

Release of AHRQ Quality Indicators™ Software for SAS QI v2020, July 2020

The Agency for Healthcare Research and Quality (AHRQ) announces the release of the AHRQ Quality Indicators (QI)™ software for SAS QI version v2020. This software applies to all four modules: Prevention Quality Indicators (PQI), Inpatient Quality Indicators (IQI), Patient Safety Indicators (PSI), and Pediatric Quality Indicators (PDI).

All of the relevant AHRQ QI software and documentation regarding v2020 can be found on the AHRQ QI Web site at <http://www.qualityindicators.ahrq.gov>.

The following sections summarize the major changes from Technical Specifications and QI Software v2019 ICD-10-CMS/PCS to v2020.

1.0 Fiscal Year 2020 Coding Updates

The AHRQ QI software v2020 reflects coding changes based on fiscal year 2020 coding updates to the *International Classification of Diseases, Tenth Revision, Clinical Modification/Procedure Coding System (ICD-10-CM/PCS)* through March 31, 2020. These coding changes impact all software modules. The AHRQ SAS QI v2020 software does not reflect coding updates effective April 1, 2020.

2.0 Specification Changes

The SAS QI v2020 software implements specification and programming changes that were developed through a detailed deliberation and assessment process with AHRQ personnel and other AHRQ stakeholders.

The fiscal year coding updates and specification changes were implemented across all modules and are detailed in the Log of Coding Updates and Revisions for each AHRQ QI module. These are available at the following web addresses:

- PQI: https://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V2020/ChangeLog_PQI_v2020.pdf
- IQI: https://www.qualityindicators.ahrq.gov/Downloads/Modules/IQI/V2020/ChangeLog_IQI_v2020.pdf
- PSI: https://www.qualityindicators.ahrq.gov/Downloads/Modules/PSI/V2020/ChangeLog_PSI_v2020.pdf
- PDI: https://www.qualityindicators.ahrq.gov/Downloads/Modules/PDI/V2020/ChangeLog_PDI_v2020.pdf

3.0 Population Files

The updated QI population file contains intercensal and postcensal estimates of county-level population by single-year age group, sex, race, and Hispanic origin covering the years 2000 through 2019 from the US Census Bureau. The population file uses Census estimates for single year age population to create AHRQ age bands. Please see the details around the population file methodology at:

https://www.qualityindicators.ahrq.gov/Downloads/Software/SAS/V2020/AHRQ_QI_v2020_ICD10_Population_File.pdf

4.0 Reporting Rates for Specific Measures

The AHRQ SAS QI v2020 software includes risk-adjustment, signal variance, reference population rates, and composite weights for PSI, IQI, PDI, and PQI modules using the 2017 HCUP state inpatient databases. The non-risk adjusted numerators, denominators, and observed rates are also reported.

In the IQI module of AHRQ SAS QI v2020, the All Patient Refined Diagnosis Related Groups (APR-DRGs) in the risk-adjustment models are based on the patient's admission diagnoses and using present on admission (POA) information.

In the PDI module of the AHRQ SAS QI v2020 Software, the Clinical Classifications Software Refined (CCSR) uses all-listed diagnoses and present on admission (POA) information on the patient's discharge record. The Clinical Classifications are used in the risk-adjustment models.

All PSI and PDI exclusions are now denominator exclusions. The small number of numerator-based exclusions in previous versions of the software are now denominator exclusions.

Users interested in calculating expected, risk-adjusted, smoothed, or composite values must have major diagnostic categories (MDCs) assigned for each discharge on their input file. MDCs are used in risk adjustment, and although the AHRQ SAS QI v2020 software includes a macro to calculate MDC, it does not account for assignments for pre-MDC DRGs or multiple trauma cases (MDC 24). Different versions of the Medicare Severity-Diagnostic Related Group (MS-DRG) grouper produce slightly different results with respect to certain high resource intensity MS-DRGs. Specifically, MS-DRGs 001-017 and 981-989 are classified as “pre-MDC” MS-DRGs, which means that they are associated with such high length of stay and/or cost that they supersede the usual assignment of MS-DRGs within body system or MDC categories. For records assigned to these MS-DRGs, some versions of the grouper software retain the MDC that would be assigned based on the principal diagnosis and procedure codes, whereas other versions of the grouper software overwrite the MDC assignment with a blank, missing, or nonnumeric value such as “PRE.” For those users who need to construct MDC, please view the documentation and software available here: <https://downloads.cms.gov/files/ms-drg-v37-0-r0-mce.zip>.

In the AHRQ SAS QI v2020, the user now has two options to calibrate smoothed rates and composite values using observed to expected ratio:

- Option 1: Set Calibration_OE_to_ref_pop to 1 in SAS QI control programs to calibrate using the 2017 HCUP reference population observed-to-expected (O-E) ratio. This is recommended and is therefore the default choice.
- Option 2: Set Calibration_OE_to_ref_pop to 0 in SAS QI control programs to calibrate to the O-E ratio of the user's input data. This option is provided to large health care systems or states who want to calibrate the predicted QI rates within the system. The caveat is that the interpretation of the rates may be different since the software would still use 2017 HCUP reference population rate as multiplier for risk adjustment rates.

For more details about the O-E ratio adjustment, please refer to the Empirical Methods document available here:

https://www.qualityindicators.ahrq.gov/Downloads/Resources/Publications/2020/Empirical_Methods_2020.pdf.

5.0 Retired Area-Level Indicators

No area-level indicators were retired in the AHRQ SAS QI v2020 software.

6.0 Retired Hospital-Level Indicators

No hospital-level indicators were retired in the AHRQ SAS QI v2020 software.

7.0 Enhancements and Fixes to Software Bugs Found in v2019

The AHRQ SAS QI v2020 software includes enhancements and issue resolution from the v2019 ICD-10-CM/PCS software. To learn more about changes made to the QI software, access the module-specific Log of Changes documents available here:

- PQI: https://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V2020/ChangeLog_PQI_v2020.pdf
- IQI: https://www.qualityindicators.ahrq.gov/Downloads/Modules/IQI/V2020/ChangeLog_IQI_v2020.pdf
- PSI: https://www.qualityindicators.ahrq.gov/Downloads/Modules/PSI/V2020/ChangeLog_PSI_v2020.pdf
- PDI: https://www.qualityindicators.ahrq.gov/Downloads/Modules/PDI/V2020/ChangeLog_PDI_v2020.pdf

For questions, please contact the QI Technical Support Team at qisupport@ahrq.hhs.gov or (301) 427-1949.