



Pediatric Quality Indicators (PDI) Log of Revisions to PDI Documentation and Software

Prepared for:

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Version 4.3a is a maintenance release of Version 4.3. The differences between the two versions are:

- Version 4.3a includes Version 29 of the Limited License edition of the 3M™ APR-DRG Grouper. This grouper corrects an issue found in Version 28 of the Limited License edition of the 3M™ APR-DRG Grouper. The grouper is only used with the Inpatient Quality Indicator (IQI) mortality measures. Version 4.3 includes Version 28 of the Limited License edition of the 3M™ APR-DRG Grouper, which was incorrectly assigning a Risk of Mortality (ROM) subclass for cases dated on or after 10/1/10.
- Version 4.3a allows users to calculate area-level indicators for years 2010 and 2011, correcting an issue previously identified in Version 4.3.

All other aspects of the software, including measure specifications, remain the same. Thus this document (related to Version 4.3) remains unchanged.

**AHRQ QI, Pediatric Quality Indicators (PDI),
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The following table summarizes the revisions made to the Pediatric Quality Indicators (PDI) documentation and software, since the original release of these documents in February 2006. The table lists the version and revision number, the date the revision was made, the component affected by the change and a short summary of the changes that were made. For convenience and ease of use, the changes are listed in reverse chronological order with the most recent changes appearing first in the table. This log of revisions is current as of the date noted above.

Version/ Revision number	Date	Component	Changes
V4.3	April 2011	Software (SAS and WinQI) and Documentation	Updated ICD-9-CM and DRG codes for FY2011 and made specification code changes (see FY2011 Coding and Specification Changes Document)
V4.3	April 2011	Software (SAS and WinQI) and Documentation	PDI #2: Modified inclusion logic to remove exclusion of pressure ulcer in stage I or II to capture diagnosis of stage III or IV ulcers.
V4.3	April 2011	Software (SAS and WinQI) and Documentation	PDI #5: Added denominator exclusions for thoracic procedures (43.5, 43.99, 44.67, 77.81, 77.91)
V4.3	April 2011	Software (SAS and WinQI) and Documentation	PDI #9: Added denominator exclusion for esophageal resection procedure (MDC 4), lung cancer procedures (32.39, 32.49, 32.59), ENT/neck procedures (CCS 33), and degenerative neurological disorders (CCS 653)
V4.3	June 30, 2011	Software (SAS and WinQI) and Documentation	AHRQ Clinical Classification Software: Modified CCS 65 to CCS 654 and CCS 67 to CCS 661. Added codes: 307.0, 307.9, 315.00, 315.01, 315.02, 315.09, 315.1, 315.2, 315.31, 315.32, 315.34, 315.35, 315.39, 315.4, 315.5, 315.8, 315.9, V40.0, V40.1, 648.30, 648.31, 648.32, 648.33, 648.34, 655.50, 655.51, 655.53, 760.72, 760.73, 760.75, 779.5, 965.00, 965.01, 965.02, 965.09, V65.42. Removed codes: 305.1, 305.10, 305.11, 305.12, 305.13, V15.82
V4.3	June 30, 2011	Guide	Revised and updated all sections of the guide document to reflect current state of indicators, software and body of evidence.
V4.2	September 30, 2010	Software (SAS and WinQI) and Documentation	Updated ICD-9-CM and DRG codes for FY2010 (see FY2010 Coding updates document).
V4.1	December 2, 2009	SAS Software and Documentation	PQI #9 – Low Birth Weight and PSI #17 – Birth Trauma Injury to Neonates – now calculated in the PDI SAS module. Technical Specifications for these indicators are distributed with their respective (PQI and PSI) set of documents.
V 4.0	June 30, 2009	Software and Documentation	PDI #2 – Pressure Ulcer (formerly Decubitus Ulcer) – added diagnosis code to denominator exclusion for hemi- and paraplegia (334.1)

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V 4.0	June 30, 2009	Software and Documentation	NQI #1 and PDI #5 – Iatrogenic Pneumothorax – 1) replaced the DRG denominator exclusion for cardiac surgery with procedure code denominator exclusion for cardiac procedures; 2) added procedure codes to denominator exclusion for thoracic procedures
V 4.0	June 30, 2009	Software and Documentation	PDI #4 – Iatrogenic Pneumothorax in Neonates has been redesignated as NQI #1. It is still calculated by the PDI SAS module.
V 4.0	June 30, 2009	Software and Documentation	PDI #9 – Postoperative respiratory failure – added denominator exclusion for craniofacial anomalies with 1) a procedure code for laryngeal or pharyngeal surgery or 2) a procedure on face and a diagnosis code of craniofacial abnormalities.
V 4.0	June 30, 2009	Software and Documentation	PDI #10 – Postoperative sepsis – removed diagnosis code from numerator inclusion for sepsis for discharges after 2004Q4 (effective October 1, 2004)
V 4.0	June 30, 2009	Software and Documentation	PDI #12 – Central Line-associated Bloodstream Infection – renamed the indicator from “Selected infections due to medical care”
V 4.0	June 30, 2009	Software and Documentation	PDI #16 – Gastroenteritis – added diagnosis code to numerator exclusion for gastrointestinal abnormalities (538 Gastrointestinal mucositis (ulcerative))
V 4.0	June 30, 2009	Software and Documentation	Multiple – Infection – 1) removed diagnosis codes for non-bacterial infections from denominator exclusion for infection; 2) Add diagnosis code to denominator exclusion for infection (078.3 CAT-SCRATCH DISEASE)
V 4.0	June 30, 2009	Software and Documentation	Multiple – Major Operating Room Procedures – removed selected procedure codes from the denominator inclusion for major operating room procedures
V 4.0	June 30, 2009	Software and Documentation	Medical DRGs – replaced the DRG denominator inclusion for medical discharges with the MS-DRG denominator inclusion for medical discharges for discharges after 2007Q4 (effective October 1, 2007).
V 4.0	June 30, 2009	Software and Documentation	Surgical DRGs – replaced the DRG denominator inclusion for surgical discharges with the MS-DRG denominator exclusion for surgical discharges for discharges after 2007Q4 (effective October 1, 2007)
V 4.0	June 30, 2009	Software and Documentation	Adult DRGs – dropped the DRG denominator inclusion for adult DRGs.
V 4.0	June 30, 2009	Software and Documentation	Pediatric Heart Surgery Mortality (PDI #6) – excluded cases with any diagnosis of ASD or VSD with PDA as the only procedure
V 4.0	June 30, 2009	Software and Documentation	Iatrogenic Pneumothorax – Neonates (PDI #4) – renamed PDI #4 to NQI #1

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V 4.0	June 30, 2009	Software and Documentation	Neonatal Mortality (NQI #2) – added the Neonatal Mortality indicator
V 4.0	June 30, 2009	Software and Documentation	Blood Stream Infection – Neonates (NQI #3) – added the Blood Stream Infection – Neonates indicator
V4.0	June 30,2009	Software and Documentation	Implement UB-04 – The UB-04 (effective October 1, 2007) changes were implemented including new data elements for point-of-origin and present on admission
V4.0	June 30,2009	Software and Documentation	Update Benchmarking Data to 2007 – used data from the 2007 SID for computation of benchmarks
V 3.2	March 10, 2008	Software and Documentation	<ol style="list-style-type: none"> 1. PDI #1 (Accidental puncture or laceration) – Added an exclusion for discharges with an ICD-9-CM procedure code for spine surgery 2. PDI #13 (Transfusion Reaction) – Revised the indicator from a rate to a count 3. PDI #3 (Foreign Body left in During Procedure) – Revised the indicator from a rate to a count and to require the POA flag
V 3.1a	March 16, 2007	SAS Software and Documentation	Added program to calculate the pediatric patient safety composite measure. The new files are PDI_COMPOSITE.SAS and MSXPDC31.TXT.
V 3.1a	March 16, 2007	Software (PDSASA2)	Amended the aggregation algorithm to correctly sum the numerator and denominator counts across stratifiers.
V 3.1	March 12, 2007	Software (SAS and Windows), Software Documentation, and Technical Specifications	<ol style="list-style-type: none"> 1. Implemented changes associated with ICD-9-CM coding updates for Fiscal Year (FY) 2007 (effective 10-1-2006). See separate documentation on ICD-9 coding updates for specific details. 2. The years for which the ICD-9-CM and DRG codes defining PDIs are valid was amended to be through FY 2007 instead of FY 2006, that is, the codes in the software are effective through September 30, 2007.
V 3.1	March 12, 2007	Software (SAS and Windows) and Technical Specifications	Revised numerator inclusion criteria for Postoperative Hemorrhage and Hematoma (PDI #8) to include a diagnosis of hemorrhage or hematoma and a procedure for control of hemorrhage or drainage of hematoma.

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V 3.1	March 12, 2007	Covariates. Software (SAS and Windows),	<ol style="list-style-type: none"> 1. Based on recommendations of the Risk Adjustment and Hierarchical Modeling (RAHM) Workgroup, computed covariates using logistic regression model with a hospital random-effect instead of the existing simple logistic model. Because the AHRQ QI use a large sample, the impact on the covariates of using the hierarchical model (and hence the impact on the risk-adjusted rates) is minor. 2. Updated the coefficients used in the calculation of expected and risk-adjusted rates to the reference population, based on the 2002-2004 State Inpatient Data (SID).
V 3.1	March 12, 2007	Covariates, Software (SAS and Windows), Software Documentation	Included an option to incorporate the present on admission indicator into the specifications. In general, cases where the outcome of interest is present on admission will be excluded from the denominator, as these cases are no longer at risk of having the outcome of interest occur during the hospitalization. The release also includes alternative parameter files of risk-adjustment covariates and population rates using 2002-2004 SID data from California and New York.
V 3.1	March 12, 2007	Software (SAS and Windows)	<ol style="list-style-type: none"> 1. Age-, race-, gender- and county-specific population estimates used for AHRQ QI area rates were updated to use revised post-censal estimates for years 2001 through 2005 and projections for the years 2006 and 2007. 2. Added capability to apply weight value to each discharge. 3. The syntax will compute risk-adjusted rates and observed-to-expected ratios for the pre-defined set of stratification variables (e.g., age, gender, payer, race). When stratifications other than hospital or area are selected, the RPPDxx variables and their confidence intervals are observed/expected ratios to avoid confounding with risk adjustment variables.
V 3.0b	September 29, 2006	Windows	Implemented the pediatric risk adjustment.
V 3.0b	September 29, 2006	SAS Software	<ol style="list-style-type: none"> 1. Changed the PAGECAT stratification data element to correctly assign non-integer AGE values. 2. Changed PHS_RACHS1.TXT syntax to correctly assign the risk category when AGE > 0 and AGEDAY is missing. In general, these cases are now assigned to a lower risk category (impacts about 3% of cases).
V 3.0b	September 29, 2006	Technical Specifications and Software	<ol style="list-style-type: none"> 1. PedQI #1, #3, #6, #10-12. Changed the exclusion from newborns less than 500g to neonates less than 500g.

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V 3.0b	September 29, 2006	Measures	<ol style="list-style-type: none"> 1. Revised the text to clarify clinical panel recommendations of indicators for inclusion in Pediatric module and those deferred for further development. 2. Added description of Pediatric Heart Surgery Volume.
V 3.0a	May 1, 2006	SAS	Implemented the pediatric risk adjustment.
V 3.0a	May 1, 2006	SAS Software	<ol style="list-style-type: none"> 1. PDSAS1.SAS – Corrected the principal diagnosis exclusion for PedQI #8. 2. PDSASA2.SAS – Corrected the denominator calculation for PedQI #17
V 3.0a	May 1, 2006	Technical Specifications	<ol style="list-style-type: none"> 1. PedQI #2 – Added exclusion for cases with an ICD-9-CM procedure code of debridement or pedicle graft as the only major operating room procedures (surgical cases only) 2. PedQI #4/#5 – Added exclusion for cases with ICD-9-CM procedure code of diaphragmatic surgery repair 3. PedQIs #16 and #18– Modified exclusion to cases with age less than or equal to 90 days (or neonates if age in days is missing) 4. Deleted ICD-9-CM procedure code 41.0 from the list of major operating room procedure codes 5. Intermediate Risk Immuno-compromised state – Clarified that codes for hepatic failure must be accompanied by codes for cirrhosis.
V 3.0a	May 1, 2006	Technical Specifications and Software	<ol style="list-style-type: none"> 1. Corrected ICD-9-CM diagnosis codes 590.00 and 590.01 in the numerator exclusion for PedQI #18. 2. Dropped ICD-9-CM diagnosis codes 585.1, 585.2, 585.3, 585.4 and 585.9 from the high risk immunocompromised state specification. 3. Added ICD-9-CM diagnosis codes 276.50, 276.51 and 276.52 to the numerator specification for PedQI #16. 4. Refined the definition of neonate by dropping the DRG and MDC inclusion criteria. 5. Refined the newborn definition by requiring that age in days be equal to zero (or missing if there is a liveborn diagnosis code).
V 3.0	February 20, 2006	Technical Specifications and Software	<ol style="list-style-type: none"> 1. Dropped ICD-9-CM diagnosis code 5185 from numerator specification for PedQI #9. 2. Dropped exclusion of all newborns and neonates transferring from another institution, added exclusion of neonates for PedQI #10.