

Welcome!

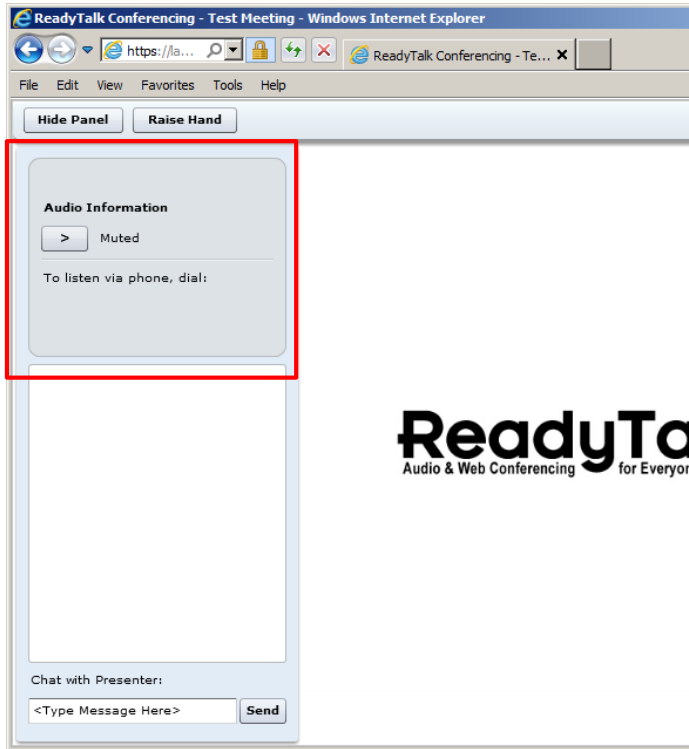
- **Audio for this event is available via ReadyTalk® Internet Streaming.**
- **No telephone line is required.**
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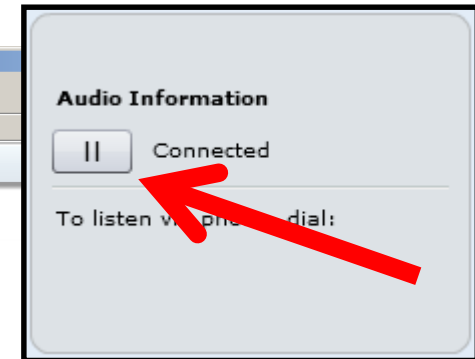
Troubleshooting Audio

Audio from computer speakers breaking up?
Audio suddenly stop?

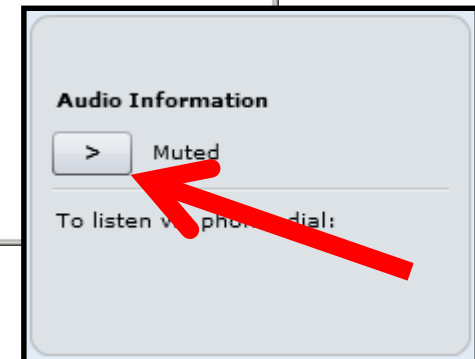
- Click Pause button
- Wait 5 seconds
- Click Play button



Location of Audio Controls



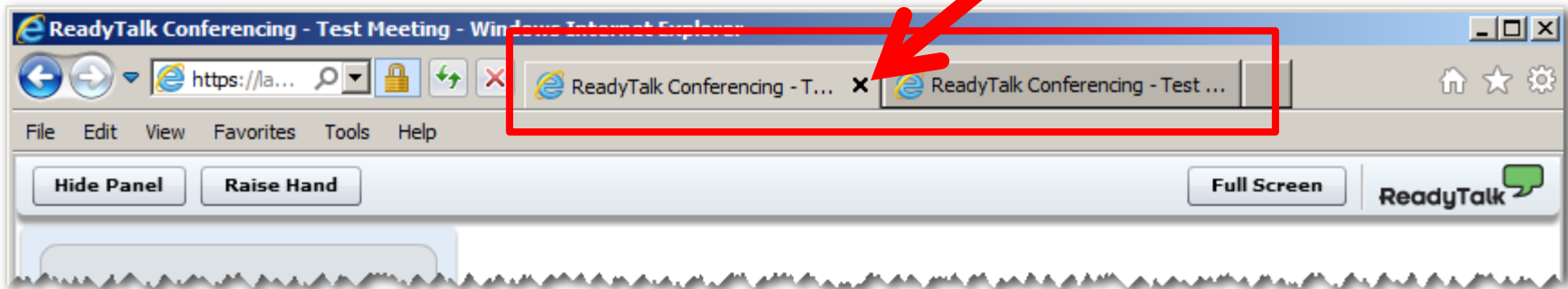
Step 1



Step 2

Troubleshooting Echo

- Hear a bad echo on the call?
- Echo is usually caused by multiple connections to a single event.
- Close all but one browser/tab and the echo will clear up.



Example of Two Connections to Same Event

Submitting Questions

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



The screenshot shows a presentation software interface. On the left is a chat window titled "Chat with Presenter" with a text input field and a "Send" button. The main area displays a slide with the CMS logo and the following text:

**Specifications Manual, Version 4.4a,
Changes & Hospital VBP Program
Improvement Series: MSPB**

November 18, 2014, 10 a.m. & 2 p.m. ET

<i>Candace Jackson, RN, Hospital IQR Support Contract Lead</i>	<i>Donna Isgett, Sr. Vice President Corporate Quality and Safety McLeod Medical Center</i>
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Hospital Value-Based Purchasing (VBP): NHSN Mapping

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Director, Behavioral Health
Health Services Advisory Group (HSAG)
Quality Innovation Network – Quality Improvement Organization (QIN-QIO)

October 19, 2015
2 p.m. ET

Purpose

Provide an overview of the impact on National Healthcare Safety Network (NHSN) mapping including the:

- Calculation of predicted number of infections by each NHSN mapped location
- Impact of incorrect mapping in NHSN to a hospital
- Methods to evaluate NHSN data by location in order to create improvement strategies

Objectives

Participants will be able to:

- Calculate predicted number of infections by each NHSN mapped location
- Define the impact of incorrect mapping in NHSN to a hospital's standardized infection ratio (SIR)
- Identify methods to evaluate NHSN data and create improvement strategies

Hospital VBP: NHSN Mapping

LOCATION MAPPING for ACCURATE QUALITY REPORTING

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Epidemiology Fellow

Division of Healthcare Quality Promotion

Centers for Disease Control and Prevention



NHSN Device-Associated Surveillance

- Central Line-Associated Bloodstream Infection (CLABSI) and Catheter-Associated Urinary Tract Infection (CAUTI)
 - Ventilator-Associated Pneumonia (VAP)/Ventilator-Associated Event (VAE)
- Events, device-days, and patient-days recorded for each unit in a hospital
- Units mapped to standardized NHSN locations
 - Separated based on patient case-mix and device use

Why?

Risk Adjustment

Goal: Measure hospital performance using Healthcare-Associated Infection (HAI) rates

- Confounded by differing risk populations
 - Example: A hospital admitting sick patients has higher HAI rates than a hospital admitting healthy patients.
 - Is the first hospital worse? **Not Necessarily!**
 - Based on the idea that patient- or facility-level factors contribute to risk of HAI
- Risk Adjustment—Adjusting for populations with differing baseline risk to obtain a “TRUE” measure of performance

Risk Adjustment (cont.)

- How do we separate risk populations?
 - For **CLABSI** and **CAUTI**
 - Locations
 - For **Surgical Site Infection (SSI)**, ***Clostridium Difficile (CDIFF)***, and **Methicillin-Resistant *Staphylococcus Aureus* Bacteremia (MRSA)**
 - Multivariable risk-adjusted models
- Locations used as a **proxy** for risk populations
 - Example: Patients admitted to an Intensive Care Unit (ICU) have a higher baseline risk of HAI than patients admitted to a medical ward because they have a higher acuity level
 - Ideally, use patient-level risk factors to determine the risk population for each individual patient
 - Difficult due to resource limitations

Risk Adjustment (cont.)

- Information loss using location as proxy for risk populations due to:
 - Mixed acuity units, generalized definitions (medical, surgical, medical/surgical wards), variable patient mix during high-volume months
- Information loss minimized by:
 - Keeping risk populations separate (as best we can)
 - NHSN-specific definitions and guidelines for location mapping

TAKE HOME: Inaccurately mapping locations leads to a misrepresentation of your hospital's performance.

Standardized Infection Ratio

$$\text{SIR} = \frac{\text{Observed \# of HAIs}}{\text{Expected (Predicted) \# of HAIs}}$$

- **Observed # of HAIs**
 - The number of events that you enter into NHSN
- **Expected or predicted # of HAIs–CLABSIs/CAUTIs**
 - Comes from national baseline data
 - Stratified by location type
- **Expected or predicted # of Other HAIs**
 - Comes from risk-adjustment models

Expected # of HAIs CLABSI and CAUTI

For CLABSI and CAUTI SIRs, the expected number of HAIs is calculated for each individual location as the

device days * (NHSN pooled mean/1000)

where the pooled mean originates from a defined baseline report.

- CAUTI Baseline: **2009 data (published in 2011)**
- CLABSI Baseline: **2006–2008 data (published in 2009)**
- Baseline data have remained consistent due in part to alignment with the Health and Human Services (HHS) Action Plan to Prevent HAIs

Note: 2015 data will comprise the new baseline for all HAI measures to be implemented in 2017.

Example: Expected # of CAUTIs

Type of Locations	No. of locations [†]	No. of CAUTIs	Urinary catheter days	Pooled mean
Critical Care Units				
Burn	18	92	20,921	4.4

- Screenshot from the 2009 NHSN Data Summary for Device-Associated (DA) Module
- Pooled mean of “4.4” is read as 4.4 CAUTIs per 1,000 urinary catheter days
- Used as the baseline for the CAUTI SIR
 - Predicted that for every 1,000 catheter days, there will be 4.4 infections (if things are the same as they were in 2009)

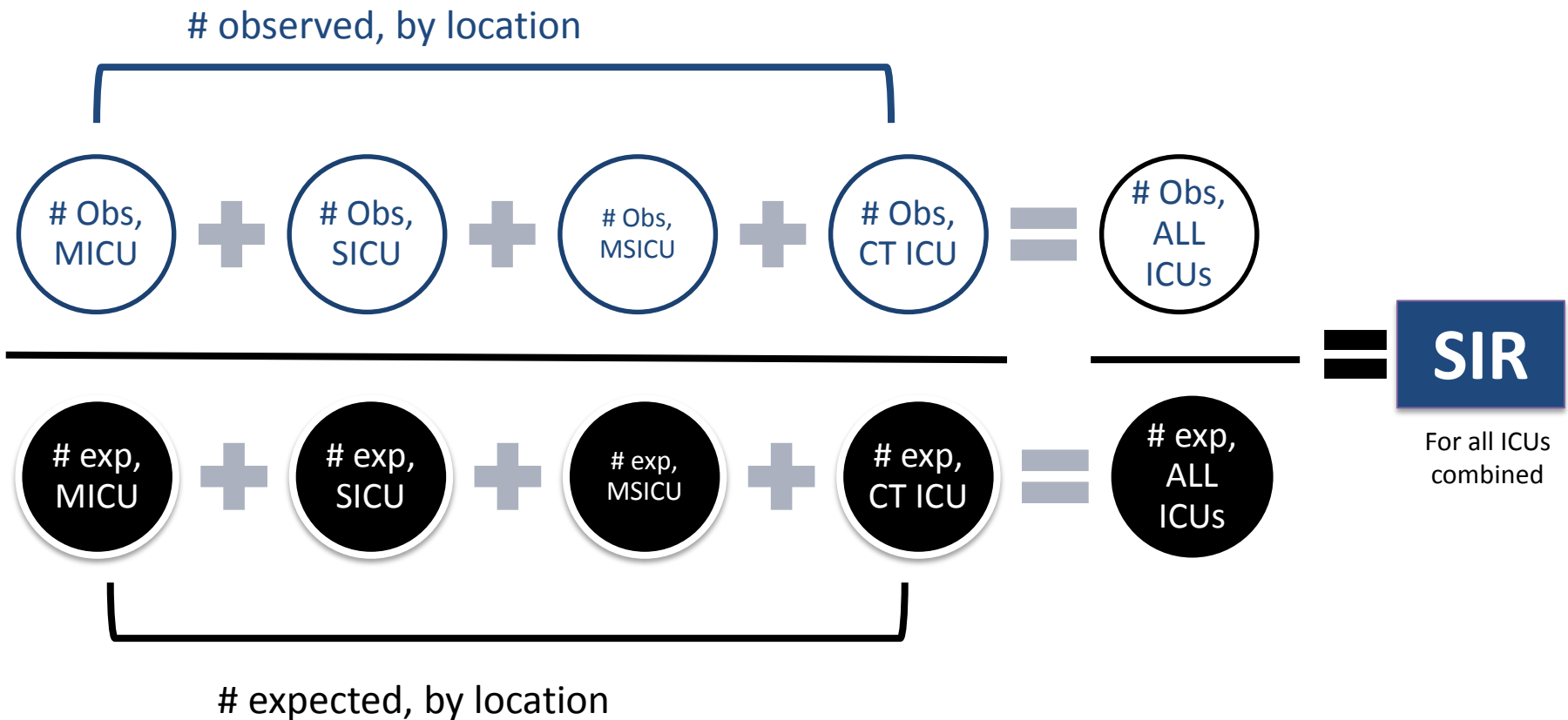
Calculating the Number Expected for DA HAIs

Number expected = # device days * (NHSN pooled mean/1000)							
Location	infcount	Number Expected	Urinary Catheter Days	NHSN Baseline Pooled Mean	SIR	SIR p-value	95% Confidence Interval
MICU	6	7.55	3284	2.3	0.795	0.6074	0.322, 1.653
SICU	6	6.16	2369	2.6	0.974	1.0000	0.395, 2.026
MSICU	5	6.29	2735	2.3	0.795	0.6484	0.291, 1.762
CT ICU	7	4.96	2916	1.7	1.411	0.3612	0.617, 2.792

3284 urinary catheter days in the MICU * (2.3/1000)
= 7.55 expected CAUTIs in the MICU

For a lower Baseline, the number expected is lower.

Calculating the SIR - Overall



Calculating the SIR - Overall

Location	infcount	Number Expected	Urinary Catheter Days	NHSN Baseline Pooled Mean	SIR
MICU	6	7.55	3,284	2.3	0.795
SICU	6	6.16	2,369	2.6	0.974
MSICU	5	6.29	2,735	2.3	0.795
CT ICU	7	4.96	2,916	1.7	1.411
TOTAL	24	24.96	11,304	----	0.962

- Although we have the total # of CAUTIs and the total # urinary catheter days, an overall rate should not be calculated.
- The infection count and number of expected infections are summed individually to generate an SIR.

Incorrect Location Mapping

True Location	Mapped Location	infcount	Number Expected	Urinary Catheter Days	NHSN Baseline Pooled Mean	SIR
MICU	MICU	6	7.55	3284	2.3	0.795
SICU	MICU	6	5.45	2369	2.3	1.101
MSICU	MICU	5	6.29	2735	2.3	0.795
CT ICU	MICU	7	6.71	2916	2.3	1.043
	TOTAL	24	26.00	11304	----	0.923

If all the ICUs were mapped as Medical Intensive Care Units (MICUs), the respective pooled means would all change to 2.3, therefore changing the number expected for certain units.

SICU: Number expected decreased, and the SIR increased (0.974 to 1.101)

CT ICU: Number expected increased, and the SIR decreased (1.411 to 1.043)

Take Home Points

- Risk-adjustment is necessary to obtain accurate measures of hospital performance.
- Locations are used as a way of assessing baseline population risks for device-associated infections.
- Inaccurately mapping locations leads to a misrepresentation of your hospital's performance.

Resources

- NHSN Locations Manual:
http://www.cdc.gov/nhsn/pdfs/pscmanual/15locationsdescriptions_current.pdf
- NHSN Analysis Training:
<http://www.cdc.gov/nhsn/training/analysis/index.html>
- CMS IQR Program:
<https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/HospitalQualityInits/HospitalRHQDAPU.html>



Hospital VBP: NHSN Mapping

TARGETED ASSESSMENT for PREVENTION (TAP)

Rick Welsh, RN, CPHQ

Director, Behavioral Health

HSAG QIN-QIO

Objectives

- Provide an overview of the TAP Strategy
- HSAG utilizes TAP reports to identify units with excess infections
- Discuss the TAP CAUTI assessments
- Review the impact of an incorrectly mapped unit

What is the TAP Strategy?

- Developed by the Centers for Disease Control and Prevention (CDC) to use data for action to prevent HAIs
- Targets healthcare facilities and specific units within facilities that have a disproportionate burden in HAIs
- Identifies gaps in infection prevention so targeted locations can be addressed
- Allows for the ranking of facilities or locations by the cumulative attributable difference (CAD) to prioritize prevention efforts where they will have the greatest impact

Cumulative Attributable Difference

The CAD is the number of infections that must be prevented to achieve an HAI reduction goal, and is calculated by subtracting a numerical prevention target from an observed number of HAIs.

SIR

SIR is a summary measure:

- Used to track HAIs at a national, state, or local level over time
- Adjusts for patients of varying risk within each facility
- Compares the actual number of HAIs reported with the baseline U.S. experience (NHSN aggregate data are used as the standard population)
- Adjusts for several risk factors that have been found to be significantly associated with differences in infection risk

Understanding the CAD

- $CAD = \text{Observed} - (\text{Predicted}) * \text{Target SIR}$
 - Target SIR can be chosen based on goals of a group, state, organization, or national target
 - Lower target → larger excess number of infections
 - CAD Interpretation:
 - Positive CAD = more infections than predicted (“excess”)
 - Negative CAD = fewer infections than predicted
- HSAG uses the VBP threshold as the target SIR

Courtesy of Minn Soe, CDC

Fiscal Year 2017 Hospital Value-based Purchasing

Safety (20% of Total Performance Score)

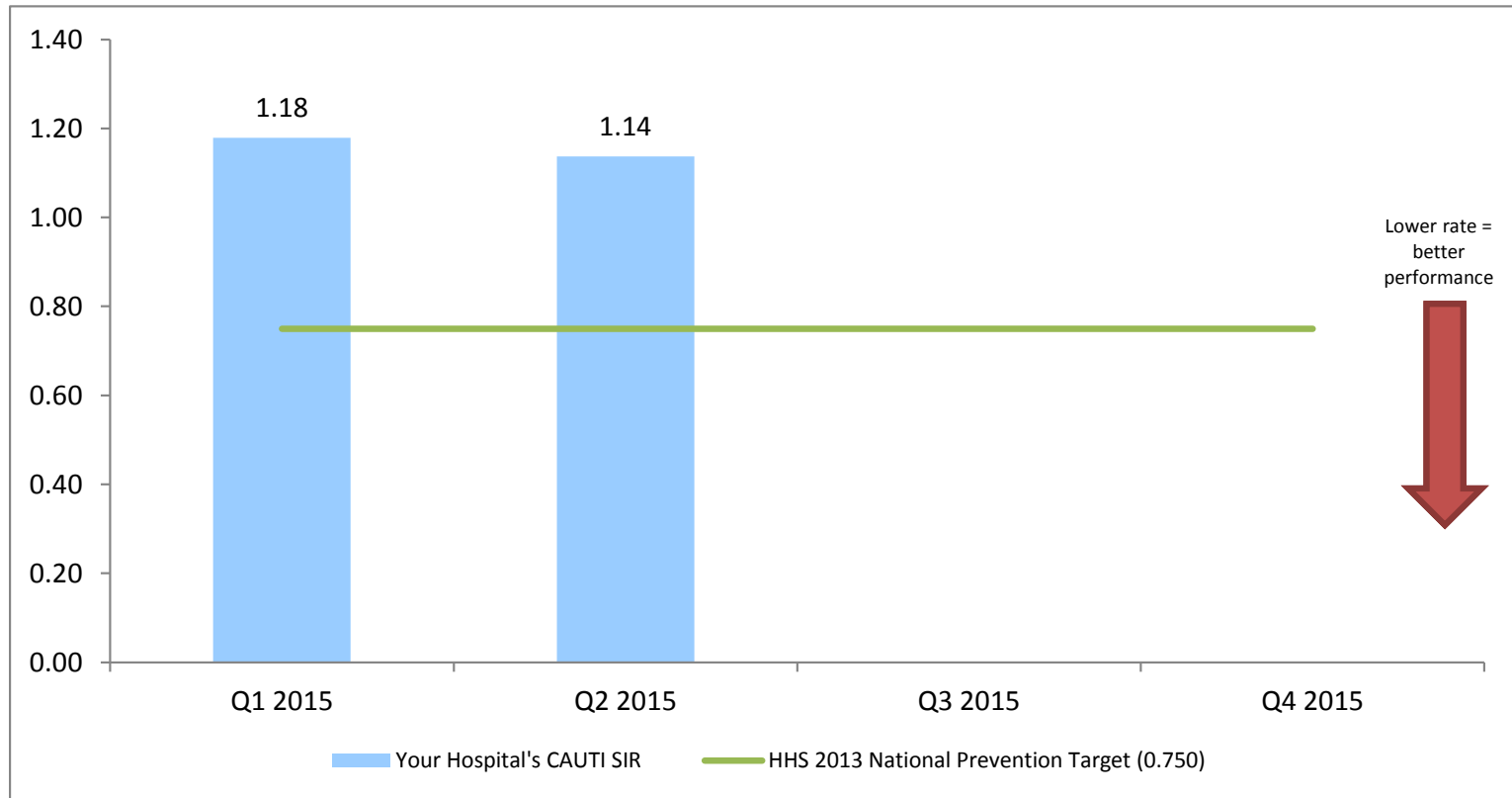
Baseline Period		Performance Period	
PSI-90* 10/01/2010–6/30/2012 All others: Calendar Year 2013		PSI-90* 10/01/2013–6/30/2015 All others: Calendar Year 2015	
Measure ID	Description	Achievement Threshold***	Benchmark
CAUTI	Catheter-Associated Urinary Tract Infection	0.845	0.000000
CLABSI	Central Line-Associated Bloodstream Infection	0.457	0.000000
New <i>C. difficile</i> **	<i>Clostridium difficile</i> infection	0.750	0.000000
New MRSA Bacteremia**	Methicillin-Resistant <i>Staphylococcus Aureus</i> Bacteremia	0.799	0.000000
SSI	Surgical Site Infection: Colon	0.751	0.000000
	Abdominal Hysterectomy	0.698	
Psi-90*	Complication/Patient Safety For Selected Indicators (Composite)	0.777936	0.547889

*PSI-90 is a score (lower is better for both) **Reported as Standardized Infection Ration (SIR) ***Threshold is the median of all hospitals submitting baseline data

This material was prepared by the Hospital Inpatient Value Incentives, and Quality Reporting (VIQR) Outreach and Education Support Contractor, under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services..

HSAG CAUTI Data Feedback Report

ICUs



Unit Ranking Based on CAD

Facility CAD	Unit	Location Type	Expected Infections	Observed Infections	SIR	Catheter Days	Patient Days	Device Utilization Ration Facility Pooled Mean		CAD	Number of Pathogens (EC, YS, PA, KS, PM, ES)
								Facility	Pooled Mean		
6.36	1	WARD	2.34	5	2.14	645	5,664	0.11	0.08	3.25	5 (2, 0, 0, 1, 0, 0)
	2	ICU	5.94	7	1.18	1,747	2,356	0.74	0.75	2.55	8 (1, 0, 3, 0, 0, 1)
	3	WARD	0.67	1	NA	355	4,185	0.08	0.15	0.49	1 (1, 0, 0, 0, 0, 0)
	4	WARD	1.07	1	0.94	666	5,684	0.12	0.17	0.20	1 (0, 0, 1, 0, 0, 0)
	5	ICU	3.78	3	0.79	1,890	2,709	0.70	0.61	0.17	3 (1, 0, 0, 1, 0, 1)
	6	WARD	1.72	1	0.58	453	3,129	0.14	0.08	-0.29	1 (0, 0, 0, 0, 0, 0)

Same Unit Mapped Differently: CAUTI

loccdc	summaryYM	infCount	numExp	numcathdays
IN:ACUTE:CC:MS	2012M01	1	0.560	431
IN:ACUTE:CC:MS	2012M02	1	0.601	462
IN:ACUTE:CC:MS	2012M03	0	0.468	360
IN:ACUTE:CC:MS	2012M04	2	0.511	393
IN:ACUTE:CC:MS	2012M05	1	0.468	360
IN:ACUTE:CC:MS	2012M06	0	0.191	147
IN:ACUTE:CC:MS	2012M07	1	0.313	241
IN:ACUTE:CC:MS	2012M08	0	0.283	218
IN:ACUTE:CC:MS	2012M09	1	0.441	339
IN:ACUTE:CC:MS	2012M10	1	0.573	441
IN:ACUTE:CC:MS	2012M11	0	0.585	450
IN:ACUTE:CC:MS	2012M12	0	0.624	480

$$8/5.61 = \text{SIR } 1.4$$

loccdc	summaryYM	infCount	numExp	numcathdays
IN:ACUTE:CC:N	2013M01	2	1.520	400
IN:ACUTE:CC:N	2013M02	1	1.505	396
IN:ACUTE:CC:N	2013M03	0	1.474	388
IN:ACUTE:CC:N	2013M04	1	1.140	300
IN:ACUTE:CC:N	2013M05	1	0.901	237
IN:ACUTE:CC:N	2013M06	1	0.562	148
IN:ACUTE:CC:N	2013M07	1	0.969	255
IN:ACUTE:CC:N	2013M08	0	0.749	197
IN:ACUTE:CC:N	2013M09	0	0.638	168
IN:ACUTE:CC:N	2013M10	2	0.676	178
IN:ACUTE:CC:N	2013M11	2	0.847	223
IN:ACUTE:CC:N	2013M12	4	0.977	257

$$15/11.95 = \text{SIR } 1.2$$

Correctly Map First: Improve Second!

loccdc	summaryYM	infCount	numExp	numcathdays	SIR	SIR_pval	SIR95CI
IN:ACUTE:CC:N	2014M01	1	0.855	225	.	.	
IN:ACUTE:CC:N	2014M02	0	0.688	181	.	.	
IN:ACUTE:CC:N	2014M03	0	0.958	252	.	.	
IN:ACUTE:CC:N	2014M04	0	1.178	310	0.000	0.3079	, 2.543
IN:ACUTE:CC:N	2014M05	1	1.182	311	0.846	0.9759	0.042, 4.173
IN:ACUTE:CC:N	2014M06	0	1.083	285	0.000	0.3386	, 2.766
IN:ACUTE:CC:N	2014M07	0	1.037	273	0.000	0.3544	, 2.888
IN:ACUTE:CC:N	2014M08	0	0.954	251	.	.	
IN:ACUTE:CC:N	2014M09	1	0.524	138	.	.	
IN:ACUTE:CC:N	2014M10	0	1.205	317	0.000	0.2998	, 2.487
IN:ACUTE:CC:N	2014M11	0	1.376	362	0.000	0.2527	, 2.178
IN:ACUTE:CC:N	2014M12	0	0.828	218	.	.	

$$3/11.86 = \text{SIR } 0.25$$

CAUTI Initial Facility Assessment Tool

- Used to determine potential gaps in infection prevention
- Completed at unit-specific level where data indicates excess CAUTI infections
- Contains six domains
 - 1) General Infrastructure, Capacity, and Processes
 - 2) Appropriate Indications for Indwelling Urinary Catheter Insertion
 - 3) Aseptic Indwelling Urinary Catheter Insertion
 - 4) Proper Indwelling Urinary Catheter Maintenance
 - 5) Timely Removal of Indwelling Urinary Catheters
 - 6) Preventing Candiduria and Detection of Asymptomatic Bacteriuria

CAUTI Initial Facility Assessment Tool Data Example

Aggregate for Facility *****: General Infrastructure, Capacity, and Processes Descriptives								
Question	Yes	%	No	%	Unknown	%	N*	
1. Is senior leadership involved in CAUTI prevention activities?	19	83%	0	0%	4	17%	23	
2. Is unit-level leadership involved in CAUTI prevention activities?	23	96%	0	0%	1	4%	24	
3. Does your facility currently have a team/work group focusing on CAUTI prevention?	16	67%	2	8%	6	25%	24	
4. Does your facility have a staff person with dedicated time to coordinate CAUTI prevention activities?	10	43%	5	22%	8	35%	23	
5. Does your facility have a nurse champion for CAUTI prevention activities?	14	61%	7	30%	2	9%	23	
6. Does your facility have a physician champion for CAUTI prevention activities?	2	9%	10	44%	11	48%	23	
Does your facility train staff on:								
7. Aseptic technique for urinary catheter insertion (for all staff <u>who</u> are given responsibility for inserting indwelling urinary catheters)?	22	96%	0	0%	1	4%	23	
8. Proper urinary catheter maintenance procedures (for all staff <u>who</u> are given responsibility for indwelling urinary catheter care)?	23	96%	1	4%	0	0%	24	
9. Use of bladder ultrasound scanners (for all staff who use them)?	21	88%	3	12%	0	0%	24	
Question	Yes	%	No	%	Unknown	%	N*	
10. Proper indwelling urinary catheter handling and placement of the drainage bag (for all staff involved in moving patients including transport personnel)?	21	88%	1	4%	2	8%	24	
11. Appropriate indications for urine culturing (for ordering providers)?	16	69%	2	9%	5	22%	23	

TAP Link

www.cdc.gov/hai/prevent/tap.html

Contact Information

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Director, Behavioral Health

HSAG QIN-QIO

813.865.3195

IPFQR Program General Resources



Q & A Tool

<https://cms-ip.custhelp.com>



Email Support

IPFQualityReporting@area-m.hcqs.org



Phone Support

866.800.8765



Inpatient Live Chat

www.qualityreportingcenter.com/inpatient



Monthly Web Conferences

www.QualityReportingCenter.com



Secure Fax

877.789.4443



ListServes

Sign up on
www.QualityNet.org



Website

www.QualityReportingCenter.com

Continuing Education Approval

- This program has been approved for 1.0 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 immediately 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

No

Please provide any additional comments

10. What is your overall level of satisfaction with this presentation?

Very satisfied

Somewhat satisfied

Neutral

Somewhat dissatisfied

Very dissatisfied

If you answered "very dissatisfied", please explain

11. What topics would be of interest to you for future presentations?

12. If you have questions or concerns, please feel free to leave your name and phone number or email address and we will contact you.

Done

Powered by [SurveyMonkey](#)
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CE Credit Process

Thank you for completing our survey!

Please click on one of the links below to obtain your certificate for your state licensure.

You must be registered with the learning management site.

New User Link:
<https://lmc.hshapps.com/register/default.aspx?ID=da0a12bc-db39-408f-b429-d6f6b9ccb1ae>

Existing User Link:
<https://lmc.hshapps.com/test/adduser.aspx?ID=da0a12bc-db39-408f-b429-d6f6b9ccb1ae>

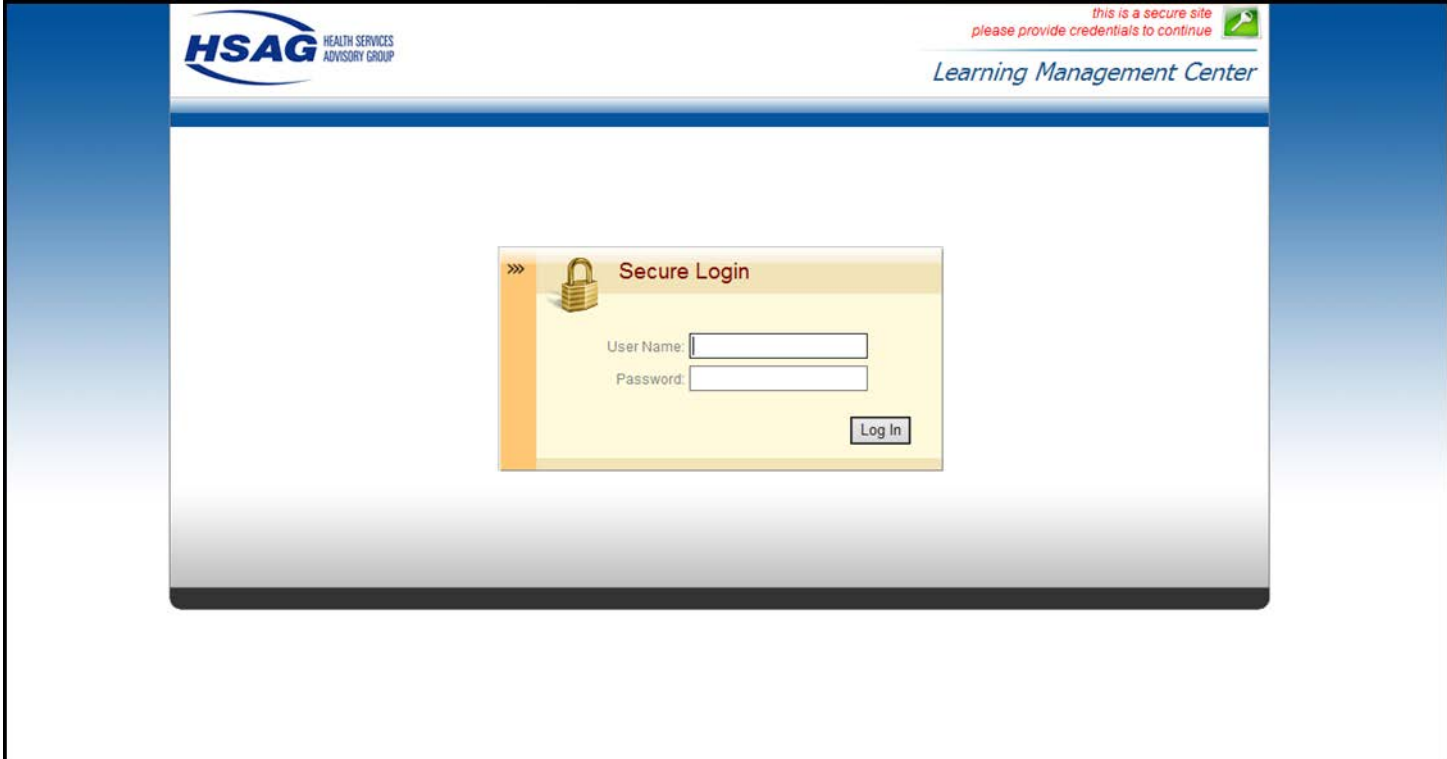
Note: If you click the 'Done' button below, you will not have the opportunity to receive your certificate without participating in a longer survey.

Done

CE Credit Process: New User

The screenshot shows a web page for the HSAG Learning Management Center. At the top left is the HSAG logo with the text "HEALTH SERVICES ADVISORY GROUP". At the top right, there is a security notice: "this is a secure site please provide credentials to continue" with a small green icon. Below this is the text "Learning Management Center". The main heading of the page is "Learning Center Registration: OQR: 2015 Specifications Manual Update - 1-21-2015". Below the heading are four input fields: "First Name:" and "Last Name:" (each with a text box), "Email:" (with a text box), and "Phone:" (with a text box containing dashes). Below the input fields is a "Register" button.

CE Credit Process: Existing User



The screenshot displays the login interface for the HSAG Learning Management Center. At the top left is the HSAG logo (Health Services Advisory Group). At the top right, a security notice reads "this is a secure site please provide credentials to continue" with a lock icon. Below this is the text "Learning Management Center". The central focus is a "Secure Login" box containing a padlock icon, a "User Name:" label with an input field, a "Password:" label with an input field, and a "Log In" button.

QUESTIONS?
