

March 30, 2012 – Release of AHRQ Quality Indicators Software for Windows and SAS Version 4.4

The Agency for Healthcare Research and Quality (AHRQ) announces the release of the AHRQ Quality Indicators (QI) software for Windows (WinQI) and SAS Version 4.4 for the Prevention Quality Indicators (PQI), Inpatient Quality Indicators (IQI), Patient Safety Indicators (PSI) and Pediatric Quality Indicators (PDI) modules.

All of the relevant AHRQ QI software and documentation regarding Version 4.4, such as technical specifications and SAS and WinQI software documentation, can be found on the AHRQ QI website at: <http://www.qualityindicators.ahrq.gov>

AHRQ QI software testing results regarding Version 4.4 can be found on the AHRQ QI website at: <http://www.qualityindicators.ahrq.gov/software/default.aspx>

Summary of Major Changes from Version 4.3 to 4.4

1. FY 2012 Coding Updates

The numerator, denominator and covariate specifications have been updated to incorporate the ICD-9-CM and DRG codes for FY2012 (effective October 1, 2011). See the “Log of Coding Updates and Revisions” document for each AHRQ QI module for specific changes to affected AHRQ QI (see each QI Resources page: <http://www.qualityindicators.ahrq.gov/modules/Default.aspx>).

2. Specification Changes

Minor SAS versus WinQI coding differences were corrected in the implementation of the technical specifications for PDI-01, PDI-02 and PSI-03. See the “Log of Coding Updates and Revisions” document for each AHRQ QI module for specific changes to affected AHRQ QI (see each QI Resources page: <http://www.qualityindicators.ahrq.gov/modules/Default.aspx>).

3. 3M™ APR DRG Limited License Grouper

Updated 3M™ APR DRGs from Version 28 to Version 29.

4. Population files, Comparative Data, and Risk Adjustment Coefficient tables

Updated data are used for population estimates (i.e., through 2012). The population data are used to calculate the denominator for the area-level QI. The comparative data tables have been updated using Version 4.4 of the software. Because the risk adjustment models and reference population have not changed for Version 4.4, the Risk Adjustment Coefficients remain as they were in Version 4.3.

5. Improved Installation Packages for SAS and WinQI

A new Prediction Module installation package has been provided for SAS which eliminates the need for the user to manually copy files. The Prediction Module has been directly included in the WinQI installation package, eliminating the need for two separate installations.

6. Improved SAS Area-Level Reporting

SAS v4.4 has changed the way area-level denominators and observed rates are reported in cases where a denominator adjustment is performed (i.e., cases where the census population for a particular (county, age, gender, race) combination is less than the observed QI numerator for that same (county, age, gender, race) combination. SAS now reports the adjusted denominator, and the observed rate is calculated with the adjusted denominator.

7. SAS and WinQI Functionality

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.

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.

The software now incorporates state level estimates of diabetes prevalence by age from the CDC National Diabetes Surveillance System, which impacts PDI 15 and PQI 1, 3, 14, and 16.

PDI 15 (Diabetes Short-term Complications Admission Rate) can be calculated using the number of diabetics in the state as the denominator, stratified by age.

Miscellaneous software related issues and minor coding errors have been corrected in the SAS software for the IQI-90 and IQI-91 provider composite QI.

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 (IQI-11, IQI-14, NQI-01 and PSI-08).

WinQI v4.3 was missing the PRPED5D code set and codes 7454 and 7455. This issue was fixed in v4.4 of WinQI and affects the PDI module only.

The WinQI v4.3 patient-level report showed incorrect POA exclusions in some cases. This issue was fixed in v4.4 of WinQI.

WinQI v4.3 did not properly implement a user selection of years later than 2009 during area report generation. Users were unable to select the year 2010 or 2011 to derive the denominator for area indicators. This issue, which affected all area-level QI, was fixed in v4.4 of WinQI.

WinQI v4.3 was not properly calculating quarterly rates when requested by the user. This issue was fixed in v4.4 of WinQI.

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 = $(2 * \text{ratio}) - \text{lower confidence bound}$.

SAS v4.3 did not properly handle stratifications where the user requested a two-way stratification that overlapped with a one-way stratification (e.g., Age-by-Gender at the same time as Age by itself). This issue was fixed in v4.4 of SAS.

For questions, please contact support@qualityindicators.ahrq.gov or (888) 512 – 6090.