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AHRQuality Indicators e-Newsletter

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The AHRQ Quality Indicators in 2007

This newsletter is intended to inform users of the AHRQ Quality Indicators (AHRQ QI) about activities planned for 2007 and anticipated changes to the AHRQ QI software and documentation upcoming in Version 3.1.

Selected Activities in 2007

National Quality Forum

Thirty-nine (39) AHRQ QI have been submitted to the National Quality Forum Consensus Development Process. Thirty-three (33) of the indicators were submitted together under the National Voluntary Consensus Standards for Hospital Care:
Additional Priorities, 2006-2007 call for measures, including 12 IQI, 10 PSI and 11 PedQI. Six other indicators were submitted under separate processes.

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Workgroup on 30-Day Mortality

The Workgroup on 30-Day Mortality consists of several HCUP partner states, and will address the usefulness of all-payer in-hospital mortality measures relative to 30-day mortality measures based on Medicare. Specifically, the workgroup analysis will:

- Apply hierarchical modeling methods for both the in-hospital and 30-day mortality measure to account for the clustering of patients within a hospital
- Provide information on the association between in-hospital and 30-day measures of mortality for selected procedures and conditions
- Provide information on the association between mortality measures based on Medicare and all-payer populations
- Provide estimates of the incremental benefit of using 30-day mortality and all-payer data for quality improvement and comparative reporting.

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Software and Documentation (Release 3.1)

All Modules

FY2007 Coding Updates

The FY2007 release (Version 3.1) is scheduled for late February, 2007 and will update the ICD-9-CM and DRG codes to Fiscal Year 2007 (effective October 1, 2006) for the PQI, IQI, PSI and PedQI modules.

Risk Adjustment

The FY2007 release will include enhancements to the functionality of the risk-adjustment syntax. Users will be able to save the discharge level file of predicted values based on the risk-adjustment model. As a result, users will be able to compute observed-to-expected ratios for any combination of discharges. In addition, the syntax will compute risk-adjusted rates for the pre-defined set of stratification variables (e.g., age, gender, payer, race), and will provide an option for using weighted data (i.e., discharge weights like those used in the NIS).

Hierarchical Modeling

The Risk Adjustment and Hierarchical Modeling (RAHM) Workgroup recommended that AHRQ adopt a hierarchical modeling approach with the AHRQ QI. As a result, in the FY2007 release the parameter file of risk adjustment covariates will be computed using a hospital random-effect instead of the existing simple logistic model. Because the covariates are computed on such a large dataset with thousands of hospitals and millions of patients, the adoption of the hierarchical model will be relatively transparent to current users of the indicators. In other words, the hierarchical model does not change the values of the coefficients very much. The syntax will include the same univariate shrinkage estimator that we use currently. For more information on the

work of the RAHM workgroup, see the draft report at (http://www.qualityindicators.ahrq.gov/listserv_archive_2006.htm#Oct13).

Composite Measures

The Composite Measures (CM) Workgroup recommended that AHRQ adopt a "composite of composites" method for computing composite measures. Composite measures have been developed for the IQI, PSI, and PedQI. For more information on the work of the CM workgroup, see the draft report at (http://www.qualityindicators.ahrq.gov/listserv_archive_2006.htm#Oct13).

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Prevention Quality Indicators

The PQI measure hospitalizations that might be prevented with improved access to high quality ambulatory care; conceptually, the PQI ought to be adjusted for factors outside the control of the health system that affect access or patient outcomes. These factors might include the prevalence of a chronic disease, such as asthma or diabetes, or socioeconomic characteristics that limit access to health care. Other factors might include insurance status and physician and/or hospital supply; but there is a long list of potential factors. For the AHRQ QI, we use county-level data from the U.S. Census as our measure of demographics, percent of persons living below poverty level as our measure of SES (based on some research at the Harvard School of Public Health), and CDC data on the percent of persons self-reporting various conditions as our measure of disease prevalence. However, there are some circumstances where one might not want to adjust for SES or disease prevalence (if, for example, one wanted to use the PQI to study the impact of poverty on health care utilization.) Therefore, the next release of the software will allow users to select whether or not adjustment for SES and/or disease prevalence should be applied.

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Inpatient Quality Indicators

3M APR-DRG Grouper

The limited license 3M APR-DRG grouper that comes with the AHRQ QI software will be updated to Fiscal Year 2007 codes. Beginning with Version 23 (FY2006), 3M will update the APR-DRG every fiscal year; therefore the limited license 3M APR-DRG grouper will be "multi-version" (i.e., Version 20, 23 and 24). The software will apply the correct version based on the discharge year and quarter. Users who have their own

APR-DRG grouper can use either the applicable DRG version or the ICD-9-CM mapping to Version 20.

IQI Composite Measures

The IQI module will include two composites: *Mortality for Selected Proced*ures and *Mortality for Selected Conditions*.

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Patient Safety Indicators/Pediatric Quality Indicators

Present on Admission

Effective March 1, 2007 the UB-04 data specification manual will include a Present on Admission indicator (http://www.nubc.org/public/whatsnew/POA.pdf). The FY2007 release of the AHRQ QI will include an option to incorporate the present on admission indicator into the specifications of the Patient Safety Indicators (PSI) and the Pediatric Quality Indicators (PedQI). In general, cases where the outcome of interest is present on admission will be excluded from the denominator, as these cases are no longer at risk of having the outcome of interest occur during the hospitalization. The release will also include alternative parameter files of risk-adjustment covariates and population rates using 2002-2004 SID data from California and New York. As additional states collect the POA indicator and provide the data to the HCUP program, the reference population will be updated in future AHRQ QI releases to include these states. Users will still be able to compute observed and risk-adjusted PSI and PedQI rates without the POA flag.

Postoperative Hemorrhage and Hematoma

The specification for the Postoperative Hemorrhage and Hematoma indicator will be revised to flag additional discharges with 1) a diagnosis code postoperative hemorrhage in any secondary diagnosis field and a procedure code for drainage of hematoma in any procedure code field; and 2) a diagnosis code postoperative hematoma in any secondary diagnosis field and a procedure code for control of hemorrhage in any procedure code field. The change is based on work by Shufelt and colleagues that found improved sensitivity without significant loss of specificity with the above revision (see Shufelt JL, Hannan EL, Gallagher BK. The postoperative hemorrhage and hematoma patient safety indicator and its risk factors. *Am J Med Qual*. 2005 Jul-Aug;20(4):210-8).

PSI Composite Measure

The PSI will include one composite: *Patient Safety for Selected*

Indicators.

PedQI Composite Measure

The PedQI will also include one composite: *Pediatric Patient Safety for Selected Indicators*.

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