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2006 Performance Measures Validation Report

*An independent audit conducted by MetaStar of 2006 performance measures produced by
the Minnesota Department of Human Services*

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DHS's 28 Performance Measures for 2006	
1	Percent of children age two receiving immunizations
2	Percent of adults with depression receiving antidepressant medication management
3	Percent of enrollees with persistent asthma receiving appropriate medications
4	Percent of AMI discharges with immediate beta-blocker treatment
5	Percent of AMI discharges with persistent beta-blocker treatment
6	Percent of women 40-69 screened for breast cancer
7	Percent of enrollees with cardiac condition screened for LDL level
8	Percent of women screened for cervical cancer
9	Percent of sexually active women 16-25 screened for chlamydia
10	Percent of adults 51-80 screened for colorectal cancer
11	Percent of adults with diabetes screened for HbA1c and LDL-C
12	Percent of enrollees 65 and older screened for glaucoma
13	Percent of enrollees with an annual dental visit
14	Percent of adults with CD initiating and engaging in treatment
15	Percent of adults 40 and older with COPD receiving spirometry test
16	Percent of women 67 and older receiving osteoporosis care after fracture
17	Percent of live deliveries with a postpartum visit
18	Percent of 15-month olds receiving six or more primary care visits
19	Percent of 3-6 year olds receiving a primary care visit
20	Percent of adolescents with a well-care visit
21	Percent of adults with an ambulatory or preventive visit
22	Percent of children with a visit to a primary care practitioner
23	Number of CD service recipients per 1000 enrollee-years
24	Number of MH service recipients per 1000 enrollee-years
25	Number of CD inpatient discharges per 1000 enrollee-months
26	Number of MH inpatient discharges per 1000 enrollee-months
27	Number of non-acute inpatient discharges per 1000 enrollee-months
28	Percent of MH discharges receiving follow-up services
These measures are adopted from the HEDIS™ 2007 Technical Specifications published by the National Committee for Quality Assurance (NCQA). All use administrative (enrollment and claims) data only, not medical records data. See Appendix A for more information on these measures.	

Executive Summary

The Minnesota Department of Human Services (DHS) elects to use standardized performance measures to assess quality of care and services provided by its contracted managed care organizations (MCOs). These measures are calculated from encounter data submitted by these organizations to DHS. In order to assure that specifications for these measures are followed, and that DHS's healthcare information system is capable of supporting such measures, DHS contracts with MetaStar for a rigorous assessment each year. This assessment meets the Centers for Medicare & Medicaid Services performance measurement validation standards.¹

The assessment is not intended to evaluate the overall effectiveness of DHS's systems. Rather, the focus is on evaluating aspects of DHS's systems that specifically impact the ability to accurately report performance measures. In essence, DHS needs to demonstrate that it has the automated systems, management practices, data control procedures, and computational procedures necessary to ensure that all performance measure information is adequately captured, transformed, stored, computed, analyzed, and reported.

DHS currently employs 28 performance measures (see preceding page). This set of measures focuses on early detection and management of chronic disease, basic preventive care, and access to care. The measures follow specifications found in the *Healthcare Effectiveness Data and Information Set (HEDIS)® 2007 Technical Specifications*.²

DHS uses those HEDIS measures best-suited to available encounter data and its limitations. Although HEDIS specifications are followed closely for all measures, a few require minor modifications due to state-specific requirements or data idiosyncrasies. In addition to monitoring MCO performance, this set of measures is useful in tracking progress toward internal quality improvement objectives and in meeting other state agency requirements.

To make its assessment, MetaStar examines extensive sets of system documentation and detailed computer program code, conducts interviews with DHS staff, and performs internal data consistency checks and comparative tests of measure results against benchmark data. Any identified system deficiencies or data problems are immediately corrected and reviewed again.

The assessment is performed following all processes required by the BBA (42 CFR 438.358[b][1]) and CMS Protocol Calculating Performance Measures, Validating Performance Measures, and Appendix Z (ISCAT).

The findings of MetaStar's assessment are as follows:

1. Enrollment data and encounter data in DHS's healthcare information systems are complete and reliable to the degree necessary to support the performance measurement system.

¹ BBA (42 CFR 438.358 [b][1])

² HEDIS® is a registered trademark of the National Committee for Quality Assurance (NCQA).

2. DHS's healthcare information systems are capable of extracting, managing, and analyzing the data in ways that enable production of valid and reliable performance measures.
3. DHS's selection of standard HEDIS performance measures, and its rigor in implementing these measures, ensures validity, reliability, and comparability of results.

The assessment described in this report was conducted in 2005 and 2006 as well as in 2007. The performance measurement system continues to improve each year and to keep abreast of changes in data availability and measure specifications.

2006 Performance Measures Validation Report

The Minnesota Department of Human Services (DHS) contracts with MetaStar to conduct an independent assessment of the Department's healthcare performance measurement system. DHS' performance measurement system primarily monitors performance among DHS's contracted managed care organizations (MCOs). MetaStar conducts an annual assessment and report on findings.

The purpose of MetaStar's assessment is to validate the three major components of the performance measurement system:

1. The quality of the encounter data from which DHS bases its performance measures
2. The capabilities of DHS's information systems in extracting, managing, and analyzing data without introducing error
3. The adequacy of measure definitions and degree to which DHS rigorously implements these definitions

MetaStar applies a methodology that fulfills the requirements of the Centers for Medicare & Medicaid Services' (CMS) EQRO Protocol, *Validation of Performance Measures*, including the *Information Systems Capabilities Assessment Tool* (ISCAT). This methodology meets the requirements set forth in the BBA's 42 CFR 438.242 regulations. It includes an on-site visit to DHS, preceded by specified pre-on-site activities and followed by specified post-on-site activities.

MetaStar's Credentials

MetaStar is a licensed HEDIS Compliance Audit organization with extensive experience conducting these audits.³ The staff involved in this project included two Certified HEDIS Compliance Auditors (CHCA); a project manager; and two programmer-analysts for data integrity assessment, documentation review, and measure validation.

As the External Quality Review Organization (EQRO) for the state of Wisconsin, MetaStar strictly abides by all the EQRO regulations. In addition, MetaStar has performed NCQA HEDIS™ Compliance Audits for Medicaid and Medicare among Minnesota's managed care organizations (MCOs).

Data Quality Validation

Method

DHS's healthcare performance measurement system relies on complete and accurate data. More specifically, DHS's performance measures are defined in terms of data that are available from DHS's enrollment and encounter databases. In order to validate the performance measurement system,

³ Additional information on MetaStar is available at: www.MetaStar.com.

MetaStar must verify that the content of these databases are complete and accurate enough to support this use.

MetaStar employed four approaches to validating enrollment and encounter data:

- Document review
- Interviews
- Operational quality reports
- Measure comparisons

Each approach is capable of uncovering data integrity problems that might threaten the reliability of one or more measures.

MetaStar gathered from DHS a wide range of documentation regarding enrollment and encounter data, including special studies and periodic audits, data correction policies and procedures, issues logs, EDI specifications, staffing levels, size of databases, and uses of these data. These documents were initially collected in the first annual assessment (2005) and are updated each year as necessary. To add depth to the information available in the documentation, and to clarify where necessary, MetaStar conducts interviews with those DHS staff responsible for the data systems. MetaStar asks detailed questions to assure that enrollment data are accurately collected and securely maintained.

Enrollment data for Minnesota's publicly funded managed care programs are all maintained at the state level, so performance measurement access to this primary source is direct and relatively simple. Knowledge of its problems is readily available.

Encounter data are only as good as what are submitted by the MCO, so robust methods for error detection and correction are necessary. Operational quality reports, such as data error rates and volume discrepancies reports, provide MetaStar with quantitative information about problems with encounter submissions and resolutions to those problems.

In addition to documentation review, interviews, and data quality reports, the quality of these data can be assessed in terms of the results they produce. MetaStar has access to a range of MCO, state, and national "benchmarks" against which Minnesota's public program performance measure results are compared. Large discrepancies alert the reviewers to possible underlying data problems.

Findings

1. Enrollment Data: MetaStar finds that, although DHS's enrollment data system is mature, well-staffed, well-controlled, and fundamentally reliable, it is still subject to data error, in particular where county staff are responsible for capturing and entering data into the system. To keep enrollee data up to date and to help resolve complex and sometimes confusing eligibility requirements, county staff would benefit from more training and perhaps online tutorials and refresher courses. The HealthMatch Project, nearing completion at DHS, promises to make major improvements in the way enrollment data are captured, including making more use of the Internet.

2. **Encounter Data:** As part of the *Performance Measures Validation Report for 2005*, MetaStar produced an encounter data integrity plan for DHS. This plan detailed many of the problems with encounter data quality and suggested remedies for those problems. Most of these problems still exist, including submissions of duplicate encounters by MCOs and inadequate editing procedures at DHS. However, since that report was issued, DHS has created a new unit to address encounter data quality and has hired a manager for the project. That project will include formation of a State-MCO Encounter Quality Improvement Group to improve communications and to guide needed system changes at both levels. Parallel to this, DHS's Encounter Workgroup will continue to meet on specific data quality issues that can be handled at the state level.

Operational data quality reports reveal that key data elements, such as diagnoses, procedure codes, enrollee identifiers, pay-to-provider identifiers, revenue codes, and service dates, maintain acceptably low error rates in 2006 encounter submissions. Error rates for these elements are in the 0% to 3% range. On the other hand, the duplication of encounters occurs much more frequently as a result of erroneous resubmissions or failures by the MCO's staff to correctly execute the encounter data replacement process. To maintain performance measure integrity, DHS analysts have developed deduplication algorithms that run prior to performance measure encounters being placed into the data repository to maintain performance measure integrity. Code within the individual measure programs also works to deduplicate members or claims as appropriate.

The accuracy and currency of encounter data remain troublesome in specific instances, such as inaccurate treating provider identifiers and missing place-of-service codes; however, for the selected twenty-eight performance measures these problems are either irrelevant or only minor in their effects. They do not preclude computation of the measures. Further, there is no evidence that the processes of data extraction from DHS's mainframe databases into the DHS data warehouse and performance measurement data repositories introduces error that is not already present in the encounters as submitted.

Information System Validation

Method

MetaStar applies CMS's ISCAT in its assessment of DHS's information system capabilities in supporting performance reporting. The tool is modified slightly for use at a state agency rather than at an MCO. The modified tool is available in Appendix A of this report.

The ISCAT process includes the following steps:

1. DHS prepares a written response to each question on the ISCAT, and sends these responses to MetaStar.
2. MetaStar reviews DHS's ISCAT responses in light of the other documentation MetaStar has collected about the system.

3. MetaStar conducts an on-site visit at DHS to clarify responses or to obtain additional responses to the ISCAT question set.
4. MetaStar reassesses responses during the post-on-site period and obtains from DHS any further needed information.
5. MetaStar issues its report on the capability and reliability of the DHS system as a data source for performance measurement.

The information system capabilities assessment process is intended to validate that DHS's information system can:

- Track individual enrollees and their enrollment spans
- Link services to enrollees
- Ensure accuracy and currency of data
- Avoid error in data transfer processes
- Permit encounter replacement
- Assess completeness and accuracy of processes for submission of encounters
- Provide a reliable performance measurement data repository that acts as a direct source for data measure production
- Archive and control versions of the data repository as needed
- Provide detailed standard operating procedures that direct the production of measures from the extraction point to reporting
- Adapt to needed changes

Where standard operating procedures are implemented by computer programs (SAS programs), MetaStar carefully examines and tests these programs. An example is the set of programs that extract data from DHS's data warehouse and load it into the performance measurement data repository.

Findings

MetaStar finds that DHS's healthcare data systems capably extract, manage, and analyze the available data and provide a sound platform for production of MCO-level performance measures.

1. **Enrollment Data:** DHS operates the enrollment system for public healthcare programs so it is in a position to directly impact the quality of these data. Its unique enrollee identifier is used throughout the system, allowing enrollment spans, encounters, and fee-for-service claims to be easily tracked by individual enrollee.
2. **Encounter Data:** Two years ago the MCOs were required to begin using the encounter replacement process to replace inaccurate encounters previously submitted. The MCOs have struggled to make this process work. In most cases where mass replacement is necessary, the process has been effective. In cases where only a few encounters require replacement, such replacement seldom occurs. In part this is due to the difficulty the MCOs have in identifying those encounters that need replacing. DHS sends remittance advices to each MCO, but the volume of these documents is so large that the MCOs find it difficult to sort through them to

find the replaceable encounters. DHS has begun working on this problem, studying the feasibility of designing remittance advice formats and codes better suited to encounters.

3. **Documentation:** One of the strengths of the DHS performance measurement system is its use of detailed standard operating procedures that guide production of the measures. These SOPs begin with extraction of data from mainframe enrollment and claims systems to the performance measurement data repository, and they end with procedures for reporting of measures and for continuous improvement in procedures over time. Included are procedures for demonstrating the readiness of the mainframe data for loading into the repository. Volume comparisons and error rate comparisons indicate when encounter data are complete and reliable enough for extraction. Once data are loaded into the repository, similar tests are done on data especially critical to production of performance measures. No measures are produced until the repository passes these tests. This year, MetaStar found several minor errors in the repository program, and these were corrected by DHS.
4. **IQC:** DHS follows detailed policies and procedures for testing each new and updated measure. This is documented in an Internal Quality Control (IQC) plan. The IQC plan includes comparison of the performance measure rate to rates reported by MCOs and review of individual enrollees to determine if they are appropriately included or excluded from the numerators and denominators. DHS also performs IQC to determine that the system backup procedures perform appropriately, thus assuring that the data can be reproduced.
5. **Recommendations:** Finally, of several system changes previously identified as needed, MetaStar and DHS determined that these changes are either now implemented or are assigned to a programmer for implementation. These include special coding for encounters that are not to be used in performance reporting and a process that allows MCOs to “void” previously submitted claims. Procedures for requesting system changes are now automated.

Appendix B: Detailed Assessment of DHS’s Information System Capabilities describes MetaStar’s findings based on the ISCAT.

Validation of Measures

Method

DHS recognizes the importance of employing valid and reliable performance measures. Furthermore, these measures must be well-suited to available data—i.e., the enrollment and encounter data in the DHS healthcare data system. MetaStar’s role is to assess the validity and reliability of the chosen measures and to verify that the manner in which these measures are implemented satisfies these definitions.

DHS employs a set of HEDIS measures developed by the National Committee for Quality Assurance (NCQA). The advantage to DHS in using these measures is that they have “passed the test” for validity and reliability. Their definitions are precise in terms of the available data. They are widely employed in the healthcare field and offer many opportunities for comparison. MetaStar’s task is to verify that DHS has implemented the chosen measures correctly.

DHS chose to utilize MCO-submitted encounter data to calculate its performance measures. It is important to understand the steps that occur as medical information is translated into encounter data. Once an enrollee receives medical services, the provider places the information onto a claim form. Providers submit the claim form to an MCO for payment. The MCO processes the claim and then submits the data to DHS. DHS requires that the MCO report data in a standard format and follow a standard process for data submission. The data submitted by the MCOs is considered encounter data and contains the record of the encounter between the enrollee and a provider. If the MCO provides all required elements (e.g., procedure and diagnosis codes, dates of service, enrollee identifiers, etc.) to DHS, DHS's encounter data should accurately reflect the MCO's claims data for the submitted elements. However, if an MCO obtains additional service information (such as test results or service information from external entities) that are maintained separately from claims, the information would not be submitted to DHS, and the DHS encounter database would not contain all the data from a given service.

The exclusive use of encounter data to calculate performance measures is known as the administrative method. HEDIS Technical Specifications allows for some measures (e.g., Prenatal and Postpartum Care), to be calculated using a combination of administrative (claims or encounters) and medical chart review data; this is considered a "hybrid" method. The hybrid method is used when a significant portion of the data is found only in the medical record (e.g., laboratory results) or when the care was provided but fails to record in a claim.

To use the hybrid method, a statistically appropriate sample size is determined. Enrollees meeting measure denominator criteria (e.g., a live birth in 2006) are identified, and a randomly selected sample of those enrollees is drawn. Medical charts are then reviewed for all enrollees included in the sample who did not meet numerator criteria via administrative data. Final rates, then, include both administrative and medical record data in the numerator for the measure.

The hybrid method requires development of medical record review tools, training and oversight processes, skilled medical record reviewers, identification of potential providers of the services, coordination with provider sites, and medical record review. It can be a time consuming, resource intensive, provider-burdensome process. *Because of the additional resources involved with hybrid data collection, DHS elected to calculate its performance measures with administrative data only.*

Although the hybrid method may produce higher and more accurate rates for some measures, they are not necessary for comparing baseline measurements to subsequent changes to assess MCO performance. Thus, using administrative data is an appropriate mechanism for the production of performance measurements. Utilizing the administrative only method, MCOs and programs may be equitably compared by DHS over time. When MCOs report performance measures themselves and are given the option of using administrative or hybrid methods, results may not be comparable between MCOs and across programs.

Once DHS has drafted or revised computer programs to calculate performance measure rates, MetaStar performs thorough code review of the all measures. DHS computer programmers and MetaStar analysts examine in detail the SAS programs written by DHS and compare the operations in the code to the operations specified in the HEDIS specifications. MetaStar's familiarity with the HEDIS specifications, with the DHS performance measurement platform, and with the SAS programming language, are important ingredients in this process.

Once any programming problems found via code review are fixed by DHS, MetaStar begins the process of comparing the results of those programs to MCO, state, and national benchmarks. In this instance, the process can uncover implementation problems not readily identifiable in the SAS code.

In cases where DHS-to-benchmark discrepancies cannot be explained on the basis of enrolled population differences or service system differences, MetaStar obtains raw data from DHS and runs test programs to identify the source of discrepancies. Both MetaStar and DHS compare results of the current year (2006) to previous years and to results reported to NCQA by individual MCOs through the formal HEDIS reporting system.

Findings

1. MetaStar finds that DHS correctly implements all necessary critical components of measure specifications to generate valid, reliable, and useful performance measures. This includes documentation within the SAS program code and in adjunct procedural descriptions to facilitate understanding of program logic. Any discrepancies between code and specifications were found to be insignificant and did not affect final reported rates.
2. For each of the twenty-eight measures, MetaStar adopts the NCQA reporting format that has two formal validation findings – “Report” or “Not Report”. *As of September 2007, MetaStar designated all twenty-eight performance measures with Report status.*

Final Thoughts

This is the third year that DHS has calculated HEDIS measures using encounter data. The system developed during the 2004 Performance Measure project allowed DHS to efficiently and effectively update the measures. The process used by DHS demonstrates that the system is easily maintained and adapted. Throughout the process, DHS staff remains committed to meeting rigorous standards and thoroughly documenting its methods. DHS maintains a solid foundation for producing valid and reportable performance measures.

Appendix A

Modified ISCAT for 2006

2006 Information Systems Capabilities Assessment Tool (ISCA)

The ISCA collects information about the effect of information management practices on performance measure reporting. It is *not* intended to evaluate the effectiveness of your information systems. It also requests information concerning your procedures to produce the performance measures.

The ISCA was based on the CMS ISCA for managed care organizations. Questions pertaining only to MCOs were omitted and questions specific to DHS were added.

ISCA Format

The ISCA contains the following sections:

- Section I: General Information
- Section II: Enrollment Information
- Section III: Encounter data
- Section IV: Performance Measures
- Section V: System Security

Completing the ISCA

Completing the ISCA is a required component for CMS performance measure validation. The questions and tables in this document provide auditors background information on the mechanisms used to calculate your performance measures. The information requested in the ISCA is the minimum necessary to complete the audit process. In order to increase the efficiency and effectiveness of this process, please assure that every question is answered accurately and completely.

SECTION I. GENERAL INFORMATION

1. In Table I.A., please provide information for your primary and secondary contacts for the performance measurement data validation.

Table I.A. Contact Information

	Primary Contact	Secondary Contact
Name:		
Title:		
Company:		
Address:		
Telephone:		
Fax:		
E-mail Address:		

2. Has your organization ever undergone a formal IS capability assessment? If yes, who performed the assessment? When was the assessment completed?
3. In Table 1.B, indicate performance measure calculation for *each program* undergoing an audit for the measurement year.

Table 1.B: Measurement Year Performance Measures[illegible]

SECTION II. ENROLLMENT INFORMATION

This section requests information about the general flow of enrollment data and the maintenance of the information in the MMIS data warehouse.

1. In Table II.A, provide information about the enrollment/membership data processing system described in this section.

Table II.A: Enrollment/Membership Data Processing System

Question	Response
Name of enrollment/membership system	
Type of data processed	
Programs affected	
Location (city, state)	

In Table II.B, indicate if the data element indicated is:

- R** Required: The enrollment/membership system requires the data element for all members.
- O** Optional: The enrollment/membership system requires the data element for some members, but not for all members.
- N** Not Required: The enrollment/membership system does not require or capture the data element.
- NA** Not Applicable: The data element does not apply to the enrollment/membership system.

2. For data elements that are Optional, Not Required or Not Applicable, provide an explanation. If responses vary by program, please explain.

Table II.B: Enrollment/Membership Data Element Requirements

	Required? (R, O, N, NA)	Explanation
Member Identification Information		
Full name		
Address		
Date of birth		
Gender		
Social Security number		
State ID #		
Coverage Information		
Relationship to subscriber		
MCO selection		
Program		
Effective Date		
With MCO		
By program		

Actual date of notification to MCO of effective date (in the event of a retro-active enrollment)		
Effective date		
Termination Date		
With MCO		
By program		
Actual date of notification to MCO (in the event of a retro-active enrollment)		
Termination Date		

Membership Identification Number and Tracking

3. How do you uniquely identify enrollees?
4. Under what circumstances, if any, can an enrollee exist under more than one identification number within DHS' information management systems?
5. Under what circumstances, if any, can an enrollee's identification number change?
6. How does DHS enroll and track newborns born to an existing enrollee?
7. How does DHS track retroactive enrollments and disenrollments?

Enrollment/Membership Data Processes

8. How are data for new members obtained, processed and entered into the enrollment/membership system?
9. How are changes to enrollee information obtained, processed and entered into the enrollment/membership system?
10. How are data on member terminations obtained, processed and entered into the enrollment/membership system?
11. How is data entry of enrollment/membership information verified?
12. What were the time-to-process standards for enrollment/membership data during the measurement year (2004)?
13. What was the actual average time to process for enrollment/membership data during the measurement year (2004)?
14. Was there ever a backlog or delay in processing enrollment/membership data during the measurement year (2004)? If so, describe.

15. During the measurement year were audits of enrollment/membership data processing conducted to assess the accuracy of the entered data? If so, describe what was audited and how often.
16. If accuracy audits were completed during the measurement year what were the findings?
17. Describe any deficiencies identified by the accuracy audits.

System Changes

18. Please describe any major changes/updates that have taken place in the last three years in your Medicaid enrollment data system (be sure to identify specific dates on which changes were implemented) for example:
 - New enrollment system purchased and installed to replace old system
 - New enrollment system purchased and installed to replace most of old system - old system still used
 - Major enhancements to old system (what kinds of enhancements?)
19. In your opinion, have any of these changes influenced, even temporarily, the quality and/or completeness of the Medicaid enrollee data that are collected? If so, how and when?

General Benefit Information

20. Does DHS set the pharmacy co-pay (if any) or is that set by each individual health plan?
21. Please describe any differences in pharmacy benefits between the programs.
22. Please describe any differences in vision benefits between the programs.

Requested Documentation

The documentation requested for this section is listed below. Label all documentation as described in the table.

Document	Details	Label
Enrollment/ membership data system flowchart	Provide a flowchart that gives an overview of the DHS enrollment/membership data system and processes, indicating steps in the enrollment/membership data process as well as the flow of enrollment/membership data from all sources.	
Data Accuracy Procedures	Provide a copy of any procedure used to assess the accuracy of enrollment information maintained in MMIS.	
Data Accuracy Results	Provide a copy of any results of audits performed to assess the accuracy of the enrollee information entered into your system.	
Enrollee Form	Provide a copy of the form used to capture enrollee information (i.e., name, date of birth, enrollment date, etc.)	

Contacts

Provide the name, title, department, address, telephone number, fax number and e-mail address of the persons responsible for completing this section of the ISCA.

	Primary Contact	Secondary Contact
Name:		
Title:		
Department:		
Address:		
Telephone:		
Fax:		
E-mail address:		

Date of completion:

SECTION III. ENCOUNTER DATA

This section requests information on the encounter data submitted to DHS by the contracted MCOs.

Health Plan Submission

1. All health plans are required to submit encounter data to DHS. Please describe and/or provide the documentation of the process for data submission and loading into your warehouse. This should include:
 - Process for the health plan to submit data
 - Process for DHS to acknowledge receipt
 - Frequency of submission
 - Processes in place to ensure that transmissions are properly monitored and controlled.
2. Using Tables III.A and III B below, please indicate the encounter data elements DHS requires health plans to submit. Table III.A addresses facility and provider encounter data and Table III.B addresses pharmacy encounter data. Please submit an appropriate substitute if applicable.

Please enter the following information:

- R** Required: DHS requires all MCOs to submit the data element for all encounters.
O Optional: DHS captures the element when submitted or requires it for some types of encounters but not all encounters.
N Not Required: DHS does not require or capture the data element.
NA Not Applicable: The data element does not apply to the encounter system.

Table III.A: DHS Encounter Data Element Requirements – Facility and Provider Data

Item	Required	# of Codes	# of Digits	Explanation	MMIS Field Name
Member and Provider information					
Enrollee Identification					
Rendering practitioner identification					
Encounter Information					
DHS encounter identification number					
MCO encounter number					

Item	Required	# of Codes	# of Digits	Explanation	MMIS Field Name
First date of service					
Last date of service					
Discharge status					
Payment status					
Codes					
Primary diagnosis					
Secondary diagnosis					
Primary procedure					
Secondary procedure					
Procedure modifiers					
Revenue					
Type of bill					
Place of service					
DRG					
Occurrence code					

Table III.B: DHS Encounter Data Element Requirements – Pharmacy Data

Item	Required	# of Codes	# of Digits	Explanation	MMIS Field Name
Member and Provider information					
Enrollee Identification					
Rendering practitioner identification					
Encounter Information					
DHS encounter identification number					
MCO encounter number					

Date of service					
Days supply					
Cost of the prescription					
Any member co-pay.					
Payment status					
Codes					
NDC Code					
Other					

3. How many total diagnoses does DHS require that a MCO be able to submit (e.g., up to nine.)
4. Please list any MCOs not submitting the maximum number of diagnoses to DHS?
5. How does the DHS encounter system distinguish between principal and secondary diagnoses?

Encounter Data Load Process

6. Please describe the process used to upload MCO encounter files.
7. What process is used to determine that the files were accurately and completely uploaded into the warehouse?
8. What edit checks exist to verify the accuracy of submitted information (e.g., procedure code-diagnosis edits, gender-diagnosis edits, gender-procedure code edits, field content edits)?
9. Please describe the process used when encounter data fails an edit. Please include the process used to monitor the number of encounters failing DHS edits.
10. Please describe the process used to monitor resubmission of encounters that initially failed DHS edits.

DHS Data Warehouse

11. Please describe the warehouse used by DHS to store Medicaid encounter data. A document and/or flow sheet may be provided as an attachment to answer this question.
12. In Table III.D, indicate the type of staff responsible for key steps in the warehouse maintenance. Enter the number of individuals responsible for each step; provide explanations where relevant.

Table III.D: Data Integration and Report Production

MMIS Production Functions	Type and Number of DHS Staff	Other
Encounter Data Loads		
Data warehouse maintenance		
Project management		
Quality Assurance		
Other (indicate)		

13. Provide an overview of how data are integrated and consolidated into the warehouse. Consider data from all sources. A flow chart may be substituted.
14. Describe the process and time frames to update the warehouse with health plan data.
15. Describe the process used to update the warehouse edits used to validate health plan data submissions.
16. What changes, if any, were made to the warehouse production processes during 2004? Describe.
17. How were changes made during 2004 tested?
18. Describe the process used to assure the accuracy of the warehouse loading process.
19. How many years of Medicaid data are retained in the warehouse? How is archived Medicaid data accessed when needed?

System Changes

23. Please describe any major changes/updates that have taken place in the last three years in your Medicaid encounter data system (be sure to identify specific dates on which changes were implemented) for example:
 - New enrollment system purchased and installed to replace old system
 - New enrollment system purchased and installed to replace most of old system - old system still used
 - Major enhancements to old system (what kinds of enhancements?)
24. In your opinion, have any of these changes influenced, even temporarily, the quality and/or completeness of the Medicaid encounter data that are collected? If so, how and when?

Encounter Data Completeness

We are also interested in an estimate of the completeness of your encounter data and identifying any health plans that may be underreporting encounters. We will use per member per year encounters and compare to previous DHS studies.

20. Please fill in Table III.E below with the per member per year encounters:

Table III.E: Completeness of Encounter Data

Health Plan	Blue Cross	FirstPlan	Health Partners	Itasca	Medica	Metropolitan Health Plan	SCHA	UCare
Type of Service								
Average PMPY Ambulatory								
Average PMPY Inpatient								
Average PMPY Pharmacy								
Average PMPY Behavioral Health								
Average PMPY Laboratory								

21. Please indicate in Table III.F how each type of service in Table III.E was identified and calculated.

Table III.F Process to Identify Services

Type of Service	Process to Identify and Calculate Services	Program / Query used*
Average PMPY Ambulatory		
Average PMPY Inpatient		
Average PMPY Pharmacy		
Average PMPY Behavioral Health		
Average PMPY Laboratory		

*This is an optional field. It can be used to document the name of the program used to generate the PMPY results. Some groups document the names of programs within the ISCA for ease in updating future ISCA's

22. How often does DHS monitor and assess the completeness of data submitted? Completeness includes assessing an individual encounter for all required fields and assessing the total volume of encounters.
23. Has DHS established benchmarks to assess the completeness of data submitted? If so, describe.
24. Has DHS conducted additional studies or analyses of data completeness or under-reporting? (This includes studies of total encounter volume and encounters not received.) If so, describe.
25. Describe barriers to obtaining complete and accurate encounter data. Consider all factors that influence your ability to collect such information from MCO's, including, but not limited to, MCO system constraints or incompatibilities, lack of reporting requirements, payment arrangements (e.g., capitation), data integration issues.
26. What steps, if any, has the DHS taken to improve completeness of encounter data?
27. Does DHS contractually require all MCO's to submit complete and accurate encounter data?
28. Does DHS use performance standards to ensure submission of encounter data by MCO's? Describe.
29. Does DHS have incentive or penalty arrangements in place for MCO's to submit complete and accurate data? Describe.
30. During the measurement year were other activities undertaken to encourage encounter data submission by health plans? Describe.
31. What action, if any, was taken for MCO's who routinely failed to submit complete and accurate encounter data?

Requested Documentation

The documentation requested for this section is listed below. Label all documentation as described in the table.

Document	Details	Label
Data Submission Process	Please describe and/or provide the documentation of the process for data submission and loading into your warehouse.	
Data Submission Format	Please provide a copy of the format used by the health plans to submit data.	

Encounter lag, IBNR or completion factor reports	Provide documentation (e.g., encounter lag reports, IBNR reports, completion factor reports) of completeness of encounter data at the time data files were generated for performance measure reporting.	
Data completeness studies or analyses	If applicable, attach copies of additional studies or analyses conducted on data completeness or under-reporting.	

Contacts

Provide the name, title, department, address, telephone number, fax number and e-mail address of the persons responsible for completing this section of the ISCA.

	Primary Contact	Secondary Contact
Name:		
Title:		
Department:		
Address:		
Telephone:		
Fax:		
E-mail address:		

Date of completion:

SECTION IV: PERFORMANCE MEASURE REPORT

Integration and Control of Data for Performance Measure Reporting

This section requests information on how DHS integrates Medicaid encounters, membership, provider, vendor, and other data to calculate performance rates. All questions relate to your current systems and processes, unless indicated otherwise.

Performance Measure Repository Structure

If DHS uses a performance measure repository, please answer the following question. Otherwise, skip to the File Consolidation section.

1. Please attach the repository structure.
2. Describe the process used to update the repository when measure specifications are changed.
3. Describe how the repository is tested during and after being modified?
4. How are revisions to Medicaid encounter and enrollee systems managed? (e.g. will a change in the encounter system result in a change in the performance measure repository.)

File Consolidation

5. Please attach a flowchart outlining the structure of the MMIS and your performance measurement repository, indicating data integration (i.e., encounter files, membership, pharmacy etc.).
6. Describe the procedure for consolidating Medicaid encounter and enrollee data for performance measure reporting (i.e. from a relational database or file extracts on a measure by measure basis).
7. How many different sources of data are merged together to create performance measure reports?
8. What control processes are in place to ensure file consolidations are accurate and complete?
9. What control processes are in place to ensure that no extraneous data are captured (e.g., lack of specificity in enrollee identifiers may lead to inclusion of non-eligible enrollees or to double-counting)?

10. Do you compare samples of data in the repository to transaction files to verify if all the required data are captured (e.g., were any members, providers, or services lost in the process)? Describe
11. Describe your process(es) to monitor that the required level of coding detail is maintained (e.g., all significant digits, primary and secondary diagnoses remain).
12. Describe both the files/datasets accessed to create Medicaid performance measures and the fields from those files used for linking or analysis. Use either a schematic, source code programs, or text to respond
13. Describe any algorithms used to check the reasonableness of data integrated to report Medicaid performance measures.
14. Describe how data files used to report Medicaid performance measures are archived and maintained to ensure repeatability for the measurement period in question.

Performance Measurement Software

15. Please list the software packages, programming languages and/or mainframe/pc-based application programs DHS uses to calculate the performance measures and how each is used. Please consider all programs, not just the final application.

Performance Measurement Source Code Developers

16. How many programmers are involved in developing the performance measure source code?
17. What is the experience and background of individuals developing source code?
18. Do you rely on any quantitative measures of programmer performance? If so, what method(s) do you use to measure the effectiveness of the programmer?
19. What is the average experience, in years, of programmers in your organization?
20. Approximately how much resource (time, money) is spent on training per programmer per year for training on software and the performance measures?
21. What type of standard training does DHS provide for programmers?
22. What type of additional training does DHS provide for individuals involved in developing source code?
23. Do you have internal back-ups for performance measure programmers--i.e., do others know the programming language and the structure of the actual programs?

Performance Measure Report Production

24. Please provide an overview of the process used to produce performance measurements. A flowchart may be used to answer this question.
25. Please describe your performance measure production logs and run controls.
26. How are performance measure report generation programs documented?
27. Please describe any version control used in your performance measure programs.
How does DHS test the process used to create Medicaid performance measure reports?
28. Please describe how continuous enrollment logic tracks enrollee changes in MCO's, movement across programs, and re-enrollment.
29. Please describe the internal process for full sign-off on an individual performance measure.

Requested Documentation

The documentation requested for this section is listed below. Label all documentation as described in the table.

Document	Details	Label
Data Integration Flow Chart	Please attach a flowchart outlining the structure of the MMIS and your performance measurement repository, indicating data integration (i.e., encounter files, membership, pharmacy etc.).	
Performance Measure Repository Structure	Provide a complete file structure, file format and field definitions for your performance measure repository.	

Contacts

Provide the name, title, department, address, telephone number, fax number and e-mail address of the persons responsible for completing this section of the ISCA.

	Primary Contact	Secondary Contact
Name:		
Title:		
Department:		
Address:		
Telephone:		
Fax:		
E-mail address:		

Date of completion:

SECTION V SECURITY

This section requests information on the security processes used to protect and maintain the integrity of the data used for performance reporting. All questions should be answered for both the MMIS warehouse and the performance measure repository.

1. How frequently are system back-ups performed? Where is back-up data stored?
2. Describe how security is maintained that restricts or controls access to MMIS an the performance measure repository.
3. Describe the physical security in place, include fire protection, locked areas, etc.
4. Describe the mechanisms used to protect data in the event of power failures.
5. Describe how loss of Medicaid encounter and other related data is prevented when systems fail or program errors occur?
6. During the measurement year did you restore data from back-up files. If so, please explain.
7. During the measurement year did you experience any data loss. If so, please explain.

Contacts

Provide the name, title, department, address, telephone number, fax number and e-mail address of the persons responsible for completing this section of the ISCA.

	Primary Contact	Secondary Contact
Name:		
Title:		
Department:		
Address:		
Telephone:		
Fax:		
E-mail address:		

Date of completion:

Appendix B

MetaStar's Detailed Assessment of DHS's Information System Capabilities

The audit consisted of an overall information systems capabilities assessment (IS Standards), followed by an evaluation of DHS's ability to comply with specifications for performance measure determination (PMD Standards). During the audit process, the audit work was evaluated and reassessed depending on early findings regarding the IS Standards and on the potential strengths and weaknesses identified by the audit team on-site.

- *Information System Capabilities Assessment:* The first part of the audit focused on assessing DHS's overall information systems capabilities and core business functions. The IS Standards used to assess the effectiveness of the systems, information practices, and control procedures focused on the processing of medical information and on mechanisms used to calculate performance measures as the foundation for accurate reporting.
- *Performance Measurement Determination Specifications Assessment:* Following completion of the Information System Capabilities Assessment, MetaStar's audit team conducted appropriate audit verification steps to assess individual performance measures. This part of the audit focused on assessing compliance with conventional reporting practices and PMD specifications, including identification of denominator and numerator populations and assessment of algorithmic compliance.

The review of DHS's information system was designed to collect information that documented the effect of DHS's information management practices on the performance measure reporting process. The audit was not intended to evaluate the overall effectiveness of DHS's information systems. Rather, the focus was on evaluating aspects of DHS's information systems that specifically impacted the ability to accurately report performance measures. In essence, DHS needed to demonstrate that it had the automated systems, information management practices, and data control procedures needed to ensure that all information required for performance measure reporting was adequately captured, translated, stored, analyzed, and reported. In the section below, the auditors summarize the findings and describe any non-compliant issues and effects on performance measure reporting.

This section follows the standards used in NCQA HEDIS Compliance Audits. Since in prior years DHS required MCOs to undergo an NCQA HEDIS Compliance Audit, it was deemed appropriate to hold DHS to the same standards that MCOs were required to meet. The appropriate ISCAT section is provided as a reference to the initial documentation prepared by DHS.

IS 1.0 Sound Coding Methods for Medical Data

ISCAT Section III

Criteria

In order to provide a basis for calculation of performance measures, DHS must be able to capture all encounter information relevant to the delivery of services. There are a number of practices that are necessary in order for this to occur, and the audit process must assure that the organization is conducting its business consistent with these practices. Principal among these, and critical for computing clinical performance measures, is that all MCOs should submit standardized codes on the encounters. These codes can then be used to identify the medical events being reported. This would include the use of nationally recognized schemes for the capture of diagnosis and procedure codes, as well as DRG and DSM codes. The use of standardized coding improves the comparability of performance measures through common definition of identical clinical events.

Since performance measures may require that a medical event is due to a specific condition (e.g., an inpatient admission due to asthma), the system must be able to distinguish between a principal and secondary diagnosis.

Process

In order to confirm that MCO submitted encounter data contained standard coding schemes, the auditors reviewed the ISCAT; DHS's Encounter Billing Procedures Manual; and HIPAA Mapping Requirements for Encounter Data, MCO submission requirements, and actual data contained in the warehouse. The audit team reviewed the ISCAT and interviewed staff to assure that processes were in place to identify missing and/or erroneous data. Review of the data repository was performed to assure that coding conventions were maintained and that principal and secondary diagnoses were identified.

Findings

DHS contractually required MCOs to submit standardized codes on encounter data and all diagnosis and procedure codes. Upon receipt of the data, edit checks are performed by DHS to assure only accepted codes are contained on the encounters. Non-standard codes would not be accepted into the system, and encounters containing non-standard codes were returned to the MCO.

On a regular basis, Performance Measurement and Quality Improvement (PMQI) staff produces reports on the volume of encounters and the number of encounters denied. In addition, PMQI produces reports identifying the number of encounters failing edits that might have an impact on performance measure rates. Through these mechanisms, DHS identifies any MCO that is not submitting standardized codes.

Activities performed to assess compliance with this standard did not identify concerns with the type of coding systems accepted by the system. Review of the performance measure

repository, PMQI repository testing, and individual performance measure results demonstrated that the coding conventions were maintained.

IS 2.0 Data Capture, Transfer, and Entry – Medical Data

ISCAT Section III

Criteria

The integrity of performance measures requires standardized encounter data formats, control over data edits and verification, and other control procedures that promote completeness and accuracy in the encounter data. DHS must have processes to receive data, communicate data receipt and status to the submitting MCO, and also return unacceptable data to the MCO. DHS must also have processes in place to ensure that data submitted by the MCO is accurately loaded into DHS's MMIS database and accurately transferred to the performance measure repository. Prior to preparing performance measures, DHS must determine data completeness by comparing received volume to expected volume. In addition, DHS must also examine performance measure results to identify potential data completeness concerns.

Process

Through the ISCAT, on-site demonstration, and review of individual encounters, the auditors assessed whether the encounter data used to calculate performance measures contained critical data such as diagnosis, procedure, date of service, enrollee information, place of service, date of birth, and gender. In addition, this process verified the receipt of electronic encounter data and that the data was accurately transferred to the performance measure repository.

The auditors examined claims completeness through review of DHS volume reports, encounter data rejection, interviews with DHS staff, and PMQI performance measure repository completeness assessments. In addition, the audit team examined individual encounter data for each performance measure included in the study.

Findings

DHS required MCOs to submit data in a standardized format. This format contained all critical elements required for performance measure reporting.

DHS has formal processes for the submission of electronic encounter data. After MCO data are received and loaded into MMIS, record counts are verified to assure that MMIS contains all submitted encounter data. DHS appropriately notifies the submitting MCO of the number of encounters received and loaded into MMIS.

When DHS loads the data into MMIS, approximately 100 edits are performed. If an encounter does not pass an edit, the information is written to a remittance form provided to the MCO on a routine basis. The MCO is responsible for correcting the data.

When data are transferred from MMIS into the data repository, formal processes are in place to assure the integrity of the data transfer. Transfers to the performance measurement repository followed a standard operating procedure. In addition, PMQI staff perform several analyses to assess the data quality. Review of individual data demonstrated the appropriate transfer of data between systems.

DHS has adequate processes for accepting encounter data from MCOs and transferring encounter data to the MMIS and the performance measure data warehouse. Encounter volume reports are generated and reviewed by DHS.

In 2006, DHS implemented an Encounter Data Workgroup to address previous recommendations regarding the need for additional encounter data monitoring. The key work areas for this group include:

- Improving DHS's ability to estimate costs of managed care
- Improving DHS's ability to analyze encounter data at a more detailed level
- Improving the completeness and accuracy of health plan-submitted data
- Avoiding artificially inflated measurements due to duplication
- Improving communication regarding encounter data with managed care organizations

Additionally, the PMQI analyst performs analyses to assess the completeness of the database prior to the computation of performance measure rates.

DHS does not have a process in place to monitor an MCO's resubmission of rejected encounters. Not monitoring resubmission of rejected encounters also places the data at risk. The MCO has no incentive to correct and resubmit the data on a timely basis. As a result, the PMQI analyst must perform additional analyses to determine the completeness of the data. Review of the analyses does not demonstrate a significant negative impact on the performance measure rates.

Because DHS's encounter data management unit does not monitor completeness at the point of encounter data submission, PMQI's analysts must perform several encounter data assessments. PMQI's process to assess encounter data completeness and accuracy was formally documented, and they investigated all potential performance measure concerns. Analytic staff in other departments must also perform completeness and accuracy assessments to assure the validity of calculations. Although there was no negative impact on performance measure rates, the lack of a formal assessment at the point of encounter receipt results in a duplication of effort within DHS.

IS 3.0 Data Capture, Transfer, and Entry – Enrollee Demographics

ISCAT Section II

Criteria

The use of standardized forms; control over receipt processes; data entry edits and verification; and other control procedures, such as data audits, promoting completeness and accuracy in receiving, and recording enrollee demographic and enrollment information are critical in developing databases that will support accurate calculation of performance measures. Specific enrollee information must include age, sex, program type, and the enrollment dates that define time periods included in the study.

Process

Through the ISCAT, enrollee forms, interviews, and examination of enrollee data, the auditors assessed whether the performance measure system contained the information necessary to meet performance measure specifications. Data fields were assessed to ascertain that they were the appropriate size for receiving the required information. Specific edits and data verification procedures were reviewed to examine the procedures used to ensure data accuracy. DHS staff were interviewed to assess the training and oversight processes of data entry. The audit team reviewed the time-to-process standards and results to determine the completeness of the data at the time the performance measures were calculated.

Findings

DHS has processes to collect and enter enrollee demographic information. All data systems reviewed contained the demographic information necessary for performance measure reporting. Review of time-to-process standards results showed that enrollee demographic information was complete when the performance measures were calculated.

The system electronically verifies social security number and the Medicare number with the appropriate federal agency. DHS's enrollment system has edits for specific fields to aid in the prevention of data errors. Although the enrollee data was appropriate for performance measure calculation, there is no formal oversight of data entry as required under this standard.

IS 4.0 Data Integration Meets the Demands of Accurate Reporting

ISCAT Sections IV

Criteria

The often complex calculations of performance measures may require data from a number of different sources. The schemes or systems utilized to assemble the data and to make the required calculations should be carefully constructed and tested. The performance measure

system must contain all elements necessary for the required measures. Formal processes should be in place to assess the transfer of data and to ensure that all appropriate data are included.

Process

The audit team reviewed the ISCAT, the performance measure repository procedures, documentation and testing, and the final performance measure results. In addition, the audit team interviewed PMQI staff. The auditors reviewed procedures to ensure that all appropriate data were identified and included in the repository. Actual results were compared to expected results (prior information reported by MCOs and national data) to verify the effectiveness of the consolidations. Any areas of potential concern were analyzed through source code review, generation of additional queries, and close examination of encounter data. Inspection of programming source code and enrollee data was performed to assess the mechanisms used to link data across all data sources to satisfy data integration requirements (e.g., identifying an enrollee with a given disease/condition).

Findings

DHS has formal, documented processes for populating the performance measure repository. This process identified all data requirements, included extensive quality assurance procedures, and contained a procedure for updating the performance measure repository in the event repository requirements change. Review of the documentation for the performance measure repository and the repository itself showed that it contained all required elements.

DHS performed extensive testing of the performance measure warehouse after each data load. Following a formal procedure, DHS staff appropriately assessed that the data transfer performed as expected. Review of DHS's results showed that DHS's procedures effectively transfer data.

From the beginning of the study through the generation of performance measure results, the audit team and PMQI staff compared the actual results to those expected. The audit did not identify problems concerning data integration.

IS 5.0 Control Procedures Support Data Integrity for Reporting

ISCAT Sections IV

Criteria

DHS's quality assurance practices and backup procedures serve as the necessary infrastructure supporting all of the organization's information systems. As such, they promote accurate and timely information processing and protect data in the event of system failure. The data needed for calculation of performance measures is an output of the organization's information systems and may be directly or indirectly impacted by those practices and procedures. DHS needs to have a process governing report production,

including review of results, adherence to policies and procedures, compliance with production timelines, and documentation of all aspects of the reporting system.

DHS must have procedures in place to ensure the physical safety of the data. Fire protection, computer system backup procedures, and data access security must be in place.

Process

Through the ISCAT, on-site visits, and communication with DHS, the audit team remained apprised of DHS's timelines and report production processes. All documentation related to the report process (policies, procedures, quality assurance results, and performance measure results) were reviewed by the audit team. The processes were discussed with DHS throughout the study. DHS revised and/or added procedures based on MetaStar's review. All revised documentation was submitted to MetaStar's audit team, and the review cycle was repeated.

Throughout the study, review of performance measure source code, report documentation, discussions with DHS staff, and review of programming output logs were performed to assess adherence to documented policies and procedures. Through the ISCAT, on-site demonstration, and documentation review, the audit team assessed whether DHS's processes and documentation complied with report program specifications, code review methodology, and testing.

Assessment of MCO submission requirements, MCO volume reports, and DHS's estimate of data completeness from prior years was performed to assess if DHS's final date to include encounter data in the performance measure repository was adequate.

MetaStar's audit team used the ISCAT, interviews, and on-site observations to assess physical security and data access authorization.

Findings

DHS has processes in place to determine its measure production timeline and to monitor adherence to the timeline. DHS met its internal timeline. DHS has appropriate documentation of the project. DHS could test the process by having a second programmer update some of the measures following the protocols. There was no evidence that data or reporting were compromised due to breaches in either physical security or data access.

Assessment of Adherence to the PMD Technical Specifications

A detailed review of the processes used to prepare the performance measures is an integral part of every performance measure audit. Auditors review specifications, computer programs, record review tools, and procedures (both manual and automated) used by DHS to prepare each performance measure. The goal of this portion of the audit is to determine whether or not each performance measure is implemented in compliance with the measure's technical specifications.

In auditing individual performance measures, auditors reviewed each of the following standards:

PMD 1.0 Denominator Identification

ISCAT Section V

Criteria

The performance measures reviewed are encounter-based measures, and as such, it is critical that DHS properly enumerate the set of enrollees who are candidates for the service or event being measured. The enumeration of this set is called the denominator, and the subsequent enumeration of those in the set who satisfy additional criteria constitute the numerator. Determining the denominator set typically involves identifying all individuals satisfying certain criteria related to age, gender, diagnosis, and having received certain medical services in certain time frames. The auditor's task is to assess the extent to which the organization has properly identified the denominator according to the appropriate technical specifications.

Process

Through review of the Data Warehouse Readiness Report, MetaStar's audit team assured that DHS performed tests to evaluate the completeness of the data used to determine denominator populations. Review of the results, DHS's comparisons to prior data, and individual enrollee data was performed to validate the accuracy and completeness of the denominator populations. Review of individual enrollee data and the formula to calculate enrollee age and/or date ranges was performed to assess adherence to the specifications. Performance measure source code and individual enrollee data were reviewed for adherence to the measure specification time frame and clinical event requirements. Individual enrollee data was examined to assure an unduplicated count for the measures. In addition, when appropriate, MetaStar wrote queries to identify denominators and validate DHS source code.

Findings

Initial review of the programs used to identify denominators showed some minor deviations from specifications. These deviations were communicated to PMQI staff who revised the programs, retested, and resubmitted to MetaStar for additional review. Final denominators for all measures included in the study met performance measure specifications or deviations were not significant to final reported rates. There were no measures excluded from DHS's performance measurement report due to PMQI denominator identification concerns.

PMD 2.0 Numerator Identification

ISCAT Section V

Criteria

After identification of the denominator population, DHS must determine if these enrollees met the numerator qualifications. Such decisions should be based on evidence methodologies specified by the performance measure specifications (e.g., CPT codes). The objective of the auditor is to examine the data and the processes employed by DHS in making these determinations to verify that they accurately include all patients who qualified for the numerator, as well as exclude those who do not.

Process

Performance measure source code, individual results, and benchmarks were reviewed to assess whether DHS's programming appropriately identified the specified medical and service events (e.g., diagnoses, procedures, prescriptions, and date of claims payment). Source code and individual results were examined to ascertain that all appropriate time frames for numerator events met performance measure specifications. If multiple events were required to meet numerator criteria, source code and individual data were reviewed to verify that the numerator was appropriately identified.

Findings

Initial review of the programs used to identify numerators showed a few minor deviations from specifications. These deviations were communicated to PMQI staff who revised the programs, retested, and resubmitted the program and results to MetaStar for review. Final numerators for all measures included in the study met all performance measure specifications or specification discrepancies were not significant to reported rates. There were no measures excluded from DHS's performance measurement report due to PMQI numerator identification concerns.

PMD 3.0 Algorithmic Compliance

ISCAT Section V

Criteria

Algorithmic compliance addresses a variety of issues associated with the production of performance measure reports beyond counting (numerator and denominator) populations. It includes proper algorithms in medical decision-making, such as classification as a diabetic or determining gestation parameters and live birth.

Process

Based on numerator and denominator results, MetaStar reviewed performance measure results as calculated within the PMQI measure database. MetaStar also reviewed final performance measurement results from production runs to those manually entered into the performance measure report. Since DHS did not perform medical record review, data integration and further algorithmic compliance did not need to be assessed.

Findings

Review of performance measure results showed algorithmic compliance. There were no issues identified through the study.

PMD 4.0 Documentation

All Sections of the ISCAT

Criteria

Reported performance results cannot be verified unless an organization can produce adequate documentation of the data and processes used to prepare its reports. An adequate “audit trail” describes the performance measure preparation process from beginning to end and includes a project plan, programming specifications, source code, computer queries, sample lists, completed record review tools, validation summaries, and many other documents.

Process

As described in the IS sections, all documentation related to the production of performance measures was reviewed. This documentation included the following:

- Programming specifications and data sources
- Data reported in prior years by the MCOs
- Dated job logs or computer runs for denominators and numerators with record counts
- Sources of any supporting external data or prior year’s data used in reporting
- Computer queries, programming logic, or source code used to create final denominators and numerators and interim data files

Findings

DHS has excellent documentation of performance measure production and has continued to improve it annually. Appropriate procedures are written for each critical production step. PMQI’s documentation allows reproduction of the process and protects PMQI in the event of personnel changes.

Measure Validation

This process assessed the extent to which DHS's information system met the requirements set forth in 42 CFR 438.242. The system's ability to collect, analyze, integrate, and report data was integral to meeting this requirement, as well as to ensure accurate performance measure reporting. DHS's system used MCO encounter data. Thus, the assessment included extensive examinations of DHS's ability to monitor the data for accuracy and completeness.

A detailed review of the preparation processes used to calculate the performance measures is an integral part of every audit. MetaStar's audit team reviewed the specifications, computer programs, and processes (both manual and automated) used by DHS to prepare the performance measures. The goal of this portion of the audit was to determine whether or not each performance measure was in compliance with performance measure technical specifications.

The audit presents two alternative audit designations for each performance measure: "Report" and "Not Report."

- "Report" (R) indicates that the measure is compliant or substantially compliant with the measure specifications and there were no IS issues to substantially bias the performance report. Any concerns with the implementation of the specifications or data availability did not result in a significant bias in the final rate for the measure.

"Not Report" (NR) indicates that the measure was not compliant with the performance measure specifications. Concerns regarding the implementation of the performance measure specifications or concerns regarding data availability created significant bias in the rate.

	DHS's 28 Performance Measures for 2006	Report Status
1	Percent of children age two receiving immunizations	Report
2	Percent of adults with depression receiving antidepressant medication management	Report
3	Percent of enrollees with persistent asthma receiving appropriate medications	Report
4	Percent of AMI discharges with immediate beta-blocker treatment	Report
5	Percent of AMI discharges with persistent beta-blocker treatment	Report
5	Percent of women 40-69 screened for breast cancer	Report
7	Percent of enrollees with cardiac condition screened for LDL level	Report
8	Percent of women screened for cervical cancer	Report
9	Percent of sexually active women 16-25 screened for chlamydia	Report
10	Percent of adults 51-80 screened for colorectal cancer	Report
11	Percent of adults with diabetes screened for HbA1c and LDL-C	Report
12	Percent of enrollees 65 and older screened for glaucoma	Report
13	Percent of enrollees with an annual dental visit	Report
14	Percent of adults with CD initiating and engaging in treatment	Report
15	Percent of adults 40 and older with COPD receiving spirometry test	Report
16	Percent of women 67 and older receiving osteoporosis care after fracture	Report
17	Percent of live deliveries with a postpartum visit	Report
18	Percent of 15-month olds receiving six or more primary care visits	Report
19	Percent of 3-6 year olds receiving a primary care visit	Report
20	Percent of adolescents with a well-care visit	Report
21	Percent of adults with an ambulatory or preventive visit	Report
22	Percent of children with a visit to a primary care practitioner	Report
23	Number of CD service recipients per 1000 enrollee-years	Report
24	Number of MH service recipients per 1000 enrollee-years	Report
25	Number of CD inpatient discharges per 1000 enrollee-months	Report
26	Number of MH inpatient discharges per 1000 enrollee-months	Report
27	Number of non-acute inpatient discharges per 1000 enrollee-months	Report
28	Percent of MH discharges receiving follow-up services	Report
	These measures are adopted from the HEDIS™ 2007 Technical Specifications published by the National Committee for Quality Assurance (NCQA). All use administrative (enrollment and claims) data only, not medical records data. See Appendix A for more information on these measures.	