Commonwealth of Virginia
Department of Medical Assistance Services

2025–2026 Encounter Data Validation Aggregate Report

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1. Executive Summary

Introduction

Accurate and complete encounter data are critical to the success of a managed care program. Therefore, the Virginia Department of Medical Assistance Services (DMAS) requires its Cardinal Care contracted managed care organizations (MCOs) to submit high-quality encounter data. DMAS relies on the quality of these encounter data submissions to accurately and effectively monitor and improve the program's quality of care, generate accurate and reliable reports, develop appropriate capitated rates, and obtain complete and accurate utilization information. Table 1-1 presents the MCOs included in this study.

Table 1-1—Cardinal Care MCOs

MCO Name	MCO Short Name
Aetna Better Health of Virginia	Aetna
HealthKeepers, Inc.	HealthKeepers
Molina Complete Care of Virginia	Molina
Sentara Health Plans	Sentara
UnitedHealthcare of the Mid-Atlantic, Inc.	United

Methods

In alignment with the Centers for Medicare & Medicaid Services (CMS) External Quality Review (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 (CMS EQR Protocol 5),[1] Health Services Advisory Group, Inc. (HSAG) conducted a medical record review (MRR) activity, which is an analysis of DMAS' electronic encounter data completeness and accuracy by comparing DMAS' 837 professional encounter data to the information documented in the corresponding members' medical records with dates of service between July 1, 2023, and June 30, 2024.

Findings, Conclusions, and Recommendations

A summary of the major findings and recommendations from the encounter data validation (EDV) study are presented below for the MRR activity.

[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: Feb 11, 2026.

Medical Record Procurement

- HSAG randomly selected a total of 2,055 samples (or 411 samples per MCO) for the study. Overall, the five MCOs submitted 85.2 percent of the requested medical records, with MCO-specific procurement rates ranging from 79.6 percent (United) to 90.5 percent (Aetna). Among all MCOs, the most common reason that medical records were not submitted was "*Non-responsive provider or provider did not respond in a timely manner.*"
- For each sampled member, providers were also asked to select a second date of service, if available, to evaluate if the services documented in the medical records were in DMAS' encounter data. While it is not expected for all members to have more than one encounter with the same provider during the study period, providers identified and submitted a record for a second date of service for 58.7 percent of samples with medical records submitted. The second date of service submission rates ranged from 46.7 percent (HealthKeepers) to 69.7 percent (United).

Encounter Data Completeness

Table 1-2 displays the medical record and encounter data omission rates for each key data element. Omissions identified in the medical records (where service information in the encounter data is not supported by the medical records) and omissions identified in the encounter data (where services documented in the medical records are absent from the encounter data) highlight discrepancies in the completeness of DMAS' encounter data. Rates 10.0 percent or lower are preferable for both measures, as they indicate consistent and comprehensive documentation across both data sources.

Table 1-2—Encounter Data Completeness Summary

Key Data Elements	Medical Record Omission*		Encounter Data Omission*	
	Statewide Rates	MCO Range	Statewide Rates	MCO Range
Date of Service	**10.0%**	7.1%–14.3%	1.1%	0.6%–1.6%
Diagnosis Code	**11.9%^**	9.6%–16.3%	0.7%	0.4%–1.1%
Procedure Code	**13.9%^**	12.2%–20.2%	6.0%	4.4%–8.0%
Procedure Code Modifier	**20.2%^**	17.7%–23.6%	1.2%	0.0%–2.4%

*Lower rates indicate better performance.

^Red text indicates rates greater than 10.0 percent.

Key Findings: Table 1-2

- The statewide medical record omission rate (i.e., percent of records found in encounter data that were not supported by members' medical records) was 10.0 percent for the *Date of Service* data element, while rates for the other three key data elements (i.e., *Diagnosis Code*, *Procedure Code*, and *Procedure Code Modifier*) were higher than 10.0 percent, indicating that the encounter data were inadequately supported by the medical records for the three key data elements.
  - For the *Date of Service* data element, nearly all medical record omissions were due to medical record non-submissions for the sampled date of service (i.e., the MCOs did not procure medical records from the providers for the sampled dates of service).

- For the remaining three key data elements (i.e., *Diagnosis Code*, *Procedure Code*, and *Procedure Code Modifier*), the medical record omissions were due to missing medical records to support the sampled dates of service versus insufficient medical records to support the three key data elements. Table 1-3 shows that 78.7 percent of the omitted diagnosis codes, 69.2 percent of the omitted procedure codes, and 48.7 percent of the omitted procedure code modifiers were due to missing medical records. In the analysis, when no medical records supported a sampled date of service, all diagnosis codes, procedure codes, and procedure code modifiers associated with that date of service were treated as medical record omissions. In addition, to evaluate the extent to which insufficient medical records affected the medical record omissions, Table 1-3 displays the modified medical record omission rates by excluding sampled dates of service missing medical records from the analysis. While these modified rates were much lower than the original rates, the modified rate for the *Procedure Code Modifier* data element was still relatively high at 12.5 percent.

Table 1-3—Modified Statewide Medical Record Omission Rates

Key Data Elements	Statewide Medical Record Omission*		
	Original Rates	Percent of Medical Record Omissions Due to Missing Medical Records	Modified Rates When Excluding Dates of Service Missing Medical Records
Diagnosis Code	11.9%	78.7%	3.2%
Procedure Code	13.9%	69.2%	5.0%
Procedure Code Modifier	20.2%	48.7%	12.5%

*Lower rates indicate better performance.

- The statewide encounter data omission rates (i.e., percent of records found in the submitted members' medical records that were not supported by the encounter data) were 6.0 percent or below for all key data elements, indicating that members' medical records were generally well supported by the encounter data.

Encounter Data Accuracy

Table 1-4 displays the element accuracy rates for each key data element and the all-element accuracy rates. HSAG evaluated the accuracy of encounter data for dates of service that were present in both DMAS' encounter data and the corresponding members' medical records. HSAG evaluated the key data elements (i.e., *Diagnosis Code, Procedure Code, and Procedure Code Modifier*) for accuracy if the individual data element was present in both DMAS' encounter data and the medical records. Rates 90 percent or higher for each data element reflect better performance and stronger alignment between the two data sources.

Additionally, HSAG calculated the all-element accuracy rate, which represents the percentage of dates of service where all evaluated data elements (i.e., *Diagnosis Code*, *Procedure Code*, and *Procedure Code Modifier*) were accurate and fully supported by the corresponding medical records.

Table 1-4—Encounter Data Accuracy

Key Data Elements	Statewide Rates	MCO Range
Diagnosis Code	**99.7%**	99.4%–99.9%
Procedure Code	**98.8%**	98.5%–99.2%
Procedure Code Modifier	**99.7%**	99.3%–100%
All-Element Accuracy*	**77.7%**	75.3%–80.6%

* The denominator for the element accuracy rate for each data element was defined differently from the denominator for the all-element accuracy rate. Therefore, the all-element accuracy rate cannot be derived from the accuracy rate from each data element.

Key Findings: Table 1-4

- In general, when key data elements were present in both DMAS' encounter data and the medical records, and were evaluated independently, the data elements were found to be accurate, with all key data elements having a statewide accuracy rate of 98.8 percent or higher. This indicates a strong alignment between the data recorded in the encounter data and the medical records.
- Overall, 77.7 percent of the dates of service present in both data sources accurately represented all three data elements—*Diagnosis Code*, *Procedure Code*, and *Procedure Code Modifier*—when compared to member medical records. At the MCO level, the all-element accuracy rates ranged from 75.3 percent (HealthKeepers) to 80.6 percent (Molina).
  - The statewide all-element inaccuracies were mainly caused by high medical record omission rates across all data elements and low procurement rates.

Recommendations

To improve the quality of DMAS' encounter data, HSAG offers the following recommendations to assist DMAS and the MCOs in addressing opportunities for improvement:

- The MRR results indicated that the encounters the MCOs submitted and maintained in DMAS' data warehouse were relatively complete and accurate when compared to the submitted medical records. As such, HSAG recommends that DMAS continues its current efforts in monitoring encounter data submissions and addressing any identified data issues with the MCOs' encounter data submissions.
- Although HSAG allowed for additional time for the MCOs to procure medical records, four MCOs' medical record submission rates remained below 90.0 percent, which negatively affected the medical record omission study indicators for all key data elements evaluated. As such, to ensure accountability for record procurement requirements, the MCOs may consider strengthening and/or enforcing their contract requirements and oversight with the following approaches:
  - Enhance contract requirements: Establish and reinforce accountability measures to ensure the timely submission of complete and accurate records.
  - Enforce contract language: Implement contractual provisions that mandate the submission of records by contracted providers and emphasize timely and responsive communication.

   - Address non-responsive providers: Develop and enforce strategies to mitigate delays caused by non-responsive providers and ensure the timely submission of service records for auditing and other evaluations.
- Since the results of the record review are dependent on the MCOs' submission of complete and accurate supporting documentation, HSAG recommends that DMAS establish record submission standards (e.g., MCOs should procure at least 90.0 percent of the medical records requested by DMAS to validate random samples selected from DMAS' final paid encounters). These standards may ensure the MCOs are more responsive in procuring requested records and also lead to more representative results of the actual documentation available.
- The statewide medical record omission rates for three of the four key data elements were above 10.0 percent. Although the low procurement rates largely contributed to higher medical record omission rates, HSAG could not attribute all medical record omission rates to non-procured records. Therefore, the MCOs should investigate the root causes of these omissions and consider performing periodic MRRs of submitted claims to verify appropriate coding and data completeness, where appropriate. Findings from these reviews should be used to target education and training to providers regarding their encounter data submissions, medical record documentation, and coding practices.

2. Overview and Methodology

Overview

Accurate and complete encounter data play a vital role in ensuring the success of managed care programs. State Medicaid agencies rely on the quality of encounter data submissions from contracted MCOs to accurately and effectively monitor and improve the quality of care, generate accurate and reliable reports, develop appropriate capitated rates, and obtain complete and accurate utilization information. The completeness and accuracy of these data are essential to DMAS' overall management and oversight of its Medicaid managed care program.

Methodology

Medical and clinical records are considered the "gold standard" for documenting access to and the quality of healthcare services. HSAG evaluated encounter data completeness and accuracy via a review of medical records for professional services rendered between July 1, 2023, and June 30, 2024. This study answered the following question:

- Were the data elements in Table 2-1 found in the professional encounters complete and accurate when compared to information contained within the medical records?

Table 2-1—Key Data Elements for Medical Record Review

Key Data Elements
Date of Service
Diagnosis Code
Procedure Code
Procedure Code Modifier

To answer the study question, HSAG conducted the following steps:

- Identified the eligible population and generated samples from data extracted from the DMAS data warehouse.
- Provided technical assistance to the MCOs to support procurement of medical records from providers, as appropriate.
- Reviewed medical records against the DMAS encounter data.
- Calculated study indicators.
- Submitted study results to DMAS.

Study Population

To be eligible for the MRR, a member must have been continuously enrolled in the same MCO during the study period (i.e., between July 1, 2023, and June 30, 2024) and must have had at least one professional visit during the study period. In addition, HSAG excluded members with Medicare and other insurance coverages from the eligible population since DMAS does not have complete encounter data for all services these members received.

In this document, HSAG refers to "professional visits" as the services that meet all criteria in Table 2-2.

Table 2-2—Criteria for Professional Visits Included in the Study

Data Element	Criteria
Encounter Type	Encounters submitted to DMAS in the 837 professional format but not from a non-emergency medical transportation (NEMT) subcontractor
Rendering Provider Taxonomy Classification	Advanced Practice Midwife
	Allergy & Immunology
	Behavior Analyst
	Clinic/Center
	Clinical Nurse Specialist
	Community/Behavioral Health
	Counselor
	Custodial Care Facility
	Dermatology
	Emergency Medicine
	Family Medicine
	General Practice
	Home Delivered Meals
	Homemaker
	In Home Supportive Care
	Internal Medicine
	Midwife
	Nurse Practitioner
	Nurse's Aide
	Nursing Facility/Intermediate Care Facility
	Obstetrics & Gynecology
	Ophthalmology
	Otolaryngology
	Pediatrics

Data Element	Criteria
	Physician Assistant
	Podiatrist
	Preventive Medicine
	Psychiatry & Neurology
	Psychologist
	Registered Nurse
	Social Worker
	Urology
Place of Service	02–Telehealth Provided Other Than in Patient's Home
	10–Telehealth Provided in Patient's Home
	11–Office
	12–Home
	17–Walk-in Retail Health Clinic
	20–Urgent Care Facility
	49–Independent Clinic
	50–Federally Qualified Health Center
	71–Public Health Clinic
	72–Rural Health Clinic
Procedure Code	HSAG included the following home- and community-based services (HCBS) based on the procedure codes: • Adult Day Healthcare Code: S5102 • Personal Care, both Agency (T1019) and Consumer Directed (S5126) • Respite Care, both Agency (T1005) and Consumer Directed (S5150) • Service Facilitation Codes: – Service Facilitation Consumer Training Visit (S5109) – Service Facilitation Initial Comprehensive Visit (H2000) – Service Facilitation Management Training Hours (S5116) – Service Facilitation Reassessment Visit (T1028) – Service Facilitation Routine Visit (99509)
	If all detail lines for a visit had one of the following procedure codes, the visit was excluded from the study since these procedure codes were for services outside the scope of work for this study (e.g., durable medical equipment [DME], dental, vision, and ancillary providers): • Procedure codes starting with "B," "E," "D," "K," or "V"

Data Element	Criteria
	• Procedure codes between A0021 and A0999 (i.e., codes for transportation services) • Procedure codes between A4206 and A9999 (i.e., codes for medical and surgical supplies, miscellaneous, and investigational) • Procedure codes between T4521 and T4544 (i.e., codes for incontinence supplies) • Procedure codes between L0112 and L4631 (i.e., codes for orthotic devices and procedures) • Procedure codes between L5000 and L9900 (i.e., codes for prosthetic devices and procedures) • Procedure codes with an "F" in the fifth digit • Procedure codes related to blood pressure quality measures (i.e., G8476, G8477, G8752, G8753, G8754, G8755, G8783, G8785, G8950, and G9273)

Sampling Strategy

HSAG used a two-stage sampling technique to select samples based on the member enrollment and encounter data extracted from the DMAS data warehouse. HSAG first identified all members who met the study population eligibility criteria and then used random sampling to select 411 members[2] from the eligible population for each MCO. Then, for each selected sampled member, HSAG used the SURVEYSELECT procedure in SAS®[3] to randomly select one professional visit[4] that occurred in the study period (i.e., between July 1, 2023, and June 30, 2024). Additionally, to evaluate whether any of the dates of service were omitted from the DMAS data warehouse, HSAG reviewed a second date of service rendered by the same billing or rendering provider (i.e., based on billing or rendering provider identifier) during the review period. The providers selected the second date of service that was within the study period and closest to the selected date of service from the medical records for each sampled member. If a sampled member had no second visit with the same provider during the review period, HSAG evaluated only one date of service for that member. As such, the final number of cases reviewed was between 411 and 822 cases in total for each MCO.

Since an equal number of cases were selected from each MCO to ensure an adequate sample size when reporting rates at the MCO level, adjustments were required to calculate the statewide rates to account for population differences among the MCOs. When reporting statewide rates, the MCOs' raw rates were weighted based on the volume of professional visits among the eligible population for each MCO. This approach ensured that no MCO was over- or under-represented in the statewide rates.

[2] The sample size of 411 was based on a 95 percent confidence level and a margin of error of 5 percent for potential MCO-to-MCO comparisons.

[3] SAS and all other SAS Institute Inc. product or service names are registered trademarks or trademarks of SAS Institute, Inc. in the USA and other countries. ® indicates USA registration.

[4] To ensure that the MRR included all services provided on the same date of service, encounters with the same date of service and same rendering provider were consolidated into one visit for sampling purposes.

Medical Record Procurement

After finalization of the methodology, HSAG conducted a 30-minute meeting with the MCOs on April 28, 2025, to introduce the study and informed the MCOs about the medical record procurement process so the MCOs could plan ahead for the study. During the meeting, HSAG shared example documents such as a sample list, a letter template to providers, and medical record tracking sheets to assist the MCOs with their preparation for the medical record procurement process. Also, HSAG developed a process to make sure that all MCOs acknowledged receipt of information regarding the study and subsequent milestones for the medical record procurement process.

Upon receiving the final sample list from HSAG, the MCOs were responsible for procuring the sampled members' medical records from their contracted providers for services that occurred on the sampled date of service and the second date of service, if available. In addition, the MCOs were responsible for submitting the documentation to HSAG. To improve the procurement rate, HSAG conducted a one-hour technical assistance meeting with the MCOs on August 14, 2025, to review the EDV project and the procurement protocols. HSAG instructed the MCOs to submit medical records electronically via a secure file transfer protocol site to ensure the protection of personal health information. During the procurement process, HSAG worked with the MCOs to answer questions and monitored the number of medical records submitted. For example, HSAG provided an intermediate submission status update on September 24, 2025, during the procurement period and a final submission status update on October 21, 2025, following the original completion date of the procurement period (i.e., October 14, 2025). In addition, since the MCOs continued to receive medical records from their providers after October 14, 2025, DMAS approved an extension of the procurement period through October 24, 2025.

HSAG maintained all received electronic medical records on a secure site, which allowed HSAG's trained reviewers to validate the cases from a centralized location under supervision and oversight. As with all MRR and research activities, HSAG has implemented a thorough HIPAA compliance and protection program in accordance with federal regulations that includes recurring training as well as policies and procedures that address physical security, electronic security, and day-to-day operations.

As HSAG began to review the medical records, HSAG compiled an initial procurement issue list and then followed up with the MCOs on November 10, 2025, for clarification and/or updated medical records. During the follow-up process for the initial procurement issue list, DMAS also allowed the MCOs to submit any additional records received from providers until November 26, 2025, to reduce the percentage of cases with a procurement status of "non-responsive provider or provider did not respond in a timely manner." When HSAG completed its preliminary review of all medical records, HSAG followed up with the MCOs regarding a final procurement issue list on December 16, 2025, and then received clarification and/or updated medical records from the MCOs by January 6, 2026. Resolving issues identified from the procurement process helped HSAG obtain more complete and accurate medical records from the MCOs for the study.

Review of Medical Records

Concurrent with medical record procurement activities, HSAG developed a set of detailed MRR training documents, trained its review staff on specific study protocols, and conducted interrater reliability and rater-to-standard testing. All reviewers were required to achieve a 95 percent accuracy rate prior to reviewing medical records and collecting data for the study.

HSAG's trained reviewers first verified whether the sampled date of service from the DMAS encounter data could be found in the member's medical record. If so, the reviewers documented that the date of service was valid; if not, the reviewers reported the date of service as a *medical record omission*. The reviewers then reviewed the services provided on the selected date of service and validated the key data elements in Table 2-2. Reviewers entered all findings into an electronic tool to ensure data integrity.

After the reviewers evaluated the sampled date of service, they determined if the medical record contained documentation for a second date of service in the study period. If the documentation for a second date of service was available, the reviewer evaluated the services rendered on this date and validated the key data elements associated with the second date of service. If the documentation contained more than one second date of service, the reviewer selected the date closest to the sampled date of service to validate. If the second date of service was missing from the DMAS data warehouse, it was reported as an *encounter data omission*. The missing values associated with this visit were listed as an omission for each key data element, respectively.

Study Indicators

Once the MRR was completed, HSAG analysts exported information collected from the electronic tool, reviewed the data, and conducted the analyses. Table 2-3 displays the study indicators that were used to report the MRR results.

Table 2-3—Study Indicators

Study Indicator	Denominator	Numerator
Medical Record Procurement Rate: Percentage of medical records submitted and the reasons for missing medical records.	Total number of samples.	Number of samples with medical records submitted for either the sampled date of service or the second date of service.
Second Date of Service Submission Rate: Percentage of samples with a second date of service submitted in the medical records.	Number of samples with medical records submitted for either the sampled date of service or the second date of service.	Number of samples with a second date of service submitted in the medical records.
Medical Record Omission Rate: Percentage of key data elements (e.g., Date of Service) identified in DMAS' data warehouse that were not found in the members' medical records. HSAG calculated the study indicator for each key data element listed in Table 2-2.	Total number of key data elements (e.g., Date of Service) identified in DMAS' data warehouse (i.e., based on the sampled dates of service and the second dates of service that were found in DMAS' data warehouse).	Number of key data elements (e.g., Date of Service) in the denominator but not found in the medical records.
Encounter Data Omission Rate: Percentage of key data elements (e.g., Date of Service) identified in members' medical records but not found in DMAS' data warehouse.	Total number of key data elements (e.g., Date of Service) identified in members' medical records (i.e., based on the medical	Number of key data elements (e.g., Date of Service) in the denominator

Study Indicator	Denominator	Numerator
HSAG calculated the study indicator for each key data element listed in Table 2-2.	records procured for the sampled dates of service and second dates of service).	but not found in DMAS' data warehouse.
Diagnosis Code Accuracy: Percentage of diagnosis codes supported by the medical records and the associated reasons for inaccuracy, including specificity errors and inaccurate codes.	Total number of diagnosis codes that meet the following two criteria: • Dates of service (i.e., including both the sampled dates of service and the second dates of service) that existed in both DMAS' encounter data and the medical records. • Diagnosis codes present in both DMAS' encounter data and the medical records.	Number of diagnosis codes supported by the medical records.
Procedure Code Accuracy: Percentage of procedure codes supported by the medical records and the associated reasons for inaccuracy, including inaccurate codes, higher levels of service found in medical records, and lower levels of service found in medical records.	Total number of procedure codes that meet the following two criteria: • Dates of service (i.e., including both the sampled dates of service and the second dates of service) that existed in both DMAS' encounter data and the medical records. • Procedure codes present in both DMAS' encounter data and the medical records.	Number of procedure codes supported by the medical records.
Procedure Code Modifier Accuracy: Percentage of procedure code modifiers supported by the medical records.	Total number of procedure code modifiers that meet the following two criteria: • Dates of service (i.e., including both the sampled dates of service and the second dates of service) that existed in both DMAS' encounter data and the medical records. • Procedure code modifiers present in both DMAS'	Number of procedure code modifiers supported by the medical records.

Study Indicator	Denominator	Numerator
	encounter data and the medical records.	
All-Element Accuracy Rate: Percentage of dates of service present in both DMAS' encounter data and the medical records, with the same values for all key data elements listed in Table 2-2.	Total number of dates of service (i.e., including both the sampled dates of service and second dates of service) that were in both DMAS' encounter data and the medical records.	The number of dates of service in the denominator with the same diagnosis codes, procedure codes, and procedure code modifiers for a given date of service.

3. Medical Record Review

Background

The MRR activity assessed data quality through investigating the completeness and accuracy of DMAS' encounters compared to the information documented in the corresponding medical records of Medicaid members.

HSAG reviewed and compared members' information between the two data sources (i.e., DMAS' encounters and provider-submitted medical records) using a unique combination of the members' Medicaid IDs and the billing and rendering provider information for specific dates of service.

Medical Record Procurement Status

After receiving their sample files, the MCOs were responsible for procuring the medical records from their contracted providers. Table 3-1 shows the medical record procurement status for each of the participating MCOs, detailing the number of medical records requested as well as the number and percentage of medical records submitted by each MCO as indicated in the submitted tracking sheets for either the sampled date of service or the second date of service.

Table 3-1—Medical Record Procurement Status

MCO	Number of Records Requested	Number of Records Submitted	Percentage of Records Submitted
Aetna	411	372	90.5%
HealthKeepers	411	353	85.9%
Molina	411	331	80.5%
Sentara	411	367	89.3%
United	411	327	79.6%
Statewide	**2,055**	**1,750**	**85.2%**

Key Findings: Table 3-1

- In total, 1,750 medical records were submitted to HSAG across all five MCOs, representing an overall submission rate of 85.2 percent. Individual MCO submission rates ranged from 79.6 percent (United) to 90.5 percent (Aetna).
- Medical records that were not submitted contributed to the medical record omission results detailed in the "Encounter Data Completeness" section of this report. Specifically, if medical records were not submitted for a sampled date of service, all associated data elements (i.e., *Date of Service*, *Diagnosis Code*, *Procedure Code*, and *Procedure Code Modifier*) were reported as medical record omissions. Consequently, the MCOs with relatively lower medical record procurement rates (e.g., less than 90.0 percent) would be more likely to exhibit higher medical record omission rates and reflect poorer performance for each key data element.

Table 3-2 highlights the reasons why medical record documentation was not submitted at the statewide level. Detailed tables for each MCO are provided in the MCO-specific appendices.

Table 3-2—Reasons for Missing Records

Non-Submission Reason	Statewide	
	Number	Percent
Non-responsive provider or provider did not respond in a timely manner	272	89.2%
Practice was permanently closed	18	5.9%
Member was not a patient of the practice	5	1.6%
Other	5	1.6%
Member was a patient of the practice; however, no documentation was available for the requested date of service	3	1.0%
Provider refused to release medical records	2	0.7%
Total	**305**	**100%**

Key Findings: Table 3-2

- Among the 305 sampled cases without medical records submitted, the primary non-submission reason was "*Non-responsive provider or provider did not respond in a timely manner,*" which accounted for 89.2 percent (272 records) of all non-submissions. Of the records attributed to this reason, the majority were associated with Molina (78 records) and United (72 records).
- The rates for other non-submission reasons were substantially lower. For example, the second highest non-submission reason was "*Practice was permanently closed,*" which accounted for 5.9 percent (18 records) of non-submitted records. The "*Member was not a patient of the practice*" and "*Other*" reason each accounted for 1.6 percent of non-submitted records.

Table 3-3 displays the number and percentage of cases with one additional date of service selected and submitted for the study.

Table 3-3—Second Date of Service

MCO	Records With Second Date of Service	
	Number	Percent
Aetna	224	60.2%
HealthKeepers	165	46.7%
Molina	223	67.4%
Sentara	188	51.2%
United	228	69.7%
Statewide	**1,028**	**58.7%**

Key Findings: Table 3-3

- While all members were not expected to have more than one professional encounter with the same provider during the study period, providers were able to identify and submit a record for a second date of service for 58.7 percent of all 1,750 submitted records. This rate ranged from 46.7 percent (HealthKeepers) to 69.7 percent (United).

Encounter Data Completeness

HSAG evaluated encounter data completeness by identifying differences between key data elements from DMAS-based encounters and the corresponding members' medical records. These data elements included *Date of Service*, *Diagnosis Code*, *Procedure Code*, and *Procedure Code Modifier*. Medical record omission and encounter data omission represented two aspects of encounter data completeness through their identification of vulnerabilities in the process of claims documentation and communication among the providers, MCOs, and DMAS.

A medical record omission occurred when an encounter data element (i.e., *Date of Service*, *Diagnosis Code*, *Procedure Code*, or *Procedure Code Modifier*) was not supported by documentation in a member's medical record, or the medical record could not be found. Medical record omissions suggest opportunities for improvement within the provider's internal processes, such as billing processes and record documentation.

An encounter data omission occurred when an encounter data element (i.e., *Date of Service*, *Diagnosis Code*, *Procedure Code*, or *Procedure Code Modifier*) was documented in a member's medical record but was not present in the associated electronic encounter data. Encounter data omissions suggest opportunities for improvement in the areas of claims submissions and/or processing routes among the providers, MCOs, and DMAS.

HSAG evaluated the medical record omission and the encounter data omission rates for each MCO using dates of service selected by HSAG and an additional date of service selected by the provider if one was available. If more than one additional date of service was available from the medical record, the provider was instructed to select the one closest to HSAG's selected date of service. **For both rates, lower values indicate better performance**.

Date of Service Completeness

Table 3-4 displays the percentage of dates of service identified in the encounter data that were not supported by the members' medical records (i.e., medical record omission) and the percentage of dates of service from the members' medical records that were not found in the encounter data (i.e., encounter data omission). HSAG conducted the analyses at the date-of-service level.

Table 3-4—Medical Record Omission and Encounter Data Omission for Date of Service

MCO	Medical Record Omission		Encounter Data Omission	
	Number of Dates of Service Identified in the Encounter Data	Percent Not Supported by Members' Medical Records*	Number of Dates of Service Identified in Members' Medical Records	Percent Not Found in the Encounter Data*
Aetna	605	7.1%	571	1.6%
HealthKeepers	558	10.9%^	500	0.6%
Molina	608	14.3%^	525	0.8%
Sentara	574	8.5%	533	1.5%
United	625	13.9%^	544	1.1%
Statewide	**2,970**	**10.0%**	**2,673**	**1.1%**

*Lower rates indicate better performance.

^Red text indicates rates greater than 10.0 percent.

Key Findings: Table 3-4

- At the statewide level, 10.0 percent of the dates of service identified within DMAS' encounter data were not supported by members' medical records (i.e., medical record omission), with MCO-level rates ranging from 7.1 percent (Aetna) to 14.3 percent (Molina).
  - HealthKeepers, Molina, and United had medical record omission rates exceeding 10.0 percent for the *Date of Service* data element. Notably, these MCOs had medical record procurement rates of less than 86.0 percent. In contrast, Aetna had the lowest *Date of Service* medical record omission rate of 7.1 percent and the highest procurement rate of 90.5 percent. This pattern highlights a consistent relationship between low record procurement and high medical record omission rates in the analysis.
- Overall, 1.1 percent of the dates of service identified in members' medical records were not found in the encounter data (i.e., encounter data omission), with MCO-level rates ranging from 0.6 percent (HealthKeepers) to 1.6 percent (Aetna).

Diagnosis Code Completeness

Table 3-5 displays the percentage of diagnosis codes identified in the encounter data that had no supporting documentation in the members' medical records (i.e., medical record omission) and the percentage of diagnosis codes from the members' medical records that were not found in the encounter data (i.e., encounter data omission). HSAG conducted the analysis at the diagnosis code level.

Table 3-5—Medical Record Omission and Encounter Data Omission for Diagnosis Code

MCO	Medical Record Omission		Encounter Data Omission	
	Number of Diagnosis Codes Identified in Encounter Data	Percent Not Supported by Members' Medical Records*	Number of Diagnosis Codes Identified in Members' Medical Records	Percent Not Found in the Encounter Data*
Aetna	1,633	9.6%	1,486	0.7%
HealthKeepers	1,541	12.5%^	1,354	0.4%
Molina	1,497	16.3%^	1,259	0.5%
Sentara	1,566	10.9%^	1,412	1.1%
United	1,686	14.5%^	1,449	0.5%
Statewide	**7,923**	**11.9%^**	**6,960**	**0.7%**

* Lower rates indicate better performance.
^Red text indicates rates greater than 10.0 percent.

Key Findings: Table 3-5

- At the statewide level, 11.9 percent of the diagnosis codes within DMAS' encounter data were not supported by members' medical records (i.e., medical record omission), with MCO-level rates ranging from 9.6 percent (Aetna) to 16.3 percent (Molina).
  - Except for Aetna, all MCOs had elevated medical record omission rates exceeding 10.0 percent for the *Diagnosis Code* data element.
  - The medical record omission rate for the *Diagnosis Code* data element was largely influenced by medical record non-submissions and medical record omissions for the *Date of Service* data element. In the analysis, when no medical records were submitted for a sampled date of service, all diagnosis codes associated with that date of service were treated as medical record omissions. Consequently, MCOs with lower medical record submission rates had higher medical record omission rates for the *Diagnosis Code* data element.
    - Of the *Diagnosis Code* data element medical record omissions, approximately 78.7 percent were due to missing medical records for the sampled date of service.
  - For cases with medical records available to validate the date of service, the top three diagnosis codes included in the encounter data but not supported by members' medical records (i.e., insufficient information in the medical record) were:
    - Z23: Encounter for immunization; Frequency = 14
    - Z68.54: Body mass index (BMI) pediatric, greater than or equal to 95th percentile for age; Frequency = 7
    - Z68.52: BMI pediatric, 5th percentile to less than 85th percentile for age; Frequency = 6
- Overall, only 0.7 percent of the diagnosis codes identified in medical records were not found in the encounter data (i.e., encounter data omission), with MCO-level encounter data omission rates ranging from 0.4 percent (HealthKeepers) to 1.1 percent (Sentara).

Procedure Code Completeness

Table 3-6 displays the percentage of procedure codes identified in the encounter data that had no supporting documentation in the members' medical records (i.e., medical record omission) and the percentage of procedure codes from the members' medical records that were not found in the encounter data (i.e., encounter data omission). HSAG conducted the analysis at the procedure code level.

Table 3-6—Medical Record Omission and Encounter Data Omission for Procedure Code

MCO	Medical Record Omission		Encounter Data Omission	
	Number of Procedure Codes Identified in Encounter Data	Percent Not Supported by Members' Medical Records*	Number of Procedure Codes Identified in Members' Medical Records	Percent Not Found in the Encounter Data*
Aetna	1,175	13.0%^	1,075	4.9%
HealthKeepers	1,103	15.4%^	976	4.4%
Molina	1,190	20.2%^	994	4.4%
Sentara	1,161	12.2%^	1,108	8.0%
United	1,213	13.5%^	1,110	5.5%
Statewide	**5,842**	**13.9%^**	**5,263**	**6.0%**

* Lower rates indicate better performance.
^Red text indicates rates greater than 10.0 percent.

Key Findings: Table 3-6

- At the statewide level, 13.9 percent of the procedure codes within DMAS' encounter data were not supported by members' medical records (i.e., medical record omission), with MCO-level rates ranging from 12.2 percent (Sentara) to 20.2 percent (Molina).
  - All MCOs had elevated medical record omission rates exceeding 10.0 percent for the *Procedure Code* data element.
  - In the analysis, when no medical records were submitted for the sampled date of service, all procedure codes associated with that date of service were treated as medical record omissions. Therefore, MCOs with lower medical record submission rates had higher medical record omission rates for the *Procedure Code* data element.
    - Among the omitted procedure codes, 69.2 percent were due to missing medical records for the sampled date of service.
  - For cases with medical records available to validate the date of service, the top three procedure codes included in the encounter data but not supported by members' medical records (i.e., insufficient information in the medical record) were:
    - 90461: Immunization administration through 18 years of age via any route of administration, with counseling by physician or other qualified health care professional, each additional vaccine or toxoid component administered (list separately in addition to code for primary procedure); Frequency = 32

- 90460: Immunization administration through 18 years via any route of administration, with counseling by physician or other qualified health care professional, first or only component of each vaccine or toxoid administered; Frequency = 19
- 36415: Collection of venous blood by venipuncture; Frequency = 13

- Overall, 6.0 percent of the procedure codes identified in the medical records were not found in the encounter data (i.e., encounter data omission). All MCOs exhibited low encounter data omission rates below 10.0 percent ranging from 4.4 percent (HealthKeepers and Molina) to 8.0 percent (Sentara).
  - Potential contributors to procedure code encounter data omissions included:
    - Dates of service omitted from the encounter data that resulted in all procedure codes associated with those dates of service being treated as encounter data omissions.
    - Providers making coding errors or failing to submit procedure codes despite performing the services.
    - Lags between service provision and encounter submission to the MCOs or DMAS.

Procedure Code Modifier Completeness

Table 3-7 displays the percentage of procedure code modifiers identified in the encounter data that had no supporting documentation in the members' medical records (i.e., medical record omission) and the percentage of procedure code modifiers from the members' medical records that were not found in the encounter data (i.e., encounter data omission). HSAG conducted the analysis at the procedure code modifier level.

Table 3-7—Medical Record Omission and Encounter Data Omission for Procedure Code Modifier

MCO	Medical Record Omission		Encounter Data Omission	
	Number of Procedure Code Modifiers Identified in Encounter Data	Percent Not Supported by Members' Medical Records*	Number of Procedure Code Modifiers Identified in Members' Medical Records	Percent Not Found in the Encounter Data*
Aetna	405	18.8%^	337	2.4%
HealthKeepers	398	23.6%^	308	1.3%
Molina	394	20.3%^	314	0.0%
Sentara	395	17.7%^	328	0.9%
United	502	21.3%^	399	1.0%
Statewide	**2,094**	**20.2%^**	**1,686**	**1.2%**

* Lower rates indicate better performance.
^Red text indicates rates greater than 10.0 percent.

Key Findings: Table 3-7

- At the statewide level, 20.2 percent of the procedure code modifiers within DMAS' encounter data were not supported by members' medical records (i.e., medical record omission), with MCO-level rates ranging from 17.7 percent (Sentara) to 23.6 percent (HealthKeepers).
  - All MCOs had elevated medical record omission rates exceeding 10.0 percent for the *Procedure Code Modifier* data element.
  - In the analysis, when no medical records were submitted for the sampled date of service, all procedure code modifiers associated with that date of service were treated as medical record omissions. Therefore, MCOs with lower medical record submission rates had higher medical record omission rates for the *Procedure Code Modifier* data element.
    - Among the omitted procedure code modifiers, 48.7 percent were due to missing medical records for the sampled date of service.
  - For cases with medical records available to validate the date of service, the top three procedure code modifiers included in the encounter data but not supported by members' medical records (i.e., insufficient information in the medical record) were:
    - 25: Significant, Separately Identifiable Evaluation and Management Service by the Same Physician or Other Qualified Health Care Professional on the Same Day of the Procedure or Other Service; Frequency = 83
    - 59: Distinct Procedural Service; Frequency = 68
    - QW: Clinical Laboratory Improvement Amendments (CLIA) waived test; Frequency = 18
- Overall, only 1.2 percent of the procedure code modifiers identified in the medical records were not found in DMAS' encounter data (i.e., encounter data omission). All MCOs exhibited low encounter data omission rates below 10.0 percent ranging from 0.0 percent (Molina) to 2.4 percent (Aetna).

Encounter Data Accuracy

Encounter data accuracy was evaluated for dates of service that existed in both DMAS' encounter data and the submitted medical records, with values present in both data sources for the evaluated data element. HSAG considered the encounter data elements (i.e., *Diagnosis Code, Procedure Code,* and *Procedure Code Modifier*) accurate if documentation in the medical records supported the values contained in the electronic encounter data. Higher accuracy rates for each data element indicate better performance.

Diagnosis Code Accuracy

Table 3-8 displays the percentage of diagnosis codes associated with validated dates of service from the encounter data that were correctly coded based on members' medical records. In addition, errors found in the diagnosis coding were separated into two categories: inaccurate coding and specificity errors. Inaccurate coding occurred when the diagnosis code submitted by the provider should have been selected from a different family of codes based on the documentation in the medical record (e.g., R51 [headache] versus the documentation supporting G43 [migraine]). A specificity error occurred when the documentation supported a more specific code than was listed in DMAS' encounter data (e.g., unspecified abdominal pain [R10.9] when the provider noted during the exam that the abdominal

pain was in the right lower quadrant [R10.31]). Specificity errors also included diagnosis codes that did not have the required fourth or fifth digit.

Inaccurate diagnosis coding and specificity errors in the medical records were collectively considered as the denominator for the error type rates in Table 3-8.

Table 3-8—Accuracy Results and Error Types for Diagnosis Code

MCO	Accuracy Results		Error Type
	Number of Diagnosis Codes Present in Both Sources	Accuracy Rate	
Aetna	1,476	99.9%	Inaccurate coding: 100% Specificity error: 0.0%
HealthKeepers	1,349	99.6%	Inaccurate coding: 100% Specificity error: 0.0%
Molina	1,253	99.4%	Inaccurate coding: 100% Specificity error: 0.0%
Sentara	1,396	99.9%	Inaccurate coding: 100% Specificity error: 0.0%
United	1,442	99.5%	Inaccurate coding: 85.7% Specificity error: 14.3%
Statewide	**6,916**	**99.7%**	**Inaccurate coding: 98.7%** **Specificity error: 1.3%**

Key Findings: Table 3-8

- At the statewide level, 99.7 percent of the diagnosis codes were accurate when they were present in both the encounter data and medical records, with all MCOs having accuracy rates above 99.0 percent.
- For diagnosis coding accuracy, most of the errors were attributed to inaccurate coding (98.7 percent), rather than discrepancies associated with specificity errors (1.3 percent), among all MCOs.

Procedure Code Accuracy

Table 3-9 displays the percentage of procedure codes associated with validated dates of service from the encounter data that were correctly coded based on members' medical records. In addition, errors found in the procedure coding were separated into the following three categories:

- Higher level of service in the medical record: Evaluation and Management (E&M) codes documented in the medical record reflected a higher level of service performed by the provider than the E&M codes submitted in the encounter. For example, a patient was seen by a physician for a follow-up appointment for a worsening earache, and the physician noted all key elements in the patient's medical record. The physician also changed the patient's medication during this visit. The

encounter submitted showed a procedure code of 99212 (established patient self-limited or minor problem). With all key elements documented and a worsening condition, this visit should have been coded with a higher level of service, such as 99213 (established patient low-to-moderate severity).

- Lower level of service in the medical record: E&M codes documented in the medical record reflected a lower level of service than the E&M codes submitted in the encounter data. For example, a provider's notes omitted critical documentation elements of the E&M service, or the problem treated did not warrant a high-level visit. This would apply to a patient follow-up visit for an earache that was improving, required no further treatment, and for which no further problems were noted. The encounter submitted showed a procedure code of 99213 (established patient low-to-moderate severity). However, with an improving condition, the medical record described a lower level of service, or 99212 (established patient self-limited or minor problem).
- Inaccurate coding: The documentation in the medical records did not support the procedure codes billed, or an incorrect procedure code was used in the encounter for scenarios other than the two mentioned above.

Inaccurate coding, codes with higher levels of service, and codes with lower levels of service in medical records were collectively considered as the denominator for the error type rates in Table 3-9.

Table 3-9—Accuracy Results and Error Types for Procedure Code

MCO	Accuracy Results		Error Type
	Number of Procedure Codes Present in Both Sources	Accuracy Rate	
Aetna	1,022	99.2%	Inaccurate coding: 87.5% Higher level of service in medical record: 12.5% Lower level of service in medical record: 0.0%
HealthKeepers	933	98.8%	Inaccurate coding: 90.9% Higher level of service in medical record: 9.1% Lower level of service in medical record: 0.0%
Molina	950	98.6%	Inaccurate coding: 69.2% Lower level of service in medical record: 30.8% Higher level of service in medical record: 0.0%
Sentara	1,019	98.5%	Inaccurate coding: 93.3% Lower level of service in medical record: 6.7% Higher level of service in medical record: 0.0%
United	1,049	99.1%	Inaccurate coding: 88.9% Lower level of service in medical record: 11.1% Higher level of service in medical record: 0.0%
Statewide	**4,973**	**98.8%**	**Inaccurate coding: 89.9%** **Lower level of service in medical record: 5.7%** **Higher level of service in medical record: 4.5%**

Key Findings: Table 3-9

- At the statewide level, 98.8 percent of the procedure codes were accurate when they were present in both the encounter data and medical records, with all MCOs having accuracy rates above 98.0 percent.
- For procedure coding accuracy, 89.9 percent of the identified errors were associated with inaccurate coding. Additionally, 5.7 percent of the procedure codes errors occurred when a provider documented a lower level of service in the medical record compared with a higher-level code identified in the encounter data. The remaining 4.5 percent of errors occurred when the medical record supported a higher level of service compared with a lower-level code identified in the encounter data.

Procedure Code Modifier Accuracy

Table 3-10 displays the percentage of procedure code modifiers associated with validated dates of service from the encounter data that were correctly coded based on members' medical records. The errors for this data element could not be separated into subcategories and therefore were not presented in Table 3-10. Example errors for this data element include instances where procedure code modifier left (LT) was used instead of right (RT) to indicate the side of the body on which a service or procedure was performed, or modifier 95 or modifier GT (i.e., services were delivered via an interactive audio and video telecommunications system) was present, but the documentation did not support telemedicine services.

Table 3-10—Accuracy Results for Procedure Code Modifier

MCO	Number of Procedure Code Modifiers Present in Both Sources	Accuracy Rate
Aetna	329	99.7%
HealthKeepers	304	99.3%
Molina	314	99.7%
Sentara	325	100%
United	395	99.7%
Statewide	**1,667**	**99.7%**

Key Findings: Table 3-10

- At the statewide level, 99.7 percent of the procedure code modifiers were accurate when they were present in both the encounter data and medical records, with all MCOs having accuracy rates above 99.0 percent and one MCO (Sentara) achieving a 100 percent accuracy rate.

All-Element Accuracy

Table 3-11 displays the percentage of dates of service present in both DMAS' encounter data and in the medical records with the same values for all key data elements listed in Table 2-1. The denominator is the total number of dates of service that matched in both data sources. The numerator is the total number of dates of service with matching values for all key data elements. Higher all-element accuracy rates indicate greater overall completeness and accuracy of DMAS' encounter data when compared to the medical records.

It is important to note that the denominator for the element accuracy rate for each data element was defined differently than the denominator for the all-element accuracy rate. Therefore, the all-element accuracy rate could not be derived from the accuracy rate from each data element. Using diagnosis code as an example, each diagnosis code was assigned to one of the four mutually exclusive categories: medical record omission, encounter data omission, accurate, or inaccurate. When evaluating the element accuracy for each key data element, the denominator is the number of diagnosis code values in the categories of accurate and inaccurate. However, for the all-element accuracy rate, the denominator is the total number of dates of service that matched between the medical records and encounter data, and the numerator is the total number of dates of service with the same values for all key data elements. Therefore, for each date of service, if any of the data elements were in the medical record omission, encounter data omission, or inaccurate categories, the date of service was not counted in the numerator for the all-element accuracy rate.

Table 3-11—All-Element Accuracy

MCO	Number of Dates of Service Present in Both Sources	Accuracy Rate
Aetna	562	80.4%
HealthKeepers	497	75.3%
Molina	521	80.6%
Sentara	525	77.7%
United	538	79.7%
Statewide	**2,643**	**77.7%**

Key Findings: Table 3-11

- At the statewide level, 77.7 percent of the dates of service present in both data sources (i.e., encounter data and medical records) contained accurate values for all key data elements—*Diagnosis Code*, *Procedure Code*, and *Procedure Code Modifier*—with MCO-level all-element accuracy rates ranging from 75.3 percent (HealthKeepers) to 80.6 percent (Molina). The all-element inaccuracies were primarily driven by high medical record omission rates across all three data elements and lower medical record submission rates.

4. Conclusions and Recommendations

Conclusions

The MRR activity evaluated encounter data completeness and accuracy through a review of medical records for professional services rendered from July 1, 2023, through June 30, 2024. The evaluation focused on these key data elements: *Date of Service, Diagnosis Code, Procedure Code,* and *Procedure Code Modifier*.

To report the MRR results, HSAG developed the following study indicators for each key data element:

- **Medical Record Omission Rate:** Percentage of data elements (e.g., *Date of Service*) identified in DMAS' encounter data that were not found in the members' medical records.
- **Encounter Data Omission Rate:** Percentage of data elements (e.g., *Date of Service*) identified in members' medical records that were not found in DMAS' encounter data.
- **Accuracy Rate:** Percentage of diagnosis codes, procedure codes, and procedure code modifiers associated with validated dates of service from DMAS' encounter data that were supported by the members' medical records.

Medical Record Procurement

HSAG randomly selected a total of 2,055 cases (or 411 cases per MCO) for evaluation. Providers were also asked to identify and submit a second date of service for the sampled members, if available.

The statewide medical record submission rate was 85.2 percent, with individual MCO rates ranging from 79.6 percent (United) to 90.5 percent (Aetna). The primary non-submission reason was "*Non-responsive provider or provider did not respond in a timely manner*" for all MCOs. Providers were able to locate a second date of service for 58.7 percent of sampled members with medical records submitted, and the individual MCO rates ranged from 46.7 percent (HealthKeepers) to 69.7 percent (United).

Encounter Data Completeness

HSAG evaluated encounter data completeness using two indicators (medical record omission and encounter data omission) across four data elements: *Date of Service*, *Diagnosis Code*, *Procedure Code*, and *Procedure Code Modifier*. Cases without submitted sample medical records contributed directly to medical record omissions; therefore, the MCOs with lower submission rates generally exhibited higher medical record omission rates across all data elements. Table 4-1 displays the medical record and encounter data omission rates for each key data element.

Table 4-1—Encounter Data Completeness Summary

Key Data Elements	Statewide	Aetna	HealthKeepers	Molina	Sentara	United
Medical Record Omission*						
Date of Service	**10.0%**	7.1%	10.9%^	14.3%^	8.5%	13.9%^
Diagnosis Code	**11.9%^**	9.6%	12.5%^	16.3%^	10.9%^	14.5%^
Procedure Code	**13.9%^**	13.0%^	15.4%^	20.2%^	12.2%^	13.5%^
Procedure Code Modifier	**20.2%^**	18.8%^	23.6%^	20.3%^	17.7%^	21.3%^
Encounter Data Omission*						
Date of Service	**1.1%**	1.6%	0.6%	0.8%	1.5%	1.1%
Diagnosis Code	**0.7%**	0.7%	0.4%	0.5%	1.1%	0.5%
Procedure Code	**6.0%**	4.9%	4.4%	4.4%	8.0%	5.5%
Procedure Code Modifier	**1.2%**	2.4%	1.3%	0.0%	0.9%	1.0%

* Lower rates indicate better performance.

^Red text indicates rates greater than 10.0 percent.

Key Findings: Table 4-1

As displayed in Table 4-1, the statewide medical record omission rate was 10.0 percent for the *Date of Service* data element while rates for the other three key data elements (i.e., *Diagnosis Code*, *Procedure Code*, and *Procedure Code Modifier*) were higher than 10.0 percent, indicating that the encounter data was inadequately supported by the medical records for the three key data elements. Notably, the primary reason for the medical record omissions for all data elements was due to missing medical records for the sampled dates of service. Other common reasons for elevated medical record omissions rates may include providers not documenting the services performed in the medical records (i.e., insufficient information in the medical record) despite submitting claims and encounters, or providers not providing the service(s) reflected in the encounter data.

The ranges of medical record omission rates among the MCOs were less than 10.0 percentage points for all data elements. The medical record omission range was 7.2 percentage points for *Date of Service*, 6.7 percentage points for *Diagnosis Code*, 8.0 percentage points for *Procedure Code,* and 5.9 percentage points for *Procedure Code Modifier.* Notably, two medical record omission rates for Aetna and one rate for Sentara were below 10.0 percent.

The statewide encounter data omission rates were 6.0 percent or lower for all four key data elements, indicating members' medical records were well supported by the encounter data. Potential reasons for encounter data omissions included provider billing offices making coding errors or failing to submit codes despite performing specific services; and lags between the provider's performance of the service and the submission of the encounter to the MCO and/or DMAS.

The variations in encounter data omission rates among the MCOs were minimal, with ranges below 4.0 percentage points for all data elements. The ranges of encounter record omission rates among the MCOs were 1.0 percentage point for *Date of Service*, 0.7 percentage points for *Diagnosis Code*, 3.6

percentage points for *Procedure Code*, and 2.4 percentage points for *Procedure Code Modifier*. Notably, all encounter data omission rates for all MCOs were below 10.0 percent.

Encounter Data Accuracy

Table 4-2 displays the element accuracy rates for each key data element and the all-element accuracy rates.

Table 4-2—Encounter Data Accuracy

Key Data Elements	Statewide	Aetna	HealthKeepers	Molina	Sentara	United	Statewide Error Types
Diagnosis Code[1]	**99.7%**	99.9%	99.6%	99.4%	99.9%	99.5%	Inaccurate coding: 98.7% Specificity error: 1.3%
Procedure Code[2]	**98.8%**	99.2%	98.8%	98.6%	98.5%	99.1%	Inaccurate coding: 89.9% Lower level of service in medical record: 5.7% Higher level of service in medical record: 4.5%
Procedure Code Modifier	**99.7%**	99.7%	99.3%	99.7%	100%	99.7%	—
All-Element Accuracy[3]	**77.7%**	80.4%	75.3%	80.6%	77.7%	79.7%	—

"—" denotes that the error type analysis was not applicable to a given data element.
[1] Inaccurate coding and specificity errors in service records were collectively considered as the denominator for the error type rates.
[2] Inaccurate coding, codes with higher levels of service, and codes with lower levels of service in service records were collectively considered as the denominator for the error type rates.
[3] The denominator for the element accuracy rate for each data element was defined differently from the denominator for the all-element accuracy rate. Therefore, the all-element accuracy rate could not be derived from the accuracy rate from each data element.

Key Findings: Table 4-2

In general, when key data elements were present in both DMAS' encounter data and the medical records, and were evaluated independently, the data elements were found to be accurate. As displayed in Table 4-2, 98.8 percent of procedure codes, and 99.7 percent of diagnosis codes and procedure code modifiers were accurate when found in both sources at the statewide level. This indicates a strong alignment between the data recorded in the encounter data and the medical records for the three key data elements. At the MCO level, the data element accuracy rates were above 98.0 percent for each of the three key data elements.

The accuracy rate for the *Diagnosis Code* and *Procedure Code* data elements can be affected by different types of errors. The errors affecting the *Diagnosis Code* data element were due to inaccurate coding (98.7 percent) and discrepancies related to specificity errors (1.3 percent). For the *Procedure Code* data element, 89.9 percent of the identified errors were associated with the use of inaccurate codes; 5.7 percent involved a provider documenting a lower level of service in the medical record

compared to a higher-level code identified in the encounter data; and 4.5 percent involved the medical record supporting a higher level of service compared to a lower-level code identified in the encounter data.

At the statewide level, 77.7 percent of the dates of service present in both data sources accurately represented all three data elements—*Diagnosis Code*, *Procedure Code*, and *Procedure Code Modifier*—when compared to members' medical records. At the MCO level, the all-element accuracy rates ranged from 75.3 percent (HealthKeepers) to 80.6 percent (Molina). The statewide all-element inaccuracies were mainly caused by high medical record omission rates across all data elements and low procurement rates.

Recommendations

To improve the quality of DMAS' encounter data submissions, HSAG offers the following recommendations to assist DMAS and the MCOs in addressing opportunities for improvement:

- The MRR results indicated that the encounters the MCOs submitted and maintained in DMAS' data warehouse were relatively complete and accurate when compared to the submitted medical records. As such, HSAG recommends that DMAS continues its current efforts in monitoring encounter data submissions and addressing any identified data issues with the MCOs' encounter data submissions.
- Although HSAG allowed for additional time for the MCOs to procure medical records, four MCOs' medical record submission rates remained below 90.0 percent, which negatively affected the medical record omission study indicators for all key data elements evaluated. As such, to ensure accountability for record procurement requirements, the MCOs may consider strengthening and/or enforcing their contract requirements and oversight with the following approaches:
  - Enhance contract requirements: Establish and reinforce accountability measures to ensure the timely submission of complete and accurate records.
  - Enforce contract language: Implement contractual provisions that mandate the submission of records by contracted providers and emphasize timely and responsive communication.
  - Address non-responsive providers: Develop and enforce strategies to mitigate delays caused by non-responsive providers and ensure the timely submission of service records for auditing and other evaluations.
- Since the results of the record review are dependent on the MCOs' submission of complete and accurate supporting documentation, HSAG recommends that DMAS establish record submission standards (e.g., MCOs should procure at least 90.0 percent of the medical records requested by DMAS to validate random samples selected from DMAS' final paid encounters). These standards may ensure the MCOs are more responsive in procuring requested records and also lead to more representative results of the actual documentation available.
- The statewide medical record omission rates for three of the four key data elements were above 10.0 percent. Although the low procurement rates largely contributed to higher medical record omission rates, HSAG could not attribute all medical record omission rates to non-procured records. Therefore, the MCOs should investigate the root causes of these omissions and consider performing periodic MRRs of submitted claims to verify appropriate coding and data completeness, where appropriate. Findings from these reviews should be used to target education and training to

providers regarding their encounter data submissions, medical record documentation, and coding practices.

Study Limitations

When evaluating the findings presented in this report, it is important to understand the following limitations associated with this study:

- Accurate evaluation of the completeness and accuracy of DMAS' encounter data depends on the ability of the MCOs to procure members' complete and accurate medical records. Therefore, validation results may have been affected by an MCO's inability to successfully obtain medical records from its provider network (e.g., non-responsive provider) or if the submitted medical records were incomplete (e.g., submission of a visit summary instead of the complete medical record).
- Study findings of the MRR relied solely on the documentation contained in members' medical records; therefore, results are dependent on the overall quality of physicians' medical records. For example, a physician may have performed a service but not documented it in the member's medical record. As such, HSAG would have counted this occurrence as a negative finding. This study was unable to distinguish cases in which a service was not performed versus those in which a service was performed but not documented in the medical record.
- The findings from this study are associated with encounters with dates of service between July 1, 2023, and June 30, 2024, and paid dates on or before June 30, 2025. Therefore, results may not reflect the current quality of DMAS' encounter data, or any changes implemented after June 30, 2025.

Appendix A. Results for Aetna Better Health of Virginia

Medical Record Review Results

Medical Record Procurement Status

Table A-1 shows the medical record submission status for Aetna, detailing the number of medical records requested, the number and percentage of medical records submitted for either the sampled date of service or the second date of service, as well as the number and percentage of medical records with a second date of service submitted by Aetna as indicated in its tracking sheets.

Table A-1—Medical Record Procurement Status for Aetna

MCO	Number of Records Requested	Number of Records Submitted		Records Submitted With Second Date of Service	
		Number	Percent	Number	Percent
Aetna	411	372	90.5%	224	60.2%
Statewide	**2,055**	**1,750**	**85.2%**	**1,028**	**58.7%**

Table A-2 highlights the reasons why Aetna did not submit medical records and orders the reasons by occurrence.

Table A-2—Reasons for Missing Medical Records for Aetna

Non-Submission Reason	Count	Percent
Non-responsive provider or provider did not respond in a timely manner	28	71.8%
Practice was permanently closed	7	17.9%
Member was not a patient of the practice	2	5.1%
Other	2	5.1%
Total*	**39**	**100%**

* The sum of rates from all non-submission reasons may not equal 100 percent due to rounding.

Encounter Data Completeness

Table A-3 displays the medical record omission and encounter data omission rates for each key data element for Aetna. Using the *Diagnosis Code* data element as an example, the specifications for the denominator and numerator are as follows:

- Medical record omission rate: The denominator for the medical record omission rate is the number of diagnosis codes identified in DMAS' electronic encounter data, and the numerator is the number

of diagnosis codes identified in DMAS' electronic encounter data that were not found (i.e., not supported) in the members' medical records.

In the analysis, when no medical records were submitted for a sampled date of service, all other key data elements associated with that date of service were treated as medical record omissions.

- Encounter data omission rate: The denominator for the encounter data omission rate is the number of diagnosis codes identified in the members' medical records, and the numerator is the number of diagnosis codes from the members' medical records that were not found in DMAS' electronic encounter data.

Table A-3—Encounter Data Completeness Summary for Aetna

Data Element	Medical Record Omission*			Encounter Data Omission*		
	Denominator	Numerator	Rate	Denominator	Numerator	Rate
Date of Service	605	43	7.1%	571	9	1.6%
Diagnosis Code	1,633	157	9.6%	1,486	10	0.7%
Procedure Code	1,175	153	13.0%^	1,075	53	4.9%
Procedure Code Modifier	405	76	18.8%^	337	8	2.4%

* Lower rates indicate better performance.

^Red text indicates rates greater than 10.0 percent.

Encounter Data Accuracy

Table A-4 displays the element accuracy rates for each key data element and the all-element accuracy rate for Aetna. Encounter data accuracy was evaluated for dates of service that existed in both DMAS' encounter data and the submitted medical records, with values present in both data sources for the evaluated data element. Using the *Diagnosis Code* data element as an example, the specifications for the denominator and the numerator are as follows:

- Denominator: The denominator for the accuracy rate is the number of diagnosis codes associated with dates of service that existed in both DMAS' electronic encounter data and the members' medical records. In addition, both data sources had values for the *Diagnosis Code* data element.
- Numerator: The numerator for the accuracy rate is the number of diagnosis codes in the denominator that were correctly coded based on the members' medical records submitted for the study.

Table A-4—Encounter Data Accuracy Summary for Aetna

Data Element	Denominator	Numerator	Rate	Error Type Percentages
Diagnosis Code[1]	1,476	1,474	99.9%	Inaccurate coding: 100% Specificity error: 0.0%
Procedure Code[2]	1,022	1,014	99.2%	Inaccurate coding: 87.5% Higher level of service in medical record: 12.5%

Data Element	Denominator	Numerator	Rate	Error Type Percentages
				Lower level of service in medical record: 0.0%
Procedure Code Modifier	329	328	99.7%	—
All-Element Accuracy[3]	562	452	80.4%	—

"—" denotes that the error type analysis was not applicable to a given data element.
[1] Inaccurate coding and specificity errors in service records were collectively considered as the denominator for the error type rates.
[2] Inaccurate coding, codes with higher levels of service, and codes with lower levels of service in service records were collectively considered as the denominator for the error type rates.
[3] The denominator for the element accuracy rate for each data element was defined differently from the denominator for the all-element accuracy rate. Therefore, the all-element accuracy rate could not be derived from the accuracy rate from each data element.

Conclusions

Based on results from the MRR activity, HSAG identified areas of strength and opportunities for improvement. Along with each opportunity for improvement, HSAG has also provided a recommendation to help target improvement efforts.

Table A-5 highlights Aetna's strengths, weaknesses, and recommendations, as applicable, that were identified from the EDV study.

Strengths and Weaknesses

Table A-5—Strengths and Weaknesses for Aetna

Strengths	
+	Medical record omission rates for the *Date of Service* and *Diagnosis Code* data elements were below 10.0 percent. This indicates that when these elements were reported in the encounter data, they were also supported by the members' medical records.
+	Encounter data omission rates for all four key data elements (i.e., *Date of Service*, *Diagnosis Code*, *Procedure Code*, and *Procedure Code Modifier*) were below 5.0 percent. This indicates that the information contained in the submitted medical records could be largely identified in the encounter data.
+	When the dates of service were present in both the encounter data and members' medical records, accuracy rates for all three key data elements (i.e., *Diagnosis Code*, *Procedure Code*, and *Procedure Code Modifier*) were above 99.0 percent.
Weaknesses and Recommendations	
−	**Weakness:** The medical record omission rates for the *Procedure Code* and *Procedure Code Modifier* data elements were elevated at 13.0 percent and 18.8 percent, respectively, indicating that a notable proportion of these data elements

Weaknesses and Recommendations	
	reported in the encounter data were not supported by documentation in the members' medical records.
	Recommendations: Aetna should strengthen its provider documentation practices related to procedure codes and procedure code modifiers by reinforcing expectations that medical records clearly document these data elements. Aetna should consider conducting targeted reviews of claims for procedure codes and procedure code modifiers, providing focused education and feedback to providers on documentation standards for these data elements, and incorporating specific checks into existing auditing or quality assurance processes to reduce medical record omission rates in future reviews.

Appendix B. Results for HealthKeepers, Inc.

Medical Record Review Results

Medical Record Procurement Status

Table B-1 shows the medical record submission status for HealthKeepers, detailing the number of medical records requested, the number and percentage of medical records submitted for either the sampled date of service or the second date of service, as well as the number and percentage of medical records with a second date of service submitted by HealthKeepers as indicated in its tracking sheets.

Table B-1—Medical Record Procurement Status for HealthKeepers

MCO	Number of Records Requested	Number of Records Submitted		Records Submitted With Second Date of Service	
		Number	Percent	Number	Percent
HealthKeepers	411	353	85.9%	165	46.7%
Statewide	**2,055**	**1,750**	**85.2%**	**1,028**	**58.7%**

Table B-2 highlights the reasons why HealthKeepers did not submit medical records and orders the reasons by occurrence.

Table B-2—Reasons for Missing Medical Records for HealthKeepers

Non-Submission Reason	Count	Percent
Non-responsive provider or provider did not respond in a timely manner	54	93.1%
Other	2	3.4%
Member was a patient of the practice; however, no documentation was available for the requested date of service	1	1.7%
Provider refused to release medical record	1	1.7%
Total*	**58**	**100%**

* The sum of rates from all non-submission reasons may not equal 100 percent due to rounding.

Encounter Data Completeness

Table B-3 displays the medical record omission and encounter data omission rates for each key data element for HealthKeepers. Using the *Diagnosis Code* data element as an example, the specifications for the denominator and numerator are as follows:

- Medical record omission rate: The denominator for the medical record omission rate is the number of diagnosis codes identified in DMAS' electronic encounter data, and the numerator is the number of diagnosis codes identified in DMAS' electronic encounter data that were not found (i.e., not supported) in the members' medical records.

  In the analysis, when no medical records were submitted for a sampled date of service, all other key data elements associated with that date of service were treated as medical record omissions.
- Encounter data omission rate: The denominator for the encounter data omission rate is the number of diagnosis codes identified in the members' medical records, and the numerator is the number of diagnosis codes from the members' medical records that were not found in DMAS' electronic encounter data.

Table B-3—Encounter Data Completeness Summary for HealthKeepers

Data Element	Medical Record Omission*			Encounter Data Omission*		
	Denominator	Numerator	Rate	Denominator	Numerator	Rate
Date of Service	558	61	10.9%^	500	3	0.6%
Diagnosis Code	1,541	192	12.5%^	1,354	5	0.4%
Procedure Code	1,103	170	15.4%^	976	43	4.4%
Procedure Code Modifier	398	94	23.6%^	308	4	1.3%

* Lower rates indicate better performance.
^Red text indicates rates greater than 10.0 percent.

Encounter Data Accuracy

Table B-4 displays the element accuracy rates for each key data element and the all-element accuracy rate for HealthKeepers. Encounter data accuracy was evaluated for dates of service that existed in both DMAS' encounter data and the submitted medical records, with values present in both data sources for the evaluated data element. Using the *Diagnosis Code* data element as an example, the specifications for the denominator and the numerator are as follows:

- Denominator: The denominator for the accuracy rate is the number of diagnosis codes associated with dates of service that existed in both DMAS' electronic encounter data and the members' medical records. In addition, both data sources had values for the *Diagnosis Code* data element.
- Numerator: The numerator for the accuracy rate is the number of diagnosis codes in the denominator that were correctly coded based on the members' medical records submitted for the study.

Table B-4—Encounter Data Accuracy Summary for HealthKeepers

Data Element	Denominator	Numerator	Rate	Error Type Percentages
Diagnosis Code[1]	1,349	1,344	99.6%	Inaccurate coding: 100% Specificity error: 0.0%
Procedure Code[2]	933	922	98.8%	Inaccurate coding: 90.9%

Data Element	Denominator	Numerator	Rate	Error Type Percentages
				Higher level of service in medical record: 9.1% Lower level of service in medical record: 0.0%
Procedure Code Modifier	304	302	99.3%	—
All-Element Accuracy[3]	497	374	75.3%	—

"—" denotes that the error type analysis was not applicable to a given data element.

[1] Inaccurate coding and specificity errors in service records were collectively considered as the denominator for the error type rates.

[2] Inaccurate coding, codes with higher levels of service, and codes with lower levels of service in service records were collectively considered as the denominator for the error type rates.

[3] The denominator for the element accuracy rate for each data element was defined differently from the denominator for the all-element accuracy rate. Therefore, the all-element accuracy rate could not be derived from the accuracy rate from each data element.

Conclusions

Based on results from the MRR activity, HSAG identified areas of strength and opportunities for improvement. Along with each opportunity for improvement, HSAG has also provided a recommendation to help target improvement efforts.

Table B-5 highlights HealthKeepers' strengths, weaknesses, and recommendations, as applicable, that were identified from the EDV study.

Strengths and Weaknesses

Table B-5—Strengths and Weaknesses for HealthKeepers

Strengths	
+	Encounter data omission rates for all four key data elements (i.e., *Date of Service*, *Diagnosis Code*, *Procedure Code*, and *Procedure Code Modifier*) were below 2.0 percent. This indicates that the information contained in the submitted medical records could be largely identified in the encounter data.
+	When the dates of service were present in both the encounter data and members' medical records, accuracy rates for all three key data elements (i.e., *Diagnosis Code*, *Procedure Code*, and *Procedure Code Modifier*) were above 98.0 percent.
Weaknesses and Recommendations	
−	**Weakness:** HealthKeepers had a low medical record procurement rate (85.9 percent), which limited HSAG's ability to validate encounter data for the sampled dates of service using members' medical records. Consequently, all four key data elements associated with missing sampled records were classified as medical record omissions. As a result, each evaluated data element (i.e., *Date of*

Weaknesses and Recommendations	
	Service, *Diagnosis Code*, *Procedure Code*, and *Procedure Code Modifier*) had a medical record omission rate exceeding 10.0 percent.
	Recommendations: HealthKeepers should strengthen its medical record procurement processes by reinforcing provider accountability for timely medical record submission. This may include strengthening and/or enhancing contractual requirements with providers in providing the requested documentation, implementing escalation procedures for non-responsive providers, and conducting targeted outreach to providers with repeated non-compliance. HealthKeepers should also investigate any other root causes of medical record omissions and implement targeted corrective actions, including conducting periodic internal MRRs to assess documentation accuracy and completeness, strengthening provider education related to documentation standards, and incorporating documentation checks into existing quality assurance processes.

Appendix C. Results for Molina Complete Care of Virginia

Medical Record Review Results

Medical Record Procurement Status

Table C-1 shows the medical record submission status for Molina, detailing the number of medical records requested, the number and percentage of medical records submitted for either the sampled date of service or the second date of service, as well as the number and percentage of medical records with a second date of service submitted by Molina as indicated in its tracking sheets.

Table C-1—Medical Record Procurement Status for Molina

MCO	Number of Records Requested	Number of Records Submitted		Records Submitted With Second Date of Service	
		Number	Percent	Number	Percent
Molina	411	331	80.5%	223	67.4%
Statewide	**2,055**	**1,750**	**85.2%**	**1,028**	**58.7%**

Table C-2 highlights the reasons why Molina did not submit medical records and orders the reasons by occurrence.

Table C-2—Reasons for Missing Medical Records for Molina

Non-Submission Reason	Count	Percent
Non-responsive provider or provider did not respond in a timely manner	78	97.5%
Practice was permanently closed	1	1.3%
Provider refused to release medical record	1	1.3%
Total*	**80**	**100%**

* The sum of rates from all non-submission reasons may not equal 100 percent due to rounding.

Encounter Data Completeness

Table C-3 displays the medical record omission and encounter data omission rates for each key data element for Molina. Using the *Diagnosis Code* data element as an example, the specifications for the denominator and numerator are as follows:

- Medical record omission rate: The denominator for the medical record omission rate is the number of diagnosis codes identified in DMAS' electronic encounter data, and the numerator is the number of diagnosis codes identified in DMAS' electronic encounter data that were not found (i.e., not supported) in the members' medical records.

In the analysis, when no medical records were submitted for a sampled date of service, all other key data elements associated with that date of service were treated as medical record omissions.

- Encounter data omission rate: The denominator for the encounter data omission rate is the number of diagnosis codes identified in the members' medical records, and the numerator is the number of diagnosis codes from the members' medical records that were not found in DMAS' electronic encounter data.

Table C-3—Encounter Data Completeness Summary for Molina

Data Element	Medical Record Omission*			Encounter Data Omission*		
	Denominator	Numerator	Rate	Denominator	Numerator	Rate
Date of Service	608	87	14.3%^	525	4	0.8%
Diagnosis Code	1,497	244	16.3%^	1,259	6	0.5%
Procedure Code	1,190	240	20.2%^	994	44	4.4%
Procedure Code Modifier	394	80	20.3%^	314	0	0.0%

* Lower rates indicate better performance.

^Red text indicates rates greater than 10.0 percent.

Encounter Data Accuracy

Table C-4 displays the element accuracy rates for each key data element and the all-element accuracy rate for Molina. Encounter data accuracy was evaluated for dates of service that existed in both DMAS' encounter data and the submitted medical records, with values present in both data sources for the evaluated data element. Using the *Diagnosis Code* data element as an example, the specifications for the denominator and the numerator are as follows:

- Denominator: The denominator for the accuracy rate is the number of diagnosis codes associated with dates of service that existed in both DMAS' electronic encounter data and the members' medical records. In addition, both data sources had values for the *Diagnosis Code* data element.
- Numerator: The numerator for the accuracy rate is the number of diagnosis codes in the denominator that were correctly coded based on the members' medical records submitted for the study.

Table C-4—Encounter Data Accuracy Summary for Molina

Data Element	Denominator	Numerator	Rate	Error Type Percentages
Diagnosis Code[1]	1,253	1,246	99.4%	Inaccurate coding: 100% Specificity error: 0.0%
Procedure Code[2]	950	937	98.6%	Inaccurate coding: 69.2% Lower level of service in medical record: 30.8% Higher level of service in medical record: 0.0%
Procedure Code Modifier	314	313	99.7%	—

Data Element	Denominator	Numerator	Rate	Error Type Percentages
All-Element Accuracy[3]	521	420	80.6%	—

"—" denotes that the error type analysis was not applicable to a given data element.
[1] Inaccurate coding and specificity errors in service records were collectively considered as the denominator for the error type rates.
[2] Inaccurate coding, codes with higher levels of service, and codes with lower levels of service in service records were collectively considered as the denominator for the error type rates.
[3] The denominator for the element accuracy rate for each data element was defined differently from the denominator for the all-element accuracy rate. Therefore, the all-element accuracy rate could not be derived from the accuracy rate from each data element.

Conclusions

Based on results from the MRR activity, HSAG identified areas of strength and opportunities for improvement. Along with each opportunity for improvement, HSAG has also provided a recommendation to help target improvement efforts.

Table C-5 highlights Molina's strengths, weaknesses, and recommendations, as applicable, that were identified from the EDV study.

Strengths and Weaknesses

Table C-5—Strengths and Weaknesses for Molina

Strengths	
+	Encounter data omission rates for all four key data elements (i.e., *Date of Service*, *Diagnosis Code*, *Procedure Code*, and *Procedure Code Modifier*) were below 5.0 percent. This indicates that the information contained in the submitted medical records could be largely identified in the encounter data.
+	When the dates of service were present in both the encounter data and members' medical records, accuracy rates for all three key data elements (i.e., *Diagnosis Code*, *Procedure Code*, and *Procedure Code Modifier*) were above 98.0 percent.
Weaknesses and Recommendations	
−	**Weakness:** Molina had a low medical record procurement rate (80.5 percent), which limited HSAG's ability to validate encounter data for the sampled dates of service using members' medical records. Consequently, all four key data elements associated with missing sampled records were classified as medical record omissions. As a result, each evaluated data element (i.e., *Date of Service*, *Diagnosis Code, Procedure Code*, and *Procedure Code Modifier*) had a medical record omission rate exceeding 10.0 percent.
	Recommendations: Molina should strengthen its medical record procurement processes by reinforcing provider accountability for timely medical record submission. This may include strengthening and/or enhancing contractual

Weaknesses and Recommendations	
	requirements with providers in providing the requested documentation, implementing escalation procedures for non-responsive providers, and conducting targeted outreach to providers with repeated non-compliance. Molina should also investigate any other root causes of medical record omissions and implement targeted corrective actions, including conducting periodic internal MRRs to assess documentation accuracy and completeness, strengthening provider education related to documentation standards, and incorporating documentation checks into existing quality assurance processes.

Appendix D. Results for Sentara Health Plans

Medical Record Review Results

Medical Record Procurement Status

Table D-1 shows the medical record submission status for Sentara, detailing the number of medical records requested, the number and percentage of medical records submitted for either the sampled date of service or the second date of service, as well as the number and percentage of medical records with a second date of service submitted by Sentara as indicated in its tracking sheets.

Table D-1—Medical Record Procurement Status for Sentara

MCO	Number of Records Requested	Number of Records Submitted		Records Submitted With Second Date of Service	
		Number	Percent	Number	Percent
Sentara	411	367	89.3%	188	51.2%
Statewide	**2,055**	**1,750**	**85.2%**	**1,028**	**58.7%**

Table D-2 highlights the reasons why Sentara did not submit medical records and orders the reasons by occurrence.

Table D-2—Reasons for Missing Medical Records for Sentara

Non-Submission Reason	Count	Percent
Non-responsive provider or provider did not respond in a timely manner	40	90.9%
Practice was permanently closed	2	4.5%
Member was not a patient of the practice	1	2.3%
Member was a patient of the practice; however, no documentation was available for the requested date of service	1	2.3%
Total	**44**	**100%**

Encounter Data Completeness

Table D-3 displays the medical record omission and encounter data omission rates for each key data element for Sentara. Using the *Diagnosis Code* data element as an example, the specifications for the denominator and numerator are as follows:

- Medical record omission rate: The denominator for the medical record omission rate is the number of diagnosis codes identified in DMAS' electronic encounter data, and the numerator is the number

of diagnosis codes identified in DMAS' electronic encounter data that were not found (i.e., not supported) in the members' medical records.

In the analysis, when no medical records were submitted for a sampled date of service, all other key data elements associated with that date of service were treated as medical record omissions.

- Encounter data omission rate: The denominator for the encounter data omission rate is the number of diagnosis codes identified in the members' medical records, and the numerator is the number of diagnosis codes from the members' medical records that were not found in DMAS' electronic encounter data.

Table D-3—Encounter Data Completeness Summary for Sentara

Data Element	Medical Record Omission*			Encounter Data Omission*		
	Denominator	Numerator	Rate	Denominator	Numerator	Rate
Date of Service	574	49	8.5%	533	8	1.5%
Diagnosis Code	1,566	170	10.9%^	1,412	16	1.1%
Procedure Code	1,161	142	12.2%^	1,108	89	8.0%
Procedure Code Modifier	395	70	17.7%^	328	3	0.9%

* Lower rates indicate better performance.

^Red text indicates rates greater than 10.0 percent.

Encounter Data Accuracy

Table D-4 displays the element accuracy rates for each key data element and the all-element accuracy rate for Sentara. Encounter data accuracy was evaluated for dates of service that existed in both DMAS' encounter data and the submitted medical records, with values present in both data sources for the evaluated data element. Using the *Diagnosis Code* data element as an example, the specifications for the denominator and the numerator are as follows:

- Denominator: The denominator for the accuracy rate is the number of diagnosis codes associated with dates of service that existed in both DMAS' electronic encounter data and the members' medical records. In addition, both data sources had values for the *Diagnosis Code* data element.
- Numerator: The numerator for the accuracy rate is the number of diagnosis codes in the denominator that were correctly coded based on the members' medical records submitted for the study.

Table D-4—Encounter Data Accuracy Summary for Sentara

Data Element	Denominator	Numerator	Rate	Error Type Percentages
Diagnosis Code[1]	1,396	1,394	99.9%	Inaccurate coding: 100% Specificity error: 0.0%
Procedure Code[2]	1,019	1,004	98.5%	Inaccurate coding: 93.3% Lower level of service in medical record: 6.7%

Data Element	Denominator	Numerator	Rate	Error Type Percentages
				Higher level of service in medical record: 0.0%
Procedure Code Modifier	325	325	100%	—
All-Element Accuracy[3]	525	408	77.7%	—

"—" denotes that the error type analysis was not applicable to a given data element.
[1] Inaccurate coding and specificity errors in service records were collectively considered as the denominator for the error type rates.
[2] Inaccurate coding, codes with higher levels of service, and codes with lower levels of service in service records were collectively considered as the denominator for the error type rates.
[3] The denominator for the element accuracy rate for each data element was defined differently from the denominator for the all-element accuracy rate. Therefore, the all-element accuracy rate could not be derived from the accuracy rate from each data element.

Conclusions

Based on results from the MRR activity, HSAG identified areas of strength and opportunities for improvement. Along with each opportunity for improvement, HSAG has also provided a recommendation to help target improvement efforts.

Table D-5 highlights Sentara's strengths, weaknesses, and recommendations, as applicable, that were identified from the EDV study.

Strengths and Weaknesses

Table D-5—Strengths and Weaknesses for Sentara

Strengths	
+	The medical record omission rate for the *Date of Service* data element was 8.5 percent. This indicates that when the dates of service were reported in the encounter data, they were also supported by the members' medical records.
+	Encounter data omission rates for all four key data elements (i.e., *Date of Service*, *Diagnosis Code*, *Procedure Code*, and *Procedure Code Modifier*) were below 10.0 percent. This indicates that the information contained in the submitted medical records could be largely identified in the encounter data.
+	When the dates of service were present in both the encounter data and members' medical records, accuracy rates for all three key data elements (i.e., *Diagnosis Code*, *Procedure Code*, and *Procedure Code Modifier*) were above 98.0 percent.
Weaknesses and Recommendations	
	Weakness: Sentara had a slightly low medical record procurement rate (89.3 percent), which limited HSAG's ability to validate encounter data for the sampled dates of service using members' medical records. Consequently, all data

Weaknesses and Recommendations	
	elements associated with missing sampled records were classified as medical record omissions. As a result, three of the evaluated data elements (i.e., *Diagnosis Code, Procedure Code*, and *Procedure Code Modifier*) had a medical record omission rate exceeding 10.0 percent.
	Recommendations: Sentara should strengthen its medical record procurement processes by reinforcing provider accountability for timely medical record submission. This may include strengthening and/or enhancing contractual requirements with providers in providing the requested documentation, implementing escalation procedures for non-responsive providers, and conducting targeted outreach to providers with repeated non-compliance. Sentara should also investigate any other root causes of medical record omissions and implement targeted corrective actions, including conducting periodic internal MRRs to assess documentation accuracy and completeness, strengthening provider education related to documentation standards, and incorporating documentation checks into existing quality assurance processes.

Appendix E. Results for UnitedHealthcare of the Mid-Atlantic, Inc.

Medical Record Review Results

Medical Record Procurement Status

Table E-1 shows the medical record submission status for United, detailing the number of medical records requested, the number and percentage of medical records submitted for either the sampled date of service or the second date of service, as well as the number and percentage of medical records with a second date of service submitted by United as indicated in its tracking sheets.

Table E-1—Medical Record Procurement Status for United

MCO	Number of Records Requested	Number of Records Submitted		Records Submitted With Second Date of Service	
		Number	Percent	Number	Percent
United	411	327	79.6%	228	69.7%
Statewide	**2,055**	**1,750**	**85.2%**	**1,028**	**58.7%**

Table E-2 highlights the reasons why United did not submit medical records and orders the reasons by occurrence.

Table E-2—Reasons for Missing Medical Records for United

Non-Submission Reason	Count	Percent
Non-responsive provider or provider did not respond in a timely manner	72	85.7%
Practice was permanently closed	8	9.5%
Member was not a patient of the practice	2	2.4%
Member was a patient of the practice; however, no documentation was available for the requested date of service	1	1.2%
Other	1	1.2%
Total	**84**	**100%**

Encounter Data Completeness

Table E-3 displays the medical record omission and encounter data omission rates for each key data element for United. Using the *Diagnosis Code* data element as an example, the specifications for the denominator and numerator are as follows:

- Medical record omission rate: The denominator for the medical record omission rate is the number of diagnosis codes identified in DMAS' electronic encounter data, and the numerator is the number of diagnosis codes identified in DMAS' electronic encounter data that were not found (i.e., not supported) in the members' medical records.

  In the analysis, when no medical records were submitted for a sampled date of service, all other key data elements associated with that date of service were treated as medical record omissions.
- Encounter data omission rate: The denominator for the encounter data omission rate is the number of diagnosis codes identified in the members' medical records, and the numerator is the number of diagnosis codes from the members' medical records that were not found in DMAS' electronic encounter data.

Table E-3—Encounter Data Completeness Summary for United

Data Element	Medical Record Omission*			Encounter Data Omission*		
	Denominator	Numerator	Rate	Denominator	Numerator	Rate
Date of Service	625	87	13.9%^	544	6	1.1%
Diagnosis Code	1,686	244	14.5%^	1,449	7	0.5%
Procedure Code	1,213	164	13.5%^	1,110	61	5.5%
Procedure Code Modifier	502	107	21.3%^	399	4	1.0%

* Lower rates indicate better performance.

^Red text indicates rates greater than 10.0 percent.

Encounter Data Accuracy

Table E-4 displays the element accuracy rates for each key data element and the all-element accuracy rate for United. Encounter data accuracy was evaluated for dates of service that existed in both DMAS' encounter data and the submitted medical records, with values present in both data sources for the evaluated data element. Using the *Diagnosis Code* data element as an example, the specifications for the denominator and the numerator are as follows:

- Denominator: The denominator for the accuracy rate is the number of diagnosis codes associated with dates of service that existed in both DMAS' electronic encounter data and the members' medical records. In addition, both data sources had values for the *Diagnosis Code* data element.
- Numerator: The numerator for the accuracy rate is the number of diagnosis codes in the denominator that were correctly coded based on the members' medical records submitted for the study.

Table E-4—Encounter Data Accuracy Summary for United

Data Element	Denominator	Numerator	Rate	Error Type Percentages
Diagnosis Code[1]	1,442	1,435	99.5%	Inaccurate coding: 85.7% Specificity error: 14.3%
Procedure Code[2]	1,049	1,040	99.1%	Inaccurate coding: 88.9%

Data Element	Denominator	Numerator	Rate	Error Type Percentages
				Lower level of service in medical record: 11.1% Higher level of service in medical record: 0.0%
Procedure Code Modifier	395	394	99.7%	—
All-Element Accuracy[3]	538	429	79.7%	—

"—" denotes that the error type analysis was not applicable to a given data element.
[1] Inaccurate coding and specificity errors in service records were collectively considered as the denominator for the error type rates.
[2] Inaccurate coding, codes with higher levels of service, and codes with lower levels of service in service records were collectively considered as the denominator for the error type rates.
[3] The denominator for the element accuracy rate for each data element was defined differently from the denominator for the all-element accuracy rate. Therefore, the all-element accuracy rate could not be derived from the accuracy rate from each data element.

Conclusions

Based on results from the MRR activity, HSAG identified areas of strength and opportunities for improvement. Along with each opportunity for improvement, HSAG has also provided a recommendation to help target improvement efforts.

Table E-5 highlights United's strengths, weaknesses, and recommendations, as applicable, that were identified from the EDV study.

Strengths and Weaknesses

Table E-5—Strengths and Weaknesses for United

Strengths	
+	Encounter data omission rates for all four key data elements (i.e., *Date of Service*, *Diagnosis Code*, *Procedure Code*, and *Procedure Code Modifier*) were below 6.0 percent. This indicates that the information contained in the submitted medical records could be largely identified in the encounter data.
+	When the dates of service were present in both the encounter data and members' medical records, accuracy rates for all three key data elements (i.e., *Diagnosis Code*, *Procedure Code*, and *Procedure Code Modifier*) were above 99.0 percent.
Weaknesses and Recommendations	
−	**Weakness:** United had a low medical record procurement rate (79.6 percent), which limited HSAG's ability to validate encounter data for the sampled dates of service using members' medical records. Consequently, all four key data elements associated with missing sampled records were classified as medical record omissions. As a result, each evaluated data element (i.e., *Date of Service,*

Weaknesses and Recommendations	
	Diagnosis Code, Procedure Code, and *Procedure Code Modifier*) had a medical record omission rate exceeding 10.0 percent.
	Recommendations: United should strengthen its medical record procurement processes by reinforcing provider accountability for timely medical record submission. This may include strengthening and/or enhancing contractual requirements with providers in providing the requested documentation, implementing escalation procedures for non-responsive providers, and conducting targeted outreach to providers with repeated non-compliance. United should also investigate any other root causes of medical record omissions and implement targeted corrective actions, including conducting periodic internal MRRs to assess documentation accuracy and completeness, strengthening provider education related to documentation standards, and incorporating documentation checks into existing quality assurance processes.