

Introduction to the Pediatric Toolkit for Using the AHRQ Quality Indicators: How To Improve Hospital Quality and Safety

The Agency for Healthcare Research and Quality (AHRQ) is an agency within the U.S. Department of Health and Human Services. AHRQ's mission is to:

- Invest in research and evidence to make health care safer and improve quality.
- Create materials to teach and train health care systems and professionals to help them improve care for their patients.
- Generate measures and data used to track and improve performance and evaluate progress of the U.S. health system.

The Pediatric Toolkit for Using the AHRQ Quality Indicators (Pediatric QI Toolkit) is a set of tools available free of charge. The Pediatric QI Toolkit is designed to support hospitals in assessing and improving the quality and safety of care they provide. AHRQ first released the original *Quality Indicators™ Toolkit for Hospitals* in 2012 with a focus on improving inpatient quality of care for adult patients. Recognizing a need for similar resources toward improving quality for pediatric patients, AHRQ expanded the effort to develop a pediatric version of the Toolkit.

Some aspects of the quality improvement process are similar for both populations. For example, both adult and pediatric settings must identify the problems specific to their own hospital processes, policies, and procedures in order to identify areas in need of improvement. However, there are also important differences in the culture of care for children and adults, as well as inherent differences between children and adults themselves, including:

- **Differential epidemiology:** With the exception of a subset of children with special health care needs, children are less likely than adults to have multiple comorbid conditions.
- **Dependence:** Parents and other caregivers play a critical role in children's health care.
- **Demographics:** Children are more likely than adults to live in poverty and to represent diverse racial and ethnic groups, and are less likely to have health insurance.
- **Development:** Physical, emotional and cognitive development change dramatically across childhood; the needs of children at different ages may be strikingly different.^{i,ii}

These factors have been considered throughout the Toolkit as they must be integrated across all stages of the process of quality improvement, from the initial identification of areas in need of improvement to the development and implementation of improvement strategies.

The Pediatric QI Toolkit can be used to support inpatient quality improvement with the AHRQ Pediatric Quality Indicators (PDIs). However, it is flexible enough to be used with any other

ⁱHalfon N, Inkelas M, Wood DL, et al. Health care reform for children and families: refinancing and restructuring the U.S. child health system. In: Anderson R, Rice TH, Kominski GF, eds. *Changing the US. health care system: key issues in health services, policy, and management*. San Francisco: Jossey-Bass; 1996. pp. 229-31.

ⁱⁱJameson EJ, Wehr E. Drafting national health care reform legislation to protect the health interests of children. *Stanford Law Policy Review* 1993;5:153-76.

pediatric quality measures and has been used successfully for non-PDI quality measures in a field test (for an example, see the case study in tool A.4).

Because hospitals vary in the extent to which they have existing quality improvement processes in place, the Pediatric QI Toolkit is designed as a flexible, modifiable set of tools that can be selected according to your hospital’s needs. All the tools can be modified easily to suit your needs. In addition, your hospital may choose to use only those tools that you find helpful. The Pediatric QI Toolkit serves as a “resource inventory” from which you can select the tools that are most appropriate to your hospital’s current quality improvement capabilities and efforts.

Below is the Roadmap to the Pediatric QI Toolkit, which you can use to quickly identify which tools to use at any point in time. Individual tools are grouped into six steps A through F below, followed by a general resources section.

Roadmap to the Pediatric QI Toolkit

Section A: Assessing Readiness To Change

Section A helps board members and staff better understand the AHRQ PDIs and assist senior and quality leaders in assessing the readiness of their organization to implement improvements.

Tool	Description
A.1. Introduction to Pediatric QI Toolkit	<i>Includes this introduction to toolkit (A.1) and a fact sheet on AHRQ PDIs (A.1a)</i>
A.2. Board PowerPoint Presentation on the AHRQ PDIs	<i>Includes PowerPoint presentation template to introduce project to the hospital board and/or senior leadership</i>
A.3. Getting Ready for Change Self-Assessment	<i>Includes survey to assess leaders’ perspectives on organizational readiness</i>
A.4. Case Study of Improvement Implementation	<i>Includes a case study of how a children’s hospital used the Pediatric QI Toolkit</i>

Section B: Applying QIs to Your Hospital’s Data

Section B helps quality leaders and analysts calculate their AHRQ PDI rates and identify documentation and coding issues that can affect those rates.

Note: The current version of the AHRQ QI software does not have risk adjustment capabilities. However, the tools below include information about risk adjustment that will be relevant when looking at past performance (using ICD-9ⁱⁱⁱ codes and software) and when later versions of the AHRQ QI software with risk adjustment capabilities are released.

Tool	Description
B.1. Applying the AHRQ Pediatric Quality Indicators to Hospital Data	<i>Includes instructions for performing calculations to identify current PDI rates in your hospital</i>
B.2. PDI Rates Generated by SAS QI (B.2a) and Windows QI (B.2b) Software	<i>Includes sample output from both software packages</i>
B.3. Excel Worksheets for Charts on Data, Trends, and Rates To Populate the PowerPoint Presentation Instructions; PowerPoint Presentation: The AHRQ Quality Indicators, Results, and Discussion of Data Analysis	<i>Includes instructions on how to use Excel worksheets to produce charts based on your hospital's data and a PowerPoint presentation template</i>
B.4. Documentation and Coding for PDIs	<i>Includes strategies for addressing documentation and coding issues with the PDIs</i>
B.5. Assessing Indicator Rates Using Trends and Comparators	<i>Includes guidance for conducting trend and comparator analysis</i>

Section C: Identifying Priorities for Quality Improvement

Section C includes a prioritization worksheet to help senior and quality leaders determine where to focus improvement efforts. It also includes a presentation designed to engage staff after a PDI has been chosen and the design of an implementation is beginning.

Tool	Description
C.1. Prioritization Worksheet and Instructions	<i>Includes Excel spreadsheet to assist in prioritizing selection of indicators</i>
C.2.. Prioritization Worksheet Example	<i>Includes an example of a completed prioritization worksheet</i>
C.3. Staff Engagement Presentation	<i>Includes a PowerPoint presentation template that can be used to engage frontline and other staff</i>

ⁱⁱⁱICD-9 = International Classification of Diseases, 9th Revision.

Section D: Implementing Evidence-Based Strategies To Improve Clinical Care

Section D supports the team in applying quality improvement methods to implement changes in practices. Tool D.3 no longer exists, but we have kept the existing numbering for the remaining tools.

Tool	Description
D.1. Improvement Methods Overview	<i>Includes an overview of the steps in a quality improvement process</i>
D.2. Project Charter	<i>Includes a charter to help you define the implementation team, goals, and measures of progress for your improvement project</i>
D.4. Selected Best Practices and Suggestions for Improvements	<i>Includes introduction to indicator-specific best practices and detailed information on best practices for selected indicators</i>
D.5. Gap Analysis	<i>Includes a tool to help you understand how your organization's practices align with best practices to identify potential areas for improvement</i>
D.6. Implementation Plan	<i>Includes a tool to help plan and monitor steps needed to begin implementation</i>
D.7. Implementation Measurement	<i>Includes an example of how to monitor progress once implementation has begun</i>
D.8. Project Evaluation and Debriefing	<i>Includes a tool to assist in evaluating the implementation process and identifying areas in need of further improvement</i>

Section E: Monitoring Progress and Sustainability of Improvements

Section E supports quality staff in tracking trends in performance on the measures.

Tool	Description
E.1. Monitoring Progress for Sustainable Improvement	<i>Includes a tool to assist with planning for ongoing examination of processes and outcomes for continuous improvement</i>

Section F: Analyzing Return on Investment

Section F helps senior leaders estimate the return on investment from improvement efforts around the AHRQ PDIs.

Tool	Description
F.1 Return on Investment Estimation	<i>Includes a step-by-step method for calculating return-on-investment (ROI) for an intervention aimed at improving performance on an AHRQ QI and an example ROI calculation</i>

Section G: Other Quality Improvement Resources

Section G helps quality staff identify other resources to support quality improvement.

Tool	Description
G.1. Available Comprehensive Quality Improvement Guides	<i>Includes an annotated list of related comprehensive quality improvement guides</i>
G.2. Specific Tools to Support Change	<i>Includes an annotated list of other related quality improvement tools and resources</i>