COLORADO

Department of Health Care Policy & Financing

Fiscal Year 2024–2025 412 Encounter Data Validation Over-Read Report

for Rocky Mountain Health Plans Medicaid Prime

June 2025

HSAG HEALTH SERVICES ADVISORY GROUP

Contents

1. Executive Summary

In fiscal year (FY) 2024–2025, the Colorado Department of Health Care Policy & Financing (the Department) contracted Health Services Advisory Group, Inc. (HSAG) to conduct the encounter data validation (EDV) study for the Department's contracted limited managed care capitated initiative plans (Medicaid managed care organizations [Medicaid MCOs]). The purpose of the study was to assess the Medicaid MCOs' independent data validation capacity by having the Medicaid MCOs conduct a medical record review. The Medicaid MCOs validated a sample of physical health encounters against the corresponding medical record documentation. HSAG then over-read a random sample of the validated records to calculate and report on the validation agreement of key data elements.

Table 1-1 presents HSAG's aggregate over-read results and Rocky Mountain Health Plans Medicaid Prime's (RMHP Prime's) self-reported service coding accuracy results by encounter type. Results from HSAG's FY 2024–2025 MCO 412 over-read suggest a high level of confidence that RMHP Prime's independent validation findings accurately reflect its encounter data quality. HSAG's reviewers agreed with RMHP Prime's reviewers on 100 percent of the data elements for outpatient services, professional services, and federally qualified health center (FQHC) services. HSAG's reviewers also agreed with 99.2 percent (119 of 120) of the data elements for inpatient services. Among the four encounter types, the percentage of accuracy for the self-reported data elements was highest among the FQHC (98.4 percent) and inpatient (94.4 percent) encounter types. The self-reported accuracy was lowest among professional encounters (87.8 percent). Based on the self-reported accuracy for the professional encounters, none of the data elements were supported by the medical records more than 89.3 percent of the time. Based on these results, HSAG encourages ongoing quality improvement efforts to increase service coding accuracy.

Table 1-1—FY 2024–2025 HSAG Over-Read Results and Self-Reported Element Accuracy Results, by Encounter Type

Encounter Type	Percentage of Over-Read Cases With Complete Agreement	Percentage of Over-Read Data Elements With Agreement[1]	Percentage of Accuracy for Self-Reported Data Elements[1]
Inpatient	95.0%	99.2%	94.4%
Outpatient	100.0%	100.0%	91.5%
Professional	100.0%	100.0%	87.8%
FQHC	100.0%	100.0%	98.4%
Total	**98.8%**	**99.8%**	**93.0%**

[1] HSAG reviewed six data elements for inpatient cases and five data elements for outpatient, professional, and FQHC cases.

2. Overview

In FY 2024–2025, the Department contracted HSAG to conduct an EDV among the Department's Medicaid MCOs as an optional external quality review (EQR) activity under the Centers for Medicare & Medicaid Services (CMS) EQR *Protocol 5. Validation of Encounter Data Reported by the Medicaid and CHIP [Children's Health Insurance Program] Managed Care Plan: An Optional EQR-Related Activity*, February 2023.[1]

The study assessed the Medicaid MCOs' data validation capacity among physical health encounters submitted to the Department by each Medicaid MCO. The study evaluated each Medicaid MCO's compliance with State standards regarding encounter data submission, as well as the consistency and accuracy with which each Medicaid MCO validated encounter data using medical record reviews.

To facilitate this study, the Department randomly selected 103 final, adjudicated physical health encounters from four distinct service categories (i.e., a total of 412 encounters) to be independently validated by RMHP Prime. These service categories included encounters with services rendered in FQHCs, as well as in inpatient, outpatient, and professional settings. RMHP Prime submitted its internal validation results and an Encounter Data Quality Report to HSAG and the Department.

To further improve the quality of encounter data submitted by RMHP Prime, the Department developed and implemented the *Annual MCO Encounter Data Quality Review Guidelines* (guidelines). The guidelines include file format and reporting requirements, as well as a specific timeline to guide RMHP Prime in conducting its internal validation and using the results to prepare the Encounter Data Quality Report.

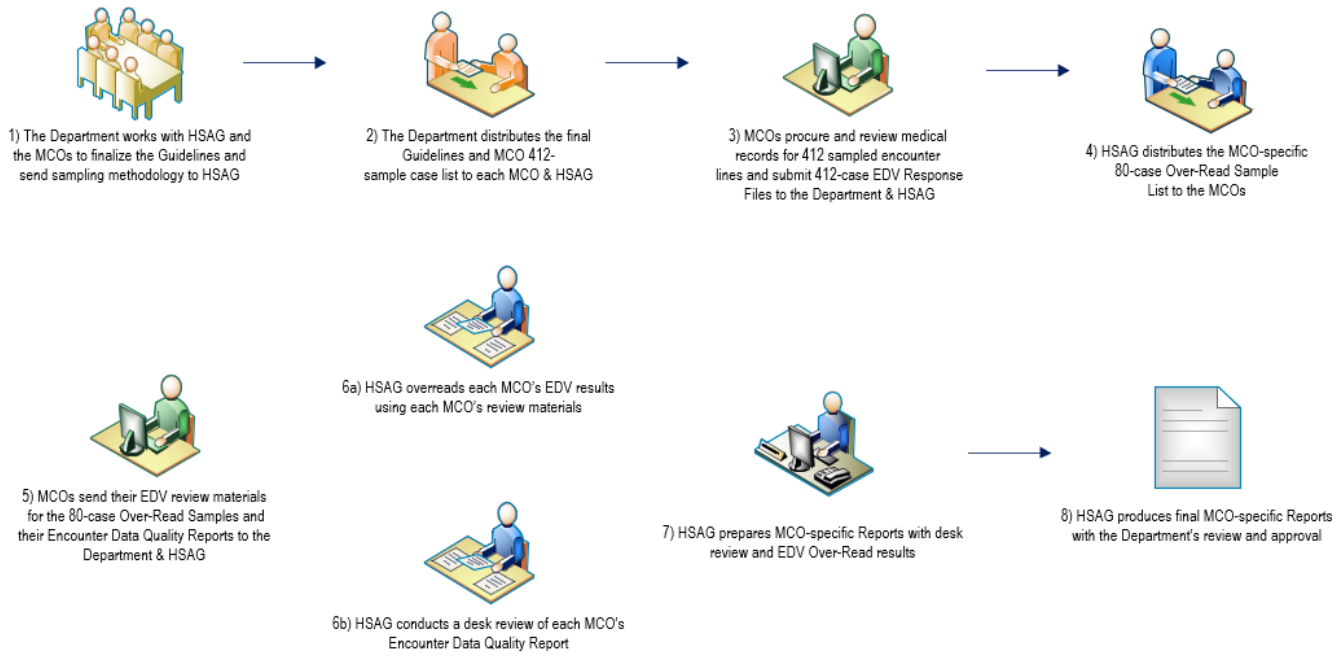
The Department contracted HSAG to evaluate RMHP Prime's capacity to internally validate encounters through an independent assessment of the Encounter Data Quality Report submitted by RMHP Prime. Specifically, the Department requested that HSAG complete the following tasks during FY 2024–2025:

1. Conduct a desk review of RMHP Prime's validation process, including any process documentation submitted by RMHP Prime.
2. Conduct a review of medical records for cases randomly selected from each service category's 103 sample list, which was generated by the Department.
3. Produce a report for RMHP Prime, containing findings specific to each service category, including a statement regarding HSAG's assessment of the accuracy of RMHP Prime's internal validation results.
4. Generate disagreement case lists by encounter type based on abstraction results.

[1] Department of Health and Human Services, Centers for Medicare & Medicaid Services. *Protocol 5. Validation of Encounter Data Reported by the Medicaid and CHIP Managed Care Plan: An Optional EQR-Related Activity*, February 2023. Available at: https://www.medicaid.gov/medicaid/quality-of-care/downloads/2023-eqr-protocols.pdf. Accessed on: June 4, 2025.

Figure 2-1 diagrams the high-level steps involved in HSAG's 412 EDV over-read process, beginning in the upper left corner of the image. HSAG's FY 2024–2025 412 EDV methodology is presented in Appendix A.

Figure 2-1—FY 2024–2025 412 EDV Over-Read Process



3. Encounter Data Validation Over-Read Results

HSAG compiled the FY 2024–2025 412 EDV findings based on three tasks: a desk review of the Department's sampling methodology, a desk review of RMHP Prime's internal EDV methodology, and an over-read validation of a sample of RMHP Prime's 412 EDV medical record review cases. The remainder of this section describes the results for these tasks.

Desk Review of the Department's Sampling Methodology

The Department provided HSAG with a description of the process used to generate a random sample of RMHP Prime's encounters. The Department's documentation listed the criteria by which it assigned encounters to service categories and noted that the sample is restricted to final, adjudicated encounters with dates of service from July 1, 2023, through June 30, 2024, and paid dates between July 1, 2023, and September 30, 2024. The Department also detailed the random sampling process for identifying 103 unique encounters per encounter type and randomly selecting a single encounter line; the Department defined encounters using the member identification data field. The Department did not include any information documenting the steps taken to verify that the correct sample frame was chosen, or to validate that the final sample was representative of the sampling frame. However, the Department did perform checks to make sure there were not any duplicate Medicaid IDs selected.

HSAG reviewed the sample list provided by the Department, the sampling description, and the portion of sampling code that the Department reported using to generate the sample. The Department created the sample by identifying a service category and selecting 70 percent of the claim lines within that category. Next, a random value was assigned to each line and the claim lines were sorted based on the random value. The claim lines were then deduplicated and the top 103 remaining lines were selected to create the sample. The Department repeated these steps for each of the four service categories.

During FY 2024-25, the Department continued to transition its encounter data process to a new Medicaid Management Information System (MMIS), interChange; RMHP Prime will submit encounter data directly into the MMIS. For validation purposes, RMHP Prime will continue to submit encounter data flat files to the Department in parallel with MMIS submissions for a period of time determined by the Department. This change to the encounter data process will require enhanced data monitoring by the Department and RMHP Prime to ensure encounter data timeliness and accuracy as well as comparability between encounter data provided by RMHP Prime under the new and legacy systems. The flat files submitted by RMHP Prime will be used as the data source until the transition is complete.

Desk Review of RMHP Prime's Internal Validation Methodology

To provide context for RMHP Prime's service coding accuracy results, the Department requested RMHP Prime's internal validation methodology documentation as a component of the Encounter Data Quality Report. HSAG's review of RMHP Prime's internal validation methodology documentation verified the presence of:

- A description of the record procurement process.
- Information on the development and use of the EDV data collection tool, a Microsoft Excel spreadsheet shared by RMHP Prime's reviewers, and a brief description of the instructions provided to the reviewers. The validation tool contained internal rules and logic associated with validation criteria.
- A description of the EDV staff members, including qualifications.
- A list of the coding guidelines referenced during RMHP Prime's abstraction process.
- A brief description of the training provided to the EDV staff members.
- The interrater reliability (IRR) testing process for validation of staff members.

HSAG also reviewed RMHP Prime's self-reported service coding accuracy summary results containing RMHP Prime's validation results by encounter type. This information was submitted as part of RMHP Prime's Encounter Data Quality Report.

Table 3-1 presents RMHP Prime's self-reported service coding accuracy for the inpatient EDV cases. The accuracy rates for these data elements were the second highest among all four encounter types. The *Through Date, Diagnosis Code, Surgical Procedure Code,* and *Discharge Status* data elements had the highest rates of being supported by the medical record documentation (all at 95.1 percent), while the *Date of Service* data element had the lowest rate of being supported by the medical record documentation (91.3 percent).

Table 3-1—RMHP Prime's Self-Reported Service Coding Accuracy Summary for Inpatient Services

Data Element	Numerator	Excluded/ Does Not Apply	Total Denominator	Modified Denominator	Overall Percent	Modified Percent
Date of Service (Service_Date)	94	0	103	103	91.3%	91.3%
Through Date (Thru_Date)	98	0	103	103	95.1%	95.1%
Diagnosis Code (Diag_Code_1)	98	0	103	103	95.1%	95.1%
Surgical Procedure Code (SurgicalProcedure1)	98	0	103	103	95.1%	95.1%
Discharge Status (Discharge_Status)	98	0	103	103	95.1%	95.1%

Table 3-2 presents RMHP Prime's self-reported service coding accuracy for the outpatient EDV cases. The *Date of Service* and *Diagnosis Code* data elements had the highest rates of being supported by the medical record documentation (both at 94.2 percent), while the *Procedure Code* and *Units* data elements had the lowest rates of being supported by the medical record documentation (both at 89.3 percent).

Table 3-2—RMHP Prime's Self-Reported Service Coding Accuracy Summary for Outpatient Services

Data Element	Numerator	Excluded/ Does Not Apply	Total Denominator	Modified Denominator	Overall Percent	Modified Percent
Date of Service (Service_Date)	97	0	103	103	94.2%	94.2%
Diagnosis Code (Diag_Code_1)	97	0	103	103	94.2%	94.2%
Procedure Code (Proc_Code)	92	0	103	103	89.3%	89.3%
Procedure Code Modifier (Proc_Code_Modifier)	93	0	103	103	90.3%	90.3%
Units (Quantity)	92	0	103	103	89.3%	89.3%

Table 3-3 presents RMHP Prime's self-reported service coding accuracy for the professional EDV cases. The accuracy rates for these data elements were the lowest among all four encounter types. The *Procedure Code Modifier* and *Units* data elements had the highest rates of being supported by the medical record documentation (both at 89.3 percent), while the *Diagnosis Code* data element had the lowest rate of being supported by the medical record documentation (84.5 percent). The rate of medical record support for the *Diagnosis Code* data element was the lowest among all four encounter types.

Table 3-3—RMHP Prime's Self-Reported Service Coding Accuracy Summary for Professional Services

Data Element	Numerator	Excluded/ Does Not Apply	Total Denominator	Modified Denominator	Overall Percent	Modified Percent
Date of Service (Service_Date)	91	0	103	103	88.3%	88.3%
Diagnosis Code (Diag_Code_1)	87	0	103	103	84.5%	84.5%
Procedure Code (Proc_Code)	90	0	103	103	87.4%	87.4%
Procedure Code Modifier (Proc_Code_Modifier)	92	0	103	103	89.3%	89.3%
Units (Quantity)	92	0	103	103	89.3%	89.3%

Overall, RMHP Prime's reviewers reported that the reviewed data elements for FQHC services had the highest rates of being supported by the medical record documentation compared to the requirements among the other encounter types. Table 3-4 presents RMHP Prime's self-reported service coding accuracy for the FQHC EDV cases. The *Date of Service*, *Procedure Code Modifier*, and *Units* data elements had the highest rates of being supported by the medical record documentation (all at 99.0 percent), while the *Procedure Code* data element had the lowest rate of being supported by the medical record documentation (97.1 percent).

Table 3-4—RMHP Prime's Self-Reported Service Coding Accuracy Summary for FQHC Services

Data Element	Numerator	Excluded/ Does Not Apply	Total Denominator	Modified Denominator	Overall Percent	Modified Percent
Date of Service (Service_Date)	102	0	103	103	99.0%	99.0%
Diagnosis Code (Diag_Code_1)	101	0	103	103	98.1%	98.1%
Procedure Code (Proc_Code)	100	0	103	103	97.1%	97.1%
Procedure Code Modifier (Proc_Code_Modifier)	102	0	103	103	99.0%	99.0%
Units (Quantity)	102	0	103	103	99.0%	99.0%

Over-Read of Sample Cases by Encounter Type

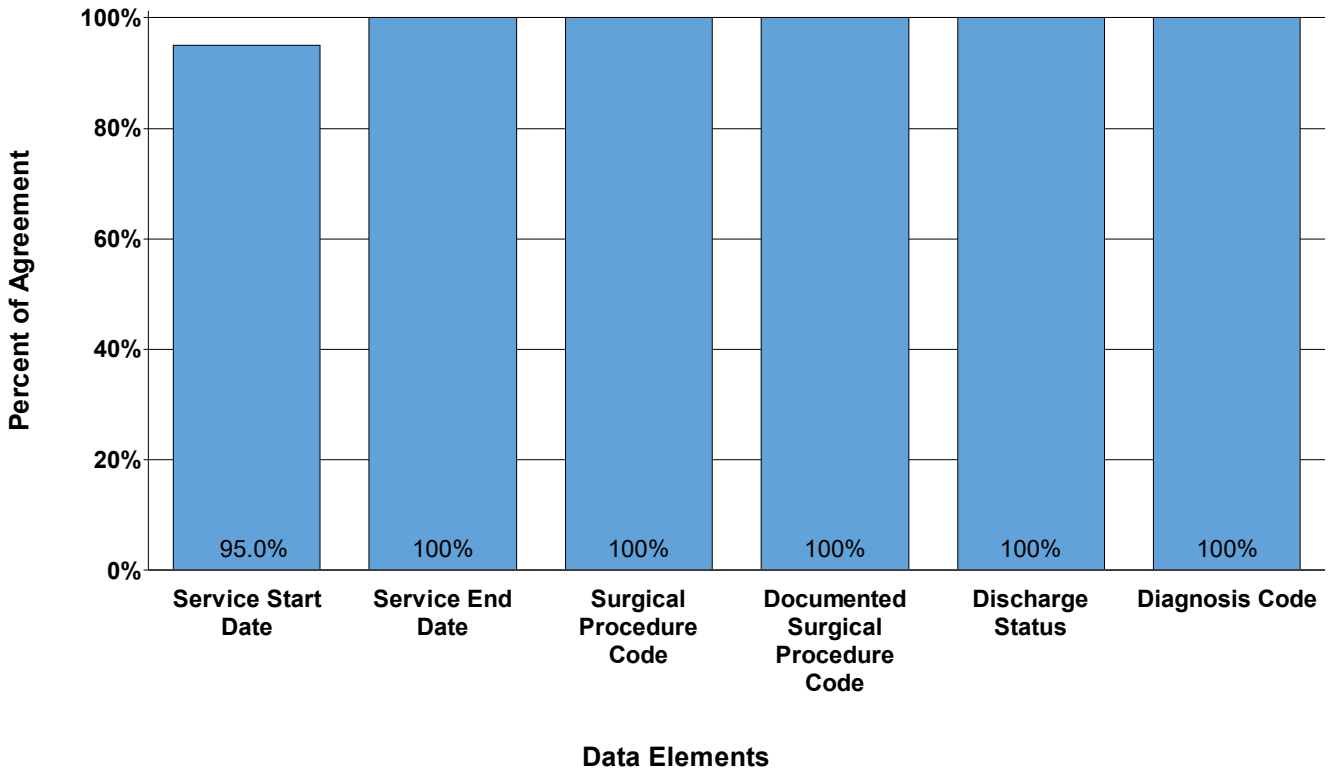
The EDV response file submitted to HSAG and the Department by RMHP Prime contained all required fields and aligned with the EDV response file layout required by the Department and outlined in the guidelines. The EDV response data layout was defined in the guidelines and is presented in Appendix A. Methodology of this report. Additionally, RMHP Prime reported that it was able to procure medical records for 76 of the 80 sampled over-read cases.

The remainder of this section details HSAG's over-read findings by encounter type.

Inpatient Cases

Figure 3-1 presents the aggregate results from HSAG's over-read of the 20 inpatient cases. Agreement values ranged from 95.0 percent to 100 percent for individual data elements, where 100 percent represents complete agreement between RMHP Prime's internal validation results and HSAG's over-read results, and 0.0 percent represents complete disagreement.

Figure 3-1—Aggregated Percent of Agreement Between HSAG's Over-Read and RMHP Prime's Internal EDV Findings, by Data Element for Inpatient Services

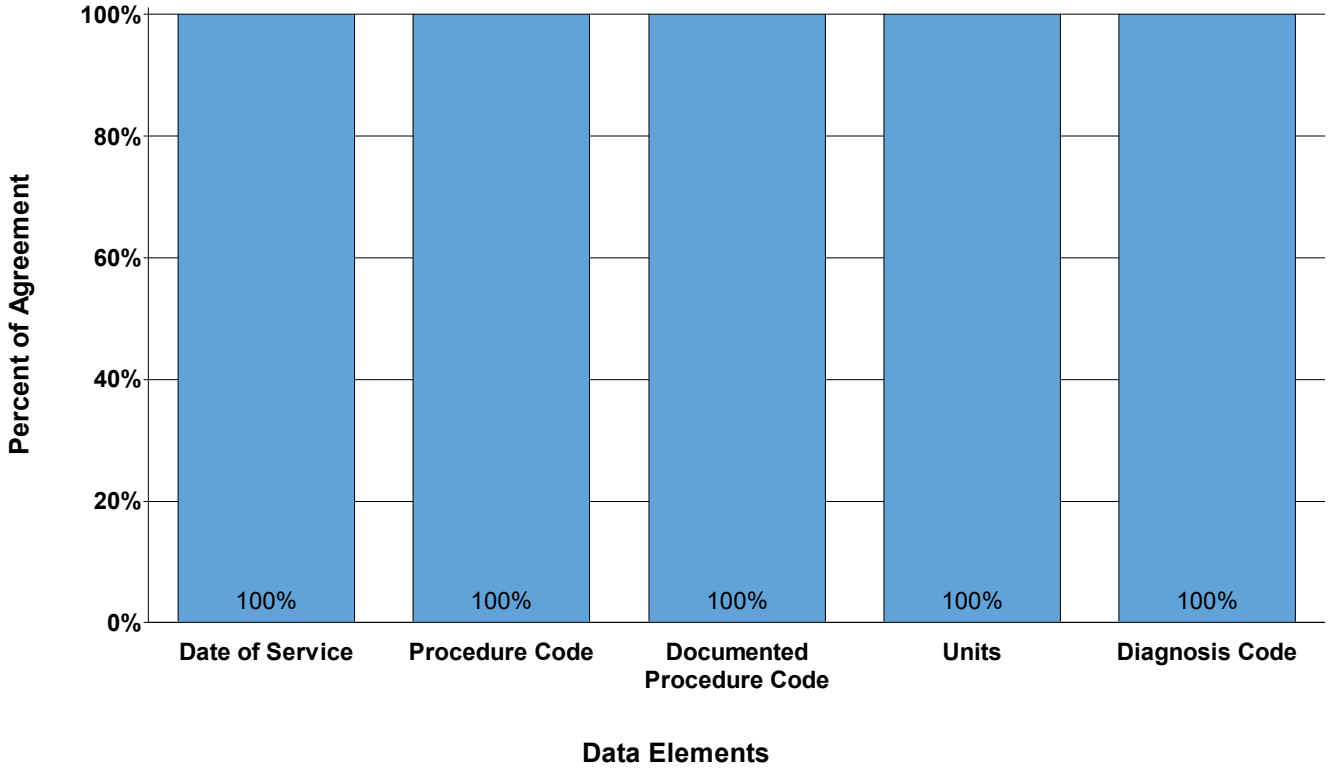


Complete agreement occurred when HSAG's over-read results indicated agreement with RMHP Prime's validation response for each of the six individual data elements assessed for a sampled inpatient case. Among the 20 sampled inpatient cases, HSAG's over-read results demonstrated complete agreement with all data elements in 19 cases, a 95.0 percent aggregate agreement rate. The highest agreement rates (each at 100 percent) were observed for the *Service End Date*, *Surgical Procedure Code*, *Documented Surgical Procedure Code*, *Discharge Status,* and *Diagnosis Code* data elements. The *Service Start Date* data element had an agreement rate of 95.0 percent.

Outpatient Cases

Figure 3-2 presents the aggregate results from HSAG's over-read of the 20 outpatient cases. Agreement values were 100 percent for each individual data element, where 100 percent represents complete agreement between RMHP Prime's internal validation results and HSAG's over-read results, and 0.0 percent represents complete disagreement.

Figure 3-2—Aggregated Percent of Agreement Between HSAG's Over-Read and RMHP Prime's Internal EDV Findings, by Data Element for Outpatient Services



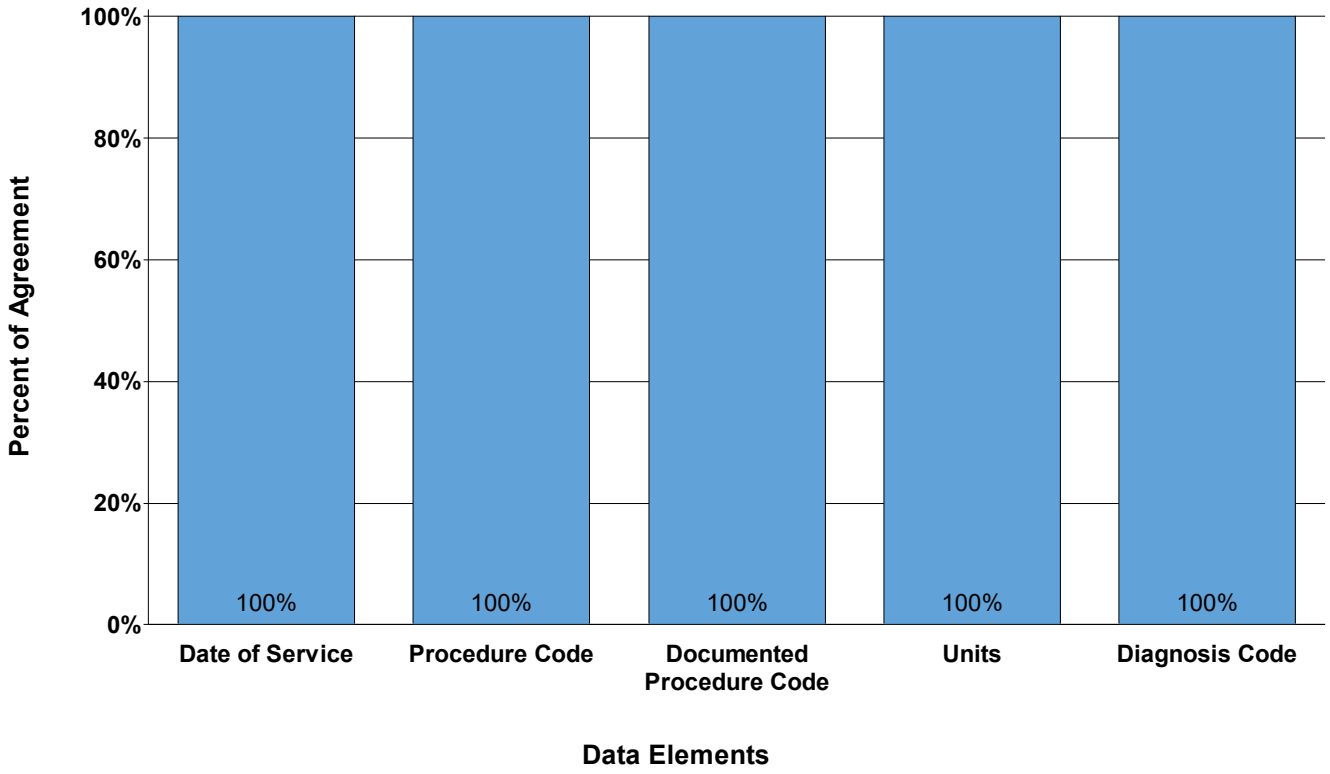
Complete agreement occurred when HSAG's over-read results indicated agreement with RMHP Prime's validation response for each of the five individual data elements assessed for a sampled outpatient case. Among the 20 sampled outpatient cases, HSAG's over-read results demonstrated complete agreement with all data elements in 20 cases, a 100 percent aggregate agreement rate. HSAG's over-read results

agreed with RMHP Prime's responses for all cases (i.e., complete agreement) for the *Date of Service*, *Procedure Code*, *Documented Procedure Code*, *Units*, and *Diagnosis Code* data elements.

Professional Cases

Figure 3-3 presents the aggregate results from HSAG's over-read of the 20 professional cases. Agreement values were 100 percent for individual data elements, where 100 percent represents complete agreement between RMHP Prime's internal validation results and HSAG's over-read results, and 0.0 percent represents complete disagreement.

Figure 3-3—Aggregated Percent of Agreement Between HSAG's Over-Read and RMHP Prime's Internal EDV Findings, by Data Element for Professional Services

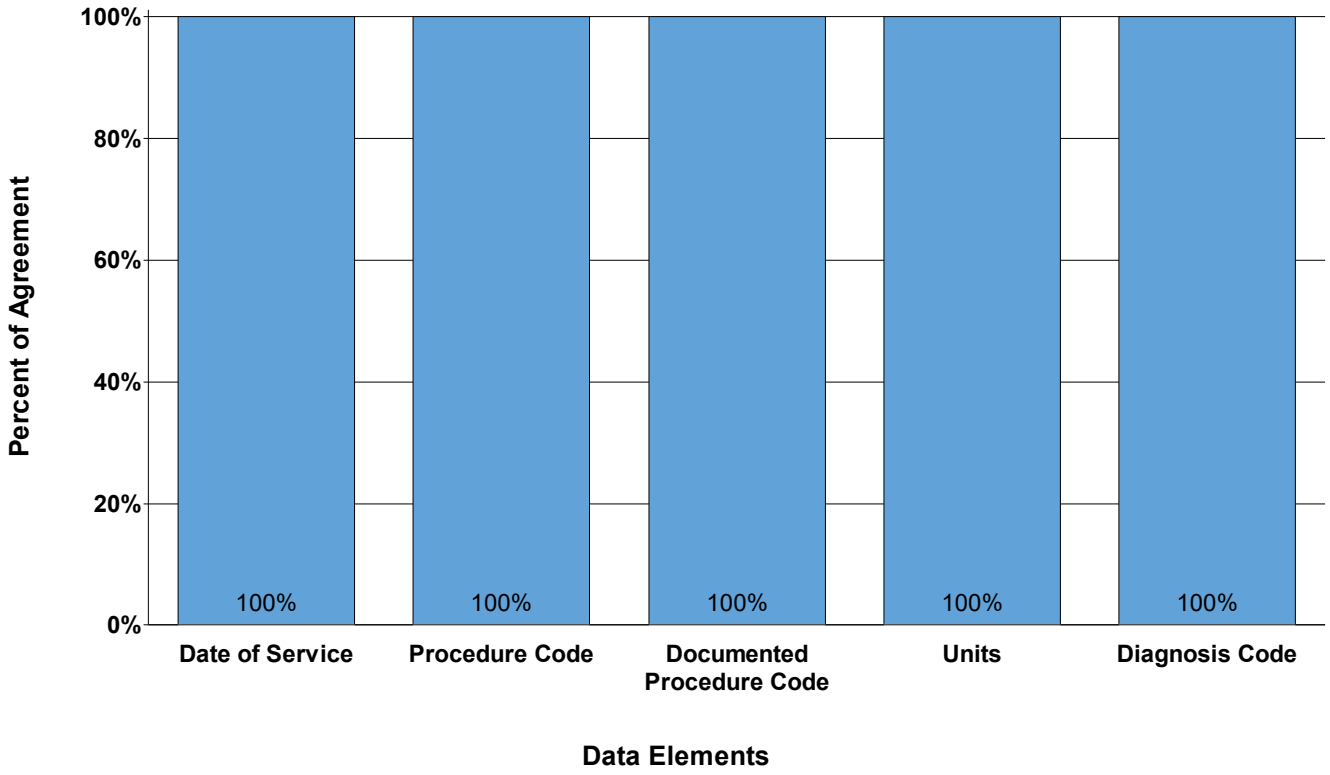


Complete agreement occurred when HSAG's over-read results indicated agreement with RMHP Prime's validation response for each of the five individual data elements assessed for a sampled professional case. Among the 20 sampled professional cases, HSAG's over-read results demonstrated complete agreement with all data elements in 20 cases, a 100 percent aggregate agreement rate. HSAG's over-read results agreed with RMHP Prime's responses for all cases (i.e., complete agreement) for the *Date of Service*, *Procedure Code*, *Documented Procedure Code*, *Units*, and *Diagnosis Code* data elements.

FQHC Cases

Figure 3-4 presents the aggregate results from HSAG's over-read of the 20 FQHC cases. Agreement values were 100 percent for each individual data element, where 100 percent represents complete agreement between RMHP Prime's internal validation results and HSAG's over-read results, and 0.0 percent represents complete disagreement.

Figure 3-4—Aggregated Percent of Agreement Between HSAG's Over-Read and RMHP Prime's Internal EDV Findings, by Data Element for FQHC Services



Complete agreement occurred when HSAG's over-read results indicated agreement with RMHP Prime's validation response for each of the five individual data elements assessed for a sampled FQHC case. Among the 20 sampled FQHC cases, HSAG's over-read results demonstrated complete agreement with all data elements in 20 cases, a 100 percent aggregate agreement rate. HSAG's over-read results agreed with RMHP Prime's responses for all cases (i.e., complete agreement) for the *Date of Service*, *Procedure Code*, *Documented Procedure Code*, *Units*, and *Diagnosis Code* data elements.

4. Discussion

Conclusions

The annual study was designed to assess the consistency and accuracy with which each Medicaid MCO validates its physical health encounter data using medical record reviews. RMHP Prime's EDV service coding accuracy results present a range of accuracy rates (i.e., medical record support of the data element) within and between the different encounter types. For example, the five data elements reviewed for inpatient services and FQHC services all had accuracy rates greater than 90.0 percent. However, among the professional services, none of the data elements had an accuracy rate greater than 89.3 percent.

Results from HSAG's FY 2024–2025 412 EDV over-read (summarized in Table 1-1) suggest a high level of confidence that RMHP Prime's independent validation findings accurately reflect its encounter data quality. Overall, the FY 2024–2025 results indicate complete case-level agreement with RMHP Prime's internal validation results for 98.8 percent of cases and an element-level agreement rate of 99.8 percent.

HSAG also reported the aggregated percent of agreement between HSAG's over-read results and RMHP Prime's internal EDV findings, by encounter type and data element. Among inpatient services, the percent of agreement ranged from 95.0 percent (*Service Start Date*) to 100 percent (*Service End Date*, *Surgical Procedure Code*, *Documented Surgical Procedure Code*, *Discharge Status*, and *Diagnosis Code*). The outpatient, professional, and FQHC cases all had 100 percent agreement for all five data elements—*Date of Service*, *Procedure Code*, *Documented Procedure Code*, *Units*, and *Diagnosis Code*.

The service coding accuracy results show that among the sampled professional cases, approximately 15 percent of the diagnosis codes and approximately 13 percent of the procedure codes were not supported by the medical record documentation. HSAG's over-read of 80 sampled cases found that HSAG agreed with 99.8 percent of RMHP Prime's data element results. The study documentation, provided by the Department and RMHP Prime, show that all parties followed the project guidelines, and HSAG found no systematic errors in its review of RMHP Prime's processes. The high level of agreement and the well-documented and administered EDV suggest that the data in the Encounter Data Quality Report are valid. This points to the completeness and accuracy of encounter data as potential targets for root cause analysis.

Analytic Considerations

Various factors associated with this study can affect the validity or interpretation of the data presented in this report. The following analytic points should be considered when reviewing this report:

- The Department samples 412 encounters to ensure sufficient statistical power to draw reliable conclusions; however, including multiple service categories could reduce the statistical precision and

make it challenging to generalize results across the different service categories with the same level of confidence. It is important that the sample the Department generates is representative of all encounters eligible for study inclusion. HSAG has provided recommendations to the Department meant to ensure that the sampling approach is well documented and thoroughly described.

- To conduct the over-read activity, HSAG samples 80 cases from the 412 encounters. To ensure that the sample is valid and representative of the original source, HSAG performs a two-step sampling procedure.
- Medical record abstraction requires the expertise of medical coders who may apply varying, though legitimate, interpretations for coding rules and processes. Such variation between HSAG's reviewers and RMHP Prime's reviewers may lead to reduced agreement rates among the over-read results. To minimize the effects of this variation, the Department and HSAG solicited RMHP Prime's input on the guidelines, and RMHP Prime was directed to include abstraction notes to communicate its decisions and findings to HSAG for specific review scenarios.
- Two Medicaid MCOs participate in the EDV process, and each MCO is responsible for independently following the EDV guidelines. For this reason, the results of the Medicaid MCO-specific reports are not meant to compare the MCOs to each other.
- RMHP Prime noted in the Encounter Data Quality Report that it was unable to procure medical records for 19 of the 412 sampled cases. Four of the unprocured records were part of the over-read sample. If a high volume of medical records is not procured, the validity of the service coding accuracy report may be affected.

Recommendations

The Department designed this study to assess the accuracy with which RMHP Prime validates physical health encounters in support of the Department's overall encounter data quality efforts. Therefore, HSAG recommends that findings associated with this independent EDV be used for the Department's information and not for performance measurement or compliance monitoring purposes.

Based on the EDV and over-read results described in this report, HSAG recommends the Department collaborate with RMHP Prime to identify best practices regarding provider education to support service coding accuracy. Identifying such practices may involve requesting and reviewing copies of RMHP Prime's provider training and/or corrective action documentation, reviewing RMHP Prime's policies and procedures for monitoring providers' physical health encounter data submissions, and verifying that RMHP Prime is routinely monitoring encounter data quality beyond the annual 412 EDV.

HSAG's FY 2024–2025 over-read results show a slight decline in agreement between HSAG's and RMHP Prime's reviewers compared to the previous year, making selected recommendations from the FY 2023–2024 study still relevant. Based on HSAG's document review, RMHP Prime's service coding accuracy results, and HSAG's over-read results, HSAG offers the following recommendations to improve the quality of RMHP Prime's encounter data:

- The Department's sampling methodology was limited to SQL code and a bulleted summary of the SQL code steps; therefore, HSAG recommends that the Department thoroughly document the sampling methodology to ensure the sample is representative of all encounters eligible for study inclusion.
  - The Department's Rates Section should update the MS Word sampling documentation to define the terms used in the documentation, include an excerpt of sampling code, and describe any limitations on the sample frame (e.g., how to limit the universe of encounters or the code values for the different encounter types).
  - The Department's Rates Section should perform validity checks on the annual 412 EDV sample lists to verify that each Medicaid MCO's sample is representative of the encounter data from which it was selected (e.g., compare distribution of the submission dates and/or providers between the sampled encounters and the sample frame).
  - The Department's Rates Section should verify the accuracy and format of the data fields and values within the 412-case sample list used to identify each of the cases.
- The Department's sampling methodology calls for a sample of 412 cases from the encounter data. To gather meaningful data from the over-read, it is imperative that as many of the associated 412 medical records are collected as possible. When medical records are not procured, the validity of the service coding accuracy rates may be affected.
  - To ensure RMHP Prime's accountability for record procurement requirements, the Department may consider strengthening and/or enforcing its contract requirements with RMHP Prime regarding provision of oversight activities in this area. HSAG recommends that the Department work with RMHP Prime to ensure documentation and/or records are easily accessible when requested.
- FY 2024–2025 is the seventh year of the independent 412 EDV for RMHP Prime, and the current report does not include a year-to-year comparison displaying the service coding accuracy rates submitted by RMHP Prime. This information could be used to track the service coding accuracy reports in a single report.
  - HSAG recommends the addition of report tables in future reports comparing the service coding accuracy rates over time. The comparison could begin with including information from the FY 2022–2023 project year to provide four years of results for the FY 2025–2026 project year.
- RMHP Prime's service coding accuracy results show that for a significant number of professional cases, the data elements were not supported by medical record documentation. To ensure that RMHP Prime has implemented quality improvement actions to address these encounter data deficiencies, the Department's contract administrator for RMHP Prime should:
  - Request copies of RMHP Prime's provider training and/or corrective action documentation.
  - Request copies of RMHP Prime's policies and procedures for monitoring providers' data submissions.
  - Collaborate with the Department's Rates Section to review RMHP Prime's encounter data quality documents and verify that RMHP Prime is monitoring encounter data quality and ensuring that providers are trained to submit encounters that accurately reflect the medical record documentation.

Complete and accurate encounter data require ongoing efforts from multiple stakeholders, including the Department, RMHP Prime, and RMHP Prime's contracted providers. Although the Department provided no additional input on quality improvement actions resulting from recommendations in the FY 2023–2024 412 EDV report, focused quality improvement efforts are underway, including an annual EQR activity in which the Department requires RMHP Prime to develop and implement a Quality Improvement Plan based on its prior year's 412 EDV service coding accuracy results. HSAG encourages ongoing quality improvement efforts to increase service coding accuracy.

Appendix A. Methodology

HSAG's independent EDV consisted primarily of an assessment of RMHP Prime's internal validation results through an over-read of medical records for a sample of randomly selected encounters. HSAG recommended a sampling strategy to the Department to ensure that selected cases were generated randomly from a representative base of encounters eligible for inclusion in this study. HSAG's review of the Department's sampling protocol was limited to an assessment of sampling methodology documentation provided by the Department.

The second component of HSAG's independent EDV was to evaluate whether RMHP Prime's internal validation of the sampled encounters against members' medical records was accurate and consistent with standard coding manuals. HSAG received a response file containing RMHP Prime's internal validation results for the 412 cases sampled by the Department. Prior to receiving RMHP Prime's internal validation results, HSAG generated an over-read sample of 20 cases for each of the four service categories (80 cases overall). The evaluation process included the following steps:

1. Generation of Over-Read Samples

The Department developed a 412-case sample of final, adjudicated RMHP Prime encounters with a date of service from July 1, 2023, through June 30, 2024, and paid dates between July 1, 2023, and September 30, 2024, for four physical health service categories.[2,3] The Department submitted the sample lists to RMHP Prime and HSAG in January 2023; RMHP Prime then conducted its internal validation on the sampled encounters.

HSAG used the sample lists from the Department to generate an over-read sample using a two-stage sampling approach. Under this sampling approach, HSAG randomly selected 20 identification numbers for unique individuals from each service category and then selected a single encounter line for each of the 20 individuals, resulting in a list of 20 randomly selected encounter lines per service category and 80 cases overall. A single health event could result in a member having encounters for both the inpatient services and the professional services categories; therefore, HSAG assessed the service category lists to ensure that no members were included in multiple service categories.

2. Encounter Data Validation Tool Development

RMHP Prime submitted its response file containing internal validation results for the 412 sampled cases to HSAG in March 2025. HSAG designed a web-based data collection tool and tool instructions based

[2] Service categories were identified using the review_typ field assigned to each encounter by the Department. Review_typ values of "PHY" identified Professional Services, "IP" identified Inpatient Services, "FQ" identified services rendered at an FQHC, and "OP" identified Outpatient Services. The Department assigns claims to service categories according to a hierarchy, and each claim may be assigned to only a single category.

[3] The Department's data layout for RMHP Prime encounter data flat files is presented in Table I-1 from Appendix I of the *Annual MCO Encounter Data Quality Review Guidelines*.

on the guidelines and on standard national coding manuals. As a result of the unique data fields and coding standards required for inpatient encounters, HSAG's web-based tool included separate data collection screens for inpatient encounters versus those used for ambulatory-type encounters (i.e., FQHC, outpatient, and professional). A control file containing select fields from the Department's encounter data flat file as well as RMHP Prime's corresponding internal validation values for sampled cases was uploaded into the tool, permitting pre-population of encounter and validation information for each case. Pre-populated information could not be altered, and HSAG's coders were required to actively select an over-read response for each data element. Corresponding medical records procured by RMHP Prime were linked to cases within the tool. The web-based tool allowed the HSAG analyst to extract Microsoft (MS) Excel files containing encounter data, RMHP Prime validation responses, and HSAG coder responses specific to each encounter type (i.e., service category).

3. HSAG's Over-Read Process

HSAG evaluated the accuracy of RMHP Prime's internal validation findings in April 2025. More specifically, the HSAG reviewers validated RMHP Prime's accuracy in abstracting the providers' submitted encounter data in accordance with the national code sets: International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM); International Classification of Diseases, Tenth Revision, Procedural Modification (ICD-10-PM); Current Procedural Terminology (CPT); Healthcare Common Procedure Coding System (HCPCS); and the 1995 Evaluation and Management (E&M) documentation guidelines. HSAG's over-read did not evaluate the quality of the medical record documentation or the provider's accuracy in submitting encounter data, only whether RMHP Prime's validation responses were accurate based on the review of the supporting medical record documentation submitted by RMHP Prime. All over-read results were entered into the HSAG data collection tool.

HSAG trained 4 certified coders to conduct the over-read. During the over-read of the ambulatory (i.e., FQHC, outpatient, or professional) encounters, the coders located the selected date of service in the submitted medical records to determine whether the ICD-10-CM and CPT or HCPCS codes pre-populated in the data collection tool from the encounter data flat file were supported by the submitted medical record documentation and in alignment with the criteria outlined in the review and code set guidelines. During the over-read of the inpatient encounters, the coders located the selected date of service in the submitted medical records to determine whether or not the ICD-10-PM and the ICD-10-CM codes pre-populated in the data collection tool from the encounter data flat file were supported by the submitted medical record documentation and in alignment with the criteria outlined in the review and code set guidelines. The HSAG coders then determined whether RMHP Prime agreed or disagreed with the accuracy of the codes submitted by the provider. If the HSAG coder agreed with RMHP Prime's response, an agreement response was recorded in the tool. If the HSAG coder disagreed with RMHP Prime's response, a disagreement response was recorded in the tool. The findings of this over-read were based on HSAG's percent of agreement or disagreement with RMHP Prime's responses.

Prior to beginning abstraction, coders participated in an interrater reliability (IRR) assessment using training cases. To proceed with abstraction on study cases, coders were required to score 95 percent or higher on the post-training IRR. If this threshold was not met, the nurse manager provided retraining, including abstraction of additional test cases.

During the over-read period, HSAG conducted an ongoing IRR assessment by randomly selecting a minimum of 10 percent of cases per coder and comparing the over-read results to those from a second coder. For cases in which over-read discrepancies were identified between the first and second coders, a third "Gold Standard" review was conducted that provided a final determination regarding the appropriate over-read result. Any IRR result that fell below 95 percent required further evaluation by the nurse manager and retraining of the coder(s).

4. Analysis Process

Following completion of the over-read, the HSAG analyst exported results from the data collection tool for each service category. Since data elements varied by claim type, results were not aggregated across the service categories. The analyst reviewed the coders' over-read notes, and notes requiring further information were addressed with the nurse manager.

The HSAG analyst assessed the over-read results to determine the percentage of records per service category for which the HSAG coder agreed with RMHP Prime's internal validation response. Results were displayed by service category for data elements that were abstracted by RMHP Prime and overread by HSAG. Over-read analysis results were independently verified by a second HSAG analyst.

5. Response Data Layout for MCOs

This section was copied from the *Annual MCO Encounter Data Quality Review Guidelines, Appendix II.* Please note that HSAG made minimal edits to the response data layout table for readability. Guidance for specific encounter data scenarios is shown following the table.

Table A-1—Response Data Layout

Data Element (Field)		Data Description	Format	Length
0	Record_No	Sequential number for each of 412 records *This field will contain a number between 001 and 412 and align with the ROWID provided by the Department of Health Care Policy and Financing (HCPF) in the 412 encounter line sample list.*	X	integer
1	Encounter_Procedure_Code	0 = No or insufficient documentation, incorrect code utilized for procedure performed 1 = Correct code, including appropriately missing values. Please see guidance scenario 8. 9 = If data element does not pertain to encounter service type (i.e., for Inpatient encounters) *Required for Professional, Outpatient, and FQHC Encounters*	X	1
2	Encounter_Procedure_Code_ Modifier	0 = No or insufficient documentation, incorrect code modifier utilized for procedure performed	X	1

Data Element (Field)		Data Description	Format	Length
		1 = Correct code modifier, including appropriately missing values. Please see guidance scenario 8. 9 = If data element does not pertain to encounter service type (i.e., for Inpatient encounters) *Required for Professional, Outpatient, and FQHC Encounters*		
3	Encounter_Surgical_Procedure_Code	0 = No or insufficient documentation, incorrect code utilized for surgical procedure performed 1 = Correct code, including appropriately missing values. Please see guidance scenario 8. 9 = If data element does not pertain to encounter service type *Required for Inpatient Encounters*	X	1
4	Encounter_Primary_Diagnosis_Code	0 = No or insufficient documentation, assignment of incorrect primary diagnosis code 1 = Correct primary diagnosis code *Required for Inpatient, Professional, Outpatient, and FQHC Encounters*	X	1
5	Encounter_Units	0 = No or insufficient documentation, incorrect units 1 = Correct units 9 = Data element does not pertain to encounter service type (i.e., for Inpatient encounters) *Required for Professional, Outpatient, and FQHC Encounters*	X	1
6	Encounter_Service_Date	0 = No or insufficient documentation, incorrect service start date (All categories use the Service Start Date) 1 = Correct service start date 9 = If data element does not pertain to encounter service type *Required for Inpatient, Professional, Outpatient, and FQHC Encounters*	X	1
7	Encounter_Thru_Date	0 = No or insufficient documentation, incorrect service end date (All categories use the Service End Date) 1 = Correct service end date 9 = If data element does not pertain to encounter service type *Required for Inpatient Encounters*	X	1
8	Encounter_Discharge_Status	0 = No or insufficient documentation, incorrect discharge status 1 = Correct discharge status 9 = If data element does not pertain to encounter service type *Required for Inpatient Encounters*	X	1

Data Element (Field)		Data Description	Format	Length
9	Doc_Procedure_Code	Enter correct procedure code if present in the supporting documentation Enter "No Doc" if no or insufficient documentation of correct procedure code Enter "NA" if data element does not pertain to encounter service type Enter "NR" if data element is not populated in the encounter data line *Required for Professional, Outpatient, and FQHC Encounters*	X	7
10	Doc_Procedure_Code_ Modifier	Enter correct procedure code modifier if present in the supporting documentation Enter "No Doc" if no or insufficient documentation of correct procedure code modifier Enter "NA" if data element does not pertain to encounter service type Enter "NR" if data element is not populated in the encounter data line *Required for Professional, Outpatient, and FQHC Encounters*	X	7
11	Doc_Surgical_Code	Enter correct surgical procedure code if present in supporting documentation Enter "No Doc" if no or insufficient documentation of correct surgical procedure code Enter "NA" if data element does not pertain to encounter service type Enter "NR" if data element is not populated in the encounter data line *Required for Inpatient Encounters*	X	7
12	Doc_Diag	Enter correct primary diagnosis code if present in the supporting documentation Enter "No Doc" if no or insufficient documentation of correct diagnosis code *Required for Inpatient, Professional, Outpatient, and FQHC Encounters*	X	7
13	Doc_Units	Enter correct units if present in the supporting documentation Enter "No Doc" if no or insufficient documentation of correct units *Required for Professional, Outpatient, and FQHC Encounters*	X	integer
14	Doc_Service_Date	Enter correct start date if present in supporting documentation Enter "No Doc" if no or insufficient documentation of correct start date *Required for Inpatient, Professional, Outpatient, and FQHC Encounters*	X	8

Data Element (Field)		Data Description	Format	Length
15	Doc_Thru_Date	Enter correct end date if present in supporting documentation Enter "No Doc" if no or insufficient documentation of correct end date Enter "NA" if data element does not pertain to encounter service type *Required for Inpatient Encounters*	X	8
16	Doc_Encounter_Discharge_ Status	Enter correct discharge status if present in supporting documentation Enter "No Doc" if no or insufficient documentation of correct discharge status Enter "NA" if data element does not pertain to encounter service type *Required for Inpatient Encounters*	X	8
17	E&M Guidelines Version	1 = 2021 version of Evaluation and Management Services Documentation Guidelines 2 = 2023 version of Evaluation and Management Services Documentation Guidelines 9 = Does Not Apply	X	1
18	Comments (conditionally required)	Reviewer should enter comments supporting the decision made. <u>Comments are required in the following scenarios:</u> • If no supporting medical records were provided, enter, "no documentation received from provider" • If medical records do not support the date of service and subsequent data elements were scored "0", enter, "No DOS in MR" • If a leveling tool (decision support tool) was used, enter, "refer to leveling tool: <tool name>" • If the case includes supplemental medical record pages without patient identifiers, enter, "Supplemental medical record pages without patient identifiers were submitted but not used for validation" <u>Comments are required to support the following scenarios:</u> • To provide details regarding non-specific primary diagnosis codes • To provide details regarding agreement or disagreement with the encounter start date for inpatient stays that began as an observation stay	X	flexible

Data Element (Field)		Data Description	Format	Length
		• To provide details regarding the documentation supporting an inpatient discharge status determination		

Guidance for Specific Encounter Data Scenarios

1. To assess encounter data quality, data elements are contingent on corresponding medical record documentation. Medical records correspond to the encounter data when the member information (i.e., name, date of birth, and/or Medicaid ID), provider information, and date of service are in agreement. If the medical records match the member and provider information but the date of service is incorrect, the *Encounter_Service_Date* will be scored as "0" and the remaining data elements will be scored as "0". The Comments field should be used to indicate that all other applicable data elements were in disagreement due to the invalid date of service.

2. The MCO 412 data quality review considers individual encounter lines that are sampled from encounter data submitted to the Department by the Medicaid MCOs. Reviewers should focus on the information found in the encounter line and determine whether the encounter values are supported by medical record documentation, with the consideration that the medical record documentation may support services captured on separate encounter lines outside the scope of this review.

3. For inpatient records or other records with services occurring over a date range, the encounter date of service is acceptable if it falls within the date range.

4. In the event medical record documentation is unavailable to support the encounter, all elements will be scored as "0" or "No Doc."
   - In cases where the medical record does not contain patient identifiers on each page of the record, encounter data elements found on medical record pages without identifiers should be scored as "0" or "No Doc."

5. In the event that medical record documentation could support more than one procedure code, reviewers should note agreement with the encounter procedure code, if applicable, and use the *Comments* to note other applicable procedure codes identified in the medical record.
   - If the HCPCS code "T1015" is present in the sampled encounter, reviewers should note agreement if the medical record documentation supports at least one additional procedure code.

6. To ensure consistency between each MCO's review and the independent auditor's over-read, MCOs should provide the independent auditor with all medical records and supporting documentation used by the MCO during its 412 EDV. Examples of such documentation include internal leveling tools, crosswalks, or any other such supporting materials used by the MCO in the completion of the 412 EDV.

7. In the event that the encounter line reflects a radiology or laboratory result, supporting medical record documentation must contain a signed order listing the test to be performed and the reason for

ordering the test. An interpretation and report of the result must also be included to fully support the encounter data value. Score the applicable EDV Response elements with "0" or "No Doc" if signed documentation from a qualified provider is not available to support the radiology or laboratory order.

8. The Table A-1 data elements Procedure Code, Procedure Code Modifier, and Surgical Code each have a response option of "NR" and Table A-2 offers examples for the use of the "NR" EDV response.

Table A-2—412 EDV Data Element "NR" Response Guidance

Encounter Line Data and Medical Record Findings	Example	Anticipated EDV Response Data
The encounter line contains no value and the medical record supports the lack of a data value.	The encounter line does not contain a procedure code modifier and the medical record supports the lack of a procedure code modifier.	Encounter_Procedure_Code_Modifier = "1" Doc_Procedure_Code_Modifier = "NR"
The encounter line contains a value and the medical record supports the data value.	The encounter line contains a modifier code (e.g., "59") and the medical record supports this modifier code.	Encounter_Procedure_Code_Modifier = "1" Doc_Procedure_Code_Modifier = "59"
The encounter line contains no value, but the medical record supports a data value.	The encounter line does not contain a modifier, but the medical record supports a procedure code modifier (e.g., "59").	Encounter_Procedure_Code_Modifier = "0" Doc_Procedure_Code_Modifier = "59"
The encounter line contains a value, but the medical record does not support the data value.	The encounter line contains a modifier value (e.g., "59") but the medical record indicates that a procedure modifier is not needed.	Encounter_Procedure_Code_Modifier = "0" Doc_Procedure_Code_Modifier = "No Doc"