

**AHRQ Quality Indicators Software for Windows and SAS Version 4.4 Webinar**  
**Wednesday, May 9, 2012**

**Frequently Asked Questions**

1) What version of the AHRQ Quality Indicators did CMS use for the patient safety public reports to be released in July 2012 through *Hospital Compare*?

In the forthcoming release of the *Hospital Compare* patient safety report, CMS is using Version 4.3 of the AHRQ Quality Indicators, whereas the measures that are currently posted on *Hospital Care* (<http://www.hospitalcompare.hhs.gov>) use Version 4.2. On *Quality Net* ([www.qualitynet.org](http://www.qualitynet.org)) CMS lists a number of documents that provide more information about the calculation of the measures that are used in Hospital Compare, including the AHRQ QIs.

2) Does Version 4.4 of the AHRQ QI differ from the Version 4.3A released on May 7, 2012?

In Version 4.4, we incorporated a version of the 3M™ APR-DRG limited license grouper that had a correction with the risk of mortality assignments, so we made that same correction to Version 4.3, and we called it Version 4.3A. Version 4.4 includes the FY2012 coding updates to ICD-9-CM and MS-DRG. Also, there was a change that deals with the calculation of area-level indicators in 2010 and 2011, as well as other various fixes.

3) If I import one set of data using the Windows software, is there a way to save it so I do not have to go through all of the wizard steps again? If I then import a second set of data, is it true that I lose all of that data from the first set and have to go through the import process again?

WinQI creates reports from the most recent dataset stored in the ‘qualityindicators’ database. The user can close WinQI and open it again without losing the data. The user can create reports from the most recent dataset without having to process the steps again. . On the Menu Bar select “export data”. Save the processed data in the QI format. You may import that data later without having to repeat the data load wizard.

4) What is the specific purpose of point of origin?

The point of origin replaced a data element that was previously known as admission source. One of the disadvantages of the admission source is it does not identify transfers—patients that transferred to a hospital from other institutional settings, like skilled nursing facilities. Those patients often differ in their characteristics and in their risk of an adverse outcome, so it was a characteristic we want to incorporate into our risk adjustment. Because of the way that hospitals coded admission source, it typically just identified people who entered through the emergency department as their entrance into the hospital. The main purpose of the point of origin is to allow us to identify transfers and the source of the institution from where the patient transfers.

5) Will the Windows software be certified to run on a 64-bit PCD and in Windows 7?

The Windows application is still a 32-bit application developed in the Windows XP environment. We have run the Windows software in 64-bit and Windows 7 environments, and have not documented any particular issues thus far. If you are running the Windows software in a 64-bit environment, it still emulates a 32-bit environment, so you are actually running it as a 32-bit application. We will document any issues we encounter in running the Windows application in Windows 7. However, in SAS the 3M™ APR-DRG limited license grouper does not execute in a 64-bit environment.

6) The Windows Quality Indicators do not have the subpopulation by payer type. Is it valid to use the stratified risk adjusted QI by payer type?

For the provider level measures you can use the software to stratify by payer type and calculate a observed-to-expected ratio by payer type. .

7) What is the recommended use of the composite weights provided in the SAS software for the Quality Indicators?

The software uses a set of weights, determined through the National Quality Forum (NQF) Consensus Development Process, to compute the provider-level composite indicators. The initial recommendation is for the user to use those weights. If the user wants to apply his/her own specific weights, the general recommendation is that for the PSI, the weights should reflect the relative prevalence of the numerator across the different indicators in the user's institution or the Reference Population. Thus, the user would look at the numerator for each one of the PSIs included in the composite, calculate a relative weight based on the sum of the numerator events, and use that as the provider-level weight. For the IQI, the recommendation is to use denominator weights, which reflect the relative size of the denominator for each one of the IQI measures that are included in the composite for both conditions and procedures.

8) Could you explain more about software being "backwards compatible" for prior years' data?

The software looks at the quarter and the year of the discharge date to identify the proper fiscal year coding to apply to that particular discharge, both for ICD-9 codes and for DRG codes. As the coding changes and the specifications are modified to incorporate those changes, the indicator logic takes that into account and applies the specification which applied during the date of that particular discharge. Coding changes often include the division of a code into sub-codes, and so the code that was divided is no longer valid as of a certain date; however, rather than remove that code from the software, we retain it. If the user applies software to data from the time when that code was valid, that code is still used in the specification. The reason we make the software backward compatible is so that users can always use the most current version of the software regardless of what data year to which they are applying the software.

9) I have run comparisons using identical data and parameters between Version 4.2 and Version 4.4 of the Quality Indicators. I am seeing large (40-100%) increases in outcomes for PQI-5 and PQI-10 and also large (50-90%) decreases in outcomes for PQI-15 and PQI-16. Can you comment on any definition changes that might have contributed to this?

There were fairly significant redefinitions for two of the PQIs: PQI-5 and PQI-15. PQI-5 relates to chronic obstructive pulmonary disease (COPD), and PQI-15 is related to asthma. We formed a clinical panel to review the specifications of all of the indicators, which we periodically do. One of the panel's recommendations was to modify the specifications for PQI-5 to include both COPD and asthma, but for older adults. The idea was that, from a clinical perspective, there is not a reason to discriminate between COPD and asthma in older adults. We used evidence-based information to identify the proper age limit, which is 40 years and older. The denominator was changed from 18 years to 40 years to limit the denominator to older adults and to expand the numerator to include both COPD and asthma. Conversely, we modified the specification for PQI-15—which is asthma in younger adults—to include only those who are between the ages of 18 and 40. The PQI-15 now only includes asthma in the numerator, since COPD is not a common condition for younger adults. We have made some modifications to the procedure codes that are used in identifying those that have amputations, which probably explain any rate change in PQI-16.

10) Do PQI only consider a patient with age equal and greater than 18 for both numerator and denominator calculations?

Generally, that is correct. For the area level measures, the PQI is typically 18 and above or with a specific focus on younger or older adults. Each technical specification details the age ranges. There are PDI versions for some of the area level measures for those under age 18.

11) Are the software and data available to the public?

Yes, the software is publicly available on the AHRQ Quality Indicator website (<http://qualityindicators.ahrq.gov>). Within the AHRQ QI program, we do not provide data. It is the expectation that the software will be applied to the user's own data, and the software documentation is publicly available.

12) What is the data element “present on admission (POA)” used for?

Present on admission is used for two things. One use is to identify secondary diagnosis codes that are numerator-defining diagnosis codes for the patient safety indicators (PSI) and for the pediatric patient safety indicators (PDI). These secondary diagnosis codes are not hospital acquired, but were present on admission. The POA data element is used to not flag those cases in the numerator of those indicators. The second use of the POA data element is for the covariates and the risk model. This is the opposite circumstance, where we want to incorporate the

conditions that were present on admission in the risk model, and we do not want to incorporate in things that were hospital acquired. We use the POA data element to make the distinction.

13) Is there an introductory type webinar for hospitals interested in implementing the SAS software (for PSI)?

AHRQ is currently in the planning stages for a series of webinars and workshops that will focus on various topics related to the Quality Indicators. We are thinking about doing an introductory webinar for hospitals. Stay tuned for more information about this series.

14) Some of the variables are required and some are optional. What functions do the optional variables serve?

There is identification of the optional variables in the data dictionary that is in the software documentation provided on the Quality Indicators Web site. The primary purpose of the optional data elements is to facilitate analysis. In particular, the optional data elements can help stratify the rates for particular types of patients—by race, for example. The optional data elements are not used in the calculation of the measures. They do not inform the numerator or the denominator or a covariate in the risk models, but they are beneficial for analysis, so they are incorporated in the software as optional elements. There are some data elements, like date of procedure, which are used to calculate some of the indicators, but there is an optional logic in case that data element is not available. The preference is to incorporate the data element, but because not all data systems have certain data elements, there is an optional logic.

15) How do the AHRQ Quality Indicators fit with National Quality Forum (NQF) alignment effort? Is NQF an exclusive harmonizer of the AHRQ measures?

As of June 2012 there are 45 AHRQ QI that have been endorsed through the NQF Consensus Development Process. During that process there are opportunities to harmonize the AHRQ QI technical specification with related and/or competing measures and we have done so on several occasions. However, we do not rely exclusively on the NQF process and routinely conduct literature reviews of similar measures and receive input from users that may result in the harmonization of an AHRQ QI with a measure from another developer.

16) Is there documented detail on the impact of the changes to the 3M™ APR-DRG limited license grouper?

For V4.3A there is no documented detail; however, in V4.3 almost all cases were assigned ROM=1.

17) Could you make code available in R or SPSS, in addition to SAS?

Currently, the software is available only as SAS code or as a standalone program for Windows. We are exploring software formats that would be accessible to the widest group of users possible, while maintaining the consistency and integrity of the AHRQ QI software.

18) Where is the documentation for the coding changes that Jeff discussed?

The log of coding updates and revisions for each QI module can be obtained from the resources pages on the QI website ([PQI](#), [IQI](#), [PSI](#), [PDI](#)).

19) Are there any differences between the Windows and SAS applications of the Quality Indicators in terms of functionality or flexibility?

WinQI has some useful additional functionality that is not present in SAS, such as a patient-level discharge report and the ability to detect errors in the user's input dataset. WinQI navigates the user step-by-step through the processes of importing data and creating reports, which beginning users may find helpful. SAS can be more flexible because an advanced SAS programmer can customize the software, including importing data, computing the AHRQ QIs, and reporting the output.

20) How should smaller hospitals with stretched budgets use these tools to show favorably on Hospital Compare, if they are performing well according to quality measures?

The main advantage of the AHRQ QI software with respect to Hospital Compare is that you may apply the software to calculate the case-mix adjusted rates and composites on your own data as soon as the data are available (e.g., monthly or quarterly). You may stratify your results by payer (i.e., Medicare and other) and compare your current performance to the performance reported for your organization and "peer" organizations on Hospital Compare to identify opportunities of improvement. The software calculates "reliability-adjusted" or "smoothed" rates which are especially useful for small hospitals because it means that any differences in performance are more likely to be statistically meaningful. Similarly, the rates from the software may be used to determine whether any interventions are having an impact of performance. Many organizations have used monthly data from the software to generate statistical process control charts to track performance over time for this type of analysis.

21) After Version 4.4, will there be another version of the AHRQ Quality Indicators released this year?

No, there won't be another version released this year. Each year we incorporate the Fiscal Year coding changes into the AHRQ Quality Indicators software and release the most updated version, usually by the end of Spring. We compare rates for indicators from year to year and look for unexpected percentage changes, and update the indicators to conform to yearly changes in ICD-9-CM diagnosis codes and procedure codes,. Our indicators are reviewed carefully for validity and many have been endorsed by the National Quality Forum (NQF); they are very complex and

depend on detailed diagnosis and procedure coding. When new codes are added or revised, our priority is on balance of specificity and sensitivity.

22) Does AHRQ have plans to provide a document similar to the one released a couple years ago that placed individual Quality Indicators into tiers categorizing the QI by their suitability for public reporting purposes?

AHRQ plans to update this document, but a timeline for doing so has not been established.