDC Locations chapter in the most recent release of the NHSN protocol included a change in the definition for chronic care units (page 15-27). In the past we’ve advised facilities to only map units as a chronic care unit if they share the same CCN as the acute care hospital it resides in. This piece of the definition has been removed in the updated locations guidelines found in the NHSN Protocol. We now advise users, regardless of CCN, chronic care units should be mapped to the same location code if the units are physically located within the walls of the hospital. Please consult the locations chapter in the updated NHSN Protocol to see the documented change: http://www.cdc.gov/nhsn/pdfs/pscmanual/15locationsdescriptions_current.pdf

Thank you for participating in the NHSN Education and Training Needs Assessment!

The NHSN team would like to thank you for your participation in the NHSN Education and Training Needs Assessment!

1,069 NHSN Patient Safety Component users provided feedback on their training needs and current knowledge and use of the available training and education resources. Results of the needs assessment survey will help the NHSN team determine where the available training resources meet the needs of NHSN users, identify the modules or topics for which additional training resources are needed, and inform development of future training and educational materials and activities.

We value your input as an NHSN user and appreciate you sharing your experience using the NHSN training and education resources. Look for information in the coming months regarding how NHSN plans to use the survey results to improve and expand training and education support available to you!

2017 Updates to the AU Option SAARs

In the upcoming NHSN 8.6 update, facilities submitting data into the Antimicrobial Use (AU) Option will be able to view their Standardized Antimicrobial Administration Ratios (SAARs) in two new ways!

1. SAARs by Month

The current “SAAR Report – All SAARs” will be shown by month by default. Users will still have the ability to see SAARs by quarter, half year, or year by modifying the report.

National Healthcare Safety Network								
SAARs Table - All Standardized Antimicrobial Administration Ratios (SAARs) High-Level Indicators and High-Value Targets								
As of: December 9, 2016 at 3:12 PM								
Date Range: AU_SAAR summaryYM After and Including 2015M01								
Antimicrobials used for hospital-onset/multi-drug resistant infections in adult ICUs								
orgID	summaryYM	SAARType	antimicrobialDays	numAUDaysPredicted	numDaysPresent	SAAR	SAAR_pval	SAAR95CI
13860	2016M09	TAR-Adult-1	323	239.045	805	1.351	0.0000	1.210, 1.505
13860	2016M10	TAR-Adult-1	303	288.621	975	1.050	0.4120	0.937, 1.173

2. SAARs by Individual Location

A new report will be added: “SAAR Report – All SAARs by Location”. The default report will show each SAAR table and the location-specific SAARs calculated for the month/year. Users will have the ability to modify the report to see the location-specific SAARs by quarter, half year, or year.

National Healthcare Safety Network										
SAARs Table - All SAARs by Location										
As of: December 9, 2016 at 3:17 PM										
Date Range: AU_SAAR summaryYM After and Including 2015M01										
Antimicrobials used for hospital-onset/multi-drug resistant infections in adult ICUs										
orgID	SAARType	location	summaryYM	locCDC	antimicrobialDays	numAUDaysPredicted	numDaysPresent	SAAR	SAAR_pval	SAAR95CI
13860	TAR-Adult-1	MICU	2016M09	IN:ACUTE:CC:M	126	124.330	403	1.013	0.9047	0.848, 1.202
13860	TAR-Adult-1	MICU	2016M10	IN:ACUTE:CC:M	109	138.521	449	0.787	0.0109	0.649, 0.945
13860	TAR-Adult-1	MSICU	2016M09	IN:ACUTE:CC:MS	197	114.715	402	1.717	0.0000	1.490, 1.970
13860	TAR-Adult-1	MSICU	2016M10	IN:ACUTE:CC:MS	194	150.100	526	1.292	0.0007	1.120, 1.484

In addition to the new SAAR report functionality, the calculation for the “Anti-MRSA Antibacterial Agents” SAAR will be updated to include only Vancomycin IV administrations. All other administrations (e.g., IM, digestive, & respiratory) of Vancomycin will be excluded. Similarly, the calculation for the “Antibacterial Agents Predominantly Used for Surgical Site Infection Prophylaxis” SAAR will be updated to include IV administrations only.

Reminder! Data for CMS Quality Reporting Programs due Soon!

The following data must be entered into NHSN by **February 15, 2017** for facilities that participate in certain CMS quality reporting programs.

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

2016 Quarter 3 (July 1 – September 30) CLABSI and CAUTI data

- All ICU locations
- All NICU locations (CLABSI only)
- Adult and pediatric medical, surgical, and medical/surgical wards

2016 Quarter 3 (July 1 – September 30) Inpatient COLO and HYST SSI data

2016 Quarter 3 (July 1 – September 30) MRSA Bacteremia and *C. difficile* LabID Events (all healthcare onset and community onset)

- FacWideIN
- ED and 24-hour observation locations

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

2016 Quarter 3 (July 1 – September 30) CLABSI and CAUTI data (all bedded inpatient care locations)

2016 Quarter 3 (July 1 – September 30) Inpatient COLO and HYST SSI data

2016 Quarter 3 (July 1 – September 30) MRSA Bacteremia and *C. difficile* LabID Events (all healthcare onset and community onset)

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

2016 Quarter 3 (July 1 – September 30) CAUTI data (all bedded inpatient locations)

2016 Quarter 3 (July 1 – September 30) 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

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

2016 Quarter 3 (July 1 – September 30) CLABSI and CAUTI data (all bedded inpatient locations)

2016 Quarter 3 (July 1 – September 30) MRSA Bacteremia and *C. difficile* LabID Events (FacWideIN, all healthcare onset and community onset)

2016 Quarter 3 (July 1 – September 30) VAE data (all bedded inpatient locations)

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: <https://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

LTCF Updates

January 2017 NHSN Long-Term Care Facility (LTCF) Component Protocols and Data Collection Forms will be posted to the NHSN website on or before January 2, 2017, and should be used beginning on January 1, 2017. The individual protocols may be accessed by clicking on the specific surveillance module (i.e., MDRO/*C. difficile*, Prevention Process Measures, or UTI) and then clicking “Protocol”. A list of significant changes to the protocols will be also posted on the

website under the “Protocol” heading for each module. Access to LTCF trainings, protocols, data collection forms, and supporting materials can be found on the following website: <http://www.cdc.gov/nhsn/ltc/index.html>

NHSN Login

About NHSN

Enroll Here

Materials for Enrolled Facilities

Ambulatory Surgery Centers

Acute Care Hospitals/Facilities

Long-term Acute Care Hospitals/Facilities

Long-term Care Facilities

- Surveillance for *C. difficile* and MRSA Infections
- Surveillance for Urinary Tract Infections
- Surveillance for Healthcare Personnel Exposure
- Surveillance for Healthcare Personnel Vaccination
- Surveillance for Process Measures - Hand Hygiene, Gloves and Gown Adherence

Tracking Infections in Long-term Care Facilities

Eliminating infections, many of which are preventable, is a significant way to improve care and decrease costs. CDC's National Healthcare Safety Network provides long-term care facilities with a customized system to track infections in a streamlined and systematic way. When facilities track infections, they can identify problems and track progress toward stopping infections. On the national level, data entered into NHSN will gauge progress toward national healthcare-associated infection goals.

NHSN's long-term care component is ideal for use by: nursing homes, skilled nursing facilities, chronic care facilities, and assisted living and residential care facilities

MDRO/C.Diff - Surveillance for *C. difficile*, MRSA, and other Drug-resistant Infections

- Training
- Protocols
- Forms
- Support Materials
- Analysis Resources
- FAQs

Click on title to open module selections

Report Prevention Process Measures - Hand Hygiene, Gloves and Gown Adherence

- Training
- Protocols
- Forms
- Support Materials
- Analysis Resources
- FAQs

Long-term Care Facility Component Annual Facility Survey: After January 7, 2017, facilities should enter their NHSN Annual Facility Survey using facility data from the prior calendar year. The data collected on the survey covers January 1, 2016 through December 31, 2016. We encourage users to print a copy of the completed 2015 annual survey for use when completing the new survey, as most of the information will be the same. Additionally, users are encouraged to complete the paper version of the survey form (http://www.cdc.gov/nhsn/forms/57.137_ltcfsurv_blank.pdf) prior to entering the data into the web application since the survey must be completed in its entirety before NHSN will save the information. Instructions for completing the survey are located in the *Table of Instructions* document under *Data Collection Forms* on the LTCF website (<http://www.cdc.gov/nhsn/forms/instr/57.137-toi-annual-facility-survey.pdf>). To avoid interruption in NHSN reporting, facilities must complete the 2016 NHSN Annual Facility Survey by March 1, 2017. For questions, please e-mail the NHSN helpdesk at nhsn@cdc.gov with 'LTCF' in the subject line.

As shown in the below screen shot, the NHSN Annual Survey is accessible under the *Surveys* tab on the left navigation bar in the NHSN application. Users can access completed surveys (to view, edit, or print) by clicking “Find” and add a new survey by clicking “Add”

CDC Department of Health and Human Services Centers for Disease Control and Prevention

NHSN - National Healthcare Safety Network

Logged into Angela LTCF Test Facility (ID 39455) as AANTTLA. Facility Angela LTCF Test Facility (ID 39455) is following the LTCF component.

Add Annual Survey

Survey Year: [v]

Facility ID*: [Angela LTCF Test Facility (ID 39455)]

National Provider ID*: []

State Provider #: []

Facility Characteristics [HELP]

Facility ownership*: [v]

Affiliation*: [v]

Certification*: []

In the previous calendar year, []

LTCF Updates continued on page 9

LTCF Updates (continued)

CDC-NHSN National Healthcare Safety Network's (NHSN) 2017 Annual Training is scheduled to take place March 20-24, 2017 in Atlanta, GA at the CDC. Monday, March 20 is dedicated to **NHSN training for Long-term Care Facilities**. Speakers will discuss a variety of topics including: UTI surveillance and reporting, surveillance and reporting for *C. difficile* and MDRO LabID Events, data analysis, and more. Keep a look out for a registration e-mail from NHSN, which will launch soon. While there is no registration fee, participants will be responsible for all travel expenses to include transportation, lodging, and the cost of food and beverages. Capacity for the training is approximately 300 participants, and invitations to attend in-person will be issued based on a randomized lottery system. For those unable to attend in-person, all presentations during the 5 days of the training will be available via live web stream. Stay posted for future updates! Continuing Education credits are pending for this activity. Please email NHSNtrain@cdc.gov with training-related questions.

Happy Holidays from the LTCF Team!

Dialysis Component

NHSN System Update and Dialysis Aggregate Data Update

NHSN System Update on January 7, 2017

All Dialysis Component forms (Reporting Plan, Dialysis Event form, Denominators for Dialysis Event form) **for 2017** should not be entered into NHSN until after January 7 (**This includes CDA via manual import and DIRECT CDA Automation**). Instead, please keep a paper or electronic copy of the January events/census and wait to enter these data until NHSN announces the system update has completed.

For a description of the new features and changes occurring in the Dialysis Component with the January system update, see the Dialysis Newsblast Archive website: <http://www.cdc.gov/nhsn/dialysis/newsblasts/index.html>

Contact the NHSN helpdesk (nhsn@cdc.gov) with 'Dialysis' in the subject line, if you have any questions or concerns.

Dialysis Aggregate Data Update

On July 23, 2016, the NHSN pooled mean rates were updated in each of the Dialysis Component rate tables to reflect the 2014 national aggregate rate data. The national aggregate data appear in each rate table in the column labeled, "NHSN Pooled Mean Rate/100 patient-months," as shown in the Rate Table – Bloodstream Infection report (image below).

Bloodstream Infection Rate/100 patient-months	NHSN Bloodstream Infection Pooled Mean Rate/100 patient-months	Incidence Density p-value
0.00	0.64	0.7579
0.00	0.26	0.9843
0.00	0.39	0.9538
	0.61	

The 2014 national data are aggregated from all in-center hemodialysis facilities reporting Dialysis Event data to NHSN. The definition of IV antimicrobial start, IV vancomycin start, bloodstream infection, access related bloodstream infection, local access site infection, and vascular access infection can be found in the Dialysis Event Protocol: <http://www.cdc.gov/nhsn/pdfs/pscmanual/8pscdialysiseventcurrent.pdf>.

For instructions on how to run and interpret the Dialysis Event rate tables, see the "Analysis Resources to Create Reports" section of the Dialysis Event homepage (<http://www.cdc.gov/nhsn/dialysis/event/index.html>) or contact the NHSN helpdesk (nhsn@cdc.gov) and include "Dialysis" in the subject line of your email.

Biovigilance Component

Hemovigilance Module Updates

NHSN Hemovigilance Module Update to be released January 7, 2017

The NHSN Hemovigilance Module update is scheduled to be released on January 7, 2017. **Do not enter data into NHSN between January 1-7, 2017. Any data entered into NHSN during this time will be deleted and will need to be reentered after January 7, 2017.** On January 7, 2017 users will see a new NHSN layout and updates to the adverse reaction reporting screen. Additionally, at that time, NHSN HV will include the options to enroll as a non-acute care facility and to enter denominator data using Clinical Documentation Architecture (CDA). Updated documentation, including protocol, forms, and trainings, will be available on the NHSN Blood Safety website by late December. A webinar to discuss updates will take place mid-January.

Updated NHSN Layout

The NHSN user interface will be updated with a new modern look to improve user experience and to simplify data entry. This update will be seen by all NHSN components.

Adverse Reaction Form updates

The Hemovigilance Adverse Reaction screen will be updated to allow for more accurate and complete data collection. Updates include a medical and transfusion history section, as well as a section to document treatment for the adverse reaction. The component detail and outcome sections have also been modified. The adverse reaction paper form will be reaction-specific, with reaction-specific signs, symptoms, and lab results under the reaction details section.

Clinical Documentation Architecture

In response to user requests and feedback, CDC has developed electronic reporting for Hemovigilance Module denominator data through Clinical Documentation Architecture (CDA). CDA allows denominator data to be electronically reported to the Hemovigilance Module, which would replace the current method of 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. To participate in electronic reporting via CDA, facilities need to build the corresponding software component to enable communication with CDC's CDA component. For more information, please refer to the [NHSN Blood Safety Surveillance website](#) and the [NHSN CDA website](#).

Addition of Annual Facility Survey for non-acute care facilities

Non-acute care facilities can now participate in the Hemovigilance Module. Long-term care facilities and ambulatory facilities, including hemodialysis and outpatient surgery centers, can enroll or activate the Hemovigilance Module to begin reporting data.

Hemovigilance Module Updates continued on page 11

Hemovigilance Module Updates (continued)

NHSN Blood Safety Website Update

Training Updates

Coming in December, there will be a number of new and updated trainings available on the [NHSN Blood Safety Surveillance website](#). Among these is a self-paced, on-demand interactive HV 101 training (Lectora), with available CEU credit, and five 5-10 minute audiovisual presentations to review specific forms and topics. New guidance for the Denominator Form regarding discarded blood units will also be available, as well as annotated forms with variables names for each question.

Upcoming Webinar

The changes outlined above will be described in detail in a webinar in mid-January, including a chance for questions and answers. Registration will be available on the [NHSN Blood Safety Surveillance website](#) in early January.

Closing out data

As 2016 comes to an end, CDC reminds facilities to begin addressing any missing data for the year. 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

NHSN Career Opportunities

Have you ever wondered how you can stay updated on positions that are available on the NHSN team? Team positions intermittently become available, and interested individuals should check the APIC Career Center at <http://apic.org/Resources/Career-Center>. Use the keyword NHSN in your search on the site.



NHSN Training Updates

2017 In-person NHSN Training Course

The National Healthcare Safety Network's 2017 Patient Safety Component annual training is scheduled to take place March 20-24, 2017 in Atlanta, GA at the Centers for Disease Control and Prevention.

The training will feature presentations on the new national baseline, define general changes to 2017 NHSN reporting, and describe new analysis tools. Speakers will discuss how to identify and report Ventilator-associated Events, Catheter-associated Urinary Tract Infections (CAUTI), Central Line-associated Blood Stream Infections (CLABSI), Secondary Bloodstream Infection (BSI) and Site-Specific Infections, Surgical Site Infections (SSI), and MRSA Bacteremia and *C. difficile* LabID events. Validation of healthcare-associated infection data and antibiotic stewardship surveillance practices will additionally be reviewed. The first day of the training will feature a special track on reporting for Long-term Care Facilities.

Registration for the training course is expected to launch in January 2017. While there is no registration fee, participants will be responsible for all travel expenses to include transportation, lodging, and the cost of food and beverages. Capacity for the training is approximately 300 participants, and invitations to attend in-person will be issued based on a randomized lottery system. For those unable to attend in-person, all presentations during the 5 days of the training will be available via live web stream.

Stay posted for future updates! Continuing Education credits are pending for this activity.

Please email NHSNtrain@cdc.gov with training-related questions.

NHSN Pathogen Code Update

The NHSN organism codes list was last updated in 2013 and will undergo a major revision with the v8.6 release effective January 2017. SNOMED CT codes have been updated based on the U.S. Edition 20150901 version; organisms without an active SNOMED CT code will no longer be available in the NHSN pick list as of the NHSN update on January 7, 2017. Display names of NHSN organisms will match more closely the descriptions for Preferred Terms and Synonyms in SNOMED CT. Words such as 'unspecified' and 'NOS' (not otherwise specified) will be eliminated. Abbreviations for species (spp.) and subspecies (ss., ssp., and subsp.) will be deleted, as well as the word 'genus'. The two terms '*Bacillus* genus - BAC' and '*Bacillus* spp. - BSP' will be reduced to one term '*Bacillus* - BAC'; this rule will apply for all genus level organisms.

The Mucosal Barrier Injury (MBI) organism and Common Commensal (CC) lists will also be updated. Rationale used to update the MBI list was as follows: if biologically plausible for an organism under consideration to translocate across the GI mucosal barrier due to an underlying condition (without having known environmental sources), it will be added to the MBI list. Missing members of viridans group streptococci and Family *Enterobacteriaceae* will be added to the MBI list. Additionally, rules were adjusted on how to manage organisms with taxonomic name changes to streamline maintenance of the MBI and CC lists. The previous protocol was to make decisions at the species-level, not for the genus as a whole. For example, *Campylobacter gracilis* was on the MBI list because it was formerly named *Bacteroides gracilis*; no other member of the genus *Campylobacter* was on the MBI list. The new rule is that decisions will be made for the genus as a whole. Rather than removing *Campylobacter gracilis* from the MBI list, all members of genus *Campylobacter* will be on the MBI list for 2017. Similar rules will be applied to ubiquitous normal flora on the skin for the CC list.

NHSN Pathogen Code Update continued on page 13

NHSN Pathogen Code Update (continued)

In short these changes will result in:

- The global list (All Organisms) of active terms will grow from 1,956 to 3,458.
- The MBI organism list will expand from 498 organisms (32 genera) to 1,003 organisms (89 genera)
- The CC list will expand from 431 organisms (7 genera) to 540 organisms (13 genera)

Please see the 2017 updated lists which have replaced the 2016 lists under Supporting Materials on the various NHSN module website pages so that you can anticipate the changes. If you have questions regarding current categorizations of organisms for the remainder of 2016, please contact NHSN@cdc.gov

CDA Corner

Attention all CDA Users!!

Reminder - the naming convention rules for individual CDA and zip files have been enforced. This means that the names of an individual CDA file as well as the zip file containing the individual CDAs may only contain alphanumeric, hyphens and underscores. Special characters in the CDA or zip file name will cause the upload to NHSN to fail.

Update for DIRECT CDA Automation

After the January 8.6 deployment, a facility using different CDA vendor systems will have the option to send via DIRECT CDA Automation for each vendor system. Ask your CDA vendor(s) about DIRECT capability.

At this time, over 2900 facilities from 8 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 Implementation Guide Version for 2017 Dialysis Reporting

For 2017 data, the below Dialysis Summary and Event CDAs will be required to be based on the R3-D1 Implementation Guide. CDAs using the R3-D1 format may be imported into NHSN after the January 8.6 deployment.

Summary Reports:

Denominators for dialysis event surveillance - census form

Dialysis Event

New CDA denominator for the Hemovigilance Module is coming!!

The 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. CDAs may be imported after the January 8.6 release.

CDA Version Guide Always Available!

The Guide to CDA versions on the NHSN CDA Submission Support Portal is always available to verify you are submitting CDAs based on the correct Implementation Guide: <http://www.cdc.gov/nhsn/cdaportal/toolkits/guidetocdaversions.html>

CDA Corner continued on page 14

CDA Corner (continued)

CDA Impact Notes: Preview of NHSN Release 8.6

- Addition of ~ 1000 pathogens, updates to pathogen names, updates to business rules, and updates to MDRO definition and unusual susceptibility alerts.
- Salmonella species is no longer reported for LCBI nor MBI-LCBI events.
- The following fungi will not be allowed to be reported for events in the Patient Safety and LTCF Components: Blastomyces, Histoplasma, Coccidioides, Paracoccidioides, Cryptococcus and Pneumocystis.
- Antimicrobial Resistance (AR) Option specimen and pathogen lists expanded.
- Ability to submit data to the (AR) Option for specimens collected in three select outpatient locations: Emergency Department, Pediatric Emergency Department, 24-hour Observation Area.
- Addition of *C. difficile* test method associated with the MDRO Monthly denominator: “NAAT plus EIA, if NAAT positive (2-step algorithm)”.

For more information on CDA Impact for NHSN Release 8.6, view the “Preview of NHSN release 8.6” webinar: <http://www.cdc.gov/nhsn/cdaportal/webinars.html>.

Guide to CDA Versions



For creating CDA files, please see the specific Implementation Guide (IG) and its associated reference materials.

The table below describes the specific Implementation Guide (IG) to be used for each component based on the event/insertion/proc collection dates (as applicable) for each year.

Download the corresponding CDA Toolkits for the corresponding year.

Events or Denominators	2017	2016	2015
CDA Toolkit Release	8.6	8.5	8.4 & 8.3
DIALYSIS			
Dialysis Event	R3-D1	R2-D2.1	R2-D1.1
Dialysis Denominator	R3-D1	R7	R7
EVENTS			
Primary Bloodstream Infection (BSI)	R9	R9	R9
Central Line Insertion Practices Adherence (CLIP) Monitoring	R2-D2.1	R2-D2.1	R9
Urinary Tract Infection	R2-D1.1	R2-D1.1	R2-D1.1
Laboratory-identified (LabID) MDRO or CDI Event	R2-D2.1	R2-D2.1	R5
SURGICAL SITE INFECTIONS AND DENOMINATOR FOR PROCEDURES			
Surgical Site Infection (SSI)	R2-D1.1	R2-D1.1	R2-D1.1
Denominator for Procedure	R2-D1.1	R2-D1.1	R2-D1.1

New IG for AU Option & Reporting for Meaningful Use Stage 3

As of July 2016, the R1 Normative Antimicrobial Use (AU) CDA is now a valid CDA import! 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 2018, NHSN Antimicrobial Use (AU) and Antimicrobial Resistance (AR) (AUR) reporting have been identified as a new option for public health registry reporting under Meaningful Use Stage 3 (MU3).

See: <https://www.federalregister.gov/articles/2015/10/16/2015-25595/medicare-and-medicaid-programs-electronic-health-record-incentive-program-stage-3-and-modifications>.

After the January 8.6 deployment, a facility enrolled in NHSN will be able to register their intent to satisfy the AUR-MU3 objective. With the upcoming NHSN 8.6 Release, an MU3 signup page will be added to NHSN. The NHSN Facility Administrator will be able to register the facility’s intent to satisfy the AUR-MU3 objective. 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.

Detailed information may be found on the NHSN CDA Submission Support Portal (CSSP): <http://www.cdc.gov/nhsn/cdaportal/meaningfuluse.html>.

Attention CDA Users!

It has been brought to our attention that some facilities uploading data via Clinical Document Architecture (CDA) have been submitting HAI event records with an **incorrect facility admission date**. We recommend facilities take this time to confirm that their software vendor is using the correct facility admission date on all HAI event records; for NHSN purposes, the facility admission date is the first calendar date when the patient is physically placed into an inpatient location. Accurate admission dates are important for data quality and are used in several algorithms throughout NHSN. For example, incorrect facility admission dates can affect the number of events counted in a facility's standardized infection ratio (SIR). Laboratory-identified events, in particular, are categorized as either community-onset (CO) or healthcare facility-onset (HO) based on the patient's facility admission date and date of specimen collection. Incorrect admission dates can lead to incorrect categorizations of LabID events, thus impacting the number of events counted in the LabID Event SIRs and incidence/prevalence rates. If you notice that your vendor is using an incorrect value for facility admission date, or any other required data element, please work with your vendor to resolve the issue.

Questions about CDA reporting can be directed to: NHSNCDA@cdc.gov

NHSN Help Desk: Activity Update

Quarter 4, 2016

(Averages)

1,091 Email Inquiries per Week

90 Facilities Enrolled per Week

NHSN Enrollment Update

NHSN Enrollment Update (as of December 15, 2016):

6,750 Hospitals (this includes 531 Long-term Acute Care Hospitals and 338 Free-standing Inpatient Rehabilitation Facilities)

6,870 Outpatient Hemodialysis Facilities

4,803 Ambulatory Surgery Centers (ASCs)

1,867 Long-term Care Facilities

20,290 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

CDC/NHSN Patient Safety Component Manual
Summary of Revisions, January 2017

Below is a summary of **significant** modifications for the NHSN Patient Safety Component Manual which will go into effect January 1, 2017. Chapter's not listed are without significant changes.

Chapter	Summary of Revisions
Modifications affecting >1 chapter (module)	Additions: -The following organism lists have been updated to include additional organisms as well to update taxonomy of previously included organisms: --NHSN All Organism List- --NHSN Mucosal Barrier List --NHSN Common Commensal List Please see the complete lists available under Supporting Materials at: http://www.cdc.gov/nhsn/acute-care-hospital/clabsi/index.html

Chapter 2: Identifying HAIs in NHSN	<p>Additions:</p> <ul style="list-style-type: none">-Appendix which provides a Flow Diagram for NHSN event determination.-Reference to information in BSI chapter regarding non-reporting of Group B Streptococcus CLABSI during a neonate's first 6 days of life.-Reference to information provided in Chapter 17 Surveillance Definitions regarding lengthened Infection Window Period, Repeat Infection Timeframe and Secondary BSI attribution period when meeting ENDO infection definition. <p>Clarifications:</p> <ul style="list-style-type: none">-Examples found in the Infection Window Period section that outline guidance related to:<ul style="list-style-type: none">--Choosing a diagnostic test to define the infection window period when more than one diagnostic test is available.--Choosing a sign or symptom to define the infection window period when no diagnostic test is available.--Choosing which criterion is to be used to determine the date of event when more than one infection criterion can be met.-Example (Table 6) that demonstrates identification of the same event within an RIT does not result in a new date of event, change the device association nor create a new Repeat Infection Timeframe.- Eligibility to exclude an HAI event when patient is declared brain dead- Hospice patients are not excluded from HAI surveillance- Post mortem specimens and results determined from post mortem examinations are not eligible for use in meeting NHSN infection definitions with the exception of CNS/IC (Intracranial) infection and PNEU infection definition using lung tissue specimen obtained by transthoracic or transbronchial biopsy immediately post-mortem.-Including an observation patient housed in an inpatient location in infection surveillance.
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Chapter 4: Bloodstream Infection	<p>Additions:</p> <ul style="list-style-type: none">-LCBI-2: – "include but are not limited to" and organisms - viridians group Streptococci, <i>Aerococcus</i> spp., <i>Micrococcus</i> spp., and <i>Rhodococcus</i> spp.-List of organisms excluded from CLABSI reporting - <i>Campylobacter</i> spp., <i>C. difficile</i> , Enteropathogenic <i>E. coli</i>, <i>Shigella</i> spp ., <i>Listeria</i> spp., and <i>Yersinia</i> spp.-Instructions that no Group B Streptococcus CLABSI should be reported during a neonate's first 6 days of life.-SUR information to analysis + TABLE <p>Clarifications:</p> <ul style="list-style-type: none">-Included in the list of devices which are not central lines: arterial catheters (changed from "femoral catheters", midlines, "ventricular assist device" (changed from "Impella device"), and extracorporeal membrane oxygenation (ECMO). These modifications are not expansions of the list of devices, but provide more detail to those that have previously been excluded as central lines.-Definition of "Access" for central lines-Examples added – a) determination of implanted central line (port) b) (port) central line day count-Patient suspected or observed accession into central line – changed word to injection-OR/PACU Observation unit/dialysis unit /ERs cannot be considered a location of attribution for BSI.-LCBI 1: recognized pathogen (an organism not on the NHSN common commensal list)-LCBI-1: If a patient meets LCBI 1 and LCBI 2 criteria, report as LCBI 1 with pathogen listed as pathogen #1 and common commensal reported as pathogen #2.-Deleted from LCBI definitions- "which is performed by a culture or non- culture based microbiologic testing method which is performed for purposes of diagnostic or treatment (e.g., not an active surveillance culture /testing ACT/AST)". Rationale: This information is not necessary. All blood specimens tests for organisms are performed for diagnostic/treatment purposes.-Added to MBI-LCBI-1- with only intestinal organisms from MBI- LCBI organism list-Added NOTE: If a patient meets MBI-LCBI 1 and MBI LCBI 2 criteria, report organisms as MBI-LCBI 1Corrected: MBI-LCBI 2 requires at least two blood specimens with only viridians group streptococcus.-Added Secondary BSI Guide table and table for site specific Infection with hyperlinks-Additional guidance to determine if organisms are considered "matching" for the purposes of meeting the NHSN definitions for specific types of infections.
Chapter 6: Pneumonia (pending issues)	<p>Clarifications:</p> <ul style="list-style-type: none">-Added a clarification to the imaging test evidence requirements meeting the PNEU event definition in Tables 1-4. The new and persistent or progressive and persistent imaging test requirement applies to all imaging test findings (i.e., infiltrate, consolidation, cavitation, pneumatoceles).-Algorithms and Flow Diagrams footnote # 10 were updated to better define steroid use duration and post transplant as indications for meeting the surveillance definition of immunocompromised.

Chapter 7: Urinary Tract Infection	<p>Clarifications:</p> <ul style="list-style-type: none">-Suprapubic tenderness whether elicited by palpation (tenderness-sign) or provided as a subjective complaint of suprapubic pain (pain-symptom), is acceptable as a part of SUTI criterion if documentation of either found in the medical record is acceptable during the IWP. (SUTI 1a and SUTI 1b)-*Patient had an indwelling urinary catheter in place for >2 calendar days on the date of event, with day of device placement being Day 1, and catheter was in place on the date of event or the day before. (ABUTI)
Chapter 9: Surgical Site Infection (SSI) Event	<p>Additions:</p> <ul style="list-style-type: none">-A new summary document titled "Summary of Operative Procedure Code Changes" has been created and outlines the status of each procedure code. The code status is indicated as:• No Change (no change made to the code)• Add (added to a procedure category)• Moved to (moved to a procedure category from another)• Moved from (moved from a procedure category to another)• Remove (completely removed from the procedure code list) <p>Changes:</p> <ul style="list-style-type: none">-The emergency definition for the denominator for procedure was updated so that this field will match what a facility documents to be an emergency or urgent procedure.-All ICD-10-PCS codes and all CPT codes were reviewed and updated. The update includes a description for each procedure code. The updates are found in the SSI "Supporting Materials" section of the NHSN website.
Chapter 10: Ventilator-Associated Event (VAE)	<p>Additions:</p> <ul style="list-style-type: none">-Addition of a reference to the NHSN 2014 VAE rates and characteristics publication that can be found in the Critical Care Medicine journal. <p>Clarifications:</p> <ul style="list-style-type: none">-Non-acute care locations in acute care facilities are no longer an eligible location for performing VAE surveillance.-Figures 2-4 were removed from the protocol to eliminate redundancy.-A reporting instruction was added to emphasize a ventilator associated event is not to be upgraded (i.e., VAC upgraded to IVAC or IVAC upgraded to PVAP) using data that occurs outside the VAE Window Period-Matching organism section of the reporting instructions was updated.

Chapter 11: Antimicrobial Use and Resistance	<p>Additions:</p> <ul style="list-style-type: none">-AR Option - AR Events can be submitted from three select outpatient location types: ED, Pediatric ED, and 24 hour observation.-AR Option - The list of organisms included in the AR Option has expanded. <p>Clarifications:</p> <ul style="list-style-type: none">-Additional updates and examples have been added throughout the chapter for clarification.
Chapter 12: MDRO & CDI	<p>Change:</p> <ul style="list-style-type: none">-Reporting event questions "Last physical overnight location of patient immediately prior to arriving into facility (applies to specimen(s) collected in outpatient setting or <4 days after inpatient admission)"and "Has patient been discharged from another facility in the past 4 weeks?" will be optional for 2017
Chapter 16: Key Terms	<p>Additions:</p> <ul style="list-style-type: none">-Definition: "infection window period"-Definition: "Non-culture based microbiologic testing" <p>Clarifications:</p> <ul style="list-style-type: none">-Definition for "active surveillance culture/testing (ASC/AST)"-Definition for "clinical correlation"-Definition for "gross anatomical"-Definition for "repeat infection timeframe"-Definition for "secondary BSI attribution period"-Definition for "surveillance cultures" <p>Deletion:</p> <ul style="list-style-type: none">-Definition for "trauma" – term can be found in the SSI Protocol

Chapter 17: Surveillance Definitions	<p>Additions:</p> <ul style="list-style-type: none">-ORAL- Oral- "from mucosal scrapings or exudate" added to Criterion 3a, which was inadvertently omitted in previous version-LUNG- provided guidance to account for imaging test results that are equivocal for LUNG-NEC- provided guidance to account for imaging test results that are equivocal for NEC-ENDO-Endocarditis-For this infection type, the Infection Window Period has been extended to 21 days- the date the first positive diagnostic test that is used as an element of the site-specific infection criterion was obtained, the 10 calendars days before and the 10 calendar days after. The ENDO Repeat Infection Timeframe (RIT) will extend through the entire patient admission. The Secondary BSI Attribution Period will also extend through the entire patient admission, for the organism(s) that match the organism(s) used to meet the ENDO criteria. Please see the guidance for further details and helpful examples.-SA-Spinal Abscess-provided guidance to account for imaging test results that are equivocal for spinal abscess-VASC-Vascular- Added extracorporeal membrane oxygenation (ECMO), vascular access devices (VAD), and midlines to those devices, which may exclude an LCBI from being a CLABSI if requirements are met. Changed "femoral artery catheters" to "arterial catheters" in the same list. See VASC Reporting Instructions for details. <p>Clarifications:</p> <ul style="list-style-type: none">-Additional guidance is provided to determine if organisms are considered "matching" for the purposes of meeting the NHSN definitions for specific types of infections.-GIT-Gastrointestinal- Criterion 2c updated to reflect that the blood culture must contain at least one organism from the broadened list of MBI-organisms-IAB-Intraabdominal- Criteria 2b and 3b updated to reflect the broadened list of MBI-organisms <p>Deletions:</p> <ul style="list-style-type: none">-GE-Gastroenteritis- Removed criteria 2c and 2d as they are already accounted for in 2a-HEP-Hepatitis- This infection type has been removed as the protracted incubation period for this type of viral infection does not agree with the definition for healthcare-associated.-SA-Spinal Abscess- removed "without meningitis" from the title
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Antimicrobial Stewardship and Infection Prevention

CENTER OF EXCELLENCE

NHSN 2015 Rebaseline

Highlights from CDC Presentations



Risk-adjustment and the SIRs

- Baseline data are risk-adjusted and this risk adjustment is applied to the calculation of the predicted number of infections
- Why risk-adjust?
 - Enables HAI predictors to be taken into account in summary measures
 - To the extent possible, addresses concerns related to the complexity of patients receiving care in an institution
 - For CDI, adjusts for the test type when alternative testing methods are available

The Rebaseline: New Models Developed at CDC

HAI	ACHs	CAHs	LTACHs	IRFs
CLABSI (non-MBI)	✓	✓	✓	✓
Central Line SUR	✓	✓	✓	✓
MBI	✓			
CAUTI	✓	✓	✓	✓
Urinary Catheter SUR	✓	✓	✓	✓
VAE	✓	✓	✓	✓
Ventilator SUR	✓	✓	✓	✓
"All SSI" Models – Adults	✓			
"All SSI" Models - Peds	✓			
"Complex A/R" Models – Adults	✓			
"Complex A/R" Models – Peds	✓			
"Complex 30-day" Models – Adults (COLO and HYST)	✓			
MRSA Bacteremia LabID	✓	✓	✓	✓
CDI LabID	✓	✓	✓	✓

Each
procedure
category
assessed
separately,
inpatient
only

Summary of New Measures:

- SIRs for critical access hospitals separate from acute care hospitals
- Mucosal Bloodstream Infection (MBI) SIRs
- VAE SIRs
 - Total VAC
 - IVAC Plus
- Pediatric SSI SIRs
- MRSA and CDI LabID SIRs for LTACHs and IRFs
- Standardized Utilization Ratios (SURs) for all device types

NEW: Standardized Utilization Ratios

- SUR is a scalable measure
 - E.g., can scale up to a hospital, state, or national level
- SURs are **not** part of the CMS Quality Reporting Programs
- SURs will be available for:
 - Central Line Use
 - Urinary Catheter Use
 - Ventilator Use

The Rebaseline: Modeling Approach

- Modeling approach consisted of three phases, include a statistical validation phase prior to finalizing the models
- Two types of models used:
 - Negative binomial regression: CLABSI, MBI, CAUTI, VAE, MRSA LabID, CDI LabID
 - Logistic regression: SSI, SURs

Using Models for Device-associated Infections

- Previously, NHSN used Pooled Mean Rates for the calculation of # predicted device-associated infections, by location

$$\text{Number of predicted DA events} = \# \text{ device days} \times \left(\frac{\text{NHSN pooled mean}}{1,000} \right)$$

- Regression models have been used in NHSN for other HAIs
 - SSI: logistic regression since 2009 (baseline: 2006-2008)
 - LabID: negative binomial regression since 2012 (baseline: 2010-2011)
- Under the 2015 Rebaseline, CDC will use models for calculating the predicted number of infections.
- General Negative Binomial Regression Model:

$$\text{Number of predicted DA events} = e^{(\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots)} * \text{device days}$$

Factors Included in the Model: Acute Care Hospitals (ACHs)

Factor	CLABSI	CLABSI (NICU)	CAUTI	VAE	CDI	MRSA
CDC Location	✓		✓	✓		
Facility Type	✓		✓	✓	✓	✓
Medical School Affiliation	✓		✓	✓	✓	✓
Inpatient quarterly CO prevalence rate					✓	✓
CDI Test Type					✓	
Birthweight		✓				
Length of Stay						✓
Reporting from ED/Obs locations					✓	✓
Facility Bedsize	✓		✓	✓	✓	
ICU Beds					✓	✓

Factors Included in the Model: Acute Care Hospitals (ACHs)-SSI Complex 30-day

Factor	COLO	HYST
Cancer hospital	✓	✓
Patient level factors		
Age	✓	✓
ASA Score	✓	✓
BMI	✓	✓
Closure technique	✓	
Diabetes	✓	✓
Gender	✓	

Data Exclusions: Acute Care Hospitals (ACH)

Exclusions:

- CLABSI: MBI
- C. difficile: quarterly CO prevalence rate > 2.6

Data Exclusions: SSIs

- Outpatient Procedures and resulting SSIs
- ASA score is missing
- If BMI is less than 12 or greater than 60 (adult patients)
- If Medical affiliation is missing or medical affiliation is 'Y' and medical type is missing
- If number of beds missing
- Procedure duration cut off points (If procedure duration is greater than $Q3 + 5IQR$ for each procedure respectively after applying all the above inclusion and exclusion criteria)

Data Exclusions: SSIs (cont.)

- PATOS = 'Y' from both numerator and denominator
- Age at the time of procedure is greater than 109
- Procedure duration less than 5 minutes
- If closure technique is missing
- If gender is missing or gender is 'O'

CMS: Implications of the New Baseline

- Once the new SIRs become available in NHSN:
 - SIRs, based on the original baselines, will be calculated within the NHSN application through 2016 data.
 - NHSN will create new reports that will calculate SIRs for 2015 and forward using the new 2015 baseline.



CMS: Implications of the New Baseline

- Effect on Value Based Purchasing (VBP)
 - FY 2017 and FY 2018 Program years will use SIRs calculated under the original NHSN baselines.
 - FY2019 and forward will use SIRs calculated under the 2015 NHSN baseline.
- For a description of CMS's Hospital VBP Program Performance Periods, please visit:
 - https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/downloads/Hospital_VBPurchasing_Fact_Sheet_ICN907664.pdf


Hospital Compare Preview Reports

- Hospitals participating in the CMS Hospital Inpatient Quality Reporting (IQR) Program can preview their HAI data before the data are publicly posted on Hospital Compare
 - CDC submitted preliminary, quarterly files to CMS –using the new 2015 baseline.
 - QualityNet Secure Portal: view December 2016 preview reports of HAI data from 2015 Q1 –2015 Q4.
 - Preview period begins October 8, 2016
 - **Data shown in the December Preview Report and the data generated from NHSN analysis reports will be different**


Analysis Reports



Centers for Disease Control and Prevention
 CDC 24/7: Saving Lives, Protecting People™



NHSN
 National Healthcare
 Safety Network




REBECCA
 DHQP MEMORIAL HOSPITAL

NHSN - National Healthcare Safety Network (apt-v-nhsn-test:8001)

NHSN Home

- Alerts
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 **Analysis Reports**

Expand All **Collapse All**

- Device-Associated (DA) Module
- Procedure-Associated (PA) Module
- HAI Antimicrobial Resistance (DA+PA Modules)
- Antimicrobial Use and Resistance Module
- MDRO/CDI Module - LABID Event Reporting
- MDRO/CDI Module - Infection Surveillance
- MDRO/CDI Module - Process Measures
- MDRO/CDI Module - Outcome Measures
- CMS Reports
- TAP Reports
- Baseline Set 1**
- Advanced
- My Custom Reports
- Published Reports

Locating reports based on 2015 baseline:

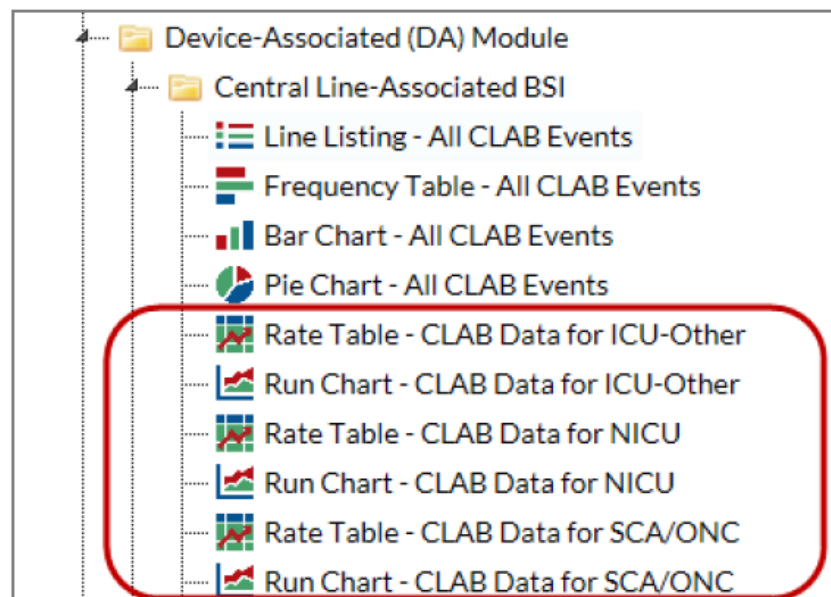
All folders displayed here, with the exception of the folder named Baseline Set 1, contain reports using the new 2015 baseline

Locating reports based on 'old' baseline:

Please find reports using the old baseline here in the Baseline Set 1, also called BS1 folder.
 Reports are organized by HAI type

Pooled Means (National Benchmark Rates)

- 2014 is the last year NHSN will publish device-associated national pooled means
 - Infection rate and device utilization ratio (DUR)
 - Moving forward, benchmarks will be published annually as SIRs
- Typically, rate tables provided the facility's rate and DUR, with a comparison to national pooled means
- Pooled means will no longer appear in the default device-associated rate tables for 2015 data and forward

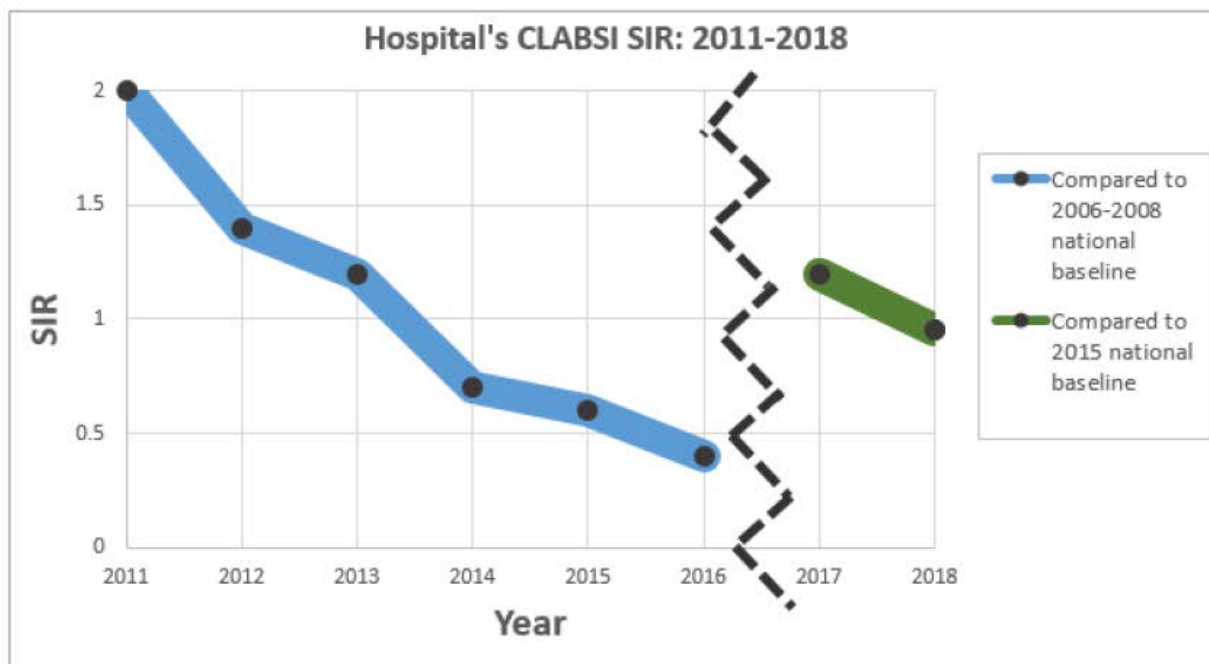


Transition Period: Which SIRs Do We Use?

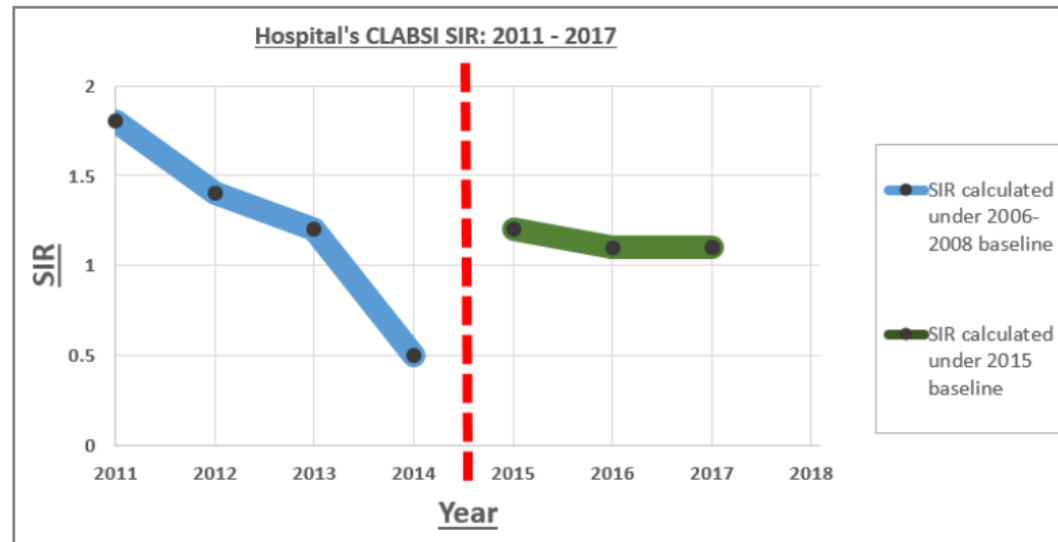
- If needed, continue reviewing SIRs under original baseline through 2016
 - Show effectiveness of prevention activities
 - Progress over time from the original baseline population
 - Review data that will be used in HVBP
- Begin reviewing SIRs under the new baseline from 2015 and forward
 - New starting place for measuring HAIs
 - Hospital Compare will display 2015 SIRs under the new baseline
 - 2015 SIRs under the new baseline will be used in future HVBP
- CDC will start using the new baseline with 2015 data
 - HAI Progress Report
 - National and state 2015 SIRs will use the updated risk models

Incorporating New Baseline

- SIRs under new baseline cannot be compared to SIRs from original baseline!
- Acceptable to show SIRs under both baselines in a single figure, given:
 - Line graph is *not* connecting points between different baselines
 - Each baseline is clearly labeled



Talking Points: Discussing SIRs During Transition Period



- 2011 – 2014 SIRs under original baseline
- 2014 SIR = 0.50
- Interpretation: In 2014, our facility saw 50% fewer CLABSIs than predicted, compared to the **2006-2008** national experience
- 2015 SIR under new baseline-transition year
- 2015 SIR = 1.20
- Interpretation: In 2015, our facility saw 20% more CLABSIs than predicted, based on the **2015** national experience



Inpatient Quality Reporting

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Quick Support Reference Card

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Need an answer right now? No time to pick up the phone or send an e-mail to support? The Inpatient **Question and Answers Tool** is here for you. With only a few clicks of the mouse, immediate answers to the most commonly asked questions are at your fingertips. Visit <https://cms-ip.custhelp.com> and get the answers you need, now.



E-MAIL SUPPORT

Sometimes a question needs a bit more explanation, and sometimes a picture says 1,000 words. For times like these, **email support** is here. E-mail your questions to inpatientsupport@vqrc1.hcgis.org. Be sure to include screen shots, photos, and whatever else describes your question. Our staff is standing by ready to assist you with the information you need.



PHONE SUPPORT

The Inpatient Quality Reporting team is waiting on the other end of the **phone** line, ready to assist you. Our experienced staff is available to help you from 8 AM to 8 PM ET, Monday through Friday. Give us a call toll free at (844) 472-4477 or (866) 800-8765... your support center is standing by!



INPATIENT LIVE CHAT

Connect with an IQR team member via **live chat** – no phone, e-mail, or fax needed! Give it a try! Visit www.qualityreportingcenter.com, click on the Inpatient link, and then click the “Talk to Us” banner on the bottom of the screen to get started!



MONTHLY WEB CONFERENCES

Helpful information on key subjects presented by national IQR experts – the Inpatient Quality Reporting monthly **web conferences** offer all that and more! Interact with CMS and IQR team leads, ask questions, and obtain informative data relevant to your job.

Visit www.qualityreportingcenter.com, click on the [see full calendar](#) link, select the event you’re



SECURE FAX

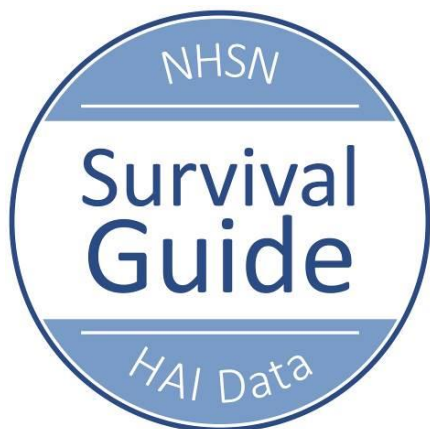
When you absolutely, positively, have to get it here *securely*, use the Inpatient Quality Reporting **secure fax** line. Documents, reports, and data... whatever you need to send to our team, the **secure fax** line will help ensure that it gets delivered quickly. To send a fax, dial (877) 789-4443.



WEBSITE

For up-to-date information, events, and reporting deadlines about Inpatient Quality Reporting, visit the QR Support Center **website** at www.qualityreportingcenter.com. For your convenience you can also find links to Hospital Outpatient and Ambulatory Surgical Center resources. For assistance in locating what you’re looking for, use the search tool in the top right corner of the site.





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NHSN Reporting for Inpatient Acute Care Hospitals

In a time when clinical data are being used for research, development of care guidelines, identification of trends, and reimbursement, the data quality are vitally important. Data quality refers to the accuracy, completeness, validity, and consistency of the information collected and entered into the database. In order to ensure data quality, you must develop and follow a framework of procedures and processes.

Use this guide as a quick reference resource to help improve the quality of your National Healthcare Safety Network (NHSN) data.

Data Quality Basics



Standardized Definitions: The Centers for Disease Control and Prevention (CDC) provides standardized definitions for each of the healthcare-associated infection (HAI) elements. It is imperative that you, and all staff members involved with the data collection process, are familiar with the definitions and adhere to them. Additionally, perform a periodic review of these definitions to ensure that you are compliant and up to date with any changes for all HAI modules.



Interrater Reliability: This is defined as the degree of agreement among two or more persons independently abstracting data elements from the same chart. Typically, interrater reliability should be assessed on approximately 10 percent of charts abstracted per quarter.



Accuracy: Ensure that abstracted data align with standardized definitions and specifications. This is measured by interrater reliability.

- **Interpretation Errors**—definitions are not applied accurately.
- **Documentation Errors**—clinical data does not correlate with documentation in the chart.
- **Coding Error**—clinical data do not match coding data.



Completeness: Each month and prior to data deadlines, run reports to ensure that data are complete. To have complete data means that no records are incomplete and NHSN alerts are completed; and every patient, procedure, and event have been entered into the database.

- Develop an internal, facility-specific process to track all cases qualifying for HAI public reporting. Cross-reference what has been coded, collected by the individual care plan, and entered into NHSN.

Quality Tips

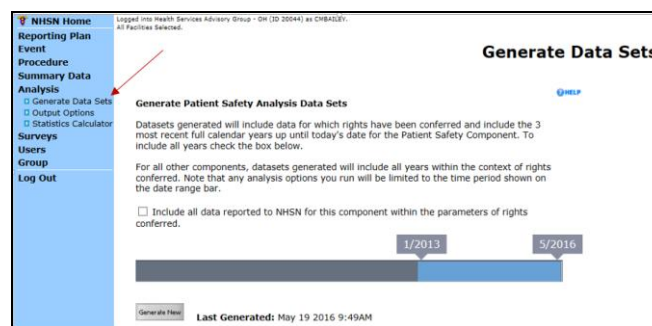


Review your reports with enough time to make necessary adjustments prior to NHSN data submission deadlines.

Print out the [HAI checklist](#) (on page 4 through 6) and keep it handy for monthly reporting. Validation reports should be run monthly, after data entry is complete, and a couple of weeks before the quarterly data submission deadlines. Planning around these timelines provides you the opportunity to identify issues and make corrections before NHSN takes the “final snapshot” of the data for CMS. **Note:** Failure to enter accurate data in a timely manner may result in annual payment update failure and lead to decreased reimbursement.



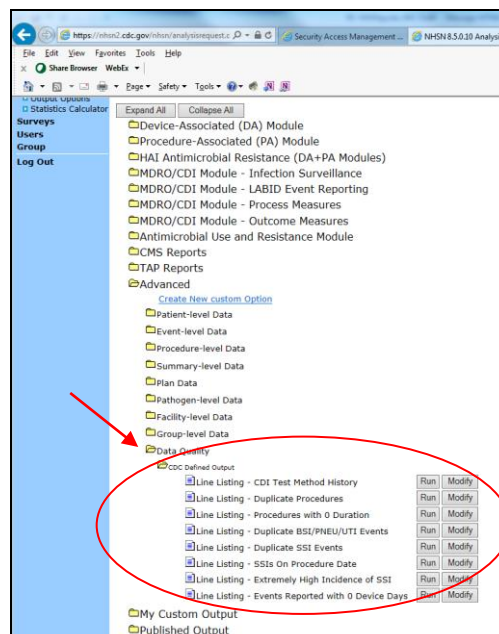
Always generate a new dataset before running reports.



Download troubleshooting tips on the NHSN site.

Log in to your NHSN Secure Access Management Services (SAMS) database and access the NHSN data quality troubleshooting reports at www.cdc.gov/nhsn. Locate NHSN Data Quality Reports to assist with troubleshooting data quality issues:

**File Path:* Analysis → Output Options → Advanced → Data Quality → CDC Defined Output



CMS HAI Data Quality Checklist

Complete the following review steps several weeks prior to the quarterly CMS reporting deadlines. For reporting deadlines, visit: <http://www.cdc.gov/nhsn/PDFs/CMS/CMS-Reporting-Requirements.pdf>.

☐ Check the monthly reporting plan.

Although most hospitals copy the data reporting plan from month to month, it is important to closely review what is included. Visit: www.cdc.gov/nhsn/forms/57.106_PSReportPlan_BLANK.pdf

- Mandated reporting units with a complete list and guidance available at: <http://www.cdc.gov/nhsn/PDFs/CMS/CMS-Reporting-Requirements.pdf>
- Facilitywide inpatient lab ID MDRO and CDI events with guidance available at: http://www.cdc.gov/nhsn/pdfs/pscmanual/12pscmdro_cdadcurrent.pdf



IMPORTANT: CDC NHSN will only submit data to CMS for measures included in the monthly reporting plan.

☐ Enter and review the summary data.

Verify that all denominator data are included:

- Total Patient Days
- Total Patient Admissions
- Central Line Days
- Urinary Catheter Days
- MDRO (MRSA) Days and CDI Days



IMPORTANT: High errors with MDRO denominator entry! Visit

<http://www.cdc.gov/nhsn/pdfs/cms/acutecare-mrsa-cdi-labiddenominator-reporting.pdf>

(include summary data for all adult and pediatric units per the CMS requirement).

☐ Validate number of SSI cases (denominator) for hysterectomy and colon surgeries.

*File Path: Analysis → Output Options → Procedure Associated (PA) Module → SSI → CDC Defined Output → Line Listing – All SSI Events

This can be easily accomplished by running a line list.

☐ Enter “No Infections”/“No Events” properly for CLABSI, CAUTI, and MDRO (MRSA/CDI).

If your facility did not have infections for the month, you must select “Report No Events” on the Summary page. Failure to do so will result in those data not being submitted to CMS.

Visit: www.cdc.gov/nhsn/PDFs/CMS/how-to-report-No-Events-CLAB-CAU.pdf

Visit: <http://www.cdc.gov/nhsn/PDFs/mrsa-cdi/How-To-Set-Up-And-Report-MRSA-CDI.pdf>

☐ Report “No Procedures.”

If your facility did not have any SSI colon or SSI hysterectomy procedures for the month, you must report “No Procedures Performed” on the “Missing Procedures” tab on the “Alerts Screen.”

www.cdc.gov/nhsn/PDFs/CMS/How-to-Report-No-Events-SSI.pdf

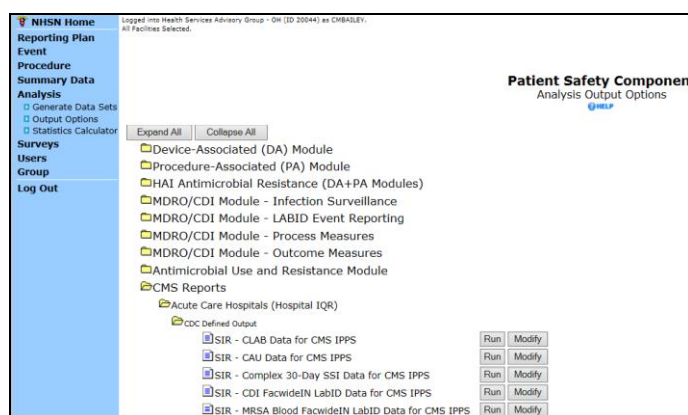
❑ **Enter “No Infections”/“No Events” for SSI properly.**

If your facility did not have infections for the month, you must report “Report No Events” on the “Missing PA Events” tab on the on the “Alerts Screen.” Failure to do so result in those data not being submitted to CMS. Visit: www.cdc.gov/nhsn/PDFs/CMS/How-to-Report-No-Events-SSI.pdf

Use the following reports to validate data quality for CMS IPPS NHSN submissions.

❑ **CMS Analysis Reports in NHSN.**

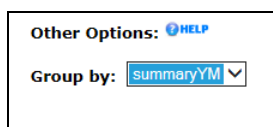
*File Path: Analysis → Output Options → CMS reports → Acute Care Hospitals → CDC Defined Output



- SIR – CLAB data for CMS IPPS
Visit: www.cdc.gov/nhsn/PDFs/CMS/CMS-IPPS-CLABSI-SIR.pdf
- SIR – CAU data for CMS IPPS
www.cdc.gov/nhsn/PDFs/CMS/CMS-IPPS-CAUTI-SIR.pdf
- SIR – CDI FacwideIN LabID data for CMS IPPS
<http://www.cdc.gov/nhsn/PDFs/CMS/CMS-IPPS-CDI-SIR.pdf>
- SIR – MRSA Blood FacwideIN LabID data for CMS IPPS
<http://www.cdc.gov/nhsn/PDFs/CMS/CMS-IPPS-MRSA-SIR.pdf>
- SIR – Complex 30-day SSI data for CMS IPPS output options
www.cdc.gov/nhsn/PDFs/CMS/CMS-IPPS-SSI-SIR.pdf



IMPORTANT: These reports show exactly what data will be submitted to CMS by NHSN and should be checked against facility-specific data to validate accuracy of information sent to CMS. It is advisable to run the reports so they display by month to better validate the data. Select “Modify” to open the report variables screen. → Scroll to the bottom and locate “Other Options:” “Group by:” and use the dropdown box to select “summaryYM”



❑ Additional Recommended Analysis Reports

Analysis → Output Options → Advanced → Event-level Data → CDC Defined Output

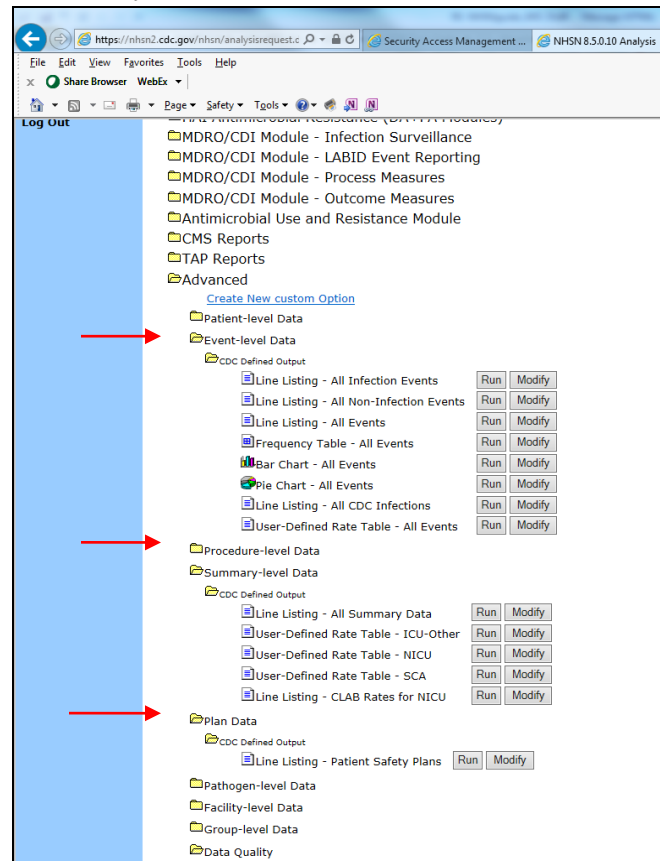
- Line Listing - All Infection Events

Analysis → Output Options → Advanced → Summary-level Data → CDC Defined Output

- Line Listing - All Summary Data

Analysis → Output Options → Advanced → Plan Data → CDC Defined Output)

- Line Listing - Patient Safety Plans



Glossary of Acronyms

CAUTI	catheter-associated urinary tract infection
CDC	Centers for Disease Control and Prevention
CDI	Clostridium difficile infection
CLABSI	central line-associated bloodstream infection
CMS	the Centers for Medicare & Medicaid Services
ICP	infection control practitioner
IPPS	Inpatient Prospective Payment System
IQR	Inpatient Quality Reporting program
MDRO	Multi-drug resistant organisms
MRSA	Methicillin-resistant Staphylococcus aureus
NHSN	National Healthcare Safety Network
OPPS	Outpatient Prospective Payment System
PA	Procedure Associated
OQR	Outpatient Quality Reporting
SIR	standardized infection ratio
SSI	surgical site infection

Data Reporting Resources

- QualityNet HAI Webpage
www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier2&cid=1228760487021
- QualityNet Specifications Manual
www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier2&cid=1141662756099
- CDC NHSN Tracking Infections in Acute Care Hospitals/Facilities
www.cdc.gov/nhsn/acute-care-hospital/index.html
- Operational Guidance for Acute Care Hospitals to Report Central Line-Associated Bloodstream Infection (CLABSI) Data to CDC's NHSN for the Purpose of Fulfilling CMS's Hospital Inpatient Quality Reporting (IQR) Program Requirements
www.cdc.gov/nhsn/PDFs/FINAL-ACH-CLABSI-Guidance.pdf
- Operational Guidance for Acute Care Hospitals to Report Catheter Associated Urinary Tract Infection (CAUTI) Data to CDC's NHSN for the Purpose of Fulfilling CMS's Hospital Inpatient Quality Reporting (IQR) Program Requirements
www.cdc.gov/nhsn/PDFs/FINAL-ACH-CAUTI-Guidance.pdf
- Operational Guidance for Reporting Surgical Site Infection (SSI) Data to CDC's NHSN for the Purpose of Fulfilling CMS's Hospital Inpatient Quality Reporting (IQR) Program Requirements
www.cdc.gov/nhsn/pdfs/cms/ssi/final-ach-ssi-guidance_2015.pdf

References

Centers for Disease Control and Prevention. *National Healthcare Safety Network (NHSN): Tracking infections in acute care hospitals/facilities*. Available at: www.cdc.gov/nhsn/acute-care-hospital/index.html, Accessed on: Jan 12, 2016.

Centers for Disease Control and Prevention. *National Healthcare Safety Network (NHSN): Operational guidance for acute care hospitals*. Available at: www.cdc.gov/nhsn/cms/. Accessed on: Jan 12, 2016.