

Colorado Medicaid  
Managed Care Program

**FY 2014–2015 Physical Health  
Performance Measure Validation  
Report**  
*for*  
**Denver Health Medicaid Choice**

September 2015

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## Validation of Performance Measures *for Denver Health Medicaid Choice*

### Introduction

The Colorado State Medicaid agency, the Department of Health Care Policy & Financing (the Department) requires three mandatory external quality review (EQR) activities as per the Balanced Budget Act of 1997 (BBA), 42 Code of Federal Regulations (CFR) 438.358. One of these activities is the validation of performance measures. The Department has contracted with Health Services Advisory Group, Inc. (HSAG), an external quality review organization (EQRO), to conduct the validation of performance measures for **Denver Health Medicaid Choice (DHMC)**, a managed care organization (MCO), for fiscal year (FY) 2014–2015.

The Department opted to use selected National Committee for Quality Assurance (NCQA) Healthcare Effectiveness Data and Information Set (HEDIS<sup>®</sup>)<sup>1</sup> measures as the performance measures and calendar year 2014 as the measurement period for validation. Developed and maintained by NCQA, HEDIS is a set of performance data broadly accepted in the managed care environment as an industry standard. Because **DHMC** is required to calculate and submit HEDIS performance measures and undergo an NCQA HEDIS Compliance Audit<sup>™</sup>,<sup>2</sup> HSAG validated the results from the audits to meet the BBA requirements. More specifically, HSAG's role in the validation of performance measures was to ensure that the validation activities were conducted as outlined in the Centers for Medicare & Medicaid Services (CMS) publication, *EQR Protocol 2: Validation of Performance Measures Reported by the MCO: A Mandatory Protocol for External Quality Review (EQR)*, Version 2.0, September 1, 2012.

The primary objectives of the performance measure validation process were to:

- ◆ Evaluate the accuracy of the performance measure data collected by **DHMC**.
- ◆ Determine the extent to which the specific performance measures calculated by **DHMC** (or on behalf of **DHMC**) followed the specifications established for each performance measure.

**DHMC** underwent an NCQA HEDIS Compliance Audit through an NCQA-licensed audit organization of its choice and submitted the audited results and audit statement to HSAG. Since the audit was conducted in compliance with NCQA's *2015 HEDIS Compliance Audit: Standards, Policies, and Procedures, Volume 5* and the NCQA HEDIS Compliance Audit is consistent with the CMS Performance Measure Validation Protocol, the findings and results from the NCQA HEDIS Compliance Audit can be reviewed, validated, and eventually accepted as findings for the validation of performance measures to meet the BBA requirements.

<sup>1</sup> HEDIS<sup>®</sup> is a registered trademark of the National Committee for Quality Assurance (NCQA).

<sup>2</sup> NCQA HEDIS Compliance Audit<sup>™</sup> is a trademark of NCQA. The purpose of conducting a HEDIS audit is to ensure that rates submitted by **DHMC** are reliable, valid, accurate, and can be compared to one another. For a brief overview of the NCQA HEDIS Compliance Audit, please refer to Appendix A.

## Performance Measure List

The NCQA-licensed audit organizations validated, at a minimum, a set of performance measures selected by the Department. The measures, which are listed in Table 1, are HEDIS measures that follow the definitions outlined in NCQA’s *HEDIS 2015 Technical Specifications, Volume 2*, and the reporting method required by the Department.

Table 1—Colorado Medicaid 2015 Performance Measure Reporting Set	
Performance Measures	Reporting Methodology
<i>Childhood Immunization Status</i>	Administrative
<i>Immunizations for Adolescents</i>	Administrative
<i>Well-Child Visits in the First 15 Months of Life</i>	Administrative
<i>Well-Child Visits in the Third, Fourth, Fifth, and Sixth Years of Life</i>	Administrative
<i>Adolescent Well-Care Visits</i>	Administrative
<i>Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents</i>	Hybrid
<i>Appropriate Testing for Children With Pharyngitis</i>	Administrative
<i>Appropriate Treatment for Children With Upper Respiratory Infection</i>	Administrative
<i>Children’s and Adolescents’ Access to Primary Care Practitioners</i>	Administrative
<i>Prenatal and Postpartum Care</i>	Hybrid
<i>Adults’ Access to Preventive/Ambulatory Health Services</i>	Administrative
<i>Controlling High Blood Pressure</i>	Hybrid
<i>Comprehensive Diabetes Care (excluding HbA1c &lt;7 indicator)</i>	Hybrid
<i>Annual Monitoring for Patients on Persistent Medications</i>	Administrative
<i>Use of Imaging Studies for Low Back Pain</i>	Administrative
<i>Avoidance of Antibiotic Treatment in Adults With Acute Bronchitis</i>	Administrative
<i>Pharmacotherapy Management of Chronic Obstructive Pulmonary Disease (COPD) Exacerbation</i>	Administrative
<i>Use of Appropriate Medications for People With Asthma</i>	Administrative
<i>Asthma Medication Ratio</i>	Administrative
<i>Medication Management for People With Asthma</i>	Administrative
<i>Use of Spirometry Testing in the Assessment and Diagnosis of COPD</i>	Administrative
<i>Disease-Modifying Anti-Rheumatic Drug Therapy for Rheumatoid Arthritis</i>	Administrative
<i>Chlamydia Screening in Women</i>	Administrative
<i>Breast Cancer Screening</i>	Administrative
<i>Cervical Cancer Screening</i>	Hybrid

Table 1—Colorado Medicaid 2015 Performance Measure Reporting Set	
Performance Measures	Reporting Methodology
<i>Non-Recommended Cervical Cancer Screening in Adolescent Females</i>	Administrative
<i>Adult Body Mass Index (BMI) Assessment</i>	Hybrid
<i>Anti-depressant Medication Management</i>	Administrative
<i>Follow-up Care for Children Prescribed Attention Deficit Hyperactivity Disorder (ADHD) Medication</i>	Administrative
<i>Follow-up After Hospitalization for Mental Illness</i>	Administrative
<i>Adherence to Antipsychotic Medications for Individuals With Schizophrenia</i>	Administrative
<i>Diabetes Screening for People With Schizophrenia or Bipolar Disorder Who Are Using Antipsychotic Medications</i>	Administrative
<i>Diabetes Monitoring for People With Diabetes and Schizophrenia</i>	Administrative
<i>Cardiovascular Monitoring for People With Cardiovascular Disease and Schizophrenia</i>	Administrative
<i>Ambulatory Care: Emergency Department Visits and Outpatient Visits</i>	Administrative
<i>Inpatient Utilization—General Hospital/Acute Care</i>	Administrative
<i>Identification of Alcohol and Other Drug Services</i>	Administrative
<i>Mental Health Utilization</i>	Administrative
<i>Antibiotic Utilization</i>	Administrative
<i>Frequency of Selected Procedures</i>	Administrative

## Technical Methods of Analysis

The CMS Performance Measure Validation Protocol identifies key types of data that should be reviewed. As part of the validation process, HSAG aggregated several sources of HEDIS-related data to determine if the licensed organizations’ (LOs’) audit process met CMS requirements.

This performance measure validation report uses two primary sources—NCQA’s Interactive Data Submission System (IDSS) data output reports and the final audit reports—to tabulate overall HEDIS reporting capabilities and functions for **DHMC**. The IDSS contained the final HEDIS rates that were verified, reviewed, and locked by the LOs. The auditor-locking mechanism in the IDSS tool ensured that no information could be changed without the consent of NCQA and the auditor. The IDSS review process allowed the LOs to assess the reasonability of the rates submitted by **DHMC**.

The following is a table identifying the key audit steps required by NCQA for the LO to conduct NCQA HEDIS Compliance Audits. The table also lists HSAG’s approach in validating the LO’s audit.

Table 2—Description of Data Sources Reviewed	
Key Steps According to NCQA's HEDIS Compliance Audit	HSAG's Approach on Validating the LO's Audit Results
<b>Pre-on-site Visit/Meeting</b> —The initial conference call or meeting between the LOs and <b>DHMC</b> staff.	HSAG verified that key HEDIS topics such as timelines and on-site review dates were addressed by the LOs.
<b>Roadmap Review</b> —This review provided the LOs with background information on policies, processes, and data in preparation for on-site validation activities. <b>DHMC</b> was required to complete the Roadmap to provide the audit team with the necessary information to begin review activities.	HSAG looked for evidence in the final report that the LOs conducted a thorough review of all components of the Roadmap.
<b>Source Code Review</b> —Source code review is used to determine compliance with the performance measure definitions, including accurate numerator and denominator identification, sampling, and algorithmic compliance (to determine if rate calculations were performed correctly, medical record and administrative data were combined appropriately, and numerator events were counted accurately). This process is not necessary if <b>DHMC</b> uses a vendor who participates in NCQA's measure certification process.	If the MCO used a software vendor to produce HEDIS rates, HSAG used the final audit report (FAR) and measure certification letter to assess whether or not the software vendor achieved full measure certification status by NCQA for the reported HEDIS measures. HSAG ensured that the LOs reviewed the programming language for calculating the HEDIS measures if such a vendor was not used.
<b>Consumer Assessment of Healthcare Providers and Systems (CAHPS®) Survey Vendor and Sample Frame Validation</b> —A certified survey vendor must be used if <b>DHMC</b> performed a CAHPS survey as part of HEDIS reporting. <sup>3</sup>	HSAG verified that the LO performed detailed validations on the CAHPS Sample Frame if <b>DHMC</b> performed a CAHPS survey as part of HEDIS reporting. If <b>DHMC</b> used a survey vendor to perform the CAHPS surveys, HSAG verified that an NCQA-Certified survey vendor was used.
<b>Supplemental Data Validation</b> —If <b>DHMC</b> used any supplemental data for reporting, the LO was to validate the supplemental data according to NCQA's guideline.	HSAG verified whether the LO was following the NCQA-required approach while validating the supplemental databases.
<b>Convenience Sample Validation</b> —The auditor reviews a small number of processed medical records to uncover potential problems in the process that may require corrective action early in the medical record review (MRR) process. A convenience sample must be prepared unless the auditor determines that a health plan is exempt. NCQA allows organizations to be exempt from the convenience sample if they participated in a HEDIS audit the previous year and passed MRR validation, and if the current MRR process has not changed significantly from the previous year and the organization does not report hybrid measures that the auditor determines to be at risk of inaccurate reporting.	HSAG verified that the LOs determined whether or not <b>DHMC</b> was required to undergo a convenience sample validation. HSAG also verified that if a convenience sample validation was not required by an LO, the specific reasons were documented.

<sup>3</sup> CAHPS® is a registered trademark of the Agency for Healthcare Research and Quality (AHRQ).

Table 2—Description of Data Sources Reviewed	
Key Steps According to NCQA’s HEDIS Compliance Audit	HSAG’s Approach on Validating the LO’s Audit Results
<p><b>Medical Record Review</b>—The LOs are required to perform a more extensive validation of medical records reviewed, which is conducted late in the abstraction process. This validation ensures that the review process was executed as planned and that the results are accurate.</p>	<p>HSAG reviewed whether or not the LOs performed a review of the medical record review processes used by <b>DHMC</b> for collecting medical record data for their hybrid measures. HSAG also examined whether the LOs had conducted a re-review of a random sample of medical records for each applicable measure group based on NCQA’s protocol.</p>
<p><b>IDSS Review</b>—<b>DHMC</b> is required to complete NCQA’s IDSS for the submission of audited rates to NCQA. The auditor finalizes the IDSS by completing the audit review and entering an audit result. This process verifies that the auditor validated all activities that culminated in a rate by <b>DHMC</b>. The auditor locks the IDSS so that no information can be changed.</p>	<p>HSAG verified that the LOs completed the IDSS review process.</p>

### Validation Findings of Audit Process

Table 3 identifies the key elements used by **DHMC**’s LO while conducting its 2015 NCQA HEDIS Compliance Audit. These key elements were reviewed by HSAG during validation activities. As presented in Table 3, a checkmark indicates that the LO reviewed the HEDIS activities, which confirmed that HEDIS methodology was being followed. Some activities are identified as being compliant by inserting the name of the company **DHMC** contracted with to perform the required tasks.

Table 3—Validation Activities for DHMC	
Licensed Organization	Attest Health Care Advisors
Pre-on-site Visit Call/Meeting	✓
Roadmap Review	✓
Software Vendor	Verisk Health, Inc.
Source Code/Certified Measure Review	✓
Survey Vendor	Morpace Inc.
CAHPS Sample Frame Validation	✓
Supplemental Data Validation	✓
Medical Record Review	✓
IDSS Review	✓

Table 3 indicates that the audit conducted for **DHMC** included all of the listed validation activities. HSAG also determined that the data collected and reported for the Department-selected measures

followed NCQA HEDIS methodology. Therefore, any rates and audit results are determined to be valid, reliable, and accurate.

## Denver Health Medicaid Choice's Compliance With IS Standards

In addition to ensuring that data were captured, reported, and presented in a uniform manner, HSAG evaluated **DHMC**'s information system (IS) capabilities for accurate HEDIS reporting. HSAG reviewed **DHMC**'s final audit report for its LO's assessments of IS capabilities, specifically focused on those aspects of **DHMC**'s systems that could have impacted the HEDIS Medicaid reporting set.

For the purpose of HEDIS compliance auditing, the terms "information system" or "IS" are used broadly to include the computer and software environment, data collection procedures, and abstraction of medical records for hybrid measures. The IS evaluation includes a review of any manual processes that may have been used for HEDIS reporting as well. The LO determined if **DHMC** had the automated systems, information management practices, processing environment, and control procedures to capture, access, translate, analyze, and report each HEDIS measure.

In accordance with NCQA's *2015 HEDIS Compliance Audit: Standards, Policies, and Procedures, Volume 5*, the LO evaluated IS compliance with NCQA's IS standards. These standards detail the minimum requirements **DHMC**'s IS systems should meet, as well as criteria that any manual processes used to report HEDIS information must meet. For circumstances in which a particular IS standard was not met, the LO rated the impact on HEDIS reporting capabilities and, particularly, any measure that could be impacted. **DHMC** may not be fully compliant with many of the IS standards but may still be able to report the selected measures.

**DHMC** received a "substantially met" designation for two IS standards and a "not met" for one. As a result of the issues identified by its LO, **DHMC** was not able to report two measures (*Inpatient Utilization—General Hospital/Acute Care (IPU)* and *Ambulatory Care (AMB)*) for the current measurement year. The section that follows provides a summary of **DHMC**'s key findings for each IS standard as noted in its final audit report. A more in-depth explanation of NCQA's IS standards is provided in Appendix A of this report.

**Table 4—Summary of DHMC’s Compliance With IS Standards**

NCQA’s IS Standards	IS Standards Compliance Findings Based on HSAG’s Review of the HEDIS 2015 Final Audit Report
<p><b>IS 1.0—Medical Services Data—Sound Coding Methods and Data Capture, Transfer, and Entry</b></p> <ul style="list-style-type: none"> <li>◆ Industry standard codes are required and captured.</li> <li>◆ Primary and secondary diagnosis codes are identified.</li> <li>◆ Nonstandard codes (if used) are mapped to industry standard codes.</li> <li>◆ Standard submission forms are used.</li> <li>◆ Timely and accurate data entry processes and sufficient edit checks are used.</li> <li>◆ Data completeness is continually assessed and all contracted vendors involved in medical claims processing are monitored.</li> </ul>	<p>DHMC was fully compliant with this standard.</p>
<p><b>IS 2.0—Enrollment Data—Data Capture, Transfer, and Entry</b></p> <ul style="list-style-type: none"> <li>◆ All HEDIS-relevant information for data entry or electronic transmissions of enrollment data is accurate and complete.</li> <li>◆ Manual entry of enrollment data is timely and accurate, and sufficient edit checks are in place.</li> <li>◆ The health plans continually assess data completeness and take steps to improve performance.</li> <li>◆ The health plans effectively monitor the quality and accuracy of electronic submissions.</li> <li>◆ The health plans have effective control processes for the transmission of enrollment data.</li> </ul>	<p>DHMC was fully compliant with this standard.</p>
<p><b>IS 3.0—Practitioner Data—Data Capture, Transfer, and Entry</b></p> <ul style="list-style-type: none"> <li>◆ Provider specialties are fully documented and mapped to HEDIS provider specialties.</li> <li>◆ Effective procedures for submitting HEDIS-relevant information are in place.</li> <li>◆ Electronic transmissions of practitioner data are checked to ensure accuracy.</li> <li>◆ Processes and edit checks ensure accurate and timely entry of data into the transaction files.</li> <li>◆ Data completeness is assessed and steps are taken to improve performance.</li> <li>◆ Vendors are regularly monitored against expected performance standards.</li> </ul>	<p>DHMC was substantially compliant with this standard.</p> <p>The auditor found that the plan did not collect credentialing data regularly from its vendor, Cofinity. The credentialing staff does not appear to have a consolidated database of all credentialed providers from which to report. Nonetheless, the issue appeared to impact the <i>Board Certification</i> (BCR) measure only, which was not required for Medicaid reporting.</p>

**Table 4—Summary of DHMC’s Compliance With IS Standards**

NCQA’s IS Standards	IS Standards Compliance Findings Based on HSAG’s Review of the HEDIS 2015 Final Audit Report
<p><b>IS 4.0—Medical Record Review Processes—Training, Sampling, Abstraction, and Oversight</b></p> <ul style="list-style-type: none"> <li>◆ Forms or tools used for medical record review capture all fields relevant to HEDIS reporting.</li> <li>◆ Checking procedures are in place to ensure data integrity for electronic transmission of information.</li> <li>◆ Retrieval and abstraction of data from medical records are accurately performed.</li> <li>◆ Data entry processes, including edit checks, are timely and accurate.</li> <li>◆ Data completeness is assessed, including steps to improve performance.</li> <li>◆ Vendor performance is monitored against expected performance standards.</li> </ul>	<p><b>DHMC</b> was fully compliant with this standard.</p>
<p><b>IS 5.0—Supplemental Data—Capture, Transfer, and Entry</b></p> <ul style="list-style-type: none"> <li>◆ Nonstandard coding schemes are fully documented and mapped to industry standard codes.</li> <li>◆ Effective procedures for submitting HEDIS-relevant information are in place.</li> <li>◆ Electronic transmissions of supplemental data are checked to ensure accuracy.</li> <li>◆ Data entry processes, including edit checks, are timely and accurate.</li> <li>◆ Data completeness is assessed, including steps to improve performance.</li> <li>◆ Vendor performance is monitored against expected performance standards.</li> </ul>	<p><b>DHMC</b> was substantially compliant with this standard. The auditor noted that <b>DHMC</b>’s Supplemental Data Sources extracted from Denver Health Care’s electronic medical record (EMR) systems contained a large amount of extraneous information. Additionally, the corresponding documentation and mapping for the extracts were found to be inadequate and incorrect. Consequently, the auditor did not approve the use of this data source for HEDIS reporting.</p> <p>The auditor recommended that <b>DHMC</b> limit its data extracts from the EMR to only those values described in the HEDIS specifications for the related measures.</p>
<p><b>IS 6.0—Member Call Center Data—Capture, Transfer, and Entry</b></p>	<p>Although <b>DHMC</b>’s LO indicated in the FAR that <b>DHMC</b> was in compliance with this standard, the standard was not applicable to the measures selected by the Department.</p>
<p><b>IS 7.0—Data Integration—Accurate Reporting, Control Procedures That Support Measure Reporting Integrity</b></p> <ul style="list-style-type: none"> <li>◆ Nonstandard coding schemes are fully documented and mapped to industry standard codes.</li> <li>◆ Data transfers to the HEDIS repository from transaction files are accurate.</li> <li>◆ File consolidations, extracts, and derivations are accurate.</li> <li>◆ The repository structure and formatting are suitable for HEDIS measures and enable required</li> </ul>	<p>The auditor determined that <b>DHMC</b> did not meet NCQA’s standards for the following two sub-standards:</p> <ul style="list-style-type: none"> <li>◆ Noncompliance with IS 7.2 (Data transfers to HEDIS repository from transaction files are accurate.)</li> <li>◆ Substantial compliance with IS 7.3 (File consolidations, extracts, and derivations are accurate.)</li> </ul> <p>The auditor noted that there were significant, continuing, and repetitive problems with <b>DHMC</b>’s data extraction and mapping into its software vendor’s (Verisk) HEDIS software.</p>

**Table 4—Summary of DHMC’s Compliance With IS Standards**

NCQA’s IS Standards	IS Standards Compliance Findings Based on HSAG’s Review of the HEDIS 2015 Final Audit Report
<p>programming efforts.</p> <ul style="list-style-type: none"> <li>◆ Report production is managed effectively and operators perform appropriately.</li> <li>◆ HEDIS reporting software is managed properly.</li> <li>◆ Physical control procedures ensure HEDIS data integrity.</li> <li>◆ The organization regularly monitors vendor performance against expected performance standards.</li> </ul>	<p>During the on-site visit, <b>DHMC</b> could not provide the auditor with complete written documentation of the data extract and mapping. The auditor identified the following issues related to HEDIS reporting on Medicaid measures:</p> <ul style="list-style-type: none"> <li>◆ Provider specialty mapping used for reporting differed from the mapping documentation initially submitted.</li> <li>◆ Only members with paid claims data were loaded to Verisk’s HEDIS software. Incomplete data extraction introduced bias to the initial rates.</li> <li>◆ Multiple product lines were listed on the members’ enrollment records, which caused concerns with the continuous enrollment calculation.</li> <li>◆ Some of the extracted claims did not include information specific to each product line, per Verisk’s input specification. Consequently, these claims could not be included in the calculation of the Use of Service measures.</li> <li>◆ Significant amounts of paid claims were missing; therefore, the IPU and the AMB measures were found to be materially biased, resulting in the auditor assigning these measures with a not reportable (NR) designation.</li> </ul> <p>The auditor recommended that the plan perform an extensive testing of the data extraction and mapping processes into the Verisk software, and provide thorough documentation on these processes.</p>

### Overview of the NCQA HEDIS Compliance Audit

Developed and maintained by NCQA, HEDIS is a set of performance data broadly accepted in the managed care environment as an industry standard. Organizations seeking NCQA accreditation or wishing to publicly report their HEDIS performance results undergo an NCQA HEDIS Compliance Audit through an NCQA-licensed audit organization. The audits are conducted in compliance with NCQA's *2015 HEDIS Compliance Audit: Standards, Policies, and Procedures, Volume 5*. The purpose of conducting a HEDIS audit is to ensure that rates submitted by the organizations are reliable, valid, accurate, and can be compared to one another.

During the HEDIS audit, data management processes were reviewed using findings from the NCQA HEDIS Record of Administration, Data Management, and Processes (Roadmap) review; interviews with key staff members; and a review of queries and output files. Data extractions from systems used to house production files and generate reports were reviewed, including a review of data included in the samples for the selected measures. Based on validation findings, the LOs produced an initial written report identifying any perceived issues of noncompliance, problematic measures, and recommended opportunities for improvement. The LOs also produced a final report with updated text and findings based on comments on the initial report.

The FAR included information on the organization's information system (IS) capabilities; each measure's reportable results; medical record review (MRR) validation results; the results of any corrected programming logic, including corrections made to numerators, denominators, or sampling used for final measure calculation; and opportunities and recommendations for improvement of data completeness, data integrity, and health outcomes.

### Information Systems Standards

Listed below are the Information Systems Standards published in NCQA's *2015 HEDIS Compliance Audit: Standards, Policies, and Procedures, Volume 5*.

#### **IS 1.0—Medical Services Data—Sound Coding Methods and Data Capture, Transfer, and Entry**

- IS 1.1 Industry standard codes (e.g., ICD-9-CM, CPT, DRG, HCPCS) are used and all characters are captured.
- IS 1.2 Principal codes are identified and secondary codes are captured.
- IS 1.3 Nonstandard coding schemes are fully documented and mapped back to industry standard codes.

- IS 1.4 Standard submission forms are used and capture all fields relevant to measure reporting. All proprietary forms capture equivalent data. Electronic transmission procedures conform to industry standards.
- IS 1.5 Data entry processes are timely and accurate and include sufficient edit checks to ensure accurate entry of submitted data in transaction files for measure reporting.
- IS 1.6 The organization continually assesses data completeness and takes steps to improve performance.
- IS 1.7 The organization regularly monitors vendor performance against expected performance standards.

### **Rationale**

The organization must capture all clinical information pertinent to the delivery of services to provide a basis for calculating measures. The audit process ensures that the organization consistently captures sufficient clinical information. Principal among these practices and critical for computing clinical measures is consistent use of standardized codes to describe medical events, including nationally recognized schemes to capture diagnosis, procedure, DRG, and DSM codes. Standardized coding improves the comparability of measures through common definition of identical clinical events. The organization must cross-reference nonstandard coding schemes at the specific diagnosis and service level to attain equivalent meaning. The integrity of measures requires using standard forms, controlling receipt processes, editing and verifying data entry, and implementing other control procedures that promote completeness and accuracy in receiving and recording medical information. The transfer of information from medical charts to the organization's databases should be subject to the same standards for accuracy and completeness.

### **IS 2.0—Enrollment Data—Data Capture, Transfer, and Entry**

- IS 2.1 The organization has procedures for submitting measure-relevant information for data entry. Electronic transmissions of membership data have necessary procedures to ensure accuracy.
- IS 2.2 Data entry processes are timely and accurate and include sufficient edit checks to ensure accurate entry of submitted data in transaction files.
- IS 2.3 The organization continually assesses data completeness and takes steps to improve performance.
- IS 2.4 The organization regularly monitors vendor performance against expected performance standards.

### **Rationale**

Controlling receipt processes, editing and verifying data entry, and implementing other control procedures to promote completeness and accuracy in receiving and recording member information are critical in databases that calculate measures. Specific member information includes age, gender, benefits, product line (commercial, Medicaid, and Medicare), and the dates that define periods of membership so gaps in enrollment can be determined.

### **IS 3.0—Practitioner Data—Data Capture, Transfer, and Entry**

- IS 3.1 Provider specialties are fully documented and mapped to provider specialties necessary for measure reporting.
- IS 3.2 The organization has effective procedures for submitting measure-relevant information for data entry. Electronic transmissions of practitioner data are checked to ensure accuracy.
- IS 3.3 Data entry processes are timely and accurate and include edit checks to ensure accurate entry of submitted data in transaction files.
- IS 3.4 The organization continually assesses data completeness and takes steps to improve performance.
- IS 3.5 The organization regularly monitors vendor performance against expected performance standards.

#### **Rationale**

Controlling receipt processes, editing and verifying data entry, and implementing other control procedures to promote completeness and accuracy in receiving and recording provider information are critical in databases that calculate measures. Specific provider information includes the provider's specialty, contracts, credentials, populations served, date of inclusion in the network, date of credentialing, board certification status, and information needed to develop medical record abstraction tools.

### **IS 4.0—Medical Record Review Processes—Training, Sampling, Abstraction, and Oversight**

- IS 4.1 Forms capture all fields relevant to measure reporting. Electronic transmission procedures conform to industry standards and have necessary checking procedures to ensure data accuracy (logs, counts, receipts, hand-off, and sign-off).
- IS 4.2 Retrieval and abstraction of data from medical records are reliably and accurately performed.
- IS 4.3 Data entry processes are timely and accurate and include sufficient edit checks to ensure accurate entry of submitted data in the files for measure reporting.
- IS 4.4 The organization continually assesses data completeness and takes steps to improve performance.
- IS 4.5 The organization regularly monitors vendor performance against expected performance standards.

#### **Rationale**

Medical record review validation ensures that record abstraction performed by or on behalf of the entity meets standards for sound processes and that abstracted data are accurate. Validation includes not only an over-read of abstracted medical records, but also a review of medical record review tools, policies, and procedures related to data entry and transfer, and training materials developed by or on behalf of the entity.

**IS 5.0—Supplemental Data—Capture, Transfer, and Entry**

- IS 5.1 Nonstandard coding schemes are fully documented and mapped to industry standard codes.
- IS 5.2 The organization has effective procedures for submitting measure-relevant information for data entry. Electronic transmissions of data have checking procedures to ensure accuracy.
- IS 5.3 Data entry processes are timely and accurate and include edit checks to ensure accurate entry of submitted data in transaction files.
- IS 5.4 The organization continually assesses data completeness and takes steps to improve performance.
- IS 5.5 The organization regularly monitors vendor performance against expected performance standards.

**Rationale**

Organizations may use a supplemental database to collect and store data, which is then used to augment rates. These databases must be scrutinized closely since they can be standard, nonstandard, or member-reported. The auditor must determine whether sufficient control processes are in place related to data collection, validation of data entry into the database, and use of these data. Mapping documents and file layouts may be reviewed as well, to determine compliance with this standard. Beginning with HEDIS 2014, NCQA provided new validation requirements for auditing supplemental data to ensure that all data included for reporting are complete and have required supporting documentation.

**IS 6.0—Member Call Center Data—Capture, Transfer, and Entry\***

- IS 6.1 Member call center data are reliably and accurately captured.

\*This standard was not applicable to the measures under the scope of the audit.

**IS 7.0—Data Integration—Accurate Reporting, Control Procedures That Support Measure Reporting Integrity**

- IS 7.1 Nonstandard coding schemes are fully documented and mapped to industry standard codes.
- IS 7.2 Data transfers to repository from transaction files are accurate.
- IS 7.3 File consolidations, extracts, and derivations are accurate.
- IS 7.4 The repository structure and formatting are suitable for measures and enable required programming efforts.
- IS 7.5 Report production is managed effectively and operators perform appropriately.
- IS 7.6 Measure reporting software is managed properly with regard to development, methodology, documentation, revision control, and testing.
- IS 7.7 Physical control procedures ensure measure data integrity such as physical security, data access authorization, disaster recovery facilities, and fire protection.
- IS 7.8 The organization regularly monitors vendor performance against expected performance standards.

## Rationale

Calculating rates requires data from multiple sources. The systems used to assemble the data and to make the required calculations should be carefully constructed and tested. The organization's quality assurance practices and backup procedures serve as an organizational infrastructure supporting all information systems. The practices and procedures promote accurate and timely information processing and data protection in the event of a disaster. Data needed to calculate measures are produced by the organization's information systems and may be directly or indirectly affected by IS practices and procedures.

## Appendix B. Audit Results and Rates for Denver Health Medicaid Choice

This appendix presents the audited rates in the IDSS as submitted by **DHMC**. The rates displayed for the *Childhood Immunization Status* and *Immunizations for Adolescents* measures reflected administrative data-only rates and were not the final reported, hybrid rates in **DHMC**'s IDSS.

Table B-1—HEDIS Audit Results		
Audit Finding	Description	Audit Result
<b>For HEDIS Measures</b>		
The rate or numeric result for a HEDIS measure is reportable. The measure was fully or substantially compliant with HEDIS specifications or had only minor deviations that did not significantly bias the reported rate.	Reportable	<b>R</b>
HEDIS specifications were followed but the denominator was too small to report a valid rate.	Denominator <30	<b>NA</b>
The health plan did not offer the health benefits required by the measure.	No Benefit (Benefit Not Offered)	<b>NB</b>
<ol style="list-style-type: none"> <li>1. The health plan calculated the measure but the rate was materially biased, or</li> <li>2. The health plan chose not to report the measure.</li> </ol>	Not Reportable	<b>NR</b>

Table B-2—DHMC’s Rates and Audit Results		
HEDIS Measure	2015 HEDIS Rate	Audit Result
<b>Childhood Immunization Status</b>		
<i>DTaP</i>	77.70%	<b>R</b>
<i>IPV</i>	88.37%	<b>R</b>
<i>MMR</i>	87.73%	<b>R</b>
<i>HiB</i>	87.35%	<b>R</b>
<i>Hepatitis B</i>	90.10%	<b>R</b>
<i>VZV</i>	87.80%	<b>R</b>
<i>Pneumococcal Conjugate</i>	81.34%	<b>R</b>
<i>Hepatitis A</i>	86.45%	<b>R</b>
<i>Rotavirus</i>	69.58%	<b>R</b>
<i>Influenza</i>	63.19%	<b>R</b>
<i>Combination #2</i>	76.81%	<b>R</b>
<i>Combination #3</i>	75.85%	<b>R</b>
<i>Combination #4</i>	75.02%	<b>R</b>
<i>Combination #5</i>	64.98%	<b>R</b>
<i>Combination #6</i>	57.96%	<b>R</b>
<i>Combination #7</i>	64.41%	<b>R</b>
<i>Combination #8</i>	57.64%	<b>R</b>
<i>Combination #9</i>	51.31%	<b>R</b>
<i>Combination #10</i>	51.05%	<b>R</b>
<b>Immunizations for Adolescents</b>		
<i>Meningococcal</i>	80.90%	<b>R</b>
<i>Tdap/Td</i>	82.36%	<b>R</b>
<i>Combination 1</i>	80.27%	<b>R</b>
<b>Well-Child Visits in the First 15 Months of Life</b>		
<i>0 Visits</i>	5.19%	<b>R</b>
<i>6+ Visits</i>	2.36%	<b>R</b>
<b>Well-Child Visits in the Third, Fourth, Fifth, and Sixth Years of Life</b>	60.06%	<b>R</b>
<b>Adolescent Well-Care Visits</b>	39.79%	<b>R</b>
<b>Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents</b>		
<i>BMI Percentile (3–11 Years)</i>	93.14%	<b>R</b>
<i>BMI Percentile (12–17 Years)</i>	93.28%	<b>R</b>
<i>BMI Percentile (Total)</i>	93.19%	<b>R</b>
<i>Counseling for Nutrition (3–11 Years)</i>	79.42%	<b>R</b>
<i>Counseling for Nutrition (12–17 Years)</i>	74.63%	<b>R</b>
<i>Counseling for Nutrition (Total)</i>	77.86%	<b>R</b>
<i>Counseling for Physical Activity (3–11 Years)</i>	56.32%	<b>R</b>
<i>Counseling for Physical Activity (12–17 Years)</i>	73.88%	<b>R</b>
<i>Counseling for Physical Activity (Total)</i>	62.04%	<b>R</b>

Table B-2—DHMC’s Rates and Audit Results		
HEDIS Measure	2015 HEDIS Rate	Audit Result
<i>Appropriate Testing for Children With Pharyngitis</i>	72.78%	<i>R</i>
<i>Appropriate Treatment for Children With Upper Respiratory Infection</i>	98.03%	<i>R</i>
<b>Children’s and Adolescents’ Access to Primary Care Practitioners</b>		
12–24 Months	91.12%	<i>R</i>
25 Months–6 Years	73.42%	<i>R</i>
7–11 Years	79.27%	<i>R</i>
12–19 Years	80.17%	<i>R</i>
<b>Prenatal and Postpartum Care</b>		
Timeliness of Prenatal Care	84.67%	<i>R</i>
Postpartum Care	60.58%	<i>R</i>
<b>Adults’ Access to Preventive/Ambulatory Health Services</b>		
20–44 Years	64.39%	<i>R</i>
45–64 Years	75.85%	<i>R</i>
65+ Years	75.56%	<i>R</i>
Total	69.07%	<i>R</i>
<b>Controlling High Blood Pressure</b>		
<b>Comprehensive Diabetes Care (excluding HbA1c &lt;7 indicator)</b>		
HbA1c Testing	85.64%	<i>R</i>
HbA1c Poor Control (>9.0%)	38.44%	<i>R</i>
HbA1c Control (<8.0%)	50.85%	<i>R</i>
Eye Exam	47.93%	<i>R</i>
Medical Attention for Nephropathy	79.32%	<i>R</i>
Blood Pressure Controlled <140/90 mm Hg	69.10%	<i>R</i>
<b>Annual Monitoring for Patients on Persistent Medications</b>		
ACE Inhibitors or ARBs	85.12%	<i>R</i>
Digoxin	NA	NA
Diuretics	86.06%	<i>R</i>
Total	85.56%	<i>R</i>
<b>Use of Imaging Studies for Low Back Pain</b>		
<b>Avoidance of Antibiotic Treatment in Adults With Acute Bronchitis</b>		
<b>Pharmacotherapy Management of COPD Exacerbation</b>		
Systemic corticosteroid	52.38%	<i>R</i>
Bronchodilator	65.08%	<i>R</i>
<b>Use of Appropriate Medications for People With Asthma</b>		
5–11 Years	88.18%	<i>R</i>
12–18 Years	87.94%	<i>R</i>
19–50 Years	73.33%	<i>R</i>
51–64 Years	47.89%	<i>R</i>
Total	79.12%	<i>R</i>

Table B-2—DHMC’s Rates and Audit Results		
HEDIS Measure	2015 HEDIS Rate	Audit Result
<b><i>Asthma Medication Ratio</i></b>		
<i>5–11 Years</i>	40.21%	<b><i>R</i></b>
<i>12–18 Years</i>	28.68%	<b><i>R</i></b>
<i>19–50 Years</i>	24.66%	<b><i>R</i></b>
<i>51–64 Years</i>	15.49%	<b><i>R</i></b>
<i>Total</i>	29.98%	<b><i>R</i></b>
<b><i>Medication Management for People With Asthma</i></b>		
<b><i>Medication Compliance 50%</i></b>		
<i>5–11 Years</i>	34.08%	<b><i>R</i></b>
<i>12–18 Years</i>	27.42%	<b><i>R</i></b>
<i>19–50 Years</i>	47.27%	<b><i>R</i></b>
<i>51–64 Years</i>	64.71%	<b><i>R</i></b>
<i>Total</i>	37.81%	<b><i>R</i></b>
<b><i>Medication Compliance 75%</i></b>		
<i>5–11 Years</i>	9.50%	<b><i>R</i></b>
<i>12–18 Years</i>	11.29%	<b><i>R</i></b>
<i>19–50 Years</i>	17.27%	<b><i>R</i></b>
<i>51–64 Years</i>	41.18%	<b><i>R</i></b>
<i>Total</i>	14.32%	<b><i>R</i></b>
<b><i>Use of Spirometry Testing in the Assessment and Diagnosis of COPD</i></b>	31.16%	<b><i>R</i></b>
<b><i>Disease Modifying Anti-Rheumatic Drug Therapy in Rheumatoid Arthritis</i></b>	64.63%	<b><i>R</i></b>
<b><i>Chlamydia Screening in Women</i></b>		
<i>16–20 Years</i>	70.13%	<b><i>R</i></b>
<i>21–24 Years</i>	66.56%	<b><i>R</i></b>
<i>Total</i>	68.60%	<b><i>R</i></b>
<b><i>Breast Cancer Screening</i></b>	53.09%	<b><i>R</i></b>
<b><i>Cervical Cancer Screening</i></b>	63.02%	<b><i>R</i></b>
<b><i>Non-Recommended Cervical Cancer Screening in Adolescent Females</i></b>	0.21%	<b><i>R</i></b>
<b><i>Adult BMI Assessment</i></b>	88.08%	<b><i>R</i></b>
<b><i>Anti-depressant Medication Management</i></b>		
<i>Effective Acute Phase Treatment</i>	43.65%	<b><i>R</i></b>
<i>Effective Continuation Phase Treatment</i>	29.62%	<b><i>R</i></b>
<b><i>Follow-up Care for Children Prescribed ADHD Medication</i></b>		
<i>Initiation Phase</i>	29.20%	<b><i>R</i></b>
<i>Continuation and Maintenance Phase</i>	NA	NA
<b><i>Follow-up After Hospitalization for Mental Illness</i></b>		
<i>30-Day Follow-up</i>	<b><i>NB</i></b>	<b><i>NB</i></b>
<i>7-Day Follow-up</i>	<b><i>NB</i></b>	<b><i>NB</i></b>
<b><i>Adherence to Antipsychotic Medications for Individuals With Schizophrenia</i></b>	59.73%	<b><i>R</i></b>

Table B-2—DHMC’s Rates and Audit Results		
HEDIS Measure	2015 HEDIS Rate	Audit Result
<i>Diabetes Screening for People With Schizophrenia or Bipolar Disorder Who Are Using Antipsychotic Medications</i>	87.66%	<b>R</b>
<i>Diabetes Monitoring for People With Diabetes and Schizophrenia</i>	60.61%	<b>R</b>
<i>Cardiovascular Monitoring for People With Cardiovascular Disease and Schizophrenia</i>	NA	NA
<b>Ambulatory Care: Emergency Department Visits and Outpatient Visits</b>		
<i>Outpatient Visits per 1,000 MM</i>	<b>NR</b>	<b>NR</b>
<i>ED Visits per 1,000 MM</i>	<b>NR</b>	<b>NR</b>
<b>Inpatient Utilization—General Hospital/Acute Care</b>		
<i>Discharges per 1,000 MM (Total Inpatient)</i>	<b>NR</b>	<b>NR</b>
<i>Days per 1,000 MM (Total Inpatient)</i>	<b>NR</b>	<b>NR</b>
<i>Average Length of Stay (Total Inpatient)</i>	<b>NR</b>	<b>NR</b>
<i>Discharges per 1,000 MM (Medicine)</i>	<b>NR</b>	<b>NR</b>
<i>Days per 1,000 MM (Medicine)</i>	<b>NR</b>	<b>NR</b>
<i>Average Length of Stay (Medicine)</i>	<b>NR</b>	<b>NR</b>
<i>Discharges per 1,000 MM (Surgery)</i>	<b>NR</b>	<b>NR</b>
<i>Days per 1,000 MM (Surgery)</i>	<b>NR</b>	<b>NR</b>
<i>Average Length of Stay (Surgery)</i>	<b>NR</b>	<b>NR</b>
<i>Discharges per 1,000 MM (Maternity)</i>	<b>NR</b>	<b>NR</b>
<i>Days per 1,000 MM (Maternity)</i>	<b>NR</b>	<b>NR</b>
<i>Average Length of Stay (Maternity)</i>	<b>NR</b>	<b>NR</b>
<b>Identification of Alcohol and Other Drug Services</b>		
<i>Any Service</i>	4.06%	<b>R</b>
<i>Inpatient</i>	1.09%	<b>R</b>
<i>Intensive Outpatient or Partial Hospitalization</i>	0.00%	<b>R</b>
<i>Outpatient or ED</i>	3.55%	<b>R</b>
<b>Mental Health Utilization</b>		
<i>Any Service</i>	<b>NB</b>	<b>NB</b>
<i>Inpatient</i>	<b>NB</b>	<b>NB</b>
<i>Intensive Outpatient or Partial Hospitalization</i>	<b>NB</b>	<b>NB</b>
<i>Outpatient or ED</i>	<b>NB</b>	<b>NB</b>
<b>Antibiotic Utilization</b>		
<i>Average Scrips for PMPY for Antibiotics (All Ages)</i>	0.30	<b>R</b>
<i>Averages Days Supplied per Antibiotic Scrip (All Ages)</i>	9.50	<b>R</b>
<i>Average Scrips PMPY for Antibiotics of Concern (All Ages)</i>	0.09	<b>R</b>
<i>Percentage of Antibiotics of Concern of All Antibiotic Scrips (All Ages)</i>	28.02%	<b>R</b>

Table B-2—DHMC’s Rates and Audit Results		
HEDIS Measure	2015 HEDIS Rate	Audit Result
<b><i>Frequency of Selected Procedures (Procedures per 1,000 MM)</i></b>		
<i>Bariatric Weight Loss Surgery (0–19 Male)</i>	0.00	<b>R</b>
<i>Bariatric Weight Loss Surgery (0–19 Female)</i>	0.00	<b>R</b>
<i>Bariatric Weight Loss Surgery (20–44 Male)</i>	0.00	<b>R</b>
<i>Bariatric Weight Loss Surgery (20–44 Female)</i>	0.03	<b>R</b>
<i>Bariatric Weight Loss Surgery (45–64 Male)</i>	0.00	<b>R</b>
<i>Bariatric Weight Loss Surgery (45–64 Female)</i>	0.08	<b>R</b>
<i>Tonsillectomy (0–9 Male &amp; Female)</i>	0.29	<b>R</b>
<i>Tonsillectomy (10–19 Male &amp; Female)</i>	0.12	<b>R</b>
<i>Hysterectomy, Abdominal (15–44 Female)</i>	0.06	<b>R</b>
<i>Hysterectomy, Abdominal (45–64 Female)</i>	0.31	<b>R</b>
<i>Hysterectomy, Vaginal (15–44 Female)</i>	0.03	<b>R</b>
<i>Hysterectomy, Vaginal (45–64 Female)</i>	0.08	<b>R</b>
<i>Cholecystectomy, Open (30–64 Male)</i>	0.12	<b>R</b>
<i>Cholecystectomy, Open (15–44 Female)</i>	0.02	<b>R</b>
<i>Cholecystectomy, Open (45–64 Female)</i>	0.03	<b>R</b>
<i>Cholecystectomy (Laparoscopic) (30–64 Male)</i>	0.10	<b>R</b>
<i>Cholecystectomy (Laparoscopic) (15–44 Female)</i>	0.57	<b>R</b>
<i>Cholecystectomy (Laparoscopic) (45–64 Female)</i>	0.57	<b>R</b>
<i>Back Surgery (20–44 Male)</i>	0.13	<b>R</b>
<i>Back Surgery (20–44 Female)</i>	0.06	<b>R</b>
<i>Back Surgery (45–64 Male)</i>	0.47	<b>R</b>
<i>Back Surgery (45–64 Female)</i>	0.34	<b>R</b>
<i>Mastectomy (15–44 Female)</i>	0.00	<b>R</b>
<i>Mastectomy (45–64 Female)</i>	0.05	<b>R</b>
<i>Lumpectomy (15–44 Female)</i>	0.07	<b>R</b>
<i>Lumpectomy (45–64 Female)</i>	0.23	<b>R</b>