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EQR PROTOCOL 6 CALCULATION OF PERFORMANCE MEASURES

A Voluntary Protocol for External Quality Review (EQR)

Protocol 1: Assessment of Compliance with Medicaid Managed Care Regulations
Protocol 2: Validation of Measures Reported by the MCO
Protocol 3: Validation of Performance Improvement Projects (PIPs)
Protocol 4: Validation of Encounter Data Reported by the MCO
Protocol 5: Validation and Implementation of Surveys
Protocol 6: Calculation of Performance Measures
Protocol 7: Implementation of Performance Improvement Projects (PIPs)
Protocol 8: Focused Studies
Appendix V: Information Systems Capabilities Assessment (ISCA)

Department of Health and Human Services (HHS)
Centers for Medicare & Medicaid Services (CMS)

Protocol 6
Version 2.0

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Attachments
Attachment A: Performance Measure Calculation Tables

PURPOSE AND OVERVIEW OF THE PROTOCOL

This voluntary protocol is used to calculate performance measures for MCOs on dimensions specified by the State. States use performance measures to monitor the performance of MCO's over time, to compare the performance of different MCOs, and to inform the selection and evaluation of quality improvement activities. Recently, the Centers for Medicare and Medicaid (CMS) identified a core set of pediatric and adult measures to use in Medicaid and CHIP by the Children's Health Insurance Program Reauthorization Act of 2009, (CHIPRA) and the Affordable Care Act of 2010. These measures are for voluntary use by State agencies; however, CMS encourages States to adopt and use the core set to work toward nationally standardized reporting. Many of these measures are part of the HEDIS®[1] data set, and have readily available national and regional benchmarks. In 2009, half of the 20.5 million Medicaid enrollees in full-risk traditional MCOs were in NCQA accredited plans that already collect HEDIS® data.[2]

This protocol specifies how the EQRO is to:

- Calculate measures of MCO performance in accordance with State technical specifications; and
- Report to the State the MCO's performance compared to State-established benchmarks or performance standards.

Protocol 6 consists of three activities: preparation, measure calculation, and reporting. For each phase, the protocol specifies outcomes or objectives and lists the activities to be performed. Methods of performance are suggested and examples are provided throughout the protocol.

ACTIVITY 1: PREPARE FOR MEASUREMENT

The EQRO will:

- Review State performance measure requirements;
- Prepare for data collection; and
- Review MCO's Information System Capabilities Assessment (ISCA).

Step 1: Review State Performance Measure Requirements

The State provides the EQRO with a list of performance measures to be calculated along with technical specifications for their calculation. The EQRO must understand the State's specifications (e.g., sampling guidelines, instructions for calculating numerators and denominators) for each performance measure, as well as the State's requirements for benchmarking, analysis, and reporting.

The EQRO must also understand the State's requirements for the timing and format of the performance measure report. The EQRO should create a "List of Performance Measures to be Calculated" (see an example in Attachment A, Table 1) to document the measures required by the State and the reporting frequency and timeline for each measure.

1 HEDIS® is a registered trademark of the National Committee for Quality Assurance (NCQA).
[2] NCQA's Medicaid Deeming Toolkit available at www.ncqa.org

For each performance measures listed in Table 1, the EQRO should construct a companion performance measurement worksheet (see an example in Attachment A, Table 2) that contains the technical specifications for the measure, benchmarks, performance standards, or any other information needed to analyze the performance measure according to the State's requirements. The EQRO may need clarification from the State to specify measures if the State is not using standardized performance measures or the CMS recommended performance measures. The EQRO should use this worksheet to document any additional information needed for analysis, such as benchmarks or percentiles (and their source), prior year performance, or State averages.

Step 2: Prepare for Data Collection

The EQRO should send an introductory communication to the MCO outlining the purpose, process, and timeline for its performance measure calculation activities. In addition, the EQRO should request a contact within the MCO to schedule activities and provide requested documents and other information. If data will be collected from other sources such as State public health registries, an all-hospital discharge database, or behavioral service vendor under contract to the State, the EQRO should establish contact with the organizations responsible for these data sources.

The EQRO should inform the MCO that it may be necessary to interview MCO or vendor staff with expertise or responsibility for data collection or performance measurement. Insights of such staff might improve the EQRO's ability to collect and integrate the information necessary for calculating performance measures.

In addition, the EQRO will provide to the MCO:

- A list and description of the State-required performance measures it plans to calculate (the EQRO should send the MCO a copy of Table 1 in Attachment A);
- A list of documents that the EQRO will need to review; and
- A list of information the EQRO may need about the MCO's structure and capacity to supply the data needed to calculate the performance measures.

The information provided by the MCO should inform the EQRO of the location of the required data, which organization (State, EQRO or MCO) will need to collect and integrate specific data elements, and how to access the data. (See Protocol 2, Attachment A for a comprehensive list of documents.)

Step 3: Review MCO's Information System Capability Assessment (ISCA)

The EQRO must review or conduct an ISCA (Appendix V) to:

- Understand data sources, flows, and integration processes used by the MCO;
- Identify where the EQRO must work with outside data sources to obtain missing data; and
- Determine which data elements are integrated by the MCO and which data elements that the EQRO must integrate in order to calculate the required performance measures.

The EQRO should prepare a master worksheet identifying the data elements required for each performance measure (see Table 3 in Attachment A). Further, the EQRO should prepare a worksheet (see Table 4 in Attachment A) for each data element identified in Table 3 in Attachment A, identifying available data sources and noting any completeness or integration issues for each data element relevant to the denominator and numerator of the measure. Available data sources include sources internal to the MCO, such as claims or membership data, which may be available in a data repository. Data sources may also include sources external to the MCO, such as a State registry, provider medical record, MCO vendor or State vendor. The EQRO may identify data capture or integration issues within the MCO, such as an inability to capture individual prenatal care services in parts of the network that the MCO pays using a global fee, or the EQRO may identify issues external to the MCO. For example, the EQRO may have difficulty accessing confidential information about mental health services that the State contracts with another organization to manage, or the data in a voluntary State registry may be incomplete, or it may face challenges in linking birth records with beneficiaries due to use of different identifiers.

ACTIVITY 2: CALCULATE MEASURES

The EQRO will:

- Collect performance measure data;
- Clean data;
- Integrate data into repository;
- Conduct preliminary analyses; and
- Calculate denominators, numerators and performance measure rates.

Step 1: Collect Performance Measure Data

The EQRO must obtain the data needed to calculate the performance measures. For each data source, the EQRO should:

- List the data required;
- Specify how the data are to be selected; and
- Specify how the data are to be transmitted to the EQRO, with appropriate privacy and security safeguards.

The EQRO can facilitate consistency by providing an electronic data shell or file format, or a file structure, such as in Table 5 of Attachment A, along with definitions of all data fields. The EQRO should construct file formats that are customized to each data supplier. The file format for the MCO or State encounter data repository will likely include all data elements that originate from claims/encounter, eligibility and provider transaction systems. A file format used to obtain vital records or immunization data from a public health department would contain different data fields that are relevant to the information required from those data sources. Additional relevant resources, targeted to development of all-payer claims databases, are available from the All-Payers Claim Database (APCD) Council Web site at http://www.apcdcouncil.org/.

The EQRO may need to conduct medical record review to obtain necessary data. If the EQRO conducts such a medical record abstraction, it should develop the following supports:

- Abstraction tools;
- Training for personnel conducting the medical record abstraction;
- Quality assurance procedures to assess the accuracy and reliability of the medical record abstraction; and
- Electronic data entry edits for abstracted medical record information.

If the MCO or other entity is performing medical record review and supplying those data to the EQRO, the EQRO should refer to Protocol 2 to validate the abstracted medical record information.

Step 2: Clean Data

The EQRO should clean all data by submitting it to electronic edits. As the EQRO receives data, it should evaluate parity from each incoming data stream to ensure that the number of bits received is equal to the number sent. When entering the data into its repository, the EQRO should screen it to ensure accuracy. Some edits the EQRO can use include the following:

- Valid procedure codes (e.g., current code, required number of digits);
- Valid diagnosis codes;
- Valid diagnosis and procedure codes for the situation (e.g., the member's age or gender, practitioner's specialty);
- Correct field size and type (e.g., alpha, numeric, date, etc.);
- Valid date ranges (e.g., "to" date is later than "from" date; dates occur during the appropriate time-frame for the measure);
- Valid practitioners; and
- Valid members.

When data fail an edit, the EQRO should contact the supplier and request the data be corrected and re-submitted. The EQRO should document the nature and extent of failures, including information about whether it received corrected information. This documentation is necessary for the EQRO to understand the accuracy and completeness of the data underlying the performance measures it will calculate.

Data that pass the edit should be integrated in the EQRO's performance measure repository (see Step 3).

Step 3: Integrate Data into Repository

The EQRO will likely receive data from multiple MCOs, multiple sources within each MCO, and from other organizations, such as statewide registry or other State contractors that are responsible for delivering specific services like prescription drugs or mental health services. To calculate performance measures, the data must be integrated so that all services provided to a specific member can be associated with that member. The ISCA, reviewed in Activity 1, Step 3, will provide information about the adequacy of data integration at the MCO. However, the EQRO may need to evaluate data integration by other data suppliers, such as the State's encounter data repository or other vendors. The EQRO will need to integrate data from these and other sources to calculate performance measures.

The EQRO must ensure that the appropriate data, including linked data from separate data sets, are used to identify the entire eligible population for inclusion in the denominator and to identify qualifying medical events (e.g., diagnoses, procedures, and prescriptions) for inclusion in the numerator of the performance measure. The "appropriate data" for each measure is documented in the completed Table 3 of Attachment A, which lists each data element required for each of the performance measures to be calculated.

During this step, the EQRO will assess the data integration of each non-MCO data supplier. This may include administering relevant portions of the ISCA to these other suppliers. The EQRO must determine which portions of the ISCA are relevant depending on the specific data elements the supplier provides and the degree of data integration the supplier must perform. The assessment includes assessing the reliability of data transmissions within and from each data supplier. The EQRO may have different degrees of access to these data suppliers and must work with them to the degree possible, to understand the data flows and procedures used to ensure data integrity. For each data supplier, the EQRO may need to:

a. Examine the details of the data supplier's processes to accurately and completely transfer data from the transaction files (i.e., membership, provider, encounter/claims) into its data repository, if any;
b. Examine samples of data to assess completeness and accuracy;
c. Investigate the data supplier's processes to consolidate diversified files, and to extract required information from its data repository;
d. Compare actual results of file consolidations or extracts to those that should have resulted according to documented algorithms or specifications;
e. Review procedures for consolidating data from vendors in ways that ensure the accurate, timely, and complete integration of the data;
f. Review computer program reports or documentation that reflect these vendor coordination activities, and spot check to verify that no data necessary to performance measure reporting are lost or inappropriately modified during transfer;
g. Assess the extent to which proper linkage mechanisms have been employed to join data from all necessary sources (e.g., identifying a member with a given disease/condition); and
h. If the data supplier uses one, evaluate the structure and format of the data repository, and examine program flow charts and source code to assess the accuracy of the process used to extract data for transmission to the EQRO.

To ensure proper data integration within its own data repository, the EQRO must undertake the following activities:

a. Write program logic or source code for each measure that identifies, tracks, and links member enrollment within and across product lines (e.g., Medicaid, CHIP), by age and gender, as well as through possible periods of enrollment and disenrollment, in order to appropriately comply with the specifications of each performance measure. Conduct tests of data to assess completeness, integration and integrity, and to ensure there is no double-counting of services reported through different data systems or suppliers.
b. Assure that all members who were eligible to receive the specified services were included in the initial population from which the final denominator was produced. This eligible population will include both members who received the services, as well as those who did not. This same activity applies to provider groups or other relevant populations identified in the specifications of each performance measure.

Step 4: Conduct Preliminary Analysis

The EQRO will analyze the data in its repository in order to assess its completeness and accuracy, and reasonableness, and work with the MCO and other data suppliers until the data are satisfactory. Referring to the ISCA conducted for the MCO and other data suppliers, the EQRO will have identified areas of potential weakness. These should be considered in conducting analyses of missing data, data quality, and supplier data issues.

General Magnitude and Types of Missing Data
The EQRO will analyze its repository for evidence of missing data. The EQRO should compare its data with data from the State, from prior years, and from similar populations, to determine completeness. Based on findings from the ISCA, the EQRO may pursue specific concerns such as missing beneficiaries, missing providers, provider locations or provider types, missing services or service types. Knowledge of the data suppliers' contractual relationships with providers from the ISCA, as well as knowledge of the expected magnitude of reporting will help identify specific areas to investigate for missing data. The EQRO will be aware of instances when the MCO was unable to submit data, when submitted data failed edits, and when data was not resubmitted.

Overall Data Quality Issues
The EQRO should analyze the data it has received to identify data quality problems such as inability to process or retain certain fields. Some MCOs may lack the capacity to capture or maintain all the data elements that are required for submission, such as secondary diagnosis or procedure codes or some coding specificity.

Supplier Data Issues
Using the edit checks from Activity 2, Step 2, the EQRO should identify problems in how data suppliers compiled and submitted their data to the EQRO.

Step 5: Calculate the Denominators, Numerators, and Performance Measure Rates

Following the specifications provided by the State, the EQRO calculates performance measures from its data repository. To do this, the EQRO must purchase or write and test source code to properly apply all specifications to identify the denominator population. The EQRO must apply specified continuous enrollment criteria and exclusions from the denominator.

Once the EQRO has identified all eligible beneficiaries in the denominator for a measure, it must apply the specifications to identify cases that qualify for inclusion in the numerator. Where sampling is required such as for medical record review, the EQRO must follow the specifications for selecting an appropriate sample. The EQRO should follow the medical record review process outlined in Activity 2, Step 1 regardless of when in the measure calculation process the medical record review takes place.

ACTIVITY 3: REPORT RESULTS

The EQRO will:

- Report preliminary performance measurement rates to the MCOs;
- Analyze the data, using prescribed benchmarks and performance standards; and
- Submit a final report to the State.

Step 1: Report Preliminary Performance Measurement Rates to MCOs

Once the EQRO has calculated the MCO's performance measures, the EQRO summarizes its preliminary findings in a report to the MCO for review and comment. The report should include, at a minimum, the following elements for each performance measure: denominator; sample size (if relevant); administrative numerator events (if relevant); medical record numerator event (if relevant); and calculated rate. The report may also include analysis of performance in relation to the State's required benchmarks, prior year performance, or other reference sources to enable the MCO to understand its result. The EQRO should invite the MCO to offer comments and documentation to support correction of any factual errors or to clarify or explain any issues or findings identified in the EQRO report. The EQRO should provide a reasonable period of time for the MCO to return its comments.

Once the EQRO has received the MCO's comments, it should recalculate measures and revise its findings where appropriate.

Step 2: Analyze Data Using Prescribed Benchmarks and Performance Standards

Using the final, corrected information following incorporation of MCO comments, the EQRO should conduct all analyses required by the State, as documented in Table 2. The EQRO should conduct and review all comparative analyses, and present them, either in a format prescribed by the State, or if the State has not prescribed a format, in a way that facilitates the State's intended use of the performance measures. Examples of formats include bar charts or box plots, to compare one MCO to another and to an average or benchmark, or individual reports that present a single MCO's performance over time.

Step 3: Submit a Final Report to the State

The EQRO will submit its findings to the State in a final report format specified by the State. The content of the final report will depend on the State's requirements but is likely to include the following elements:

- A summary of the EQR activities, including documentation of the activities performed;
- Work papers and detailed results of key steps of the measure calculation process, MCO-specific performance measure rates, and accompanying analyses;
- Discussion of areas of MCO strength and opportunities for improvement in both data management and performance; and
- Recommendations for improving MCO performance.

The EQRO must report the performance measure results, analyses and recommendations in the format prescribed by the State and in the time frame required. If the State requires the EQRO to submit its report as a draft, it must await the State's comments and revise the final report, as required.

REFERENCES

APCD Council http://www.apcdcouncil.org last accessed 11/10/10

Measures Management System Blueprint, Centers for Medicare and Medicaid Services http://www.cms.gov/MMS/19_MeasuresManagementSystemBlueprint.asp last accessed 11/10/10

NCQA's Medicaid Deeming Toolkit available at www.ncqa.org

END OF PROTOCOL