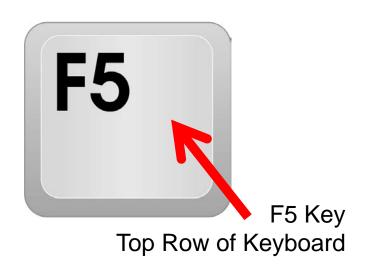
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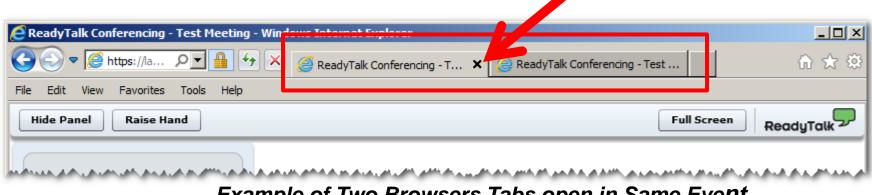


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### **Troubleshooting Echo**

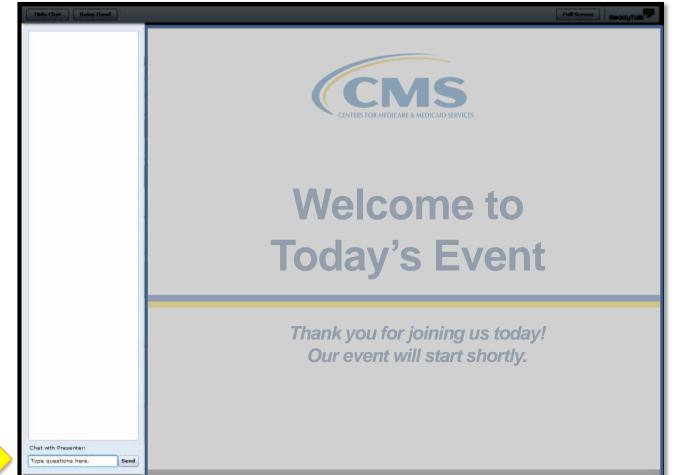
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# Updates on Patient Safety Indicators (PSIs) for Use in CMS Programs

#### Alex Bohl, PhD

Project Director, Recalibration of the Agency for Healthcare Research and Quality (AHRQ) PSIs for CMS Programs, Mathematica Policy Research, Inc.

#### Joseph Clift, EdD, MS, PMP

Measures Lead, Hospital-Acquired Condition (HAC) Reduction Program Division of Quality Measurement, CMS

#### **Bethany Wheeler-Bunch, MSHA**

Hospital Inpatient Value, Incentives, and Quality Reporting (VIQR) Outreach and Education Support Contractor (SC)

#### March 29, 2017

### Purpose

This webinar will provide an overview of the AHRQ PSIs used in CMS programs, including the following:

- Background of all-payer AHRQ PSIs
- Updates to PSIs in recalibrated version 6.0 (v6.0)
- Purpose of recalibration
- Scientific acceptability testing
- Key resources
- Transitioning to International Classification of Diseases, Tenth Revision (ICD-10)
- Implications for CMS programs

### **Objectives**

At the conclusion of the presentation, participants will be able to perform the following tasks:

- Identify how hospitals will be evaluated using the modified PSI 90
- Recall the motivation for recalibrating and updating the PSIs
- Recognize changes between the original and modified versions of the PSI 90
- Understand the CMS plan for public reporting of the PSI 90

#### Alex Bohl, PhD Project Director Recalibration of the AHRQ PSIs for CMS Programs Mathematica Policy Research, Inc.

# Overview of the AHRQ PSIs Used in CMS Programs

## **Background of PSIs**

- PSIs reflect quality of care by measuring potentially avoidable in-hospital complications and adverse events.
  - o Developed by AHRQ
  - Developed on all-payer discharge data for medical and surgical patients
  - Recalibrated for use in CMS programs
- PSIs have been refined over the years, based on the following:
  - Stakeholder and clinical review and feedback
  - o Literature review
  - o Empirical analysis
- This presentation focuses on the recalibrated versions of PSI 04 (Death Rate among Surgical Inpatients with Serious Treatable Complications), PSI 90 composite, and the recalibrated components of PSI 90 used in CMS programs.

### **Overview of PSI Refinements**

- Refinements to PSIs in v6.0
  - o Enhanced risk adjustment for PSI 04
    - National Quality Forum (NQF) endorsed in December 2016
  - Refined individual PSI specifications
  - Added components to PSI 90
  - Changed weighting structure of PSI 90
- Beginning with v5.0, PSIs were recalibrated for use in CMS programs, based on Medicare Feefor-Service data

#### Indicators in the PSI 90 Composite

- Changes between v5.0 and v6.0
  - o PSIs 09, 10, and 11 added (see below)
  - PSI 07 (Central Venous Catheter-Related Blood Stream Infection Rate) removed
- PSI 90 Composite
  - o PSI 03 Pressure Ulcer Rate
  - o PSI 06 latrogenic Pneumothorax Rate
  - o **PSI 08** In-Hospital Fall with Hip Fracture Rate
  - o **PSI 09** Perioperative Hemorrhage or Hematoma Rate
  - PSI 10 Postoperative Acute Kidney Injury Requiring Dialysis Rate
  - o **PSI 11** Postoperative Respiratory Failure Rate
  - PSI 12 Perioperative Pulmonary Embolism (PE) or Deep Vein Thrombosis (DVT) Rate
  - **PSI 13** Postoperative Sepsis Rate
  - o **PSI 14** Postoperative Wound Dehiscence Rate
  - **PSI 15** Unrecognized Abdominopelvic Accidental Puncture or Laceration Rate

#### **Refinements to PSIs in v6.0**

#### **Refinements to PSI Specifications**

- PSI 08 In-Hospital Fall with Hip Fracture Rate
- **PSI 12** Perioperative PE or DVT Rate
- **PSI 15** Unrecognized Abdominopelvic Accidental Puncture or Laceration Rate

#### **Refinements to PSIs in v6.0**

#### **PSI 90 Composite Weights**

- PSI 90 v6.0 uses volume and harm weights (Previous versions of PSI 90 used volume weights only)
  - Volume weights: based on the number of events in the reference population
  - Harm weights: based on estimates of the severity of harm associated with each event
- Component weights are more evenly distributed among PSIs

### **Purpose of Recalibration**

- Recalibration changes the statistical risk- and reliability-adjustment in the PSI software

   Originally developed on all-payer data
   Recalibration refits to a Medicare sample
- Recalibration aims to achieve the PSIs used in CMS programs
  - o Increase accuracy of PSI risk- and reliability-adjustment
  - Generate composite weights reflecting PSI volume in the Medicare population
  - Improve the interpretability of PSI smoothed rates and PSI 90 values

#### **Purpose of Recalibration**

- Recalibration changes the reference population from Healthcare Cost and Utilization Project (HCUP) all-payer data to Medicare Fee-for Service (FFS) data
- Software impacts

   Risk adjustment
   Reliability adjustment
   Composite weights

## **Scientific Acceptability Testing**

- Results from testing will be posted on *QualityNet* Focuses on validity and reliability testing
- Compared to the all-payer PSIs, recalibration has the following:
  - o Similar-to-better predictive validity
  - o Similar-to-lower reliability
    - However, these estimates are more valid
  - o Increased composite weight on PSIs 6, 10, 11, and 13
- Recalibration has modest impacts on hospitallevel performance in CMS programs

#### **Key Resources**

- For questions about the all-payer PSI software

   AHRQ QI website: <u>https://www.qualityindicators.ahrq.gov/</u>
   AHRQ QI Help Desk: <u>QIsupport@ahrq.hhs.gov</u>
- For questions about the use of recalibrated PSIs in CMS programs
  - QualityNet website: <u>https://www.qualitynet.org</u>
  - QualityNet Help Desk: <u>qnetsupport@hcqis.org</u>

## **Transitioning to ICD-10**

- Version 6.0 of the all-payer ICD-10 PSI software is available on the AHRQ website.
  - Includes numerator, denominator, and observed-rate specifications
  - Does not yet include risk adjustment or composite programs
  - Future versions will include risk adjustment and provider-level composite software
- ICD-10 version of recalibrated PSI software is in development.
  - Will include risk adjustment and composite programs

Joseph Clift, EdD, MS, PMP Measures Lead, HAC Reduction Program Division of Quality Measurement, CMS

#### **Implications for CMS Programs**

### **AHRQ Software Issue**

- AHRQ identified an error in the all-payer v6.0 PSI software.
- Two cardiac-related, medical severity diagnosisrelated groups (MS DRGs) were not included in the software when they should have been.
- The recalibrated v6.0, which is based on the Feefor-Service population that CMS was planning to use for July 2017 public reporting and *Hospital Compare* Overall Hospital Quality Star Rating, was subsequently impacted.

### **AHRQ Software Issue**

- Since the two MS DRGs were not included, the error led to an inaccurate representation of numerators and denominators.
  - Under the fixed software, the numerators and denominators will increase to account for the two cardiac-related MS DRGs
  - Under the software that contained the error, the numerators and denominators are smaller (thus inaccurate) than they would be without the error
  - This impacted most of the indicators in the PS-90 and PSI-04 (Death Rate among Surgical Inpatients with Serious Treatable Complications)
  - About 8% of hospitals are impacted by the error (meaning they experienced a change in their numerator)
- Because of the software issue, we have to wait for AHRQ to fix it before CMS can use it to calculate PSI measures for the hospital quality reporting (HQR) programs.
- Hospital Value-Based Purchasing (VBP) is not impacted by the software issue.

#### Plan for July 2017 Public Reporting

The CMS plan for July 2017 public reporting is as follows:

- April Hospital Inpatient Quality Reporting (IQR) Preview Report: normal reporting for all measures except AHRQ PSI measures. Report will contain last year's AHRQ PSI measure data (including the old 8-indicator PSI 90).
- July Public Reporting/Star Rating: Hospital Compare to be updated with the measures in the IQR preview report. Star rating will be based on the measures and scores in the April IQR preview report (including the old PSI 90).

#### Plan for October 2017 Public Reporting

- CMS will issue updated Hospital IQR preview reports around July 2017 that includes AHRQ PSI measure scores based off of the fixed software (including the modified 10-indicator PSI 90 for the first time).
- Public reporting on *Hospital Compare* will be updated with updated AHRQ PSI measure data.
- *Hospital Compare* Overall Hospital Quality Star Rating will also be updated to include the modified PSI 90.
- HAC Reduction Program Hospital-Specific Reports (HSRs) issued in July 2017 will not be impacted.

#### Hospital VBP Program Fiscal Year (FY) 2018 & FY 2019

- CMS will utilize the old version of the PSI 90 measure with the following eight underlying indicators in the FY 2018 and FY 2019 Hospital VBP Program:
  - o PSI 03 Pressure Ulcer Rate
  - o PSI 06 latrogenic Pneumothorax Rate
  - o **PSI 07** Central Venous Catheter-Related Blood Stream Infection Rate
  - o PSI 08 Postoperative Hip Fracture Rate
  - **PSI 12** Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate
  - **PSI 13** Postoperative Sepsis Rate
  - o **PSI 14** Postoperative Wound Dehiscence Rate
  - **PSI 15** Accidental Puncture or Laceration Rate
- CMS will utilize software version 5.0.1 recalibrated to the Medicare Fee-for-Service population in FY 2018 and FY 2019.

# Updates on Patient Safety Indicators (PSIs) for Use in CMS Programs

#### **Continuing Education**

# **Continuing Education Approval**

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

- Florida Board of Clinical Social Work, Marriage & Family Therapy and Mental Health Counseling
- Florida Board of Nursing Home Administrators
- Florida Dietetics and Nutrition Practice Council
- Florida Board of Pharmacy
- California 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<sup>®</sup> 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 the HSAG Learning Management Center.
  - $\circ$  This is a separate registration from ReadyTalk<sup>®</sup>.
  - 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.
- Please go back to the **New User** link and register your personal email account.

Personal emails do not have firewalls.

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

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Existing User Link:

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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**

Learning Center Registration: OQR: 2015 Specifications Manual Update - 1-21- 2015
Email: Phone:

#### **CE Credit Process: Existing User**

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	Secure Login  User Name: Password: Log In	]

# Updates on Patient Safety Indicators (PSIs) for Use in CMS Programs

#### **Questions?**

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