

## Board and Senior Leadership PowerPoint Presentations on the AHRQ Quality Indicators

### What is the purpose of this tool?

The purpose of the PowerPoint presentation for the board is to help the board members understand the importance and financial and clinical implications of the AHRQ Quality Indicators.

### Who are the target audiences?

The key users of this tool are the quality officers and senior management staff who are educating the hospital board and/or senior leadership about the Quality Indicators.

### How can the tool help you?

This tool can be a standalone educational resource or serve as a resource to condense key points for presentation to your quality and patient safety committees, boards, organizational leaders, medical and surgical committees, and performance improvement teams. You should delete, add, or modify slides to best suit your organization's needs.

### How does this tool relate to others?

This tool is part of the Readiness To Change section in the Toolkit Roadmap. It can be related to the self-assessment tool by providing a rich knowledge base on the use of the AHRQ Quality Indicators to identify quality topics for monitoring and performance improvement. An organization needs a thorough understanding of these indicators and their impact to evaluate the organization's infrastructure to support improvement efforts.

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### Instructions

Use and select the following slides to develop a presentation for your board/senior leadership. Delete or modify the text indicated in red.

# **The Agency for Healthcare Research and Quality (AHRQ) Quality Indicators**

***Background for Hospital Board &  
Senior Leadership***

*Date*

# Why are we here today?

- Understand the importance of the AHRQ Quality Indicators (QIs).
- Understand the financial and clinical implications of the QIs for our organization.
- Endorse the QIs as a tool for implementing and monitoring improvement.
- Make the QIs a priority within our organization.

# Leadership is key to improvement

- Hospital boards and senior leadership are increasingly turning to the AHRQ QIs as a tool for monitoring performance, particularly on patient safety.
- To be successful, improvement efforts within hospitals need to have attention and active support from boards and senior hospital leadership.
- Your active support will demonstrate that the hospital has made it a priority to improve quality and patient safety.
- This support will help to motivate our staff to engage fully in improvement activities.

# Health care quality is important

- The safety of our patients is a priority.
- Hospital quality indicators are increasingly available to consumers (e.g., CMS's\* Hospital Compare).
- CMS is no longer reimbursing hospitals for some hospital-acquired conditions and safety events measured by the AHRQ QIs (including children covered by Medicaid in some instances).
- Quality indicators can be used to assess performance and compare against peer hospitals.

\* CMS = Centers for Medicare & Medicaid Services.

# What is AHRQ?

- The **A**gency for **H**ealthcare **R**esearch and **Q**uality:
  - Is part of the U.S. Department of Health and Human Services.
  - Supports research designed to improve the outcomes and quality of health care, reduce health care costs, address patient safety and medical errors, and broaden access to effective services.
  - Sponsors, conducts, and disseminates research to help people make more informed decisions and improve the quality of health care services.
  - Acts as the regulator for Patient Safety Organizations that are certified under the Patient Safety and Quality Improvement Act.

# What are the AHRQ Quality Indicators?

- AHRQ QIs are indicators of hospital quality and adverse events that patients may experience as a result of an inpatient admission.
- AHRQ QIs measure events likely to be preventable through changes at the system or provider level.
- AHRQ QIs are measured using hospital administrative data.
- Composite measures are also available.

# Why were the QIs developed?

- Because quality and safety are so important, the AHRQ QIs were developed to help hospitals:
  - **Screen for potential quality and safety problems** using easily accessible data.
  - **Compare themselves with other hospitals** using national standardized measures to assess quality of hospital care.



# How were the initial AHRQ QIs developed?

- AHRQ contracted with an Evidence-based Practice Center (EPC) to develop the QIs.
- The EPC team developed the AHRQ QIs from 1998 to 2002:
  - Conducted a review of the evidence related to quality measurement based on administrative data.
  - Identified candidate indicators using interviews, literature review, Web search and other sources.
  - Conducted extensive tests of the validity and reliability of the measures.

*General Questions About the AHRQ QIs.* AHRQ Quality Indicators. July 2004. Agency for Healthcare Research and Quality, Rockville, MD. [www.qualityindicators.ahrq.gov/FAQs\\_Support/default.aspx](http://www.qualityindicators.ahrq.gov/FAQs_Support/default.aspx).

# How were the AHRQ Pediatric Quality Indicators (PDIs) developed?

- The AHRQ PDIs were developed through four processes:
  - Identification of candidate indicators
  - Literature review
  - Empirical analyses
  - Panel review
- Once developed, the PDIs were vetted by expert panels of clinicians.
- The initial set of PDIs was released in 2006.
- Eight out of 16 provider-level PDIs are endorsed by National Quality Forum (NQF).

For more information, see *Measures of Pediatric Health Care Quality Based on Hospital Administrative Data: The Pediatric Quality Indicators*. Rockville, MD: Agency for Healthcare Research and Quality; 2006.

[http://www.qualityindicators.ahrq.gov/modules/pdi\\_resources.aspx](http://www.qualityindicators.ahrq.gov/modules/pdi_resources.aspx); and

*Pediatric Quality Indicators*. Rockville, MD: Agency for Healthcare Research and Quality; July 2010.

[http://www.qualityindicators.ahrq.gov/Downloads/Modules/PDI/V42/Pediatric\\_Ind\\_10\\_update.pdf](http://www.qualityindicators.ahrq.gov/Downloads/Modules/PDI/V42/Pediatric_Ind_10_update.pdf).

# Why use the AHRQ QIs?

- The AHRQ QIs identify quality topics for monitoring and performance improvement:
  - Use hospital administrative data
  - Highlight potential quality concerns
  - Identify areas that need further study and investigation
  - Allow monitoring of changes over time
- Because we cannot always measure “quality of care” per se, we use certain measures as an “indicator” of quality.

For more information, [General Questions About the AHRQ QIs](#). AHRQ Quality Indicators. Rockville, MD: Agency for Healthcare Research and Quality; July 2004.  
[www.qualityindicators.ahrq.gov/FAQs\\_Support/default.aspx](http://www.qualityindicators.ahrq.gov/FAQs_Support/default.aspx).

# ICD-10-CM Conversion

- Change from ICD-9-CM to ICD-10-CM occurred in October 2015:
  - Addition of information relevant to ambulatory and managed care encounters
  - Expanded injury codes
  - Creation of combination diagnosis/symptom codes
  - Addition of 6th and 7th characters
  - Incorporation of common 4th and 5th digit subclassifications
  - Laterality
  - Greater specificity in code assignment
- The AHRQ QIs have been updated to reflect this change.

ICD-10-CM = International Classification of Diseases, 10<sup>th</sup> Revision, Clinical Modification

# How are the AHRQ QIs structured?

- Definitions based on:
  - ICD-10-CM diagnosis and procedure codes
  - Often along with other measures (e.g., MS-DRG, MDC, sex, age, procedure dates, admission type)
- Numerator = number of cases with the outcome of interest (e.g., cases with pressure ulcer)
- Denominator = population at risk (e.g., hospitalized patients)
- Observed rate = numerator/denominator
- Some AHRQ QIs measured as volume counts

MS-DRG = Medicare Severity diagnosis-related group; MDC = major diagnostic classification.  
Source: [www.qualityindicators.ahrq.gov/resources/Presentations.aspx](http://www.qualityindicators.ahrq.gov/resources/Presentations.aspx).

## Three\* AHRQ QI Modules

- **Patient Safety Indicators (PSIs)** reflect quality of care inside hospitals but focus on potentially avoidable complications and iatrogenic events.
- **Inpatient Quality Indicators (IQIs)** reflect quality of care inside hospitals, including inpatient mortality for medical conditions and surgical procedures.
- **Pediatric Quality Indicators (PDIs)** reflect quality of care inside hospitals and adverse events that children, adolescents, and, where specified, neonatal patients may experience as a result of exposure to the healthcare system.

\*A fourth module consists of the Prevention Quality Indicators, which assess quality of care for ambulatory care sensitive conditions. Learn more at [http://www.qualityindicators.ahrq.gov/Modules/pqi\\_resources.aspx](http://www.qualityindicators.ahrq.gov/Modules/pqi_resources.aspx).

# What are the Patient Safety Indicators (PSIs)?

- The PSIs are a set of 18 hospital-level indicators of safety-related adverse events following operations, procedures, and childbirth.
- A composite measure (PSI 90) is also available.
- PSIs measure events likely to be preventable through changes at the system or provider level.
- PSIs are measured using hospital administrative data.
- Nine of 18 provider-level PSIs are endorsed by NQF.

*Version 4.3 technical specifications.* Agency for Healthcare Research and Quality, Rockville, MD.  
[www.qualityindicators.ahrq.gov/Modules/PSI\\_TechSpec.aspx](http://www.qualityindicators.ahrq.gov/Modules/PSI_TechSpec.aspx).

# A PSI Example: Pressure Ulcer (PSI 03)

- Numerator: Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with any secondary ICD-10-CM diagnosis codes for pressure ulcer and any secondary ICD-10-CM diagnosis codes for pressure ulcer stage III or IV (or unstageable).
- Denominator: Surgical or medical discharges age 18 years and older. Surgical and medical discharges are defined by specific DRG or MS-DRG codes.
- Several exclusions (e.g., length of stay <5 days, principal diagnosis of pressure ulcer).

Source: <http://www.qualityindicators.ahrq.gov/Downloads/Modules/PSI/V50-ICD10/TechSpecs/PSI%2003%20Pressure%20Ulcer%20Rate.pdf>.



# What are the Inpatient Quality Indicators (IQIs)?

- The IQIs are a set of 28 indicators of hospital quality of care for patients 18 years and older.
- The IQIs are measured using hospital administrative data.
- The IQIs include:
  - Inpatient mortality for certain procedures and medical conditions.
  - Utilization of procedures for which there are questions of overuse, underuse, and misuse.
  - Volume of procedures for which there is some evidence that a higher volume is associated with lower mortality.
  - Two composite measures of mortality.
- Fourteen of 28 provider-level IQIs are endorsed by NQF.

*Inpatient Quality Indicators Overview.* AHRQ Quality Indicators. February 2006. Agency for Healthcare Research and Quality, Rockville, MD. [www.qualityindicators.ahrq.gov/modules/iqi\\_overview.aspx](http://www.qualityindicators.ahrq.gov/modules/iqi_overview.aspx).

# An IQI Example: Coronary Artery Bypass Graft Mortality Rate (IQI 12)

- Numerator: Number of deaths among cases meeting the inclusion and exclusion rules for the denominator
- Denominator: Discharges, age 40 years and older, with ICD-10-CM CABG code in any procedure field

Source:

<http://www.qualityindicators.ahrq.gov/Downloads/Modules/IQI/V45/TechSpecs/IQI%2012%20Coronary%20Artery%20Bypass%20Graft%20%28CABG%29%20Mortality%20Rate.pdf>.

# What are the Pediatric Quality Indicators (PDIs)?

- The PDIs are a set of 16 indicators that reflect quality of care inside hospitals and adverse events that children, adolescents, and, where specified, neonatal patients may experience as a result of exposure to the health care system.
- PDIs measure events likely preventable through changes at the system or provider level.
- PDIs are measured using hospital administrative data.
- One PDI (PDI 19) is a composite measure.
- Eight of 16 provider-level PDIs are endorsed by NQF.

[http://www.qualityindicators.ahrq.gov/modules/pdi\\_resources.aspx](http://www.qualityindicators.ahrq.gov/modules/pdi_resources.aspx)

# An Example: Pressure Ulcer (PDI 02)

- Numerator: Discharges with ICD-10-CM code of pressure ulcer in any secondary diagnosis field among cases meeting the inclusion and exclusion rules for the denominator
- Denominator: All medical and surgical discharges age 17 years and younger defined by specific DRGs or Medicare Severity DRGs.
- Several exclusions (e.g., length of stay <5 days, principal diagnosis of pressure ulcer).

Source:

<http://www.qualityindicators.ahrq.gov/Downloads/Modules/PDI/V45/TechSpecs/PDI%2002%20Pressure%20Ulcer%20Rate.pdf>.

# How can the AHRQ QIs be used in quality assessment?

- AHRQ QIs can be used to flag potential problems in quality of care.
- AHRQ QIs can be used to assess performance and compare against peer hospitals.
- Examples of hospital use of AHRQ QIs in the literature have examined the impact of:
  - Health information technology on quality of care.
  - Hospital board quality committees on quality of care.
  - The effectiveness of nurse staffing on care delivered.

Source: [www.qualityindicators.ahrq.gov/Default.aspx](http://www.qualityindicators.ahrq.gov/Default.aspx) and AHRQ Quality Indicator Toolkit Literature Review.

*If you already have your current QI data available: use slides 23-24 and delete slides 25-26.*

*If you do not have your QI data available: use slides 25-26 and delete slides 23-24.*

***DELETE THIS SLIDE.***

# Current performance on the AHRQ QIs

- *INSERT GRAPHS OR TEXT FROM YOUR HOSPITAL'S DATA HERE*


Example

## Next steps for QI team

1. Identify priorities for quality improvement.
2. Establish goals and performance targets.
3. Formulate an action plan to develop a multidisciplinary team for AHRQ QI work.



# Sample report on hospital performance on the AHRQ QIs

 <b>Quality and Safety Management Report</b>													
						Print Date:	Tuesday, June 10, 2014						
						Data Extract Date:	Wednesday, March 12, 2014						
<b>Great State Medical Center</b> <b>Oct - Dec 2013 (Q4)</b> Agency View													
AHRQ Pediatric Quality Indicators	Relative Performance	Denom	Observed	Target	UHC Median	Rank	Relative Performance	Denom	Observed	Target	UHC Median	Rank	
						Score	Score						x/n
<b>AHRQ Pediatric Quality Composite Indicators</b>													
PDI99 AHRQ Pediatric Quality Indicator Composite	○		0.63	0.98	0.90	3/117	○		0.44	1.00	0.88	1/119	
		N	Percent			x/n			N	Percent			x/n
<b>Mortality (%)</b>													
PDI06 RACHS-1 Pediatric heart surgery	⊖	20	5.0	3.7	0.0	33/ 41	⊖	99	4.0	3.7	1.9	38/ 55	
PDI21 (NQ12) Neonatal mortality	○	520	1.3	1.4	0.4	57/104	○	2,064	0.9	1.0	0.4	60/106	
		N	Rate/1000			x/n			N	Rate/1000			x/n
<b>Surgical &amp; Other (Rate per 1000)</b>													
PDI01 Accidental puncture or laceration	○○	1,258	0.0	1.2	0.0	7/117	○○	4,990	0.0	1.2	0.3	2/120	
PDI02 Pressure ulcer (Decubitus ulcer prior to 2007 Q4)	○○	188	0.0	0.2	0.0	23/103	○○	783	0.0	0.2	0.0	13/113	
PDI05 Iatrogenic pneumothorax	○○	1,127	0.0	0.2	0.0	21/117	⊖	4,516	0.2	0.2	0.0	89/120	
PDI08 Perioperative hemorrhage or hematoma	○○	147	0.0	5.2	0.0	4/ 98	○	572	3.5	5.4	0.0	76/117	
PDI09 Post-operative respiratory failure	○○	106	9.4	21.0	0.0	59/ 92	○	443	11.3	18.3	7.0	63/116	
PDI10 Post-operative sepsis	○○	110	9.1	21.4	0.0	54/ 93	○○	455	6.6	19.8	12.3	42/113	
PDI11 Post-operative wound dehiscence	○○	45	0.0	0.4	0.0	19/ 76	○○	169	0.0	0.4	0.0	19/101	
PDI12 Central venous catheter-related bloodstream infections	○○	1,091	0.9	3.0	0.0	68/116	○○	4,336	0.7	2.6	0.7	50/120	
PDI19 Birth trauma - injury to neonate (PSI17)		437	6.9					1,758	5.7				
PDI20 (NQ11) Iatrogenic pneumothorax in neonates (PDI04 prior to 2007Q4)	○○	93	0.0	0.2	0.0	34/102	○○	355	0.0	0.2	0.0	32/105	
PDI22 (NQ13) Bloodstream infection in neonates	○○	79	12.7	26.5	25.6	38/101	○	265	15.1	24.2	26.0	34/104	
		N	x/n						N	x/n			
<b>Surgical &amp; Other (Count)</b>													
PDI03 Retained surgical item or unretrieved device fragment		0			0			0			0		
PDI13 Transfusion reaction		0			0			0			0		
<b>Volumes</b>													
PDI07 RACHS-1 Pediatric heart surgery		20			12	27/ 63		104			16	24/ 81	

## Next steps for QI team

1. Run AHRQ QI report with most recent quarter's data.
2. Review AHRQ QI report at next board meeting.
3. Identify priorities for quality improvement.
4. Establish goals and performance targets.
5. Formulate an action plan to develop multidisciplinary team for AHRQ QI work.