



Prevention Quality Indicators (PQI) Log of ICD-9-CM and DRG Coding Updates and Revisions to PQI Documentation and Software

Prepared for:

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Log of ICD-9-CM and DRG Coding Updates and Revisions to PQI Documentation and Software

The following table summarizes the revisions made to the Prevention Quality Indicator (PQI) software, software documentation and the technical specification documents since the original release of these documents in November 2001. It also reflects changes to indicator specifications based on updates to ICD-9-CM and MS-DRG codes through Fiscal Year 2012 (effective October 1, 2011) and incorporates coding updates that were implemented in all versions of the PQI software (both SAS and Windows).

The table lists the version and revision number, the date the revision was made, the component(s) affected by the change and a short summary of the changes that were made. The nature of the change is categorized into three types:

- 1) fiscal year (FY) coding change: occurs because of coding changes to the most recent fiscal year codes dictated by the Centers for Medicare and Medicaid Services,
- 2) specification/calculation change: may impact the measure result that is something other than the most recent fiscal year coding change, and
- 3) software/documentation change: alteration to the software code to run the results as the measure is specified in the most effective manner or to the documentation to clarify the measure intent or functionality.

For convenience and ease of use, the changes are listed in reverse chronological order with the most recent changes appearing first in the table. Please note that changes prior to version 4.4 are not classified according to the currently defined types of changes. In addition, each type of change has varied shading to enhance readability.

All changes noted below have been incorporated into the software programming code, software documentation and the PQI technical specifications. With this software update, the PQI software now incorporates ICD-9-CM and DRG codes valid from October 1, 1994 through September 30, 2012.

Version/ Revision number	Date	Component	Nature of Change (Coding vs. Software/ Documents)	Changes
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V4.4	March 2012	All PQI	Specification/C alculation	Updated data are used for population estimates (i.e., through 2012). The population data are used to calculate the denominator for the area-level QI. The comparative data tables have been updated using Version 4.4 of the software. Because the risk adjustment models and reference population have not changed for Version 4.4, the Risk Adjustment Coefficients remain as they were in Version 4.3.
V4.4	March 2012	Hypertension Admission Rate (PQI 7)	Fiscal Year Coding	Add the following codes to existing numerator exclusions for cardiac procedures (PQI Appendix B) Add code: 1755 TRANSLUM COR ATHERECTOMY 3505 ENDOVAS REPL AORTC VALVE 3506 TRANSPCL REP AORTC VALVE 3507 ENDOVAS REPL PULM VALVE 3508 TRANSAPCL REPL PULM VALVE 3509 ENDOVAS REPL UNS HRT VLV 3826 INSRT PRSR SNSR W/O LEAD
V4.4	March 2012	Heart Failure Admission Rate (PQI 8)		Add the following codes to existing numerator exclusions for cardiac procedures (PQI Appendix B) Add code: 1755 TRANSLUM COR ATHERECTOMY 3505 ENDOVAS REPL AORTC VALVE 3506 TRANSPCL REP AORTC VALVE 3507 ENDOVAS REPL PULM VALVE 3508 TRANSAPCL REPL PULM VALVE 3509 ENDOVAS REPL UNS HRT VLV 3826 INSRT PRSR SNSR W/O LEAD

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V4.4	March 2012	Bacterial Pneumonia Admission Rate (PQI 11)	Fiscal Year Coding	Add exclusions for immunocompromised state diagnosis or procedures (PQI Appendix C) Add code: 28411 ANTIN CHEMO INDCD PANCYT 28412 OTH DRG INDCD PANCYTOPNA 28419 OTHER PANCYTOPENIA 99688 COMP TP ORGAN-STEM CELL
V4.4	March 2012	Urinary Tract Infection Admission Rate (PQI 12)	Fiscal Year Coding	Add exclusions for immunocompromised state diagnosis or procedures (PQI Appendix C) Add code: 28411 ANTIN CHEMO INDCD PANCYT 28412 OTH DRG INDCD PANCYTOPNA 28419 OTHER PANCYTOPENIA 99688 COMP TP ORGAN-STEM CELL
V4.4	March 2012	Angina without Procedure Admission Rate (PQI 13)	Fiscal Year Coding	Add exclusions for cardiac procedures (PQI Appendix B) Add code: 1755 TRANSLUM COR ATHERECTOMY 3505 ENDOVAS REPL AORTC VALVE 3506 TRANSPCL REP AORTC VALVE 3507 ENDOVAS REPL PULM VALVE 3508 TRANSAPCL REPL PULM VALVE 3509 ENDOVAS REPL UNS HRT VLV 3826 INSRT PRSR SNSR W/O LEAD

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V4.4	March 2012	Asthma in Younger Adults Admission Rate (PQI 15)	Fiscal Year Coding	Add exclusions for cystic fibrosis and anomalies of respiratory system Add code: 51661 NEUROEND CELL HYPRPL INF 51662 PULM INTERSTITL GLYCOGEN 51663 SURFACTANT MUTATION LUNG 51664 ALV CAP DYSP W VN MISALN 51669 OTH INTRST LUNG DIS CHLD
V4.4	March 2012	Heart Failure Admission Rate (PQI 8)	Software/Docu mentation	Rename indicator to Heart Failure Admission Rate Rationale: Many patients with heart failure do not experience congestion of the lungs.
V4.4	March 2012	Software	Software/ Documentation	Revised the data step of creating permanent data set containing all records which are deleted from the analysis because key variable values having missing data
V4.4	March 2012	Software	Software/ Documentation	Both SAS and WinQI v4.3 were improperly truncating the (Observed rate)/(Expected rate) ratio and associated upper confidence bound (95%) to be <= 1.0 in cases where a stratification of the rates was being implemented. This issue was fixed in both SAS and WinQI so that this truncation only applies in cases where no stratification is being performed.
V4.4	March 2012	Software	Software/ Documentation	Sort routine (PROC SORT) was introduced to PQSASA3 programs before merging all the indicators together to sorting problems in SAS whenever user selects multiple stata (e.g. stratifies by age, gender, and age by gender)
V4.4	March 2012	Software	Software/ Documentation	PQSASA2.SAS program was revised to include denominator adjustment when the population count for certain combination of strata was zero.
V4.4	March 2012	Software	Software/ Documentation	WinQI v4.3 did not properly implement a user selection of year 2010 during report generation. This issue was fixed in v4.4 of WinQI.
V4.4	March 2012	Software	Software/ Documentation	WinQI v4.3 was not properly calculating quarterly rates when requested by the user. This issue was fixed in v4.4 of WinQI.

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V4.4	March 2012	Software	Software/ Documentation	SAS v4.3 did not properly handle stratifications where the user requested a two-way stratification that overlapped with a one-way stratification (e.g., Age-by-Gender at the same time as Age by itself). This issue was fixed in v4.4 of SAS.
V4.4	March 2012	Software	Software/ Documentation	WinQI v4.3 and v4.4 do not check for a possible issue with user-defined composite weighting – users must set weights for all possible individual indicators, including zero weights for indicators that are not to be included in the composite. This requirement has been included in the software documentation.
V4.4	March 2012	Software	Software/ Documentation	SAS and WinQI v4.4 remain 32-bit applications developed on a Windows XP operating system. Some limited testing has been performed to ensure that these applications will run successfully under a 64-bit, Windows 7 environment. One additional installation requirement related to administrator rights has been included in the software documentation.
V4.4	March 2012	Software	Software/ Documentation	The software now incorporates state level estimates of diabetes prevalence by age from the CDC National Diabetes Surveillance System, which impacts PDI 15 and PQI 1, 3, 14, and 16.
V4.3	April 29, 2011	Hypertension Admission Rate (PQI 7) Numerator (Exclusion, cardiac procedure)	Coding	Add to numerator exclusion for cardiac procedure 3597 PERC MTRL VLV REPR W IMP 3737 EXC/DEST HRT LES, THRSPC
V4.3	April 29, 2011	Congestive Heart Failure Admission Rate (PQI 8) Numerator (Exclusion, cardiac procedure)	Coding	Add to numerator exclusion for cardiac procedure 3597 PERC MTRL VLV REPR W IMP 3737 EXC/DEST HRT LES, THRSPC

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V4.3	April 29, 2011	Angina Admission Rate (PQI 13) Numerator (Exclusion, cardiac procedure)	Coding	Add to numerator exclusion for cardiac procedure 3597 PERC MTRL VLV REPR W IMP 3737 EXC/DEST HRT LES, THRSPC
V4.3	April 29, 2011	Software (SAS and WinQI) and Documentation	Software/ Documents	PQI #5: Added numerator inclusion for principal diagnosis of asthma, modified numerator and denominator inclusion age to ≥ 40 , and modified title to "Chronic Obstructive Pulmonary Disease or Asthma in Older Adults"
V4.3	April 29, 2011	Software (SAS and WinQI) and Documentation	Software/ Documents	PQI #10: Add numerator inclusion for secondary diagnosis of dehydration and principal diagnosis of hyperosmolality/hyponatremia, gastroenteritis, or acute renal failure. Added code for hyperosmolality/hyponatremia (276.0). Added numerator exclusion for chronic renal failure.
V4.3	April 29, 2011	Software (SAS and WinQI) and Documentation	Software/ Documents	PQI #15: Modified numerator and denominator inclusion to ≤ 40 , modified title to "Asthma in Younger Adults"
V4.3	April 29, 2011	Software (SAS and WinQI) and Documentation	Software/ Documents	PQI #16: Added numerator exclusion for toe amputation (841.1)
V4.3	June 30, 2011	Software (SAS and WinQI) and Documentation	Software/ Documents	Surgical DRG: Added numerator inclusion codes 014 and 015 which were previously assigned to 009.
V4.3	June 30, 2011	Guide	Software/ Documents	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	Hypertension Admission Rate (PQI 7) Denominator (Exclusion)	Coding	Add procedure codes to denominator exclusion for Cardiac Procedures 17.51 Implantation of rechargeable cardiac contractility modulation (CCM), total system 17.52 Implantation or replacement of cardiac contractility modulation (CCM) rechargeable pulse generator only

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V4.2	September 30, 2010	Bacterial Pneumonia Admission Rate (PQI 11) Denominator (Exclusion)	Coding	Add diagnosis codes to denominator exclusion for immunocompromised 279.41 Autoimmune lymphoproliferative syndrome ALPS 279.49 Autoimmune disease, not elsewhere classified
V4.1	December 2, 2009	SAS Software and Documentation	Software/ Documents	PQI #9 – Low Birth Weight – Added NOTE to documentation advising that this indicator is calculated by the PDI SAS module because it is based on pediatric discharges.
V4.0	June 30, 2009	Software and Documentation	Software/ Documents	PQI #7 – Hypertension – added numerator exclusion for diagnosis of Stage I-IV kidney disease only if accompanied by procedures for preparation for hemodialysis (dialysis access procedures)
V4.0	June 30, 2009	Software and Documentation	Software/ Documents	PQI #8 – CHF – dropped diagnosis codes from numerator inclusion for hypertension with heart disease and/or renal failure ONLY for discharges after 2002Q3 (effective Oct 1, 2002)
V4.0	June 30, 2009	Software and Documentation	Software/ Documents	PQI #11 – Bacterial pneumonia – added numerator exclusion for diagnosis code of immuno-compromised state
V4.0	June 30, 2009	Software and Documentation	Software/ Documents	Cardiac procedure – added procedure codes to the numerator exclusion for cardiac procedures
V4.0	June 30, 2009	SAS Software and Documentation	Software/ Documents	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	SAS Software and Documentation	Software/ Documents	Update Benchmarking Data to 2007 – used data from the 2007 SID for computation of benchmarks
V4.0	February 20, 2009	Bacterial Pneumonia Admission Rate (PQI 11) Numerator (Inclusion)	Coding	Add diagnosis code to numerator inclusion for bacterial pneumonia (\$ACSBACD) Modify code: 482.41 Methicillin susceptible pneumonia due to Staphylococcus aureus Add code: 482.42 Methicillin resistant pneumonia due to Staphylococcus aureus

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V4.0	February 20, 2009	Cardiac procedures	Coding	Add procedure codes to numerator exclusion for cardiac procedures (\$ACSCARP) Add codes: 37.36 Excision or destruction of left atrial appendage (LAA) 37.55 Removal of internal biventricular heart replacement system 37.60 Implantation or insertion of biventricular external heart assist system
V4.0	February 20, 2009	Immunocompromis ed	Coding	Add diagnosis codes to numerator exclusion for immuno-compromised (\$IMMUNID) 199.2 Malignant neoplasm associated with transplanted organ 238.77 Neoplasm of uncertain behavior, post-transplant lymphoproliferative disorder (PTLD) 238.79 Neoplasm of uncertain behavior, other lymphatic and hematopoietic tissues 279.50 Graft-versus-host disease unspecified 279.51 Acute graft-versus-host disease 279.52 Chronic graft-versus-host disease 279.53 Acute on chronic graft-versus-host disease V45.11 Renal dialysis status

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V4.0	February 20, 2009	Hypertension Admission Rate (PQI 7) Numerator (Exclusion)	Indicator Specification	<p>Add numerator exclusion for diagnosis of Stage I-IV kidney disease (\$ACSHY2D) only if accompanied by procedures for preparation for hemodialysis (dialysis access procedures) (\$ACSHYPP).</p> <p>Add codes:</p> <p>403.00 Hypertensive chronic kidney disease, malignant, with chronic kidney disease stage I through stage IV, or unspecified 403.10 Hypertensive chronic kidney disease, benign, with chronic kidney disease stage I through stage IV, or unspecified 403.90 Hypertensive chronic kidney disease, unspecified, with chronic kidney disease stage I through stage IV, or unspecified 404.00 Hypertensive heart and chronic kidney disease, malignant, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified 404.10 Hypertensive heart and chronic kidney disease, benign, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified 404.90 Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified</p> <p>ONLY if codes:</p> <p>38.95 Venous catheterization for renal dialysis 39.27 Arteriovenostomy for renal dialysis 39.29 Other (peripheral) vascular shunt or bypass 39.42 Revision of arteriovenous shunt for renal dialysis 39.43 Removal of arteriovenous shunt for renal dialysis 39.93 Insertion of vessel-to-vessel cannula 39.94 Replacement of vessel-to-vessel cannula</p>

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V4.0	February 20, 2009	Congestive Heart Failure Admission Rate (PQI 8) Numerator (Inclusion)	Indicator Specification	Drop diagnosis codes from numerator inclusion for hypertension with heart disease and/or renal failure (\$ACSCH2D) ONLY for discharges after 2002Q3 (effective Oct 1, 2002) Delete codes: 402.01 Hypertensive heart disease, malignant, with heart failure 402.11 Hypertensive heart disease, benign, with heart failure 402.91 Hypertensive heart disease, unspecified, with heart failure 404.01 Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified 404.03 Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage V or end stage renal disease 404.11 Hypertensive heart and chronic kidney disease, benign, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified 404.13 Hypertensive heart and chronic kidney disease, benign, with heart failure and chronic kidney disease stage V or end stage renal disease 404.91 Hypertensive heart and chronic kidney disease, unspecified, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified 404.93 Hypertensive heart and chronic kidney disease, unspecified, with heart failure and chronic kidney disease stage V or end stage renal disease
V4.0	February 20, 2009	Bacterial Pneumonia Admission Rate (PQI 11) Numerator (Exclusion)	Indicator Specification	Add numerator exclusion for diagnosis code of immunocompromised state (\$IMMUNIP)

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V4.0	February 20, 2009	Cardiac Procedure	Indicator Specification	Add procedure codes to the numerator exclusion for cardiac procedures (\$ACSCARP) Add codes: 37.61 Implant of pulsation balloon 37.62 Insertion of non-implantable heart assist system 37.63 Repair of heart assist system 37.64 Removal of heart assist system 37.65 Implant of external heart assist system 37.66 Insertion of implantable heart assist system
V3.2	March 10, 2008		Coding	There were no changes to ICD-9-CM or DRG codes
V3.2	March 10, 2008	None	Software/ Documents	No change to software or documents
V3.1a	March 16, 2007	SAS Software (PQSASA2)	Software/ Documents	Amended the aggregation algorithm to correctly sum the numerator and denominator counts across stratifiers.
V3.1	March 12, 2007	Software (SAS and Windows), Software Documentation, Guide, and Technical Specifications	Software/ Documents	<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 PQIs 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.
V3.1	March 12, 2007	Covariates. Software (SAS and Windows)	Software/ Documents	Based on recommendations of the Risk Adjustment and Hierarchical Modeling (RAHM) Workgroup, computed covariates using a logistic regression model with an area 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..

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V3.1	March 12, 2007	Software (SAS and Windows), Software Documentation and Covariates document	Software/ Documents	Updated the coefficients used in the calculation of expected and risk-adjusted rates to the 2002-2004 reference population.
V3.1	March 12, 2007	Technical Specifications	Software/ Documents	Moved list of ICD-9-CM codes for cardiac procedure into an Appendix, with links to and from the PQIs that use the codes as a numerator exclusion.
V3.1	March 12, 2007	Guide	Software/ Documents	Moved average volume, provider rates, and population rates into separate document, <i>Prevention Quality Indicators Comparative Data</i>
V3.1	March 12, 2007	Software (SAS and Windows)	Software/ Documents	<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. Modified the A3 syntax to compute risk-adjusted rates and observed-to-expected ratios for the pre-defined set of stratification variables (e.g., age, gender, payer, race) 3. Added option to select whether or not to apply county-level adjustment for Socioeconomic Status (SES) and/or disease prevalence in addition to age and gender.
V3.0b	May 1, 2006	Technical Specifications	Software/ Documents	<ol style="list-style-type: none"> 1. Revised denominator description for PQI #9. 2. Deleted codes 59000 and 59001 from numerator of PQI #10. 3. Corrected code numbers in denominator of PQI #13.
V3.0b	May 1, 2006	All documents	Software/ Documents	Edited PDF files to make URLs in header or footnotes clickable links.
V3.0a	February 20, 2006	Hypertension Admission Rate (PQI 7) (Exclusion)	Coding	Added new (FY2006) codes 00.66 "Percutaneous Transluminal Coronary Angioplasty" and 37.41 "Implantation of prosthetic cardiac support device around the heart" to the cardiac procedure exclusion.

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V3.0a	February 20, 2006	Congestive Heart Failure Admission Rate (PQI 8) (Exclusion)	Coding	Added new (FY2006) codes 00.66 "Percutaneous Transluminal Coronary Angioplasty" and 37.41 "Implantation of prosthetic cardiac support device around the heart" to the cardiac procedure exclusion.
V3.0a	February 20, 2006	Dehydration (PQI 10) Numerator	Coding	Added new (FY2006) codes 276.50 "Volume depletion, unspecified", 276.51 "Dehydration", and 276.52 "Hypovolemia" to the inclusion criteria.
V3.0a	February 20, 2006	Urinary Tract Infection (PQI 12) Numerator (Exclusion)	Coding	Added exclusion for any diagnosis code of kidney/urinary tract disorder and for any diagnosis code of immunocompromised state.
V3.0a	February 20, 2006	Angina without Procedure Admission Rate (PQI 13) (Exclusion)	Coding	Added new (FY2006) codes 00.66 "Percutaneous Transluminal Coronary Angioplasty" and 37.41 "Implantation of prosthetic cardiac support device around the heart" to the cardiac procedure exclusion.
V3.0a	February 20, 2006	Asthma (PQI 15) Numerator (Exclusion)	Coding	Added exclusion for any diagnosis code of cystic fibrosis and anomalies of the respiratory system.
V3.0a	February 20, 2006	Guide, SAS and SPSS Software Documentation	Software/ Documents	<ol style="list-style-type: none"> 1. Removed Appendices that were copies of Change Log and Indicator Changes documents. 2. Added Appendix of Links to all PQI documents and additional resources.
V3.0a	February 20, 2006	Guide	Software/ Documents	<ol style="list-style-type: none"> 1. Added explanation of changes to area definitions and new stratification options. 2. Changed "MSA" to "Metro Area" throughout the document. 3. Added section "Using Different Types of QI rates."

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V3.0a	February 20, 2006	Software, Guide, and Technical Specifications	Software/ Documents	<ol style="list-style-type: none"> 1. Revised denominator of PQI #9 (Low Birth Weight) to define newborn as neonate with age at admission of 0 to 28 days, with ICD-9-CM diagnosis code for in-hospital live birth. 2. Revised numerator of PQI #12 (Urinary Tract Infection) to Add exclusion for any diagnosis code of kidney/urinary tract disorder and for any diagnosis code of immunocompromised state. 3. Revised numerator of PQI #15 (Asthma) to Add exclusion for any diagnosis code of cystic fibrosis and anomalies of the respiratory system.
V3.0a	February 20, 2006	Software (SAS and SPSS) Software Documentation	Software/ Documents	<ol style="list-style-type: none"> 1. Changed name of data element HOSPSTCO to PSTCO. 2. Added parameter POPYEAR to specify year for Census data. 3. Changed name of MSALEVL parameter to MALEVL to reflect the change in OMB definitions for areas, and added options to allow users to specify stratification by county level with U.S. Census FIPS or modified FIPS, or Metro Area with OMB 1999 or OMB 2003 definition.
V3.0a	February 20, 2006	Software (SAS and SPSS)	Software/ Documents	Changed the computation of the risk-adjusted rate to use a proportional formula for indirect standardization.
V3.0a	February 20, 2006	Software (SAS)	Software/ Documents	Added a computation of confidence limits.
V3.0a	February 20, 2006	Software (SAS and SPSS), Software Documentation and Covariates document	Software/ Documents	Updated the coefficients used in the calculation of expected and risk-adjusted rates to the 2003 reference population.
V3.0a	February 20, 2006	Indicator Changes	Software/ Documents	Revised to limit entries to indicator changes made because of changes to ICD-9-CM code updates for FY2006 and moved entries for specification changes into PQI Change Log.
V3.0	November 30, 2005	Guide	Software/ Documents	<ol style="list-style-type: none"> 1. Moved Appendix A into new document <i>Prevention Quality Indicators Technical Specifications</i>. 2. Removed Appendix B.

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V3.0	November 30, 2005	Software (SAS and SPSS), Software Documentation, Guide, Technical Specifications, and Analysis & Interpretation	Software/ Documents	<ol style="list-style-type: none"> 1. Implemented changes associated with ICD-9-CM coding updates for Fiscal Year (FY) 2006 (effective 10-1-2005). See separate documentation on ICD-9 coding updates for specific details. 2. The years for which the ICD-9-CM and DRG codes defining PQIs are valid was amended to be through FY 2006 instead of FY 2005, that is, the codes in the software are effective through September 30, 2006. 3. Dropped PQI #4 and PQI #6, which are being moved into the new Pediatric Quality Indicators module. 4. Revised PQI #2, PQI #10, PQI #11, and PQI #12 to exclude pediatric populations. 5. Added exclusion for cystic fibrosis and anomalies of the respiratory system to PQI #15 (Asthma). 6. Added exclusion for kidney/urinary tract disorder and immunocompromised state to PQI #12 (Urinary Tract Infection).
V3.0	November 30, 2005	Software Documentation (SAS and SPSS)	Software/ Documents	<ol style="list-style-type: none"> 1. Removed section "Interpreting the Results." 2. Table 3 was amended to include the 2004-06 census data and condition-specific module file (i.e., QICTYCy.TXT).
V3.0	November 30, 2005	Software (SAS and SPSS)	Software/ Documents	Added the 2004-06 census data and condition-specific module file (e.g., QICTYCy.TXT)
V2.1 R4	November 24, 2004		Coding	There were no ICD-9-CM or DRG coding changes that affected indicator definitions.
V2.1 R4	November 24, 2004	Software (SAS and SPSS), Software Documentation, and Guide	Software/ Documents	<ol style="list-style-type: none"> 1. The years for which the ICD-9-CM and DRG codes defining PQIs are valid was amended to be through FY 2005 instead of FY 2004, that is, the codes in the software are effective through September 30, 2005. 2. Added new module that calculates condition-specific rates for the diabetes PQIs across stratifiers.
V2.1 R4	November 24, 2004	Software Documentation (SAS and SPSS)	Software/ Documents	Table 3 was amended to include the 2003 census data (i.e., QICTY03.TXT and QICTYA03.TXT) and condition-specific module files (PQSASC2 and QICTYC03.TXT).
V2.1 R4	November 24, 2004	Software (SAS and SPSS)	Software/ Documents	Added the 2003 census data (i.e., QICTY03.TXT and QICTYA03.TXT) and condition-specific module files (PQSASC2 and QICTYC03.TXT)

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V2.1 R4	November 24, 2004	Guide	Software/ Documents	Rearranged the sequence of PQIs to place in numerical order.
V2.1 R4	November 24, 2004	Software (SAS)	Software/ Documents	Inserted "PQ" in format names for age aggregations in SAS programs to distinguish these formats from similarly named formats used by other indicator software.
V2.1 R3	January 9, 2004	Bacterial Pneumonia Admission Rate (PQI 11) Numerator (Exclusion, sickle cell anemia and HB-S disease)	Coding	New codes (FY 2004) 282.41, 282.42, 282.64, 282.68 were added to the numerator exclusion definition of HB-S and sickle cell anemia. This change may result in a comparability issue with previous years since 282.4 was not previously included in the sickle cell definition.
V2.1 R3	January 9, 2004	Adult Asthma Admission Rate (PQI 15) Numerator	Coding	New codes (FY 2004), 493.81 "Exercised Induced Bronchospasm" and 493.82 "Cough Variant Asthma" were added to the numerator definition of asthma
V2.1 R3	January 9, 2004	Pediatric Asthma Admission Rate (PQI 4) Numerator	Coding	New codes (FY 2004), 493.81 "Exercised Induced Bronchospasm" and 493.82 "Cough Variant Asthma" were added to the numerator definition of asthma
V2.1 R3	January 9, 2004	Congestive Heart Failure Admission Rate (PQI 8) Numerator	Coding	The new codes (FY 2003), 428.20-3, "Systolic heart failure," 428.30-3, "Diastolic heart failure," and 428.40-3, "Combined systolic and diastolic heart failure" were added to the including definition of congestive heart failure.

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V2.1 R3	January 9, 2004	Congestive Heart Failure Admission Rate (PQI 8) Numerator (Exclusion, cardiac procedures)	Coding	<ol style="list-style-type: none"> 1. The new code (FY 2003), 36.07, "Insertion of drug-eluting coronary artery stent(s) Endograft(s), Endovascular graft(s), Stent graft(s)" was added to the exclusion definition of cardiac procedures. 2. The new codes (FY 2003), 00.50-00.54, "implantation or replacement of transvenous lead" were added to the exclusion definition of cardiac procedures. 3. All new codes (FY 2004) in the new category heart replacement procedures (37.5), including 37.51, "heart transplantation," 37.52 "implantation of total replacement heart system," 37.53 "replacement or repair of thoracic unit of total replacement heart system," and 37.54 "replacement or repair of other implantable component of total replacement heart system" were added to the numerator exclusion definition of cardiac procedure. Note that 37.5, previously used for heart transplantation procedure is invalid as of October 2003. This code was retained in the software for backward comparability.
V2.1 R3	January 9, 2004	Hypertension Admission Rate (PQI 7) Numerator (Exclusion, cardiac procedures)	Coding	<ol style="list-style-type: none"> 1. The new code (FY 2003), 36.07, "Insertion of drug-eluting coronary artery stent(s) Endograft(s), Endovascular graft(s), Stent graft(s)" was added to the exclusion definition of cardiac procedures. 2. The new codes (FY 2003), 00.50-00.54, "implantation or replacement of transvenous lead" were added to the exclusion definition of cardiac procedures. 3. All new codes (FY 2004) in the new category heart replacement procedures (37.5), including 37.51, "heart transplantation," 37.52 "implantation of total replacement heart system," 37.53 "replacement or repair of thoracic unit of total replacement heart system," and 37.54 "replacement or repair of other implantable component of total replacement heart system" were added to the numerator exclusion definition of cardiac procedure. Note that 37.5, previously used for heart transplantation procedure is invalid as of October 2003. This code was retained in the software for backward comparability.

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V2.1 R3	January 9, 2004	Angina Admission Rate (PQI 13) Numerator (Exclusion, cardiac procedures)	Coding	<ol style="list-style-type: none"> 1. The new code (FY 2003), 36.07, "Insertion of drug-eluting coronary artery stent(s) Endograft(s), Endovascular graft(s), Stent graft(s)" was added to the exclusion definition of cardiac procedures. 2. The new codes (FY 2003), 00.50-00.54, "implantation or replacement of transvenous lead" were added to the exclusion definition of cardiac procedures. 3. All new codes (FY 2004) in the new category heart replacement procedures (37.5), including 37.51, "heart transplantation," 37.52 "implantation of total replacement heart system," 37.53 "replacement or repair of thoracic unit of total replacement heart system," and 37.54 "replacement or repair of other implantable component of total replacement heart system" were added to the numerator exclusion definition of cardiac procedure. Note that 37.5, previously used for heart transplantation procedure is invalid as of October 2003. This code was retained in the software for backward comparability.
V2.1 R3	January 9, 2004	Software (SAS and SPSS) and Guide	Software/ Documents	Implemented changes associated with ICD-9-CM coding updates from Fiscal Year (FY) 2003 (effective 10-1-2002) and FY 2004 (effective 10-1-2003). See separate documentation on ICD-9 coding updates for specific details.

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V2.1 R3	January 9, 2004	Software (SAS and SPSS)	Software/ Documents	<ol style="list-style-type: none"> 1. Angina Admission Rate. The numerator exclusion for patients undergoing any surgical procedure was removed and replaced with a more restrictive exclusion of cardiac procedures, identical to the exclusion list for cardiac procedures included in the CHF Admission Rate and Hypertension Admission Rate Indicators (see below). The rate for the Angina Admission Rate indicator is expected to decrease significantly with this change. 2. CHF Admission Rate, Hypertension Admission rate and Angina Admission Rate. The numerator exclusion of major cardiac surgery was redefined to include only surgeries that would typically be done on an elective or semi-elective basis and therefore represent the indication for admission. This would include valve repair (35.xx), angioplasty and stent placement (36.0x), coronary bypass and other revascularization surgery (36.1x-36.9x), and heart transplantation (37.5). In addition, the list was expanded to include procedures associated with angina, in conjunction with the use of this inclusion in the Angina Admission Rate Indicator. The resulting exclusion is now identical for the three indicators.
V2.1 R3	January 9, 2004	Software (SAS and SPSS)	Software/ Documents	<ol style="list-style-type: none"> 1. All parameter text files were renamed to refer specifically to the PQI module (e.g., use of PQ in file name). These changes are also reflected in the software documentation. 2. All parameter files were rerun using the updated software and Year 2000 HCUP SID data. 3. Population files for 2000, 2001 and 2002 were re-estimated using the latest available census files
V2.1 R3	January 9, 2004	Software – SPSS	Software/ Documents	The treatment of missing data by SPSS was changed to mirror the treatment of missing data by SAS, specifically the software requires confirmation for the assignment of a poor outcome or negative event. For instance, in order to be assigned as a death, each case must actually be coded as a death. Missing data is considered neutral. Missing data for some elements results in the exclusion of that case from the denominator. For a few other elements, the case is retained. Table 5 of the Software Documentation lists the impact of missing data for each data element.

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V2.1 R2	January 10, 2003	Software Documentation (SAS and SPSS)	Software/ Documents	<ol style="list-style-type: none"> 1. Updated documentation to reference the changes made to the software programs such as the change in the default number of ICD-9 diagnosis and procedure codes, the option to stratify area by MSA or county, and instructions for using the patient FIPS code. 2. Modified the data file input specifications to standardize across software programs (SAS and SPSS) so the user would be able to run the same input data file with either statistical package.
V2.1 R2	January 10, 2003	Software (SAS and SPSS)	Software/ Documents	<ol style="list-style-type: none"> 1. The county-to-MSA mapping for Waller County in Texas was corrected by assigning the value of 3362 for the Houston-Galveston MSA. 2. The default number of ICD-9-CM diagnoses was changed from 5 to 30. 3. The default number of ICD-9-CM procedures was changed from 4 to 30. 4. The ICD-9 coding was updated to reflect changes through FY 2002 (September 30, 2002). 5. Added the option for the user to select rates calculated by MSA or by county for urban areas (rates for rural areas will always be by county). 6. Additional ASCII text files with Census residential population numbers for 2000 and 2001 were included in the module. 7. Risk-adjustment inputs that were based on nineteen SID state data files from the year 1997 were replaced with numbers that were based on twenty-nine SID state data files from the year 2000. 8. The formulation of smoothed rates was corrected so that missing values would be generated when appropriate, rather than zeros. 9. Hardcopy printouts were modified to be easier to understand (intermediate means were removed, the final means were restricted to just area-level records, prints of the final results were reformatted and labeled).
V2.1 R2	October 9, 2002	Guide	Software/ Documents	<ol style="list-style-type: none"> 1. The definition for the Perforated appendix admission rate was clarified in appendix A, by moving the ICD-9-CM codes for the population at risk to a separate section that defined the denominator for the rate. 2. The definition of the Low Birthweight indicator was corrected in Appendix A, by removing references to DRG's 370-375.

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V2.1 R1	April 17, 2002	Guide	Software/ Documents	<ol style="list-style-type: none"> 1. The age inclusions for the populations at risk were corrected for the following indicators: bacteria pneumonia, dehydration, urinary tract infection, angina without procedure, CHF, hypertension, adult asthma, COPD, uncontrolled diabetes, diabetes short-term complications, diabetes long-term complications, and lower-extremity amputation among patients with diabetes. In all cases, the descriptions of the indicators in the Guide suggested that the indicator be applied to a specific age group, but suggested that it could be applied to other age groups as well. The software applies the indicator to all relevant age groups; therefore, the Guide was amended to reflect this. 2. For the definition of Lower-Extremity Amputation among Patients with Diabetes, under Outcomes of Interest, "Discharges with ICD-9-CM principal diagnosis codes" was changed to "Discharges with ICD-9-CM procedure codes".
V2.1 R1	April 17, 2002	Software documentation	Software/ Documents	The years for which the ICD-9-CM codes defining PQIs are valid was amended to be through FY 2001 instead of FY 2000, that is, the codes in the software are effective through September 30, 2001.