NHSN: An Update on the Risk Adjustment of HAI Data

Maggie Dudeck, MPH

Zuleika Aponte, MPH

Rashad Arcement, MSPH

Prachi Patel, MPH

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Updated: April 2017 (see slide 2)

Errata: Corrections and Updates

- Changes were made to this presentation after it was originally presented on October 5, 2016.

  - **Slide 31**: VAE Model for LTACHs does *not* include "Setting". Associated checkmark for "Setting" was removed.
  - **Slide 32**: Factors included in *C. difficile* LabID Event (CDI) Inpatient Rehabilitation Facility (IRF) model have been updated.
  - **Slides 8, 37, 40, 43:** NHSN version 8.6 was released in January 2017. These slides originally listed December 2016 as the date of the NHSN update.

Learning Objectives

- Discuss the history and approach of developing a new national baseline for measuring healthcare-associated infections (HAIs).

- Explain the structure and elements of the new HAI risk models.

- Review the use of the standardized infection ratios (SIRs) in relation to Centers for Medicare and Medicaid Services (CMS) programs.

- Identify educational materials and additional resources related to the rebaseline of HAI data at CDC.

A Review: The Standardized Infection Ratio (SIR) and National SIR Baseline

- SIR – A summary statistic that compares the number of healthcare-associated infections (HAIs) that were reported to the number of HAIs that were predicted to occur, based on a calculation using data for HAI events that occurred in a given referent time period

$$SIR = \frac{\#\ observed\ HAIs}{\#\ predicted\ HAIs}$$

- National SIR baseline – The HAI incidence rate for a referent time period that is used to calculate the predicted number of HAIs for a subsequent time period.

  - **The SIR is only calculated if the predicted number of HAIs is ≥1.**

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

Basis for Using SIRs

- The SIR is a risk-adjusted composite measure that allows for scalability
  - For Example: An overall CLABSI SIR can be provided for a hospital with multiple ICUs. Without the SIR, CLABSI data would have to be provided in the form of location-specific rates.
- Use of the SIR requires a baseline, from which progress can be measured
  - The baseline remains static for a number of years
- At some point, the baseline must be updated
  - No set standard on *when* to update a baseline
  - Decision on the timing of updating a baseline may be driven by policy, HAI surveillance definitions, etc.

The Baseline

- **Data reported to NHSN for CY2015 serve as the new baseline for SIRs**
- Will the baseline be updated every year?
  - CDC does not have plans to update the baseline every year
  - Contributing facilities and HAI surveillance definitions and protocols are expected to remain stable for a number of years
  - Frequently updating the baseline would hinder the ability to measure progress and assess trends at the local, state, and national level

The Rebaseline: CDC's Timeline

- Now through January 2017 (scheduled release of NHSN v8.6):
  - Develop new reports in NHSN application
  - EDUCATION! (via newsletters, quick reference guides, and Rebaseline webinars)
- With the 8.6 release in January 2017, NHSN Users will be able to run SIRs for 2015 and 2016 under both the old baseline, and the new baseline
  - Data for 2017 and forward will be available under the new baseline only

The Rebaseline: New Models Developed at CDC

HAI	ACHs	CAHs	LTACH s	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
- MBI SIRs
- VAE SIRs
  - Total VAE
  - 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

- Similar to the SIR and SAAR

- Summarized risk-adjusted measure for device use

- Calculated as:

$$\text{SUR} = \frac{\#\ observed\ device\ days}{\#\ predicted\ device\ days}$$

- # predicted device days is calculated based on multivariable logistic regression models

NEW: Standardized Utilization Ratios

- SUR is a scalable measure
  - E.g., can scale up to a hospital, state, or national level
- SURs are <u>not</u> part of the CMS Quality Reporting Programs
- SURs will be available for:
  - Central Line Use
  - Urinary Catheter Use
  - Ventilator Use
- Additional information and training will be provided late-2016/early-2017

The Rebaseline: Modeling Approach

- Used in-plan data reported to NHSN for January –December 2015 (as reported by May 16, 2016)

- Included facilities from all states, territories, and DoD installations

- Lead analysts applied consistent overarching methods and analytic approach

- Input was solicited from subject matter experts

- Decisions made a priori regarding which factors should or should not be considered potential risk factors in the model

- Data cleaning and outlier detection was performed prior to modeling work

The Rebaseline: Contributing Facilities

Facility Type	N*
Acute Care Hospitals (ACH)	3,664
Critical Access Hospitals (CAH)	623
Long Term Acute Care Hospitals (LTACH)	489
Inpatient Rehabilitation Facilities (IRF)†	1,170

*Number of facilities contributing to each model varies by HAI type. This number represents the maximum number of facilities contributing to a single model.

†Includes freestanding IRFs enrolled in NHSN as HOSP-REHAB, as well as CMS IRF Units within an acute care facility.

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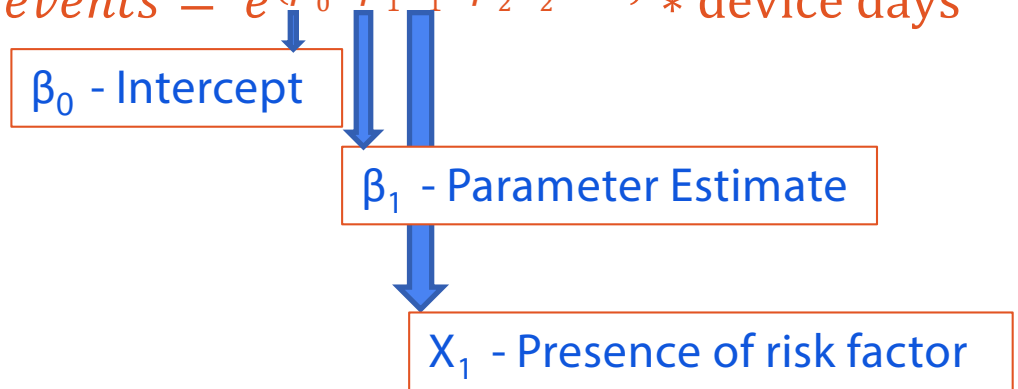
$$Number\ of\ predicted\ DA\ events = \#\ device\ days\ x\ (\frac{NHSN\ pooled\ mean}{1,000})$$

■ 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:

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

Using Models for Device-associated Infections

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

β_0 - Intercept

β_1 - Parameter Estimate

X_1 - Presence of risk factor

- The parameter estimate allows for each factor's contribution to be different

- If the parameter estimate is positive, presence of a risk factor can increase the number of predicted infections.

Using Models for Device-associated Infections

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

X_1 - Presence of risk factor

- Some examples of <u>potential</u> risk factors for DA infections:
  - Facility bedsize (continuous or categorical)
  - Medical school affiliation
  - Status as a Cancer Hospital
  - ICU location
  - Pediatric location

The Rebaseline: Will my SIRs change?

- In short…Yes.

- In addition to different risk models being used, the rebaselined SIRs will be using data with different incidence, and collected under different protocols and definitions, than the first baseline.

- Let's look at a couple of examples…

The Rebaseline: Will my hospital's SIRs change?

- **Example 1:**
- Annual, Facility-level CAUTI data from a 300-bed General Acute Care Hospital, with Graduate teaching affiliation, reporting for a medical ICU and a Med/Surg Ward
- Baseline 1 (2009 NHSN Data):

Year	# CAUTI	# pred	SIR	P-value	95% CI	Cath Days
2015	7	10.401	0.673	0.2931	0.294, 1.331	5,996

- Baseline 2 (2015 NHSN Data):

Year	# CAUTI	# pred	SIR	P-value	95% CI	Cath Days
2015	7	2.523	2.774	0.0193	1.213, 5.488	5,996

Fictitious data. Example provided for illustrative purposes only.

The Rebaseline: Will my hospital's SIRs change?

- **Example 2:**
- Annual, Facility-level CAUTI data from a 400-bed General Acute Care Hospital, with Major teaching affiliation, reporting for a burn ICU, trauma ICU, and a surgical ward
- Baseline 1 (2009 NHSN Data):

Year	# CAUTI	# pred	SIR	P-value	95% CI	Cath Days
2015	30	60.650	0.495	<0.0001	0.340, 0.697	16,963

- Baseline 2 (2015 NHSN Data):

Year	# CAUTI	# pred	SIR	P-value	95% CI	Cath Days
2015	30	26.772	1.121	0.5218	0.770, 1.580	16,963

Fictitious data. Example provided for illustrative purposes only.

Before We Review Model Highlights…

- Keep in mind the manner in which data are collected
  - Device-associated denominator data collected at the location-level (i.e., no patient-level risk factors)
  - LabID denominator data are collected at the inpatient, facility-wide level (i.e., no location or patient-level risk factors)
- Given the use of risk models for all HAIs, annual national pooled mean rates and device-utilization ratios will no longer be produced
  - Will be replaced by national SIRs and SURs, with percentile distributions
  - Predicted Rate Calculator will be developed in 2017, will allow for access to national rates using the 2015 risk adjustment and incidence

New Models

New Models-Highlights

- Previously excluded inpatient locations were included under the 2015 baseline.
  - For example Telemetry Ward, Mixed Acuity Ward

- CAUTI: Urinary catheter days will continue to be used in the SIR calculation

- VAE: Will be calculated for "Total VAE" as well as "IVAC Plus"

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	✓	

Acute Care Hospitals (ACH)

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

Data Exclusions – SSI*

- 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)

*Applicable to all SSI models

Data Exclusions – SSI*

- 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'

*Applicable to all SSI models

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

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

- Regression models without predictors are also known as intercept only models.

- This means that there were no factors found to be statistically significant in the model, in other words a model with no factors.

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/Percent of Admissions on Hemodialysis			✓		
Proportion/Percent of Admissions on a Ventilator			✓	✓	✓

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

Factor	CLABSI	CAUTI	VAE	CDI	MRSA
Reporting of community-onset events			✓	✓	
CDI test type			✓	✓	
Setting		✓	✓	✓	
Proportion/Percent of Admissions within each diagnostic category		✓		✓	
Primary diagnosis of stroke			✓	✓	
Primary diagnosis of orthopedic conditions			✓	✓	
Traumatic spinal cord dysfunction		✓	✓	✓	
Non-traumatic spinal cord dysfunction		✓	✓	✓	

New variables included in the models

- Average Length of Stay=numPatDays/numAdmits

- MRSA ED/OBS rate: mrsa_bldcount/numtotencounters * 100

- Proportion of Admissions on a Ventilator=(numventadm/numAdmits)*100

- Proportion of Admissions on a Hemodialysis
  =(numventadm/numAdmits)*100

New variables included in the models

- Proportion of Admissions with primary diagnosis of:
  - stroke= (numStrokeAdm/numAdmits)***100**

  - orthopedic conditions= (numOrthoAdm/numAdmits)***100**

  - traumatic spinal cord dysfunction= (numTraSCDysAdm/numAdmits)***100**

  - Non-traumatic spinal cord dysfunction= (numNonTraSCDysAdm/numAdmits)***100**

CMS: Implications of the New Baseline

Rashad Arcement

CMS: Implications of the New Baseline

- 2016 Quarter 1 and Quarter 2 data submitted to CMS Quality Reporting Program using the new 2015 baseline.
- CY 2015 Public Reporting files re-sent to CMS using the new baseline in August 2016.

Submitted to CMS using new 2015 baselines

NHSN Release v8.6

August
2016Q1 Data Submissions to CMS
2015 Public Reporting Files resent to CMS*

November
2016Q2 Data Submissions to CMS

December
2015 baselines available within NHSN

2016 | Jun | Jul | Aug | Sep | Oct | Nov | Dec

*Public reporting data as of the end of each quarter for 2015

CMS: Implications of the New Baseline

- Analysis reports run in the NHSN application prior to the next NHSN update in January 2017 will still use the original baseline data and risk models.

Sent using the original baselines

| 2015Q1 | 2015Q2 | 2015Q3 | 2015Q4 | | 2016Q1 | 2016Q2 |
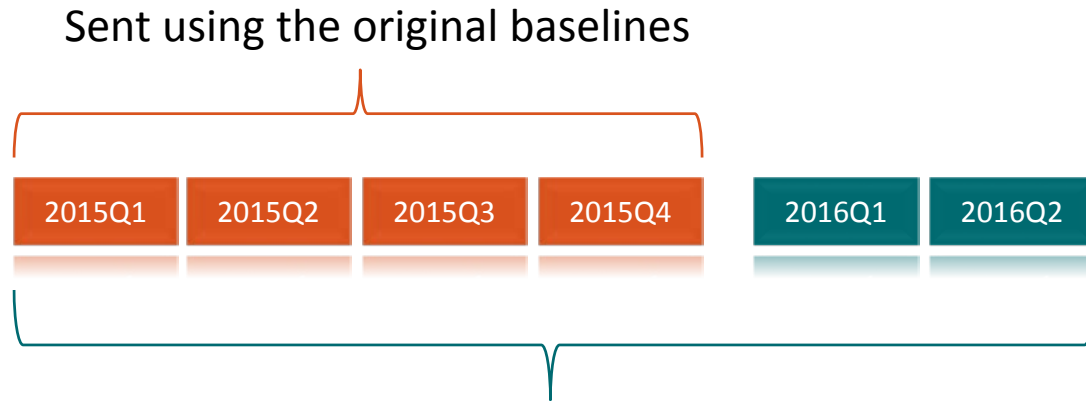
6 Quarters of data sent to CMS using
the new baseline data and risk models

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.

2015 Rebaseline Models

2014 2015 2016 2017

Original Baseline Models

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

Why will 2016 Q1 and Q2 SIRs be submitted to CMS before hospitals have the opportunity to view them?

- Since 2011, NHSN application has enabled hospitals to reproduce CDC's SIR calculations.
  - This year, new baseline for each HAI SIR calculation
  - Use the new risk models in the 2016Q1 and 2016Q2 HAI SIRs reported on behalf of hospitals to CMS.
- These new risk models will be incorporated into the next release of the NHSN application – **January 2017**.
  - Hospitals will not be able to calculate their own 2016Q1 and 2016Q2 HAI SIRs in the NHSN application until January
  - CDC to ensure that the new risk models and reports have been accurately applied in the NHSN application

Implications of the New Baseline: Data Review

- Still available in NHSN by using the existing SIRs and rate tables.
  - The numerator (i.e., number of events)
  - Contributing denominator (e.g., central line days, patient days)

National Healthcare Safety Network
SIR for In-Plan Central Line-Associated BSI Data - By OrgID
As of: October 3, 2016 at 10:43 AM
Date Range: CLAB_RATESALL summaryYr After and Including 2016
if (((bsiPlan = "Y")))

Facility Org ID=████ CMS Certification Number=████

Facility Org ID	Summary Yr/Half	Events	Number Expected	Central Line Days	SIR	SIR p-value	95% Confidence Interval
████	2016H1	2	1.486	1060	1.346	0.6249	0.226, 4.448

If infCount in this table is less than you reported, aggregate data are not available to calculate numExp.
Lower bound of 95% Confidence Interval only calculated if infCount > 0. SIR values only calculated if numExp >= 1.
SIR excludes those months and locations where device days are missing.

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**
- **http://www.cdc.gov/nhsn/pdfs/newsletters/nhsn-nl-sept-2016.pdf**

Rebaselined SIRs Shared with CMS

- CDC re-sent 2015Q1-2015Q4 data, under the new 2015 baseline, for the following measures:

    - **Hospital IQR:** CLABSI, CAUTI, SSI-COLO, SSI-HYST, MRSA bacteremia LabID, CDI LabID
    - **LTCHQR:** CLABSI, CAUTI
    - **IRFQR:** CAUTI

- The new baseline will continue to be used for rolling 4-quarter Public Reporting files

- CDC is sending 2016Q1+ data to CMS, under the new 2015 baseline, for all QRP HAI measures at each quarterly deadline

- SIRs calculated under the new 2015 baseline will be available within the NHSN application in January 2017

- **Bottom Line:** The data shown in the Hospital Compare Preview Report for the December Hospital Compare release <u>will be different</u> from the data currently generated within NHSN.

NHSN FAQs and Additional Resources

Device-Associated FAQs

Q: Will previously excluded locations, such as Telemetry Wards and Mixed Acuity Wards, be included in the new SIR calculations?

– Yes, with the rebaseline, we were able to gather enough data to have those wards be included in the SIR calculations.

Q: Will MBI-LCBIs be excluded from the CMS SIR with the rebaseline?

– Yes, MBI-LCBIs will be excluded from the CMS SIR. New measures for MBI-LCBI events will be available in NHSN.

SSI FAQs

Q: Will SSIs reported as "Present at time of Surgery" (PATOS) be excluded from the SSI SIRs?

– SSIs reported as PATOS are exclude from all the SSI SIR models under the rebaseline. Although PATOS events are excluded from the SIR calculations, they must still be reported per NHSN protocol. Users can still analyze their PATOS data using frequency and line list reports.

Q: Will the Complex 30-day SSI SIR model continue to use only ASA score and Age to risk adjust the SIR?

– The Complex 30-day SSI SIR model, under the rebaseline, uses other risk factors in addition to ASA score and Age to risk adjust the SIR. This list has been provided in an earlier slide.

LAB-ID FAQs

Q: I noticed that the MRSA and CDI models include a variable for ED and observation units. What if my hospital does not have an ED or observation unit?

- Your hospital will still receive the appropriate risk adjustment, based on the national experience from facilities without EDs or observation units.

Q: My hospital has a CMS-certified Inpatient Rehab (IRF) unit. Will my IRF unit receive its own LabID event SIR?"

- Yes. Data from IRF units, as well as free-standing inpatient rehabilitation facilities, will be risk adjusted using the same IRF model shown earlier on the slides. The IRF unit will have a separate SIR from the acute care hospital.

Rebaseline Educational Tools

- Rebaseline Website
- Updates to existing documents on website
- Rebaseline Compendium
- The NHSN Standardized Infection Ratio (SIR): A User's Guide to the SIR
- SUR User's Guide
- Quarterly Newsletters

NHSN Rebaseline Webpage

- FAQs: The 2015 Rebaseline

- FAQs: Rebaseline Implementation Timeline

- FAQs: NHSN CLABSI Definition & Rebaseline

- FAQs: NHSN CAUTI Definition & Rebaseline

- FAQs: NHSN SSI Rebaseline

- FAQs: NHSN LabID Events Rebaseline

- Table: Rebaselined SIR Changes Applicable to CMS QRP

SIR Changes from Baseline 1 to Baseline 2 Applicable to CMS Quality Reporting Programs

SIR	Change in Numerator	Change in Denominator
Central Line-Associated Bloodstream Infection (CLABSI)	All Facility Types: • Exclude MBI-LCBIs Acute Care Hospitals ONLY: • Events from additional locations, as defined in the Appendix, will be included	Acute Care Hospitals ONLY: • Central line days from additional ICUs, as defined in the Appendix, will be included
Catheter-Associated Urinary Tract Infection (CAUTI)	Acute Care Hospitals ONLY: • Events from additional locations, as defined in the Appendix, will be included	Acute Care Hospitals ONLY: • 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: No Changes LTACHs and IRFs: SIRs will now be available	Acute Care Hospitals: No Changes LTACHs and IRFs: SIRs will now be available
Facility-Wide Inpatient (FacWideIN) Methicillin-Resistant Staphylococcus aureus (MRSA) Blood Specimen (Bacteremia) Laboratory-Identified (LabID)	Acute Care Hospitals: No Changes LTACHs and IRFs: SIRs will now be available	Acute Care Hospitals: No Changes LTACHs and IRFs: SIRs will now be available

Surgical Site Infection/Colon Surgery (COLO) and Abdominal Hysterectomy (HYST)
 	
(Complex 30-day Model)
	• Exclude SSIs where PATOS = YES	• Procedures meeting the following criteria will be excluded from the SIRs:
		  ○ 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.

Appendix: Additional Locations included in the 2015 Rebaselined SIRs for CMS's Hospital Inpatient Quality Reporting Program

HAI Measure	CDC Location
Central Line-Associated Bloodstream Infection (CLABSI)*	IN:ACUTE:CC:R
	IN:ACUTE:CC:B_PED
	IN:ACUTE:CC:CT_PED
	IN:ACUTE:CC:NS_PED
	IN:ACUTE:CC:PNATL
	IN:ACUTE:CC:S_PED
	IN:ACUTE:CC:T_PED
	IN:ACUTE:CC:ONC_M
	IN:ACUTE:CC:ONC_MS
	IN:ACUTE:CC:ONC_S
	IN:ACUTE:CC:ONC_PED
	IN:ACUTE:WARD:S_PED
Catheter-Associated Urinary Tract Infection (CAUTI)+	IN:ACUTE:CC:PNATL
	IN:ACUTE:CC:ONC_M
	IN:ACUTE:CC:ONC_MS
	IN:ACUTE:CC:ONC_PED
	IN:ACUTE:CC:ONC_S
	IN:ACUTE:CC:B_PED
	IN:ACUTE:CC:NS_PED
	IN:ACUTE:CC:S_PED
	IN:ACUTE:CC:T_PED
	IN:ACUTE:WARD:S_PED

*Acute care hospitals must report CLABSIs and associated denominator data for infections that occur on or after January 1, 2015 from all adult, pediatric, and neonatal intensive care units (ICUs) and from all patient care locations meeting the NHSN definition for adult and pediatric medical, surgical, or combined medical/surgical wards.

+Acute care hospitals must report CAUTIs and associated denominator data for infections that occur on or after January 1, 2015 from all adult and pediatric intensive care units (ICUs) and from all patient care locations meeting the NHSN definition for adult and pediatric medical, surgical, or combined medical/surgical wards.

Example: CLABSI SIR

- Numerator: Run a CLABSI Line List to identify MBI-LCBIs

National Healthcare Safety Network
Line Listing for All Central Line-Associated BSI Events
As of: October 3, 2016 at 2:08 PM
Date Range: CLAB_EVENTS evntDateYM 2015M02 to 2015M02

orgID	admitDate	eventID	eventDate	eventType	spcEvent	mbi_lcbi
	02/23/2015		02/26/2015	BSI	LCBI	N
	01/20/2015		02/02/2015	BSI	LCBI	Y
	02/05/2015		02/10/2015	BSI	LCBI	N
	02/02/2015		02/09/2015	BSI	LCBI	N
	02/01/2015		02/05/2015	BSI	LCBI	N

- Denominator: Run a Summary Data Line List to identify summary data

National Healthcare Safety Network
Line Listing for All Summary Data
As of: October 3, 2016 at 2:15 PM
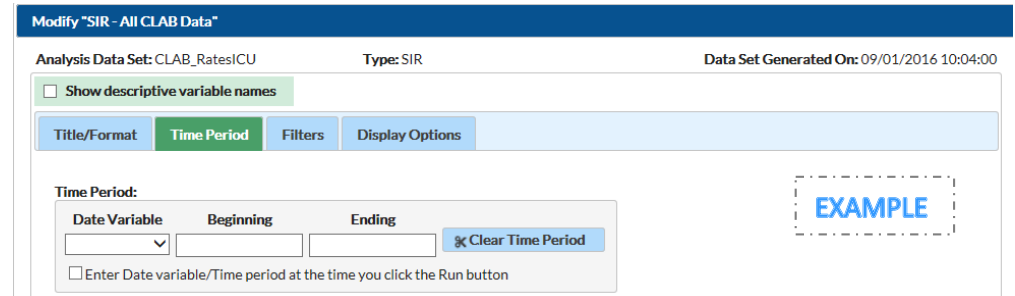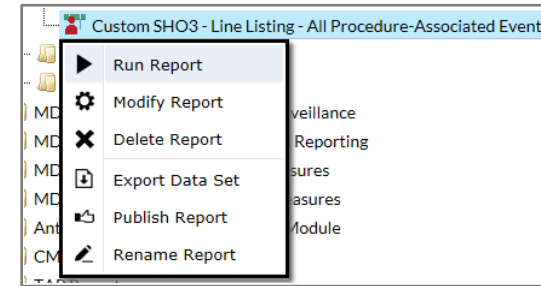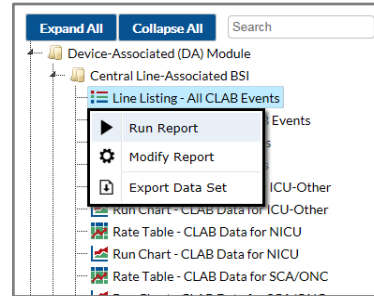Date Range: PSSUMMARY summaryYM 2015M02 to 2015M02

summaryYM	summarytype	locationtype	eventtype	numddays	numpatdays
2015M02	ICU	OTHER	CLAB	50	100
2015M02	ICU	CC	CLAB	98	197
2015M02	ICU	CC	CLAB	90	159

NHSN Trainings and Webinars

- **October 26th**: HIQR Webinar, details specific to CMS reporting

- **TBD**: LTCHQR/IRFQR Webinar, similar to HIQR webinar

- **November 30th**: Rebaseline Webinar Part II: **"Running the New SIRs in NHSN"**

- **March 2017**: NHSN Annual Training – detailed review of each new SIR by HAI type

November 30th: Running the New SIRs in NHSN

- Preview of the new application interface
- New reports
- Putting the re-baseline into practice
- Annual surveys

Additional Rebaseline Resources

- Updating the National Risk-Adjustment of HAI Data – March 2016
  - http://www.cdc.gov/nhsn/pdfs/training/2016/updating-national-risk-adjustment-dudeck.pdf

- APIC 2016 NHSN Members Meeting – June 2016
  - http://www.cdc.gov/nhsn/pdfs/newsletters/nhsn-members-meeting-2016.pdf

- NHSN Newsletters
  - http://www.cdc.gov/nhsn/pdfs/newsletters/nhsn-enewsletter_dec-2015_final.pdf
  - http://www.cdc.gov/nhsn/pdfs/newsletters/nhsn-nl-march-2016.pdf
  - http://www.cdc.gov/nhsn/pdfs/newsletters/nhsn-nl-june-2016.pdf

Questions?

NHSN@cdc.gov