

Fact Sheet on Pediatric Quality Indicators

What Are the Pediatric Quality Indicators (PDIs)?

The Pediatric Quality Indicators (PDIs) are a set of 16 measures (15 standalone measures and one composite measure) developed by the Agency for Healthcare Research and Quality (AHRQ) that can be used with hospital inpatient discharge data to provide a perspective on the quality of pediatric healthcare and the health of the pediatric population. The hospital PDIs screen for problems that occur while a patient is hospitalized and that patients experience as a result of exposure to the health care system. These events may be preventable by changes at the system or provider level. Some of these indicators also have area-level analogs designed to detect patient safety events on a county or regional level.

PDI 19 is a composite measure that is intended to reflect the safety climate of the hospital by providing a marker of patient safety (or “avoidance of harm”) during the delivery of pediatric healthcare. As a single and transparent metric, it can be easily used to monitor performance over time or across regions and populations with a methodology that can be applied at the national, regional, State and provider level. Each PDI in the composite is amenable to prevention through system-level related structures and processes of care.

The composite indicator is intended to be used to monitor performance in national and regional reporting, as well as for comparative reporting and quality improvement at the provider level. It is not intended to reflect any broader construct of quality, beyond what is reflected in the component indicators themselves. Use of a composite can assist consumers in selecting hospitals, assist clinicians in allocating resources, and assist payers in assessing performance; especially in the presence of competing priorities or where more than one component measure may be important.

A Snapshot of the Indicators

The current 16 provider-level PDIs are listed in Table 1, along with information on their most recent annual rates and status regarding NQF endorsement.

A detailed list of indicator specifications, software for calculating the measures, and software documentation are available on the AHRQ Quality Indicators Web site: www.qualityindicators.ahrq.gov.

Table 1. The 2015 AHRQ Neonatal Quality Indicators (NQIs) and Pediatric Quality Indicators (PDIs), With 2012 Rates and National Quality Forum Endorsement Status

Neonatal or Pediatric Indicator	Rate per 1,000	NQF Endorsement	
		ID	Most Recent Year
NQI 01 Neonatal Iatrogenic Pneumothorax Rate	0.18		
NQI 02 Neonatal Mortality Rate	2.25		
NQI 03 Neonatal Blood Stream Infection Rate	25.18	0478	2013
PDI 01 Accidental Puncture or Laceration Rate	0.46	0344	2012
PDI 02 Pressure Ulcer Rate	0.27	0337	2015
PDI 03 Retained Surgical Item or Unretrieved Device Fragment Count	N/A*	0362	2012
PDI 05 Iatrogenic Pneumothorax Rate	0.11	0348	2012
PDI 06 RACHS-1 Pediatric Heart Surgery Mortality Rate	31.55	0339	2012
PDI 07 RACHS-1 Pediatric Heart Surgery Volume	N/A*	0340	2012
PDI 08 Perioperative Hemorrhage or Hematoma Rate	5.2		
PDI 09 Postoperative Respiratory Failure Rate	14.52		
PDI 10 Postoperative Sepsis Rate	14.33		
PDI 11 Postoperative Wound Dehiscence Rate	1.12		
PDI 12 Central Venous Catheter-Related Blood Stream Infection Rate	0.76		
PDI 13 Transfusion Reaction Count	N/A*	0350	2012
PDI 19 Pediatric Safety for Select Indicators	**		

* N/A: Not applicable; measure is based on a count of events.

** Composite score.

Based on AHRQ QI software version 5.0 for ICD-9 as of March 2015; 2012 is the most recent version of HCUP available at time of toolkit publication.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), State Inpatient Databases, 2012; AHRQ Quality Indicators Pediatric Quality Indicator Benchmark Data Tables. http://www.qualityindicators.ahrq.gov/Modules/pdi_resources.aspx.

AHRQ Quality Indicators Software

AHRQ provides free software—in both SAS® and Windows—for organizations to apply the PDIs to their own data to assist quality improvement efforts in acute care hospital settings. Both versions of the software include all the AHRQ QI modules, including the PDIs.

Some of the PDIs are calculated using present-on-admission (POA) codes in the hospital discharge data. In QI software version 5.0, the user had the option of indicating that POA should not be considered when running the software. In version 6.0, the option to ignore POA was removed. It is now assumed that all data include valid POA information.

In October 2015, the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) used to report medical diagnoses and inpatient procedures was officially replaced by the International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM). This transition affected diagnosis and inpatient procedure coding across the United States. As of spring 2016, AHRQ has updated the QI software (v6.0) to account for the change to ICD-10. Because hospitals have just begun coding with ICD-10 codes, there are no available national data that allow hospitals to compare their measures to national benchmarks; however, future versions of the software will calculate risk-adjusted measures.