



Session 3C: Overview of the AHRQ Quality Indicators



Thursday, September 27, 2007
3:30 pm to 5:00 pm ET





Session Overview

- Research, rational and processes used to develop indicators
 - Development Process: Neonatal, Patrick Romano
 - Establishing the Validity of the AHRQ QI/NQF process, Pat Zrelak
- Tools for the interpretation and use
 - QI Mapping Tool, Melanie Chansky
 - Use of the QI's, Jeff Geppert
- Information on how ICD-9 coding practices impacts the indicators
 - Expectations of next release, Sheryl Davies





AHRQ Quality Indicators

- Provides a tool utilizing data collected routinely in the delivery of hospital care to:
 - identify potential quality concerns
 - identify areas that need further study and investigation
 - track changes over time
- Facilitate decision making by federal, state and local policy makers; healthcare leaders; clinicians; etc.
- Variety of uses
- Maximizes existing resources





Structure of AHRQ QI

- Definitions based on
 - ICD-9-CM diagnosis and procedure codes
 - Often along with DRG, MDC, sex, age, procedure dates, admission type, admission source, discharge disposition
- Numerator is the number of cases “flagged” with the outcome of interest
- Denominator is the population at risk
- The observed rate is numerator / denominator
- Volume counts for selected procedures





Four QI Modules

- Prevention Quality Indicators (PQI)
 - Identify “ambulatory care sensitive conditions” (ACSCs) in adult populations
 - good outpatient care can potentially prevent the need for hospitalization
 - early intervention can prevent complications or more severe disease



Prevention Quality Indicators (PQI)

- Adult Asthma
- Angina w/o Procedure
- Bacterial Pneumonia
- Chronic Obstructive Pulmonary Disease
- Dehydration
- Diabetes Short Term complications
- Diabetes Long-term complications
- Hypertension
- Low Birth Weight
- Rate of Lower-extremity Amputation among people with diabetes
- Perforated Appendix
- Urinary Tract Infection
- Uncontrolled Diabetes
- Congestive Heart Failure



Inpatient Quality Indicators (IQI)

- Reflect quality of care inside hospitals
 - Inpatient mortality for certain procedures and medical conditions
 - u Mortality varies for procedure or condition across institutions
 - u Evidence that high mortality may be associated with deficiencies in quality



IQI Mortality Indicators for Inpatient Procedures and Conditions

■ Procedures

- Abdominal Aortic Aneurysm
- Esophageal Resection
- Coronary Artery Bypass Graft
- Carotid Endarterectomy
- Craniotomy
- Pancreatic Resection
- Hip Replacement
- PTCA

■ Conditions

- Acute Myocardial Infarction (AMI)
- AMI, without transfer cases
- Congestive Heart Failure
- Acute Stroke Mortality
- Gastrointestinal Hemorrhage
- Hip Fracture
- Pneumonia



IQIs

- Utilization of procedures
 - Examines procedures with varying use across hospitals
 - Potential overuse, underuse or misuse
- Indicators
 - Bilateral Cardiac Catheterization Rate
 - Cesarean Delivery Rate
 - Incidental Appendectomy in the Elderly Rate
 - Laparoscopic Cholecystectomy Rate
 - Primary Cesarean Delivery Rate
 - Vaginal birth after Cesarean Rate (VBAC)
 - VBAC rate, uncomplicated



IQIs

■ Area-level Utilization

- Reflect the rate of hospitalization in the area for specific procedures
- Use age and gender adjusted population-based denominator

■ Indicators

- Coronary artery bypass graft (CABG) rate
- Hysterectomy rate
- Laminectomy or spinal fusion rate
- PTCA area rate





IQIs

- Volume of procedures
 - Indirect measures of quality
 - Counts of admissions
 - Evidence suggesting that hospitals that perform more of an intensive, complex procedure have better outcomes
- Indicators
 - Abdominal Aortic Aneurysm Repair
 - Carotid Endarterectomy
 - Coronary Artery Bypass Graft
 - Esophageal Resection
 - Pancreatic Resection
 - Percutaneous Transluminal Coronary
 - Angioplasty (PTCA)



Patient Safety Indicators (PSI)

- Identify adverse events that patients experience as a result of exposure to the health care system
- These events are likely amenable to prevention by changes at the system or provider level.



Area Level PSI

- Cases of potentially preventable complications that occur in given area either during hospitalization or resulting in subsequent hospitalization
- Indicators
 - Accidental Puncture or Laceration
 - Foreign Body Left in During a Procedure
 - Iatrogenic Pneumothorax
 - Postoperative Hemorrhage and Hematoma
 - Postoperative Wound Dehiscence
 - Selected Infections Due to Medical Care
 - Transfusion Reaction



Provider-Level PSI

- Measure of potentially preventable complication for patients who received their initial care and the complication of care within the same hospitalization
 - Include only cases where a secondary diagnosis code flags a potentially preventable complication
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| ■ Accidental puncture or Laceration | ■ Postoperative Hip Fracture |
| ■ Birth Trauma-Injury to neonate | ■ Postoperative Hemorrhage and Hematoma |
| ■ Complications of anesthesia | ■ Postoperative Physiological and Metabolic Derangements |
| ■ Death in low-mortality DRG's | ■ Postoperative Pulmonary Embolism or Deep Vein Thrombosis |
| ■ Decubitus Ulcer | ■ Postoperative Sepsis |
| ■ Failure to Rescue | ■ Postoperative Wound Dehiscence |
| ■ Foreign body left during procedure | ■ Selected Infections Due to Medical Care |
| ■ Iatrogenic pneumothorax | ■ Transfusion Reaction |
| ■ Obstetric Trauma-Vaginal with and without instrument | |
| ■ Obstetric Trauma-Cesarean delivery | |



Pediatric Quality Indicators (PDI)

- Identify potentially preventable complications tailored for the pediatric population
 - Age under 18
 - Not in MDC 14 (Pregnancy, Childbirth and the Puerperium)
 - Not in Adult Diagnostic Related Groups



Provider Level and Area-Level Indicators

■ Provider Level

- Accidental Puncture and Laceration
- Decubitus Ulcer
- Foreign Body Left During procedure
- Iatrogenic pneumothorax in neonate and non-neonate
- Pediatric heart surgery mortality
- Pediatric heart surgery volume
- Postoperative hemorrhage & hematoma
- Postoperative respiratory failure
- Postoperative sepsis
- Postoperative wound dehiscence
- Selected Infections due to medical care
- Transfusion reaction

■ Area Level

- Asthma Admission Rate
- Diabetes Short-term Complications
- Gastroenteritis Admission
- Perforated Appendix Admission
- Urinary Tract Infection



AHRQ QI User Support Resources

- Electronic Newsletter

- QI Listserv

www.qualityindicators.ahrq.gov/signup.htm

- QI Support Web Site

www.qualityindicators.ahrq.gov

- Support Email

support@qualityindicators.ahrq.gov

- Support Telephone (voicemail)

(888) 512-6090

