



Minnesota Department of Human Services

## **2006 Performance Measure Project Report**

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

November 2007

*Conducted by:*

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## *Executive Summary*

Standardized performance measures are required for all state Medicaid managed care programs by federal law.<sup>1</sup> The Minnesota Department of Human Services (DHS) fulfilled this requirement by calculating performance measures from encounter data submitted by its contracted managed care organizations (MCOs). DHS retained MetaStar to conduct an independent audit of DHS's 2006 performance measures and processes.

MetaStar, Inc.'s (MetaStar's) audit included a review of DHS's information systems. The review was designed to collect information documenting the effect DHS's management practices had on the performance measurement process. The review was not intended to evaluate the overall effectiveness of DHS's systems. Rather, its focus was 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, translated, stored, analyzed, and reported.

DHS selected 28 performance measures for examination, all of which are based on Healthcare Effectiveness Data and Information Set (HEDIS<sup>®</sup>) 2007 Technical Specifications.<sup>2</sup> DHS selected measures suited to encounter data and its limitations, internal quality improvement objectives, and other state agency requirements.

This year's Performance Measurement Project showed the impact of improvements made based on recommendations from last year's Performance Measurement Project Report. Improvements were made in the source code review timeline, encounter data completeness incentives were implemented, and various process improvements in project operations and production were achieved. These improvements allowed MetaStar and DHS to again focus on changes and gain efficiencies. The final project teleconference included discussions on the changes to be made to the project in the future.

The project exhibited several strengths. DHS staff was able to effectively and efficiently utilize internal and external resources using a system that is easily adaptable to accurately report all 28 measures. Year-to-year performance measure variability was shown to be minimal. DHS again showed efficiencies regarding the production of information and deliverables for both federal and state statutory program requirements. DHS has been able, due to its methodology, to create reports specific to Medicaid populations and across programs. Also, DHS performance measure data are used in contract and performance measure incentive decision-making.

This report also addresses opportunities and recommendations for improvements for upcoming projects. Opportunities focus on additional process efficiencies and improved communications to ensure an effective project implementation each year.

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<sup>1</sup> BBA (42 CFR 438.358 (b) (2)).

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

## *2006 Performance Measures Project Report*

### **Project Background**

Performance measures are designed to provide data on health care processes or outcomes. Over time, performance measures are used to quantify the impact of changes and improve the quality of health care. Standardized performance measures are required for all state Medicaid managed care programs by federal law. States utilize these performance measures to direct improvements in the quality of care. MCOs can utilize performance measures to implement appropriate interventions to gain or maintain momentum for quality. Like Minnesota, several other states have chosen to meet their federal obligation to produce performance measures by calculating performance measures using encounter data.<sup>3</sup>

DHS believes that in addition to the primary objective of producing performance measures, utilizing encounter data will result in:

- A decreased administrative and financial burden for MCOs since they no longer are required to submit performance measures;
- Increased performance measure consistency from year-to-year;
- Providing DHS with the ability to examine performance measures for specific populations and subpopulations;
- Providing DHS with the opportunity to specify measurement time frames and enrollment criteria that are most useful in purchasing the highest quality health care services at the most economical cost; and
- Improving the quality of the encounter data submitted by MCOs.

Utilizing encounter data to produce performance measures required DHS to contract with MetaStar to test and validate that its performance measures are consistent with federal requirements. MetaStar's review of DHS performance measures also helps identify potential data integrity improvement opportunities.<sup>4</sup>

Overall, the purpose of the 2006 Performance Measures Project Report is to assess activities conducted to produce the 2006 performance measures and make recommendations that lead to greater accuracy and efficiencies in next year's project.

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<sup>3</sup> Other states calculate performance measures using encounter data: Iowa, North Carolina, Ohio, Maryland, and Wisconsin.

<sup>4</sup> See 2006 Data Integrity Report for MetaStar's improvement opportunity analysis.

## Performance Measure Process Assessment

The process of data validation consisted of auditing the general project processes used by DHS, reviewing the data flow between the MCOs and DHS, reviewing all documentation used to calculate the performance measures, and the demonstration of DHS's capacity to produce reliable, accurate performance measures. This began with a review of DHS processes and concluded with review of the final measurement results.<sup>5</sup>

- Federal Regulation and HEDIS Technical Specification Review. MetaStar assessed the extent to which DHS's information system meets the requirements set forth in BBA protocol 42 CFR 438.242 and the CMS Protocols regarding External Quality Review standards. The system's ability to collect, analyze, integrate, and report data was integral to meeting these requirements, as well as ensuring accurate performance measure reporting. Because DHS's system uses MCO encounter data, the assessment included examinations of DHS's ability to monitor the data for accuracy and completeness. Validation consisted of a review of DHS's data management processes, evaluation of algorithmic compliance with specifications, and verification and benchmarking of the final performance measures selected for review. To assess DHS's performance measures, MetaStar adopted a three-phase validation process approach: pre-on-site, on-site, and post-on-site activities, consistent with the CMS Protocols.

MetaStar and DHS chose to use an approach with as much stringency as called for in other performance measure reviews, including the strict methodology used in HEDIS Compliance audits. The validation process began with the pre-on-site phase of a complete review and updating of the Information System Capabilities Assessment (ISCA) system documentation. During the on-site, MetaStar staff and DHS staff held a detailed discussion of individual measure coding, possible anomalies and results using trending data from previous years, known benchmarks regionally and nationally, and HEDIS rate results when known. Post-on-site activities included further investigation into outliers and anomalies with analysis of potential impact on rates. Throughout the process, source code review was performed at a line-by-line level to ensure that measure specifications were met exactly; where measure specifications could not be met due to lack of complete or accurate data, reviewers determined using statistical analysis whether final measure rates were reportable or biased based on those issues.

- Process Assessment Findings. DHS has adequate processes for accepting encounter data from MCOs and transferring encounter data to its Medicaid Management Information System (MMIS) and to its data warehouse. Encounter volume reports are generated and reviewed by both the Data Management and Quality Assurance Division (DMQA) of Health Care Operations and Performance Measurement and Quality Improvement (PMQI) staff. Specifically, PMQI staff work with DMQA staff in April of each year to determine the readiness of the data warehouse for performance measure reporting based on various member- and claims-volume reports and comparisons. DHS does not currently have a formal process to notify an MCO when encounter submissions are less than expected at that time. If deficiencies are identified by the PMQI analyst and not corrected by the MCO, the performance measure rates could be inaccurately reported. Also, if the MCO is allowed to

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<sup>5</sup> See: 2006 Performance Measure Validation Report for details of the process.

provide additional encounters, the performance measure rate production may be delayed. *The auditors recommend that DHS consider developing and implementing a variation of the data readiness process that would be used more frequently than annually. If data readiness benchmarks can be developed and used throughout the year, perhaps minimally semi-annually or quarterly, DHS could be better assured that problems would be identified and addressed earlier. Also, the auditors request DHS share the results of these reviews with MetaStar as they are completed.*

The MMIS system electronically verifies an enrollee's social security number and the Medicare number with the appropriate federal agency. The enrollment system also contains 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 because data for eligibility and enrollment are entered by the counties. These enrollment data are then loaded into the MMIS by DHS staff for use in the data warehouse. Because enrollment data is entered by the counties, there are no opportunities by DHS for improvement of the process prior to being loaded into MMIS. This issue is common for all states that utilize county resources for eligibility and enrollment processing. 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. Additionally, health plans have worked diligently to maintain the accuracy of eligibility and enrollment data and have worked with DHS and county systems appropriately to maintain a system that is as free from error as possible. No measures were excluded from performance measure reporting due to specific concerns with accuracy of member-level data.

DHS has a formal and well-documented process for populating the performance measure data repository from which all performance measures are calculated. These processes meet all data requirements, included extensive quality assurance procedures, and contained a procedure for updating the performance measure data 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.

Initial review of the programs used to calculate performance measures showed some deviations from specifications. These deviations were communicated to PMQI staff who revised the program, retested, and resubmitted to MetaStar for additional review until all deviations were corrected or were found to be non-material. Final calculations for all measures included in the study met all performance measure specifications. There were no measures excluded from the study due to PMQI programming concerns.

- Performance Measure Outcomes. DHS selected 28 performance measures for examination. All performance measure specifications were based on HEDIS 2007 Technical Specifications. DHS selected measures based on their understanding of encounter data and its limitations, internal quality improvement objectives, and other state agency requirements.

MetaStar and DHS staff used various methodologies to determine whether performance measure rates calculated by DHS were reasonable. Because DHS wisely chose to use measurement year specifications "frozen" in time, and have then used those specifications to calculate four years of reports for each organization for each measure applicable, clear trends can be shown. This is a clear strength of the DHS performance measure process over other nationally-recognized performance measure systems.

Using 2006 measurement year specifications and calculating rates for each organization for the previous four years, reviewers were able to identify where true rate changes had occurred, versus those that were the result of changes in specifications. All changes in measure rates from measurement year to measurement year greater than or equal to five percentage points were examined. For 2006 reporting, no specific trends emerged showing issues with any one particular organization's rate changes over any other. Taking into account changes in programs during 2006 and small denominators for small health plans, few discrepancies were noted using the frozen specifications. This evaluation supports the theory that the DHS data warehouse is stable and that changes in measure rates are more likely from true change versus variation by health plan. DHS continues to review the few outliers. *The auditors recommend that DHS consider a policy that all outliers greater than or equal to five percentage points that cannot be immediately and conclusively explained will be reanalyzed and addressed immediately prior to reporting of Annual Technical Report (ATR) measures. Rates that are less than five percentage points can be reviewed to determine if there is a structural reason for the difference during the off-reporting season. Analysis of plan-to-plan trends in this manner should be a continuing focus of DHS.*

As part of analysis of outliers as noted above, MetaStar staff use HEDIS-reported data from health plans to determine potential issues with data comparability. When outliers are found, MetaStar and DHS use HEDIS data to attempt to identify means for further analysis. The addition of the use of the plan's reported HEDIS data from that and previous years and the use of known benchmarks in that regard aid DHS in understanding data variation where it occurs. *The auditors recommend DHS continue to use all known data sources in review and analysis of outlier comparability.*

- Performance Measure Result Caveats. Several important caveats exist in understanding reported DHS performance measure results. These caveats are necessary to communicate to ensure audiences understand the proper interpretation of the results and comparability or non-comparability of data to other performance measure systems.

Certain HEDIS measures require identification of provider type (e.g., primary care provider). Because of this, some performance measures produced by DHS have not been able to appropriately include coding for specific provider type. Since the diagnosis and procedure codes included in these measures would generally only be used by the type of provider required in the measure, the impact on rates should be limited. However, lack of complete provider-type data in the warehouse makes analyses of discrepancies with HEDIS reports difficult. However, this does not affect comparison of trending of DHS performance measures from year-to-year. *Regardless, DHS should continue to attempt to improve the collection of accurate provider-types within the encounter system and any potential affects on performance measure reporting.*

Also, MCOs may have access to administrative data that are not submitted to DHS. These may include internally and externally generated data sources. Examples of internally generated sources include data from immunization surveys or registries or breast or cervical cancer screening surveys, among others. Internal administrative data may also be generated as part of a case, disease, or utilization management program. External administrative data may be generated through data supplied by hospitals, laboratories, or individual providers.

*When possible, DHS should ask MCOs about available MCO administrative data sources as well as the data validation performed on each of these administrative sources. This will allow DHS a more complete understanding of administrative data and its potential affect on encounter data reporting.*

## **Data Integrity Assessment**

Several processes occur in the flow of information from the time that health services occur until receipt and acceptance into the DHS warehouse. In all of these processes, potential data errors may occur. Although errors at any point in the process may be small, cumulative errors may cause serious bias in reporting. Utilizing the DHS data flowchart as a map, MetaStar examined each of the steps involved in data flow. Potential integrity issues were identified, such as providers not submitting data to the MCO, the MCO submitting duplicate data or incomplete data, or potential for loss of data integrity after receipt by DHS.

There exist several possible methods for assessing and monitoring integrity issues. These include:

- Requiring MCOs to provide an assessment of the completeness and accuracy of provider submissions;
- Monitoring encounter volume;
- Monitoring reasons encounters are not accepted by the DHS Encounter System; and
- Comparing DHS-generated performance measure reports with MCO-generated HEDIS performance measures submitted to the Minnesota Department of Health.

Because both the MCO's HEDIS data reports and DHS's encounter data reports follow HEDIS technical specifications, a useful comparison can be made between the two. This comparison can be used to identify any potential issues with DHS processes or programming or with data integrity issues. This comparison allows DHS to identify possible areas for necessary intervention to ensure encounter reports are as accurate and meaningful as possible.

*When a non-explainable, significant discrepancy of larger than five percentage points is identified by comparing a health plan's HEDIS reported administrative rate for a measure and the DHS rate, the auditors recommend that DHS communicate with the MCOs to identify potential reasons, where possible.*

## **Improvements in the 2006 Performance Measurement Project**

It is important to continually improve because improvements will allow for fewer resources spent over time to ensure better outcomes and focus resources on areas where they make the most impact.

- Effectiveness Improved. MetaStar finds DHS improvement efforts have continued to increase efficiencies over the previous year's project. Both MetaStar's and DHS's experience with reviewing project data and processes over several years has increased awareness of the capabilities of the system and the caveats that affect it.
- Source Code Process and Timeliness Improved. Due to previous project recommendations, MetaStar implemented the use of multiple personnel to review DHS's performance

measurement source code. Additionally, a source code programming and review timeline was implemented by DHS to ensure code was reviewed on a timely basis. Due to this change, source code review was generally more efficient, especially as staff learned how to work within the timeline. As a result, all measures were programmed, reviewed, and marked final in some cases several months earlier than they had been in the previous project.

- Encounter Data Completeness Incentives Implemented. DHS implemented a set of incentives and withholds in MCO contracts, which are partially responsible for greater performance in meeting encounter data submission standards. For instance, MCOs not including valid treating provider identifiers received no reimbursement from the withhold pool. These incentives should help to ensure MCOs are submitting data that is as complete and accurate as possible.
- Practitioner Data Processing Documentation Improved. The Information System Capabilities Assessment Tool (ISCAT) contained improved documentation regarding practitioner data processing. It is clear that DHS is committed to continually improving the quality of practitioner data obtained and used for encounter data reporting. The addition of this information to the ISCAT provides a fuller, more dynamic picture of practitioner data and its impact on performance measure reporting.
- Encounter Data Process Documentation Enhanced. DHS provided enhanced encounter data process documentation in the form of narrative business processes. Narrative business processes regarding programmatic procedures are useful in assuring consistent, accurate usage of programs. Such documentation also allows for training of internal staff and could be used to explain programmatic processes to invested non-programmers.

## **Strengths of the 2006 Performance Measurement Project**

- Trending Variability is Minimal. An important strength of the DHS Performance Measure Project using encounter data is the ability for DHS to identify and examine performance measurement rate trends over time. In each year, HEDIS specifications are held constant and reflected back to previous years, allowing DHS to determine whether changes in care are significant and real, or appear due to differing reporting specifications.

Overall, evaluation of trends has shown little discrepancy by using the same specifications for comparison. This allows DHS to see true rate changes that might be attributable to MCO quality interventions or to improvements in encounter data accuracy and completeness. Using these findings, MCOs and DHS can more efficiently focus efforts toward quality over time.

- Federal and Statutory Program Efficiencies. Because DHS has chosen to use an internal performance measurement reporting process to meet federal statutory and waiver program obligations, these obligations can be met with efficiency. Using performance measurement from encounter data to meet external quality review requirements results in greater use of required encounter data. Also, using administrative measures based on encounter data helps to ensure that performance measures are less prone to variability and reduce the inefficient use of chart abstractions for hybrid performance measures.

- Opportunity for Measure Specificity to Medicaid Subpopulations. Again due to DHS's use of standard specifications across data collected from all programs and subprograms including waiver programs in Medicaid, and the use of enrollment data across programs and organizations, final rates are more robust. Additional analysis can be performed by DHS staff to identify trends in health care in Medicaid regardless of organization, and useful comparisons can be made between organizations, programs and subprograms when necessary. Because of HEDIS continuous enrollment criteria, similar comparisons cannot be made; services could potentially be lost from analysis in alternate measurement systems where member data is not available between programs, subprograms, or organizations. DHS continually uses performance measure results in an attempt to identify disparities between programs and systems. Additionally, it is common that legislators request data on certain Medicaid populations or subpopulations; DHS's system allows for these requests to be met with no additional data burden on health plans.
- Data Availability for Contract Decisions. DHS is able to use available, audited, comparable data to identify points for contract decision-making. Increasingly across the nation, such performance measure programs are being used to identify contract incentives or pay-for-performance program specifications. Again, the use of stringently audited and produced administrative data rates aids the assurance of comparability of these data when used for these reasons.

## Opportunities and Recommendations for 2007

MetaStar and DHS identified several opportunities for improvement during the 2006 Performance Measurement Project. Opportunities focus on additional process efficiencies and improved communications to ensure an effective project implementation each year. These opportunities and recommendations are discussed below.

- More Frequent Data Issues Communication. DHS becomes aware of issues with encounter data quality or completeness as issues arise. However, in the past, this information has not been shared with MetaStar until it was time for ISCAT completion. In 2006, rates of denial for encounter data had increased; it is not clear whether this increase implied a decrease in the quality of data. Ten specific edits accounted for a large portion of the data denials that occurred. *The auditors recommend developing and implementing a formally documented encounter data issues list that could be provided to MetaStar more frequently than during the ISCAT completion time frame.*
- More Timely Rate Comparison Communication. The process of comparing data to ensure reasonability is a very resource-intensive process and often partially manual. Also, due to tight time frames, particularly for ATR measures, auditor communication of documented findings was inefficient at times. *The auditors recommend DHS and MetaStar staff create a more efficient manner in which to communicate trending and reasonability findings on measure results. A spreadsheet with measure findings and results has been created and will be used as part of the Monthly Report process to ensure all specific findings on measure-level rates are communicated timely.*
- Earlier Project Completion. DHS communicated a desire to complete the project even earlier than previously. It is important to note that the timeline for the project is driven by the

availability of a complete set of encounter data from the MCOs, and claims lags must be taken into account. *MetaStar and DHS should work together to identify the possibilities of speeding the project process, where that is possible.*

- Cross-Trained PMQI Project Staff. With the addition of one SAS programmer to PMQI, PMQI staff are afforded an opportunity for additional cross-training. Although there have been no issues with performance measure reporting within the desired time frames, it is a best practice when staff are available to step in and aid or take over performance measure duties when necessary. *The auditors recommend that DHS develop and implement a training program for at least one SAS programmer within PMQI who can be fully knowledgeable and capable for taking over processes for performance measurement, if necessary.*

## Summary and Conclusions

In the 2006 project, PMQI maintained earlier gains regarding efficiencies in rate production and use. The system remained stable and usable and trending analysis showed little incomparability with previously reported rates. Since the beginning of the performance measure project, DHS has been able to identify process gaps and improvements and has acted on them to ensure an effective project and process outcome. As in previous years of the project, the validation of the performance measures verified the stability of the processes reviewed during the prior year.

The 2006 Performance Measure Validation Report contains details regarding actual performance measure validation. DHS was required to meet the same standards as MCOs for the measures included in this report. As demonstrated by the report status of the measures, DHS produced accurate performance measures. Without an audit and review of details for selected measures, programming errors may occur or small process changes could have an adverse affect on measure results. *If these were not identified through the audit process, the performance measure reports would be less accurate, and business decisions would be made on inaccurate data. It is for those reasons MetaStar believes DHS should continue to undergo an annual validation of its performance measures.*

DHS has demonstrated the overall validity of the system used to produce performance measures. The 2007 Performance Measurement Project Report should be focused on additional process improvements including continued efficiencies in the validation process and continued focus on accuracy and comparability of outlier measure results.