Fact Sheet on Inpatient Quality Indicators

What are the Inpatient Quality Indicators?

The Inpatient Quality Indicators (IQIs) include 28 provider-level indicators established by the Agency for Healthcare Research and Quality (AHRQ) that can be used with hospital inpatient discharge data to provide a perspective on quality. They are grouped into the following four sets:

- **Volume indicators** are proxy, or indirect, measures of quality based on counts of admissions during which certain intensive, high-technology, or highly complex procedures were performed. They are based on evidence suggesting that hospitals performing more of these procedures may have better outcomes.
- **Mortality indicators for inpatient procedures** include procedures for which mortality has been shown to vary across institutions and for which there is evidence that high mortality may be associated with poorer quality of care.
- **Mortality indicators for inpatient conditions** include conditions for which mortality has been shown to vary substantially across institutions and for which evidence suggests that high mortality may be associated with deficiencies in the quality of care.
- **Utilization indicators** examine procedures whose use varies significantly across hospitals and for which questions have been raised about overuse, underuse, or misuse.

Mortality for Selected Procedures and **Mortality for Selected Conditions** are composite measures that AHRQ established in 2008. Each composite is estimated as a weighted average, across a set of IQIs, of the ratio of a hospital's observed rate (OR) to its expected rate (ER), based on a reference population: *OR/ER*. The IQI-specific ratios are adjusted for reliability before they are averaged, to minimize the influence of ratios that are high or low at a specific hospital by chance. Users may select from among several weighting options. The composite indicators are intended to be used primarily to monitor performance in national and regional reporting, and also for comparative reporting and quality improvement at the provider level. They are not intended to reflect any broader construct of quality, beyond that reflected in the component indicators.

A Snapshot of the Indicators

The current provider-level IQIs are listed in Table 1, along with information on their annual rates of incidence and status regarding endorsement by the National Quality Forum. A detailed Guide to Inpatient Quality Indicators, software for calculating the measures, and software documentation are available on the AHRQ QI Web site: www.qualityindicators.ahrq.gov/modules/iqi_resources.aspx. The guide includes a summary assessment for each of the individual indicators.

Each year, AHRQ updates the IQIs to reflect changes to the International Classification of Diseases, 9th Revision, Clinical Modification and Diagnosis-Related Group coding specifications, specifications of the indicators themselves, data elements reported in the Uniform Billing form, and other technical changes. Other revisions also are made to the indicators from time to time, as determined by continued analysis of the indicators and review by expert panels. All the changes made are described in an online change log on the AHRQ QI Web pages.

Table 1. The 2013 Provider-Level Inpatient Quality Indicators, With 2011 Rates and National Quality Forum Endorsement Status

IQI Indicator	Rate per 1,000	NQF Endorsement ID	NQF Endorsement Year
Volume Indicators			
1 Esophageal resection	NA	0361	2008
2 Pancreatic resection	NA	0366	2008
4 Abdominal aortic aneurysm (AAA) repair	NA	0357	2008
5 Coronary artery bypass graft (CABG)	NA		
6 Percutaneous coronary intervention (PCI)	NA		
7 Carotid endarterectomy (CEA)	NA		
Mortality Rates for Inpatient Procedures			
8 Esophageal resection	46.76	0360	2008
9 Pancreatic resection	38.22	0365	2008
11 AAA repair	40.32	0359	2008
12 CABG	25.90		
13 Craniotomy	51.10		
14 Hip replacement	1.10		
30 PCI (not used in public reporting)	19.62		
31 CEA (not used in public reporting)	4.14		
Mortality Rates for Inpatient Conditions			
15 Acute myocardial infarction (AMI)	58.78	0730	2010
32 AMI, without transfer cases	61.28		
16 Heart failure (CHF)	31.98	0358	2008
17 Acute stroke	83.39	0467	2008
18 Gastrointestinal hemorrhage	22.41		
19 Hip fracture	26.92	0354	2008
20 Pneumonia	38.11	0231	2007
Utilization Rates			
21 Cesarean delivery, uncomplicated	300.97		
33 Primary cesarean delivery, uncomplicated	178.60		
22 Vaginal birth after cesarean (VBAC), uncomplicated	96.14		
34 VBAC, all	95.46		
23 Laparoscopic cholecystectomy	857.87		
24 Incidental appendectomy in the elderly	9.56		
25 Bilateral cardiac catheterization	13.70	0355	2008

Source: Healthcare Cost and Utilization Project, Nationwide Inpatient Sample, 2011.

AHRQ Quality Indicators Software

AHRQ provides free software—in both SAS® and Windows—for organizations to apply the IQIs to their own data to assist quality improvement efforts in acute care hospital settings. Both versions contain all the AHRQ QI modules, including the IQIs. Both versions of the software include the IQI composites. Included in the software are data that allow hospitals to compare their measures to national benchmarks, based on data from the State Inpatient Databases (SID). The most recent release of the software uses the most current data available from the SID for computation of benchmarks, which is a change from previous versions that had used 3-year averages. The mortality indicators can be risk adjusted, but utilization and volume are not.