AHRQ Quality Indicators™

Patient Safety Indicators (PSI) Log of Coding Updates and Revisions
Through Version 2021

Prepared for:

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Contract No. HHSA290201800003G

July 2021

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Log of Coding Updates and Revisions

The following table summarizes the revisions made to the Patient Safety Indicators (PSI) software, software documentation and the technical specification documents in the 2021 version and previous versions since the original release of QI change log documents in April 2002. It also reflects changes to indicator specifications based on updates to ICD-10-CM/PCS codes through Fiscal Year 2021 (effective October 1, 2020) and incorporates coding updates that were implemented in both the SAS and WinQI versions of the PSI software.

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 as:

1. **Fiscal Year (FY) Coding** – occurs because of changes to the most recent fiscal year codes dictated by the Centers for Disease Control and Prevention (CDC) National Center for Health Statistics (NCHS) and Centers for Medicare & Medicaid Services (CMS).
2. **Specification/ Calculation** – may impact the measure result that is something other than the most recent fiscal year coding change.
3. **Software/Documentation** – alteration to the software code to calculate the measure as specified, 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.

All changes noted below have been incorporated into the software programming code, software documentation and the IQI technical specifications. With this software update, the PSI software now incorporates ICD-9-CM, ICD-10 CM/PCS, and DRG/MS-DRG codes valid from October 1, 1994 through September 30, 2021.

The transition from ICD-9-CM to ICD-10-CM/PCS represents substantial differences across the two code sets. Specifications have been carefully reviewed to achieve as much consistency as possible; however, differences are expected to exist between the ICD-9-CM v6.0, the last ICD-9 version of the AHRQ QI measures, and the ICD-10-CM/PCS releases - such as, v2020 and v2021. A detailed explanation of the process of conversion is detailed in http://www.qualityindicators.ahrq.gov/Downloads/Resources/Publications/2013/C.14.10.D001_REVISED.pdf

Note: the change log entries for v6.0 (ICD-10) reflect the changes from v5.0 alpha version of ICD-10 software and not the changes from v5.0 ICD-9-CM version.

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v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI All	Software/ Documentation	**Description:** Added an option in the CONTROL program for users to specify the length and data type of the hospital identifier (HOSPID) found on the input discharge data. The default for HOSPID_TYP is numeric length 5. **Rationale for the change:** Allowing users to specify the attributes of the hospital identifier provides flexibility for users to calculate hospital-level risk-adjusted rates when SAS QI is run with a limited set of discharge records.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI All	Software/ Documentation	**Description:** Added global exclusion for all PSI indicators when MDC equals 15. **Rationale for the change:** Despite pediatric age exclusions built into PSI indicators, some observations with ages greater than 17 have MDC 15 (Newborns & Other Neonates with Conditions Originating in Perinatal Period). Because these observations could be newborn patients, they are excluded from adult QIs.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI All	Specification/ Calculation	**Description:** Implemented an option in the CONTROL program to specify whether major diagnostic categories (MDCs) are provided on discharge records using MDC_PROVIDED value. **Rationale for the change:** Users are required to provide MDC on their input data. If MDC is missing, the software will only calculate numerators, denominators, and observed rates. Expected rates, risk-adjusted rates, smoothed rates, and composites are suppressed when MDC is not provided.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI All	Specification/ Calculation	**Description:** Implemented an option in the CONTROL program to address discharges with an ICD-10-CM diagnosis for COVID-19 and their use in indicator calculation. Users have the following options using COVID_19 values: 1) Exclude COVID discharges from the numerator and denominator 2) Take no action with respect to COVID discharges

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				3) Include only COVID discharges in the numerator and denominator. The recommended and default choice is to exclude COVID-19 discharges. For options 2 and 3 above, the software will suppress expected rates, risk-adjusted rates, smoothed rates, and composites for hospital indicators. **Rationale for the change:** Because the 2018 HCUP reference population pre-dates the public health emergency, it does not provide an accurate representation of COVID-19 discharges that is required for risk-adjustment. Therefore, users can only calculate expected, risk-adjusted, smoothed rates, or composites when they select the default option to exclude COVID-19 discharges.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI All	Software/ Documentation	**Description:** Updated AHRQ's Elixhauser Comorbidity Software Refined for ICD-10-CM Diagnoses Tool used in the PSI module **Rationale for the change:** Select Elixhauser Comorbidity Software Refined comorbidities (https://www.hcup-us.ahrq.gov/toolssoftware/comorbidityicd10/comorbidity_icd10.jsp) are included in certain risk-adjustment models.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI All	Specification/ Calculation	**Description:** Capped smoothed rates to 1 if values exceeds 1 **Rationale for the change:** Observed rates cannot exceed 1 (the value where the numerator is equal to the denominator). Since risk adjusted and smoothed rates should be reflective of actual rates, they also should not exceed 1. The upper limit of 1 is imposed in cases where, under normal circumstances, the risk adjustment or smoothing function results in a rate that slightly exceeds 1.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI All	Specification/ Calculation	**Description:** For hospital-level indicators, the expected value, EHAT, is now capped at a value of 0.99 **Rationale for the change:**

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				The probability of an event is naturally bounded by 0 and 1 and is unlikely to be exactly 1; therefore, to avoid a negative value when calculating variance, an upper bound for EHAT at 0.99 was implemented.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI All	Specification/ Calculation	**Description:** Expected rates, risk-adjusted rates, smoothed rates, and composites are suppressed in certain strata for hospital level indicators. **Rationale for the change:** AHRQ SAS QI software users continue to have the option to produce stratified rates. Because age, gender, age in days, and birth weight are used in risk adjustment models, it is inappropriate to produce risk-adjusted rates for any stratum that includes these variables.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 04, PSI 09, PSI 10, PSI 11, PSI 12, PSI 14, PSI 15	Specification/ Calculation	**Description:** For users that set PRDAY = 0 in the CONTROL program, the PSI module will suppress expected rates, risk-adjusted rates, smoothed rates, and composites for indicators that use PRDAYn information. **Rationale for the change:** PRDAY information is required for some indicators in PSI module specifications. Users should set the PRDAY macro variable to '0' in the PSI CONTROL program when PRDAYn is missing or incomplete on the input data.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 03	Specification/ Calculation	**Description:** Change PSI 03 denominator exclusion to remove cases where DTI is non-POA but all pressure ulcer is POA. This is implemented through the format DTID. 25 codes in the new setname. **Rationale for the change:** correct indicator calculation to be consistent with the intent of the indicator.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 04	Specification/ Calculation	**Description:** Revised the order of the PSI 04 strata hierarchy to shock, sepsis, pneumonia, GI hemorrhage, and DVT/PE. **Rationale for the change:**

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				If a patient meets the denominator criteria for more than one stratum, this change prioritizes the patient into the higher risk stratum.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 04	Specification/ Calculation	**Description:** Add requirement that the FTR5PR procedures should be ON OR AFTER the date of the index procedure (ORPROC) to quality for this stratum, SHOCK. **Rationale for the change:** Denominator stratum SHOCK focuses on discharges with diagnosis codes for shock or cardiac arrest (FTR5DX) or a procedure code for shock or cardiac arrest (resuscitation) (FTR5PR). Based on a user suggestion, this refinement requires FTR5PR procedures to occur on or after the date of the index operating room procedure to qualify for PSI 04 SHOCK stratum.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 04	Specification/ Calculation	**Description:** DNR (code Z66) is now used in risk-adjustment for PSI 04 strata. **Rationale for the change:** Lifesaving intervention goes against patient's documented preference.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 04	Specification/ Calculation	**Description:** Change variable names for SEVERE and ANY stratum variables to be more descriptive. **Rationale for the change:** Updated names for the SEVERE and ANY variables in PSI 04 strata to avoid confusion between these variables and risk adjustment output.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 03, PSI 04, PSI 05, PSI 06, PSI 07, PSI 08, PSI 09, PSI 10, PSI 11, PSI 12, PSI 13, PSI 15	Software/ Documentation	**Description:** Categorize discharges as surgical discharges using fiscal year dependent code sets SURGI2R or SURGI2R_PREV **Rationale for the change:** Since Medicare Severity Diagnosis Related Groups (MS-DRGs) are fiscal year dependent, this functionality allows certain MS-DRGs to be categorized as surgical DRGs for fiscal years 2020 and prior.
v2021	July 2021	PSI 08	Specification/	**Description:**

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(ICD-10) for SAS QI & WinQI			Calculation	Remove the following exclusions from PSI 08 denominator: SEIZUID, SYNCOID, STROKID, COMAID, CARDIID, POISOID, TRAUMID, DELIRID, ANOXIID, METACID, LYMPHID, BONEMID Note: codes described by CARDIID and TRAUMID are used for other indicators. **Rationale for the change:** Denominator exclusions should exclude cases that are false positives, cases with doubtful preventability, or other cases with face validity concerns. To refocus the QIs on quality improvement, several exclusions that do not meet these criteria are removed from denominator. This variation in risk will be handled through risk adjustment.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 08	Specification/ Calculation	**Description:** Remove the PSI 08 denominator criteria requiring at least one operating room procedure. **Rationale for the change:** This criterion was incorrect, given that the intention of the denominator is to cover all medical and surgical discharges.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 09	Software/ Documentation	**Description:** Change name of PSI 09 to “Postoperative Hemorrhage or Hematoma Rate” **Rationale for the change:** ICD-10-CM codes no longer allow preoperative or intraoperative hemorrhage or hematoma
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 11	Specification/ Calculation	**Description:** Remove logic where discharges with missing PRDAY information were, by default, assigned as numerator events given other denominator criterion were satisfied. **Rationale for the change:** The previous logic overestimated numerator events for this measure.
v2021 (ICD-10) for	July 2021	PSI 11	Specification/ Calculation	**Description:** Removed the denominator exclusion for MDC 5 diseases/disorders of

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SAS QI & WinQI				the circulatory system **Rationale for the change:** Denominator exclusions should exclude cases that are false positives, cases with doubtful preventability, or other cases with face validity concerns. To refocus the QIs on quality improvement, several exclusions that do not meet these criteria are removed from denominator. This variation in risk will be handled through risk adjustment.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 14	Specification/ Calculation	**Description:** Remove the following exclusions from PSI 14 denominator: IMMUNID, IMMUNIP **Rationale for the change:** Denominator exclusions should exclude cases that are false positives, cases with doubtful preventability, or other cases with face validity concerns. To refocus the QIs on quality improvement, several exclusions that do not meet these criteria are removed from denominator. This variation in risk will be handled through risk adjustment.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 15	Fiscal Year Coding	**Description:** Abdominopelvic surgery, procedure codes (ABDOMI15P) 195 codes added, 39 codes removed **Rationale for change:** Annual coding updates.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 14	Fiscal Year Coding	**Description:** Abdominopelvic surgery, open approach, procedure codes (ABDOMIPOPEN) 56 codes added, 2 codes removed **Rationale for change:** Annual coding updates.
v2021	July 2021	PSI 14	Fiscal Year Coding	**Description:**

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(ICD-10) for SAS QI & WinQI				Abdominopelvic surgery, other approach, procedure codes (ABDOMIPOTHER) 139 codes added, 5 codes removed **Rationale for change:** Annual coding updates.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 04	Fiscal Year Coding	**Description:** Alcoholism diagnosis codes (ALCHLSM) 8 codes added **Rationale for change:** Annual coding updates.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 02, PSI 07	Fiscal Year Coding	**Description:** Cancer diagnosis codes (CANCEID) 105 codes removed **Rationale for change:** Annual coding updates.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 06	Fiscal Year Coding	**Description:** Potentially trans-pleural cardiac procedures (CARDSIP) 63 codes added, 7 codes removed **Rationale for change:** Annual coding updates.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 09	Fiscal Year Coding	**Description:** Coagulation disorders diagnosis codes (COAGDID) 2 codes added **Rationale for change:** Annual coding updates.
v2021 (ICD-10) for	July 2021	PSI All	Specification/ Calculation	**Description:** New setname for COVID diagnosis codes for use from Q2 2020 on

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SAS QI & WinQI				(COVIDD) used to identify cases for optional exclusion of all hospital indicators. The CONTROL program flag COVID_19 defines the optional exclusion. **Rationale for change:** Added setname to capture newly released diagnosis codes for documenting cases of COVID-19.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI All	Specification/ Calculation	**Description:** New setname for COVID diagnosis codes for use during Q1 2020 (COVIDQ120D) used to identify cases for optional exclusion of all hospital indicators. The CONTROL program flag COVID_19 defines the optional exclusion. **Rationale for change:** Added setname to capture newly released diagnosis codes for documenting cases of COVID-19.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 02	Fiscal Year Coding	**Description:** MS-DRG to Modified DRG (DRGF2T) 12 codes added, 11 code result values changed **Rationale for change:** Annual coding updates.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 04	Specification/ Calculation	**Description:** Viral pneumonia or influenza diagnosis codes (FTR3EXB) 1 code added - Pneumonia due to coronavirus disease 2019 (J12.82) **Rationale for change:** Identify conditions resulting from COVID-19
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 04	Fiscal Year Coding	**Description:** Gastrointestinal hemorrhage or acute ulcer diagnosis codes (FTR6DX) 3 codes added

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				Rationale for change: Annual coding updates.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 04	Fiscal Year Coding	**Description:** Qualifying diagnoses associated with a diagnosis of esophageal varices with bleeding (FTR6QD) 3 codes added **Rationale for change:** Annual coding updates.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 04	Fiscal Year Coding	**Description:** Gastrointestinal hemorrhage diagnosis codes for PSI 04 (GASTRID) 14 codes added **Rationale for change:** Annual coding updates.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 09	Fiscal Year Coding	**Description:** Control of hemorrhage and evacuation of hematoma procedures (HEMOTH2P) 8 codes added **Rationale for change:** Annual coding updates.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 02, PSI 07, PSI 14	Fiscal Year Coding	**Description:** Immunocompromised state diagnosis codes (IMMUNID) 4 codes added, 5 codes removed **Rationale for change:** Annual coding updates.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 02, PSI 07, PSI 14	Fiscal Year Coding	**Description:** Immunocompromised state procedure codes (IMMUNIP) 10 codes added, 9 codes removed

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				Rationale for change: Annual coding updates.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 04, PSI 13	Fiscal Year Coding	**Description:** Infection diagnosis codes (INFECID) 145 codes added **Rationale for change:** Annual coding updates.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 02	Fiscal Year Coding Specification/ Calculation	**Description:** Low-mortality (less than 0.5%) MS-DRG codes (LOWMODR) 4 codes added, 5 codes removed **Rationale for change:** The LOWMODR setname is updated each year by the observed mortality in the two most recent years of data available. For v2021, 2017 and 2018 HCUP reference population data were used to re-calculate mortality. Along with clinical review and statistical examination, the LOWMODR setname is updated to reflect conditions with low mortality for all MS-DRGs within an MDRG. Note that, in v2021, MDRGs were remapped to account for fiscal year coding changes, which may have also impacted the final LOWMODR list..
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 04, PSI 11	Specification/ Calculation	**Description:** Lung cancer procedure codes (LUNGCIP) 44 codes added **Rationale for change:** Add procedure codes for resections and excisions involving the bronchi, diaphragm, rib cage, or chest wall to the LUNCIP denominator exclusion. These procedures may result in prolonged intubations or reintubations.
v2021 (ICD-10) for SAS QI &	July 2021	PSI 11	Specification/ Calculation	**Description:** Lung transplant procedure codes (LUNGTRANSP) 3 codes added

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WinQI				**Rationale for change:** Add heart transplant codes to the LUNGTRANSP denominator exclusion. These procedures may result in prolonged intubations or reintubations.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 03, PSI 04, PSI 06, PSI 08, PSI 09, PSI 10, PSI 11, PSI 12, PSI 13, PSI 14, PSI 15, PSI 19	Fiscal Year Coding	**Description:** MS-DRG TO MDC (MDCF2T) 12 codes added **Rationale for change:** Annual coding updates.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 03, PSI 05, PSI 06, PSI 07, PSI 08, PSI 15	Fiscal Year Coding	**Description:** Medical discharge MS-DRGs (MEDIC2R) 4 codes added, 10 code result values changed **Rationale for change:** Annual coding updates.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 11	Fiscal Year Coding	**Description:** Neuromuscular disorders diagnosis codes (NEUROMD) 5 codes added **Rationale for change:** Annual coding updates.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 04, PSI 08, PSI 09, PSI 10, PSI 11, PSI 12, PSI 13	Specification/ Calculation Fiscal Year Coding	**Description:** Operating room procedure codes (ORPROC) 2901 codes added **Rationale for change:** Coding updates based on clinical review, in addition to updates due to fiscal year coding changes and code retirements.
v2021 (ICD-10) for	July 2021	PSI 03, PSI 05, PSI 06, PSI 07, PSI 08,	Fiscal Year Coding	**Description:** Added POA Exempt ICD-10-CM diagnosis codes, Version 38 Format

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SAS QI & WinQI		PSI 09, PSI 10, PSI 11, PSI 12, PSI 13, PSI 14, PSI 15		(POAXMPT_V38FMT). New codes are defined by CMS at https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/HospitalAcqCond/Coding **Rationale for the change:** Annual coding updates.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 11	Specification/ Calculation	**Description:** Esophageal resection procedure codes (PRESOPP) 6 codes added **Rationale for change:** Add esophageal replacement codes to the PRESOPP denominator exclusion, These procedures may result in prolonged intubations or reintubations.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 03, PSI 04, PSI 05, PSI 06, PSI 07, PSI 08, PSI 09, PSI 10, PSI 11, PSI 12, PSI 13, PSI 15	Fiscal Year Coding	**Description:** Surgical discharge MS-DRGs (SURGI2R) 11 codes added, 3 codes removed **Rationale for change:** Annual coding updates.
v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 03, PSI 04, PSI 05, PSI 06, PSI 07, PSI 08, PSI 09, PSI 10, PSI 11, PSI 12, PSI 13, PSI 15	Specification/ Calculation	**Description:** New setname for Fiscal Year Dependent Surgical MS-DRGs for prior to FY2021 codes (SURGI2R_PREV) **Rationale for the change:** The Centers for Medicare & Medicaid Services (CMS) identified MS-DRGs 014, 016, and 017 as Medical instead of Surgical in FY 2021. This change is reflected in AHRQ's v2021 software (Appendix E: SURGI2R; Appendix C: MEDIC2R). For discharges prior to October 1, 2020, the QI software automatically uses both SURGI2R and SURGI2R_PREV (Appendix E) to identify records in these three MS-DRGs as Surgical instead of Medical, ensuring consistency with CMS' contemporaneous classification.

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v2021 (ICD-10) for SAS QI & WinQI	July 2021	PSI 06	Fiscal Year Coding and Specification/ Calculation	**Description:** Thoracic surgery procedure codes (THORAIP) 924 codes added, 308 codes removed **Rationale for change:** Annual coding updates, and coding enhancements to address exclusion criteria and remove overlap with setname CARDSIP.
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI All	Specification/ Calculation	**Description:** Deleted records where DRG is assigned the value 999 **Rationale for change:** DRG 999 is assigned to records that are considered ungroupable based on information provided on the discharge record.
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI All	Specification/ Calculation	**Description:** Added an option to specify whether observed to expected (O-E) ratio smoothing is calibrated to the reference population or the user's data. The default and recommended option is to the reference population. **Rationale for change:** Allows large health care systems or states to calibrate expected QI rates within the system.
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI All	Fiscal Year Coding	**Description:** Updated MS-DRG to MDC mapping (MDCF2T) **Rationale for change:** Annual coding update
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI All	Fiscal Year Coding	**Description:** Added POA exempt codes for the fiscal year 2020 update to V37 (POAXMPT_V37FMT). New codes are defined by CMS at https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/HospitalAcqCond/Coding **Rationale for change:**

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				Annual coding update
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 03, 05, 06, 07, 08, 09, 10, 11, 12, 13, 15	Specification/ Calculation	**Description:** Removed the small number of numerator exclusions described as "otherwise qualifying for the numerator/denominator criteria" in previous versions of the software. **Rationale for change:** POA dependent exclusions were switched from numerator to strictly denominator exclusions. Associated variables remain in the program in case they are needed for future for POA exclusions.
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 15	Fiscal Year Coding	**Description:** Updated codes for surgical discharge (SURGI2R) based on DRGs **Rationale for change:** Annual coding update
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 02, 07, 14	Fiscal Year Coding	**Description:** Added codes D8130, D8131, D8132, D8139 to diagnosis codes for immunocompromised state (IMMUNID) **Rationale for change:** Annual coding update
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 02, 07, 14	Fiscal Year Coding	**Description:** Updated procedure codes for immunocompromised state (IMMUNIP) **Rationale for change:** Annual coding update
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 02, 04, 08	Fiscal Year Coding	**Description:** Updated Trauma diagnosis codes (TRAUMID) **Rationale for change:** Annual coding update
v2020	July 2020	PSI 04, 08, 09, 10,	Fiscal Year Coding	**Description:**

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(ICD-10) for SAS QI & WinQI		11, 12		Updated Operating room procedure codes (ORPROC) **Rationale for change:** Annual coding update
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 04, 11	Fiscal Year Coding	**Description:** Updated Lung cancer procedure codes (LUNGCIP) **Rationale for change:** Annual coding update
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 04, 13	Fiscal Year Coding	**Description:** Updated Infection diagnosis codes (INFECID) **Rationale for change:** Annual coding update
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 02	Fiscal Year Coding	**Description:** Updated MS-DRGs to Modified DRG mapping (DRGF2T) **Rationale for change:** Annual coding update
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 02	Fiscal Year Coding	**Description:** Updated codes for Low-mortality (less than 0.5%) MS-DRG codes (LOWMODR) **Rationale for change:** Annual coding update
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 03	Specification/ Calculation	**Description:** New setname Pressure ulcer stage diagnosis codes exclusions (DECUBEXD) **Rationale for change:** Added new setname to differentiate between the setname used to define the PSI 03 numerator (DECUBVD) and the setname used for PSI 03

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				exclusions (DECUBEXD)
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 04	Specification/ Calculation	**Description:** Add the GI_HEMORRHAGE stratum exclusions of a secondary diagnosis code for esophageal varices with bleeding (FTR6GV: I85.11), and with a principal diagnosis code for qualifying diagnoses associated with a diagnosis of esophageal varices with bleeding (FTR6QD) **Rationale for change:** Under the shock stratum GI bleed as the principle diagnosis is an exclusion. The problem is with esophageal varices where the coding guideline require that the underlying condition causing the varices be coded 1st with the varices as a secondary diagnosis, so this exclusion will never be met for the shock stratum. Either I85.11 should be removed from GASTRIID or a separate qualification should be added.
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 04	Software/ Documentation	**Description:** New setname for Severe gastrointestinal hemorrhage or acute ulcer diagnosis codes (SEVGIHDX) **Rationale for change:** Added setname for risk factor included in PSI 04 GI hemorrhage risk adjustment models. Prior to v2020, these were hard coded into the PSI_ALL_MEASURES.sas program.
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 04	Software/ Documentation	**Description:** New setname for Severe pulmonary embolism or deep vein thrombosis diagnosis codes (SEVDPEDX) **Rationale for change:** Added setname for risk factor included in PSI 04 PE/DVT risk adjustment models. Prior to v2020, these were hard coded into the PSI_ALL_MEASURES.sas program.
v2020 (ICD-10) for SAS QI &	July 2020	PSI 04	Software/ Documentation	**Description:** New setname for Severe pneumonia diagnosis codes (SEVPNEUDX)

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WinQI				**Rationale for change:** Added setname for risk factor included in PSI 04 pneumonia risk adjustment models. Prior to v2020, these were hard coded into the PSI_ALL_MEASURES.sas program.
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 04	Software/ Documentation	**Description:** New setname for Severe shock or cardiac arrest diagnosis codes (SEVSCKDX) **Rationale for change:** Added setname for risk factor included in PSI 04 shock risk adjustment models. Prior to v2020, these were hard coded into the PSI_ALL_MEASURES.sas program.
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 04	Software/ Documentation	**Description:** New setname for Severe sepsis diagnosis codes (SEVSEPDX) **Rationale for change:** Added setname for risk factor included in PSI 04 sepsis risk adjustment models. Prior to v2020, these were hard coded into the PSI_ALL_MEASURES.sas program.
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 04	Fiscal Year Coding	**Description:** Updated Pulmonary embolism or deep vein thrombosis diagnosis codes (FTR2DXB) **Rationale for change:** Annual coding update
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 04	Fiscal Year Coding	**Description:** Added T8144XA to Sepsis diagnosis codes (FTR4DX) **Rationale for change:** Annual coding update
v2020 (ICD-10) for SAS QI &	July 2020	PSI 06	Fiscal Year Coding	**Description:** Updated Cardiac procedure codes (CARDSIP)

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WinQI				**Rationale for change:** Annual coding update
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 06	Fiscal Year Coding	**Description:** Updated Pleural effusion diagnosis codes (PLEURAD) **Rationale for change:** Annual coding update
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 06	Fiscal Year Coding	**Description:** Updated Thoracic surgery procedure codes (THORAIP) **Rationale for change:** Annual coding update
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 08	Software/ Documentation	**Description:** New setname Joint prostheses associated fracture diagnosis codes (PROSFXID) use as an exclusion **Rationale for change:** In response to user inquiry, added new setname for PSI 08 exclusion to avoid including patients in the denominator that did not fall.
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 09	Fiscal Year Coding	**Description:** Updated Control of perioperative hemorrhage and evacuation of hematoma procedures (HEMOTH2P) **Rationale for change:** Annual coding update
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 10	Fiscal Year Coding	**Description:** Updated Bypass Left Axillary Artery to Lower Arm Vein with Autologous Arterial Tissue, Open Approach (DIALY2P) **Rationale for change:** Annual coding update

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v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 10	Fiscal Year Coding	**Description:** Updated Urinary tract obstruction diagnosis codes (URINARYOBSID) **Rationale for change:** Annual coding update
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 11	Fiscal Year Coding	**Description:** Added Z9911 and Z9912 to Acute respiratory failure diagnosis codes (ACURF3D) use as an exclusion **Rationale for change:** Annual coding update
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 11	Specification/ Calculation	**Description:** New setname Malignant Hyperthermia diagnosis codes (MALHYPD) use as an exclusion **Rationale for change:** Prolonged intubation is part of the treatment for malignant hyperthermia due to anesthesia, T88.3xxA (for initial encounter).
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 11	Fiscal Year Coding	**Description:** Updated Laryngeal, pharyngeal, nose, mouth and pharynx surgery procedure codes (NUCRANP) **Rationale for change:** Annual coding update
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 11	Fiscal Year Coding	**Description:** Updated Esophageal resection procedure codes (PRESOPP) **Rationale for change:** Annual coding update
v2020 (ICD-10) for SAS QI &	July 2020	PSI 11	Specification/ Calculation	**Description:** New setname for Tracheostomy status diagnosis codes (TRACHID). Use as exclusion when POA.

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WinQI				**Rationale for change:** Include chronic diminished mental status and/or patients with a history of tracheostomy to the list of excluded neurologic diagnoses
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 12	Fiscal Year Coding	**Description:** Updated Chest trauma diagnosis codes (DEEPVIB) **Rationale for change:** Annual coding update
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 12	Fiscal Year Coding	**Description:** Updated Extracorporeal membrane oxygenation (ECMO) procedure codes (ECMOP) **Rationale for change:** Annual coding update
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 12	Software/ Documentation	**Description:** Updated Acute brain or spinal injury diagnosis codes (NEURTRAD) **Rationale for change:** Removed code for skull fracture (S02XXA) based on conceptual review of setname
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 12	Fiscal Year Coding	**Description:** Added I2694 to Pulmonary embolism diagnosis codes (PULMOID) **Rationale for change:** Annual coding update
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 13	Fiscal Year Coding	**Description:** Added T8144XA to Sepsis diagnosis codes (SEPTI2D) **Rationale for the change:** Annual coding update
v2020	July 2020	PSI 14	Fiscal Year Coding	**Description:**

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(ICD-10) for SAS QI & WinQI				Updated Abdominopelvic surgery, open approach, procedure codes (ABDOMIPOPEN) **Rationale for change:** Annual coding update
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 14	Fiscal Year Coding	**Description:** Updated Abdominopelvic surgery, other approach, procedure codes (ABDOMIPOTHER) **Rationale for change:** Annual coding update
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 15	Fiscal Year Coding	**Description:** Updated Accidental puncture or laceration during a procedure diagnosis codes: (ABDOMI15P) **Rationale for change:** Annual coding update
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 15	Software/ Documentation	**Description:** Updated measure name; removed "Unrecognized" from Abdominopelvic Accidental Puncture or Laceration Rate **Rationale for change:** Renamed PSI 15 to avoid the implication that every flagged event was unrecognized at the time that it occurred.
v2020 (ICD-10) for SAS QI & WinQI	July 2020	PSI 16	Software/ Documentation	**Description:** Removed format: TRANFID; measure retired in prior version. **Rationale for change:** Remove formats that are no longer relevant
v2019 (ICD-10) for SAS QI & WinQI	August 2019	PSI	Software/ Documentation change	**Description:** Added technical assistance to apply MS-DRG grouper to input file in the release note within the software package.

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				Rationale for the change: In the case that the user does not have MDC assigned for pre-MDC MS-DRGs (e.g., transplants), the user is required to run the public version of the MS-DRG software. The correct classification of MDC is important for PSI risk-adjustment
v2019 (ICD-10) for SAS QI & WinQI	August 2019	PSI	Specification/ Calculation	**Description:** Removed PSI_AREA_OBSERVED.sas program and census population file from the module. **Rationale for the change:** Removed as there are no longer any area-level PSI indicators in v2019.
v2019 (ICD-10) for SAS QI & WinQI	August 2019	PSI	Fiscal Coding Updates	**Description:** Updated POA exempt list. **Rationale for the change:** Annual coding update
v2019 (ICD-10) for SAS QI & WinQI	August 2019	PSI All	Specification/ Calculation	**Description:** Updated Elixhauser comorbidity software. **Rationale for the change:** Measure maintenance and coding updates
v2019 (ICD-10) for SAS QI & WinQI	August 2019	PSI All	Fiscal Coding Updates	**Description:** Added MS-DRG codes for MDC 14. **Rationale for the change:** Annual coding updates.
v2019 (ICD-10) for SAS QI & WinQI	August 2019	PSI All	Software/ Documentation change	**Description:** Updated the PSI_Comorbid_Format_v20191.sas file, which is based on the Elixhauser comorbidity format version 3.7. **Rationale for the change:** Measure maintenance and annual coding updates.
v2019 (ICD-10) for SAS QI & WinQI	August 2019	PSI	Specification/ Calculation	**Description:** Updated AGE_SEX risk-adjustment coefficients and removed all other coefficient combinations. **Rationale for the change:** The hospital-level QI software only produces risk-adjusted rates with

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				age and sex data starting with v2019.
v2019 (ICD-10) for SAS QI & WinQI	August 2019	PSI	Software/ Documentation change	**Description:** Renamed stratified indicators to include clinical concept in naming convention: PSI 04, PSI 14, IQI 11, and IQI 17. **Rationale for the change:** Measure maintenance and annual coding updates.
v2019 (ICD-10) for SAS QI & WinQI	August 2019	PSI 02	Specification/ Calculation	**Description:** Updated codes for cancer (CANCEID). **Rationale for the change:** Measure maintenance and coding updates
v2019 (ICD-10) for SAS QI & WinQI	August 2019	PSI 02	Fiscal Coding Updates	**Description:** Updated the list of modified DRG codes associated with low-mortality DRGs (LOWMODR) to define the denominator. **Rationale for the change:** Measure maintenance and annual coding updates
v2019 (ICD-10) for SAS QI & WinQI	August 2019	PSI 03, 05-15	Specification/ Calculation	**Description:** Updated list of surgical DRGs (SURGI2R) and descriptions. In addition, removed ICD-9-CM/PCS specific MS-DRGs. **Rationale for the change:** Measure maintenance and annual coding updates.
v2019 (ICD-10) for SAS QI & WinQI	August 2019	PSI 03, 05, 06, 07, 08, 15	Specification/ Calculation	**Description:** Updated list of medical DRGs (MEDIC2R) and descriptions. **Rationale for the change:** Measure maintenance and annual coding updates.
v2019 (ICD-10) for SAS QI & WinQI	August 2019	PSI 04, 08, 09, 10, 11, 12, 13	Fiscal Coding Updates	**Description:** Updated codes for infections and operating room procedures (ORPROC) **Rationale for the change**: Measure maintenance and annual coding updates.
v2019 (ICD-10) for SAS QI	August 2019	PSI 04	Fiscal Coding Updates	**Description:** Added and updated Infection diagnosis codes (INFECID)

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& WinQI				**Rationale for the change:** Measure maintenance and annual coding updates.
v2019 (ICD-10) for SAS QI & WinQI	August 2019	PSI 06	Fiscal Coding Updates	**Description:** Updated codes for cardiac surgery procedure lists (CARDSIP) **Rationale for the change:** Measure maintenance and annual coding updates.
v2019 (ICD-10) for SAS QI & WinQI	August 2019	PSI 06	Fiscal Coding Updates	**Description:** Updated codes for thoracic surgery procedure lists (THORAIP) **Rationale for the change:** Measure maintenance and annual coding updates.
v2019 (ICD-10) for SAS QI & WinQI	August 2019	PSI 07	Fiscal Coding Updates	**Description:** Updated codes for cancer (CANCEID) **Rationale for the change:** Measure maintenance and annual coding updates.
v2019 (ICD-10) for SAS QI & WinQI	August 2019	PSI 08	Fiscal Coding Updates	**Description:** Updated coding for stroke and occlusion of arteries and operating room procedures (STROKID). **Rationale for the change:** Measure maintenance and annual coding updates.
v2019 (ICD-10) for SAS QI & WinQI	August 2019	PSI 08	Fiscal Coding Updates	**Description:** Updated codes for delirium and other psychoses (DELIRID). **Rationale for the change:** Measure maintenance and annual coding updates.
v2019 (ICD-10) for SAS QI & WinQI	August 2019	PSI 08	Fiscal Coding Updates	**Description:** Updated codes for poisoning diagnoses (POISOID). **Rationale for the change:** Measure maintenance and annual coding updates.
v2019 (ICD-10) for SAS QI & WinQI	August 2019	PSI 09	Fiscal Coding Updates	**Description:** Updated codes for control of perioperative hemorrhage and evacuation of hematoma procedures (HEMOTH2P). **Rationale for the change:**

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				Measure maintenance and annual coding updates.
v2019 (ICD-10) for SAS QI & WinQI	August 2019	PSI 10	Fiscal Coding Updates	**Description:** Updated coding for urinary tract obstruction diagnosis codes (URINARYOBSID). **Rationale for the change:** Measure maintenance and annual coding updates.
v2019 (ICD-10) for SAS QI & WinQI	August 2019	PSI 10	Fiscal Coding Updates	**Description:** Updated coding for dialysis access procedure code (DIALY2P). **Rationale for the change:** Measure maintenance and annual coding updates.
v2019 (ICD-10) for SAS QI & WinQI	August 2019	PSI 11	Fiscal Coding Updates	**Description:** Updated codes for neuromuscular disorders diagnosis codes (NEUROMD) . **Rationale for the change:** Measure maintenance and annual coding updates.
v2019 (ICD-10) for SAS QI & WinQI	August 2019	PSI 12	Fiscal Coding Updates	**Description:** Updated codes for acute brain or spinal injury diagnosis codes (NEURTRAD). **Rationale for the change:** Measure maintenance and annual coding updates.
v2019 (ICD-10) for SAS QI & WinQI	August 2019	PSI 12	Fiscal Coding Updates	**Description:** Updated codes for extracorporeal membrane oxygenation (ECMO) procedure codes (ECMOP). **Rationale for the change:** Measure maintenance and annual coding updates.
v2019 (ICD-10) for SAS QI & WinQI	August 2019	PSI 13	Fiscal Coding Updates	**Description:** Updated list of infection diagnoses (INFECID). **Rationale for the change:** Measure maintenance and annual coding updates.

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v2019 (ICD-10) for SAS QI & WinQI	August 2019	PSI 14	Fiscal Coding Updates	**Description:** Updated list of abdominopelvic open, abdominopelvic other than open, and operating room procedure codes (ABDOMIPOPEN). **Rationale for the change:** Measure maintenance and annual coding updates.
v2019 (ICD-10) for SAS QI & WinQI	August 2019	PSI 15	Specification/ Calculation	**Description:** Updated list of abdominopelvic and operating room procedures (ABDOMI15P). **Rationale for the change:** Measure maintenance and annual coding updates.
v2019 (ICD-10) for SAS QI & WinQI	August 2019	PSI 16	Specification/ Calculation	**Description:** Indicator removed from software and documentation. **Rationale for the change:** Indicator retired in v2019
v2019 (ICD-10) for SAS QI & WinQI	August 2019	PSI17	Specification/ Calculation	**Description:** Removed formats AGEFMT and POPCAT from software. **Rationale for the change:** Measure maintenance and annual coding updates.
v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 02, PSI 07	Fiscal Year Coding	**Description:** Added ICD10-CM codes for Aggressive systemic mastocytosis, C9621, Malignant mast cell neoplasm, unspecified, C9620, Mast cell sarcoma, C9622, Other malignant mast cell neoplasm, C9629, to existing denominator for exclusion (CANCEID). **Rationale for the change:** Annual coding update
v2018 (ICD-10) for SAS QI &	April 2018	PSI 02, PSI 07, PSI 14, PSI 04	Fiscal Year Coding	**Description:** Added ICD10-CM codes for Cutaneous mastocytosis, D4701, and Systemic mastocytosis, D4702, to existing denominator for exclusion (IMMUNID).

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WinQI				**Rationale for the change:** Annual coding update
v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 02, PSI 07, PSI 14, PSI 04	Fiscal Year Coding	**Description:** Added ICD10-CM code for Other mast cell neoplasms of uncertain behavior, D4709, to existing denominator for exclusion (IMMUNID). **Rationale for the change:** Annual coding update
v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 02, PSI 08, PSI 04	Fiscal Year Coding	**Description:** Added ICD10-CM codes for Injury, unspecified, initial encounter, T1490XA, Other injury of unspecified body region, initial encounter, T148XXA, Suicide attempt, initial encounter, T1491XA, Unspecified multiple injuries, initial encounter, T07XXXA, to existing denominator for exclusion (TRAUMID). **Rationale for the change:** Annual coding update
v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 04	Fiscal Year Coding	**Description:** Added ICD10-CM code for Alcohol abuse, in remission, F10.11, to existing denominator for exclusion (ALCHLSM). **Rationale for the change:** Annual coding update
v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 04	Fiscal Year Coding	**Description:** Added ICD10-CM code for Cutaneous mastocytosis, D4701, to existing denominator for exclusion (IMMUNID). **Rationale for the change:** Annual coding update
v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 06	Fiscal Year Coding	**Description:** Added ICD10-PCS codes to the existing denominator exclusion for cardiac procedure (CARDSIP). **Rationale for the change:** Annual coding update
v2018	April 2018	PSI 06	Fiscal Year Coding	**Description:** Added ICD10-PCS codes to the existing denominator exclusion for

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(ICD-10) for SAS QI & WinQI				Thoracic surgery (THORAIP). **Rationale for the change:** Annual coding update
v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 06	Specification/ Calculation	**Description:** Removed ICD10-PCS codes from the existing denominator exclusion for Thoracic surgery (THORAIP). **Rationale for the change:** Esophageal procedures unlikely to cause non-preventable pneumothorax (i.e., perforation of the esophagus is a preventable complication).
v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 06	Specification/ Calculation	**Description:** Removed ICD10-PCS codes from the existing denominator exclusion for Thoracic surgery (THORAIP). **Rationale for the change:** Insertions of devices by this approach into the tracheobronchial tree are very low risk, not included in this specification.
v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 06	Specification/ Calculation	**Description:** Removed ICD10-PCS code Introduction of Other Gas into Peritoneal Cavity, Percutaneous Approach (3E0M3SF) from the existing denominator exclusion for Thoracic surgery (THORAIP). **Rationale for the change:** Unlikely to result in non-preventable pneumothorax.
v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 06	Specification/ Calculation	**Description:** Moved all ICD10-PCS codes from the existing denominator exclusion for Lung or pleural biopsy (LUNGBIP) to Thoracic surgery (THORAIP). **Rationale for the change:** Codes moved from LUNGBIP to THORAIP due to redundancy.
v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 06	Specification/ Calculation	**Description:** Moved all ICD10-PCS codes from the existing denominator exclusion for Diaphragmatic surgery repair (DIAPHRP) to Thoracic surgery (THORAIP).

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				Rationale for the change: Codes moved from DIAPHRP to THORAIP due to redundancy
v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 07, PSI 14	Fiscal Year Coding	**Description:** Added ICD10-PCS codes XW033B3, XW033C3, XW043B3, XW043C3 to the existing denominator exclusion for Immunocompromised state (IMMUNIP). **Rationale for the change:** Annual coding update.
v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 08	Fiscal Year Coding	**Description:** Added ICD10-CM code for Aggressive systemic mastocytosis, C9621, Unspecified multiple injuries, initial encounter, T07XXXA, Mast cell sarcoma, C9622, Mast cell sarcoma, C9622, to existing denominator for exclusion (LYMPHID). **Rationale for the change:** Annual coding update.
v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 08	Fiscal Year Coding	**Description:** Added ICD10-CM code for Type 2 diabetes mellitus with ketoacidosis with coma, E1111, to existing denominator for exclusion (COMAID). **Rationale for the change:** Annual coding update.
v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 09	Fiscal Year Coding	**Description:** Added ICD10-PCS codes to the existing denominator inclusion for post-operative hemorrhage or Miscellaneous hemorrhage hematoma-related procedure (HEMOTH2P). **Rationale for the change:** Annual coding update.
v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 09	Specification/ Calculation	**Description:** Removed ICD-10 PCS codes Drainage of Pericardial Cavity, Percutaneous Approach, Diagnostic (0W9D3ZX) and Drainage of Pericardial Cavity, Percutaneous Endoscopic Approach, Diagnostic (0W9D4ZX) from the existing denominator inclusion for post-operative hemorrhage or Miscellaneous hemorrhage hematoma-related procedure (HEMOTH2P)

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				Rationale for the change: Diagnostic procedures unrelated to hemorrhage/hematoma.
v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 09	Specification/ Calculation	**Description:** Removed ICD-10 PCS codes 0VBF0ZZ,0VBF3ZZ, 0VBF4ZZ, 0VBG0ZZ, 0VBG3ZZ, 0VBG4ZZ, 0VBH0ZZ, 0VBH3ZZ, 0VBH4ZZ from the existing denominator inclusion for post-operative hemorrhage or Miscellaneous hemorrhage hematoma-related procedure (HEMOTH2P) **Rationale for the change:** Excision of closely related structures (e.g., prostate, scrotum, testes, epididymis) **not** included in specification.
v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 09	Specification/ Calculation	**Description:** Removed ICD-10 PCS codes Destruction of Right Inner Ear, Open Approach (095D0ZZ) and Destruction of Left Inner Ear, Open Approach (095E0ZZ) from the existing denominator inclusion for post-operative hemorrhage or Miscellaneous hemorrhage hematoma-related procedure (HEMOTH2P) **Rationale for the change:** Inner ear unlikely location for postoperative hemorrhage requiring destruction.
v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 09	Specification/ Calculation	**Description:** Removed ICD-10 PCS codes 099D00Z, 099D0ZZ, 099E00Z, 099E0ZZ from the existing denominator inclusion for post-operative hemorrhage or Miscellaneous hemorrhage hematoma-related procedure (HEMOTH2P). **Rationale for the change:** Inner ear unlikely location for postoperative hemorrhage requiring drainage.
v2018 (ICD-10) for SAS QI &	April 2018	PSI 09	Specification/ Calculation	**Description:** Removed ICD-10 PCS codes Extirpation of Matter from Right Inner Ear, Open Approach (09CD0ZZ) and Extirpation of Matter from Left Inner Ear, Open Approach (09CE0ZZ) from the existing denominator

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WinQI				inclusion for post-operative hemorrhage or Miscellaneous hemorrhage hematoma-related procedure (HEMOTH2P). **Rationale for the change:** Inner ear unlikely location for postoperative hemorrhage requiring extirpation.
v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 10	Fiscal Year Coding	**Description:** Added ICD10-PCS codes to the existing denominator exclusion for Dialysis access procedure (DIALY2P). **Rationale for the change:** Annual coding update.
v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 10	Fiscal Year Coding	**Description:** Added ICD-10 PCS codes Performance of Urinary Filtration, Intermittent, Less than 6 Hours Per Day (5A1D70Z), Performance of Urinary Filtration, Prolonged Intermittent, 6-18 hours Per Day (5A1D80Z), and Performance of Urinary Filtration, Continuous, Greater than 18 hours Per Day (5A1D90Z) to the existing denominator inclusion for Dialysis procedure (DIALYIP). **Rationale for the change:** Annual coding update.
v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 11	Fiscal Year Coding	**Description:** Added ICD10-CM codes for Juvenile dermatomyositis with respiratory involvement, M3301, Other dermatomyositis with respiratory involvement, M3311, Polymyositis with respiratory involvement M3321, Dermatopolymyositis, unspecified with respiratory involvement M3391 to the existing denominator exclusion for Neuromuscular disorders (NEUROMD); Replaces ICD-10 CM Codes M3302, 3312, 3322,3392 due to Clinical Specification: Myopathy WITH respiratory involvement is essential for this exclusion. **Rationale for the change:** Annual coding update.

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v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 11	Fiscal Year Coding	**Description:** Added ICD10-PCS codes to the existing denominator exclusion for craniofacial anomalies (NUCRANP). **Rationale for the change:** Annual coding update.
v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 11	Specification/ Calculation	**Description:** Removed ICD10-PCS codes from the existing denominator exclusion for craniofacial anomalies (NUCRANP). **Rationale for the change:** Corresponding codes for insertion of monitoring, infusion, or intraluminal devices into tracheobronchial tree not included in specification.
v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 11	Specification/ Calculation	**Description:** Removed ICD10-PCS codes 0DQ50ZZ, 0DQ53ZZ, 0DQ54ZZ, 0DQ57ZZ, 0DQ58ZZ from the existing denominator exclusion for craniofacial anomalies (NUCRANP). **Rationale for the change:** Esophageal procedures usually do not compromise the airway.
v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 11	Fiscal Year Coding	**Description:** Added ICD10-PCS codes to the existing denominator inclusion for OR Procedures (ORPROC). **Rationale for the change:** Annual coding update.
v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 11	Fiscal Year Coding	**Description:** Removed ICD10-PCS codes from the existing denominator inclusion for OR Procedures (ORPROC). **Rationale for the change:** No longer OR procedure per CMS.
v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 13, PSI 04	Fiscal Year Coding	**Description:** Added ICD10-CM codes for Enterocolitis due to clostridium difficile, not specified as recurrent, A0472, Other dermatomyositis with respiratory involvement, M3311, to existing denominator for exclusion (INFECID).

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				Rationale for the change: Annual coding update.
v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 14	Fiscal Year Coding	**Description:** Added ICD10-PCS codes to the existing denominator inclusion for abdominopelvic surgery, open approach (ABDOMIPOPEN). **Rationale for the change:** Annual coding update.
v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 14	Specification/ Calculation	**Description:** Removed ICD10-PCS codes 0DB10ZX,0DB20ZX,0DT10ZZ,0DT20ZZ from the existing denominator inclusion for abdominopelvic surgery, open approach (ABDOMIPOPEN). **Rationale for the change:** Esophageal procedures involving upper/middle esophagus unlikely to be approached through the abdomen.
v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 14	Fiscal Year Coding	**Description:** Added ICD10-PCS codes to the existing denominator inclusion for abdominopelvic surgery, other than open approach(ABDOMIPOTHER). **Rationale for the change:** Annual coding update.
v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 14	Specification/ Calculation	**Description:** Removed ICD10-PCS codes 0DB13ZX, 0DB14ZX, 0DB14ZZ, 0DB23ZX, 0DB24ZX, 0DB24ZZ, 0DT14ZZ, 0DT24ZZ, 0DW630Z, 0DW632Z, 0DW633Z, 0DW637Z, 0DW63CZ, 0DW63DZ from the existing denominator inclusion for abdominopelvic surgery, other than open approach(ABDOMIPOTHER). **Rationale for the change:** Esophageal procedures involving upper/middle esophagus unlikely to be approached through the abdomen.
v2018 (ICD-10) for	April 2018	PSI 14	Specification/ Calculation	**Description:** Removed ICD10-PCS codes 0DH632Z, 0DH633Z, 0DH63DZ, 0DH63MZ, 0DH63UZ from the existing denominator inclusion for

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SAS QI & WinQI				abdominopelvic surgery, other than open approach(ABDOMIPOTHER). **Rationale for the change:** Other esophageal insertion procedures not included in specification, not approached through abdomen.
v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 14	Specification/ Calculation	**Description:** Removed ICD10-PCS codes 0DP630Z, 0DP632Z, 0DP633Z, 0DP637Z, 0DP63CZ, 0DP63DZ from the existing denominator inclusion for abdominopelvic surgery, other than open approach(ABDOMIPOTHER). **Rationale for the change:** Other esophageal removal procedures not included in specification, not approached through abdomen.
v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 14	Fiscal Year Coding	**Description:** Added ICD10-PCS codes 0KRK07Z, 0KRK0JZ, 0KRK0KZ, 0KRK47Z, 0KRK4JZ, 0KRK4KZ, 0KRL07Z, 0KRL0JZ, 0KRL0KZ, 0KRL47Z, 0KRL4JZ, 0KRL4KZ to the existing denominator inclusion for Reclosure procedure (RECLOIP). **Rationale for the change:** Annual coding update
v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 15	Fiscal Year Coding	**Description:** Added ICD10-PCS codes to the existing denominator inclusion for abdominopelvic procedures (ABDOMI15P). **Rationale for the change:** Annual coding update.
v2018 (ICD-10) for SAS QI & WinQI	April 2018	PSI 15	Specification/ Calculation	**Description:** Removed ICD10-PCS codes from the existing denominator inclusion for abdominopelvic procedures (ABDOMI15P). **Rationale for the change:** Esophageal procedures involving upper/middle esophagus unlikely to be approached through the abdomen.
v7.0 (ICD-10) for SAS QI &	September 2017	PSI 02	Software / Documentation Change	**Description:** Updated codes for cancer in existing denominator exclusion.

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WinQI				**Rationale for the change:** Annual coding update
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 02	Software / Documentation Change	**Description:** Updated codes for immunocompromising conditions in existing denominator exclusion. **Rationale for the change:** Annual coding update
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 02	Software / Documentation Change	**Description:** Updated codes related to transplantation in existing denominator exclusion. **Rationale for the change:** Annual coding update
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 02	Software / Documentation Change	**Description:** Updated codes for trauma in existing denominator exclusion. **Rationale for the change:** Annual coding update
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 03	Software / Documentation Change	**Description:** An exclusion for severe burns (≥20% body surface area) was added to the denominator for the ICD-10 version of PSI 03. **Rationale for the change:** Patients with severe burns are at an increased risk for skin breakdown and already receive intensive skin care as a result of their burn-related injury. Despite best efforts, progression to stage III or IV pressure ulcers may be largely unpreventable, which is inconsistent with the intent of PSI 03 to capture preventable hospital-acquired pressure ulcers.
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 03	Software / Documentation Change	**Description:** PSI 03 denominator exclusions were removed for the following procedures and conditions in ICD-10: pedicle graft procedures, hemiplegia or similar plegias, spina bifida or anoxic encephalopathy, and major skin disorders. Exclusions for patients admitted from acute hospitals or SNFs/ICFs were also removed in the ICD-10 version of PSI 03.

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				Rationale for the change: Before POA reporting was required, these conditions and procedures potentially associated with pressure ulcers were assumed to indicate that the pressure injury was POA. Therefore, exclusions for these conditions and procedures served as a means of removing events that might not be attributable to hospitals. However, now that POA status is required, these exclusions are redundant and lead to undercounting of hospital-acquired pressure ulcers.
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 04	Software / Documentation Change	**Description:** Esophageal ulcer with bleeding, and other acute/unspecified gastrointestinal ulcers with bleeding, were added to the denominator of Stratum E for the ICD-10 version of PSI 04. **Rationale for the change:** Esophageal ulcer with bleeding (K22.11) and related ICD-10-CM codes were inadvertently omitted from FTR6DX.

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v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 04	Software / Documentation Change	**Description:** Hypostatic pneumonia (J18.2) and chronic pulmonary edema (J81.1) were removed from the denominator of Stratum B for the ICD-10 version of PSI 04. **Rationale for the change:** Hypostatic pneumonia and chronic pulmonary edema are not true pneumonias and do not fit within the clinical logic of PSI 04 Stratum B (analogous to ICD-9-CM 514).
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 04	Software / Documentation Change	**Description:** Added an overall denominator exclusion for patients in hospice care at admission for the ICD-10 version of PSI 04. **Rationale for the change:** Patients in hospice care at admission who have a PSI 04 triggering event may not receive aggressive life-saving interventions to rescue them from serious post-operative complications due to end-of-life care. In addition, it may be difficult to discern which patients die from a PSI 04 triggering event rather than as a natural consequence of their underlying condition.
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 04	Software / Documentation Change	**Description:** Added conditional logic for excluding I85.11(secondary esophageal varicies with bleeding) from the denominator of stratum E in the ICD-10 version of PSI 04, when it is secondary to an underlying principal diagnosis of cirrhosis and related diseases, as identified by a list of qualifying principal diagnoses (FTR6QD). **Rationale for the change:** ICD-10 coding rules specify that ICD-10-CM code I85.11 is only valid when used as a secondary diagnosis code in conjunction with a qualifying principal diagnosis code for the underlying condition. Previously, this code was included in FTR6DX, which only applies to principal diagnoses for exclusionary purposes. Note that FTR6DX remains unchanged because this setname is also used as an inclusionary criterion for the stratum E denominator; in this context, secondary diagnoses are used.

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v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 04	Software / Documentation Change	**Description:** Exclusions for diagnoses and procedures indicating immunocompromised state, and length of stay less than 4 days, were dropped from the denominator of Stratum C in the ICD-10 version of PSI 04.Reconciliation with evidence-based changes to the specification of PSI 13 in version 6. **Rationale for the change:** This reconciliation obviates concerns about potential changes over time in how immune compromising conditions and procedures could be defined.
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 04	Software / Documentation Change	**Description:** The timing requirement for identifying surgical hospitalizations at risk for PSI 04 was changed to focus on the first operating room procedure (chronologically) rather than the principal procedure. The principal procedure is defined as the procedure most closely related to the principal diagnosis, but may not be the most important (or first) procedure during the hospital stay. **Rationale for the change:** Users have expressed concern about relying upon the sequencing of procedure codes, which may be unreliable. PSI 04 focuses on hospitals' performance rescuing patients from complications after surgery, so the timing of the first operating room procedure is more relevant than the timing of the principal procedure. This modification was shown to reduce bias against certain types of hospitals, including large hospitals and teaching hospitals.
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 04	Software / Documentation Change	**Description:** Updated infection codes in existing denominator exclusion for sepsis stratum. **Rationale for the change:** Annual coding update
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 04	Software / Documentation Change	**Description:** Updated trauma codes in existing denominator exclusion for postoperative hemorrhage and GI hemorrhage stratum. **Rationale for the change:**

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				Annual coding update
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 04	Software / Documentation Change	**Description:** Updated codes related to hemorrhage. **Rationale for the change:** Annual coding update
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 06	Software / Documentation Change	**Description:** The following codes were removed from THORAIP in ICD-10: - 0JH604Z Insertion of Pacemaker, Single Chamber into Chest Subcutaneous Tissue and Fascia, Open Approach - 0JH634Z Insertion of Pacemaker, Single Chamber into Chest Subcutaneous Tissue and Fascia, Percutaneous Approach - 0JH804Z Insertion of Pacemaker, Single Chamber into Abdomen Subcutaneous Tissue and Fascia, Open Approach - 0JH834Z Insertion of Pacemaker, Single Chamber into Abdomen Subcutaneous Tissue and Fascia, Percutaneous Approach **Rationale for the change:** These codes were left in the logic of PSI 06 due to a GEM mapping error and should be removed because they do not put patients at an increased risk of an iatrogenic pneumothorax, unlike diaphragmatic pacemaker insertion procedures that may involve entering the pleural space.
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 07	Software / Documentation Change	**Description:** Updated codes for immunocompromising conditions in existing denominator exclusion. **Rationale for the change:** Annual Coding Update
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 07	Software / Documentation Change	**Description:** Updated codes for transplant procedures in existing denominator exclusion. **Rationale for the change:** Annual Coding Update
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 07	Software / Documentation Change	**Description:** Updated codes for cancer in existing denominator exclusion.

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				Rationale for the change: Annual Coding Update
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 08	Software / Documentation Change	**Description:** Removed denominator exclusion for self-inflicted injuries (SELFIID) from PSI 08 in ICD-10. **Rationale for the change:** Exclusion of self-inflicted injuries was removed because self-inflicted harm could be better addressed with risk-adjustment rather than exclusion. Hospitals should be expected to make efforts to prevent patient self-inflicted harm. Self-inflicted harm is extremely unlikely to result in a hip fracture.
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 08	Software / Documentation Change	**Description:** Removed denominator exclusion for MDC 08 in ICD-10. **Rationale for the change:** In Version 6.0 the denominator was expanded to medical and surgical patients. This exclusion had the unintended effect of removing patients who were admitted for a medical condition assigned to MDC 08, fell, and sustained a hip fracture. Hospitals may be expected to prevent falls with hip fracture in these patients.
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 08	Software / Documentation Change	**Description:** Updated codes for delirium in existing denominator exclusion. **Rationale for the change:** Annual coding update
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 08	Software / Documentation Change	**Description:** Updated trauma codes in existing denominator exclusion. **Rationale for the change:** Annual coding update
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 08	Software / Documentation Change	**Description:** Updated stroke codes in existing denominator exclusion. **Rationale for the change:** Annual coding update
v7.0 (ICD-10) for SAS QI &	September 2017	PSI 08	Software / Documentation Change	**Description:** Updated lymphoma codes in existing denominator exclusion.

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WinQI				**Rationale for the change:** Annual coding update
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 09	Software / Documentation Change	**Description:** Antineoplastic chemotherapy induced pancytopenia and other disorders impacting coagulation were added to the definition of platelet disorders for the purpose of excluding patients in the ICD-10 version of PSI 09. **Rationale for the change:** As an antiplatelet disorder, patients with antineoplastic chemotherapy induced pancytopenia have a higher risk for a PSI 09 event and should consequently be excluded from the measure. Other disorders can decrease coagulation.
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 09	Software / Documentation Change	**Description:** Updated procedure codes for control of hemorrhage or drainage of hematoma. **Rationale for the change:** Annual coding update
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 09	Software / Documentation Change	**Description:** Updated codes to capture postprocedural hemorrhage and hematoma. **Rationale for the change:** Annual coding update
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 10	Software / Documentation Change	**Description:** Added a modified version of a previous denominator exclusion list for severe cardiac dysrhythmias (e.g., v-tach, v-fib) to the ICD-10 version of PSI 10. **Rationale for the change:** Previous exclusion for cardiac arrhythmias was found to be too broad, because it excluded atrial fibrillation and other common but relatively benign rhythms. The modified specification only excludes rhythms likely to be associated with hypotension and renal injury.
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 10	Software / Documentation Change	**Description:** Added a denominator exclusion for records with any diagnosis of solitary kidney (congenital or acquired) present on admission and any

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				procedure of partial nephrectomy to the ICD-10 version of PSI 10. **Rationale for the change:** In the setting of a solitary kidney, partial nephrectomy is expected to lead to significant compromise of renal function, potentially requiring temporary or permanent renal replacement therapy.
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 10	Software / Documentation Change	**Description:** Updated codes for urinary obstruction in existing denominator exclusion. **Rationale for the change:** Annual Coding Update
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 10	Software / Documentation Change	**Description:** The setname DIALYIDP was split into two separate setnames for dialysis procedures (DIALYIP) and dialysis access procedures (DIALYIDP). **Rationale for the change:** Splitting the setnames allows for alignment of dialysis codes with other indicators. The logic and codes were not changed.
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 10	Software / Documentation Change	**Description:** Remove dependency of denominator exclusions on cases with a diagnosis of acute kidney failure. **Rationale for the change:** This dependency was retained after removing diabetes related complications. Patients should be removed from the denominator regardless of whether they had acute kidney failure.
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 11	Software / Documentation Change	**Description:** Revise the list of procedures performed to correct craniofacial anomalies that would involve an inherent risk of airway compromise (addressed by prolonged intubation to protect the airway). **Rationale for the change:** More specific procedure codes in ICD-10-PCS permit a more tailored denominator exclusion based on the procedures that involve airway compromise requiring extended intubation.
v7.0 (ICD-10)	September 2017	PSI 11	Software / Documentation	**Description:**

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for SAS QI & WinQI			Change	Gastrectomy procedure codes were removed from the list of PSI 11 denominator exclusions. **Rationale for the change:** Gastrectomy procedures in ICD-9 were appropriate because 4399 (Total Gastrectomy Nec) included the removal of the distal esophagus which would place patients undergoing this procedure at a higher risk of respiratory failure. However, this exclusion does not translate to ICD-10 as available codes do not include the removal of the distal esophagus and are limited only to stomach resections.
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 12	Software / Documentation Change	**Description:** Pulmonary arterial thrombectomy procedures are excluded from the denominator of PSI 12 in ICD-10, if performed before or on the same day as the first operating room procedure or as the only operating room procedure. **Rationale for the change:** Pulmonary arterial thrombectomy procedures should not qualify a patient as a surgical patient if no other OR procedures were performed prior to the thrombectomy, because the thrombectomy was presumably performed to treat a pulmonary embolism. Therefore, failure to exclude thrombectomy procedures from the denominator may lead to false positives for PSI 12 events. (Such an exclusion could not be implemented in ICD-9 due to lack of specific codes for pulmonary arterial thrombectomy.)
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 12	Software / Documentation Change	**Description:** Interruption of vena cava procedures are excluded from the denominator of PSI 12 in ICD-10, when it is the only operating room procedure. **Rationale for the change:** This change modifies the current exclusion so that cases are excluded only if they are the only OR procedure, instead of the principal procedure. The principal procedure is defined as the procedure most closely related to the principal diagnosis, which is not relevant to the intent of this exclusion.
v7.0 (ICD-10) for SAS QI &	September 2017	PSI 12	Software / Documentation Change	**Description:** Updated codes for acute brain or spinal injury in existing denominator

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WinQI				exclusion. **Rationale for the change:** Annual coding update
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 13	Software / Documentation Change	**Description:** Updated infections code and/or code titles for existing denominator exclusion. **Rationale for the change:** Annual Coding Update
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 14	Software / Documentation Change	**Description:** Added large number of additional abdominopelvic procedure codes to the denominator of PSI14. **Rationale for the change:** Codes were unintentionally omitted from Version 6.0.
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 14	Software / Documentation Change	**Description:** Applied stratification of denominator by open vs. laparoscopic (including all non-open approaches). This resulted in the setname for abdominopelvic procedures (ABDOMI14P) split into into two setnames (ABDOMIPOPEN and ABDOMIPOTHER). **Rationale for the change:** Laparoscopic procedures have lower risk of dehiscence
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 14	Software / Documentation Change	**Description:** Updated denominator specification of abdominal procedures. **Rationale for the change:** Annual coding update
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 14	Software / Documentation Change	**Description:** Updated codes for transplant procedures in existing denominator exclusion. **Rationale for the change:** Annual coding update
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 14	Software / Documentation Change	**Description:** Updated codes for immunocompromised diagnoses in existing denominator exclusion.

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				Rationale for the change: Annual coding update
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 15	Software / Documentation Change	**Description:** Added large number of additional abdominopelvic procedure codes to the denominator of PSI15. **Rationale for the change:** Codes were unintentionally omitted from Version 6.0.
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 15	Software / Documentation Change	**Description:** Modified logic such that all subsequent abdominopelvic operations should be considered, including a 3rd or subsequent operation if a second operation meets exclusion criteria. H43. **Rationale for the change:** Some patients may be excluded due to a first and second operation occurring on the same day, but have a third procedure.
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 18	Software / Documentation Change	**Description:** Updated codes for third degree perinatal laceration during delivery. **Rationale for the change:** Annual Coding Update
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 19	Software / Documentation Change	**Description:** Updated codes for third degree perinatal laceration during delivery. **Rationale for the change:** Annual Coding Update
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 09	Software / Documentation Change	**Description:** Remove "else" clause from measure specific exclusion macro. **Rationale for the change:** This change removes the logic that allows the principal procedure to stand in as a logical proxy for a procedure occurring prior to another. This is not the intent of the macro.
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 10	Software / Documentation Change	**Description:** Remove "else" clause from measure specific exclusion macro ($DIALYIDP).

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				Rationale for the change: This change removes the logic that allows the principal procedure to stand in as a logical proxy for a procedure occurring prior to another (MPRDAY <= ORDAY) when either procedure day is missing. This is not the intent of the macro.
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 11	Software / Documentation Change	**Description:** Remove "else" clause from measure specific exclusion macro ($TRACHIP). **Rationale for the change:** This change removes the logic that allows the principal procedure to stand in as a logical proxy for a procedure occurring prior to another (MPRDAY <= ORDAY) when either procedure day is missing. This is not the intent of the macro.
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 12	Software / Documentation Change	**Description:** Remove "else" clause from measure specific exclusion macro ($VENACIP)This change removes the logic that allows the principal procedure to stand in as a logical proxy for a procedure occurring prior to another (MPRDAY <= ORDAY) when either procedure day is missing. **Rationale for the change:** This is not the intent of the macro.
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 14	Software / Documentation Change	**Description:** Remove "else" clause from measure specific exclusion macro ($RECLOIP). **Rationale for the change:** This change removes the logic that allows the principal procedure to stand in as a logical proxy for a procedure occurring prior to another (MPRDAY <= ORDAY) when either procedure day is missing. This is not the intent of the macro.
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 21	Software / Documentation Change	**Description:** Remove indicator from software. **Rationale for the change:** Indicator was retired in version 7.0
v7.0 (ICD-10)	September 2017	PSI 22	Software / Documentation	**Description:**

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for SAS QI & WinQI			Change	Remove indicator from software. **Rationale for the change:** Indicator was retired in version 7.0
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 23	Software / Documentation Change	**Description:** Remove indicator from software. **Rationale for the change:** Indicator was retired in version 7.0
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 24	Software / Documentation Change	**Description:** Remove indicator from software. **Rationale for the change:** Indicator was retired in version 7.0
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 25	Software / Documentation Change	**Description:** Remove indicator from software. **Rationale for the change:** Indicator was retired in version 7.0
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 26	Software / Documentation Change	**Description:** Remove indicator from software. **Rationale for the change:** Indicator was retired in version 7.0
v7.0 (ICD-10) for SAS QI & WinQI	September 2017	PSI 27	Software / Documentation Change	**Description:** Remove indicator from software. **Rationale for the change:** Indicator was retired in version 7.0
v6.0.2 (ICD-9) for SAS QI v6.0.2 (ICD-9) for WinQI	July 2017	All PSI	Software /Documentation change	**Description:** Corrected typos in code operationalizing MDRGs. Specifically, changes were made to MDRG 109, 204, 205, 621, 1019. **Rationale for the change:** Version 6.0 included typos which resulted in the incorrect assignment of 4 MDRGs and dropping 1 MDRG. These typos are corrected in this release.
v6.0.2 (ICD-9)	July 2017	All PSI	Software /Documentation	**Description:**

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for SAS v6.0.2 (ICD-9) for WinQI			change	Algorithm added to assign MDC based on principal diagnosis to align with CMS regulation. **Rationale for the change:** CMS requires MDC to be assigned based on principal diagnosis rather than MS-DRG assignment. Doing so will assign MDCs for discharges assigned to "Pre-MDC" MS-DRGs.
v6.0.2 (ICD-9) for SAS v6.0.2 (ICD-9) for WinQI	July 2017	All PSI	Software /Documentation change	**Description:** Combined MDRGs 521 and 520. **Rationale for the change:** Acute myocardial infarction MDRGs 520 and 521 differ only by mortality status. Including these are two separate variable adjusts for poor outcomes, some of which may be a result of poor in-hospital quality and complications.
v6.0.2 (ICD-9) for SAS v6.0.2 (ICD-9) for WinQI	July 2017	All PSI	Software /Documentation change	**Description:** Updated indicator titles in comment blocks. **Rationale for the change:** Software code clean-up.
v6.0.2 (ICD-9) for SAS v6.0.2 (ICD-9) for WinQI	July 2017	All PSI	Software /Documentation change	**Description:** Removed formats that are no longer used in the PSI algorithms or risk adjustment. **Rationale for the change:** Software code clean-up.
v6.0.2 (ICD-9) for SAS v6.0.2 (ICD-9) for WinQI	July 2017	All PSI	Software /Documentation change	**Description:** Add external composite weights file. **Rationale for the change:** This change was added to improve production processes.

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v6.0.2 (ICD-9) for SAS v6.0.2 (ICD-9) for WinQI	July 2017	All PSI	Software /Documentation change	**Description:** Restored MS-DRGs 237 and 238 to the setname for surgical MS-DRGs (SURGI2R). **Rationale for the change:** MS-DRG 237 and 238 are no longer valid starting in FY2016, but removing them from the software resulted in cases in prior years to be inadvertently omitted from surgical denominators. For prior years, this change impacts denominators significantly.
v6.0.2 (ICD-9) for SAS v6.0.2 (ICD-9) for WinQI	July 2017	All PSI	Software /Documentation change	**Description:** Added version suffixing to PSI_Dx_Px_Macros file to make these macros version specific **Rationale for the change:** This versioning is used across all of our other programs and that it improves our ability to confirm that the correct macro is being used.
v6.0.2 (ICD-9) for SAS v6.0.2 (ICD-9) for WinQI	July 2017	All PSI	Software /Documentation change	**Description:** Removed references to smoothed and smoothed error values in output data set and listing output for stratified measures **Rationale for the change:** These results for individual stratum are not validated for use as individual metrics.
v6.0.2 (ICD-9) for SAS v6.0.2 (ICD-9) for WinQI	July 2017	All PSI	Software /Documentation change	**Description:** Removed non-functional code that flagged cases with palliative care codes or diagnoses POA that are not used in the PSI specifications. **Rationale for the change:** Software code clean-up
v6.0.2 (ICD-9) for SAS v6.0.2 (ICD-9)	July 2017	All PSI	Software /Documentation change	**Description:** Modified code in PROV_RISKADJ to prevent the SUMWGT warning from being triggered.

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for WinQI				**Rationale for the change:** The warning was inconsequential but may be confusing to users.
v6.0.2 (ICD-9) for SAS v6.0.2 (ICD-9) for WinQI	July 2017	All PSI	Software /Documentation change	**Description:** Removed NOPOUB04, NOPRDAY, and TRNSOUT variables that are not required for the current software. **Rationale for the change:** Software code clean-up.
v6.0.2 (ICD-9) for SAS v6.0.2 (ICD-9) for WinQI	July 2017	All PSI	Software /Documentation change	**Description:** Revised risk model to include additional MDRGs unintentionally omitted from variable selection process. **Rationale for the change:** To ensure completeness of the models additional variables were added to applicable models.
v6.0.2 (ICD-9) for SAS v6.0.2 (ICD-9) for WinQI	July 2017	All PSI	Software /Documentation change	**Description:** Changed structure for two MDRGs: acute myocardial infarction and neonates died or transferred. **Rationale for the change:** Root MS-DRGs are structured by mortality and as mortality may be related to the numerator event, these MS-DRGs were combined with the corresponding MS-DRG for patients discharged alive.
v6.0.2 (ICD-9) for SAS v6.0.2 (ICD-9) for WinQI	July 2017	All PSI	Software /Documentation change	**Description:** Updated labels for MDRGs **Rationale for the change:** Software code clean-up.
v6.0.2 (ICD-9) for SAS v6.0.2 (ICD-9) for WinQI	July 2017	All PSI	Software /Documentation change	**Description:** Removed formats that are no longer used in the PSI algorithms or risk adjustment. **Rationale for the change:**

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				Software code clean-up.
v6.0.2 (ICD-9) for SAS v6.0.2 (ICD-9) for WinQI	July 2017	PSI 10, 11 and 13	Software /Documentation change	**Description:** Risk adjustment models were recreated, and updated coefficients, signal variance, and reference arrays were included in the revised software. **Rationale for the change:** One state mistakenly omitted from the reference population.
v6.0.2 (ICD-9) for SAS v6.0.2 (ICD-9) for WinQI	July 2017	PSI 07, 08, 09, 12, 14	Software /Documentation change	**Description:** Corrected typos in code assigning Modified DRGs, MDRGs used in PSI provider risk adjustment models. Specifically, changes were made to MDRG 109, 204, 205, 621, 1019. Risk adjustment models were recreated and updated coefficients, signal variance and reference arrays created. **Rationale for the change:** The version 6.0 October, 2016 release included typos which resulted in the mis-assignment of 4 MDRGs and dropping 1 MDRG. All risk adjustment models impacted by changes since the initial 6.0 release include updated risk adjustment factors.
v6.0.2 (ICD-9) for SAS v6.0.2 (ICD-9) for WinQI	July 2017	PSI 03 and 06	Software /Documentation change	**Description:** Risk adjustment models were recreated and updated coefficients, signal variance and reference arrays created. Combined MDRGs 521 and 520. Acute myocardial infarction MDRGs 520 and 521 differ only by mortality status. **Rationale for the change:** All risk adjustment models impacted by changes since the initial 6.0 release include updated risk adjustment factors. Including these are two separate variable adjusts for poor outcomes, some of which may be a result of poor in-hospital quality and complications.
v6.0.2 (ICD-9) for SAS v6.0.2 (ICD-9) for WinQI	July 2017	PSI 04	Software /Documentation change	**Description:** Two variables were added to the risk-models for each PSI 04 stratum: dichotomous variable indicating whether any of the triggering complications in that stratum were present on admission and a dichotomous variable indicating whether all of the triggering complications in that stratum were present on admission.

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				Rationale for the change: Admissions with a complication present on admission have a higher risk of death. Adding this variable to the risk model improves model performance.
v6.0.2 (ICD-9) for SAS v6.0.2 (ICD-9) for WinQI	July 2017	PSI 04	Software /Documentation change	**Description:** Created variables that flag whether the qualifying denominator complication is "severe". These are flagged in the software as XPPS04x_ANY and XPPS04x_SEVERE. **Rationale for the change:** Within each PSI 04 stratum some complications are more likely to result in death than others. For instance, PE results in death more frequently than DVT. Variables were added to the risk model to account for the mix of complications within a hospital, which improves model performance.
v6.0.2 (ICD-9) for SAS v6.0.2 (ICD-9) for WinQI	July 2017	PSI 04, PSI 10	Software /Documentation change	**Description:** Updated software comment text to include updated titles for PSI 10 and PSI 04 strata. **Rationale for the change:** Software comment clean-up.
v6.0.2 (ICD-9) for SAS v6.0.2 (ICD-9) for WinQI	July 2017	PSI 02, PSI 15	Software /Documentation change	**Description:** Risk adjustment models were recreated and updated coefficients, signal variance and reference arrays created. **Rationale for the change:** All risk adjustment models impacted by changes since the initial 6.0 release include updated risk adjustment factors.
v6.0 (ICD-9)	October 2016	All PSI	Software /Documentation change	**Description:** Programs underwent cosmetic updates to headers and commenting. **Rationale for the change:** General correction
v6.0 (ICD-9)	October 2016	All PSI	Software /Documentation change	**Description:** Increased length of MDRG from 3 to 4 bytes. **Rationale for the change:**

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				The reduced length of the MDRG variable resulted in the non-assignment of some DRGs (because the resulting length was too long).
v6.0 (ICD-9)	October 2016	All PSI	Software /Documentation change	**Description:** Restored mapping for MDRG 0508 to MDC. **Rationale for the change:** Error in software revised
v6.0 (ICD-9)	October 2016	All PSI	Software /Documentation change	**Description:** Map MDRG "other" case to 9999 (not used in risk adjustment) **Rationale for the change:** Error in software revised
v6.0 (ICD-9)	October 2016	All PSI	Software /Documentation change	**Description:** Update operating room procedures (ORPROC) list to exclude "0094", "0110", "0116", "0117", "5013" **Rationale for the change:** These procedures were inadvertently added in previous versions
v6.0 (ICD-9)	October 2016	All PSI	Software /Documentation change	**Description:** Update operating room procedures (ORPROC) list to add "1481", "1482","1483" **Rationale for the change:** These procedures were inadvertently omitted in previous versions
v6.0 (ICD-9)	October 2016	All PSI	Specification/ Calculation	**Description:** Updated MS-DRG list to account for FY2016 changes. **Rationale for the change:** Annual update
v6.0 (ICD-9)	October 2016	PSI 03	Specification/ Calculation	**Description:** Removed MDC 09 exclusion. Added focused exclusion for major skin disorders that are associated with higher risk of pressure ulcer. **Rationale for the change:** Some skin disorders put patients at greater risk for skin breakdown (e.g. Epidermolysis Bullosa). These types of skin disorders could lead to greater rates of decubitus ulcers and secondary complications in this patient group.

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v6.0 (ICD-9)	October 2016	PSI 03	Specification/ Calculation	**Description:** Changed exclusion for length of stay from less than 5 days to less than 3 days. **Rationale for the change:** Source of false negatives and long length of stay potentially redundant with "present on admission".
v6.0 (ICD-9)	October 2016	PSI 03	Specification/ Calculation	**Description:** Modified logic to also include cases with 2 or more qualifying pressure ulcers, when at least one of the ulcers are not POA. **Rationale for the change:** Previous logic incorrectly excluded patients who had an ulcer present on admission, but develop a second ulcer in the hospital.
v6.0 (ICD-9)	October 2016	PSI 04	Software style changes	**Description:** Implemented strata specific risk models. **Rationale for the change:** Predictiveness is improved when models are estimated separately for each stratum.
v6.0 (ICD-9)	October 2016	PSI 04	Specification/ Calculation	**Description:** Added "pneumococcal pneumonia" to the denominator of pneumonia stratum and removed it from the exclusion list. **Rationale for the change:** Error in software revised
v6.0 (ICD-9)	October 2016	PSI 04	Specification/ Calculation	**Description:** Removed "calf DVT" codes from DVT stratum. Calf DVT are more susceptible to ascertainment bias through screening of asymptomatic patients. **Rationale for the change:** Calf DVT highly susceptible to ascertainment bias, often found by screening asymptomatic postop patients, treatment may not be beneficial
v6.0 (ICD-9)	October 2016	PSI 04	Software /Documentation change	**Description:** Removed exclusion lung cancer from Stratum D.

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				Rationale for the change: Corrected error in software
v6.0 (ICD-9)	October 2016	PSI 04	Software /Documentation change	**Description:** Corrected format FTR5DX (Shock or cardiac arrest diagnosis codes) **Rationale for the change:** Error in software revised
v6.0 (ICD-9)	October 2016	PSI 06 and PSI 22	Specification/ Calculation	**Description:** Restricted the chest trauma exclusion to rib fractures, traumatic pneumothorax and related chest wall injuries that are associated with "difficult-to-detect" or nascent pneumothorax. **Rationale for the change:** Not all chest traumas are associated with pneumothoraxes.
v6.0 (ICD-9)	October 2016	PSI 08	Specification/ Calculation	**Description:** Renamed PSI 08 to "In Hospital Fall with Hip Fracture". **Rationale for the change:** PSI 08 now includes both medical and surgical patients.
v6.0 (ICD-9)	October 2016	PSI 08	Specification/ Calculation	**Description:** Added medical MS-DRGs to denominator criteria. It is no longer necessary to focus on surgical patients to avoid false positives. The complication can occur in both medical and surgical patients. **Rationale for the change:** Concept applies equally to medical and surgical patients. Previously medical patients were excluded due to concerns of capturing fractures present on admission, but present on admission data allows for dropping this criterion.
v6.0 (ICD-9)	October 2016	PSI 08	Specification/ Calculation	**Description:** Removed exclusion of records from denominator with hip fracture repair as the first or only OR procedure. With the inclusion of "present on admission" criteria it is no longer necessary to focus on surgical patients to avoid false positives. **Rationale for the change:** Date of hip fracture repair is empirically not associated with reported POA status.

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v6.0 (ICD-9)	October 2016	PSI 09 and PSI 27	Specification/ Calculation	**Description:** Removed selected procedures that have weak connections with diagnosis or treatment of perioperative hemorrhage or hematoma from the numerator inclusion list. **Rationale for the change:** These procedures were a source of false positives.
v6.0 (ICD-9)	October 2016	PSI 09 and PSI 27	Software /Documentation change	**Description:** Corrected format POHMRI2D (Perioperative hemorrhage or hematoma diagnosis codes) **Rationale for the change:** Error in software revised
v6.0 (ICD-9)	October 2016	PSI 10	Specification/ Calculation	**Description:** Excluded hospitalizations with principal diagnosis of urinary tract obstruction. **Rationale for the change:** This was a source of false positives.
v6.0 (ICD-9)	October 2016	PSI 10	Specification/ Calculation	**Description:** Removed cardiac exclusions that were intended principally to exclude events more likely to have been present on admission: AMI, hemorrhage, GI hemorrhage. **Rationale for the change:** Present on admission coding is now required.
v6.0 (ICD-9)	October 2016	PSI 10	Specification/ Calculation	**Description:** Exclude hospitalizations in which dialysis access preceded or constituted the first or only operation. **Rationale for the change:** Source of false negative.
v6.0 (ICD-9)	October 2016	PSI 10	Specification/ Calculation	**Description:** Removed cardiac exclusions that were intended principally to exclude events more likely to have been present on admission: AMI, cardiac arrhythmia, possibly shock, possibly hemorrhage, possibly GI hemorrhage. Present on admission coding is now required.

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				Rationale for the change: Present on admission coding is now required.
v6.0 (ICD-9)	October 2016	PSI 10	Specification/ Calculation	**Description:** Changed name of PSI 10 to reflect changes made in V.5.0. Changed name of PSI 10 to Postoperative Acute Kidney Injury Requiring Dialysis **Rationale for the change:** Name change better reflects what is captured in the measure.
v6.0 (ICD-9)	October 2016	PSI 11	Specification/ Calculation	**Description:** Expanded exclusion for acute postraumatic or postoperative respiratory failure present on admission to include other etiologies of acute respiratory failure. **Rationale for the change:** Other etiologies of respiratory failure require exclusion.
v6.0 (ICD-9)	October 2016	PSI 11	Specification/ Calculation	**Description:** Added exclusion of hospitalizations involving lung transplantation. **Rationale for the change:** Lung transplantation patients should not be included in respiratory failure measure.
v6.0 (ICD-9)	October 2016	PSI 12	Specification/ Calculation	**Description:** Removed "calf DVT" codes from DVT. Calf DVT are more susceptible to acsertainment bias through screening of asymptomatic patients. **Rationale for the change:** Calf DVT highly susceptible to ascertainment bias, often found by screening asymptomatic postop patients, treatment may not be beneficial
v6.0 (ICD-9)	October 2016	PSI 12	Specification/ Calculation	**Description:** Added exclusion for any diagnosis with acute brain or spinal injury. **Rationale for the change:** DVT prophylaxis may be contraindicated in these cases.
v6.0 (ICD-9)	October 2016	PSI 13	Specification/ Calculation	**Description:** Removed exclusions for immunocompromise-related conditions and procedures, and cancer. These variables are considered in risk-

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				adjustment models in version 6.0. **Rationale for the change:** Empirically exclusion was not associated with "present on admission" complications. Higher risk can be better accounted for using risk adjustment.
v6.0 (ICD-9)	October 2016	PSI 13	Specification/ Calculation	**Description:** Removed exclusion for length of stay less than 4 days. **Rationale for the change:** Exclusion less necessary due to present on admission data.
v6.0 (ICD-9)	October 2016	PSI 14 and PSI 24	Specification/ Calculation	**Description:** Added exclusion for diagnosis of "disruption of internal operation wound" that is present on admission to denominator. **Rationale for the change:** Implementing standard exclusion
v6.0 (ICD-9)	October 2016	PSI 14	Specification/ Calculation	**Description:** Modified numerator to require a diagnosis and procedure code for ICD-10 specification. **Rationale for the change:** ICD-10-PCS does not have an equivalent procedure code.
v6.0 (ICD-9)	October 2016	PSI 15	Specification/ Calculation	**Description:** Revised PSI 15 to require a second operation and a diagnosis of accidental puncture or laceration. **Rationale for the change:** This change addresses concerns regarding potentially clinically inconsequential lacerations captured by diagnosis code alone.
v6.0 (ICD-9)	October 2016	PSI 15	Specification/ Calculation	**Description:** PSI 15 Name changed from "Accidental Puncture or Laceration" to "Unrecognized Abdominopelvic Accidental Puncture or Laceration" **Rationale for the change:** Reflects new specification
v6.0 (ICD-9)	October 2016	PSI 15 and PSI 25	Specification/ Calculation	**Description:**

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				Revised PSI 15 to require a second operation and a diagnosis of accidental puncture or laceration. PSI 24 modified to account for changes in PSI 15. **Rationale for the change:** This change addresses concerns regarding potentially clinically inconsequential lacerations captured by diagnosis code alone.
v6.0 (ICD-9)	October 2016	PSI 90	Planned file update	**Description:** Refined PSI 90 harms model to better account for overlapping harms, institute better alignment across PSI regarding measured harms and harms specifications. Improved harm models and utility estimates were used to calculate the PSI 90 weights. **Rationale for the change:** Further refinement improves harms estimates.
v6.0 (ICD-10)	July 2016	PSI All	Specification/ Calculation	**Description:** Removed former DRG classification from software; the software include only MS-DRG. **Rationale for the change:** Backwards compatibility with DRG codes has been removed
v6.0 (ICD-10)	July 2016	PSI All	Software /Documentation change	**Description:** Changed MDRG other from 8898 to 9999. **Rationale for the change:** General correction.
v6.0 (ICD-10)	July 2016	PSI All	Software /Documentation change	**Description:** Length of the MDRG variable increased from 3 to 4 bytes to allow for additional values. **Rationale for the change:** The current software assigned a length=3 for the MDRG variable, which limited values to 3 bytes, or integers with a maximum value of 8,192. The peculiar consequence is that 8898 and 8899 were lumped together.
v6.0 (ICD-10)	July 2016	PSI All	Software /Documentation change	**Description:** Updated AHRQ Comorbidity Software to Version 3.7, October 2015.

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				Rationale for the change: Routine update of software integrated in software
v6.0 (ICD-10)	July 2016	PSI All	Software /Documentation change	**Description:** Updated MS-DRG list to account for FY2016 changes. **Rationale for the change:** Update MS-DRG lists for FY 16 changes
v6.0 (ICD-10)	July 2016	PSI All	Specification/ Calculation	**Description:** Updated OR procedure list to account for FY2016 changes. **Rationale for the change:** Update OR procedure lists for FY 16 changes
v6.0 (ICD-10)	July 2016	PSI 02, PSI 04B, PSI 04C, PSI 07, PSI 14, PSI 23 and PSI 24	Specification/ Calculation	**Description:** Removed codes for autologous pancreatic cell transplant (3E030U0, 3E033U0) Added codes for nonautologous pancreatic cell transplant (3E0J3U1, 3E0J7U1, 3E0J8U1) **Rational for the change:** Autologous islet cell transplants are unlikely to result in immunosuppression
v6.0 (ICD-10)	July 2016	PSI 03	Specification/ Calculation	**Description:** Changed exclusion for length of stay from less than 5 days to less than 3 days. Source of false negatives and long length of stay potentially redundant with "present on admission". **Rational for the change:** This exclusion is >87% POA-enhanced, and thus appears largely redundant with POA reporting
v6.0 (ICD-10)	July 2016	PSI 03	Specification/ Calculation	**Description:** Removed MDC 09 exclusion. Added focused exclusion for major skin disorders that are associated with higher risk of pressure ulcer. **Rational for the change:** Some skin disorders put patients at greater risk for skin breakdown (e.g. Epidermolysis Bullosa). These types of skin disorders could lead to greater rates of decubitus ulcers and secondary complications in this patient group.

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v6.0 (ICD-10)	July 2016	PSI 03, PSI 04, PSI 08, PSI 09, PSI 10, PSI 11, PSI 12 and PSI 13	Specification/ Calculation	**Description:** Revised OR Procedure list to remove known instances where procedures are not typically performed in an operating room. These changes result in the AHRQ QI OR procedure list not being aligned with the CMS OR Procedure list. **Rational for the change:** CMS OR procedure list contains some common procedures that are not typically performed in the OR, and as a result these cases are incorrectly pushed into a surgical PSI denominator.
v6.0 (ICD-10)	July 2016	PSI 03	Specification/ Calculation	**Changes:** Modified logic to also include cases with 2 or more qualifying pressure ulcers, when at least one of the ulcers are not POA **Rationale for the change:** Software currently excludes patients that have two or more ulcers when some ulcers are POA and others are not POA. Because some ulcers are POA the cases should be captured. No clear reason why having a pressure ulcer POA should exclude ahospital-acquired PU; FN rate was 12.4% among these excluded cases, and they contributed 26% of all FNs. [Zrelak PA, et al. J Healthcare Qual; 2013 Oct 1].
v6.0 (ICD-10)	July 2016	PSI 04	Specification/ Calculation	**Description:** Added "pneumococcal pneumonia" to the denominator of pneumonia stratum and removed it from the exclusion list. **Rational for the change:** This is bacterial pneumonia that has been mislabeled as viral pneumonia or influenza.
v6.0 (ICD-10)	July 2016	PSI 04	Specification/ Calculation	**Description:** Removed "calf DVT" codes from DVT stratum. Calf DVT are more susceptible to acsertainment bias through screening of asymptomatic patients. **Rationale for the change:**

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				Calf DVT highly susceptible to ascertainment bias, often found by screening asymptomatic postop patients, treatment may not be beneficial
v6.0 (ICD-10)	July 2016	PSI 04	Specification/ Calculation	**Description:** Removed exclusion lung cancer from Stratum D. Unclear association with stratum D. **Rationale for the change:** Unclear rationale as an exclusion. Lung cancer is not at higher risk.
v6.0 (ICD-10)	July 2016	PSI 04 and PSI 04D	General correction	**Description:** The Shock or cardiac arrest diagnosis codes were corrected. **Rationale for the change:** Error resolution
v6.0 (ICD-10)	July 2016	PSI 06 and PSI 22	Specification/ Calculation	**Description:** Restricted the chest trauma exclusion to rib fractures, traumatic pneumothorax and related chest wall injuries that are associated with "difficult-to-detect" or nascent pneumothorax **Rational for the change:** Chest trauma, in general, shows no evidence of POA enhancement (i.e., 14% POA), so the exclusion does not appear to have its intended effect
v6.0 (ICD-10)	July 2016	PSI 11	Specification/ Calculation	**Description:** Expanded exclusion for acute posttraumatic or postoperative respiratory failure present on admission to include other etiologies of acute respiratory failure. **Rational for the change:** ARF of any cause POA obviates the usefulness of postoperative ARF as a quality indicator; users report some false positives for this reason
v6.0 (ICD-10)	July 2016	PSI 08	Specification/ Calculation	**Description:** Renamed PSI 08 to "In Hospital Fall with Hip Fracture". PSI 08 no includes both medical and surgical patients.

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				Rationale for the change: Date of hip fracture repair is empirically not associated with reported POA status; rationale for focusing on surgical patients no longer exists; concept applies equally to medical and surgical patients
v6.0 (ICD-10)	July 2016	PSI 08	Specification/ Calculation	**Description:** Added medical MS-DRGs to denominator. With the inclusion of "present on admission" criteria it is no longer necessary to focus on surgical patients to avoid false positives. The complication can occur in both medical and surgical patients. **Rationale for the change:** Date of hip fracture repair is empirically not associated with reported POA status; rationale for focusing on surgical patients no longer exists; concept applies equally to medical and surgical patients
v6.0 (ICD-10)	July 2016	PSI 08	Specification/ Calculation	**Description:** Removed exclusion of records from denominator with hip fracture repair as the first or only OR procedure. With the inclusion of "present on admission" criteria it is no longer necessary to focus on surgical patients to avoid false positives. **Rationale for the change:** Date of hip fracture repair is empirically not associated with reported POA status; rationale for focusing on surgical patients no longer exists; concept applies equally to medical and surgical patients
v6.0 (ICD-10)	July 2016	PSI 08	Specification/ Calculation	**Description**: Added 7th character "A" to six codes in MTHIPFD. These now read: M80051A, M80052A, M80059A, M80851A, M80852A, M80859A. **Rationale for the change:** The final character was unintentionally omitted from these codes.
v6.0 (ICD-10)	July 2016	PSI 09 and PSI 27	General correction	**Description:** The Perioperative hemorrhage or hematoma diagnosis codes were corrected. **Rationale for the change:** Error resolution
v6.0 (ICD-10)	July 2016	PSI 09 and PSI 27	Specification/ Calculation	**Description:** Removed selected procedures that have weak connections with

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				diagnosis or treatment of perioperative hemorrhage or hematoma from the numerator inclusion list. This was a source of false positives. **Rationale for the change:** Source of false positives, because users are reporting cases in which the triggering procedure is unrelated to perioperative hemorrhage or hematoma, and therefore cannot be used as a severity marker.
v6.0 (ICD-10)	July 2016	PSI 10	Specification/ Calculation	**Description:** Excluded hospitalizations with principal diagnosis of urinary tract obstruction when accompanied by a secondary diagnosis of renal failure POA. This was a source of false positives. **Rationale for the change:** Source of false positives (20%).
v6.0 (ICD-10)	July 2016	PSI 10	Specification/ Calculation	**Description:** Exclude hospitalizations in which dialysis access preceded or constituted the first or only operation. **Rationale for the change:** Source of false positives (20%) [Zrelak, Med Care, 2013]
v6.0 (ICD-10)	July 2016	PSI 10	Specification/ Calculation	**Description:** Removed cardiac exclusions that were intended principally to exclude events more likely to have been present on admission: AMI, cardiac arrhythmia, possibly shock, possibly hemorrhage, possibly GI hemorrhage. Present on admission coding is now required. **Rationale for the change:** Very small numbers, but these exclusions appear to be markedly POA-enhanced, and thus largely redundant with POA reporting
v6.0 (ICD-10)	July 2016	PSI 10	Specification	**Description:** Changed name of PSI 10 to “Postoperative Acute Kidney Injury Requiring Dialysis” to reflect changes made in V.5.0. **Rationale for the change:** The indicator is now targeted towards acute kidney injury requiring dialysis. The diabetic aspect has been removed.
v6.0 (ICD-10)	July 2016	PSI 11	Specification/ Calculation	**Description:**

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				Removed procedure codes 0CHY7BZ and 0CHY8BZ from the ICD-10 exclusion list in the code group, Laryngeal, pharyngeal, nose, mouth and pharynx surgery procedure codes **Rationale for the change:** Codes do not map to an included procedure in ICD-9 and were not intended for inclusion in Laryngeal, pharyngeal, nose, mouth and pharynx surgery procedure codes.
v6.0 (ICD-10)	July 2016	PSI 11	Specification/ Calculation	**Description:** Added exclusion of hospitalizations involving lung transplantation. **Rationale for the change:** It was observed that cases where cystic fibrosis patients having both bilateral lung transplant along with liver transplant qualified for PSI-11-Perioperative Respiratory Failure when the payer is Blue Cross/Blue Shield since it goes to an APR-DRG and not an MS-DRG. Specifically, the principal diagnosis for the hospitalization in question plays an important role in MS-DRG assignment, which affects which MDC applies. In general, it would not be appropriate to exclude all hospitalizations involving a diagnosis of cystic fibrosis because we would not want to assume that all (or most) cases of postoperative respiratory failure in this subpopulation are non-preventable. However, exclusion of hospitalizations involving lung transplantation (33.5x) seems reasonable and appropriate.
v6.0 (ICD-10)	July 2016	PSI 11	Specification/ Calculation	**Description:** Expanded exclusion for acute postraumatic or postoperative respiratory failure present on admission to include other etiologies of acute respiratory failure. **Rationale for the change:** ARF of any cause POA obviates the usefulness of postoperative ARF as a quality indicator; users report some false positives for this reason.
v6.0 (ICD-10)	July 2016	PSI 12	Specification/ Calculation	**Description:** Removed "calf DVT" codes from DVT. Calf DVT are more susceptible to acsertainment bias through screening of asymptomatic patients.

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				Rationale for the change: Removes calf DVT from qualifying codes, since these DVT are less likely to be clinically meaningful and they are more likely to be identified during screening.
v6.0 (ICD-10)	July 2016	PSI 12	Specification/ Calculation	**Description:** Added exclusion for any diagnosis with acute brain or spinal injury. DVT prophylaxis may be contraindicated in these cases. **Rationale for the change:** This is a last minute add to version 6.0 in a response to public feedback on PSI 90 as part of the NQF endorsement process. There is a lack of clear guidelines when it is safe to start VTE prophylaxis in patients with acute brain and or spinal injury. Events in this population may be less preventable.
v6.0 (ICD-10)	July 2016	PSI 13	Specification/ Calculation	**Description:** Removed exclusions for immunocompromise-related conditions and procedures, and cancer; these variables were considered in risk-adjustment models in Version 6.0. Empirically exclusion was not associated with "present on admission" complications. Higher risk can be better accounted for using risk adjustment. **Rationale for the change:** Immunocompromise-related conditions and procedures, and cancer, show no evidence of POA enhancement, so the exclusion does not appear to have its intended effect.
v6.0 (ICD-10)	July 2016	PSI 13	Specification/ Calculation	**Description:** Removed exclusion for length of stay less than 4 days. Exclusion less necessary due to present on admission data. **Rationale for the change:** Consistency with PSI 13; stratification appears to enhance the apparent benefit of LOS exclusion in identifying events that were actually POA (i.e., 62% vs 21% POA among non-elective clean operations, which are excluded from PSI 13).
v6.0 (ICD-10)	July 2016	PSI 14	Specification/ Calculation	**Description:** Modified numerator to require a diagnosis and procedure code for ICD-10 specification. ICD-10-PCS does not have an equivalent procedure code.

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				Rationale for the change: Patients undergoing these procedures are at risk for abdominopelvic re-operation.
v6.0 (ICD-10)	July 2016	PSI 14; PSI 24	Specification/ Calculation	**Description:** Added exclusion for diagnosis of "disruption of internal operation wound" that is present on admission to denominator. **Rational for the change:** Would presumably reduce FPs due to operative repair a dehiscent wound from a prior operation (but no validation evidence)
v6.0 (ICD-10)	July 2016	PSI 15	Specification/ Calculation	**Description:** Revised PSI 15 to require a second operation and a diagnosis of accidental puncture or laceration. This change addresses concerns regarding potentially clinically inconsequential lacerations captured by diagnosis code alone. **Rationale for the change:** Patients undergoing these procedures are at risk for abdominopelvic re-operation.
v6.0 (ICD-10)	July 2016	PSI 15	Specification	**Description:** PSI 15 Name changed from "Accidental Puncture or Laceration" to "Unrecognized Abdominopelvic Accidental Puncture or Laceration" to reflect redefinition of indicator **Rationale for the change:** Given the rather profound change for PSI15 in v6.0, it was suggested to change the name to highlight the rationale and significance of the specification change.
v6.0 (ICD-10)	July 2016	PSI 15	Specification/ Calculation	**Description:** Revised PSI 15 to require a second operation and a diagnosis of accidental puncture or laceration. This change addresses concerns regarding potentially clinically inconsequential lacerations captured by diagnosis code alone. PSI 24 modified to account for changes in PSI 15. **Rationale for the change:** Focuses indicator on events requiring return to surgery and

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				abdominopelvic surgeries. Increases the likelihood of preventability.
v6.0 (ICD-10)	July 2016	PSI 17 - this is also on the standalone module for PSI 17	Specification/ Calculation	**Description:** Removed denominator exclusion for brachial plexus injury. **Rationale for the change:** It was never intended as a denominator exclusion; it was intended as a numerator omission only, as there is no reason why a BP injury should disqualify other injuries
v6.0 (ICD-10)	July 2016	PSI 18	Specification/ Calculation	**Description:** Change denominator in software to a ICD-10 based definition consisting of a diagnosis code for birth and a procedure code for mode of delivery **Rationale for the change:** Under ICD-10 procedures performed to assist delivery will result in a patient being moved into a surgical DRG, removing these cases from the former PSI denominator. As a result, it is necessary to define the denominator using ICD-10 codes.
V5.0	March 2015	Death Rate in Low-Mortality DRGs (PSI 02)	Specification/ Calculation	The list of qualifying low-mortality DRGs was updated.
V5.0	March 2015	Pressure Ulcer Rate (PSI 03)	Specification/ Calculation	Records with any secondary diagnosis of pressure ulcer present on admission and any secondary diagnosis of pressure ulcer stage III or IV or unstageable present on admission were dropped from the denominator exclusion definition.
V5.0	March 2015	Death Rate among Surgical Inpatients with Serious Treatable Conditions (PSI 04)	Specification/ Calculation	Stratification priority was modified from relative prevalence in the reference population to prior probability of death
V5.0	March 2015	Death Rate among Surgical Inpatients with Serious Treatable Conditions (PSI 04)	Specification/ Calculation	Phlebitis and thrombophlebitis of lower extremities NOS (451.2) was removed from the denominator of Stratum A.

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V5.0	March 2015	Death Rate among Surgical Inpatients with Serious Treatable Conditions (PSI 04)	Specification/ Calculation	Abortion-related shock diagnosis codes were added to the Stratum D denominator (634.5x, 635.5x, 636.5x, 637.5x, 638.5x).
V5.0	March 2015	Retained Surgical Item or Unretrieved Device Fragment Count (PSI 05)	Specification/ Calculation	E-codes (E871.x) were removed from numerator and denominator specification.
V5.0	March 2015	Central Venous Catheter-Related Blood Stream Infection Rate (PSI	Specification/ Calculation	Other unspecified infection due to central venous catheter (99.31) was removed from the numerator and denominator specification.
V5.0	March 2015	Postoperative Hip Fracture Rate (PSI 08)	Specification/ Calculation	E codes were removed from denominator specification for poisoning (E850-E869, E951-E952, E962, E980-E982).
V5.0	March 2015	Postoperative Hip Fracture Rate (PSI 08)	Specification/ Calculation	New codes for self-inflicted injury by air gun (E955.6) or paintball gun (E955.7) were added to Appendix K denominator exclusion for self-inflicted injury.
V5.0	March 2015	Perioperative Hemorrhage or Hematoma Rate (PSI 09)	Specification/ Calculation	Setnames HEMATIP, HEMORIP and HEMOTHP were consolidated into one set for “Control of perioperative hemorrhage and evacuation of hematoma”. The procedure code for endovascular embolization or occlusion of vessel(s) of the head or neck using bioactive coils (39.76) and the codes for uterine art embolization with or without coils (68.24, 68.25) were added to the denominator code set for the Perioperative Hemorrhage or Hematoma Rate measure.
V5.0	March 2015	Perioperative Hemorrhage or Hematoma Rate (PSI	Specification/ Calculation	The setnames for Posoperative Hemorrhage and Postoperative Hematoma were consolidated into one set: Perioperative Hemorrhage or Hematoma.

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V5.0	March 2015	Perioperative Hemorrhage or Hematoma Rate (PSI 09)	Specification/ Calculation	Platelet disorders were added to numerator exclusion for coagulation disorders: 286.53 Antiphospholipid antibody with hemorrhagic disorder 287.1 Qualitative platelet defect 287.30 Primary thrombocytopenia NOS 287.31 Immune thrombocytopenic purpura 287.22 Evans' syndrome 287.33 Congenital and hereditary thrombocytopenic purpura 287.39 Other primary thrombocytopenia 287.41 Posttransfusion purpura 287.5 Thrombocytopenia NOS 287.8 Other specified hemorrhagic conditions 287.9 Unspecified hemorrhagic conditions
V5.0	March 2015	Postoperative Physiologic and Metabolic Derangement Rate	Specification/ Calculation	Diabetic complications codes were removed from numerator and diabetes exclusions.
V5.0	March 2015	Postoperative Physiologic and Metabolic Derangement Rate	Specification/ Calculation	The chronic kidney failure POA denominator exclusion was restricted to stage V or end stage renal disease (403.x1, 404.x2, 404.x3, 585.5, 585.6).
V5.0	March 2015	Postoperative Physiologic and Metabolic Derangement Rate	Specification/ Calculation	Ulcer of esophagus with bleeding (530.21) was added to the denominator exclusion for GI hemorrhage.
V5.0	March 2015	Postoperative Respiratory Failure Rate (PSI 11)	Specification/ Calculation	Temporary tracheostomy (31.1) was added to definition of tracheostomy.

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V5.0	March 2015	Postoperative Respiratory Failure Rate (PSI 11)	Specification/ Calculation	The denominator exclusion for gingivoplasty (24.2) was dropped. Denominator exclusions for facial bone operations (76.31, 76.39, 76.41-76.45, 76.61-76.64, 76.7x, 76.92-76.99) and laryngo-tracheal operations (31.0, 31.61-31.64,31.71-31.72, 31.91-31.95) were added to the Postoperative Respiratory Failure Rate measure. Setnames for laryngeal, pharyngeal, facial, nose/mouth procedures were consolidated into one set: "Laryngeal, pharyngeal, facial, nose, mouth and pharynx surgery".
V5.0	March 2015	Postoperative Respiratory Failure Rate (PSI 11)	Specification/ Calculation	The denominator exclusion for senility (old age) without psychosis (797) under "degenerative neurological disorder" was removed.
V5.0	March 2015	Postoperative Respiratory Failure Rate (PSI 11)	Specification/ Calculation	The denominator exclusion for lung cancer surgery was expanded to include thoracoscopic surgery (32.30, 32.41, 32.50).
V5.0	March 2015	Postoperative Respiratory Failure Rate (PSI 11)	Specification/ Calculation	The denominator exclusion for esophageal surgery was expanded to include esophagostomy (42.10, 42.11, 42.12, 42.19).
V5.0	March 2015	Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate (PSI	Specification/ Calculation	Phlebitis and thrombophlebitis of lower extremities NOS (451.2) was removed from the numerator and denominator.
V5.0	March 2015	Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate (PSI	Specification/ Calculation	Extracorporeal membrane oxygenation (39.65) at any time during the index hospitalization was added as a denominator exclusion.
V5.0	March 2015	Postoperative Sepsis Rate (PSI 13)	Specification/ Calculation	Postoperative shock NOS (99800) was removed from the numerator and denominator specification.

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V5.0	March 2015	Accidental Puncture or Laceration Rate (PSI 15)	Specification/ Calculation	E-codes (E870.x) were removed from the numerator and denominator specification.
V5.0	March 2015	Accidental Puncture or Laceration Rate (PSI 15)	Specification/ Calculation	Insertion of recombinant BMP (84.52) was dropped from denominator exclusion for spine surgery.
V5.0	March 2015	Transfusion Reaction Count (PSI 16)	Specification/ Calculation	Mismatched blood transfusion (E8760) was removed from the numerator and denominator.
V5.0	March 2015	Retained Surgical Item or Unretrieved Device Fragment Rate (PSI 21)	Specification/ Calculation	E-codes (E871.x) were removed from the numerator.
V5.0	March 2015	Central Venous Catheter-Related Blood Stream Infection Rate (PSI	Specification/ Calculation	Other and unspecified infection due to central venous catheter (999.31) was removed from the numerator.
V5.0	March 2015	Accidental Puncture or Laceration Rate (PSI 25)	Specification/ Calculation	E-codes (E870.x) were removed from the numerator.
V5.0	March 2015	Accidental Puncture or Laceration Rate (PSI 25)	Specification/ Calculation	Insertion of recombinant BMP (84.52) was removed from the denominator exclusion for spine surgery.
V5.0	March 2015	Transfusion Reaction Rate (PSI 26)	Specification/ Calculation	Mismatched blood transfusion (E8760) was removed from the numerator and denominator.

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V5.0	March 2015	Postoperative Hemorrhage or Hematoma Rate (PSI 27)	Specification/ Calculation	Setnames HEMATIP, HEMORIP and HEMOTHP were consolidated into one set for "Control of perioperative hemorrhage and evacuation of hematoma". The procedure code for endovascular embolization or occlusion of vessel(s) of the head or neck using bioactive coils (39.76) and the codes for uterine art embolization with or without coils (68.24, 68.25) were added to the denominator code set for the Perioperative Hemorrhage or Hematoma Rate measure.
V5.0	March 2015	Postoperative Hemorrhage or Hematoma Rate (PSI 27)	Specification/ Calculation	The setnames for Posoperative Hemorrhage and Postoperative Hematoma were consolidated into one set: Perioperative Hemorrhage or Hematoma.
V5.0	March 2015	Postoperative Hemorrhage or Hematoma Rate (PSI 27)	Specification/ Calculation	Platelet disorders were added to numerator exclusion for coagulation disorders: 286.53 Antiphospholipid antibody with hemorrhagic disorder 287.1 Qualitative platelet defect 287.30 Primary thrombocytopenia NOS 287.31 Immune thrombocytopenic purpura 287.22 Evans' syndrome 287.33 Congenital and hereditary thrombocytopenic purpura 287.39 Other primary thrombocytopenia 287.41 Posttransfusion purpura 287.5 Thrombocytopenia NOS 287.8 Other specified hemorrhagic conditions 287.9 Unspecified hemorrhagic conditions
V5.0	March 2015	PSSASP3	Specification/ Calculation	Risk adjustment models were updated using the 2012 reference population file; The code was revised to use new regression coefficients.
V5.0	March 2015	PSSAS1	Specification/ Calculation	The macro code that uses POA values to identify conditions present on admission was revised.

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V5.0	March 2015	PSSASP2	Specification/ Calculation	The code for T flags for the POA to SAS1 program was adjusted.
V5.0	March 2015	PSI Composite	Specification/ Calculation	Weights for the measures that make up the Composite measure were updated using the 2012 reference population.
V5.0	March 2015	All PSI	Specification/ Calculation	The reference population was updated based on 2012 HCUP SIDS data.
V5.0	March 2015	All PSI	Specification/ Calculation	The population file was updated with US Census County estimates for 2014.
V4.5a	July 2014	All PSIs	Software (SAS, V4.5a)	To better reflect that SAS QI software does not currently support weighted QI estimates, DISCWT was removed from the program.
V4.5a	July 2014	All PSIs	Software (SAS V4.5a and WinQI V4.6)	There was an error in the software that did not allow the software to accept data for Quarter 4 2013 and beyond. This was corrected for two data elements: ICDVER and DRGVER.
V4.5a	July 2014	All PSIs	Software (SAS, V4.5a)	Labels were modified for consistency. QPPS labels were changed to better reflect that the data elements are flags for palliative care and Present-on- Admission.

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V4.5a	July 2014	All PSIs	Software (SAS, V4.5a)	To improve the output of results in a better format, the PROC MEANS statement was modified.
V4.5a	July 2014	All PSIs	Software (WinQI, V4.6)	A denominator adjustment added to SAS for Version 4.4 has been added to WinQI. This applies to the population counts when certain combinations of strata are zero.
V4.5a	July 2014	PSI 04	Specification/ Calculation	To ensure that the strata are mutually exclusive within each indicator, strata were prioritized according to their relative prevalence in the reference population. Order of priority for PSI 04 is Strata D, C, B, A, E.
V4.5a	July 2014	PSI 12	Documentation	The technical specifications were updated to correct the error of italicizing procedure code 45.12 – PHELBITIS AND THROMBOPHLEBITIS OF LOWER EXTREMITY UNSPECIFIED, as it is retained in the algorithm.
V4.5a	July 2014	PSI 12	Specification/ Calculation	Denominator exclusion for discharges in which the operating room procedure is interruption of vena cava was removed as unnecessary and redundant.
V4.5a	July 2014	EXP 01, EXP 02	Software (WinQI, V4.6)/ Documentation	The 'experimental' indicators, EXP 01, Obstretric Trauma Rate (Caesarian) and EXP 02, Complications of Anesthesia, have been removed. These indicators had originally been part of the PSI module as experimental and were previously discontinued in WinQI. These EXP indicators have not been routinely updated.
V4.5	May 2013	All area PSI	Specification/ Calculation	Updated data are used for population estimates (i.e., through 2013). The population data are used to calculate the denominator for the area-level QI.

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V4.5	May 2013	All PSI	Specification/ Calculation	Updated reference population rates were calculated using 44 state files from the 2010 State Inpatient Databases (SID). New risk adjustment coefficients were calculated using the updated reference population
V4.5	May 2013	Death Rate among Surgical Inpatients with Serious Treatable Complications (PSI 4)	Specification/ Calculation	1. Drop selected denominator inclusion codes for Stratum C: 78559 SHOCK W/O TRAUMA NEC 9980 POSTOPERATIVE SHOCK 99800 POSTOPERATIVE SHOCK, NOS 2. Drop selected denominator inclusion codes for Stratum D: 78552 SEPTIC SHOCK 99802 POSTOP SHOCK, SEPTIC 3. Stratified into five categories: • Stratum A: Secondary diagnosis of pneumonia • Stratum B: Secondary diagnosis of DVT/PE • Stratum C: Secondary diagnosis of sepsis • Stratum D: Secondary diagnosis of shock/cardiac arrest • Stratum E: Secondary diagnosis of GI hemorrhage/acute ulcer The software reports an observed rate, an expected rate, a risk-adjusted rate, and confidence limits around the risk-adjusted rate for each stratum. The smoothed rate and posterior standard deviation are not reported for the strata. All results for the measure aggregated
V4.5	May 2013	Postoperative Hip Fracture Rate (PSI 8)	Specification/ Calculation	Drop the secondary diagnosis exclusion criterion for seizure, syncope, stroke and occlustion of arteries, coma, cardiac arrest, poisoning, trauma, delirium and other psychoses, and anoxic brain injury

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V4.5	May 2013	Postoperative Hemorrhage or Hematoma Rate (PSI 9)	Specification/ Calculation	1. Add denominator exclusion codes for any diagnosis code of coagulation disorder: 2860 CONG FACTOR VIII DISORDER 2861 CONG FACTOR IX DISORDER 2862 CONG FACTOR XI DISORDER 2863 CONG DEF CLOT FACTOR NEC 2864 VON WILLEBRAND'S DISEASE 28652 ACQUIRED HEMOPHILIA 28659 OT HEM D/T CIRC ANTICOAG 2866 DEFIBRINATION SYNDROME 2867 ACQ COAGUL FACTOR DEF 2869 COAGUL DEFECT NEC NOS 2. Add numerator inclusion codes for miscellaneous hemorrhage or hematoma-related procedures: Codes listed in Appendix C
V4.5	May 2013	All mortality PSI and Postoperative Wound Dehiscence Rate (PSI 14)	Specification/ Calculation	Modify the parameters in the analysis module for measures that are never present on admission (this is, where P=0 for all cases) by increasing the estimated precision threshold, i.e., modify the precision parameter in the analysis module to less than $1x10^9$. This changed only affected the software. The user will not see the change in parameters as they are embedded in the regression intercept and coefficients that are used by the prediction module. Rationale: Effect will be to change the reference population rate used for shrinkage to be closer to empirically estimated reference population rate given P=0

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V4.5	May 2013	Postoperative Hemorrhage or Hematoma Rate (PSI 27)	Specification/ Calculation	1. Add numerator exclusion codes for any diagnosis code of coagulation disorder: 2860 CONG FACTOR VIII DISORDER 2861 CONG FACTOR IX DISORDER 2862 CONG FACTOR XI DISORDER 2863 CONG DEF CLOT FACTOR NEC 2864 VON WILLEBRAND'S DISEASE 28652 ACQUIRED HEMOPHILIA 28659 OT HEM D/T CIRC ANTICOAG 2866 DEFIBRINATION SYNDROME 2867 ACQ COAGUL FACTOR DEF 2869 COAGUL DEFECT NEC NOS 2. Add numerator inclusion codes for miscellaneous hemorrhage or hematoma-related procedures: Codes listed in Appendix C
V4.5	May 2013	All PSI	Software/ Documentation	Respiratory complications diagnosis codes – Corrections were made to assure that three specific diagnosis codes were present in both the SAS and WinQI software. This change only affected the software.
V4.5	May 2013	All PSI	Software/ Documentation	In WinQI there was an error in the smoothed rate calculation involving the noise variance and signal variance. This error was not previously observed because it only became significant in particular cases with relatively unusual variances. This issue was fixed in WinQI Version 4.5
V4.5	May 2013	All PSI	Software/ Documentation	The variable DISCWT in SAS QI v4.5 was set equal to 1 and the variable DISCWT was removed from the KEEP statement associated with the input file. This change ensures that the SAS programs do not account for complex sampling design when calculating QI estimates and standard errors. The SAS QI software, beginning with Version 4.1, does not support weighted QI estimates or standard errors for weighted estimates. The WinQI software has never supported weighted QI estimates or standard errors for weighted estimates

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V4.5	May 2013	All PSI	Software/ Documentation	Phlebitis and related codes – The processing of code 4512 was corrected to be consistent in the SAS and WinQI software. This change only affected the software.
V4.5	May 2013	All PSI	Software/ Documentation	The installation packages have been improved for Version 4.5 of the SAS and WinQI software, including the Prediction Module and 3M™ APR DRG software. Both the SAS and WinQI software are available in Version 4.5 as either 32-bit or 64-bit applications. The 32-bit applications are targeted for Windows XP operating systems, and the 64-bit applications are targeted for Windows 7 operating systems.
V4.5	May 2013	All PSI	Software/ Documentation	The WinQI software was corrected to address the following issues: 1. On Step 2 of the Sampling Wizard dialog, the Sample Data File text box was not working correctly. Users were not able to save the file specified using the Browse explorer function. This issue has been fixed in WinQI Version 4.5. 2. Denominators were not being adjusted (i.e., dividing by the number of discharge quarters) when the calculations were being stratified by quarter. This issue has been fixed in WinQI Version 4.5. 3. On the WinQI Additional Options for Data Analysis screen of the Report Wizard, if the "*Ref. Pop. Rate*" is deselected, and then the expected rate and O/E ratio are reported incorrectly. These rates should be disabled on this screen if "*Ref. Pop. Rate*" is not selected. This issue has been included in the software documentation. 4. The compiled C# program was named AHRQ.exe, and this was the same name used for the compiled Prediction Module C++ program. This potential conflict has been fixed in WinQI Version 4.5. 5. Excel files with an .xlsx extension were not recognized. MS

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V4.5	May 2013	Volume of Foreign Body Left during Procedure (PSI 5)	Software/ Documentation	Rename indicator to "Retained Surgical Item or Unretrieved Device Fragment Count." This change only affected the documentation. Rationale: NQF measure refinements agreed upon with the Surgery Endorsement Maintenance 2010 Steering Committee
V4.5	May 2013	Iatrogenic Pneumothorax Rate (PSI 6)	Software/ Documentation	Code description for 3424 in the PSI 6 technical specification was updated to be "PLEURAL BIOPSY NEC." This change only affected the documentation.
V4.5	May 2013	Postoperative Hemorrhage or Hematoma Rate (PSI 9)	Software/ Documentation	1. Rename indicator to "Perioperative Hemorrhage or Hematoma Rate." This change only affected the documentation. Rationale: Cases identified included adverse events that occur both perioperatively and postoperatively 2. For the denominator exclusion criterion that excludes cases where the procedure of interest occurs before the first operating room procedure, explicitly say that a secondary diagnosis for postoperative hemorrhage or postoperative hematoma must also be present in the discharge record for the record to be excluded. This change clarified the documentation and did not alter the calculation of the indicator
V4.5	May 2013	Postoperative Respiratory Failure Rate (PSI 11)	Software/ Documentation	Added the following codes to Neuromuscular disorder diagnosis codes: 35921 MYOTONIC MUSCULAR DYSTRPHY 35929 OTHER MYOTONIC DISORDER This change affected both the software and documentation

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V4.5	May 2013	Postoperative Pulmonary Embolism or Deep Vein Thrombosis Rate (PSI 12)	Software/ Documentation	1. Rename indicator to "Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate." This change only affected the documentation. Rationale: Cases identified included adverse events that occur both perioperatively and postoperatively 2. Italicize the following numerator inclusion deep vein thrombosis diagnosis code: 4512 THROMBOPHLEBITIS LEG NOS This change only affected the documentation
V4.5	May 2013	Transfusion Reaction Volume (PSI 16)	Software/ Documentation	Rename indicator to "Transfusion Reaction Count." This change only affected the documentation.
V4.5	May 2013	Birth Trauma Rate – Injury to Neonate (PSI 17)	Software/ Documentation	1. A standalone SAS module was introduced that allows PSI #17 to be calculated without the need to run the entire PDI module. The PSI #17 Standalone Module for SAS is available for download from the AHRQ QI website. 2. The definitions of Newborn and Outborn were revised in WinQI to better align them with SAS. The differences affected cases where discharge records have some combinations of missing values for one or more of the required data fields (e.g., Age, Age in Days).
V4.5	May 2013	Rate of Foreign Body Left during Procedure (PSI 21)	Software/ Documentation	Rename indicator to "Retained Surgical Item or Unretrieved Device Fragment Rate." This change only affected the documentation. Rationale: NQF measure refinements agreed upon with the Surgery Endorsement Maintenance 2010 Steering Committee
V4.5	May 2013	Iatrogenic Pneumothorax Rate (PSI 22)	Software/ Documentation	Deleted denominator exclusion criteria section, as this is an area calculation. This change only affected the documentation.

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V4.5	May 2013	Postoperative Hemorrhage or Hematoma Rate (PSI 27)	Software/ Documentation	Rename indicator to "Perioperative Hemorrhage or Hematoma Rate." This change only affected the documentation. Rationale: Cases identified included adverse events that occur both perioperatively and postoperatively
V4.5	May 2013	Birth Rate Trauma – Injury to Neonate (PSI 17) Obstetric Trauma Rate – Vaginal Delivery With Instrument (PSI 18) Obstetric Trauma Rate – Vaginal Delivery Without Instrument (PSI 19)	Software/ Documentation	Expected rates, risk-adjusted rates, and smoothed rates are no longer reported for these measures. These measures are not risk-adjusted, so only the numerators, denominators, and observed rates are reported by the software.
V4.4	March 2012	All Area PSI	Specification/ Calculation	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 using the 2009 Nationwide Inpatient Sample (NIS) 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.

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V4.4	March 2012	Dealth in Low-Mortality DRGs (PSI 2)	Fiscal Year Coding	1. Add denominator exclusions for immunocompromised state diagnoses or procedures (PSI Appendix I) Add code: 28411 ANTIN CHEMO INDCD PANCYT 28412 OTH DRG INDCD PANCYTOPNA 28419 OTHER PANCYTOPENIA 99688 COMP TP ORGAN-STEM CELL 2. Add denominator exclusions for diagnosis of trauma (PSI Appendix G) Add code: 80844 PELV FX-CL W/O PLV DISRP 80854 PELV FX-OPEN W/O PELV DIS
V4.4	March 2012	Pressure Ulcer Rate (PSI 3)	Fiscal Year Coding	1. Add/Remove denominator inclusions for operating room procedure codes (PSI Appendix A) See Appendix F in this document for specific codes. 2. Add surgical discharge MS-DRGs (PSI Appendix E) Add code: 16 AUTOLOGOUS BONE MARROW TRANSPLANT W CC/MCC 17 AUTOLOGOUS BONE MARROW TRANSPLANT W/O CC/MCC 570 SKIN DEBRIDEMENT W MCC 571 SKIN DEBRIDEMENT W CC

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V4.4	March 2012	Death Among Surgical Inpatients with Serious Treatable Complications (PSI 4)	Fiscal Year Coding	. Add/Remove denominator inclusions for operating room procedure codes (PSI Appendix A) See Appendix F in this document for specific codes. 2. Add denominator exclusions for FTR 3 Pneumonia and FTR 4 Sepsis for immunocompromised state diagnoses or procedures (PSI Appendix I) Add code: 28411 ANTIN CHEMO INDCD PANCYT 28412 OTH DRG INDCD PANCYTOPNA 28419 OTHER PANCYTOPENIA 99688 COMP TP ORGAN-STEM CELL 3. Remove principal diagnosis denominator exclusion from FTR 5 Shock or Cardiac Arrest for diagnosis of shock or cardiac arrest. *Please note that this code set also serves as a denominator inclusion when the code is a secondary diagnosis.* Remove code: 9980 POSTOPERATIVE SHOCK 4. Add principal diagnosis denominator exclusion to FTR 2 DVT/PE for pulmonary embolism and deep vein thrombosis diagnosis. *Please note that this code set also serves as a denominator inclusion when the code is a secondary diagnosis.* Add code: 41513 SADDLE EMBOL PULMON ART

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V4.4	March 2012	Death Among Surgical Inpatients with Serious Treatable Complications (PSI 4)	Fiscal Year Coding	5. Add principal diagnosis denominator exclusion to FTR 3 Pneumonia for diagnosis of influenza. *Please note that this code set also serves as a denominator inclusion when the code is a secondary diagnosis.* Add code: 48881 FLU DT NVL A VRS W PNEU 48882 FLU DT NVL A W OTH RESP 48889 FLU DT NOVEL A W OTH MAN 6. Add denominator exclusions to FTR 4 Sepsis for diagnosis of infection diagnosis codes (PSI Appendix F) Add code: 04141 SHIGA TXN-PRODUCE E.COLI 04142 SHGA TXN PROD E.COLI NEC 04143 SHGA TXN PROD E.COLI NOS 04149 E.COLI INFECTION NEC/NOS 53901 INF D/T GASTRC BAND PROC 53981 INF D/T OT BARIATRC PROC 59681 INFECTION OF CYSTOSTOMY 99802 POSTOP SHOCK, SEPTIC 99932 BLOOD INF DT CEN VEN CTH 99933 LCL INF DET CEN VEN CTH 99934 AC INF FOL TRANS,INF BLD

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V4.4	March 2012	Death Among Surgical Inpatients with Serious Treatable Complications (PSI 4)	Fiscal Year Coding	7. Remove/add principal diagnosis denominator exclusion from FTR 4 Sepsis. *Please note that this code set also serves as a denominator inclusion when the code is a secondary diagnosis.* Remove code: 9980 POSTOPERATIVE SHOCK Add code: 99800 POSTOPERATIVE SHOCK, NOS 99802 POSTOP SHOCK, SEPTIC 8. Add principal diagnosis denominator exclusions to FTR 5 Shock or Cardiac Arrest for diagnosis of shock or cardiac arrest. *Please note that this code set also serves as a denominator inclusion when the code is a secondary diagnosis.* Add code: 99800 POSTOPERATIVE SHOCK, NOS 99801 POSTOP SHOCK, CARDIOGENIC 99802 POSTOP SHOCK, SEPTIC 99809 POSTOP SHOCK, OTHER 99941 ANAPHYL D/T ADM BLD/PROD 99942 ANAPHYL REACT D/T VACCIN 99949 ANAPH REACT D/T OT SERUM

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V4.4	March 2102	Death Among Surgical Inpatients with Serious Treatable Complications (PSI 4)	Fiscal Year Coding	9. Add denominator exclusions to FTR 5 Shock or Cardiac Arrest and FTR 6 GI Hemorrhage/Acute Ulcer for Trauma Diagnosis Codes (PSI Appendix G) Add code: 80844 PELV FX-CL W/O PLV DISRP 80854 PELV FX-OPEN W/O PELV DIS 10. Add denominator inclusion for surgical discharge MS-DRGs (PSI Appendix E) Add code: 16 AUTOLOGOUS BONE MARROW TRANSPLANT W CC/MCC 17 AUTOLOGOUS BONE MARROW TRANSPLANT W/O CC/MCC 570 SKIN DEBRIDEMENT W MCC 571 SKIN DEBRIDEMENT W CC
V4.4	March 2012	Volume of Foreign Body Left During Procedure (PSI 5)	Fiscal Year Coding	Add denominator inclusion for surgical discharge MS-DRGs (PSI Appendix E) Add code: 16 AUTOLOGOUS BONE MARROW TRANSPLANT W CC/MCC 17 AUTOLOGOUS BONE MARROW TRANSPLANT W/O CC/MCC 570 SKIN DEBRIDEMENT W MCC 571 SKIN DEBRIDEMENT W CC

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V4.4	March 2012	Iatrogenic Pneumothorax Rate (PSI 6)	Fiscal Year Coding	1. Add denominator exclusions for cardiac procedures Add code: 3506 TRNSAPCL REP AORTC VALVE 3508 TRNSAPCL REP PULM VALVE 2. Add denominator inclusion for surgical discharge MS-DRGs (PSI Appendix E) Add code: 16 AUTOLOGOUS BONE MARROW TRANSPLANT W CC/MCC 17 AUTOLOGOUS BONE MARROW TRANSPLANT W/O CC/MCC 570 SKIN DEBRIDEMENT W MCC 571 SKIN DEBRIDEMENT W CC

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V4.4	March 2012	Central Venous Catheter-Related Blood Stream Infections (PSI 7)	Fiscal Year Coding	1. Add numerator definition for diagnosis of central venous catheter-related blood stream infections diagnosed on or after October 1, 2011. Add code: 99932 BLOOD INF DT CEN VEN CTH 2. Add denominator exclusions for immunocompromised state diagnosis or procedures (PSI Appendix I) Add code: 28411 ANTIN CHEMO INDCD PANCYT 28412 OTH DRG INDCD PANCYTOPNA 28419 OTHER PANCYTOPENIA 99688 COMP TP ORGAN-STEM CELL 3. Add denominator inclusion for surgical discharge MS-DRGs (PSI Appendix E) Add code: 16 AUTOLOGOUS BONE MARROW TRANSPLANT W CC/MCC 17 AUTOLOGOUS BONE MARROW TRANSPLANT W/O CC/MCC 570 SKIN DEBRIDEMENT W MCC

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V4.4	March 2012	Postoperative Hip Fracture Rate (PSI 8)	Fiscal Year Coding	1. Add/Remove denominator inclusions to operating room procedure codes (PSI Appendix A) See Appendix F in this document for specific codes. 2. Add denominator exclusions for diagnosis of delirium or other psychoses Add code: 29420 DEMEN NOS W/O BEHV DSTRB 29421 DEMEN NOS W BEHAV DISTRB 3. Add denominator inclusion for surgical discharge MS-DRGs (PSI Appendix E) Add code: 16 AUTOLOGOUS BONE MARROW TRANSPLANT W CC/MCC 17 AUTOLOGOUS BONE MARROW TRANSPLANT W/O CC/MCC 570 SKIN DEBRIDEMENT W MCC 571 SKIN DEBRIDEMENT W CC 572 SKIN DEBRIDEMENT W/O CC/MCC 4. Add denominator exclusions for diagnosis of trauma (PSI Appendix G) Add code: 808.44 PELV FX-CL W/O PLV DISRP 808.54 PELV FX-OPEN W/O PELV DIS

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V4.4	March 2012	Postoperative Hemorrhage or Hematoma Rate (PSI 9)	Fiscal Year Coding	1. Add/Remove denominator inclusions to operating room procedure codes (PSI Appendix A) See Appendix F in this document for specific codes. 2. Add denominator inclusion for surgical discharge MS-DRGs (PSI Appendix E) Add code: 16 AUTOLOGOUS BONE MARROW TRANSPLANT W CC/MCC 17 AUTOLOGOUS BONE MARROW TRANSPLANT W/O CC/MCC 570 SKIN DEBRIDEMENT W MCC 571 SKIN DEBRIDEMENT W CC

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V4.4	March 2012	Postoperative Physiologic and Metabolic Derangement Rate (PSI 10)	Fiscal Year Coding	1. Add/Remove denominator inclusions to operating room procedure codes (PSI Appendix A) See Appendix F in this document for specific codes. 2. Add denominator exclusions for diagnosis of shock Add code: 99800 POSTOPERATIVE SHOCK, NOS 99801 POSTOP SHOCK,CARDIOGENIC 99802 POSTOP SHOCK, SEPTIC 99809 POSTOP SHOCK, OTHER 99941 ANAPHYL D/T ADM BLD/PROD 99942 ANAPHYL REACT D/T VACCIN 99949 ANAPH REACT D/T OT SERUM 3. Remove denominator exclusions for diagnosis of shock Remove code: 9980 POSTOPERATIVE SHOCK 4. Add denominator inclusion for surgical discharge MS-DRGs (PSI Appendix E) Add code: 16 AUTOLOGOUS BONE MARROW TRANSPLANT W CC/MCC 17 AUTOLOGOUS BONE MARROW TRANSPLANT W/O CC/MCC 570 SKIN DEBRIDEMENT W MCC 571 SKIN DEBRIDEMENT W CC 572 SKIN DEBRIDEMENT W/O CC/MCC

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V4.4	March 2012	Postoperative Respiratory Failure Rate (PSI 11)	Fiscal Year Coding	1. Add numerator inclusions for diagnosis of acute respiratory failure Add code: 51851 AC RESP FLR FOL TRMA/SRG 51853 AC/CHR RSP FLR FOL TR/SG 2. Remove inclusions for diagnosis of acute respiratory failure Remove code: 51881 ACUTE RESPIRATORY FAILURE 51884 ACUTE & CHRONC RESP FAIL 3. Add/Remove denominator inclusions for operating room procedure codes (PSI Appendix A) See Appendix F in this document for specific codes. 4. Add denominator exclusions for diagnosis of degenerative neurological disorder Add code: 31081 PSEUDOBULBAR AFFECT 31089 NONPSYCH MNTL DISORD NEC 3316 CORTICOBASAL DEGENERATION 34882 BRAIN DEATH 5. Add denominator inclusion for surgical discharge MS-DRGs (PSI Appendix E)

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V4.4	March 2012	Postoperative Respiratory Failure Rate (PSI 11)	Fiscal Year Coding	6. Add denominator exclusions for diagnosis of neuromuscular disorders Add code: 35830 LAMBERT-EATON SYND NOS 35831 LAMBERT-EATON SYND NEOPL 572 SKIN DEBRIDEMENT W/O CC/MCC Add code: 16 AUTOLOGOUS BONE MARROW TRANSPLANT W CC/MCC 17 AUTOLOGOUS BONE MARROW TRANSPLANT W/O CC/MCC 570 SKIN DEBRIDEMENT W MCC 571 SKIN DEBRIDEMENT W CC 572 SKIN DEBRIDEMENT W/O CC/MCC
V4.4	March 2012	Postoperative Pulmonary Embolism or DVT Rate (PSI 12)	Fiscal Year Coding	1. Add numerator inclusion for diagnosis of pulmonary embolism and deep vein thrombosis Add code: 41513 SADDLE EMBOL PULMON ART 2. Add/Remove denominator inclusions for operating room procedure codes (PSI Appendix A) See Appendix F in this document for specific codes. 3. Add denominator inclusion for surgical discharge MS-DRGs (PSI Appendix E) Add code: 16 AUTOLOGOUS BONE MARROW TRANSPLANT W CC/MCC 17 AUTOLOGOUS BONE MARROW TRANSPLANT W/O CC/MCC 570 SKIN DEBRIDEMENT W MCC 571 SKIN DEBRIDEMENT W CC 572 SKIN DEBRIDEMENT W/O CC/MCC

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V4.4	March 2012	Postoperative Sepsis Rate (PSI 13)	Fiscal Year Coding	1. Add/Remove denominator inclusion for operating room procedure codes (PSI Appendix A) See Appendix F in this document for specific codes. 2. Add denominator inclusion for surgical discharge MS-DRGs (PSI Appendix E) Add code: 16 AUTOLOGOUS BONE MARROW TRANSPLANT W CC/MCC 17 AUTOLOGOUS BONE MARROW TRANSPLANT W/O CC/MCC 570 SKIN DEBRIDEMENT W MCC 571 SKIN DEBRIDEMENT W CC 572 SKIN DEBRIDEMENT W/O CC/MCC 3. Add denominator exclusions for diagnosis of infection (PSI Appendix F) Add code: 04141 SHIGA TXN-PRODUCE E.COLI 04142 SHGA TXN PROD E.COLI NEC 04143 SHGA TXN PROD E.COLI NOS 04149 E.COLI INFECTION NEC/NOS 53901 INF D/T GASTRC BAND PROC 53981 INF D/T OT BARIATRC PROC 59681 INTESTINAL FISTULA 99802 POSTOP SHOCK, SEPTIC 99932 BLOOD INF DT CEN VEN CTH 99933 LCL INF DET CEN VEN CTH 99934 AC INF FOL TRANS,INF BLD

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
				4. Add denominators exclusion for immunocompromised state diagnosis or procedures (PSI Appendix I) Add code: 28411 ANTIN CHEMO INDCD PANCYT 28412 OTH DRG INDCD PANCYTOPNA 28419 OTHER PANCYTOPENIA 99688 COMP TP ORGAN-STEM CELL 99800 POSTOPERATIVE SHOCK, NOS 99802 POSTOP SHOCK,SEPTIC 5. Remove denominator exclusion from diagnosis of immunocompromised state diagnosis or procedures (PSI Appendix I) Remove code: 9980 POSTOPERATIVE SHOCK 6. Add numerator inclusions for diagnosis of sepsis 99800 POSTOPERATIVE SHOCK, NOS 99802 POSTOP SHOCK, SEPTIC
V4.4	March 2012	Postoperative Wound Dehiscence Rate (PSI 14)	Fiscal Year Coding	1. Add denominator inclusion for abdominopelvic procedures Add code: 4382 LAP VERTICAL GASTRECTOMY 2. Add denominator exclusions to diagnosis of immunocompromised state (PSI Appendix I) Add code: 28411 ANTIN CHEMO INDCD PANCYT 28412 OTH DRG INDCD PANCYTOPNA 28419 OTHER PANCYTOPENIA 99688 COMP TP ORGAN-STEM CELL

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V4.4	March 2012	Accidental Puncture or Laceration (PSI 15)	Fiscal Year Coding	Add denominator inclusion for surgical discharge MS-DRGs (PSI Appendix E) Add code: 16 AUTOLOGOUS BONE MARROW TRANSPLANT W CC/MCC 17 AUTOLOGOUS BONE MARROW TRANSPLANT W/O CC/MCC 570 SKIN DEBRIDEMENT W MCC 571 SKIN DEBRIDEMENT W CC 572 SKIN DEBRIDEMENT W/O CC/MCC
V4.4	March 2012	Transfusion Reaction Volume (PSI 16)	Fiscal Year Coding	Add denominator inclusion for surgical discharge MS-DRGs (PSI Appendix E) Add code: 16 AUTOLOGOUS BONE MARROW TRANSPLANT W CC/MCC 17 AUTOLOGOUS BONE MARROW TRANSPLANT W/O CC/MCC 570 SKIN DEBRIDEMENT W MCC 571 SKIN DEBRIDEMENT W CC 572 SKIN DEBRIDEMENT W/O CC/MCC
V4.4	March 2012	Rate of Foreign Body Left During Procedure (PSI 21)	Fiscal Year Coding	Add denominator inclusion for surgical discharge MS-DRGs (PSI Appendix E) Add code: 16 AUTOLOGOUS BONE MARROW TRANSPLANT W CC/MCC 17 AUTOLOGOUS BONE MARROW TRANSPLANT W/O CC/MCC 570 SKIN DEBRIDEMENT W MCC 571 SKIN DEBRIDEMENT W CC 572 SKIN DEBRIDEMENT W/O CC/MCC

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V4.4	March 2012	Iatrogenic Pneumothorax Rate (PSI 22)	Fiscal Year Coding	1. Add denominator exclusions for cardiac procedures Add code: 3506 TRNSAPCL REP AORTC VALVE 3508 TRNSAPCL REP PULM VALVE 2. Add denominator inclusion for surgical discharge MS-DRGs (PSI Appendix E) Add code: 16 AUTOLOGOUS BONE MARROW TRANSPLANT W CC/MCC 17 AUTOLOGOUS BONE MARROW TRANSPLANT W/O CC/MCC 570 SKIN DEBRIDEMENT W MCC 571 SKIN DEBRIDEMENT W CC 572 SKIN DEBRIDEMENT W/O CC/MCC

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V4.4	March 2012	Central Venous Catheter-Related Blood Stream Infections (PSI 23)	Fiscal Year Coding	1. Add numerator definition for diagnosis of central venous catheter-related blood stream infections diagnosed on or after October 1, 2011. Code: 999.31 OTH/UNS INF-CEN VEN CATH 999.32 BLOOD INF DT CEN VEN CTH 2. Add denominator inclusion for surgical discharge MS-DRGs (PSI Appendix E) Add code: 16 AUTOLOGOUS BONE MARROW TRANSPLANT W CC/MCC 17 AUTOLOGOUS BONE MARROW TRANSPLANT W/O CC/MCC 570 SKIN DEBRIDEMENT W MCC 571 SKIN DEBRIDEMENT W CC 572 SKIN DEBRIDEMENT W/O CC/MCC 3. Add exclusions for immunocompromised state diagnosis or procedures (PSI Appendix I) 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	Postoperative Wound Dehiscence Rate (PSI 24)	Fiscal Year Coding	Add exclusions for immunocompromised state diagnosis or procedures (PSI Appendix I) Add code: 28411 ANTIN CHEMO INDCD PANCYT 28412 OTH DRG INDCD PANCYTOPNA 28419 OTHER PANCYTOPENIA 99688 COMP TP ORGAN-STEM CELL

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V4.4	March 2012	Accidental Puncture of Laceration Rate (PSI 25)	Fiscal Year Coding	Add denominator inclusion for surgical discharge MS-DRGs (PSI Appendix E) Add code: 16 AUTOLOGOUS BONE MARROW TRANSPLANT W CC/MCC 17 AUTOLOGOUS BONE MARROW TRANSPLANT W/O CC/MCC 570 SKIN DEBRIDEMENT W MCC 571 SKIN DEBRIDEMENT W CC 572 SKIN DEBRIDEMENT W/O CC/MCC
V4.4	March 2012	Transfusion Reaction Rate (PSI 26)	Fiscal Year Coding	Add denominator inclusion for surgical discharge MS-DRGs (PSI Appendix E) Add code: 16 AUTOLOGOUS BONE MARROW TRANSPLANT W CC/MCC 17 AUTOLOGOUS BONE MARROW TRANSPLANT W/O CC/MCC 570 SKIN DEBRIDEMENT W MCC 571 SKIN DEBRIDEMENT W CC 572 SKIN DEBRIDEMENT W/O CC/MCC
V4.4	March 2012	Rate of Complications of Anesthesia (EXP 1)	Fiscal Year Coding	1. Add and remove operating room procedure codes (PSI Appendix A) See Appendix F in this document for specific codes. 2. Add denominator inclusion for surgical discharge MS-DRGs (PSI Appendix E) Add code: 16 AUTOLOGOUS BONE MARROW TRANSPLANT W CC/MCC 17 AUTOLOGOUS BONE MARROW TRANSPLANT W/O CC/MCC 570 SKIN DEBRIDEMENT W MCC 571 SKIN DEBRIDEMENT W CC 572 SKIN DEBRIDEMENT W/O CC/MCC

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
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 WinQI and partially fixed in SAS so that this truncation only applies in cases where no stratification is being performed. In SAS, (Observed rate)/ (Expected rate) ratio upper confidence bounds for provider-level, non-risk-adjusted IQI and provider-level, non-risk-adjusted PSI are still truncated to be <= 1.0 in cases where a stratification of the rates is being implemented. This issue will be fixed in v4.5. Users may obtain the upper confidence bound (95%) using the following formula: upper confidence bound = (2 * ratio) – lower confidence bound.
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 in fixed in v4.4 of SAS.
V4.4	March 2012	Software	Software/ Documentation	PSSASA2.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	Minor SAS versus WinQI coding differences were corrected in the implementation of the technical specifications for PSI-03.
V4.4	March 2012	Software	Software/ Documentation	PSI# 07: Modified inclusion logic to include time dependent logic to discharges before October 1, 2011 and after October 1, 2011 for central line-associated blood stream infection diagnosis code
V4.4	March 2012	Software	Software/ Documentation	PSI# 23: Modified inclusion logic to include time dependent logic to discharges before October 1, 2011 and after October 1, 2011 for central line-associated blood stream infection diagnosis code

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V4.4	March 2012	Software	Software/ Documentation	PSI #11: Modified the order of denominator exclusion/inclusions and numerator flags.
V4.4	March 2012	Software	Software/ Documentation	Added the major operating room procedure codes ($ORPROC) of FY2011 which were not included in V4.3 0120 IMP/REPL BRAIN PULSE GEN 0129 REM BRAIN PULSE GENERATR 3227 BRNC THRMPLSTYABLT MSCL 3597 PERC MTRL VLV REPR W IMP 3737 EXC/DEST HRT LES THRSPC 3981 IMP CRTD SINUS STMTOTL 3982 IMP/REP CRTD SINUS LEAD 3983 IMP/REP CRTD SINUS GNRTR 3984 REV CRTD SINUS STM LEADS 3985 REV CRTD SINUS PULSE GEN 3986 REM CRTD SINUS STM TOTL 3987 REM CRTD SINUS STM LEAD 3988 REM CRTD SINUS PULSE GEN 3989 OTH CARTD BODY/SINUS OP 8188 RVRS TOTL SHLDR REPLACMT 8494 INS STRN FIX W RGD PLATE 8555 FAT GRAFT TO BREAST 8687 FAT GRFT SKIN/SUBQ TISS 8690 EXT FAT FOR GRFT/BANKING
V4.4	March 2012	Software	Software/ Documentation	Changes were made to the SAS and WinQI software to implement a re-estimation of the signal variance in order to correct the fact that the smoothed rates in v4.3 of the software were constant for all providers for four indicators (PSI-08).
V4.4	March 2012	Software	Software/ Documentation	The WinQI v4.3 patient-level report showed incorrect POA exclusions in some cases. This issue was fixed in v4.4 of WinQI.
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.

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
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.
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	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 in fixed in v4.4 of SAS.
V4.3	April 29, 2010	Death Among Surgical Inpatients with Serious Treatable Complications (PSI 4) Denominator (Exclusion, influenza)	Coding	Add to denominator exclusion for diagnosis of influenza (FTR #3) 48801 FLU DR IDEN AVIAN W PNEU 48802 FLU DT AVIAN W OTH RESP 48809 FLU DT AVIAN MANFEST NEC 48811 FLU DT H1N1 FLU W PNEU 48812 FLU DT H1N1 W OTH RESP 48819 FLU DT H1N1 MANFEST NEC
V4.3	April 29, 2010	Iatrogenic Pneumothorax (PSI 6 and 22) Denominator (Exclusion, thoracic procedure)	Coding	Add to denominator exclusion for thoracic procedure 3227 BRNC THRMPLSTY, ABLT MSCL

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V4.3	April 29, 2010	Iatrogenic Pneumothorax (PSI 6 and 22) Denominator (Exclusion, cardiac procedure)	Coding	Add to denominator exclusion for cardiac procedure 3597 PERC MTRL VLV REPR W IMP 3737 EXC/DEST HRT LES, THRSPC
V4.3	April 29, 2010	Postoperative Hip Fracture (PSI 8) Denominator (Exclusion, seizure)	Coding	Add to denominator exclusion for diagnosis of seizure 78033 POST TRAUMATIC SEIZURES
V4.3	April 29, 2010	Transfusion Reaction (PSI 16) Numerator (Inclusion, transfusion reaction)	Coding	Add to numerator inclusion for diagnosis of transfusion reaction 99960 ABO INCOMPAT REAC NOS 99961 ABO INCOMP/HTR NEC 99962 ABO INCOMPAT/ACUTE HTR 99963 ABO INCOMPAT/DELAY HTR 99969 ABO INCOMPAT REACTN NEC 99970 RH INCOMPAT REACTION NOS 99971 RH INCOMP/HTR NEC 99972 RH INCOMPAT/ACUTE HTR 99973 RH INCOMPAT/DELAY HTR 99974 RH INCOMPAT REACTION NEC
V4.3	April 29, 2010	AHRQ Comorbidity Software	Coding	Add codes for NEURO 78033 POST TRAUMATIC SEIZURES
V4.3	April 29, 2010	AHRQ Comorbidity Software	Coding	Add codes for OBESE 27803 OBESITY HYPOVENT SYND V8541 BMI 40.0-44.9, ADULT V8542 BMI 45.0-49.9, ADULT V8453 BMI 50.0-59.9, ADULT V8544 BMI 60.0-69.9, ADULT V8545 BMI 70 AND OVER, ADULT

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V4.3	April 29, 2010	Multiple Surgical MS-DRG	Coding	Add to numerator inclusion for Surgical Diagnosis Related Group 14 ALLOGENIC BONE MARROR TRANSPLANT 15 AUTOLOGOUS BONE MARROW TRANSPLANT
V4.3	April 29, 2010	Software (SAS and WinQI) and Documentation	Software/ Documents	Updated ICD-9-CM codes for FY2011 and made specification code changes (see FY2011 Coding and Specification Changes)
V4.3	April 29, 2010	Software (SAS and WinQI) and Documentation	Software/ Documents	PSI #2: Removed numerator inclusion for Low Mortality Diagnosis Related Group (DRG121 & 122, MS-DRG 280, 281, 282). Added denominator exclusions for missing discharge disposition or transfer to acute care facility.
V4.3	April 29, 2010	Software (SAS and WinQI) and Documentation	Software/ Documents	PSI #3: Modified denominator exclusion for diagnosis of stage I and II pressure ulcers to capture potential diagnosis of stage III or IV ulcers.
V4.3	April 29, 2010	Software (SAS and WinQI) and Documentation	Software/ Documents	PSI #4: Removed numerator inclusion for diagnosis of deep vein thrombosis (451.9, 453.8, 453.9). Added denominator exclusions for lung cancer procedures (32.39, 32.49, 32.59).
V4.3	April 29, 2010	Software (SAS and WinQI) and Documentation	Software/ Documents	PSI #6 and 22: Added denominator exclusions for thoracic procedures (43.5, 43.99, 44.5a7). Removed denominator exclusion for thoracic procedures (33.26, 33.28, 34.24, 77.81, 77.91)
V4.3	April 29, 2010	Software (SAS and WinQI) and Documentation	Software/ Documents	PSI #11: Added denominator exclusion for esophageal resection procedures (MDC 4), lung cancer procedure (32.39, 32.49, 32.59), ENT/neck procedures (CCS 33), degenerative neurological disorder (CCS 653)
V4.3	April 29, 2010	Software (SAS and WinQI) and Documentation	Software/ Documents	PSI #12: Removed numerator inclusion for diagnosis of deep vein thrombosis (451.9, 453.8, 453.9)
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.

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
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	Death in Low Mortality DRGs (PSI 2) Denominator (Exclusion, cancer)	Coding	Add code: 209.30 Malignant poorly differentiated neuroendocrine carcinoma, any site 209.31 Merkel cell carcinoma of the face 209.32 Merkel cell carcinoma of the scalp and neck 209.33 Merkel cell carcinoma of the upper limb 209.34 Merkel cell carcinoma of the lower limb 209.35 Merkel cell carcinoma of the trunk 209.36 Merkel cell carcinoma of other sites 209.70 Secondary neuroendocrine tumor, unspecified site 209.71 Secondary neuroendocrine tumor of distant lymph nodes 209.72 Secondary neuroendocrine tumor of liver 209.73 Secondary neuroendocrine tumor of bone 209.74 Secondary neuroendocrine tumor of peritoneum 209.75 Secondary Merkel cell carcinoma 209.79 Secondary neuroendocrine tumor of other sites V10.90 Personal history of unspecified malignant neoplasm V10.91 Personal history of malignant neuroendocrine tumor
V4.2	September 30, 2010	Death in Low Mortality DRGs (PSI 2) Denominator (Exclusion, immunocompromised)	Coding	279.41 Autoimmune lymphoproliferative syndrome ALPS 279.49 Autoimmune disease, not elsewhere classified
V4.2	September 30, 2010	Death in Low Mortality DRGs (PSI 2) Denominator (Exclusion, trauma)	Coding	813.46 Torus fracture of ulna 816.47 Torus fracture of radius and ulna

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V4.2	September 30, 2010	Postoperative Hip Fracture (PSI 8) Denominator (Exclusion, metastatic cancer)	Coding	209.70 Secondary neuroendocrine tumor, unspecified site 209.71 Secondary neuroendocrine tumor of distant lymph nodes 209.72 Secondary neuroendocrine tumor of liver 209.73 Secondary neuroendocrine tumor of bone 209.74 Secondary neuroendocrine tumor of peritoneum 209.75 Secondary Merkel cell carcinoma 209.79 Secondary neuroendocrine tumor of other sites
V4.2	September 30, 2010	Postoperative Respiratory Failure (PSI 11) Denominator (Exclusion, neuromuscular disorders)	Coding	359.71 Inclusion body myositis IBM 359.79 Other inflammatory and immune myopathies, NEC
V4.2	September 30, 2010	Death Among Surgical Inpatients with Serious Treatable Complications (PSI 4) Denominator (Inclusion, renal failure)	Coding	Modify codes: 584.5 Acute kidney failure, tubr necr 584.5a Acute kidney failure, cort necr 584.7 Acute kidney failure, medu necr 584.8 Acute kidney failure NEC 584.9 Acute kidney failure NOS

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V4.2	September 30, 2010	Death Among Surgical Inpatients with Serious Treatable Complications (PSI 4) Denominator (Exclusion, infection)	Coding	Modify codes: 670.00 Major puerperal infection, unspecified 670.02 Major puerperal infection, NOS-del p/p 670.04 Major puerperal infection NOS-p/p Add codes: 670.10 Puerperal endometritis-unsp 670.12 Puerperal endometritis del w p/p 670.14 Puerperal endometritis-postpart 670.20 Puerperal sepsis-unsp 670.22 Puerperal sepsis-del w p/p 670.24 Puerperal sepsis-postpart 670.30 Puerperal septic thrombophlebitis-unsp 670.32 Puerperal septic thrombophlebitis-del w p/p 670.34 Puerperal septic thrombophlebitis-postpart 670.80 Major puerperal infection NEC-suspec 670.82 Major puerperal infection NEC-dl w p/p 670.84 Major puerperal infection NEC-p/p
V4.2	September 30, 2010	Postoperative Physiologic and Metabolic Derangements (PSI 10) Denominator (Inclusion, PO physiological derangement)	Coding	Modify codes: 584.5 Acute kidney failure, tubr necr 584.5a Acute kidney failure, cort necr 584.7 Acute kidney failure, medu necr 584.8 Acute kidney failure NEC 584.9 Acute kidney failure NOS
V4.2	September 30, 2010	Pressure Ulcer (PSI 3) Denominator (Exclusion, hemi-, para- or quadriplegia)	Coding	Add codes: 768.70 Hypoxic-ischemic encephalopathy, unspecified 768.72 Moderate hypoxic-ischemic encephalopathy 768.73 Severe hypoxic-ischemic encephalopathy

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V4.2	September 30, 2010	Postoperative Hip Fracture (PSI 8) Denominator (Exclusion, poisoning)	Coding	Add codes: 969.1 Poisoning by antidepressant, unspecified 969.2 Poisoning by MAOI 969.3 Poisoning by SSNRI 969.4 Poisoning by SSRI 969.5 Poisoning by tetracyclics 969.6 Poisoning by tricyclics 969.09 Poisoning by other antidepressants 969.70 Poisoning by psychostimulant, unspec 969.71 Poisoning by caffeine 969.72 Poisoning by amphetamines/methaamph 969.73 Poisoning by methylphenidate 969.79 Poisoning by other psychostimulants
V4.2	September 30, 2010	Multiple Indicators	Coding	Add MS-DRG: 265 Acid lead procedures
V4.2	September 30, 2010	Multiple Indicators (Comorbidity Changes)	Coding	416.2 Chronic pulmonary embolism 768.70 Hypoxic-ischemic encephalopathy, unspecified 768.71 Mild hypoxic-ischemic encephalopathy 768.72 Moderate hypoxic-ischemic encephalopathy 768.73 Severe hypoxic-ischemic encephalopathy 209.70 Secondary neuroendocrine tumor, unspecified site 209.71 Secondary neuroendocrine tumor of distant lymph nodes 209.72 Secondary neuroendocrine tumor of liver 209.73 Secondary neuroendocrine tumor of bone 209.74 Secondary neuroendocrine tumor of peritoneum 209.75 Merkel cell carcinoma, unknown primary site 209.79 Secondary neuroendocrine tumor of other sites 209.31 Merkel carcinoma of the face 209.32 Markel cell carcinoma of the scalp and neck 209.33 Merkel cell carcinoma of the upper limb 209.34 Merkel cell carcinoma of the lower limb 209.35 Merkel cell carcinoma of the trunk 209.36 Merkel cell carcinoma of other sites

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V4.2	September 30, 2010	Multiple Indicators	Coding	Add new operating procedure codes: 1751 Implant CCM, total system 1752 Implant CCM pulse gentr 1761 LITT lesn brain, guidance 1762 LITT les hd/nck, guidance 1763 LITT lesn liver, guidance 1769 LITT lesn, guide oth/NOS 3975 Endo emb hd/nk, bare coil 3976 Endo em hed/nk, bioac coil 4850 ABDPERNEAL RES RECTM NOS 8570 TOTL RECONSTC BREAST NOS Modify: 9227 RADIOACTIVE ELEM IMPLANT 3760 Imp Bivn Ext Hrt Ast Sys 4840 Pull-thru Res Rectum NOS 3768 PERCUTAN HRT ASSIST SYST

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V4.2	September 30, 2010	Multiple Indicators	Coding	Remove operating procedure codes: 0044 PROC-VESSEL BIFURCATION 0074 HIP REPL SURFMETAL/POLY 0075 HIP REP SURFMETAL/METAL 0076 HIP REP SURFCERMC/CERMC 0077 HIP REPL SURF- CERMC/POLY 0126 INS CATHCRANIAL CAVITY 0127 REM CATHCRANIAL CAVITY 1741 OPEN ROBOTIC ASSIST PROC 1742 LAP ROBOTIC ASSIST PROC 1743 PERC ROBOTIC ASSIST PROC 1744 ENDO ROBOTIC ASSIST PROC 1745 THORACO ROBOTIC AST PROC 1749 ROBOTIC AST PROC NEC/NOS 3372 ENDO PULM ARWY FLOW MSMT 3736 EXC LEFT A TRAIL APPENDAG 3790 INS LEFT ATR APPEND DEV 3823 INTRAVASCLR SPECTROSCOPY 7094 INSERT BIOLOGICAL GRAFT 7095 INSERT SYNTH GRAFT/PROST 8472 APP EXT FIX DEVRING SYS 8473 APP HYBRID EXT FIX DEV
V4.2	September 30, 2010	Software (SAS and WinQI) and Documentation	Software/ Documents	Updated ICD-9-CM and DRG codes for FY2010.
V4.1a	July 2, 2010	Software (SAS only) and Documentation	Software/ Documents	PSI #08 – Removed the following diagnosis codes from the POISONING exclusion set: 96561-POIS-PROPRIONIC ACID DERV and 96569-POISON-ANTHREUMATIC NEC.
V4.1	December 2, 2009	Documentation	Software/ Documents	PSI #17 – Added NOTE to documentation advising that this indicator is calculated by the PDI SAS module because it is based on pediatric discharges.

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V4.0	June 30, 2009	Software (SAS and Windows) and Documentation	Software/ Documents	PSI #1 – Complications of Anesthesia – removed this indicator from the Patient Safety Indicators (see the AHRQ QI Comparative Reporting Guide for more information). Results for this indicator (based on V 3.2 specifications) can be viewed in Windows application under the Experimental tab.
V4.0	June 30, 2009	Software (SAS and Windows) and Documentation	Software/ Documents	PSI #3 – Pressure Ulcer (formerly Decubitus Ulcer) – added diagnosis code to denominator exclusion for hemi- and paraplegia (334.1 hereditary spastic paraplegia)
V4.0	June 30, 2009	Software (SAS and Windows) and Documentation	Software/ Documents	PSI #6 and #22 – 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
V4.0	June 30, 2009	Software (SAS and Windows) and Documentation	Software/ Documents	PSI #7 and #21 – Central Venous Catheter-Related Bloodstream Infection – 1) renamed the indicator from "Selected infections due to medical care"; 2) applied ICD-9-CM codes 996.62 and 999.3 Version 24 or before and 999.31 Version 25 and after
V4.0	June 30, 2009	Software (SAS and Windows) and Documentation	Software/ Documents	PSI #8 – Postoperative hip fracture – 1) added procedure codes to the denominator exclusion for hip fracture repair; 2) added diagnosis codes to denominator exclusion for stroke; 3) added diagnosis codes to denominator exclusion for coma; 4) removed diagnosis codes from denominator exclusion for poisonings 5) removed diagnosis codes from denominator exclusion for delirium and other psychoses
V4.0	June 30, 2009	Software (SAS and Windows) and Documentation	Software/ Documents	PSI #10 – Postoperative Physiologic and Metabolic Derangements – replaced the DRG denominator exclusion for cardiac arrhythmia with diagnosis code denominator exclusion for cardiac arrhythmia; 2) added diagnosis codes to denominator exclusion for chronic kidney disease; 3) added diagnosis codes to denominator exclusion for hemorrhage

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V4.0	June 30, 2009	Software (SAS and Windows) and Documentation	Software/ Documents	PSI #11 – Postoperative respiratory failure – 1) 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
V4.0	June 30, 2009	Software (SAS and Windows) and Documentation	Software/ Documents	PSI #13 – Postoperative sepsis – 1) remove diagnosis code (785.59 Shock without mention of trauma, other) from numerator inclusion for sepsis for discharges after 2004Q4 (effective October 1, 2004)
V4.0	June 30, 2009	Software (SAS and Windows) and Documentation	Software/ Documents	Multiple – Infection – 1) removed diagnosis codes for non-bacterial infections from denominator exclusion for infection; 2) added diagnosis code to denominator exclusion for infection (078.3 CAT-SCRATCH DISEASE)
V4.0	June 30, 2009	Software (SAS and Windows) and Documentation	Software/ Documents	PSI #17 – Birth Trauma – 1) added code to numerator (7675 FACIAL NERVE INJ-BIRTH); 2) dropped code from numerator (7679 BIRTH TRAUMA NOS); 3) Added exclusion for any diagnosis of birth weight less than 2000g; 4) Added exclusion for any diagnosis of Injury to Brachial Plexus (7676 BRACH PLEXUS INJ-BIRTH); 5) Added exclusion for any diagnosis of Osteogenesis Imperfecta (75651 OSTEOGENESIS IMPERFECTA)
V4.0	June 30, 2009	Software (SAS and Windows) and Documentation	Software/ Documents	PSI #18 – OB Trauma – with Instrumentation – 1) removed procedure code inclusion criteria; 2) Included both CMS-DRG and MS-DRG inclusion criteria
V4.0	June 30, 2009	Software (SAS and Windows) and Documentation	Software/ Documents	PSI #19 – OB Trauma – without Instrumentation – 1) removed procedure code inclusion criteria; 2) Included both CMS-DRG and MS-DRG inclusion criteria
V4.0	June 30, 2009	Software (SAS and Windows) and Documentation	Software/ Documents	PSI #20 – OB Trauma – removed this indicator from the Patient Safety Indicators (See the AHRQ QI Comparative Reporting Guide for more information) Results for this indicator (based on V 3.2 specifications) can be viewed in Windows application under the Experimental tab.

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V4.0	June 30, 2009	Software (SAS and Windows) and Documentation	Software/ Documents	Multiple – Major Operating Room Procedures – removed selected procedure codes from the denominator inclusion for major operating room procedures
V4.0	June 30, 2009	Software (SAS and Windows) and Documentation	Software/ Documents	Medical DRGs – For discharges after 2007Q4 (effective October 1, 2007), replaced the DRG denominator inclusion for medical discharges with the MS-DRG denominator inclusion for medical discharges.
V4.0	June 30, 2009	Software (SAS and Windows) and Documentation	Software/ Documents	Surgical DRGs – For discharges after 2007Q4 (effective October 1, 2007).replaced the DRG denominator inclusion for surgical discharges with the MS-DRG denominator inclusion for surgical discharges
V4.0	June 30, 2009	Software (SAS and Windows) and Documentation	Software/ Documents	Multiple Indicators – removed DRG denominator exclusions for cancer, trauma, infection and immunocompromised state
V4.0	June 30, 2009	Software (SAS and Windows) and Documentation	Software/ Documents	Multiple Indicators – Present on Admission methodology change. POA data element is required. For users without POA data, the model will incorporate the likelihood that the numerator event or the co-morbidity was present on admission. For users with POA data, the model will be based on that data element.
V4.0	June 30,2009	Software (SAS and Windows) 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	Software (SAS and Windows) and Documentation	Software/ Documents	Update Benchmarking Data to 2007 – used data from the 2007 SID for computation of benchmarks
V4.0	February 24, 2009	Pressure Ulcer (PSI 3) Denominator (Exclusion, diagnosis of Stage I or II)	Coding	Add denominator exclusion for diagnosis of Stage I or Stage II ($DECUBVD) Add code: 707.20 PRESSURE ULCER, STAGE NOS 707.21 PRESSURE ULCER, STAGE I 707.22 PRESSURE ULCER, STAGE II

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V4.0	February 24, 2009	Death in Surgical Inpatients (PSI 4) Denominator (Inclusion, pneumonia)	Coding	Add diagnosis code to denominator inclusion for pneumonia ($FTR3DX) Modify code: 482.41 Methicillin susceptible pneumonia due to Staphylococcus aureus Add code: 482.42 Methicillin resistant pneumonia due to Staphylococcus aureus
V4.0	February 24, 2009	Death in Surgical Inpatients (PSI 4) Denominator (Inclusion, sepsis)	Coding	Add diagnosis code to denominator inclusion for sepsis ($FTR4DX) and denominator exclusion for sepsis ($SEPTIID) Modify code: 38.11 Methicillin susceptible staphylococcus aureus septicemia Add code: 38.12 Methicillin resistant Staphylococcus aureus septicemia
V4.0	February 24, 2009	Iatrogenic Pneumothorax (PSI 6 and 22) Denominator (Exclusion, diaphragmatic surgery repair)	Coding	Add procedure codes to denominator exclusion for diaphragmatic surgery repair ($DIAPHRP) Add code: 53.71 Laparoscopic repair of diaphragmatic hernia, abdominal approach 53.72 Other and open repair of diaphragmatic hernia, abdominal approach 53.75 Repair of diaphragmatic hernia, abdominal approach, NOS 55.83 Laparoscopic repair of diaphragmatic hernia, with thoracic approach 55.84 Other and open repair of diaphragmatic hernia, with thoracic approach
V4.0	February 24, 2009	Iatrogenic Pneumothorax (PSI 6 and 22) Denominator (Exclusion, pleural effusion)	Coding	Add diagnosis codes to denominator exclusion for pleural effusion ($PLEURAD) Add code: 511.81 Malignant pleural effusion 511.89 Other specified forms of effusion, except tuberculosis
V4.0	February 24, 2009	Iatrogenic Pneumothorax (PSI 6 and 22) Denominator	Coding	Replace the DRG denominator exclusion for cardiac surgery ($CARDSDR) with a procedure code denominator exclusion for cardiac procedures ($CARDSIP). See Table 1 in Appendix. Add code: 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

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V4.0	February 24, 2009	Postoperative Hip Fracture (PSI 8) Denominator (Exclusion, coma)	Coding	Add diagnosis codes to denominator exclusion for coma ($COMAID) Add codes: 249.20 Secondary diabetes mellitus with hyperosmolarity, unspecified 249.21 Secondary diabetes mellitus with hyperosmolarity, uncontrolled 249.30 Secondary diabetes mellitus with other coma, unspecified 249.31 Secondary diabetes mellitus with other coma, uncontrolled

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V4.0	February 24, 2009	Postoperative Hip Fracture (PSI 8) Denominator (Exclusion, lymphoid malignancy)	Coding	Add diagnosis codes to denominator exclusion for lymphoid malignancy ($LYMPHID) Add codes: 203.02 MULT MYELOMA IN RELAPSE 203.12 PLSM CEL LEUK IN RELAPSE 203.82 OTH IMNPRLF NEO-RELAPSE 204.02 ACT LYMP LEUK IN RELAPSE 204.12 CHR LYMP LEUK IN RELAPSE 204.22 SBAC LYM LEUK IN RELAPSE 204.82 OTH LYM LEUK IN RELAPSE 204.92 LYMP LEUK NOS RELAPSE 205.02 ACT MYEL LEUK IN RELAPSE 205.12 CHR MYEL LEUK IN RELAPSE 205.22 SBAC MYL LEUK IN RELAPSE 205.32 MYEL SARCOMA IN RELAPSE 205.82 OTH MYEL LEUK IN RELAPSE 205.92 MYEL LEUK NOS IN RELAPSE 206.02 ACT MONO LEUK IN RELAPSE 206.12 CHR MONO LEUK IN RELAPSE 206.22 SBAC MONO LEU IN RELAPSE 206.82 OTH MONO LEUK IN RELAPSE 206.92 MONO LEUK NOS RELAPSE 207.02 AC ERTH/ERYLK IN RELAPSE 207.12 CHR ERYTHRMIA IN RELAPSE 207.22 MGKRYCYT LEUK IN RELAPSE 207.82 OTH SPF LEUK IN RELAPSE 208.02 AC LEUK UNS CL RELAPSE 208.12 CH LEU UNS CL IN RELAPSE 208.22 SBAC LEU UNS CL-RELAPSE 208.82 OTH LEUK UNS CL-RELAPSE 208.92 LEUKEMIA NOS IN RELAPSE
V4.0	February 24, 2009	Postoperative Hip Fracture (PSI 8) Denominator (Exclusion, syncope)	Coding	Add diagnosis codes to denominator exclusion for syncope ($SYNCOID) Add codes: 337.01 Carotid sinus syndrome

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V4.0	February 24, 2009	Postoperative Metabolic and Physiologic Derangement (PSI 10) Denominator (Exclusion, diabetes)	Coding	Add diagnosis codes to denominator exclusion for diabetes ($DIABEID) Add codes: 249.1 Secondary diabetes mellitus without mention of complication, not stated as controlled or unspecified 249.2 Secondary diabetes mellitus without mention of complication, uncontrolled 249.10 Secondary diabetes mellitus with ketoacidosis, unspecified 249.11 Secondary diabetes mellitus with ketoacidosis, uncontrolled 249.20 Secondary diabetes mellitus with hyperosmolarity, unspecified 249.21 Secondary diabetes mellitus with hyperosmolarity, uncontrolled 249.30 Secondary diabetes mellitus with other coma, unspecified 249.31 Secondary diabetes mellitus with other coma, uncontrolled 249.40 Secondary diabetes mellitus with renal manifestations, unspecified 249.41 Secondary diabetes mellitus with renal manifestations, uncontrolled 249.50 Secondary diabetes mellitus with ophthalmic manifestations, unspecified 249.51 Secondary diabetes mellitus with ophthalmic manifestations, uncontrolled 249.60 Secondary diabetes mellitus with neurological manifestations, unspecified 249.61 Secondary diabetes mellitus with neurological manifestations, uncontrolled 249.70 Secondary diabetes mellitus with peripheral circulatory manifestations, unspecified 249.71 Secondary diabetes mellitus with peripheral circulatory manifestations, uncontrolled 249.80 Secondary diabetes mellitus with other specified manifestations, unspecified 249.81 Secondary diabetes mellitus with other specified manifestations, uncontrolled 249.90 Secondary diabetes mellitus with unspecified manifestations, unspecified 249.91 Secondary diabetes mellitus with unspecified manifestations, uncontrolled

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V4.0	February 24, 2009	Postoperative Metabolic and Physiologic Derangement (PSI 10) Numerator (Inclusion, diabetes with ketoacidosis)	Coding	Add diagnosis codes to numerator inclusion for diabetes with ketoacidosis ($PHYSIDA) Add codes: 249.10 Secondary diabetes mellitus with ketoacidosis, unspecified 249.11 Secondary diabetes mellitus with ketoacidosis, uncontrolled 249.20 Secondary diabetes mellitus with hyperosmolarity, unspecified 249.21 Secondary diabetes mellitus with hyperosmolarity, uncontrolled 249.30 Secondary diabetes mellitus with other coma, unspecified 249.31 Secondary diabetes mellitus with other coma, uncontrolled
V4.0	February 24, 2009	Postoperative Sepsis (PSI 13) Numerator (Inclusion, sepsis)	Coding	Add diagnosis code to numerator inclusion for sepsis ($SEPTIID) Modify code: 38.11 Methicillin susceptible staphylococcus aureus septicemia Add code: 38.12 Methicillin resistant Staphylococcus aureus septicemia
V4.0	February 24, 2009	Postoperative Wound Dehiscence (PSI 14 and 24) Denominator (Inclusion, abdonimopelvic procedures)	Coding	Add procedure codes to denominator inclusion for abdominopelvic procedures ($ABDOMIP) Add codes: 17.31 Laparoscopic multiple segmental resection of large intestine 17.32 Laparoscopic cecectomy 17.33 Laparoscopic right hemicolectomy 17.34 Laparoscopic resection of transverse colon 17.35 Laparoscopic left hemicolectomy 17.36 Laparoscopic sigmoidectomy 17.39 Other laparoscopic partial excision of large intestine 45.81 Laparoscopic total intra-abdominal colectomy 45.82 Open total intra-abdominal colectomy 45.83 Other and unspecified total intra-abdominal colectomy 48.40 Pull-through resection of rectum, not otherwise specified 48.43 Open pull-through resection of rectum 48.50 Abdominoperineal resection of the rectum, NOS 48.52 Open abdominoperineal resection of the rectum 48.59 Other abdominoperineal resection of the rectum 53.75 Repair of diaphragmatic hernia, abdominal approach, NOS

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V4.0	February 24, 2009	Accidental Puncture or Laceration (PSI 15) Denominator (Inclusion, spinal surgeries)	Coding	Add procedure codes to denominator inclusion for spinal surgeries ($SPINEP) Add codes: 80.53 Repair of the annulus fibrosus with graft or prosthesis 80.54 Other and unspecified repair of the annulus fibrosus
V4.0	February 24, 2009	Multiple Indicators Denominator (Exclusion, cancer)	Coding	Add diagnosis codes to denominator exclusion for cancer ($CANCEID) Add codes: 203.02 MULT MYELOMA IN RELAPSE 203.12 PLSM CEL LEUK IN RELAPSE 203.82 OTH IMNPRLF NEO-RELAPSE 204.02 ACT LYMP LEUK IN RELAPSE 204.12 CHR LYMP LEUK IN RELAPSE 204.22 SBAC LYM LEUK IN RELAPSE 204.82 OTH LYM LEUK IN RELAPSE 204.92 LYMP LEUK NOS RELAPSE 205.02 ACT MYEL LEUK IN RELAPSE 205.12 CHR MYEL LEUK IN RELAPSE 205.22 SBAC MYL LEUK IN RELAPSE 205.32 MYEL SARCOMA IN RELAPSE 205.82 OTH MYEL LEUK IN RELAPSE 205.92 MYEL LEUK NOS IN RELAPSE 206.02 ACT MONO LEUK IN RELAPSE 206.12 CHR MONO LEUK IN RELAPSE 206.22 SBAC MONO LEU IN RELAPSE 206.82 OTH MONO LEUK IN RELAPSE 206.92 MONO LEUK NOS RELAPSE 207.02 AC ERTH/ERYLK IN RELAPSE 207.12 CHR ERYTHRMIA IN RELAPSE 207.22 MGKRYCYT LEUK IN RELAPSE 207.82 OTH SPF LEUK IN RELAPSE 208.02 AC LEUK UNS CL RELAPSE 208.12 CH LEU UNS CL IN RELAPSE 208.22 SBAC LEU UNS CL-RELAPSE

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				208.82 OTH LEUK UNS CL-RELAPSE 208.92 LEUKEMIA NOS IN RELAPSE 209.1 MAL CRCNOID SM INTST NOS 209.2 MALIG CARCINOID DUODENUM 209.3 MALIG CARCINOID JEJUNUM 209.4 MALIG CARCINOID ILEUM 209.10 MAL CRCNOID LG INTST NOS 209.11 MALIG CARCINOID APPENDIX 209.12 MALIG CARCINOID CECUM 209.13 MAL CRCNOID ASCEND COLON 209.14 MAL CRCNOID TRANSV COLON 209.15 MAL CARCINOID DESC COLON 209.16 MAL CARCINOID SIG COLON 209.17 MALIG CARCINOID RECTUM 209.20 MAL CRCND PRIM SITE UNKN 209.21 MAL CARCINOID BRONC/LUNG 209.22 MALIG CARCINOID THYMUS 209.23 MALIG CARCINOID STOMACH 209.24 MALIG CARCINOID KIDNEY 209.25 MAL CARCNOID FOREGUT NOS 209.26 MAL CARCINOID MIDGUT NOS 209.27 MAL CARCNOID HINDGUT NOS 209.29 MALIG CARCINOID OTH SITE

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V4.0	February 24, 2009	Multiple Indicators Denominator (Exclusion, immunocompromised)	Coding	Add diagnosis codes to denominator exclusion for immunocompromised ($IMMUNID) Add codes: 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 24, 2009	Multiple Indicators Denominator (Exclusion, infection)	Coding	Add diagnosis codes to denominator exclusion for infection ($INFECID) Modify codes; 038.11 Methicillin susceptible staphylococcus aureus septicemia 041.11 Methicillin susceptible staphylococcus aureus 482.41 Methicillin susceptible pneumonia due to staphylococcus aureus Add codes: 038.12 Methicillin resistant Staphylococcus aureus septicemia 041.12 Methicillin resistant Staphylococcus aureus (MRSA) 482.42 Methicillin resistant pneumonia due to staphylococcus aureus 707.20 Pressure ulcer unspecified stage 707.22 Pressure ulcer stage II 707.23 Pressure ulcer stage III 707.24 Pressure ulcer stage IV 777.50 Necrotizing enterocolitis in newborn, unspecified 777.51 Stage I necrotizing enterocolitis in newborn 777.52 Stage II necrotizing enterocolitis in newborn 777.53 Stage III necrotizing enterocolitis in newborn Delete codes (for discharges after 2008Q4 effective October 1, 2008): 707.1 PRESSURE ULCER, SITE NOS 707.2 PRESSURE ULCER, ELBOW 707.3 PRESSURE ULCER, UPR BACK 707.4 PRESSURE ULCER, LOW BACK 707.5 PRESSURE ULCER, HIP 707.6 PRESSURE ULCER, BUTTOCK 707.7 PRESSURE ULCER, ANKLE 707.8 PRESSURE ULCER, HEEL 707.09 PRESSURE ULCER, SITE NEC
V4.0	February 24, 2009	Complications of Anesthesia (PSI 1)	Indicator Specification	Remove this indicator from the Patient Safety Indicators and assign it to a new module of Experimental Indicators
V4.0	February 24, 2009	Pressure Ulcer (PSI 3) Denominator (Exclusion, hemi- and paraplegia)	Indicator Specification	Add diagnosis code to denominator exclusion for hemi- and paraplegia ($HEMIPID) Add code: 334.1 Hereditary spastic paraplegia

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V4.0	February 24, 2009	Iatrogenic Pneumothorax (PSI 6 and 22) Denominator (Exclusion)	Indicator Specification	Replace the DRG denominator exclusion for cardiac surgery ($CARDSDR) with procedure code denominator exclusion for cardiac procedures ($CARDSIP). See Table 1 in Appendix. Add procedure codes to denominator exclusion for thoracic procedures ($THORAIP) Add codes: 5.22 Sympathectomy Cervical 5.23 Sympathectomy Lumbar 05.29 Other sympathectomy and ganglionectomy 7.80 Thymectomy, not otherwise specified 7.81 Other partial excision of thymus 7.82 Other total excision of thymus 7.83 Thoracoscopic partial excision of thymus 7.84 Thoracoscopic total excision of thymus 32.49 Other lobectomy of lung
V4.0	February 24, 2009	Hospital Acquired Vascular Catheter Related Infections (PSI 7 and 21)	Indicator Specification	Rename the indicator from "Selected infections due to medical care" to "Hospital acquired vascular catheter related infections" Apply 996.62 and 999.3 ($IDTMCID) Version 24 or before (2007Q3) and 999.31 ($IDTMC2D) Version 25 and after (2007Q4)

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V4.0	February 24, 2009	Postoperative Hip Fracture (PSI 8) Denominator (Exclusion)	Indicator Specification	Add procedure codes to the denominator exclusion for hip fracture repair ($HIPFXIP). Add codes: 79.05 Closed reduction of fracture of femur without internal fixation 79.65 Debridement of open fracture of femur 81.53 Revision of hip replacement, not otherwise specified Add diagnosis codes to denominator exclusion for stroke ($STROKID) Add codes: 435.1 Basilar artery syndrome 435.2 Vertebral artery syndrome 435.3 Vertebrobasilar artery syndrome Add diagnosis codes to denominator exclusion for coma ($COMAID) Add codes: 070.0 Viral hepatitis A with hepatic coma 70.20 Viral hepatitis B with hepatic coma, acute or unspecified, without mention of hepatitis delta 70.21 Viral hepatitis B with hepatic coma, acute or unspecified, with hepatitis delta 70.22 Viral hepatitis B with hepatic coma, chronic, without mention of hepatitis delta 70.23 Viral hepatitis B with hepatic coma, chronic, with hepatitis delta 70.41 Acute hepatitis C with hepatic coma 70.42 Hepatitis delta without mention of active hepatitis B disease with hepatic coma 70.43 Hepatitis E with hepatic coma 70.44 Chronic hepatitis C with hepatic coma 070.49 Other specified viral hepatitis with hepatic coma 070.6 Unspecified viral hepatitis with hepatic coma 070.71 Unspecified viral hepatitis C with hepatic coma Remove diagnosis codes from denominator exclusion for poisonings ($POISOID). See Table 2 in Appendix. Remove diagnosis codes from denominator exclusion for delirium and other psychoses ($DELIRID). See Table 3 in Appendix.

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V4.0	February 24, 2009	Postoperative Physiologic and Metabolic Derangements (PSI 10)	Indicator Specification	Replace the DRG denominator exclusion for cardiac arrhythmia ($CARDRDR) with diagnosis code denominator exclusion for cardiac arrhythmia ($CARDRID). Add codes: 426.0 Atrioventricular block, complete 427.1 Paroxysmal supraventricular tachycardia 427.2 Paroxysmal ventricular tachycardia 427.3 Paroxysmal tachycardia, unspecified 427.31 Atrial fibrillation 427.32 Atrial flutter 427.41 Ventricular fibrillation 427.42 Ventricular flutter 427.9 Cardiac dysrhythmia, unspecified Add diagnosis codes to denominator exclusion for chronic kidney disease ($CRENLFD) Add codes: 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 404.1 Hypertensive heart and chronic kidney disease, malignant, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified 404.2 Hypertensive heart and chronic kidney disease, malignant, with 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 404.11 Hypertensive heart and chronic kidney disease, benign, with 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

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				404.91 Hypertensive heart and chronic kidney disease, unspecified, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified Add diagnosis codes to denominator exclusion for hemorrhage ($HEMORID) Add codes: 568.81 Hemoperitoneum (nontraumatic)

V4.0	February 24, 2009	Postoperative Respiratory Failure (PSI 11)	Indicator Specification	Add denominator exclusion for craniofacial anomalies with 1) a procedure code for laryngeal or pharyngeal surgery ($CRANI1P) or 2) a procedure on face ($CRANI2P) and a diagnosis code of craniofacial abnormalities ($CRANIID). Add codes for pharyngeal surgery ($CRANI1P): 25.3 Complete glossectomy 25.4 Radical glossectomy 27.31 Local excision or destruction of lesion or tissue of bony palate 29.0 Pharyngotomy 29.33 Pharyngectomy (partial) 29.39 Other excision or destruction of lesion or tissue of pharynx 29.4 Plastic operation on pharynx 29.53 Closure of other fistula of pharynx 29.59 Other repair of pharynx 29.91 Dilation of pharynx 30.09 Other excision or destruction of lesion or tissue of larynx 30.21 Epiglottidectomy 30.22 Vocal cordectomy 30.29 Other partial laryngectomy 30.3 Complete laryngectomy 30.4 Radical laryngectomy 31.3 Other incision of larynx or trachea 31.5 Local excision or destruction of lesion or tissue of trachea 31.69 Other repair of larynx 31.73 Closure of other fistula of trachea 31.75 Reconstruction of trachea and construction of artificial larynx 31.79 Other repair and plastic operations on trachea 31.98 Other operations on larynx 31.99 Other operations on trachea

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				Add codes for procedure on face ($CRANI2P): 25.2 Partial glossectomy 25.59 Other repair and plastic operations on tongue 27.32 Wide excision or destruction of lesion or tissue of bony palate 27.62 Correction of cleft palate 27.63 Revision of cleft palate repair 27.69 Other plastic repair of palate 29.31 Cricopharyngeal myotomy 76.65 Segmental osteoplasty [osteotomy] of maxilla 76.66 Total osteoplasty [osteotomy] of maxilla 76.46 Other reconstruction of other facial bone 76.69 Other facial bone repair 76.91 Bone graft to facial bone Add codes for craniofacial abnormalities ($CRANIID). 744.83 Macrostomia 744.84 Microstomia 744.9 Unspecified anomalies of face and neck 748.3 Congenital anomalies of skull and face bones 756.0 Tracheomalacia and congenital tracheal stenosis
V4.0	February 24, 2009	Postoperative Sepsis (PSI 13) Numerator (Inclusion)	Indicator Specification	Remove diagnosis code from numerator inclusion for sepsis ($SEPTIID) for discharges after 2004Q4 (effective October 1, 2004) Drop code: 785.59 Shock without mention of trauma, other

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V4.0	February 24, 2009	Multiple Indicators (Infection)	Indicator Specification	Remove diagnosis codes for non-bacterial infections from denominator exclusion for infection ($INFECID) Drop codes: 376.00 ACUTE INFLAM NOS, ORBIT 386.30 LABYRINTHITIS NOS 386.31 SEROUS LABYRINTHITIS 386.32 CIRCUMSCRI LABYRINTHITIS 598.1 URETHR STRICT:INFECT NOS 598.2 URETH STRICT:OTH INFECT 686.01 PYODERMA GANGRENOSUM Add diagnosis code to denominator exclusion for infection ($INFECID) Add codes: 078.3 CAT-SCRATCH DISEASE

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V4.0	February 24, 2009	Birth Trauma (PSI 17)	Indicator Specification	Combine tables $BIRTIDA, $BIRTIDA and $BIRTIDA into a single table $BIRTHID Add code to $BIRTHID 7675 FACIAL NERVE INJ-BIRTH Drop code from $BIRTHID 7679 BIRTH TRAUMA NOS Exclude any diagnosis of birth weight less than 2000g ($PRETEID) Add codes: 76500 EXTREME IMMATUR WTNOS Drop codes; 76508 EXTREME IMMATURITY, 2000 - 2499 GRAMS 76518 OTHER PRETERM INFANTS, 2000 - 2499 GRAMS 76521 LESS THAN 24 COMPLETED WEEKS OF GESTATION 76522 24 COMPLETED WEEKS OF GESTATION 76523 25-26 COMPLETED WEEKS OF GESTATION 76524 27-28 COMPLETED WEEKS OF GESTATION 76525 29-30 COMPLETED WEEKS OF GESTATION 76526 31-32 COMPLETED WEEKS OF GESTATION 76527 33-34 COMPLETED WEEKS OF GESTATION Exclude any diagnosis of Injury to Brachial Plexus ($BRACHID) 7676 BRACH PLEXUS INJ-BIRTH Exclude any diagnosis of Osteogenesis Imperfecta ($OSTEOID) 75651 OSTEOGENESIS IMPERFECTA/
V4.0	February 24, 2009	OB Trauma with Instrumentation (PSI 18)	Indicator Specification	Remove procedure code inclusion criteria ($OBTRAIP) Replace table $VAGINDR with table PRVAGBG (CMS-DRG) and table PRVAG2G (MS-DRG)
V4.0	February 24, 2009	OB Trauma without Instrumentation (PSI 19)	Indicator Specification	Remove procedure code inclusion criteria ($OBTRAIP) Replace table $VAGINDR with table PRVAGBG (CMS-DRG) and table PRVAG2G (MS-DRG)
V4.0	February 24, 2009	OB Trauma (PSI 20)	Indicator Specification	Remove this indicator from the Patient Safety Indicators and assign it to a new module of Experimental Indicators

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V4.0	February 24, 2009	Multiple Indicators (Major Operating Room Procedures)	Indicator Specification	Remove procedure codes from the denominator inclusion for major operating room procedures ($ORPROC) Drop codes: 38.7 INTERRUPTION VENA CAVA 41.0 LYMPH STRUCTURE OP NEC 41.1 BONE MARROW TRNSPLNT NOS 41.2 AUTO BONE MT W/O PURG 41.3 ALO BONE MARROW TRNSPLNT 41.4 ALLOGRFT BONE MARROW NOS 41.5 AUTO HEM STEM CT W/O PUR 41.6 ALLO HEM STEM CT W/O PUR 41.7 CORD BLD STEM CELL TRANS 41.8 AUTO HEM STEM CT W PURG 41.9 ALLO HEM STEM CT W PURG 41.10 AUTO BONE MT W PURGING
V4.0	February 24, 2009	Multiple DRGs	Indicator Specification	Remove the DRG denominator exclusions for cancer ($CANCEDR), trauma ($TRAUMDR), infection ($INFECDR) and immunocompromised ($IMMUNDR)
V4.0	February 24, 2009	Medical DRGs	Indicator Specification	Replace the DRG denominator inclusion for medical discharges ($MEDICDR) with the MS-DRG denominator exclusion for medical discharges ($MEDICMS) for discharges after 2007Q4 (effective October 1, 2007). See Table 4 in Appendix.
V4.0	February 24, 2009	Surgical DRGs	Indicator Specification	Replace the DRG denominator inclusion for surgical discharges ($SURGIDR) with the MS-DRG denominator exclusion for surgical discharges ($SURGIMS) for discharges after 2007Q4 (effective October 1, 2007). See Table 5 in Appendix.
V4.0	February 24, 2009	Adult DRGs	Indicator Specification	Drop the DRG denominator inclusion for adult ($ADULTDR) for discharges after 2007Q4 (effective October 1, 2007).

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V 3.2	March 10, 2008	Iatrogenic Pneumothorax (PSI 6 and 22) Denominator (Exclusion, Thoracic Surgery)	Coding	Added new codes: 32.20 THORAC EXC LUNG LESION 32.30 THORAC SEG LUNG RESECT 32.39 OTH SEG LUNG RESECT NOS 32.41 THORAC LOBECTOMY LUNG 32.50 THORACOSPC PNEUMONECTOMY 32.59 OTHER PNEUMONECTOMY NOS 33.20 THORACOSCOPC LUNG BIOPSY 34.20 THORACOSCOPIC PLEURAL BX 34.52 THORACOSCOPC DECORT LUNG
V 3.2	March 10, 2008	Selected Infections due to Medical Care (PSI 7 and 23) Numerator (Inclusion)	Coding	Added new code 999.31 INFECT D/T CENT VEN CATH

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V 3.2	March 10, 2008	Multiple Indicators (Exclusion, cancer)	Coding	Added new codes: 20030 MARGNL ZONE LYM XTRNDL 20031 MARGIN ZONE LYM HEAD 20032 MARGIN ZONE LYM THORAX 20033 MARGIN ZONE LYM ABDOM 20034 MARGIN ZONE LYM AXILLA 20035 MARGIN ZONE LYM INGUIN 20036 MARGIN ZONE LYM PELVIC 20037 MARGIN ZONE LYMPH SPLEEN 20038 MARGIN ZONE LYMPH MULTIP 20040 MANTLE CELL LYM XTRRNDL 20041 MANTLE CELL LYMPH HEAD 20042 MANTLE CELL LYMPH THORAX 20043 MANTLE CELL LYMPH ABDOM 20044 MANTLE CELL LYMPH AXILLA 20045 MANTLE CELL LYMPH INGUIN 20046 MANTLE CELL LYMPH PELVIC 20047 MANTLE CELL LYMPH SPLEEN 20048 MANTLE CELL LYMPH MULTIP 20050 PRIMARY CNS LYMPH XTRNDL 20051 PRIMARY CNS LYMPH HEAD 20052 PRIMARY CNS LYMPH THORAX 20053 PRIMARY CNS LYMPH ABDOM 20054 PRIMARY CNS LYMPH AXILLA 20055 PRIMARY CNS LYM INGUIN 20056 PRIMARY CNS LYMPH PELVIC 20057 PRIMARY CNS LYMPH SPLEEN 20058 PRIMARY CNS LYMPH MULTIP 20060 ANAPLASTIC LYMPH XTRNDL 20061 ANAPLASTIC LYMPH HEAD

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
				20062 ANAPLASTIC LYMPH THORAX 20063 ANAPLASTIC LYMPH ABDOM 20064 ANAPLASTIC LYMPH AXILLA 20065 ANAPLASTIC LYMPH INGUIN 20066 ANAPLASTIC LYMPH PELVIC 20067 ANAPLASTIC LYMPH SPLEEN 20068 ANAPLASTIC LYMPH MULTIP 20070 LARGE CELL LYMPH XTRNDL 20071 LARGE CELL LYMPHOMA HEAD 20072 LARGE CELL LYMPH THORAX 20073 LARGE CELL LYMPH ABDOM 20074 LARGE CELL LYMPH AXILLA 20075 LARGE CELL LYMPH INGUIN 20076 LARGE CELL LYMPH PELVIC 20077 LARGE CELL LYMPH SPLEEN 20078 LARGE CELL LYMPH MULTIP 20270 PERIPH T CELL LYM XTRNDL 20271 PERIPH T CELL LYMPH HEAD 20272 PERIPH T CELL LYM THORAX 20273 PERIPH T CELL LYM ABDOM 20274 PERIPH T CELL LYM AXILLA 20275 PERIPH T CELL LYM INGUIN 20276 PERIPH T CELL LYM PELVIC 20277 PERIPH T CELL LYM SPLEEN 20278 PERIPH T CELL LYM MULTIP
V 3.2	March 10, 2008	Multiple Indicators (Exclusion, infection	Coding	Add new codes 040.41 INFANT BOTULISM and 040.42 WOUND BOTULISM
V 3.2	March 10, 2008	Multiple Indicators	Coding	Updated DRG to Version 25.0

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V 3.2	March 10, 2008	Software (SAS and Windows) and Documentation	Software/ Documents	PSI #15 (Accidental puncture or laceration) – Added an exclusion for discharges with an ICD-9-CM procedure code for spine surgery PSI #4 (Death among Surgical Inpatients with Serious Treatable Complications) – Revised the denominator to surgical patients, removed Acute Renal Failure from the definition and revised the inclusion and exclusion criteria PSI #16 (Transfusion Reaction) – Revised the indicator from a rate to a count PSI #5 (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	Software/ Documents	Added program to calculate the PSI composite measure. The new files are PSI_COMPOSITE.SAS and MSXPSC31.TXT.
V 3.1a	March 16, 2007	SAS Software	Software/ Documents	Amended the aggregation algorithm to correctly sum the numerator and denominator counts across stratifiers. (PSSASA2). Amended the expected rate calculation to correctly assign the modified DRG to the intercept term. (PSFMTS, PSSASP3)
V 3.1	March 12, 2007	Software, Software Documentation, Guide, and Technical Specifications	Software/ Documents	The years for which the ICD-9-CM and DRG codes defining PSIs 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 Documentation	Software/ Documents	The FY2007 release of the PSI includes an option to incorporate the Present on Admission indicator into the specifications. Added Data Elements DXATADMIT1 – DXATADMIT30 to indicate whether the corresponding diagnosis (i.e., DX1 – DX30) was Present on Admission. Added an option for using weighted data (i.e., discharge weights like those used in the National Inpatient Sample). Added data element DISCWT to hold weight to assign to discharge.

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V 3.1	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. 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. Updated Covariates document to include the POA coefficients.
V 3.1	March 12, 2007	Software (SAS and Windows)	Software/ Documents	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. The AHRQ co-morbidity software was incorporated unchanged, except for minor syntax changes to conform to our variable names. Also, one obsolete ICD-9-CM code, "347 ", was added to insure backwards compatibility to 2002 for the NEURO co-morbidity. 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 RPPSxx variables and their confidence intervals are observed/expected ratios to avoid confounding with risk adjustment variables
V 3.1	March 12, 2007	Software (SAS and Windows) and Technical Specifications	Software/ Documents	Revised inclusion criteria for Death in Low Mortality DRGs (PSI #2) based on analysis of 2002-2004 data. Deleted DRG 061 and added codes 353, 375, 425, 497, 498, and 518. Revised numerator inclusion criteria for Postoperative Hemorrhage and Hematoma (PSI #9) to require a diagnosis of hemorrhage or hematoma and a procedure for control of hemorrhage or drainage of hematoma. Impact: The rate increases by about 25%.

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V 3.1	March 12, 2007	SAS Software and Documentation	Software/ Documents	Added flag &POAFG to CONTROL_PSI.SAS to indicate whether Present on Admission data is available. Added alternative POA parameter files of risk-adjustment covariates and population rates using 2002-2004 SID data from California and New York. Co-morbidity software that was developed and is maintained by AHRQ has been integrated into PSI syntax, relieving users of the need to run this software prior to PSSAS1.SAS and then to match the results to their input discharge data.
V 3.0a	May 1, 2006	Technical Specifications	Software/ Documents	Edited denominator specification of PSI #2 to reflect SAS software (Windows and SPSS updated). Corrected denominator specification of PSI #4 (Sepsis). Edited denominator specification of PSI #6, PSI #15, and PSI #17 for clarity. Edited exclusion specification of PSI #10 to reflect SAS software (Windows and SPSS updated). Edited immunocompromised state specification (multiple indicators) to reflect SAS software (Windows and SPSS updated).
V 3.0a	May 1, 2006	SAS Software and Documentation	Software/ Documents	CONTROL_PSI.SAS – Renamed %COMOB to %COMOBFG. PSSAS1.SAS – SAS – Renamed %COMOB to %COMOBFG. PSASA2.SAS – Fixed CSV column header for OAPS27. PSSASP3.SAS – Changed age parameter for PSI #17 from 2 to 7 to prevent run error when age is invalid (note: users should verify cases in denominator have age = 0). Added SAS syntax file to merge user data file with file created using updated AHRQ comorbidities software.
V 3.0a	May 1, 2006	Guide	Software/ Documents	Edited denominator specification of PSIs #6, 13-15, and 17 for clarity.
V 3.0a	May 1, 2006	All documents	Software/ Documents	Edited PDF files to make URLs in header or footer clickable links.
V 3.0	February 20, 2006	Low-mortality DRGs (PSI 2) Denominator (Inclusion)	Coding	Revised list of low-mortality DRGs based on DRG coding updates.

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V 3.0	February 20, 2006	Failure to Rescue (PSI 4) Denominator (Exclusion, alcoholism)	Coding	Added new code 291.82 (Alcohol induced sleep disorders) to exclusion criteria.
V 3.0	February 20, 2006	Iatrogenic Pneumothorax (PSI 6 and 22) Denominator (Exclusion, cardiac surgery DRGs)	Coding	Added new DRGs 547 - 550 to exclusion criteria.
V 3.0	February 20, 2006	Postoperative Hip Fracture (PSI 8) Denominator (Exclusion, delirium and other psychoses)	Coding	Added code 292.85 (Drug induced sleep disorders) to exclusion criteria.
V 3.0	February 20, 2006	Multiple Indicators Denominator (Inclusion)	Coding	Added new code 559 to list of Medical DRGs used as denominator inclusion for PSIs #3, 5-7, 15-16, 21-23, and 25-26.
V 3.0	February 20, 2006	Multiple Indicators Denominator (Inclusion)	Coding	Added new codes 544 - 558 to list of Surgical DRGs used as denominator inclusion for PSIs #1, 3, 5-13, 15-16, 21-23, and 25-27.
V 3.0	February 20, 2006	Multiple Indicators Denominator (Exclusion, immunocompromise d state)	Coding	Added new procedure code 00.18 (Infusion of immunosuppressive antibody therapy during induction phase of solid organ transplant) to criteria for immunocompromised state, used as denominator exclusion for PSIs #2, 4, 7, 13-14, and 23-24.
V 3.0	February 20, 2006	Multiple Indicators Denominator (Inclusion)	Coding	Revised list of Operating Room Procedure Codes used as denominator inclusion for PSIs #1, 3, and 8-12.

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V 3.0	February 20, 2006	Software, Software Documentation, Guide, and Technical Specifications	Software/ Documents	The years for which the ICD-9-CM and DRG codes defining PSIs 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. Dropped PSIs #27-29 and revised PSIs #18-20 to limit OB Trauma numerator definitions to 3rd and 4th degree lacerations. Added area-level version of Postoperative Hemorrhage or Hematoma as PSI #27.
V 3.0	February 20, 2006	Software, Guide, and Technical Specifications	Software/ Documents	Revised multiple indicators to exclude pediatric populations (age less than 18). Specifically, PSIs #3-4, 6, 8-15, 22, 25, and 27. Revised multiple indicators to exclude pediatric populations (age less than 18) unless MDC 14. Specifically, PSIs #1-2, 5, 7, 16, 21, and 23-24.

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V 3.0	February 20, 2006	Software, Guide, and Technical Specifications	Software/ Documents	Modified denominator for PSI #3 (decubitus ulcer) to exclude transfers from acute care facility, spina bifida or anoxic brain damage diagnosis, and debridement or pedicle graft procedures. Modified criteria for PSI #6 and PSI #22 (iatrogenic pneumothorax) to drop exclusion for trauma and add exclusions for chest trauma, diaphragmatic surgery repair, and pleural effusion. Modified criteria for PSI #7 (selected infections due to medical care) and PSI #14 (postop wound dehiscence) to exclude length of stay less than 2 days. Modified criteria for PSI #8 (postop hip fracture) to exclude hip fracture repair that occurs before or on the same day as the major operating room procedure code. Modified criteria for PSI #10 (postop physiological and metabolic derangement) to exclude principal diagnosis of chronic renal failure in cases of acute renal failure. Modified specification for PSI #11 (postop respiratory failure) to add procedure codes for postoperative reintubation procedures based on number of days after major operating room procedure to numerator and exclude neuromuscular disorder diagnosis from denominator. Modified denominator of PSI #14 and PSI #24 (postop wound dehiscence) to exclude immunocompromised state. Modified denominator of PSI #17 (birth trauma) to limit to in-hospital live births admitted between 0 and 28 days of age. Modified criteria for PSI #18 – PSI #20 (birth trauma) to limit numerator to 3rd and 4th degree lacerations.
V 3.0	February 20, 2006	Software, and Technical Specifications	Software/ Documents	Added diagnosis codes 785.52 (Septic shock), 785.59 (Other shock without mention of trauma), and 998.0 (Postoperative shock) to list of diagnosis codes for Sepsis (PSI #4 and PSI #13.) Added code 586 (Renal failure, unspecified) and 997.5 (Urinary complications) to numerator specification for acute renal failure in PSI #10 (postop physiological and metabolic derangement.) Revised list of diagnosis codes included in diagnosis of immunocompromised states (PSI #2, 4, 7, 13-14, 23-24). Added diagnosis codes to definition of infection used as denominator exclusion for PSI #4 (FTR) and PSI #13 (postop sepsis).

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V 3.0	February 20, 2006	Guide	Software/ Documents	Moved Appendix A into new document *Patient Safety Indicators Technical Specifications*. Removed Appendix B. Added new section "Using Different Types of QI Rates." Added explanation of changes to area definitions and new stratification options. Changed "MSA" to "Metro Area" throughout the document.
V3.0	February 20, 2006	Guide, Software Documentation, Guide, and Technical Specifications	Software/ Documents	Removed Appendices that were copies of Change Log and Indicator Changes documents. Added Appendix of Links to all IQI documents and additional resources.
V 3.0	February 20, 2006	Software Documentation (SAS and SPSS)	Software/ Documents	Amended Table 2 to add variables for expected, lower and upper CI levels, and standard error of smoothed rate. Amended Table 3 to include the new 1995-2006 census data (POP95TO06.TXT). Removed section "Interpreting the Results". Replaced example printouts with tables explaining contents of columns in printouts.
V 3.0	February 20, 2006	Software and Software Documentation (SAS only)	Software/ Documents	Removed outdated HCUP comorbidity program. Advised users to run HCUP Comorbidity Software, Version 3.0 as a separate program before running PSIs if risk-adjusted rates are desired. Amended Table 4 to specify that AHRQ Comorbidity Variables are required to generate risk-adjusted rates.
V 3.0	February 20, 2006	Software	Software/ Documents	Added the 1995-2006 Census data (e.g., POP95TO06.TXT). Updated the covariates to 3M APR-DRG Version 20.0 (i.e., COVIQP30.TXT) Changed the computation of the risk-adjusted rate to use a proportional formula for indirect standardization. Added a computation of confidence limits. Changed name of data element HOSPSTCO to PSTCO. Added parameter POPYEAR to specify year for Census data.

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V 3.0	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.
V 2.1 R3a	February 15, 2005	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 2002 reference population. NOTE: The Guide to Patient Safety Indicators, Operating Room Procedure Codes, and Fiscal Year 2005 Coding Changes documents were not updated and Revision 3 remains the current version.
V 2.1 R 3	January 17, 2005	Decubitus Ulcer (PSI 3) Numerator (Inclusion, decubitus ulcer)	Coding	Added new (FY2005) codes 707.00 “unspecified site”, 707.01 “elbow”, 707.02 “upper back”, 707.03 “lower back”, 707.04 “hip”, 707.05 “buttock”, 707.06 “ankle”, 707.07 “heel” and 707.09 “site, other” to the numerator inclusion criteria for decubitus ulcer. Expected impact on rate: negligible.
V 2.1 R 3	January 17, 2005	Failure to Rescue (PSI 4) Denominator (Inclusion, DVT/PE)	Coding	Added new (FY2005) codes 453.40 “unspecified site”, 453.41 “proximal” and 453.42 “distal” to the denominator inclusion criteria for venous embolism and thrombosis of deep vessels of the lower extremity. Expected impact on rate: negligible.
V 2.1 R 3	January 17, 2005	Postoperative DVT/PE (PSI 12) Numerator (Inclusion, DVT/PE)	Coding	Added new (FY2005) codes 453.40 “unspecified site”, 453.41 “proximal” and 453.42 “distal” to the numerator inclusion criteria for venous embolism and thrombosis of deep vessels of the lower extremity. Expected impact on rate: negligible.

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V 2.1 R 3	January 17, 2005	Postoperative Wound Dehiscence (PSI 14) Denominator (Inclusion, abdominopelvic surgery)	Coding	For discharges beginning in FY 2005, ICD-9-CM code 44.99 "other gastric operation" is added to the denominator definition of abdominopelvic surgery because laparoscopic procedures that previously dominated this code were re-assigned to other codes. Note: Revision 3 adds optional data elements YEAR (year of patient discharge) and DQTR (calendar quarter of patient discharge) to the input data file specifications. If available, these data elements are used to include ICD-9-CM code 44.99 in the denominator for discharges occurring on or after 10/1/2004. However, ICD-9 code 44.99 will not be retained in the denominator if the data elements year and quarter of discharge are not available or if the user selects the option not to retain code 44.99 for purposes of trending over time or to maintain historical continuity in the rate. However, users are encouraged to transition to the new definition as soon as possible. Expected impact on rate: may result in an increase in the denominator and resulting increase in the rate due to the significant risk of wound dehiscence in the open procedures retained in this code.
V 2.1 R 3	January 17, 2005	Multiple Indicators Denominator (Inclusion, surgical discharges)	Coding	Added new (FY2005) DRG codes 541-543 to the surgical discharges inclusion criteria for the applicable PSIs: 1, 3, 5-13, 15-16, 21-23, and 25-26. Expected impact on rate: negligible
V 2.1 R 3	January 17, 2005	Multiple Indicators Denominator (Inclusion, surgical discharges)	Coding	Added new (FY2005) major operating procedure codes to the surgical discharges inclusion criteria for the applicable PSIs (see above for the list of PSIs). See the document "Operating Room Procedure Codes" at http://www.qualityindicators.ahrq.gov/psi_download.htm for a list of these ICD-9 codes. The new codes can be identified locating the reference date of introduction "Oct 04" behind the ICD-9 code and description. Expected impact on rate: negligible

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V 2.1 R 3	January 17, 2005	Multiple Indicators Comorbidity (other neurological disorders)	Coding	Added new (FY2005) codes 347.00 "narcolepsy w/o cataplexy", 347.01 "w/ cataplexy", 347.10 "narcolepsy in conditions classified elsewhere w/o cataplexy" and 347.11 "w/ cataplexy" to the co morbidity inclusion criteria for other neurological disorders. Added new (FY2005) DRG code 543 to the co morbidity exclusion criteria for other neurological disorders. Expected impact on rate: negligible
V 2.1 R 3	January 17, 2005	Software (SAS and SPSS) and Guide	Software/ Documents	Modified documentation to reflect changes in indicators associated with ICD-9-CM coding updates for FY 2005 (effective 10-1-2004). See separate documentation on ICD-9 coding updates for specific details.
V 2.1 R 3	January 17, 2005	Guide	Software/ Documents	Updated the provider, area and population rates in Table 1 and Table 2 and the detailed evidence section using data from the 2002 HCUP SID files. In the detailed evidence section, added a cross reference from each indicator description to the indicator's detailed definition in Appendix A. Included Appendix A titles of detailed definitions in the Table of Contents. Removed the Operating Room Procedure Codes from Appendix C and reorganized the Appendices. The Operating Room Procedure Codes are now provided as a separate downloadable document.
V 2.1 R 3	January 17, 2005	Software (SAS and SPSS)	Software/ Documents	Added the 2003 census data (i.e., QICTY03.TXT) Added optional data elements YEAR (year of patient discharge) and DQTR (calendar quarter of patient discharge) to the specifications of the input file. Added new user control parameter YEARQTR to CONTROL_PSI.SAS and PSSPS1.SPS. The default setting for this parameter in the syntax is 0. If the data elements YEAR and DQTR are available in the input data file the parameter would be set to 1. Note: If available, these data elements are used to implement a coding change to Postoperative Wound Dehiscence (PSI #14) that adds ICD-9-CM code 44.99 to the denominator for discharges occurring on or after 10/1/2004. However, ICD-9 code 44.99 will not be retained in the denominator if the data elements year and quarter of discharge are not available or if the user selects the option not to retain code 44.99 for purposes of trending over time.

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V 2.1 R 3	January 17, 2005	Software Documentation (SAS and SPSS)	Software/ Documents	Table 3 was amended to include the 2003 census data (i.e., QICTY03.TXT). Added instructions for setting new user control parameter YEARQTR to CONTROL_PSI.SAS and PSSPS1.SPS. Added descriptions of optional data elements YEAR (year of patient discharge) and DQTR (calendar quarter of patient discharge) to Table 4.
V 2.1 R 2a	November 19, 2004	Software (SAS)	Software/ Documents	Corrected syntax for the option to export program output of PSSASP2.SAS and PSSASP3.SAS to comma-delimited files that can then be read by Excel. NOTE: The changes do not affect the SPSS syntax.
V 2.1 R 2a	November 19, 2004	Software (SAS and SPSS)	Software/ Documents	Updated zip files to exclude the QICTYAxx.TXT census files, which are not required for risk adjustment for the PSI module.
V 2.1 R 2a	November 19, 2004	Covariates	Software/ Documents	Revised to include additional columns (i.e. the number of covariates and the odds ratio) and to correct the covariate labels. NOTE: The changes do not affect the covariate values or the calculation of risk-adjusted rates.

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V 2.1 R 2	October 22, 2004	Guide	Software/ Documents	Modified documentation to reflect changes in indicators associated with ICD-9-CM coding updates for FY 2004 (effective 10-1-2003). See separate documentation for specific details. Changed syntax of "hospital-level" to "provider-level" throughout the documentation. Added PSI number to each Indicator name. Updated empirical results for Table 1, and limited contents to Provider-level PSIs. Added Table 2, listing Area-level PSIs. Added caption for Table 3, Indicators and Use of External Cause-of-Injury Codes. Modified PSI #2 (death in low mortality DRGs). The indicator is reported as a single measure, but also stratified by type of DRG: adult medical, pediatric medical, adult surgical (with OR procedure), adult surgical (without OR procedure), pediatric surgical (with OR procedure), pediatric surgical (without OR procedure), obstetric and psychiatric. A list of low mortality DRGs by type is included PSI Guide. Impact: Among the low mortality DRGs, about 25% of the discharges and 60% of the deaths are “adult medical” DRGs. Psychiatric DRGs also have a higher share of deaths (10%) than discharges (6%). Death among the other DRG types is very rare (0.1% or less). Few low mortality surgical DRGs do not have an operating room procedure, so the adult or pediatric surgical DRG (without OR procedure) will generally be missing or zero for most hospitals. Modified PSI #14, Postoperative Wound Dehiscence, to include only OR procedures in the definition of abdominopelvic surgery. Impact: Small (less than 1%) decrease in the denominator and resulting small increase in the rate due to exclusion of a low-risk procedure.

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
				Modified PSI #17, Birth Trauma, to exclude preterm infants with subdural or cerebral hemorrhage or osteogenesis imperfecta infants with injury to skeleton from the numerator only. NOTE: The infants remain in the population at risk for other types of birth trauma. Impact: Small (less than 1%) increase in the denominator and resulting small decrease or no impact in the rate (i.e. the risk of other types of birth trauma for these two populations is less than or no different than for other births). Added three new Indicators #27-29, to include third-degree lacerations for each of three types of delivery: Vaginal with and without instruments, and Cesarean. Impact: The rate for OB Trauma is generally 5-10% higher when including 3rd degree lacerations Limited the surgical DRG inclusion criteria to major OR procedures for PSI #1, 8-13, all of which deal with postoperative illness or injury. Impact: Medium (1-4%) decrease in the denominator. The impact on the rate varies by indicator. PSIs 1, 8 and 9 have a medium (1-3%) increase in the rate. PSIs 10 and 12 have a small (less than 1%) decrease in the rate. PSIs 11 and 13 have a medium (3-4%) decrease in the rate. Modified PSIs #1, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15. 16 to exclude discharges with a PSI-defining secondary diagnosis and a different PSI-defining principal diagnosis (but within the same PSI definition). Impact: Small (less than 1%) decrease in the denominator. The impact on the rate varies by indicator. PSIs 1, 3, 6, 7, 8, 10, 11, 13 and 16 have a small (less than 1%) increase in the rate. PSI 9 has a small (less than 1%) decrease in the rate. PSI 15 has a medium (2-3%) decrease in the rate. PSIs 5 and 12 have a large (5-9%) decrease in the rate.

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
				Modified PSIs #8, 9, 11, 12 to exclude discharges where the only OR procedure is a PSI-related procedure. Impact: Small (less than 1%) decrease in the denominator. The impact on the rate varies by indicator. PSI 11 has a small (less than 1%) decrease in the rate. PSI 9 has a medium (1-2%) decrease in the rate. PSIs 8 and 12 have a large (15-65%) decrease in the rate. Modified PSIs #8, 9, 11, 12, 14 to exclude discharges where a PSI-related procedure precedes the denominator-defining OR procedure. Impact: Small (less than 1%) decrease in the denominator. The impact on the rate varies by indicator. PSI 9 has a large (65-70%) increase in the rate. PSIs 11 and 12 have a small (less than 1%) decrease in the rate. PSI 8 has a medium (3-4%) decrease in the rate. PSI 14 has a large (8-9%) decrease in the rate. Modified Area level PSI #24, Postoperative Wound Dehiscence, to drop the requirement that the wound reclosure occurs in a discharge with a procedure code of abdominopelvic surgery. Impact: Numerator increases by about 40%. Added code 72.79 to the definition of instrument-assisted delivery in PSI #18, 19. Impact: Transfers about 33% of the denominator from PSI 19 to PSI 18. Because the OB Trauma rate for these cases is higher than average for PSI 19 and lower than average for PSI 18, and because the OB Trauma rate for PSI 19 is lower than PSI 18, the rate for both indicators decreases by 3-10%.

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V 2.1 R 2	October 22, 2004	Software (SAS and SPSS)	Software/ Documents	Implemented syntax changes associated with ICD-9-CM coding updates from FY 2004 (effective 10-1-2003). See separate documentation on ICD-9 coding updates for specific details. Implemented all syntax changes required to implement the indicator modifications (noted above under Guide) and incorporated the related documentation in the Software manuals. Modified the age, DRG and co morbidity aggregations used in the risk-adjustment to reflect the new rates and to group the DRGs by MDC (including an MDC-specific other category) Added the calculation and reporting of the expected rate at the stratification level selected by the user. The SAS (PSSASP3.SAS) and SPSS (PSSPSP3.SPS) software now calculates the risk-adjusted rate, the expected rate and the smoothed rate. The rates are saved in the output file. The user also has the option to print the rates or save the rates in a comma-delimited ASCII file.
V 2.1 R 2	October 22, 2004	Software (SAS)	Software/ Documents	Inserted "PS" in format names for age, sex, DRG and co morbidity aggregations in SAS programs to distinguish these formats from similarly named formats used by other indicator software.
V 2.1 R 1	May 28, 2003	Guide	Software/ Documents	Updated empirical results for Table 1. Corrected error in Failure to Rescue Sepsis (denominator, exclusion criteria). Corrected syntax excludes patients with a length of stay less than 4 days.
V 2.1 R 1	May 28, 2003	Software (SAS)	Software/ Documents	Corrected error in Failure to Rescue Sepsis (denominator, exclusion criteria). Corrected syntax excludes patients with a length of stay less than 4 days. Made minor syntax change to pathname syntax to ease use.
V 2.1 R 1	May 28, 2003	Software Documentation (SAS)	Software/ Documents	Added instructions for obtaining confidence interval module.
V 2.1 R 1	May 28,2003	Software reference files (SAS)	Software/ Documents	Parameter files: Updated the parameter reference files.
V 2.1 R 1	May 28,2003	Software and Documentation (SPSS)	Software/ Documents	Released SPSS software which incorporates all changes noted for SAS.

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V2.1	March 13. 2003	Multiple Indicators Denominator (Exclusion, population)	Coding	Removed MDC 15 exclusions for the following indicators because DRGs for most neonates are not included in the population at risk, making the exclusion redundant: Postoperative hemorrhage and hematoma, Postoperative metabolic and physiologic derangement, Accidental puncture and laceration, Postoperative respiratory failure, Postoperative PE and DVT, Postoperative sepsis, Postoperative wound dehiscence.
V2.1	March 13. 2003	Multiple Indicators (Immunocompromised state)	Coding	Added code 52.82 "Pancreatic homotransplant" to the definition of Immunocompromised state used as exclusion in several indicators. Removed all DRGs from definition.
V2.1	March 13. 2003	Multiple Indicators (Medical discharges)	Coding	New DRGs from FY 2002 and 2003 and the DRGs related to burns (inadvertently excluded in the earlier work) of 505, 508-511, and 521-524 were added to the definition of medical discharges for the applicable PSI denominators.
V2.1	March 13. 2003	Multiple Indicators (Surgical discharges)	Coding	New DRGs from FY 2002 and 2003 and the DRGs related to burns (inadvertently excluded in the earlier work) of 504, 506, 507, 512 – 520, and 525-527 were added to the definition of surgical discharges for the applicable PSI denominators.
V2.1	March 13. 2003	Multiple Indicators (Exclusion, trauma)	Coding	1. The new codes (FY 2003) 813.45, "Torus fracture of radius," and 823.4x, "Torus fracture," were added to the exclusion definition of trauma for the applicable PSIs. 2. Modified to include DRGs for trauma in pediatric patients (DRGs 30, 33) and DRGs for burns (DRGs 456-460, 504-511). In addition, DRGs which do not directly indicate trauma were removed (DRGs 447- 455). 3. All e-codes were removed from the format definition of trauma.
V2.1	March 13. 2003	Accidental Puncture or Laceration (PSI 15 and 25)	Coding	The indicator "Technical Difficulty with Procedure" was renamed "Accidental Puncture or Laceration" to clarify the indicator description.
V2.1	March 13. 2003	Birth Trauma (PSI 17) Denominator (Exclusion, premature)	Coding	A modification was made to the exclusion of premature infants with cerebral hemorrhage based on new codes for gestational age (FY 2003). The new codes 765.21 "<24 completed weeks of gestation" through 765.27 "33-34 completed weeks of gestation" were added to the exclusion for this indicator. These are in addition to the existing exclusion for birth weight under 2500 grams (codes 765.01- 765.08, 765.11-765.18).

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V2.1	March 13. 2003	Death in Low Mortality DRGs (PSI 2) Denominator (Exclusion, cancer)	Coding	Added code V10.53 "Renal pelvis" to the exclusion definition of cancer.
V2.1	March 13. 2003	Death in Low Mortality DRGs (PSI 2) Denominator (Exclusion, population)	Coding	DRGs for neonatal discharges (386-391) were removed from the denominator, since these are by definition zero mortality. As a result, the neonatal sub-indicator was removed.
V2.1	March 13. 2003	Decubitus Ulcer (PSI 3) Denominator (Exclusion, population)	Coding	MDC 14 (obstetrics) was excluded from the population at risk.
V2.1	March 13. 2003	Failure to Rescue (PSI 4) Denominator (Exclusion, population)	Coding	1. For all sub-indicator a principal diagnosis exclusion was added for the inclusion population to ensure only patients with only qualifying secondary codes are included (e.g. FTR – pneumonia, exclude principal dx of pneumonia). 2. To incorporate recommendations from the clinical review panel, patients age 75 and older were excluded from the population at risk. 3. Modified to exclude MDC 15, neonates, from the denominator definition, since complications in this population may be clinically distinct from other populations and are coded in a different manner.
V2.1	March 13. 2003	Failure to Rescue (PSI 4) Denominator (Inclusion, acute renal failure)	Coding	Codes for complication in obstetric patients were added to the denominator inclusion renal failure definition including "Acute renal failure following labor and delivery" (669.3x) and "Complications following abortion and ectopic and molar pregnancies, renal failure" (639.3).
V2.1	March 13. 2003	Failure to Rescue (PSI 4) Denominator (Exclusion, acute renal failure)	Coding	1. A principal diagnosis exclusion for acute renal failure after abortion was added (codes 634.3x, 635.3x, 636.3x, 637.3x, and 638.3x). 2. The codes defining trauma were added to this exclusion. 3. The codes for GI hemorrhage were added to this exclusion. 4. Definition of shock used as an exclusion with Acute Renal Failure was modified to include additional types of shock (ICD-9-CM codes: 995.0, 995.4, 998.0, 669.1x, 999.4, 785.5, 634.5x, 635.5x, 636.5x, 637.5x, 638.5, 639.5).

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V2.1	March 13. 2003	Failure to Rescue (PSI 4) Denominator (Exclusion, DVT/PE)	Coding	The denominator exclusion was expanded by adding the codes 415.11 "Iatrogenic pulmonary embolism and infarction," 415.19 "Other pulmonary embolism and infarction," 673.2x, "Obstetrical pulmonary embolism" and codes indicating thromboembolism following abortion (634.5ax, 635.6x, 636.6x, 637.6x, 638.6 and 639.6).
V2.1	March 13. 2003	Failure to Rescue (PSI 4) Denominator (Inclusion, sepsis)	Coding	The new codes (FY 2003), 995.91 "Systemic inflammatory response syndrome due to infectious process without organ dysfunction" and 995.92 "Systemic inflammatory response syndrome due to infection process with organ dysfunction" were added to the denominator inclusion definition of sepsis.
V2.1	March 13. 2003	Failure to Rescue (PSI 4) Denominator (Exclusion, sepsis)	Coding	Definition of infection used in the sepsis exclusion criteria was modified to include DRGs for infection in pediatric patients (DRGs 70, 81, 91, 279, 322, 417) and additional DRGs for bacterial infections (DRGs 415 and 423).
V2.1	March 13. 2003	Failure to Rescue (PSI 4) Denominator (Inclusion, shock)	Coding	1. The code for complication in obstetric patients was added to the denominator inclusion shock definition "Complications following abortion and ectopic and molar pregnancies, shock "(639.5). 2. Also added the codes for "Shock, unspecified, without mention of trauma" (785.50) and "Shock, cardiogenic" (785.51).
V2.1	March 13. 2003	Failure to Rescue (PSI 4) Denominator (Exclusion, shock)	Coding	1. A principal diagnosis exclusion for shock after abortion was added (634.5x, 635.5x, 636.5x, 637.5x, 638.5, 639.5). 2. Expanded to include the GI hemorrhage codes in the exclusion for Shock.
V2.1	March 13. 2003	Failure to Rescue (PSI 4) Denominator (Inclusion, gastrointestinal hemorrhage)	Coding	1. The new codes (FY 2003) 537.84 "Dieulafoy lesion (hemorrhagic) of stomach and duodenum" and 569.86 "Dieulafoy lesion (hemorrhagic) of intestine" were added to the denominator-inclusion definition of gastrointestinal hemorrhage. 2. In addition to the new codes above, the code 456.20 "Bleeding esophageal varices in diseases classified elsewhere, with bleeding" was added to this denominator inclusion definition.

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V2.1	March 13. 2003	Failure to Rescue (PSI 4) Denominator (Exclusion, gastrointestinal hemorrhage)	Coding	This exclusion criteria was modified to exclude a specific diagnosis of alcoholism (see list of codes below) and the exclusion for drug dependency was removed. Alcoholism codes: 291.0 - Alcohol withdrawal delirium; 291.1 – Alcohol amnestic syndrome; 291.2 - Other alcoholic dementia; 291.3 - Alcohol withdrawal hallucinosis; 291.4 - Idiosyncratic alcohol intoxication; 291.5 - Alcoholic jealousy; 291.81 - Other specified alcoholic psychoses, alcohol withdrawal; 291.89 - Other specified alcoholic psychoses, other; 291.9 - Unspecified alcoholic psychosis; 303.0x – Acute alcohol intoxication; 303.9x - Other and unspecified alcohol dependence; 305.0x - Nondependent abuse of drugs, alcohol abuse; 425.5 – Alcoholic cardiomyopathy; 571.0 - Alcoholic fatty liver; 571.1 - Acute alcoholic hepatitis; 571.2 - Alcoholic cirrhosis of liver; 571.3 - Alcoholic liver damage, unspecified; 535.3x - Alcoholic gastritis; 980.0 - Toxic effect of alcohol, ethyl alcohol; 980.9 - Toxic effect of alcohol, unspecified alcohol
V2.1	March 13. 2003	Iatrogenic Pneumothorax (PSI 6) (Exclusion, population)	Coding	MDC 14 (obstetrics) was excluded from the population at risk.
V2.1	March 13. 2003	Iatrogenic Pneumothorax (PSI 6) (Exclusion, thoracic surgery)	Coding	The new code (FY 2002) 81.34 "Refusion of dorsal and dorsolumbar spine, anterior technique" was added to the denominator exclusion definition of thoracic surgery.
V2.1	March 13. 2003	Postoperative hip fracture (PSI 8) Denominator (Exclusion, population)	Coding	MDC 14 (obstetrics) was excluded from the population at risk.
V2.1	March 13. 2003	Postoperative hip fracture (PSI 8) Denominator (Exclusion, stroke)	Coding	Based on new coding guidelines (FY 2003), the code 997.02 "Postoperative cerebrovascular accident" was added to the denominator exclusion definition of stroke.

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V2.1	March 13. 2003	Postoperative Physiologic and Metabolic Derangement (PSI 10) Denominator (Exclusion, gastrointestinal hemorrhage)	Coding	The new codes (FY 2003) 537.84 "Dieulafoy lesion (hemorrhagic) of stomach and duodenum" and 569.86, "Dieulafoy lesion (hemorrhagic) of intestine" were added to the denominator-exclusion definition of gastrointestinal hemorrhage.
V2.1	March 13. 2003	Postoperative Physiologic and Metabolic Derangement (PSI 10) Denominator (Exclusion, shock)	Coding	Definition of shock was modified to include additional types of shock (ICD-9-CM codes: 995.0, 995.4, 998.0, 669.1x, 999.4, 785.5, 634.5x, 635.5x, 636.5x, 637.5x, 638.5, 639.5).
V2.1	March 13. 2003	Postoperative Sepsis (PSI 13) Denominator (Exclusion, infection)	Coding	Definition of infection was modified to include DRGs for infection in pediatric patients (DRGs 70, 81, 91, 279, 322, 417) and additional DRGs for bacterial infections (DRGs 415 and 423).
V2.1	March 13. 2003	Postoperative Sepsis (PSI 13) Numerator (sepsis)	Coding	The new codes (FY 2003) 995.91 "Systemic inflammatory response syndrome due to infectious process without organ dysfunction" and 995.92 "Systemic inflammatory response syndrome due to infection process with organ dysfunction" were added to the numerator definition of sepsis.
V2.1	March 13. 2003	Selected Infections due to Medical Care (PSI 7 and 23)	Coding	The indicator "Infection Due to Medical Care" was renamed "Selected Infections Due to Medical Care" to clarify the indicator description.
V2.1	March 13. 2003	Multiple Indicators (Risk Adjustment) Comorbidity Index (Congestive Heart Failure)	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 comorbidity index definition of congestive heart failure.

VERSION/ REVISION NUMBER	DATE	COMPONENT	NATURE OF CHANGE	CHANGES
V2.1	March 13. 2003	Multiple Indicators (Risk Adjustment) Comorbidity Index (Peripheral Vascular Disease)	Coding	1. The new codes (FY 2003), 445.01 and 445.02 "atheroembolism involving the extremities," 445.81, "atheroembolism of the renal artery," and 445.89 "atheroembolism of other sites" were added to the comorbidity definition of peripheral vascular disease. 2. DRGs 108, 100, 111, 478 and 479 were excluded from this comorbidity definition, in order to remove all of the cases that were admitted with a cardiac principal diagnosis and underwent arterial surgery. 3. Codes describing arterial dissection (441.00- 3) were removed from this comorbidity definition, since these codes often do not reflect a chronic disease.
V2.1	March 13. 2003	Multiple Indicators (Risk Adjustment)	Coding	Modified to incorporate new DRGs from FY 2003: 1. DRGs 512-518, 524-527 were individually added to the DRG risk adjustment model. 2. DRGs 519 and 520 were aggregated and added to the DRG risk adjustment model. 3. DRGs 521, 522, and 523 were aggregated and added to the DRG risk adjustment model.
V2.1	March 13. 2003	Multiple Indicators (Risk Adjustment)	Coding	Identified five DRGs that were no longer valid as of 10/1/01 (112, 434-437) however they were retained for backward compatibility.

Appendices

Appendix A. Cardiac Procedure Codes as of February 2009

3510	OPEN VALVULOPLASTY NOS
3511	OPN AORTIC VALVULOPLASTY
3512	OPN MITRAL VALVULOPLASTY
3513	OPN PULMON VALVULOPLASTY
3514	OPN TRICUS VALVULOPLASTY
3520	OPN/OTH REP HRT VLV NOS
3521	OPN/OTH REP AORT VLV-TIS
3522	OPN/OTH REP AORTIC VALVE
3523	OPN/OTH REP MTRL VLV-TIS
3524	OPN/OTH REP MITRAL VALVE
3525	OPN/OTH REP PULM VLV-TIS
3526	OPN/OTH REPL PUL VALVE
3527	OPN/OTH REP TCSPD VLV-TS
3528	OPN/OTH REPL TCSPD VALVE
3531	PAPILLARY MUSCLE OPS
3532	CHORDAE TENDINEAE OPS
3533	ANNULOPLASTY
3534	INFUNDIBULECTOMY
3535	TRABECUL CARNEAE CORD OP
3539	TISS ADJ TO VALV OPS NEC
3550	PROSTH REP HRT SEPTA NOS
3551	PROS REP ATRIAL DEF-OPN
3553	PROS REP VENTRIC DEF-OPN
3554	PROS REP ENDOCAR CUSHION
3560	GRFT REPAIR HRT SEPT NOS
3561	GRAFT REPAIR ATRIAL DEF
3562	GRAFT REPAIR VENTRIC DEF
3563	GRFT REP ENDOCAR CUSHION
3570	HEART SEPTA REPAIR NOS
3571	ATRIA SEPTA DEF REP NEC
3572	VENTR SEPTA DEF REP NEC
3573	ENDOCAR CUSHION REP NEC
3581	TOT REPAIR TETRAL FALLOT
3582	TOTAL REPAIR OF TAPVC
3583	TOT REP TRUNCUS ARTERIOS
3584	TOT COR TRANSPOS GRT VES
3591	INTERAT VEN RETRN TRANSP
3592	CONDUIT RT VENT-PUL ART
3593	CONDUIT LEFT VENTR-AORTA
3594	CONDUIT ARTIUM-PULM ART
3595	HEART REPAIR REVISION
3598	OTHER HEART SEPTA OPS
3599	OTHER HEART VALVE OPS
3603	OPEN CORONRY ANGIOPLASTY
3610	AORTOCORONARY BYPASS NOS
3611	AORTOCOR BYPAS-1 COR ART
3612	AORTOCOR BYPAS-2 COR ART
3613	AORTOCOR BYPAS-3 COR ART
3614	AORTCOR BYPAS-4+ COR ART
3615	1 INT MAM-COR ART BYPASS
3616	2 INT MAM-COR ART BYPASS
3617	ABD-CORON ARTERY BYPASS
3619	HRT REVAS BYPS ANAS NEC
362	ARTERIAL IMPLANT REVASC
3631	OPEN CHEST TRANS REVASC
3632	OTH TRANSMYO REVASCULAR
3639	OTH HEART REVASCULAR
3691	CORON VESS ANEURYSM REP
3699	HEART VESSEL OP NEC
370	PERICARDIOCENTESIS
3710	INCISION OF HEART NOS
3711	CARDIOTOMY
3712	PERICARDIOTOMY
3731	PERICARDIECTOMY
3732	HEART ANEURYSM EXCISION
3733	EXC/DEST HRT LESION OPEN
3735	PARTIAL VENTRICULECTOMY
3741	IMPL CARDIAC SUPPORT DEV
3749	HEART/PERICARD REPR NEC
3751	HEART TRANSPLANTATION
3752	IMP TOT INT BI HT RP SYS
3753	REPL/REP THR UNT TOT HRT
3754	REPL/REP OTH TOT HRT SYS
3761	PULSATION BALLOON IMPLAN
3762	INSRT NON-IMPL CIRC DEV
3763	REPAIR HEART ASSIST SYS
3764	REMVE EXT HRT ASSIST SYS
3765	IMP VENT EXT HRT AST SYS
3766	IMPLANTABLE HRT ASSIST
3767	IMP CARDIOMYOSTIMUL SYS
3791	OPN CHEST CARDIAC MASSAG
3804	INCISION OF AORTA
3805	THORACIC VESSEL INC NEC
3844	RESECT ABDM AORTA W REPL
3845	RESECT THORAC VES W REPL
3864	EXCISION OF AORTA
3865	THORACIC VESSEL EXCISION
3884	OCCLUDE AORTA NEC
3885	OCCLUDE THORACIC VES NEC
390	SYSTEMIC-PULM ART SHUNT
3921	CAVAL-PULMON ART ANASTOM
3922	AORTA-SUBCLV-CAROT BYPAS
3923	INTRATHORACIC SHUNT NEC

Appendix B. Poisonings as of February 2009

9600	POISONING-PENICILLINS
9601	POIS-ANTIFUNGAL ANTIBIOT
9602	POISON-CHLORAMPHENICOL
9603	POIS-ERYTHROMYC/MACROLID
9604	POISONING-TETRACYCLINE
9605	POIS-CEPHALOSPORIN GROUP
9606	POIS-ANTIMYCOBAC ANTIBIO
9607	POIS-ANTINEOP ANTIBIOTIC
9608	POISONING-ANTIBIOTIC NEC
9609	POISONING-ANTIBIOTIC NOS
9610	POISONING-SULFONAMIDES
9611	POIS-ARSENIC ANTI-INFEC
9612	POIS-HEAV MET ANTI-INFEC
9613	POIS-QUINOLINE/HYDROXYQU
9614	POISONING-ANTIMALARIALS
9615	POIS-ANTIPROTOZ DRUG NEC
9616	POISONING-ANTHELMINTICS
9617	POISONING-ANTIVIRAL DRUG
9618	POIS-ANTIMYCOBAC DRG NEC
9619	POIS-ANTI-INFECT NEC/NOS
9620	POIS-CORTICOSTEROIDS
9621	POISONING-ANDROGENS
9622	POISONING-OVARIAN HORMON
9623	POISON-INSULIN/ANTIDIAB
9624	POIS-ANT PITUITARY HORM
9625	POIS-POST PITUITARY HORM
9626	POISONING-PARATHYROIDS
9627	POISONING-THYROID/DERIV
9628	POISON-ANTITHYROID AGENT
9629	POISONING HORMON NEC/NOS
9630	POIS-ANTIALLRG/ANTIEMET
9631	POIS-ANTINEOPL/IMMUNOSUP
9632	POISONING-ACIDIFYING AGT
9633	POISONING-ALKALIZING AGT
9634	POISONING-ENZYMES NEC
9635	POISONING-VITAMINS NEC
9638	POISONING-SYSTEM AGT NEC
9639	POISONING-SYSTEM AGT NOS
9640	POISONING-IRON/COMPOUNDS
9641	POISON-LIVER/ANTIANEMICS
9642	POISONING-ANTICOAGULANTS
9643	POISONING-VITAMIN K
9644	POISON-FIBRINOLYSIS AGNT
9645	POISONING-COAGULANTS
9646	POISONING-GAMMA GLOBULIN
9647	POISONING-BLOOD PRODUCT
9648	POISONING-BLOOD AGT NEC
9649	POISONING-BLOOD AGT NOS
9651	POISONING-SALICYLATES
9654	POIS-AROM ANALGESICS NEC
9655	POISONING-PYRAZOLE DERIV
96561	POIS-PROPIONIC ACID DERV
96569	POISON-ANTIRHEUMATIC NEC
9657	POIS-NO-NARC ANALGES NEC
9659	POIS-ANALGES/ANTIPYR NOS
9700	POISONING-ANALEPTICS
9701	POISON-OPIATE ANTAGONIST
9708	POIS-CNS STIMULANTS NEC#
9709	POIS-CNS STIMULANT NOS
9710	POIS-PARASYMPATHOMIMETIC
9711	POIS-PARASYMPATHOLYTICS
9712	POISON-SYMPATHOMIMETICS
9713	POISONING-SYMPATHOLYTICS
9719	POIS-AUTONOMIC AGENT NOS
9720	POIS-CARD RHYTHM REGULAT
9721	POISONING-CARDIOTONICS
9722	POISONING-ANTILIPEMICS
9723	POIS-GANGLION BLOCK AGT
9724	POIS-CORONARY VASODILAT
9725	POISON-VASODILATOR NEC
9726	POIS-ANTIHYPERTEN AGENT
9727	POISON-ANTIVARICOSE DRUG
9728	POISON-CAPILLARY ACT AGT
9729	POIS-CARDIOVASC AGT NEC
9730	POIS-ANTACID/ANTIGASTRIC
9731	POIS-IRRITANT CATHARTICS
9732	POIS-EMOLLIENT CATHARTIC
9733	POISONING-CATHARTIC NEC
9734	POISONING-DIGESTANTS
9735	POISONING-ANTIDIARRH AGT
9736	POISONING-EMETICS
9738	POISONING-GI AGENTS NEC
9739	POISONING-GI AGENT NOS
9740	POIS-MERCURIAL DIURETICS
9741	POIS-PURINE DIURETICS
9742	POIS-H2CO3 ANHYDRA INHIB
9743	POISONING-SALURETICS
9744	POISONING-DIURETICS NEC
9745	POIS-ELECTRO/CAL/WAT AGT
9746	POISON-MINERAL SALTS NEC
9747	POIS-URIC ACID METABOL
9750	POISONING-OXYTOCIC AGENT
9751	POIS-SMOOTH MUSCLE RELAX
9753	POISON-MUSCLE AGENT NEC
9754	POISONING-ANTITUSSIVES
9755	POISONING-EXPECTORANTS
9756	POIS-ANTI-COLD DRUGS
9757	POISONING-ANTIASTHMATICS
9758	POIS-RESPIR DRUG NEC/NOS
9760	POIS-LOCAL ANTI-INFECT
9761	POISONING-ANTIPRURITICS
9762	POIS-LOC ASTRING/DETERG
9763	POIS-EMOL/DEMUL/PROTECT
9764	POISON-HAIR/SCALP PREP

9765	POIS-EYE ANTI-INFEC/DRUG
9766	POISON-ENT PREPARATION
9767	POIS-TOPICAL DENTAL DRUG
9768	POIS-SKIN/MEMBR AGNT NEC
9769	POIS-SKIN/MEMBR AGNT NOS
9770	POISONING-DIETETICS
9771	POISON-LIPOTROPIC DRUGS
9772	POISONING-ANTIDOTES NEC
9773	POISON-ALCOHOL DETERRENT
9774	POIS-PHARMACEUT EXCIPIEN
9778	POISON-MEDICINAL AGT NEC
9779	POISON-MEDICINAL AGT NOS
9780	POISONING-BCG VACCINE
9781	POIS-TYPH/PARATYPH VACC
9782	POISONING-CHOLERA VACCIN
9783	POISONING-PLAGUE VACCINE
9784	POISONING-TETANUS VACCIN
9785	POIS-DIPHTHERIA VACCINE
9786	POIS-PERTUSSIS VACCINE
9788	POIS-BACT VACCIN NEC/NOS
9789	POIS-MIX BACTER VACCINES
9790	POISON-SMALLPOX VACCINE
9791	POISON-RABIES VACCINE
9792	POISON-TYPHUS VACCINE
9793	POIS-YELLOW FEVER VACCIN
9794	POISONING-MEASLES VACCIN
9795	POIS-POLIOMYELIT VACCINE
9796	POIS-VIRAL/RICK VACC NEC
9797	POISONING-MIXED VACCINE
9799	POIS-VACCINE/BIOLOG NEC

Appendix C. Delirium and Other Psychoses as of February 2009

29600	BIPOL I SINGLE MANIC NOS
29601	BIPOL I SINGLE MANC-MILD
29602	BIPOL I SINGLE MANIC-MOD
29603	BIPOL I SING-SEV W/O PSY
29604	BIPO I SIN MAN-SEV W PSY
29605	BIPOL I SING MAN REM NOS
29606	BIPOL I SINGLE MANIC REM
29610	RECUR MANIC DIS-UNSPEC
29611	RECUR MANIC DIS-MILD
29612	RECUR MANIC DIS-MOD
29613	RECUR MANIC DIS-SEVERE
29614	RECUR MANIC-SEV W PSYCHO
29615	RECUR MANIC-PART REMISS
29616	RECUR MANIC-FULL REMISS
29620	DEPRESS PSYCHOSIS-UNSPEC
29621	DEPRESS PSYCHOSIS-MILD
29622	DEPRESSIVE PSYCHOSIS-MOD
29623	DEPRESS PSYCHOSIS-SEVERE
29624	DEPR PSYCHOS-SEV W PSYCH
29625	DEPR PSYCHOS-PART REMISS
29626	DEPR PSYCHOS-FULL REMISS
29650	BIPOL I CUR DEPRES NOS
29651	BIPOL I CUR DEPRESS-MILD
29652	BIPOL I CUR DEPRESS-MOD
29653	BIPOL I CURR DEP W/O PSY
29654	BIPOL I CURRNT DEP W PSY
29655	BIPOL I CUR DEP REM NOS
29656	BIPOL I CURRNT DEP REMIS
29660	BIPOL I CURRNT MIXED NOS
29661	BIPOL I CURRNT MIX-MILD
29662	BIPOL I CURRNT MIXED-MOD
29663	BIPOL I CUR MIX W/O PSY
29664	BIPOL I CUR MIXED W PSY
29665	BIPOL I CUR MIX-PART REM
29666	BIPOL I CUR MIXED REMISS
29699	EPISODIC MOOD DISORD NEC
30300	AC ALCOHOL INTOX-UNSPEC
30301	AC ALCOHOL INTOX-CONTIN
30302	AC ALCOHOL INTOX-EPISOD
30500	ALCOHOL ABUSE-UNSPEC
30501	ALCOHOL ABUSE-CONTINUOUS
30502	ALCOHOL ABUSE-EPISODIC
30530	HALLUCINOG ABUSE-UNSPEC
30531	HALLUCINOG ABUSE-CONTIN
30532	HALLUCINOG ABUSE-EPISOD

Appendix D. Medical Discharges as of February 2009

52 SPINAL DISORDERS & INJURIES W CC/MCC
53 SPINAL DISORDERS & INJURIES W/O CC/MCC
54 NERVOUS SYSTEM NEOPLASMS W MCC
55 NERVOUS SYSTEM NEOPLASMS W/O MCC
56 DEGENERATIVE NERVOUS SYSTEM DISORDERS W MCC
57 DEGENERATIVE NERVOUS SYSTEM DISORDERS W/O MCC
58 MULTIPLE SCLEROSIS & CEREBELLAR ATAXIA W MCC
59 MULTIPLE SCLEROSIS & CEREBELLAR ATAXIA W CC
60 MULTIPLE SCLEROSIS & CEREBELLAR ATAXIA W/O CC/MCC
61 ACUTE ISCHEMIC STROKE W USE OF THROMBOLYTIC AGENT W MCC
62 ACUTE ISCHEMIC STROKE W USE OF THROMBOLYTIC AGENT W CC
63 ACUTE ISCHEMIC STROKE W USE OF THROMBOLYTIC AGENT W/O CC/MCC
064 INTRACRANIAL HEMORRHAGE OR CEREBRAL INFARCTION W MCC
65 INTRACRANIAL HEMORRHAGE OR CEREBRAL INFARCTION W CC
66 INTRACRANIAL HEMORRHAGE OR CEREBRAL INFARCTION W/O CC/MCC
067 NONSPECIFIC CVA & PRECEREBRAL OCCLUSION W/O INFARCT W MCC
68 NONSPECIFIC CVA & PRECEREBRAL OCCLUSION W/O INFARCT W/O MCC
69 TRANSIENT ISCHEMIA
70 NONSPECIFIC CEREBROVASCULAR DISORDERS W MCC
71 NONSPECIFIC CEREBROVASCULAR DISORDERS W CC
72 NONSPECIFIC CEREBROVASCULAR DISORDERS W/O CC/MCC
73 CRANIAL & PERIPHERAL NERVE DISORDERS W MCC
74 CRANIAL & PERIPHERAL NERVE DISORDERS W/O MCC
75 VIRAL MENINGITIS W CC/MCC
76 VIRAL MENINGITIS W/O CC/MCC
77 HYPERTENSIVE ENCEPHALOPATHY W MCC
78 HYPERTENSIVE ENCEPHALOPATHY W CC
79 HYPERTENSIVE ENCEPHALOPATHY W/O CC/MCC
80 NONTRAUMATIC STUPOR & COMA W MCC
81 NONTRAUMATIC STUPOR & COMA W/O MCC
82 TRAUMATIC STUPOR & COMA, COMA >1 HR W MCC
83 TRAUMATIC STUPOR & COMA, COMA >1 HR W CC
84 TRAUMATIC STUPOR & COMA, COMA >1 HR W/O CC/MCC
85 TRAUMATIC STUPOR & COMA, COMA <1 HR W MCC
86 TRAUMATIC STUPOR & COMA, COMA <1 HR W CC
87 TRAUMATIC STUPOR & COMA, COMA <1 HR W/O CC/MCC
88 CONCUSSION W MCC
89 CONCUSSION W CC
90 CONCUSSION W/O CC/MCC
91 OTHER DISORDERS OF NERVOUS SYSTEM W MCC
92 OTHER DISORDERS OF NERVOUS SYSTEM W CC
93 OTHER DISORDERS OF NERVOUS SYSTEM W/O CC/MCC
94 BACTERIAL & TUBERCULOUS INFECTIONS OF NERVOUS SYSTEM W MCC
095 BACTERIAL & TUBERCULOUS INFECTIONS OF NERVOUS SYSTEM W CC
096 BACTERIAL & TUBERCULOUS INFECTIONS OF NERVOUS SYSTEM W/O CC/MCC
97 NON-BACTERIAL INFECT OF NERVOUS SYS EXC VIRAL MENINGITIS W MCC
98 NON-BACTERIAL INFECT OF NERVOUS SYS EXC VIRAL MENINGITIS W CC
99 NON-BACTERIAL INFECT OF NERVOUS SYS EXC VIRAL MENINGITIS W/O CC/MCC
100 SEIZURES W MCC
101 SEIZURES W/O MCC
102 HEADACHES W MCC
103 HEADACHES W/O MCC
121 ACUTE MAJOR EYE INFECTIONS W CC/MCC
122 ACUTE MAJOR EYE INFECTIONS W/O CC/MCC
123 NEUROLOGICAL EYE DISORDERS
124 OTHER DISORDERS OF THE EYE W MCC
125 OTHER DISORDERS OF THE EYE W/O MCC

146 EAR, NOSE, MOUTH & THROAT MALIGNANCY W MCC
147 EAR, NOSE, MOUTH & THROAT MALIGNANCY W CC
148 EAR, NOSE, MOUTH & THROAT MALIGNANCY W/O CC/MCC
149 DYSEQUILIBRIUM
150 EPISTAXIS W MCC
151 EPISTAXIS W/O MCC
152 OTITIS MEDIA & URI W MCC
153 OTITIS MEDIA & URI W/O MCC
154 NASAL TRAUMA & DEFORMITY W MCC
155 NASAL TRAUMA & DEFORMITY W CC
156 NASAL TRAUMA & DEFORMITY W/O CC/MCC
157 DENTAL & ORAL DISEASES W MCC
158 DENTAL & ORAL DISEASES W CC
159 DENTAL & ORAL DISEASES W/O CC/MCC
175 PULMONARY EMBOLISM W MCC
176 PULMONARY EMBOLISM W/O MCC
177 RESPIRATORY INFECTIONS & INFLAMMATIONS W MCC
178 RESPIRATORY INFECTIONS & INFLAMMATIONS W CC
179 RESPIRATORY INFECTIONS & INFLAMMATIONS W/O CC/MCC
180 RESPIRATORY NEOPLASMS W MCC
181 RESPIRATORY NEOPLASMS W CC
182 RESPIRATORY NEOPLASMS W/O CC/MCC
183 MAJOR CHEST TRAUMA W MCC
184 MAJOR CHEST TRAUMA W CC
185 MAJOR CHEST TRAUMA W/O CC/MCC
186 PLEURAL EFFUSION W MCC
187 PLEURAL EFFUSION W CC
188 PLEURAL EFFUSION W/O CC/MCC
189 PULMONARY EDEMA & RESPIRATORY FAILURE
190 CHRONIC OBSTRUCTIVE PULMONARY DISEASE W MCC
191 CHRONIC OBSTRUCTIVE PULMONARY DISEASE W CC
192 CHRONIC OBSTRUCTIVE PULMONARY DISEASE W/O CC/MCC
193 SIMPLE PNEUMONIA & PLEURISY W MCC
194 SIMPLE PNEUMONIA & PLEURISY W CC
195 SIMPLE PNEUMONIA & PLEURISY W/O CC/MCC
196 INTERSTITIAL LUNG DISEASE W MCC
197 INTERSTITIAL LUNG DISEASE W CC
198 INTERSTITIAL LUNG DISEASE W/O CC/MCC
199 PNEUMOTHORAX W MCC
200 PNEUMOTHORAX W CC
201 PNEUMOTHORAX W/O CC/MCC
202 BRONCHITIS & ASTHMA W CC/MCC
203 BRONCHITIS & ASTHMA W/O CC/MCC
204 RESPIRATORY SIGNS & SYMPTOMS
205 OTHER RESPIRATORY SYSTEM DIAGNOSES W MCC
206 OTHER RESPIRATORY SYSTEM DIAGNOSES W/O MCC
207 RESPIRATORY SYSTEM DIAGNOSIS W VENTILATOR SUPPORT 96+ HOURS
208 RESPIRATORY SYSTEM DIAGNOSIS W VENTILATOR SUPPORT <96 HOURS
280 ACUTE MYOCARDIAL INFARCTION, DISCHARGED ALIVE W MCC
281 ACUTE MYOCARDIAL INFARCTION, DISCHARGED ALIVE W CC
282 ACUTE MYOCARDIA INFARCTION, DISCHARGED ALIVE W/O CC/MCC
283 ACUTE MYOCARDIAL INFARCTION, EXPIRED W MCC
284 ACUTE MYOCARDIAL INFARCTION, EXPIRED W CC
285 ACUTE MYOCARDIAL INFARCTION, EXPIRED W/O CC/MCC
286 CIRCULATORY DISORDERS EXCEPT AMI, W CARD CATH W MCC
287 CIRCULATORY DISORDERS EXCEPT AMI, W CARD CATH W/O MCC
288 ACUTE & SUBACUTE ENDOCARDITIS W MCC
289 ACUTE & SUBACUTE ENDOCARDITIS W CC
290 ACUTE & SUBACUTE ENDOCARDITIS W/O CC/MCC
291 HEART FAILURE & SHOCK W MCC
292 HEART FAILURE & SHOCK W CC
293 HEART FAILURE & SHOCK W/O CC/MCC
294 DEEP VEIN THROMBOPHLEBITIS W CC/MCC
295 DEEP VEIN THROMBOPHLEBITIS W/O CC/MCC
296 CARDIAC ARREST, UNEXPLAINED W MCC
297 CARDIAC ARREST, UNEXPLAINED W CC
298 CARDIAC ARREST, UNEXPLAINED W/O CC/MCC
299 PERIPHERAL VASCULAR DISORDERS W MCC
300 PERIPHERAL VASCULAR DISORDERS W CC
301 PERIPHERAL VASCULAR DISORDERS W/O CC/MCC
302 ATHEROSCLEROSIS W MCC
303 ATHEROSCLEROSIS W/O MCC

304 HYPERTENSION W MCC
305 HYPERTENSION W/O MCC
306 CARDIAC CONGENITAL & VALVULAR DISORDERS W MCC
307 CARDIAC CONGENITAL & VALVULAR DISORDERS W/O MCC
308 CARDIAC ARRHYTHMIA & CONDUCTION DISORDERS W MCC
309 CARDIAC ARRHYTHMIA & CONDUCTION DISORDERS W CC
310 CARDIAC ARRHYTHMIA & CONDUCTION DISORDERS W/O CC/MCC
311 ANGINA PECTORIS
312 SYNCOPE & COLLAPSE
313 CHEST PAIN
314 OTHER CIRCULATORY SYSTEM DIAGNOSES W MCC
315 OTHER CIRCULATORY SYSTEM DIAGNOSES W CC
316 OTHER CIRCULATORY SYSTEM DIAGNOSES W/O CC/MCC
368 MAJOR ESOPHAGEAL DISORDERS W MCC
369 MAJOR ESOPHAGEAL DISORDERS W CC
370 MAJOR ESOPHAGEAL DISORDERS W/O CC/MCC
371 MAJOR GASTROINTESTINAL DISORDERS & PERITONEAL INFECTIONS W MCC
372 MAJOR GASTROINTESTINAL DISORDERS & PERITONEAL INFECTIONS W CC
373 MAJOR GASTROINTESTINAL DISORDERS & PERITONEAL INFECTIONS W/O CC/MCC
374 DIGESTIVE MALIGNANCY W MCC
375 DIGESTIVE MALIGNANCY W CC
376 DIGESTIVE MALIGNANCY W/O CC/MCC
377 G.I. HEMORRHAGE W MCC
378 G.I. HEMORRHAGE W CC
379 G.I. HEMORRHAGE W/O CC/MCC
380 COMPLICATED PEPTIC ULCER W MCC
381 COMPLICATED PEPTIC ULCER W CC
382 COMPLICATED PEPTIC ULCER W/O CC/MCC
383 UNCOMPLICATED PEPTIC ULCER W MCC
384 UNCOMPLICATED PEPTIC ULCER W/O MCC
385 INFLAMMATORY BOWEL DISEASE W MCC
386 INFLAMMATORY BOWEL DISEASE W CC
387 INFLAMMATORY BOWEL DISEASE W/O CC/MCC
388 G.I. OBSTRUCTION W MCC
389 G.I. OBSTRUCTION W CC
390 G.I. OBSTRUCTION W/O CC/MCC
391 ESOPHAGITIS, GASTROENT & MISC DIGEST DISORDERS W MCC
392 ESOPHAGITIS, GASTROENT & MISC DIGEST DISORDERS W/O MCC
393 OTHER DIGESTIVE SYSTEM DIAGNOSES W MCC
394 OTHER DIGESTIVE SYSTEM DIAGNOSES W CC
395 OTHER DIGESTIVE SYSTEM DIAGNOSES W/O CC/MCC
432 CIRRHOSIS & ALCOHOLIC HEPATITIS W MCC
433 CIRRHOSIS & ALCOHOLIC HEPATITIS W CC
434 CIRRHOSIS & ALCOHOLIC HEPATITIS W/O CC/MCC
435 MALIGNANCY OF HEPATOBILIARY SYSTEM OR PANCREAS W MCC
436 MALIGNANCY OF HEPATOBILIARY SYSTEM OR PANCREAS W CC
437 MALIGNANCY OF HEPATOBILIARY SYSTEM OR PANCREAS W/O CC/MCC
438 DISORDERS OF PANCREAS EXCEPT MALIGNANCY W MCC
439 DISORDERS OF PANCREAS EXCEPT MALIGNANCY W CC
440 DISORDERS OF PANCREAS EXCEPT MALIGNANCY W/O CC/MCC
441 DISORDERS OF LIVER EXCEPT MALIG, CIRR, ALC HEPA W MCC
442 DISORDERS OF LIVER EXCEPT MALIG, CIRR, ALC HEPA W CC
443 DISORDERS OF LIVER EXCEPT MALIG, CIRR, ALC HEPA W/O CC/MCC
444 DISORDERS OF THE BILIARY TRACT W MCC
445 DISORDERS OF THE BILIARY TRACT W CC
446 DISORDERS OF THE BILIARY TRACT W/O CC/MCC
533 FRACTURES OF FEMUR W MCC
534 FRACTURES OF FEMUR W/O MCC
535 FRACTURES OF HIP & PELVIS W MCC
536 FRACTURES OF HIP & PELVIS W/O MCC
537 SPRAINS, STRAINS, & DISLOCATIONS OF HIP, PELVIS & THIGH W CC/MCC
538 SPRAINS, STRAINS, & DISLOCATIONS OF HIP, PELVIS & THIGH W/O CC/MCC
539 OSTEOMYELITIS W MCC
540 OSTEOMYELITIS W CC
541 OSTEOMYELITIS W/O CC/MCC

542 PATHOLOGICAL FRACTURES & MUSCULOSKELET & CONN TISS MALIG W MCC
543 PATHOLOGICAL FRACTURES & MUSCULOSKELET & CONN TISS MALIG W CC
544 PATHOLOGICAL FRACTURES & MUSCULOSKELET & CONN TISS MALIG W/O CC/MCC
545 CONNECTIVE TISSUE DISORDERS W MCC
546 CONNECTIVE TISSUE DISORDERS W CC
547 CONNECTIVE TISSUE DISORDERS W/O CC/MCC
548 SEPTIC ARTHRITIS W MCC
549 SEPTIC ARTHRITIS W CC
550 SEPTIC ARTHRITIS W/O CC/MCC
551 MEDICAL BACK PROBLEMS W MCC
552 MEDICAL BACK PROBLEMS W/O MCC
553 BONE DISEASES & ARTHROPATHIES W MCC
554 BONE DISEASES & ARTHROPATHIES W/O MCC
555 SIGNS & SYMPTOMS OF MUSCULOSKELETAL SYSTEM & CONN TISSUE W MCC
556 SIGNS & SYMPTOMS OF MUSCULOSKELETAL SYSTEM & CONN TISSUE W/O MCC
557 TENDONITIS, MYOSITIS & BURSITIS W MCC
558 TENDONITIS, MYOSITIS & BURSITIS W/O MCC
559 AFTERCARE, MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE W MCC
560 AFTERCARE, MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE W CC
561 AFTERCARE, MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE W/O CC/MCC
562 FX, SPRN, STRN & DISL EXCEPT FEMUR, HIP, PELVIS & THIGH W MCC
563 FX, SPRN, STRN & DISL EXCEPT FEMUR, HIP, PELVIS & THIGH W/O MCC
564 OTHER MUSCULOSKELETAL SYS & CONNECTIVE TISSUE DIAGNOSES W MCC
565 OTHER MUSCULOSKELETAL SYS & CONNECTIVE TISSUE DIAGNOSES W CC
566 OTHER MUSCULOSKELETAL SYS & CONNECTIVE TISSUE DIAGNOSES W/O CC/MCC
592 SKIN ULCERS W MCC
593 SKIN ULCERS W CC
594 SKIN ULCERS W/O CC/MCC
595 MAJOR SKIN DISORDERS W MCC
596 MAJOR SKIN DISORDERS W/O MCC
597 MALIGNANT BREAST DISORDERS W MCC
598 MALIGNANT BREAST DISORDERS W CC
599 MALIGNANT BREAST DISORDERS W/O CC/MCC
600 NON-MALIGNANT BREAST DISORDERS W CC/MCC
601 NON-MALIGNANT BREAST DISORDERS W/O CC/MCC
602 CELLULITIS W MCC
603 CELLULITIS W/O MCC
604 TRAUMA TO THE SKIN, SUBCUT TISS & BREAST W MCC
605 TRAUMA TO THE SKIN, SUBCUT TISS & BREAST W/O MCC
606 MINOR SKIN DISORDERS W MCC
607 MINOR SKIN DISORDERS W/O MCC
637 DIABETES W MCC
638 DIABETES W CC
639 DIABETES W/O CC/MCC
640 NUTRITIONAL & MISC METABOLIC DISORDERS W MCC
641 NUTRITIONAL & MISC METABOLIC DISORDERS W/O MCC
642 INBORN ERRORS OF METABOLISM
643 ENDOCRINE DISORDERS W MCC
644 ENDOCRINE DISORDERS W CC
645 ENDOCRINE DISORDERS W/O CC/MCC
682 RENAL FAILURE W MCC
683 RENAL FAILURE W CC
684 RENAL FAILURE W/O CC/MCC
685 ADMIT FOR RENAL DIALYSIS
686 KIDNEY & URINARY TRACT NEOPLASMS W MCC
687 KIDNEY & URINARY TRACT NEOPLASMS W CC
688 KIDNEY & URINARY TRACT NEOPLASMS W/O CC/MCC
689 KIDNEY & URINARY TRACT INFECTIONS W MCC
690 KIDNEY & URINARY TRACT INFECTIONS W/O MCC
691 URINARY STONES W ESW LITHOTRIPSY W CC/MCC
692 URINARY STONES W ESW LITHOTRIPSY W/O CC/MCC
693 URINARY STONES W/O ESW LITHOTRIPSY W MCC
694 URINARY STONES W/O ESW LITHOTRIPSY W/O MCC
695 KIDNEY & URINARY TRACT SIGNS & SYMPTOMS W MCC
696 KIDNEY & URINARY TRACT SIGNS & SYMPTOMS W/O MCC

697 URETHRAL STRICTURE
698 OTHER KIDNEY & URINARY TRACT DIAGNOSES W MCC
699 OTHER KIDNEY & URINARY TRACT DIAGNOSES W CC
700 OTHER KIDNEY & URINARY TRACT DIAGNOSES W/O CC/MCC
722 MALIGNANCY, MALE REPRODUCTIVE SYSTEM W MCC
723 MALIGNANCY, MALE REPRODUCTIVE SYSTEM W CC
724 MALIGNANCY, MALE REPRODUCTIVE SYSTEM W/O CC/MCC
725 BENIGN PROSTATIC HYPERTROPHY W MCC
726 BENIGN PROSTATIC HYPERTROPHY W/O MCC
727 INFLAMMATION OF THE MALE REPRODUCTIVE SYSTEM W MCC
728 INFLAMMATION OF THE MALE REPRODUCTIVE SYSTEM W/O MCC
729 OTHER MALE REPRODUCTIVE SYSTEM DIAGNOSES W CC/MCC
730 OTHER MALE REPRODUCTIVE SYSTEM DIAGNOSES W/O CC/MCC
754 MALIGNANCY, FEMALE REPRODUCTIVE SYSTEM W MCC
755 MALIGNANCY, FEMALE REPRODUCTIVE SYSTEM W CC
756 MALIGNANCY, FEMALE REPRODUCTIVE SYSTEM W/O CC/MCC
757 INFECTIONS, FEMALE REPRODUCTIVE SYSTEM W MCC
758 INFECTIONS, FEMALE REPRODUCTIVE SYSTEM W CC
759 INFECTIONS, FEMALE REPRODUCTIVE SYSTEM W/O CC/MCC
760 MENSTRUAL & OTHER FEMALE REPRODUCTIVE SYSTEM DISORDERS W CC/MCC
761 MENSTRUAL & OTHER FEMALE REPRODUCTIVE SYSTEM DISORDERS W/O CC/MCC
774 VAGINAL DELIVERY W COMPLICATING DIAGNOSES
775 VAGINAL DELIVERY W/O COMPLICATING DIAGNOSES
776 POSTPARTUM & POST ABORTION DIAGNOSES W/O O.R. PROCEDURE
777 ECTOPIC PREGNANCY
778 THREATENED ABORTION
779 ABORTION W/O D&C
780 FALSE LABOR
781 OTHER ANTEPARTUM DIAGNOSES W MEDICAL COMPLICATIONS
782 OTHER ANTEPARTUM DIAGNOSES W/O MEDICAL COMPLICATIONS
789 NEONATES, DIED OR TRANSFERRED TO ANOTHER ACUTE CARE FACILITY
790 EXTREME IMMATURITY OR RESPIRATORY DISTRESS SYNDROME, NEONATE
791 PREMATURITY W MAJOR PROBLEMS
792 PREMATURITY W/O MAJOR PROBLEMS
793 FULL TERM NEONATE W MAJOR PROBLEMS
794 NEONATE W OTHER SIGNIFICANT PROBLEMS
795 NORMAL NEWBORN
808 MAJOR HEMATOL/IMMUN DIAG EXC SICKLE CELL CRISIS & COAGUL W MCC
809 MAJOR HEMATOL/IMMUN DIAG EXC SICKLE CELL CRISIS & COAGUL W CC
810 MAJOR HEMATOL/IMMUN DIAG EXC SICKLE CELL CRISIS & COAGUL W/O CC/MCC
811 RED BLOOD CELL DISORDERS W MCC
812 RED BLOOD CELL DISORDERS W/O MCC
813 COAGULATION DISORDERS
814 RETICULOENDOTHELIAL & IMMUNITY DISORDERS W MCC
815 RETICULOENDOTHELIAL & IMMUNITY DISORDERS W CC
816 RETICULOENDOTHELIAL & IMMUNITY DISORDERS W/O CC/MCC
834 ACUTE LEUKEMIA W/O MAJOR O.R. PROCEDURE W MCC
835 ACUTE LEUKEMIA W/O MAJOR O.R. PROCEDURE W CC
836 ACUTE LEUKEMIA W/O MAJOR O.R. PROCEDURE W/O CC/MCC
837 CHEMO W ACUTE LEUKEMIA AS SDX OR W HIGH DOSE CHEMO AGENT W MCC
838 CHEMO W ACUTE LEUKEMIA AS SDX W CC OR HIGH DOSE CHEMO AGENT
839 CHEMO W ACUTE LEUKEMIA AS SDX W/O CC/MCC
840 LYMPHOMA & NON-ACUTE LEUKEMIA W MCC
841 LYMPHOMA & NON-ACUTE LEUKEMIA W CC
842 LYMPHOMA & NON-ACUTE LEUKEMIA W/O CC/MCC
843 OTHER MYELOPROLIF DIS OR POORLY DIFF NEOPL DIAG W MCC
844 OTHER MYELOPROLIF DIS OR POORLY DIFF NEOPL DIAG W CC
845 OTHER MYELOPROLIF DIS OR POORLY DIFF NEOPL DIAG W/O CC/MCC

846 CHEMOTHERAPY W/O ACUTE LEUKEMIA AS SECONDARY DIAGNOSIS W MCC
847 CHEMOTHERAPY W/O ACUTE LEUKEMIA AS SECONDARY DIAGNOSIS W CC
848 CHEMOTHERAPY W/O ACUTE LEUKEMIA AS SECONDARY DIAGNOSIS W/O CC/MCC
849 RADIOTHERAPY
862 POSTOPERATIVE & POST-TRAUMATIC INFECTIONS W MCC
863 POSTOPERATIVE & POST-TRAUMATIC INFECTIONS W/O MCC
864 FEVER OF UNKNOWN ORIGIN
865 VIRAL ILLNESS W MCC
866 VIRAL ILLNESS W/O MCC
867 OTHER INFECTIOUS & PARASITIC DISEASES DIAGNOSES W MCC
868 OTHER INFECTIOUS & PARASITIC DISEASES DIAGNOSES W CC
869 OTHER INFECTIOUS & PARASITIC DISEASES DIAGNOSES W/O CC/MCC
870 SEPTICEMIA W MV 96+ HOURS
871 SEPTICEMIA W/O MV 96+ HOURS W MCC
872 SEPTICEMIA W/O MV 96+ HOURS W/O MCC
880 ACUTE ADJUSTMENT REACTION & PSYCHOSOCIAL DYSFUNCTION
881 DEPRESSIVE NEUROSES
882 NEUROSES EXCEPT DEPRESSIVE
883 DISORDERS OF PERSONALITY & IMPULSE CONTROL
884 ORGANIC DISTURBANCES & MENTAL RETARDATION
885 PSYCHOSES
886 BEHAVIORAL & DEVELOPMENTAL DISORDERS
887 OTHER MENTAL DISORDER DIAGNOSES
894 ALCOHOL/DRUG ABUSE OR DEPENDENCE, LEFT AMA
895 ALCOHOL/DRUG ABUSE OR DEPENDENCE W REHABILITATION THERAPY
896 ALCOHOL/DRUG ABUSE OR DEPENDENCE W/O REHABILITATION THERAPY W MCC
897 ALCOHOL/DRUG ABUSE OR DEPENDENCE W/O REHABILITATION THERAPY W/O MCC
913 TRAUMATIC INJURY W MCC
914 TRAUMATIC INJURY W/O MCC
915 ALLERGIC REACTIONS W MCC
916 ALLERGIC REACTIONS W/O MCC
917 POISONING & TOXIC EFFECTS OF DRUGS W MCC
918 POISONING & TOXIC EFFECTS OF DRUGS W/O MCC
919 COMPLICATIONS OF TREATMENT W MCC
920 COMPLICATIONS OF TREATMENT W CC
921 COMPLICATIONS OF TREATMENT W/O CC/MCC
922 OTHER INJURY, POISONING & TOXIC EFFECT DIAG W MCC
923 OTHER INJURY, POISONING & TOXIC EFFECT DIAG W/O MCC
933 EXTENSIVE BURNS OR FULL THICKNESS BURNS W MV 96+ HRS W/O SKIN GRAFT
934 FULL THICKNESS BURN W/O SKIN GRFT OR INHAL INJ
935 NON-EXTENSIVE BURNS
945 REHABILITATION W CC/MCC
946 REHABILITATION W/O CC/MCC
947 SIGNS & SYMPTOMS W MCC
948 SIGNS & SYMPTOMS W/O MCC
949 AFTERCARE W CC/MCC
950 AFTERCARE W/O CC/MCC
951 OTHER FACTORS INFLUENCING HEALTH STATUS
963 OTHER MULTIPLE SIGNIFICANT TRAUMA W MCC
964 OTHER MULTIPLE SIGNIFICANT TRAUMA W CC
965 OTHER MULTIPLE SIGNIFICANT TRAUMA W/O CC/MCC
974 HIV W MAJOR RELATED CONDITION W MCC
975 HIV W MAJOR RELATED CONDITION W CC
976 HIV W MAJOR RELATED CONDITION W/O CC/MCC
977 HIV W OR W/O OTHER RELATED CONDITION

Appendix E. Surgical Discharges as of February 2009

52 SPINAL DISORDERS & INJURIES W CC/MCC
53 SPINAL DISORDERS & INJURIES W/O CC/MCC
54 NERVOUS SYSTEM NEOPLASMS W MCC
55 NERVOUS SYSTEM NEOPLASMS W/O MCC
56 DEGENERATIVE NERVOUS SYSTEM DISORDERS W MCC
57 DEGENERATIVE NERVOUS SYSTEM DISORDERS W/O MCC
58 MULTIPLE SCLEROSIS & CEREBELLAR ATAXIA W MCC
59 MULTIPLE SCLEROSIS & CEREBELLAR ATAXIA W CC
60 MULTIPLE SCLEROSIS & CEREBELLAR ATAXIA W/O CC/MCC
61 ACUTE ISCHEMIC STROKE W USE OF THROMBOLYTIC AGENT W MCC
62 ACUTE ISCHEMIC STROKE W USE OF THROMBOLYTIC AGENT W CC
63 ACUTE ISCHEMIC STROKE W USE OF THROMBOLYTIC AGENT W/O CC/MCC
064 INTRACRANIAL HEMORRHAGE OR CEREBRAL INFARCTION W MCC
65 INTRACRANIAL HEMORRHAGE OR CEREBRAL INFARCTION W CC
66 INTRACRANIAL HEMORRHAGE OR CEREBRAL INFARCTION W/O CC/MCC
067 NONSPECIFIC CVA & PRECEREBRAL OCCLUSION W/O INFARCT W MCC
68 NONSPECIFIC CVA & PRECEREBRAL OCCLUSION W/O INFARCT W/O MCC
69 TRANSIENT ISCHEMIA
70 NONSPECIFIC CEREBROVASCULAR DISORDERS W MCC
71 NONSPECIFIC CEREBROVASCULAR DISORDERS W CC
72 NONSPECIFIC CEREBROVASCULAR DISORDERS W/O CC/MCC
73 CRANIAL & PERIPHERAL NERVE DISORDERS W MCC
74 CRANIAL & PERIPHERAL NERVE DISORDERS W/O MCC
75 VIRAL MENINGITIS W CC/MCC
76 VIRAL MENINGITIS W/O CC/MCC
77 HYPERTENSIVE ENCEPHALOPATHY W MCC
78 HYPERTENSIVE ENCEPHALOPATHY W CC
79 HYPERTENSIVE ENCEPHALOPATHY W/O CC/MCC
80 NONTRAUMATIC STUPOR & COMA W MCC
81 NONTRAUMATIC STUPOR & COMA W/O MCC
82 TRAUMATIC STUPOR & COMA, COMA >1 HR W MCC
83 TRAUMATIC STUPOR & COMA, COMA >1 HR W CC
84 TRAUMATIC STUPOR & COMA, COMA >1 HR W/O CC/MCC
85 TRAUMATIC STUPOR & COMA, COMA <1 HR W MCC
86 TRAUMATIC STUPOR & COMA, COMA <1 HR W CC
87 TRAUMATIC STUPOR & COMA, COMA <1 HR W/O CC/MCC
88 CONCUSSION W MCC
89 CONCUSSION W CC
90 CONCUSSION W/O CC/MCC
91 OTHER DISORDERS OF NERVOUS SYSTEM W MCC
92 OTHER DISORDERS OF NERVOUS SYSTEM W CC
93 OTHER DISORDERS OF NERVOUS SYSTEM W/O CC/MCC
94 BACTERIAL & TUBERCULOUS INFECTIONS OF NERVOUS SYSTEM W MCC
095 BACTERIAL & TUBERCULOUS INFECTIONS OF NERVOUS SYSTEM W CC
096 BACTERIAL & TUBERCULOUS INFECTIONS OF NERVOUS SYSTEM W/O CC/MCC
97 NON-BACTERIAL INFECT OF NERVOUS SYS EXC VIRAL MENINGITIS W MCC
98 NON-BACTERIAL INFECT OF NERVOUS SYS EXC VIRAL MENINGITIS W CC
99 NON-BACTERIAL INFECT OF NERVOUS SYS EXC VIRAL MENINGITIS W/O CC/MCC
100 SEIZURES W MCC
101 SEIZURES W/O MCC
102 HEADACHES W MCC
103 HEADACHES W/O MCC
121 ACUTE MAJOR EYE INFECTIONS W CC/MCC
122 ACUTE MAJOR EYE INFECTIONS W/O CC/MCC
123 NEUROLOGICAL EYE DISORDERS
124 OTHER DISORDERS OF THE EYE W MCC
125 OTHER DISORDERS OF THE EYE W/O MCC

146 EAR, NOSE, MOUTH & THROAT MALIGNANCY W MCC
147 EAR, NOSE, MOUTH & THROAT MALIGNANCY W CC
148 EAR, NOSE, MOUTH & THROAT MALIGNANCY W/O CC/MCC
149 DYSEQUILIBRIUM
150 EPISTAXIS W MCC
151 EPISTAXIS W/O MCC
152 OTITIS MEDIA & URI W MCC
153 OTITIS MEDIA & URI W/O MCC
154 NASAL TRAUMA & DEFORMITY W MCC
155 NASAL TRAUMA & DEFORMITY W CC
156 NASAL TRAUMA & DEFORMITY W/O CC/MCC
157 DENTAL & ORAL DISEASES W MCC
158 DENTAL & ORAL DISEASES W CC
159 DENTAL & ORAL DISEASES W/O CC/MCC
175 PULMONARY EMBOLISM W MCC
176 PULMONARY EMBOLISM W/O MCC
177 RESPIRATORY INFECTIONS & INFLAMMATIONS W MCC
178 RESPIRATORY INFECTIONS & INFLAMMATIONS W CC
179 RESPIRATORY INFECTIONS & INFLAMMATIONS W/O CC/MCC
180 RESPIRATORY NEOPLASMS W MCC
181 RESPIRATORY NEOPLASMS W CC
182 RESPIRATORY NEOPLASMS W/O CC/MCC
183 MAJOR CHEST TRAUMA W MCC
184 MAJOR CHEST TRAUMA W CC
185 MAJOR CHEST TRAUMA W/O CC/MCC
186 PLEURAL EFFUSION W MCC
187 PLEURAL EFFUSION W CC
188 PLEURAL EFFUSION W/O CC/MCC
189 PULMONARY EDEMA & RESPIRATORY FAILURE
190 CHRONIC OBSTRUCTIVE PULMONARY DISEASE W MCC
191 CHRONIC OBSTRUCTIVE PULMONARY DISEASE W CC
192 CHRONIC OBSTRUCTIVE PULMONARY DISEASE W/O CC/MCC
193 SIMPLE PNEUMONIA & PLEURISY W MCC
194 SIMPLE PNEUMONIA & PLEURISY W CC
195 SIMPLE PNEUMONIA & PLEURISY W/O CC/MCC
196 INTERSTITIAL LUNG DISEASE W MCC
197 INTERSTITIAL LUNG DISEASE W CC
198 INTERSTITIAL LUNG DISEASE W/O CC/MCC
199 PNEUMOTHORAX W MCC
200 PNEUMOTHORAX W CC
201 PNEUMOTHORAX W/O CC/MCC
202 BRONCHITIS & ASTHMA W CC/MCC
203 BRONCHITIS & ASTHMA W/O CC/MCC
204 RESPIRATORY SIGNS & SYMPTOMS
205 OTHER RESPIRATORY SYSTEM DIAGNOSES W MCC
206 OTHER RESPIRATORY SYSTEM DIAGNOSES W/O MCC
207 RESPIRATORY SYSTEM DIAGNOSIS W VENTILATOR SUPPORT 96+ HOURS
208 RESPIRATORY SYSTEM DIAGNOSIS W VENTILATOR SUPPORT <96 HOURS
280 ACUTE MYOCARDIAL INFARCTION, DISCHARGED ALIVE W MCC
281 ACUTE MYOCARDIAL INFARCTION, DISCHARGED ALIVE W CC
282 ACUTE MYOCARDIA INFARCTION, DISCHARGED ALIVE W/O CC/MCC
283 ACUTE MYOCARDIAL INFARCTION, EXPIRED W MCC
284 ACUTE MYOCARDIAL INFARCTION, EXPIRED W CC
285 ACUTE MYOCARDIAL INFARCTION, EXPIRED W/O CC/MCC
286 CIRCULATORY DISORDERS EXCEPT AMI, W CARD CATH W MCC
287 CIRCULATORY DISORDERS EXCEPT AMI, W CARD CATH W/O MCC
288 ACUTE & SUBACUTE ENDOCARDITIS W MCC
289 ACUTE & SUBACUTE ENDOCARDITIS W CC
290 ACUTE & SUBACUTE ENDOCARDITIS W/O CC/MCC
291 HEART FAILURE & SHOCK W MCC
292 HEART FAILURE & SHOCK W CC
293 HEART FAILURE & SHOCK W/O CC/MCC
294 DEEP VEIN THROMBOPHLEBITIS W CC/MCC
295 DEEP VEIN THROMBOPHLEBITIS W/O CC/MCC
296 CARDIAC ARREST, UNEXPLAINED W MCC
297 CARDIAC ARREST, UNEXPLAINED W CC
298 CARDIAC ARREST, UNEXPLAINED W/O CC/MCC
299 PERIPHERAL VASCULAR DISORDERS W MCC
300 PERIPHERAL VASCULAR DISORDERS W CC
301 PERIPHERAL VASCULAR DISORDERS W/O CC/MCC
302 ATHEROSCLEROSIS W MCC
303 ATHEROSCLEROSIS W/O MCC

304 HYPERTENSION W MCC
305 HYPERTENSION W/O MCC
306 CARDIAC CONGENITAL & VALVULAR DISORDERS W MCC
307 CARDIAC CONGENITAL & VALVULAR DISORDERS W/O MCC
308 CARDIAC ARRHYTHMIA & CONDUCTION DISORDERS W MCC
309 CARDIAC ARRHYTHMIA & CONDUCTION DISORDERS W CC
310 CARDIAC ARRHYTHMIA & CONDUCTION DISORDERS W/O CC/MCC
311 ANGINA PECTORIS
312 SYNCOPE & COLLAPSE
313 CHEST PAIN
314 OTHER CIRCULATORY SYSTEM DIAGNOSES W MCC
315 OTHER CIRCULATORY SYSTEM DIAGNOSES W CC
316 OTHER CIRCULATORY SYSTEM DIAGNOSES W/O CC/MCC
368 MAJOR ESOPHAGEAL DISORDERS W MCC
369 MAJOR ESOPHAGEAL DISORDERS W CC
370 MAJOR ESOPHAGEAL DISORDERS W/O CC/MCC
371 MAJOR GASTROINTESTINAL DISORDERS & PERITONEAL INFECTIONS W MCC
372 MAJOR GASTROINTESTINAL DISORDERS & PERITONEAL INFECTIONS W CC
373 MAJOR GASTROINTESTINAL DISORDERS & PERITONEAL INFECTIONS W/O CC/MCC
374 DIGESTIVE MALIGNANCY W MCC
375 DIGESTIVE MALIGNANCY W CC
376 DIGESTIVE MALIGNANCY W/O CC/MCC
377 G.I. HEMORRHAGE W MCC
378 G.I. HEMORRHAGE W CC
379 G.I. HEMORRHAGE W/O CC/MCC
380 COMPLICATED PEPTIC ULCER W MCC
381 COMPLICATED PEPTIC ULCER W CC
382 COMPLICATED PEPTIC ULCER W/O CC/MCC
383 UNCOMPLICATED PEPTIC ULCER W MCC
384 UNCOMPLICATED PEPTIC ULCER W/O MCC
385 INFLAMMATORY BOWEL DISEASE W MCC
386 INFLAMMATORY BOWEL DISEASE W CC
387 INFLAMMATORY BOWEL DISEASE W/O CC/MCC
388 G.I. OBSTRUCTION W MCC
389 G.I. OBSTRUCTION W CC
390 G.I. OBSTRUCTION W/O CC/MCC
391 ESOPHAGITIS, GASTROENT & MISC DIGEST DISORDERS W MCC
392 ESOPHAGITIS, GASTROENT & MISC DIGEST DISORDERS W/O MCC
393 OTHER DIGESTIVE SYSTEM DIAGNOSES W MCC
394 OTHER DIGESTIVE SYSTEM DIAGNOSES W CC
395 OTHER DIGESTIVE SYSTEM DIAGNOSES W/O CC/MCC
432 CIRRHOSIS & ALCOHOLIC HEPATITIS W MCC
433 CIRRHOSIS & ALCOHOLIC HEPATITIS W CC
434 CIRRHOSIS & ALCOHOLIC HEPATITIS W/O CC/MCC
435 MALIGNANCY OF HEPATOBILIARY SYSTEM OR PANCREAS W MCC
436 MALIGNANCY OF HEPATOBILIARY SYSTEM OR PANCREAS W CC
437 MALIGNANCY OF HEPATOBILIARY SYSTEM OR PANCREAS W/O CC/MCC
438 DISORDERS OF PANCREAS EXCEPT MALIGNANCY W MCC
439 DISORDERS OF PANCREAS EXCEPT MALIGNANCY W CC
440 DISORDERS OF PANCREAS EXCEPT MALIGNANCY W/O CC/MCC
441 DISORDERS OF LIVER EXCEPT MALIG, CIRR, ALC HEPA W MCC
442 DISORDERS OF LIVER EXCEPT MALIG, CIRR, ALC HEPA W CC
443 DISORDERS OF LIVER EXCEPT MALIG, CIRR, ALC HEPA W/O CC/MCC
444 DISORDERS OF THE BILIARY TRACT W MCC
445 DISORDERS OF THE BILIARY TRACT W CC
446 DISORDERS OF THE BILIARY TRACT W/O CC/MCC
533 FRACTURES OF FEMUR W MCC
534 FRACTURES OF FEMUR W/O MCC
535 FRACTURES OF HIP & PELVIS W MCC
536 FRACTURES OF HIP & PELVIS W/O MCC
537 SPRAINS, STRAINS, & DISLOCATIONS OF HIP, PELVIS & THIGH W CC/MCC
538 SPRAINS, STRAINS, & DISLOCATIONS OF HIP, PELVIS & THIGH W/O CC/MCC
539 OSTEOMYELITIS W MCC
540 OSTEOMYELITIS W CC
541 OSTEOMYELITIS W/O CC/MCC

542 PATHOLOGICAL FRACTURES & MUSCULOSKELET & CONN TISS MALIG W MCC
543 PATHOLOGICAL FRACTURES & MUSCULOSKELET & CONN TISS MALIG W CC
544 PATHOLOGICAL FRACTURES & MUSCULOSKELET & CONN TISS MALIG W/O CC/MCC
545 CONNECTIVE TISSUE DISORDERS W MCC
546 CONNECTIVE TISSUE DISORDERS W CC
547 CONNECTIVE TISSUE DISORDERS W/O CC/MCC
548 SEPTIC ARTHRITIS W MCC
549 SEPTIC ARTHRITIS W CC
550 SEPTIC ARTHRITIS W/O CC/MCC
551 MEDICAL BACK PROBLEMS W MCC
552 MEDICAL BACK PROBLEMS W/O MCC
553 BONE DISEASES & ARTHROPATHIES W MCC
554 BONE DISEASES & ARTHROPATHIES W/O MCC
555 SIGNS & SYMPTOMS OF MUSCULOSKELETAL SYSTEM & CONN TISSUE W MCC
556 SIGNS & SYMPTOMS OF MUSCULOSKELETAL SYSTEM & CONN TISSUE W/O MCC
557 TENDONITIS, MYOSITIS & BURSITIS W MCC
558 TENDONITIS, MYOSITIS & BURSITIS W/O MCC
559 AFTERCARE, MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE W MCC
560 AFTERCARE, MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE W CC
561 AFTERCARE, MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE W/O CC/MCC
562 FX, SPRN, STRN & DISL EXCEPT FEMUR, HIP, PELVIS & THIGH W MCC
563 FX, SPRN, STRN & DISL EXCEPT FEMUR, HIP, PELVIS & THIGH W/O MCC
564 OTHER MUSCULOSKELETAL SYS & CONNECTIVE TISSUE DIAGNOSES W MCC
565 OTHER MUSCULOSKELETAL SYS & CONNECTIVE TISSUE DIAGNOSES W CC
566 OTHER MUSCULOSKELETAL SYS & CONNECTIVE TISSUE DIAGNOSES W/O CC/MCC
592 SKIN ULCERS W MCC
593 SKIN ULCERS W CC
594 SKIN ULCERS W/O CC/MCC
595 MAJOR SKIN DISORDERS W MCC
596 MAJOR SKIN DISORDERS W/O MCC
597 MALIGNANT BREAST DISORDERS W MCC
598 MALIGNANT BREAST DISORDERS W CC
599 MALIGNANT BREAST DISORDERS W/O CC/MCC
600 NON-MALIGNANT BREAST DISORDERS W CC/MCC
601 NON-MALIGNANT BREAST DISORDERS W/O CC/MCC
602 CELLULITIS W MCC
603 CELLULITIS W/O MCC
604 TRAUMA TO THE SKIN, SUBCUT TISS & BREAST W MCC
605 TRAUMA TO THE SKIN, SUBCUT TISS & BREAST W/O MCC
606 MINOR SKIN DISORDERS W MCC
607 MINOR SKIN DISORDERS W/O MCC
637 DIABETES W MCC
638 DIABETES W CC
639 DIABETES W/O CC/MCC
640 NUTRITIONAL & MISC METABOLIC DISORDERS W MCC
641 NUTRITIONAL & MISC METABOLIC DISORDERS W/O MCC
642 INBORN ERRORS OF METABOLISM
643 ENDOCRINE DISORDERS W MCC
644 ENDOCRINE DISORDERS W CC
645 ENDOCRINE DISORDERS W/O CC/MCC
682 RENAL FAILURE W MCC
683 RENAL FAILURE W CC
684 RENAL FAILURE W/O CC/MCC
685 ADMIT FOR RENAL DIALYSIS
686 KIDNEY & URINARY TRACT NEOPLASMS W MCC
687 KIDNEY & URINARY TRACT NEOPLASMS W CC
688 KIDNEY & URINARY TRACT NEOPLASMS W/O CC/MCC
689 KIDNEY & URINARY TRACT INFECTIONS W MCC
690 KIDNEY & URINARY TRACT INFECTIONS W/O MCC
691 URINARY STONES W ESW LITHOTRIPSY W CC/MCC
692 URINARY STONES W ESW LITHOTRIPSY W/O CC/MCC
693 URINARY STONES W/O ESW LITHOTRIPSY W MCC
694 URINARY STONES W/O ESW LITHOTRIPSY W/O MCC
695 KIDNEY & URINARY TRACT SIGNS & SYMPTOMS W MCC
696 KIDNEY & URINARY TRACT SIGNS & SYMPTOMS W/O MCC

697 URETHRAL STRICTURE
698 OTHER KIDNEY & URINARY TRACT DIAGNOSES W MCC
699 OTHER KIDNEY & URINARY TRACT DIAGNOSES W CC
700 OTHER KIDNEY & URINARY TRACT DIAGNOSES W/O CC/MCC
722 MALIGNANCY, MALE REPRODUCTIVE SYSTEM W MCC
723 MALIGNANCY, MALE REPRODUCTIVE SYSTEM W CC
724 MALIGNANCY, MALE REPRODUCTIVE SYSTEM W/O CC/MCC
725 BENIGN PROSTATIC HYPERTROPHY W MCC
726 BENIGN PROSTATIC HYPERTROPHY W/O MCC
727 INFLAMMATION OF THE MALE REPRODUCTIVE SYSTEM W MCC
728 INFLAMMATION OF THE MALE REPRODUCTIVE SYSTEM W/O MCC
729 OTHER MALE REPRODUCTIVE SYSTEM DIAGNOSES W CC/MCC
730 OTHER MALE REPRODUCTIVE SYSTEM DIAGNOSES W/O CC/MCC
754 MALIGNANCY, FEMALE REPRODUCTIVE SYSTEM W MCC
755 MALIGNANCY, FEMALE REPRODUCTIVE SYSTEM W CC
756 MALIGNANCY, FEMALE REPRODUCTIVE SYSTEM W/O CC/MCC
757 INFECTIONS, FEMALE REPRODUCTIVE SYSTEM W MCC
758INFECTIONS, FEMALE REPRODUCTIVE SYSTEM W CC
759 INFECTIONS, FEMALE REPRODUCTIVE SYSTEM W/O CC/MCC
760 MENSTRUAL & OTHER FEMALE REPRODUCTIVE SYSTEM DISORDERS W CC/MCC
761 MENSTRUAL & OTHER FEMALE REPRODUCTIVE SYSTEM DISORDERS W/O CC/MCC
774 VAGINAL DELIVERY W COMPLICATING DIAGNOSES
775 VAGINAL DELIVERY W/O COMPLICATING DIAGNOSES
776 POSTPARTUM & POST ABORTION DIAGNOSES W/O O.R. PROCEDURE
777 ECTOPIC PREGNANCY
778 THREATENED ABORTION
779 ABORTION W/O D&C
780 FALSE LABOR
781 OTHER ANTEPARTUM DIAGNOSES W MEDICAL COMPLICATIONS
782 OTHER ANTEPARTUM DIAGNOSES W/O MEDICAL COMPLICATIONS
789 NEONATES, DIED OR TRANSFERRED TO ANOTHER ACUTE CARE FACILITY
790 EXTREME IMMATURITY OR RESPIRATORY DISTRESS SYNDROME, NEONATE
791 PREMATURITY W MAJOR PROBLEMS
792 PREMATURITY W/O MAJOR PROBLEMS
793 FULL TERM NEONATE W MAJOR PROBLEMS
794 NEONATE W OTHER SIGNIFICANT PROBLEMS
795 NORMAL NEWBORN
808 MAJOR HEMATOL/IMMUN DIAG EXC SICKLE CELL CRISIS & COAGUL W MCC
809 MAJOR HEMATOL/IMMUN DIAG EXC SICKLE CELL CRISIS & COAGUL W CC
810 MAJOR HEMATOL/IMMUN DIAG EXC SICKLE CELL CRISIS & COAGUL W/O CC/MCC
811RED BLOOD CELL DISORDERS W MCC
812 RED BLOOD CELL DISORDERS W/O MCC
813 COAGULATION DISORDERS
814 RETICULOENDOTHELIAL & IMMUNITY DISORDERS W MCC
815 RETICULOENDOTHELIAL & IMMUNITY DISORDERS W CC
816 RETICULOENDOTHELIAL & IMMUNITY DISORDERS W/O CC/MCC
834 ACUTE LEUKEMIA W/O MAJOR O.R. PROCEDURE W MCC
835 ACUTE LEUKEMIA W/O MAJOR O.R. PROCEDURE W CC
836 ACUTE LEUKEMIA W/O MAJOR O.R. PROCEDURE W/O CC/MCC
837 CHEMO W ACUTE LEUKEMIA AS SDX OR W HIGH DOSE CHEMO AGENT W MCC
838 CHEMO W ACUTE LEUKEMIA AS SDX W CC OR HIGH DOSE CHEMO AGENT
839 CHEMO W ACUTE LEUKEMIA AS SDX W/O CC/MCC
840 LYMPHOMA & NON-ACUTE LEUKEMIA W MCC
841 LYMPHOMA & NON-ACUTE LEUKEMIA W CC
842 LYMPHOMA & NON-ACUTE LEUKEMIA W/O CC/MCC
843 OTHER MYELOPROLIF DIS OR POORLY DIFF NEOPL DIAG W MCC
844 OTHER MYELOPROLIF DIS OR POORLY DIFF NEOPL DIAG W CC
845 OTHER MYELOPROLIF DIS OR POORLY DIFF NEOPL DIAG W/O CC/MCC

846 CHEMOTHERAPY W/O ACUTE LEUKEMIA AS SECONDARY DIAGNOSIS W MCC
847 CHEMOTHERAPY W/O ACUTE LEUKEMIA AS SECONDARY DIAGNOSIS W CC
848 CHEMOTHERAPY W/O ACUTE LEUKEMIA AS SECONDARY DIAGNOSIS W/O CC/MCC
849 RADIOTHERAPY
862 POSTOPERATIVE & POST-TRAUMATIC INFECTIONS W MCC
863 POSTOPERATIVE & POST-TRAUMATIC INFECTIONS W/O MCC
864 FEVER OF UNKNOWN ORIGIN
865 VIRAL ILLNESS W MCC
866 VIRAL ILLNESS W/O MCC
867 OTHER INFECTIOUS & PARASITIC DISEASES DIAGNOSES W MCC
868 OTHER INFECTIOUS & PARASITIC DISEASES DIAGNOSES W CC
869 OTHER INFECTIOUS & PARASITIC DISEASES DIAGNOSES W/O CC/MCC
870 SEPTICEMIA W MV 96+ HOURS
871 SEPTICEMIA W/O MV 96+ HOURS W MCC
872 SEPTICEMIA W/O MV 96+ HOURS W/O MCC
880 ACUTE ADJUSTMENT REACTION & PSYCHOSOCIAL DYSFUNCTION
881 DEPRESSIVE NEUROSES
882 NEUROSES EXCEPT DEPRESSIVE
883 DISORDERS OF PERSONALITY & IMPULSE CONTROL
884 ORGANIC DISTURBANCES & MENTAL RETARDATION
885 PSYCHOSES
886 BEHAVIORAL & DEVELOPMENTAL DISORDERS
887 OTHER MENTAL DISORDER DIAGNOSES
894 ALCOHOL/DRUG ABUSE OR DEPENDENCE, LEFT AMA
895 ALCOHOL/DRUG ABUSE OR DEPENDENCE W REHABILITATION THERAPY
896 ALCOHOL/DRUG ABUSE OR DEPENDENCE W/O REHABILITATION THERAPY W MCC
897 ALCOHOL/DRUG ABUSE OR DEPENDENCE W/O REHABILITATION THERAPY W/O MCC
913 TRAUMATIC INJURY W MCC
914 TRAUMATIC INJURY W/O MCC
915 ALLERGIC REACTIONS W MCC
916 ALLERGIC REACTIONS W/O MCC
917 POISONING & TOXIC EFFECTS OF DRUGS W MCC
918 POISONING & TOXIC EFFECTS OF DRUGS W/O MCC
919 COMPLICATIONS OF TREATMENT W MCC
920 COMPLICATIONS OF TREATMENT W CC
921 COMPLICATIONS OF TREATMENT W/O CC/MCC
922 OTHER INJURY, POISONING & TOXIC EFFECT DIAG W MCC
923 OTHER INJURY, POISONING & TOXIC EFFECT DIAG W/O MCC
933 EXTENSIVE BURNS OR FULL THICKNESS BURNS W MV 96+ HRS W/O SKIN GRAFT
934 FULL THICKNESS BURN W/O SKIN GRFT OR INHAL INJ
935 NON-EXTENSIVE BURNS
945 REHABILITATION W CC/MCC
946 REHABILITATION W/O CC/MCC
947 SIGNS & SYMPTOMS W MCC
948 SIGNS & SYMPTOMS W/O MCC
949 AFTERCARE W CC/MCC
950 AFTERCARE W/O CC/MCC
951 OTHER FACTORS INFLUENCING HEALTH STATUS
963 OTHER MULTIPLE SIGNIFICANT TRAUMA W MCC
964 OTHER MULTIPLE SIGNIFICANT TRAUMA W CC
965 OTHER MULTIPLE SIGNIFICANT TRAUMA W/O CC/MCC
974 HIV W MAJOR RELATED CONDITION W MCC
975 HIV W MAJOR RELATED CONDITION W CC
976 HIV W MAJOR RELATED CONDITION W/O CC/MCC
977 HIV W OR W/O OTHER RELATED CONDITION

Appendix F. Operating Room Procedure Codes as of September 2012

Add code:

0221 INSERT/REPLACE EVD
0222 INTRCRAN VENT SHUNT/ANAS
1267 INSERT AQUEOUS DRAIN DEV
1753 PERC ATHER EXTRACRAN VSL
1754 PERC ATHER INTRACRAN VSL
1755 TRANSLUM COR ATHERECTOMY
1756 ATHER OTH NON-VOR VESSEL
3505 ENDOVAS REPL AORTC VALVE
3506 TRANSAPCL REP AORTC VALVE
3507 ENDOVAS REPL PULM VALVE
3508 TRNSAPCL REPL PULM VALVE
3509 ENDOVAS REPL UNS HRT VLV
3826 INSRT PRSR SNSR W/O LEAD
3977 TEMP ENDOVSC OCCLS VESSEL
3978 ENDOVAS IMPLN GRFT AORTA
4382 LAP VERTICAL GASTRECTOMY
6824 UTERINE ART EMB W COILS
6825 UTERINE ART EMB W/O COIL

Remove code:

0058 INS INTRA-ANSM PRES MNTR
0059 INTRAVASC MSMNT COR ART
0067 INTRAVAS MSMNT THORC ART
0068 INTRAVAS MSMT PERIPH ART
0069 INTRAVS MSMT VES NEC/NOS