Welcome!

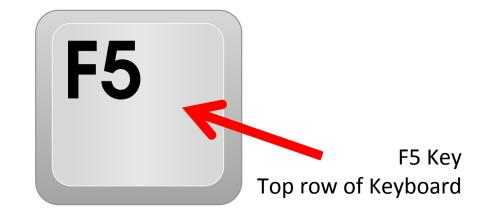
- Audio for this event is available via ReadyTalk[®] Internet Streaming.
- No telephone line is required.
- Computer speakers or headphones are necessary to listen to streaming audio.
- Limited dial-in lines are available.
 Please send a chat message if needed.
- This event is being recorded.

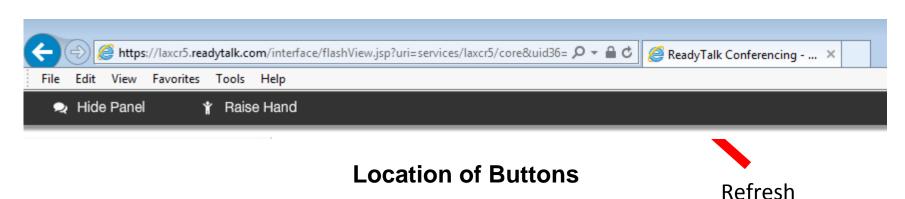


Troubleshooting Audio

Audio from computer speakers breaking up? Audio suddenly stop?

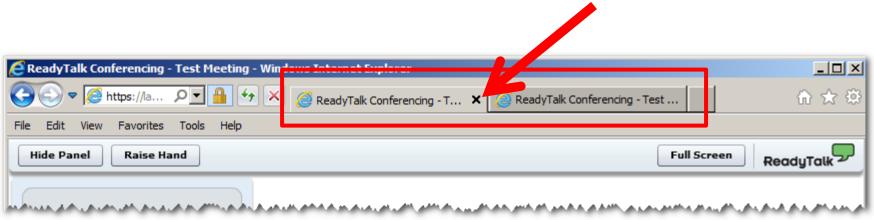
Click <u>Refresh</u> icon –
 or Click F5





Troubleshooting Echo

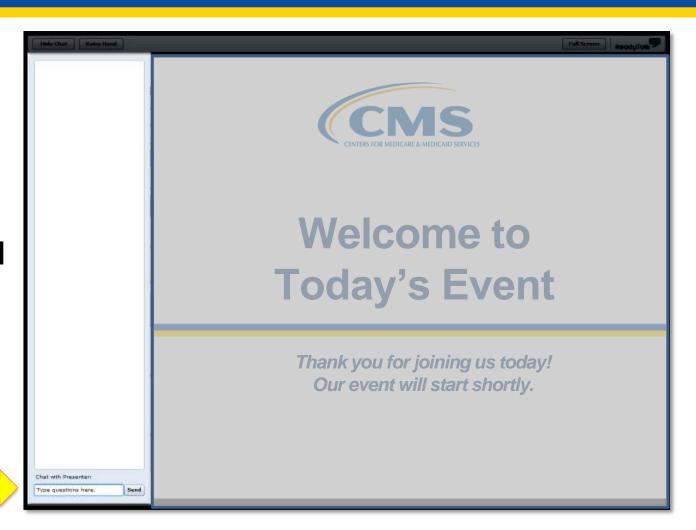
- Hear a bad echo on the call?
- Echo is caused by multiple browsers/tabs open to a single event – multiple audio feeds.
- · Close all but one browser/tab and the echo will clear up.



Example of Two Browsers Tabs open in Same Event

Submitting Questions

Type questions in the "Chat with Presenter" section, located in the bottom-left corner of your screen.



National Center for Emerging and Zoonotic Infectious Diseases



NHSN: Transition to the Rebaseline Guidance for Acute Care Facilities

PRACHI PATEL
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NHSN Methods and Analytics Team, Surveillance Branch
Division of Healthcare Quality Promotion
Centers for Disease Control and Prevention

October 26, 2016

Today's Objectives

- Explain the elements of the new HAI risk models
- Review the use of the SIRs in relation to Centers for Medicare and Medicaid Services (CMS) programs
- Learn how to review NHSN data
- Preview the new application interface
- Discuss additional resources and upcoming events

The Rebaseline (BS2) is Coming!

- The new risk adjusted baseline (BS2) will be implemented in the application on December 10, 2016
- Now through December 10th (scheduled release of NHSN v8.6):
 - Develop new reports in NHSN application
 - EDUCATION! (via newsletters, quick reference guides, and Rebaseline webinars)
- With the NHSN v8.6 release on Dec. 10th, NHSN Users will be able to run SIRs for 2015 and 2016 under both the old baseline (BS1), and the new baseline (BS2)
 - Data for 2017 and forward will be available under the new BS2 only

10/20/2010

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

Device-Associated Events

Prachi Patel

Central Line-Associated Bloodstream Infection (CLABSI) Data Submitted to CMS

- Includes in-plan data for:
 - Beginning with 2011
 - Adult, pediatric, and neonatal ICU
 - Beginning with 2015, additional locations were added:
 - Adult and pediatric Medical Wards
 - Adult and pediatric Surgical Wards
 - Adult and pediatric Medical/Surgical Wards

CLABSI: Model Changes

- Negative binomial regression model used to calculate # predicted infections
- MBI-LCBI excluded from the CLABSI SIR
- Addition of events and device days from some ICU locations
 - There were some locations that at the time of Baseline 1 did not have enough data to be included in the SIR calculations.
 - They were still required to be reported, but SIRs were not calculated.
 - Now, with the Baseline 2, data from these locations will now be included in the SIR calculations.

Catheter Associated Urinary Tract Infections (CAUTI) Data Reported to CMS

- Includes in-plan data for:
 - Beginning with 2012 data:
 - Adult and Pediatric ICU
 - Beginning with 2015, additional locations were added:
 - Adult and Pediatric Medical Wards
 - Adult and Pediatric Surgical Wards
 - Adult and Pediatric Medial/Surgical Wards

CAUTI: Model Changes

- Negative binomial regression model used to calculate # predicted infections
- Urinary catheter days will continue to be used in the SIR calculations
- Addition of events and device days of some ICU locations
 - There were some locations that at the time of Baseline 1 did not have enough data to be included in the SIR calculations.
 - They were still required to be reported, but SIRs were not calculated.
 - Now, with the Baseline 2, data from these locations will now be included in the SIR calculations.

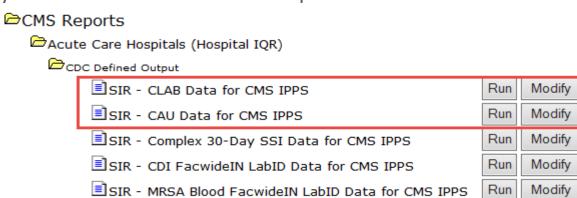
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Factors included for CLABSI and CAUTI Models

Factors	CLABSI	CAUTI
Type of CDC Location	✓	✓
Facility Type	✓	✓
Medical School Affiliation	✓	✓
Facility Bedsize	✓	✓

Preparing for the CMS Deadline

- Clear all alerts
- Generate your datasets
- Run your CMS CLASBI and CAUTI reports



- The following CAUTI elements will match between NHSN and QNET
 - Number of CAUTIs (numerator)
 - Urinary catheter days
- The following CLABSI elements will match between NHSN and QNET
 - Number of CLABSIs (excluding MBI-LCBIs)
 - Central line days

CLABSI – Numerator Check

Run a CLABSI Line List to identify MBI-LCBIs

Device-Associated (DA) Module

Central Line-Associated BSI

CDC Defined Output

Line Listing - All CLAB Events

Run Modify

National Healthcare Safety Network Line Listing for All Central Line-Associated BSI Events

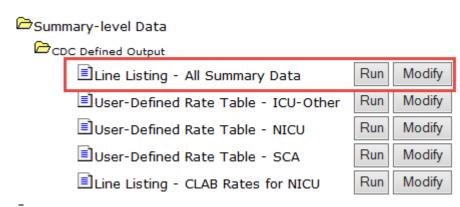
As of: October 3, 2016 at 2:08 PM

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	Υ
	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

CLABSI – Denominator Check

- Run a Summary Data line list to identify all contributing summary data
- Include those additional ICU locations



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	СС	CLAB	90	159

Data Quality Check

- CDC Location
 - Review your facility CDC locations in NHSN
- Facility Type
 - Designated during enrollment in NHSN
 - Can be viewed under "Facility" > "Facility Info"
- Medical School Affiliation
 - 2015 Annual Survey
- Facility Bedsize
 - 2015 Annual Survey

Surgical Site Infections: Complex 30-day Model

Rebecca Konnor

What is included in the Complex 30-day model

- COLO and HYST
- In-plan, inpatient procedures in adults 18 years and older
- Deep incision primary (DIP) and Organ/space (O/S) SSIs
- SSIs identified within 30 days of the procedure date
- SSIs regardless of detection (e.g., readmission, post discharge surveillance, etc.)
- Procedures with either primary and other than primary closure techniques

Data Exclusions

Data Exclusions (Due to potential d	ata quality issues or outliers)
Data from ambulatory surgery centers (ASCs) and long-term acute care hospitals (LTACHs)	Closure technique is missing
Present at time of surgery (PATOS) is 'Yes'	ASA score is missing
Age at the time of procedure is greater than 109	If number of beds missing
Gender = Other	Gender is missing
Procedure duration less than 5 minutes	If procedure duration is greater than Q3+5IQR
BMI is less than 12 or greater than 60 (adults)	Outpatient procedures and resulting SSIs
Medical affiliation is missing or medical affiliation is 'Y' and medical type is missing	

Factors Included in the Complex 30-day Model

Factor	COLO	HYST
Age	X	X
ASA Score	X	X
BMI	X	X
Cancer hospital	X	X
Closure technique	X	
Diabetes	X	X
Gender	X	

SIRs using the 2015 Rebaseline

- NHSN will submit SIRs using the new 2015 risk-adjusted baseline
- Details of the process and approach to the rebaseline and risk adjustment provided in previous webinar
 - https://www.cdc.gov/nhsn/2015rebaseline/index.html
- Compared to the current baseline of (2006-2008), you will notice differences in your
 - Numerator (# of observed SSIs)
 - Denominator (# of predicted SSIs based on 2015 risk adjusted baseline)
- Because of the new data inclusions/exclusions and updated risk factors listed above

Data Submission to CMS for Quality Reporting

- Quarterly SIRs
- NHSN submits aggregate data to CMS
 - Numerator (# of observed SSIs)
 - Denominator (# of predicted SSIs based on 2015 risk adjusted baseline)
 - Number of procedures
 - SIR
 - P-value and the 95% Confidence Interval

Upcoming CMS Deadline

- The upcoming 2016Q2 submission will use the 2015 risk-adjusted rebaseline
 - 2016Q2 data submission for IQR due November 15, 2016
- However, the updated risk-adjusted models will not be implemented in NHSN until later--on December 10, 2016
- So, the 2016Q2 CMS reports in NHSN will not match the data previewed on Quality Net
- Differences between what is in NHSN vs. Quality Net, for the Complex 30-day model, in terms of following
 - The number of procedures
 - The number of observed SSIs
 - The number of predicted SSIs
 - The SIR (and supporting statistics)

How do I Know what in included in my Data?

- Continue to follow the steps of checking your data for CMS submission
 - Include HYST and COLO on your monthly reporting plans for the quarter
 - Address all outstanding Alerts related to procedures/SSIs
 - Generate datasets
 - Run the Complex 30-day SSI Data report and
 - Review your table of "Incomplete and Custom Procedures not Included in the SIR"
 - In addition, review the new data inclusions/exclusion and the new risk factors

Checking your Denominator-Procedures

- Step 1: Run a line list of procedures limiting to COLO and HYST and the time period in question
 - http://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/faq-procedure-line-list.pdf
 - On the modify screen, include all risk factors listed above, in the available variable list
- Step 2: Review the procedure line list for the inclusion and exclusion criteria
 - Procedures included in the new SIR are
 - In-plan, inpatient procedures in adults 18 years and older
 - Procedures with either primary or other than primary closure techniques

How to troubleshoot your SIR:

http://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/ssi-sir_tips.pdf https://www.youtube.com/watch?v=2zKqpSrZVAU&feature=youtu.be

Checking your Denominator-Procedures

- Procedures excluded from the new SIR are
 - Procedures with gender = Other 'O'
 - Procedures with BMI <12 or >60
 - Present at time of surgery (PATOS) = Yes
 - Procedures with duration <5 minutes or >IQR5 (COLO: 697 minutes, HYST: 547 minutes)
 - Procedures missing any of the required factors
 - Age at time of procedure > 109 year

NEW EXCLUSIONS UNDER NEW 2015
REBASELINE

Checking your Numerator-SSIs

 Step 1: Run a line list of SSI events, limiting to COLO and HYST and the time period in question



NOTE: If a procedure is excluded from the denominator, the resulting SSI is excluded from the numerator

Checking your Numerator-SSIs

- Step 2: Review the SSI event line list for inclusion/exclusion criteria
 - SSI events included in the new SIR are
 - Deep incisional primary and organ/space SSIs
 - SSIs identified within 30 days of the procedure date
 - SSI regardless of detection (e.g., readmission, post discharge surveillance, etc.)
 - SSI events excluded from the new SIR are
 - PATOS = YES

MRSA Bacteremia & C.difficile LabID Events

Lindsey Weiner

Data Submission to CMS for Quality Reporting

- Quarterly facility-wide (FacwideIN) SIRs
 - One SIR for entire facility, based on CCN
- The following data elements are submitted to CMS for both MRSA bacteremia and C.difficile (CDI):
 - Numerator (# of unique hospital-onset events)
 - Denominator (# of predicted hospital-onset events)
 - SIR
 - Total patient days
 - P-value
 - 95% Confidence Interval

What is Changing?

- The following data elements are submitted to CMS:
 - Numerator (# of unique hospital-onset events)
 - Denominator (# of predicted hospital-onset events)
 - SIR
 - Total patient days
 - P-value
 - 95% Confidence Interval

New risk adjustment will result in a change to the number of predicted events

Number of Predicted LabID Events

- Will now be calculated based on the national experience from 2015
- Will account for a new set of risk factors
 - Based on variables that were significant predictors of LabID events according to the 2015 national experience

Risk Adjustment Factors for 2015 Baseline		
MRSA Bacteremia	<u>C.difficile</u>	
Facility type	Facility type	
Med school affiliation/teaching status	Med school affiliation/teaching status	
# ICU beds	# ICU beds	
Average length of stay for patients in the hospital	Total # beds	
Inpatient community-onset prevalence rate	Inpatient community-onset prevalence rate	
Outpatient community-onset prevalence rate in ED/24 hr observation location	Any reporting from an ED/24 hr observation location	
	CDI test type	

What is Changing?

Observed events
SIR = ----# Predicted events

- The following data elements are submitted to CMS:
 - Numerator (# of unique hospital-onset events)
 - Denominator (# of predicted hospital-onset events)
 - SIR
 - Total patient days
 - P-value
 - 95% Confidence Interval

SIR is a comparison of the # observed events in your hospital to the 2015 national experience

NHSN and QualityNet

- Updated risk models will be incorporated into NHSN in December 2016
- For 2016 Q2 data submitted to CMS on November 15th:
 - NHSN SIR reports generated prior to December 2016 use the original baseline
 - Data submitted to Quality Net/CMS will use the updated 2015 baseline
- For LabID events, 2016 Q2 reports from Quality Net will not match SIR reports in NHSN for some data elements
 - # predicted events, SIR, p-value, 95% confidence interval
- The following LabID data elements will match between NHSN and Quality Net:
 - Numerator (# of unique hospital-onset events)
 - Total Patient Days

Preparing for Q2 Deadline

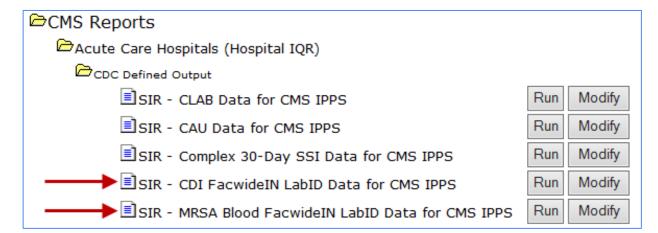
Step 1: Confirm monthly reporting plans are accurate and no outstanding "Alerts"

Follow the regular CMS checklist to confirm reporting is complete:
 http://www.cdc.gov/nhsn/pdfs/cms/ach-monthly-checklist-cms-iqr.pdf

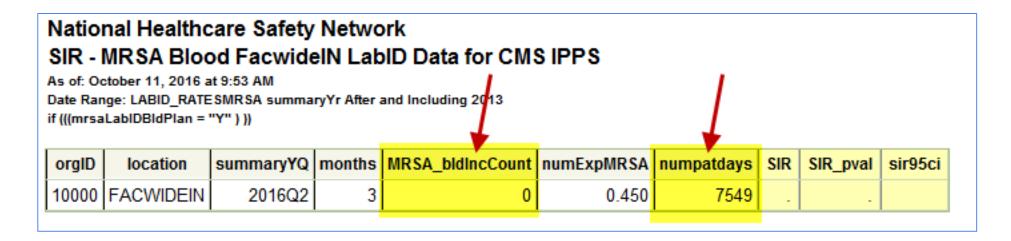
Step 2: Use CMS LabID SIR report in NHSN to review # of hospital-onset LabID events and total patient days

Same # events and patient days you see in NHSN will be submitted to CMS for

Q2



Review Hospital-onset LabID Events and Patient Days



- Follow regular data quality assessment to confirm accuracy
 - MRSA or CDI event line list to review hospital-onset events
 - Summary data line list or manual review of monthly denominator data
 - Troubleshooting tips for MRSA and CDI: http://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/mrsacdi tips.pdf

Preparing for Q2 Deadline

Step 3: For data quality check of # predicted events, review new risk adjustment variables

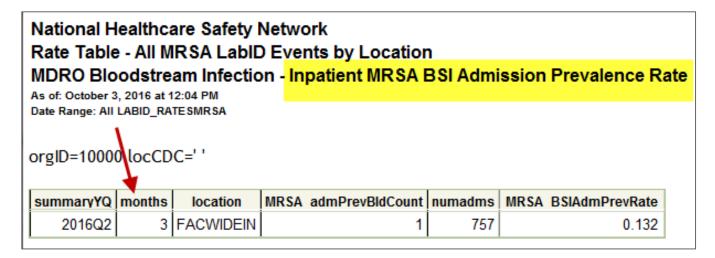
MRSA Bacteremia:

- Facility type
 - Confirm accurate enrollment status (click "Facility" > "Facility Info")
 - HOSP-CAH: reserved for CMS-certified Critical Access Hospitals
- Medical school affiliation/teaching status
 - Review 2015 annual survey
- # ICU beds
 - Review 2015 annual survey



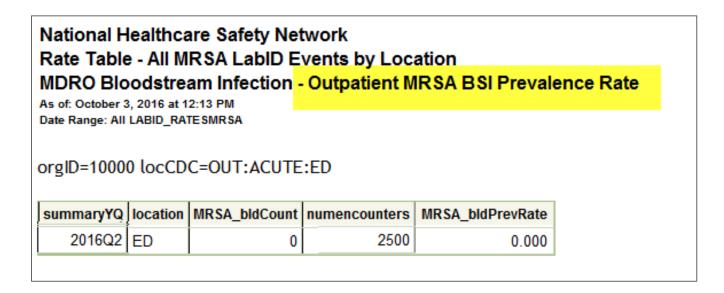
MRSA Bacteremia, continued

- Average length of stay
 - Review annual survey: total # annual patient days / total # annual admissions
 - Should include all inpatient locations, including CMS-certified units
- Inpatient community-onset prevalence rate for 2016 Q2
 - Review MRSA bacteremia rate tables



MRSA Bacteremia, continued

- Outpatient community-onset prevalence rate in ED/24 hr observation
 - Review MRSA bacteremia rate tables for outpatient locations



 If your hospital does not have an ED or 24 hr observation location, you will still receive appropriate risk adjustment

Updated Risk Adjustment for *C.difficile*

C.difficile:

- Facility type
- Medical school affiliation/teaching status
- # ICU beds

Total # beds

Review 2015 annual survey

Reporting from ED/24 hr observation locations

Ensure proper reporting, if applicable

CDI test type

Review June 2016 FacwideIN denominator form

Inpatient community-onset prevalence rate

Review CDI rate tables

Updated Risk Adjustment for *C.difficile*

C.difficile:

- ✓ Facility type
- ✓ Medical school affiliation/teaching status
- **#** ICU beds

Total # beds

Review 2015 annual survey

Reporting from ED/24 hr observation locations

Ensure proper reporting, if applicable

CDI test type

Review June 2016 FacwideIN denominator form

Inpatient community-onset prevalence rate

Review CDI rate tables

CDI Test Type on June FacwideIN Summary Record

```
General
Setting: Inpatient Total Facility Patient Days *: 1500 Total Facility Admissions *: 500
Setting: Outpatient Total Facility Encounters:

If monitoring MDRO in a FACWIDE location, then subtract all counts from patient care units with unique CCNs(IRF and IPF) from Totals:

MDRO Patient Days*: 1200 MDRO Admissions*: 400 MDRO Encounters:

If monitoring C. difficile in a FACWIDE location, then subtract all counts from patient care units with unique CCNs(IRF and IPF) as well a CDI Patient Days*: 1000 CDI Admissions*: 350 CDI Encounters:

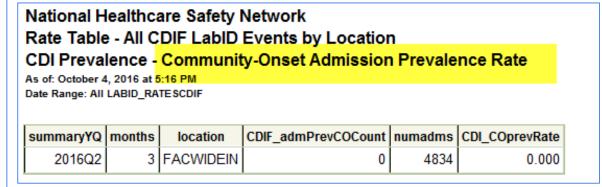
For this quarter, what is the primary testing method for C. difficile used most often by your facility's laboratory or the outside laborator NAAT - Nucleic acid amplification test (NAAT)
```

- CDI test type indicated on the June summary record will be used in the calculation for # predicted events
- PCR testing should be indicated by selecting <u>NAAT</u>

Inpatient Community-Onset Prevalence Rate

Review 2016 Q2 CO prevalence rate, found in the C.difficile rate tables





Hospital Compare

December 2016 Update of Hospital Compare

- 2015 Q1 Q4 data will be posted with the December update to Hospital Compare
 - These data have been calculated under the new 2015 baseline
 - Will be used for other programs such as HAC and HVBP
- Preview period for these data began October 8th
 - Review your SIRs, calculated under the new baseline, in QualityNet preview reports
 - Note that SIR reports generated in NHSN will continue to use the old baseline until the December 2016 NHSN update
- More information: http://www.cdc.gov/nhsn/pdfs/newsletters/nhsn-nl-sept-2016.pdf

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Hospital Compare

- All future releases of Hospital Compare, starting with December 2016, will show SIRs calculated under the new baseline
 - April 2017 refresh of Hospital Compare: 2015 Q3 2016 Q2
- Language on the Hospital Compare website will be updated to reflect the new baseline and new risk adjustment variables

Data in Q-net vs NHSN

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 – December 2016.
 - Hospitals will not be able to calculate their own 2016Q1 and 2016Q2
 HAI SIRs in the NHSN application until December
 - CDC needs remaining months to develop and implement the new risk models and reports in the NHSN application

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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
- 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 December, 2016
- Bottom Line: The 2015 data shown in the Hospital Compare Preview Report for the December Hospital Compare release will be different from the data currently generated within NHSN.

Additional Resources

Rebaseline Educational Tools

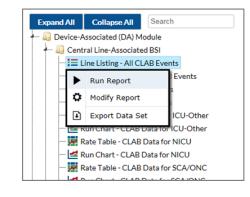
- Rebaseline Website
 - http://www.cdc.gov/nhsn/2015rebaseline/index.html
- Updates to existing documents on website
- Rebaseline Compendium
- The NHSN Standardized Infection Ratio (SIR): A User's Guide to the SIR
- SUR User's Guide
- Quarterly Newsletters

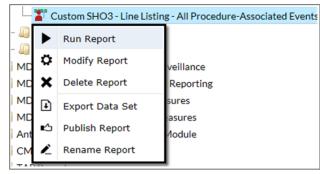
NHSN Trainings and Webinars

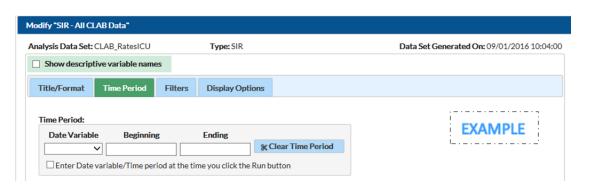
- November: LTCHQR/IRFQR Webinar, similar to HIQR webinar
- November 30th: Rebaseline Webinar Part II: "Running the New SIRs in NHSN"
- March 2017: NHSN Annual Training detailed review of each new SIR by HAI type

November 30th: Running the New SIRs in NHSN

- Preview of the new application interface
- New reports
- Putting the re-baseline into practice
- Annual surveys
- Registration Link:
 - https://cc.readytalk.com/r/ffs5js17p967&eom







Additional Rebaseline Resources

- Updating the National Risk-Adjustment of HAI Data March 2016
 - http://www.cdc.gov/nhsn/pdfs/training/2016/updating-national-riskadjustment-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

Continuing Education Approval

This program has been approved for 1.5 continuing education (CE) unit for the following professional boards:

- Florida Board of Clinical Social Work, Marriage and Family Therapy and Mental Health Counseling
- Florida Board of Nursing Home Administrators
- Florida Council of Dietetics
- Florida Board of Pharmacy
- Board of Registered Nursing (Provider #16578)
 - It is your responsibility to submit this form to your accrediting body for credit.

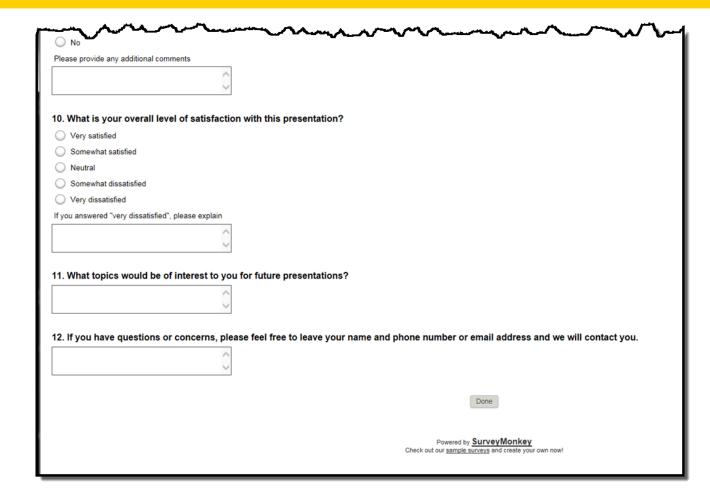
CE Credit Process

- Complete the ReadyTalk® survey that will pop up after the webinar, or wait for the survey that will be sent to all registrants within the next 48 hours.
- After completion of the survey, click "Done" at the bottom of the screen.
- Another page will open that asks you to register in HSAG's Learning Management Center.
 - This is a separate registration from ReadyTalk®.
 - Please use your PERSONAL email so you can receive your certificate.
 - Healthcare facilities have firewalls up that block our certificates.

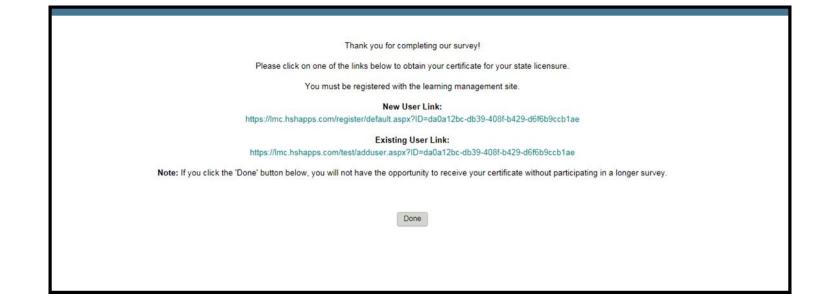
CE Certificate Problems?

- If you do not <u>immediately</u> receive a response to the email that you signed up with in the Learning Management Center, you have a firewall up that is blocking the link that is sent out.
- Please go back to the New User link and register your personal email account.
 - Personal emails do not have firewalls.

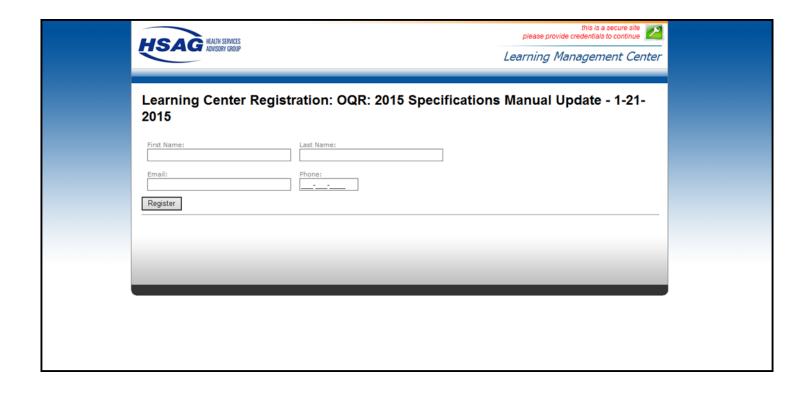
CE Credit Process: Survey



CE Credit Process



CE Credit Process: New User



CE Credit Process: Existing User

