

New Hampshire Healthcare-Associated Infections Annual NHSN Workshop: February 22, 2017

Global Changes to NHSN in 2017

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Agenda: 2017 NHSN update

- Rebaseline
- New version of NHSN:
 - Visually different/New features
 - Alerts
 - Data entry screen
 - Monthly reporting plans
- New variables
- New models
- New analysis options
- New reports

Rebaseline

- Used in-plan data reported for 2015
- Used different risk models, along with different incidence and collected under different protocols and definitions than the 1st baseline.

Facility Type	Number of facilities contribute to each model*
Acute Care Hospital (ACH)	3,664
Critical Access Hospital (CAH)	623
Long Term Acute Care Hospitals (LTACH)	489
Inpatient Rehabilitation Facilities (IRF)	1,170

*The number represents the maximum number of facilities contributing to a single model.

Rebaseline

- Example 1:

Baseline 1 (2009 NHSN Data)

Year	# CAUTI	# Predicted	SIR	P-Value	95%CI	Cath Days
2016	5	2.64	1.891	0.1811	0.693, 4.192	2203

Baseline 2 (2015 NHSN Data)

Year	# CAUTI	# Predicted	SIR	P-Value	95%CI	Cath Days
2016	5	1.99	2.504	0.0688	0.917, 5.550	2203

Rebaseline

- Example 2:

Baseline 1 (2009 NHSN Data)

Year	# CLABSI	# Predicted	SIR	P-Value	95%CI
2016	1	2.073	0.482	0.512	0.024, 2.379

Baseline 2 (2015 NHSN Data)

Year	# CLABSI	# Predicted	SIR	P-Value	95%CI
2016	1	1.22	0.815	0.946	0.041, 4.020

Rebaseline Timeline

- 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



NHSN Patient Safety Component Home Page

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

NHSN National Healthcare Safety Network

NHSN - National Healthcare Safety Network [apt-v.nhsn-test:8001]

REBECCA
DHQP MEMORIAL HOSPITAL

NHSN Home

- Alerts
- Reporting Plan ▶
- Patient ▶
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- Summary Data ▶
- Import/Export
- Surveys ▶
- Analysis ▶
- Users ▶
- Facility ▶
- Group ▶
- Tools ▶
- Logout

NHSN Patient Safety Component Home Page

COMPLETE THESE ITEMS

Confer Rights
Not Accepted

ALERTS

84 Incomplete Events	227 Missing Events	56 Incomplete Summary Items	322 Missing Summary Items
29 Incomplete Procedures	142 Missing Procedures	5 Missing Procedure-Associated Events	1 Unusual Susceptibility Profile

Monthly Reporting Plans



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

NHSN - National Healthcare Safety Network (apt-v-nhsn-test:0001)

NHSN Home

Alerts

Reporting Plan

Patient

Event

Procedure

Summary Data

Import/Export

Surveys

Analysis

Users

Facility

Group

Tools

Logout



Add Monthly Reporting Plan

Mandatory fields marked with *

Facility ID *:

Month *:

Year *:

No NHSN Patient Safety Modules Followed this Month

Device-Associated Module

	Locations	CLASI	VAP	CAUTI	CLIP
<input type="checkbox"/>	<input type="text" value="PESURG_CC - PESURG_CC"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="text" value="AMAU - ADULT MIXED ACUTIY UNIT"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Add Row

Clear All Rows

Copy from Previous Month

Procedure-Associated Module

	Procedures	SSI	Post-procedure PNEU
<input type="checkbox"/>	<input type="text" value="COLO - Colon surgery"/>	IN: <input checked="" type="checkbox"/> OUT: <input type="checkbox"/>	<input type="text" value="IN - Inpatient"/>
<input type="checkbox"/>	<input type="text" value="HYST - Abdominal hysterectomy"/>	IN: <input checked="" type="checkbox"/> OUT: <input type="checkbox"/>	<input type="text" value="IN - Inpatient"/>

Add Row

Clear All Rows

Copy from Previous Month

Statistics Calculator

Statistics Calculator Screenshot

NHSN Home

- Alerts
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- Logout

Statistics Calculator

- [Compare Two Proportions](#)
- [Compare Single SIR to 1](#)
- [Compare Two Standardized Infection Ratios](#)
- [Compare Two Incidence Density Rates](#)
- [Compare Single Proportion to a Benchmark](#)
- [Compare Single SIR to Nominal Value](#)

Generate Data Sets

Reports

Statistics Calculator

New Variables

- Average length of stay= $\text{numPatDays}/\text{numAdmits}$
- MRSA ED/OBS rate:
 $(\text{mrsa_bldcount}/\text{numtotencounters}) * 100$
- Proportion of Admissions on a Ventilator=
 $(\text{numVenAdm}/\text{numAdmits}) * 100$
- Proportion of Admissions on Hemodialysis=
 $(\text{numHemAdm}/\text{numAdmits}) * 100$

NHSN New Summary Measures

- New Standardized Infection Ratios (SIR)
 - Critical Access Hospitals Separate from Acute Care
 - Mucosal Barrier Injury
 - VAE
 - Total VAE
 - IVAC Plus
 - Pediatric SSI SIRs
 - MRSA and CDI LabID for LTACHs and IRFs
- Standardized Utilization Ratios (SURs)

New Models Developed

Each procedure category assessed separately, inpatient only

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	✓	✓	✓	✓

Standardized Utilization Ratios

- Summarized risk-adjustment measure for device use
 - Central Line Use
 - Urinary Catheter Use
 - Ventilator Use
- SURs are not part of CMS Quality Reporting Programs

Standardized Utilization Ratios

- SUR is a scalable measure
 - Can scale up to a hospital, state or national level
- Similar to SIR
- Calculated as:

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

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

Your reflections

- This work is done with limited resources
 - The HAI Program and NHSN recognize that any change to reporting requirements/processes represents a burden on workload
 - Let us know how we can support you
 - Share your thoughts directly with NHSN – they value facility input!

Helpful resources

- NHSN newsletters

- December 2016

- <https://www.cdc.gov/nhsn/pdfs/newsletters/nhsn-nl-dec-2016.pdf>

- APIC newsletters

- <http://apic.org/Member-Services/Publications/E-News>

- CDC NHSN Patient Safety Component (PSC) Manual (Updated January 2017)

- http://www.cdc.gov/nhsn/pdfs/pscmanual/pcsmanual_current.pdf



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References

"Paving the Path Forward: 2015 Rebaseline." *Centers for Disease Control and Prevention*. Centers for Disease Control and Prevention, 11 Jan. 2017. Web. 21 Feb. 2017.

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