Qlarant

Maryland
DEPARTMENT OF HEALTH

Medicaid Managed Care Organization

Encounter Data Validation Report

Measurement Year 2023

Submitted February 2025

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Introduction and Purpose

The Maryland Department of Health (MDH) administers the state's Medicaid managed care program, Maryland HealthChoice Program (HealthChoice). HealthChoice operates under a Centers for Medicare and Medicaid Services (CMS) 1115 waiver and Code of Maryland Regulations (COMAR) to provide quality healthcare that is patient-focused, prevention-oriented, coordinated, accessible, and cost-effective. MDH is responsible for evaluating the quality of care provided to enrollees by HealthChoice's managed care organizations (MCOs).

Federal regulations require MDH to contract with an external quality review organization (EQRO) to provide annual, independent reviews assessing quality, access, and timeliness of care. This independent review ensures services provided to enrollees meet the standards set forth in the Code of Federal Regulations (CFR) and COMAR regulations governing the HealthChoice program. MDH contracts with Qlarant to serve as the EQRO for the HealthChoice Program to meet federal regulations and validate encounter data.

External quality review (EQR) activities are guided by Medicaid Managed Care provisions of the Balanced Budget Act of 1997 (BBA), which was informed by direction from the U.S. Department of Health and Human Services. Early iterations served as guidelines to develop protocols for conducting EQR activities before CMS began developing a series of tools to help state Medicaid agencies collect, validate, and utilize encounter data for managed care program oversight in 1995. Encounter data identifies when a provider rendered a specific service under a managed care delivery system. States rely on valid and reliable encounter data submitted by MCOs to make key decisions, establish goals, assess and improve quality of care, monitor program integrity, and determine capitation rates.

CMS strongly encourages states to contract with EQROs to conduct encounter data validation (EDV) to ensure the overall validity and reliability of its encounter data. Collecting complete and accurate encounter data is critical in evolving payment methodologies and value-based payment elements. Qlarant reviews aggregate encounters to determine the accuracy of the data when compared to medical record reviews and the resolution of any outliers identified. Validation of encounter data provides MDH with a level of confidence in the completeness and accuracy of encounter data submitted by the MCOs.

Qlarant conducted EDV for measurement year (MY) 2023, encompassing January 1, through December 31, 2023, for all nine HealthChoice MCOs:

- Aetna Better Health of Maryland (ABH)
- CareFirst BlueCross BlueShield Community Health Plan (CFCHP)

- Jai Medical Systems, Inc. (JMS)
- Kaiser Permanente of the Mid-Atlantic States, Inc. (KPMAS)
- Maryland Physicians Care (MPC)
- MedStar Family Choice, Inc. (MSFC)
- Priority Partners (PPMCO)
- UnitedHealthcare (UHC)
- Wellpoint Maryland (WPM)

Methodology

Qlarant conducted EDV in accordance with the *CMS External Quality Review (EQR) Protocol 5*, *Validation of Encounter Data Reported by the Medicaid and CHIP Managed Care Plan*[1]. To assess the completeness and accuracy of encounter data, Qlarant completed the following activities:

Activity 1. Reviewed state requirements for collecting and submitting encounter data. Qlarant reviewed MDH's contractual requirements for encounter data collection and submission to ensure the MCOs followed the specifications in file format and encounter types.

Activity 2. Reviewed the MCO's capability to produce accurate and complete encounter data. Qlarant completed an evaluation of the MCO's Information Systems Capabilities Assessment (ISCA) to determine whether the MCO's information system is able to collect and report high-quality encounter data.

Activity 3. Analyzed MCO electronic encounter data for accuracy and completeness. MDH elected to contract with The Hilltop Institute at the University of Maryland, Baltimore County (Hilltop) to analyze and evaluate the validity of encounter data in order to complete Activity 3. Hilltop performed an evaluation of all electronic encounter data submitted by the MCOs for MY 2021 through MY 2023 to determine the validity of the encounter data and ensure the data are complete, accurate, and of high quality.

Activity 4. Reviewed medical records for confirmation of findings of encounter data analysis. Qlarant's certified coders/nurse reviewers compared electronic encounter data to medical record documentation to confirm the accuracy of reported encounters. A random sample of encounters for inpatient, outpatient, and office visit claims were reviewed to evaluate if the electronic encounter was documented in the medical record and the level of documentation supported the billed service codes. Reviewers validate patient identifiers, diagnosis codes, procedure codes, and if applicable, revenue codes.

[1] CMS EQRO Protocols

Activity 5. Submitted findings to MDH. Qlarant prepared this report for submission to MDH, which includes results, strengths, and recommendations.

Results

State Requirements for Collecting and Submitting Encounter Data

Qlarant reviewed information regarding MDH's requirements for collecting and submitting encounter data. MDH provided Qlarant with:

- MDH's requirements for collecting and submitting encounter data by MCOs, including specifications in the contracts between the State and the MCO.
- Data submission format requirements for MCOs.
- Requirements specifying the types of encounters that must be validated.
- MDH's abridged data dictionary.
- A description of the information flow from the MCO to the State, including the role of any contractors or data intermediaries.
- MDH's standards for encounter data completeness and accuracy.
- A list and description of edit checks built into MDH's Medicaid Management Information System (MMIS) that identifies how the system treats data that fails edit checks.
- Requirements regarding timeframes for data submission.
- Prior year's EQR report on validating encounter data.
- Hilltop's report, *EQR Protocol 5, Activity 3: Validation of Encounter Data, CY 2021 to CY 2023*.
- Any other information relevant to encounter data validation.

MDH provided an abridged data dictionary and described the process of encounter data submission from the MCOs to the State. MCOs can submit encounter data through a web portal or through a file transfer protocol. Each MCO may contract with a vendor or use data intermediaries to prepare encounter data submissions.

The electronic data interchange (EDI) is an automated system that includes rules dictating the transfer of data from each MCO to MDH. MDH uses the Health Insurance Portability and Accountability Act (HIPAA) EDI transaction sets and standards for data submission of 820, 834, 835, and 837 files. The 837 file contains patient claim information, while the 835 file contains the payment and/or explanation of benefits for a claim. MDH processes encounters via the Electronic Data Interchange Translator Processing System for completeness and accuracy. All encounters are validated on two levels: first by performing Level 1 and Level 2 edit checks on 837 data, using HIPAA EDI implementation guidelines; and second, within MMIS's adjudication process.

The system treats encounters that fail the MMIS edit checks in the following manner:

- All denied and rejected encounters appear with the MMIS Explanation of Benefit (EOB) code and description in the 8ER file, with one exception. EOB 101 is excluded from this report.
- All paid and denied encounters appear in the 835 file. Denied encounters use the HIPAA EDI Claim Adjustment Reason Codes and Remittance Advice Remark Codes to report back the denied reason. Encounters marked as suspended are not included in the 835.
- In addition, MMIS generates a summary report for each MCO.

Performance standards used to define requirements for encounters in MY 2023 are established by MDH in MY 2023 HealthChoice MCO Agreements and Appendix O of MCO contracts. MDH specifies the encounter data requirements for the collection and submission of encounter data by MCOs in Section II.I.4, and 5 of the MY 2023 HealthChoice MCO Agreement (p. 13)**.** Appendix O of the contract includes all the COMAR provisions applicable to MCOs, including regulations concerning encounter data. Regulations applying to encounters in MY 2023 are noted in the table below.

Table 1. MY 2023 COMAR Requirements for Encounter Data

COMAR	Requirement

10.67.03.11A	A description of the applicant's management information system, including, but not limited to:
	• Capacities, including:
	  ○ The ability to generate and transmit electronic claims data consistent with the Medicaid Statistical Information System (MSIS) requirements or successor systems;
	  ○ The ability to collect and report data on enrollee and provider characteristics and on all services furnished to enrollees through an encounter data system;
	  ○ The ability to screen the data collected for completeness, logic, and consistency; and
	  ○ The ability to collect and report data from providers in standardized formats using secure information exchanges and technologies utilized for Medicaid quality improvement and care coordination efforts;
	• Software;
	• Characteristics; and
	• Ability to interface with other systems

10.67.03.11B	A description of the applicant's operational procedures for generating service-specific encounter data.
10.67.03.11C	Evidence of the applicant's ability to report, on a monthly basis, service-specific encounter data in UB04 or CMS1500 format.
10.67.07.03A(1)	MCOs shall submit to MDH the following: Encounter data in the form and manner described in COMAR 10.67.04.15B, 42 CFR §438.242(c), and 42 CFR §438.818.
10.67.07.03B	MCOs shall report to MDH any identified inaccuracies in the encounter data reported by the MCOs or its subcontractors within 30 days of the date discovered regardless of the effect which the inaccuracy has upon MCOs reimbursement.

10.67.04.15B	Encounter Data:
	• MCOs shall submit encounter data reflecting 100% of provider-enrollee encounters, in CMS1500 or UB04 format or an alternative format previously approved by MDH.
	• MCOs may use alternative formats including:
	  ○ ASC X12N 837 and NCPDP formats; and
	  ○ ASC X12N 835 format, as appropriate.
	• MCOs shall submit encounter data that identifies the provider who delivers any items or services to enrollees at a frequency and level of detail to be specified by CMS and MDH, including, at a minimum:
	  ○ Enrollee and provider identifying information;
	  ○ Service, procedure, and diagnosis codes;
	  ○ Allowed, paid, enrollee responsibility, and third party liability amounts; and
	  ○ Service, claims submissions, adjudication, and payment dates.
	• MCOs shall report encounter data within 60 calendar days after receipt of the claim from the provider.
	• MCOs shall submit encounter data utilizing a secure online data transfer system.

MDH sets forth requirements regarding timeframes for data submission in COMAR 10.67.04.15B, which specifies that MCOs must report encounter data within 60 calendar days after receipt of the claim from the provider. For daily data exchanges, the cutoff time is 3 p.m. for transmission of a single encounter data file for an MCO to receive an 835 the next day. Any encounters processed after the cutoff time will be picked up in the next adjudication cycle on the following business day.

MCO's Capability to Produce Accurate and Complete Encounter Data

Qlarant assessed each MCO's capability for collecting accurate and complete encounter data. Each MCO's information systems process and capabilities in capturing complete and accurate encounter data will be assessed through the following steps:

1. Review of the MCO's ISCA.
2. Interview MCO personnel, as needed.

The purpose of the ISCA review is to assess the MCO's information systems capabilities to capture and assimilate information from multiple data sources. The documentation review also determines if the system may be vulnerable to incomplete or inaccurate data capture, integration, storage, or reporting. Documentation review findings are used to identify issues that may contribute to inaccurate or incomplete encounter data.

After reviewing the findings from the ISCA, Qlarant conducted follow-up interviews with MCO personnel, as needed, to supplement the information and ensure an understanding of the MCO's information systems and processes. Results of the document review and interview process are summarized in the table below.

Table 2. MY 2023 ISCA Summary

Information Systems Component	HealthChoice Aggregate
Captures Data Appropriately	**Yes/No**
Captures accurate encounter data	Yes for All
Captures all appropriate data elements for claims processing	Yes for All
Clean Claims Assessment	**%**
Clean Claims in 30 Days Timeliness Standard	96%
Clean Claims in 30 Days Timeliness Rate	99%
Electronic Claims Assessment	**%**
Percentage of electronic professional claims	96%
Percentage of electronic institutional/facility claims	87%

Analysis of MCO's Electronic Encounter Data for Accuracy and Completeness

MDH has an interagency governmental agreement with Hilltop to serve as the data warehouse for its encounters. Therefore, Hilltop completed Activity 3 of the EDV, which includes the following four steps for analyses:

1. Develop a data quality test plan based on data element validity requirements
2. Encounter data macro-analysis—verification of data integrity
3. Encounter data micro-analysis—generate and review analytic reports
4. Compare findings to state-identified benchmarks

Hilltop's report, *EQR Protocol 5, Activity 3: Validation of Encounter Data, CY 2021 to CY 2023*, is included in **Appendix A** and the conclusions for MY 2023 Activity 3 are listed below.

Overall, analysis of the CY 2023 electronic encounter data submitted indicates improvements in provider enrollment-related denied encounters. Although the MCOs continue to struggle with the changes in encounter editing logic, the Department and the MCOs have continued to strengthen gains made in recent years.

In general, the MCOs have similar distributions of denials, types of encounters, types of visits, and outliers, except where specifically noted in the results. This analysis identified minor outliers that merit further monitoring and investigation, although the MCOs have made progress. Hilltop generated recipient-level reports for Department staff to discuss with the MCOs.

Hilltop found that the volume of accepted encounters was generally consistent with MCO enrollment. Although the time dimension analysis showed some variation among MCOs regarding the timeliness of encounter submissions, most encounters were submitted within the eight-month maximum time frame allotted by the Department. The decreases in encounters submitted within one to two days and three to seven days that were observed for CY 2023 are offset by the increase in the number of encounters submitted within eight to 31 days and one to two months.

Analysis of Medical Records to Confirm Encounter Data Accuracy

A review of enrollees' medical records offers a method to examine the completeness and accuracy of encounter data. Using the encounter/claims data file prepared by Hilltop, Qlarant identified all enrollees with an inpatient, outpatient, and office visit service claim. The sample size was selected to ensure a 90% confidence interval with a +/-5% margin of error rate for sampling. Oversampling was used in order to ensure adequate numbers of medical records were received to meet the required sample size. Hospital inpatient and outpatient encounter types were oversampled by 300%, while office visit encounter types were oversampled by 400% for each MCO.

Records were requested directly from the billing providers. Qlarant mailed each sampled provider a letter with the specific record request, which included the patient's name, medical assistance identification number, date of birth, date(s) of service, claim number, and treating physician's National Provider Identifier (NPI) number. Targeted follow-up is addressed, as needed, to providers who did not respond to the initial request, including phone calls and fax requests. Providers were asked to securely submit medical record information to Qlarant with the following instructions:

- Identify documentation submitted for each patient using the patient's first and last name, medical assistance identification number, date of birth, age, gender, and provider name.
- Include all relevant medical record documentation to ensure receipt of adequate information for validating service codes (a list of recommended documentation was provided for reference).

The total number of EDV minimum samples required, classified by encounter type, is displayed in the table below.

Table 3. MYs 2021 through 2023 EDV Minimum Sample Required for Review by Encounter Type

Sample Size by Encounter Type	MY 2021	MY 2022	MY 2023
Inpatient	55 (2%)	52 (2%)	52 (2%)
Outpatient	507 (21%)	497 (20%)	458 (19%)
Office Visit	1,892 (77%)	1,907 (78%)	1,944 (79%)
Total	**2,454**	**2,456**	**2,454**

Note: Values reported are rounded to the nearest percentage for reporting only.

The minimum sample for MY 2023 (2,454) has slightly decreased by two encounters compared to MY 2022 (2,456) and aligns with the minimum sample for MY 2021. Most encounters in the sample were office visits (79%), followed by outpatient encounters (19%), and inpatient encounters (2%). The percentage of inpatient encounters has remained the same from MY 2021 to MY 2023. The percentage of outpatient encounters has slightly declined year-over-year from MY 2021 (21%) to MY 2023 (19%). The percentage of office visit encounters has slightly increased year-over-year from MY 2021 (77%) to MY 2023 (79%).

The total number of MCO record review response rates by encounter type is displayed in the table below.

Table 4. MY 2023 MCO EDV Medical Record Review Response Rates by Encounter Type

MCO	Inpatient Records			Outpatient Records			Office Visit Records		
	# Reviewed	Minimum Reviews Required	Sample Size Achieved?	# Reviewed	Minimum Reviews Required	Sample Size Achieved?	# Reviewed	Minimum Reviews Required	Sample Size Achieved?
ABH	6	6	Yes	51	50	Yes	220	215	Yes
CFCHP	7	7	Yes	51	51	Yes	217	215	Yes
JMS	9	8	Yes	78	77	Yes	188	187	Yes
KPMAS	6	5	Yes	19	19	Yes	250	249	Yes
MPC	5	5	Yes	56	55	Yes	214	213	Yes
MSFC	5	5	Yes	48	52	No	219	216	Yes
PPMCO	6	6	Yes	66	58	Yes	213	209	Yes
UHC	5	5	Yes	53	51	Yes	220	217	Yes
WPM	5	5	Yes	45	45	Yes	226	223	Yes
Total	**54**	**52**	**Yes**	**467**	**458**	**Yes**	**1,967**	**1,944**	**Yes**

All MCOs, except for MSFC, met the minimum sample for each setting type of the encounter data review. MSFC submitted a sufficient number of records; however, a number of those records were deemed invalid. MSFC was notified and discovered the root cause, which has been corrected.

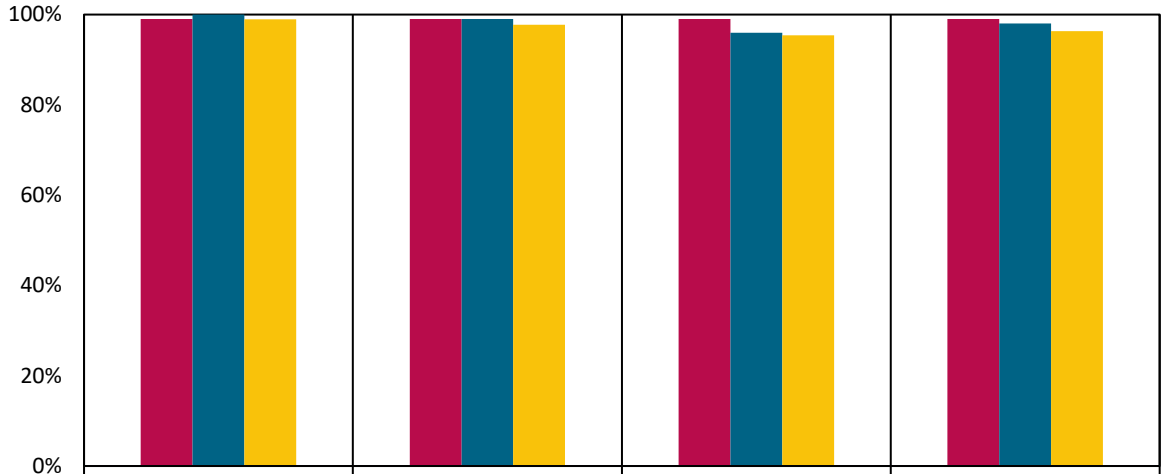
Medical records received were verified against the sample listing and enrollee demographic information from the data file to ensure consistency between submitted encounter data and corresponding medical records. Documentation was noted in the database as to whether the diagnosis, procedure, and if applicable, revenue codes were substantiated by the medical record. All diagnosis codes, procedure codes, and revenue codes included in the data were validated per record for the EDV. Qlarant defines findings of consistency in terms of *Match*, *No Match*, and *Invalid*, as shown in the table below.

Table 5. EDV Review Criteria for Findings

Finding	Criteria
Match	Documentation was found in the record
No Match	Lack of documentation in the record, coding error(s), or inconsistent coding
Invalid	Medical record was not legible or could not be verified against the encounter data by key identifiers: patient name, gender, date of birth, or date(s) of service

For MY 2023, Qlarant reviewed 2,488 medical records collectively representing all nine MCOs. Analysis of the data was organized by review elements, including diagnosis, procedure, and revenue codes (applicable only for inpatient and outpatient).

Figure 2. MYs 2021 through 2023 EDV Results by Encounter Type



	Inpatient	Outpatient	Office Visit	Composite
MY 2021	99%	99%	99%	99%
MY 2022	100%	99%	96%	98%
MY 2023	99%	98%	95%	96%

- The percentage of match rates remained above the standard compliance of 90% by five percentage points or above for all three encounter types and the composite rate.

- The composite match rate has steadily declined from MY 2021 (99%) to MY 2023 (96%) and decreased by two percentage points from MY 2022 (98%) to MY 2023 (96%).
- Inpatient match rates decreased by one percentage point from MY 2022 (100%) to MY 2023 (99%), matching MY 2021's match rate.
- Outpatient match rates decreased by one percentage point from MY 2021 and 2022 (99%) to MY 2023 (98%).
- Office visit match rates have steadily declined from MY 2021 (99%) to MY 2023 (95%), decreasing by one percentage point from MY 2022 (96%).

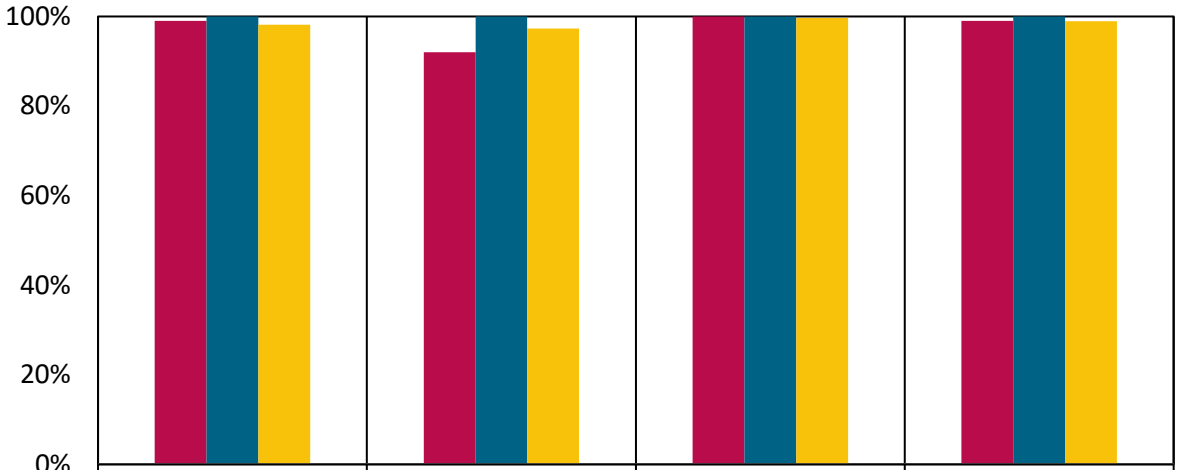
Table 6. MYs 2021 through 2023 EDV Results by Encounter Type

Encounter Type	Records Reviewed			Total Possible Elements*			Total Matched Elements			Percentage of Matched Elements		
	MY 2021	MY 2022	MY 2023	MY 2021	MY 2022	MY 2023	MY 2021	MY 2022	MY 2023	MY 2021	MY 2022	MY 2023
Inpatient	56	56	54	1,186	1,206	1,208	1,173	1,203	1,195	99%	100%	99%
Outpatient	514	517	467	6,812	7,106	6,286	6,774	7,033	6,144	99%	99%	98%
Office Visit	1,915	1,953	1,967	9,124	9,753	10,650	9,056	9,409	10,157	99%	96%	95%
Total	**2,485**	**2,526**	**2,488**	**17,122**	**18,065**	**18,144**	**17,003**	**17,645**	**17,496**	**99%**	**98%**	**96%**

*Possible elements include diagnosis, procedure, and revenue codes.

Inpatient Encounters

Figure 3. MYs 2021 through 2023 Inpatient EDV Results by Code Type



	Diagnosis	Procedure	Revenue	Composite
MY 2021	99%	92%	100%	99%
MY 2022	100%	100%	100%	100%
MY 2023	98%	97%	100%	99%

- The MY 2023 inpatient encounter composite rate has decreased by one percentage point from MY 2022 (100%) to MY 2023 (99%).
- The match rate for diagnosis codes decreased by two percentage points from MY 2022 (100%) to MY 2023 (98%).
- The match rate for procedure codes decreased by three percentage points from MY 2022 (100%) to MY 2023 (97%).
- The match rate for revenue codes has maintained full compliance (100%) for MYs 2021, 2022, and 2023.

Table 7. MYs 2021 through 2023 EDV Inpatient Encounter Type Results by Code

Inpatient Encounter Type	Diagnosis Codes			Procedure Codes			Revenue Codes			Total Codes		
	MY 2021	MY 2022	MY 2023	MY 2021	MY 2022	MY 2023	MY 2021	MY 2022	MY 2023	MY 2021	MY 2022	MY 2023
Match	473	469	488	85	117	73	615	617	634	1,173	1,203	1,195
No Match	5	1	9	7	0	2	1	2	2	13	3	13
Total	478	470	497	92	117	75	616	619	636	1,186	1,206	1,208
Match Percent	**99%**	**100%**	**98%**	**92%**	**100%**	**97%**	**99%**	**100%**	**100%**	**99%**	**100%**	**99%**

Note: Values reported are rounded to the nearest percentage for reporting only.

- The amount of inpatient encounter types for *No Match* findings increased for diagnosis codes and procedure codes by eight and two encounters, respectively, from MY 2022 to MY 2023.
- The amount of *No Match* findings for revenue codes maintained at two encounters for MY 2022 to MY 2023.
- The total amount of *No Match* findings declined from MY 2021 (13) to MY 2022 (3); however, the total amount of *No Match* findings increased for MY 2023 (13).

Table 8. MY 2023 MCO Inpatient Results by Code Type

MCO	# of Reviews	Diagnosis Codes			Procedure Codes			Revenue Codes			Total Codes		
		Match	Total	%	Match	Total	%	Match	Total	%	Match	Total	%
ABH	6	29	31	94%	9	10	90%	43	43	100%	81	84	96%
CFCHP	7	62	62	100%	8	8	100%	77	78	99%	147	148	99%
JMS	9	88	88	100%	9	9	100%	83	83	100%	180	180	100%
KPMAS	6	55	56	98%	9	9	100%	92	92	100%	156	157	99%
MPC	5	56	60	93%	7	8	88%	90	90	100%	153	158	97%
MSFC	5	45	46	98%	3	3	100%	65	66	98%	113	115	98%
PPMCO	6	66	66	100%	5	5	100%	66	66	100%	137	137	100%
UHC	5	48	49	98%	9	9	100%	62	62	100%	119	120	99%
WPM	5	39	39	100%	14	14	100%	56	56	100%	109	109	100%

Note: Values reported are rounded to the nearest percentage for reporting only.

- JMS, PPMCO, and WPM had 100% match rates for inpatient encounters across all three code types.
- All MCOs achieved match rates above 93% for diagnosis codes, with CFCHP, JMS, PPMCO, and WPM scoring 100%.

- ABH and MPC were the only MCOs that fell below 100% for procedure code match rates at 90% and 88%, respectively.
- CFCHP and MSFC were the only MCOs that fell below 100% for revenue code match rates at 99% and 98%, respectively.
- Total match rates for all codes ranged from 96% (ABH) to 100% (JMS, PPMCO, and WPM), exceeding the 90% compliance standard.

Outpatient Encounters

Figure 4. MYs 2021 through 2023 Outpatient EDV Results by Code Type

	Diagnosis	Procedure	Revenue	Composite
MY 2021	98%	100%	100%	99%
MY 2022	98%	99%	99%	99%
MY 2023	98%	97%	99%	98%

- All code types for outpatient encounters maintained 97% or higher match rates across MYs 2021 to 2023.
- Diagnosis code match rates maintained performance from MY 2021 to MY 2023 at 98%.
- Procedure code match rates have steadily declined from MY 2021 (100%) to MY 2023 (97%).
- Revenue code match rates slightly declined from MY 2021 (100%) to MY 2023 (99%).
- The total composite match rate slightly decreased from MY 2022 (99%) to MY 2023 (98%).

Table 9. MYs 2021 through 2023 EDV Outpatient Encounter Type by Code

Outpatient Encounter Type	Diagnosis Codes			Procedure Codes			Revenue Codes			Total Codes		
	MY 2021	MY 2022	MY 2023	MY 2021	MY 2022	MY 2023	MY 2021	MY 2022	MY 2023	MY 2021	MY 2022	MY 2023
Match	1,902	2,046	1,714	2,848	2,887	2,620	2,024	2,100	1,810	6,774	7,033	6,144
No Match	29	41	42	3	19	75	6	13	25	38	73	142
Total	1,931	2,087	1,756	2,851	2,906	2,695	2,030	2,113	1,835	6,812	7,106	6,286
Match Percent	**98%**	**98%**	**98%**	**100%**	**99%**	**97%**	**100%**	**99%**	**99%**	**99%**	**99%**	**98%**

Note: Values reported are rounded to the nearest percentage for reporting only.

- The amount of *No Match* findings has increased for each code type for outpatient encounters comparing MY 2021 to MY 2023.
- The *No Match* encounters for diagnosis codes increased by 13 encounters from MY 2021 (29) to MY 2023 (42).
- Procedure codes had the largest increase of all code types for *No Match* findings by 72 encounters from MY 2021 (3) to MY 2023 (75).
- The revenue codes *No Match* findings had an increase from MY 2021 (6) to MY 2023 (25).
- The total *No Match* finding for all code types increased from MY 2021 (38) to MY 2023 (142).

Table 10. MY 2023 MCO Outpatient Results by Code Type

MCO	# of Reviews	Diagnosis Codes			Procedure Codes			Revenue Codes			Total Codes		
		Match	Total	%	Match	Total	%	Match	Total	%	Match	Total	%
ABH	51	188	191	98%	247	249	99%	181	182	100%	616	622	99%
CFCHP	51	167	173	97%	238	240	99%	170	171	99%	575	584	99%
JMS	78	282	289	98%	391	401	98%	262	268	98%	935	958	98%
KPMAS	19	53	53	100%	145	145	100%	111	111	100%	309	309	100%
MPC	56	206	211	98%	289	292	99%	201	204	99%	696	707	98%
MSFC	48	190	193	98%	306	307	100%	199	200	100%	695	700	99%
PPMCO	66	310	318	98%	403	449	90%	262	271	97%	975	1038	94%
UHC	53	183	188	97%	343	343	100%	239	239	100%	765	770	99%
WPM	45	135	140	96%	258	269	96%	185	189	98%	578	598	97%

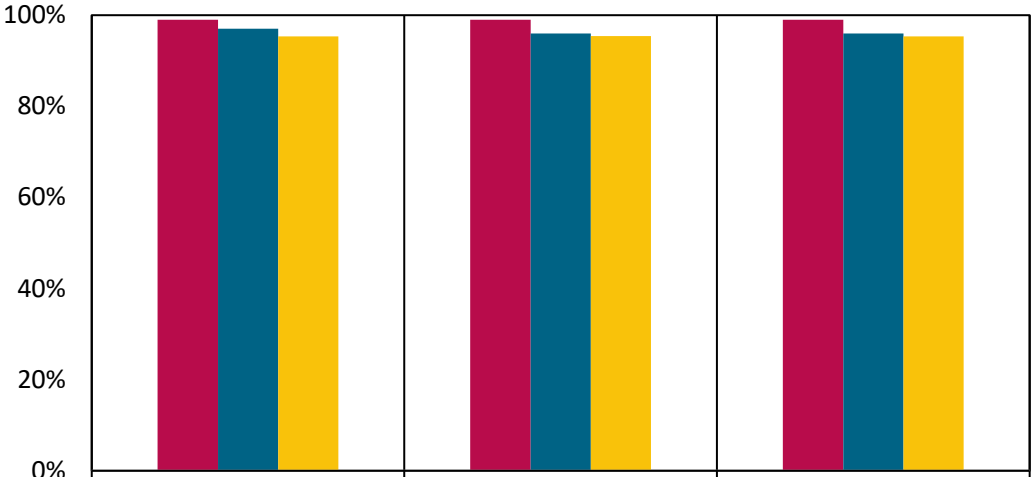
Note: Values reported are rounded to the nearest percentage for reporting only.
MSFC was unable to meet the minimum sample required for reviews.

- All MCOs achieved match rates at or above 90% for all outpatient encounter code types.

- KPMAS was the only MCO to achieve 100% match rates for each code type and the only MCO to achieve 100% match rates for diagnosis codes.
- KPMAS, MSFC, and UHC achieved 100% match rates for procedure codes and ABH, KPMAS, MSFC, and UHC achieved 100% match rates for revenue codes.
- Total match rates across all code types ranged from 94% (PPMCO) to 100% (KPMAS), exceeding the 90% compliance standard.

Office Visit Encounters

Figure 5. MYs 2021 through 2023 Office Visit EDV Results by Code Type



	Diagnosis	Procedure	Composite
MY 2021	99%	99%	99%
MY 2022	97%	96%	96%
MY 2023	95%	95%	95%

- Diagnosis, procedure, and the composite code match rates for office visits encounters achieved 95% for MY 2023.
- Diagnosis, procedure, and composite code match rates have steadily declined from MY 2021 (99%).

Table 11. MYs 2021 through 2023 EDV Office Visit Encounter Type Results by Code*

Office Visit Encounter Type	Diagnosis Codes			Procedure Codes			Total		
	MY 2021	MY 2022	MY 2023	MY 2021	MY 2022	MY 2023	MY 2021	MY 2022	MY 2023
Match	5,592	5,669	5,982	3,464	3,740	4,175	9,056	9,409	10,157
No Match	43	165	294	25	158	199	68	323	493
Total Elements	5,635	5,848	6,276	3,489	3,905	4,374	9,124	9,753	10,650
Match Percent	**99%**	**97%**	**95%**	**99%**	**96%**	**95%**	**99%**	**96%**	**95%**

*Revenue codes are not applicable for office visit encounters.
Note: Values reported are rounded to the nearest percentage for reporting only.

- The *No Match* encounters for diagnosis and procedure codes have steadily increased from MY 2021 (43 and 25, respectively) to MY 2023 (294 and 199, respectively).

Table 12. MY 2023 MCO Office Visit Results by Code Type*

MCO	# of Reviews	Diagnosis Codes			Procedure Codes			Total Codes		
		Match	Total	%	Match	Total	%	Match	Total	%
ABH	220	656	696	94%	435	457	95%	1,091	1,153	95%
CFCHP	217	679	716	95%	425	449	95%	1,104	1,165	95%
JMS	188	620	630	98%	271	276	98%	891	906	98%
KPMAS	250	663	675	98%	733	766	96%	1,396	1,441	97%
MPC	214	662	703	94%	445	477	93%	1,107	1,180	94%
MSFC	219	637	670	95%	426	451	94%	1,063	1,121	95%
PPMCO	213	667	701	95%	468	485	96%	1,135	1,186	96%
UHC	220	653	698	94%	493	511	96%	1,146	1,209	95%
WPM	226	745	787	95%	479	502	95%	1,224	1,289	95%

*Revenue codes are not applicable for office visit encounters.
Note: Values reported are rounded to the nearest percentage for reporting only.

- Match rates for office visits ranged from 93% (MPC procedure codes) to 98% (KPMAS diagnosis codes and JMS diagnosis and procedure codes) across diagnosis and procedure code types.
- Total codes ranged from 94% (MPC) to 98% (JMS), exceeding the 90% compliance standard.

All Encounters "No Match" Summary

The tables below summarize the reasons for *No Match* findings for MY 2021 through MY 2023.

Table 13. MYs 2021 through 2023 Coding Error Reasons for *No Match* Findings by Encounter Type

Encounter Type	MY 2021			MY 2022			MY 2023		
Diagnosis	**#**	**%**	**Total Error Elements**	**#**	**%**	**Total Error Elements**	**#**	**%**	**Total Error Elements**
Inpatient	1	20%	5	-	-	1	4	44%	9
Outpatient	2	7%	29	2	5%	41	5	12%	42
Office Visit	15	35%	43	9	6%	165	70	24%	249
Procedure	**#**	**%**	**Total Error Elements**	**#**	**%**	**Total Error Elements**	**#**	**%**	**Total Error Elements**
Inpatient	4	57%	7	-	-	0	-	-	2
Outpatient	-	-	3	-	-	19	4	5%	75
Office Visit	11	44%	25	6	4%	158	38	19%	199
Revenue	**#**	**%**	**Total Error Elements**	**#**	**%**	**Total Error Elements**	**#**	**%**	**Total Error Elements**
Inpatient	1	100%	2	-	-	2	-	-	2
Outpatient	-	-	6	-	-	13	2	8%	25

Table 14. MYs 2021 through 2023 Lack of Documentation Reasons for *No Match* Findings by Encounter Type

Encounter Type	MY 2021			MY 2022			MY 2023		
Diagnosis	**#**	**%**	**Total Error Elements**	**#**	**%**	**Total Error Elements**	**#**	**%**	**Total Error Elements**
Inpatient	4	80%	5	1	100%	1	5	56%	9
Outpatient	27	93%	29	39	95%	41	37	88%	42
Office Visit	27	63%	43	156	95%	165	224	76%	294
Procedure	**#**	**%**	**Total Error Elements**	**#**	**%**	**Total Error Elements**	**#**	**%**	**Total Error Elements**
Inpatient	3	43%	7	-	-	0	2	100%	2
Outpatient	3	100%	3	19	100%	19	71	95%	75
Office Visit	14	56%	25	152	96%	158	154	77%	199
Revenue	**#**	**%**	**Total Error Elements**	**#**	**%**	**Total Error Elements**	**#**	**%**	**Total Error Elements**
Inpatient	-	-	2	2	100%	2	2	100%	2
Outpatient	6	100%	6	13	100%	13	23	92%	25

Table 15. MYs 2021 through 2023 Upcoding Reasons for *No Match* Findings by Encounter Type

Encounter Type	MY 2021			MY 2022			MY 2023		
Diagnosis	**#**	**%**	**Total Error Elements**	**#**	**%**	**Total Error Elements**	**#**	**%**	**Total Error Elements**
Inpatient	-	-	5	-	-	1	-	-	9
Outpatient	-	-	29	-	-	41	-	-	42
Office Visit	1	2%	43	-	-	165	-	-	294
Procedure	**#**	**%**	**Total Error Elements**	**#**	**%**	**Total Error Elements**	**#**	**%**	**Total Error Elements**
Inpatient	-	-	7	-	-	0	-	-	2
Outpatient	-	-	3	-	-	19	-	-	75
Office Visit	-	-	25	-	-	158	7	4%	199
Revenue	**#**	**%**	**Total Error Elements**	**#**	**%**	**Total Error Elements**	**#**	**%**	**Total Error Elements**
Inpatient	-	-	2	-	-	2	-	-	2
Outpatient	-	-	6	-	-	13	-	-	25

When comparing encounter and code types across MYs, lack of documentation and coding errors are the most frequent combination of errors with lack of documentation continuing to account for most of the *No Match* findings. Lack of documentation and coding errors are the reasons for *No Match* findings for all inpatient and outpatient encounters from MY 2021 to MY 2023 for all code types. The only *No Match* findings for upcoding were for MY 2021 office visit diagnosis codes (2%) and MY 2023 office visit procedure codes (4%).

Lack of documentation for diagnosis codes decreased from MY 2022 (100% for inpatient encounters, 95% for outpatient encounters, and 95% for office visit encounters) to MY 2023 (56% for inpatient encounters, 88% for outpatient encounters, and 76% for office visit encounters). Coding errors for diagnosis codes significantly increased from MY 2022 (0% for inpatient encounters, 5% for outpatient encounters, and 6% for office visit encounters) to MY 2023 (44% for inpatient encounters, 12% for outpatient encounters, and 24% for office visit encounters).

For MY 2023, all *No Match* findings for inpatient procedure codes were due to lack of documentation, which is an increase from MY 2022 (0%). Lack of documentation for outpatient procedure codes decreased from MY 2022 (100%) to MY 2023 (95%) followed by an increase in outpatient procedure coding errors from MY 2022 (0%) to MY 2023 (5%). For MY 2023, lack of documentation accounted for 77% of *No Match* findings for office visit procedure codes followed by 19% of coding errors, and 4% of upcoding.

Lack of documentation has accounted for 100% of *No Match* findings for inpatient revenue codes for MYs 2022 and 2023. Outpatient revenue code *No Match* findings were due to lack of documentation (92%) and coding errors (8%).

MCO Encounter Data Validation Results

MCO results by encounter type are displayed in the table below.

Table 16. MYs 2021 through 2023 MCO and HealthChoice Results by Encounter Type

MCO	Inpatient			Outpatient			Office Visit		
	MY 2021	MY 2022	MY 2023	MY 2021	MY 2022	MY 2023	MY 2021	MY 2022	MY 2023
ABH	100%	100%	96%	98%	99%	99%	99%	95%	95%
CFCHP	100%	100%	99%	100%	100%	98%	99%	93%	95%
JMS	96%	100%	100%	99%	99%	98%	99%	96%	98%
KPMAS	100%	100%	99%	100%	100%	100%	100%	99%	97%
MPC	100%	99%	97%	99%	99%	98%	100%	96%	94%
MSFC	100%	99%	98%	100%	99%	99%	100%	99%	95%
PPMCO	98%	100%	100%	99%	97%	94%	99%	97%	96%
UHC	98%	99%	99%	100%	99%	99%	99%	98%	95%
WPM	100%	100%	100%	99%	99%	97%	98%	94%	95%
HealthChoice	**99%**	**100%**	**99%**	**99%**	**99%**	**98%**	**99%**	**96%**	**95%**

Note: Values reported are rounded to the nearest percentage for reporting only.
MSFC was unable to meet the minimum sample required for reviews.

All MCOs achieved match rates ranging from three to ten percentage points above the minimum compliance standard of 90%, across all MYs from 2021 to 2023. Office visit encounters had the most fluctuation in range for match rates from 93% (MY 2022) to 98% (MY 2023). Match rates ranged from 96% to 100% for inpatient encounters for MY 2023. Outpatient encounters ranged from 94% to 100% for MY 2023.

The HealthChoice Aggregate has remained comparable for each encounter type from MY 2021 to MY 2023; however, match rates for office visits have consistently declined from MY 2021 (99%) to MY 2023 (95%). Inpatient and outpatient encounter HealthChoice Aggregate match rates have decreased by one percentage point from MY 2022 (100% and 99%, respectively) to MY 2023 (99% and 98%, respectively).

Corrective Action Plans

The corrective action plan (CAP) process requires each MCO to submit a CAP, which details the actions each MCO will take to correct any deficiencies identified during the EDV review. CAPs must be submitted within 45 calendar days of receipt of the EDV final results. CAPs are reviewed by Qlarant and determined adequate if they address the following required elements and components:

- Action item(s) to address each requirement
- Methodology for evaluating the effectiveness of actions taken
- Timeframe for evaluating each action item, including plans for evaluation
- Responsible party for each action item

Summary of CAPs Required

For MY 2023's EDV, all of the HealthChoice MCOs achieved match rates that are above the minimum compliance standard (90%). There are no CAPs required as a result of the MY 2023 review.

Conclusion

HealthChoice is a mature managed care program and, overall, analysis of the electronic encounter data submitted by MCOs indicates the data are valid (complete and accurate). Qlarant and Hilltop completed an EDV study for MDH based on an assessment of encounters paid during MY 2023. Qlarant conducted a medical record review on a sample of inpatient, outpatient, and office visit encounters (2,488) to confirm the accuracy of codes. Overall, MCOs achieved a match rate of 96%, meaning 96% of claims submitted were supported by medical record documentation. MCOs achieved a high match rate for each encounter setting: 99% for inpatient, 98% for outpatient, and 95% for office visits.

- **Quality** – MCOs must ensure accuracy and completeness of encounter data submitted to MDH, and when compared to medical record reviews. Areas of impact during the MY 2023 EDV review include:
  - The continued likelihood that inpatient and outpatient encounter documentation will result in coding errors, lack of documentation, or upcoding due to sustained performance in match rates from MY 2022 to MY 2023.
  - An increased likelihood that office visit encounter documentation will result in coding errors, lack of documentation, or upcoding due to the declining trend in performance from MY 2021 to MY 2023.
- **Access** – MCOs must ensure access to accurate, capable, and complete information systems, which analyze and maintain encounter data in MDH's Electronic Data Interchange Translation Processing System and MMIS. Areas of impact during the MY 2023 EDV review include:
  - An increase in the likelihood that MCOs are accurately demonstrating and reporting outcome information related to EDV due to the high percentage of match rates sustained at 95% or higher from MY 2021 to MY 2023.
- **Timeliness** – MCOs must ensure the timeliness of encounter data submissions. Areas of impact during the MY 2022 EDV review include:
  - The continued likelihood that MCOs' information systems are providing timely and accurate data due to eight out of nine MCOs having successfully provided encounter review data to meet the minimum sample for review while resulting in overall match rates across all code types at 96% or higher for MY 2023.
    - MSFC was the only MCO unable to successfully provide encounter review data to meet the minimum sample for review.

Recommendations

MCO Recommendations

The following recommendations are based on results from the MY 2023 EDV:

- **Decline in Office Visit Encounter Match Rates.** All MCOs should conduct a root cause analysis to identify and overcome reasons for the decline in match rates for office visit encounters. With MDH's MY 2024 target of 99% match rates, any decline should be investigated.
- **Decline in Inpatient Procedure Code Match Rates.** The match rates for inpatient procedure codes declined by three percentage points from MY 2022 (100%) to MY 2023 (97%). All MCOs should conduct a root cause analysis to identify and overcome reasons for the decline in match rates.
- **Increase in Coding Errors for Diagnosis Codes.** All MCOs should conduct a root cause analysis for the significant increase in diagnosis code coding errors from MY 2022 to MY 2023 across all encounter types.
- **Continued Lack of Documentation.** Lack of documentation continues to be a reason for *No Match* findings across all encounters and code types. MCOs should conduct a root cause analysis to identify and overcome barriers to improving documentation for accurate coding across all encounter types.

Complete and Accurate Medical Records. MCOs must ensure that medical records justify the services billed, such as orders and reports of major services, operating records, procedures, test results, and patient care. MCOs are encouraged to ensure UB billing forms are submitted with patient records for clarity. For inpatient encounters, MCOs are encouraged to provide the orders for admission to observation and admission to the hospital unit to clarify the admission date. For outpatient and emergency visits, MCOs are encouraged to monitor that the discharge date in the record matches the claim data to ensure the validity of the record. MCOs are encouraged to monitor and ensure telehealth visits are coded properly with the correct modifiers.

ABH's Strengths, Opportunities, and Recommendations

ABH's encounter and code type match rates exceeded the minimum compliance standard of 90%:

- **Inpatient Encounters.** All inpatient code types achieved match rates at or above 90%, with a total match rate of 96%.
- **Outpatient Encounters.** All outpatient code types achieved match rates at or above 98%, with a total match rate of 99%.
- **Office Visit Encounters.** All office visit code types achieved match rates at or above 94%, with a total match rate of 95%.

The following opportunities for improvement were identified:

- ABH had a slight decline of four percentage points from MY 2022 (100%) to MY 2023 (96%) for total inpatient match rates. Qlarant recommends that ABH identify and address the root causes of the decline in performance to ensure inpatient match rates remain above the minimum compliance standard.

CFCHP's Strengths, Opportunities, and Recommendations

CFCHP's encounter and code type match rates exceeded the minimum compliance standard of 90%:

- **Inpatient Encounters.** All inpatient code types achieved match rates of 99% and 100%, with a total match rate of 99%.
- **Outpatient Encounters.** All outpatient code types achieved match rates of 97% and above, with a total match rate of 98%.
- **Office Visit Encounters.** All office visit code types achieved match rates of 95%, with a total match rate of 95%.

The following opportunities for improvement were identified:

- CFCHP has maintained a match rate of 95% for office visit diagnosis and procedure codes. Qlarant recommends that CFCHP monitor documentation and coding errors for office visit encounters to ensure office visit match rates remain above the minimum compliance standard.

JMS' Strengths, Opportunities, and Recommendations

JMS' encounter and code type match rates exceeded the minimum compliance standard of 90%:

- **Inpatient Encounters.** All inpatient code types achieved match rates of 100%, which was sustained from MY 2022 to MY 2023.
- **Outpatient and Office Visit Encounters.** All outpatient and office visit code types achieved match rates of 98%. Total match rates for office visit codes improved by two percentage points from MY 2022 (96%) to MY 2023 (98%).

There are no formal recommendations for JMS.

KPMAS' Strengths, Opportunities, and Recommendations

KPMAS' encounter and code type match rates exceeded the minimum compliance standard of 90%:

- **Inpatient Encounters.** All inpatient code types achieved match rates of 98% and above, with a total match rate of 99%.
- **Outpatient Encounters.** KPMAS was the only MCO to achieve 100% match rates for all outpatient code types. KPMAS additionally maintained 100% match rates for outpatient encounters from MY 2021 to MY 2023.
- **Office Visit Encounters.** All office visit code types achieved match rates of 96% and above, with a total match rate of 97%.

The following opportunities for improvement were identified:

- KPMAS has had a steady decline in performance for office visit encounter match rates from MY 2021 (100%) to MY 2023 (97%). Qlarant recommends KPMAS identify and address root causes for the decline in performance to ensure office visit match rates remain above the minimum compliance standard.

MPC's Strengths, Opportunities, and Recommendations

MPC's encounter type match rates exceeded the minimum compliance standard of 90%:

- **Inpatient Encounters.** Match rates for procedure codes fell below the compliance standard at 88%; however, MPC still achieved a total match rate of 97%.
- **Outpatient Encounters.** All outpatient code types achieved match rates of 98% and above, with a total match rate of 98%.
- **Office Visit Encounters.** All office visit code types achieved match rates of 93% and above, with a total match rate of 94%.

The following opportunities for improvement were identified:

- MPC's match rates for inpatient procedure codes (88%) fell below the minimum compliance standard. Qlarant recommends MPC identify and address root causes for the decline in performance to ensure inpatient match rates remain above the minimum compliance standard.
- MPC has had a steady decline in performance for office visit match rates from MY 2021 (100%) to MY 2023 (94%). Qlarant recommends MPC identify and address root causes for the steady decline in performance to ensure office visit match rates remain above the minimum compliance standard.

MSFC's Strengths, Opportunities, and Recommendations

MSFC's encounter and code type match rates exceeded the minimum compliance standard of 90%:

- **Inpatient and Outpatient Encounters.** All inpatient and outpatient code types achieved match rates of 98% and above, with total match rates of 98% and 99%, respectively.
- **Office Visit Encounters.** All office visit code types achieved match rates of 94% and above, with a total match rate of 95%.

MSFC was the only MCO that was unable to meet the minimum sample of valid medical records for outpatient reviews. MSFC completed an investigation regarding the invalid records provided. MSFC discovered a coding error, which has been corrected. MSFC is working towards correcting historical data that was impacted.

The following opportunities for improvement were identified:

- Qlarant recommends MSFC complete internal audits to ensure the coding issue identified in the root cause for the invalid records has been corrected.
- MSFC has had a steady decline in performance for inpatient match rates from MY 2021 (100%) to MY 2023 (98%). Qlarant recommends MSFC identify and address root causes for the steady decline in performance to ensure inpatient match rates remain above the minimum compliance standard.
- MSFC has had a steady decline in performance for office visit match rates from MY 2021 (100%) to MY 2023 (95%). Qlarant recommends MSFC identify and address root causes for the steady decline in performance to ensure office visit match rates remain above the minimum compliance standard.

PPMCO's Strengths, Opportunities, and Recommendations

PPMCO's encounter and code type match rates exceeded the minimum compliance standard of 90%:

- **Inpatient Encounters.** PPMCO improved inpatient match rates from MY 2021 (98%) to MY 2023 (100%). All inpatient code types achieved match rates of 100%.
- **Outpatient Encounters.** All outpatient code types achieved match rates of 90% and above, with a total match rate of 94%.
- **Office Visit Encounters.** All office visit code types achieved match rates of 95% and above, with a total match rate of 96%.

The following opportunities for improvement were identified:

- PPMCO's match rates for outpatient procedure codes just met the minimum compliance standard of 90% for MY 2023. Qlarant recommends PPMCO identify and address root causes for performance to ensure outpatient match rates remain above the minimum compliance standard.
- PPMCO has had a steady decline in performance for outpatient match rates from MY 2021 (99%) to MY 2023 (94%). Qlarant recommends PPMCO identify and address root causes for the decline in performance to ensure outpatient match rates remain above the minimum compliance standard.
- PPMCO has had a steady decline in performance for office visit match rates from MY 2021 (99%) to MY 2023 (96%). Qlarant recommends PPMCO identify and address root causes for the decline in performance to ensure office visit match rates remain above the minimum compliance standard.

UHC's Strengths, Opportunities, and Recommendations

UHC's encounter and code type match rates exceeded the minimum compliance standard of 90%:

- **Inpatient Encounters.** UHC improved inpatient match rates from MY 2021 (98%) to MY 2023 (99%). All inpatient code types achieved match rates of 99% and above.
- **Outpatient Encounters**. All outpatient code types achieved match rates of 97% and above, with a total match rate of 99%.
- **Office Visit Encounters.** All office visit code types achieved match rates of 94% and above, with a total match rate of 95%.

The following opportunities for improvement were identified:

- UHC has had a steady decline in performance for office visit match rates from MY 2021 at 99% to MY 2023 at 95%. Qlarant recommends UHC identify and address root causes for the decline in performance to ensure office visit match rates remain above the minimum compliance standard.

WPM's Strengths, Opportunities, and Recommendations

WPM's encounter and code type match rates exceeded the minimum compliance standard of 90%:

- **Inpatient Encounters.** WPM maintained 100% match rates for inpatient encounters from MY 2021 to MY 2023.
- **Outpatient Encounters.** All outpatient code types achieved match rates of 96% and above, with a total match rate of 97%.
- **Office Visit Encounters.** All office visit code types and the total match rate achieved match rates of 95%.

The following opportunities for improvement were identified:

- WPM had a decline in outpatient match rates from MYs 2021 and 2022 (99%) to MY 2023 (97%). Qlarant recommends WPM identify and address root causes for the decline in performance to ensure outpatient match rates remain above the minimum compliance standard.
- WPM has had a steady decline in performance for office visit match rates from MY 2021 (98%) to MY 2023 (95%). Qlarant recommends WPM identify and address root cause for the decline in performance to ensure office visit match rates remain above the minimum compliance standard.

MDH Recommendations

- MDH should monitor MSFC's coding issue that resulted in the submission of invalid records and failure to meet the minimum sample for review to ensure the issue has been resolved.
- MDH should encourage MCOs to conduct internal investigations/audits to determine the cause for the continued decline of office visit match rates and monitor the MCO root causes. Although MDH has achieved its Objective 4 goal of increasing the HealthChoice aggregate scores to at least 90% by MY 2024, MDH has set a specific EDV target goal of 99% match rates for all encounter types. Currently, office visit encounters do not meet that target goal by four percentage points.
- MDH should monitor match rates for outpatient encounters to ensure the 99% target goal for MY 2024 is met. Currently, outpatient encounters do not meet that target goal by one percentage point.
- MDH should continue to monitor and work with the MCOs to resolve the usage of the MDH Provider Master File and NPI Crosswalk process (The Hilltop Institute, 2024).
- MDH should continue to work with the MCOs to instill best practices to improve their numbers of denied encounters (The Hilltop Institute, 2024).
- MDH should take into consideration the variance between an MCO's share of all denials compared to its share of all accepted encounters (The Hilltop Institute, 2024).
- MDH should require MCOs with unusually high volumes of $0 encounters to provide an explanation to MDH and ensure accuracy with future submissions (The Hilltop Institute, 2024).

- MDH should consider implementing measures to enforce adherence to this requirement, such as automatic denial of $0 encounters submitted without an indicator (The Hilltop Institute, 2024).
- MDH should continue to work with the MCOs to ensure appropriate utilization and improvement in the accuracy of the provider reimbursement field on accepted encounters (The Hilltop Institute, 2024).
- To address the high volume of denied encounters, MDH should continue to encourage MCOs to work with their providers to ensure that they are enrolled on the date of service and that they know how to check their current status (The Hilltop Institute, 2024).
- MCOs that submit encounters more than eight months after the date of service—the maximum time allotted for an encounter to be submitted to MDH—should be flagged for improvement. MDH should consider automatically denying encounters submitted after this period has ended (The Hilltop Institute, 2024).
- Hilltop reviewed the volume of inpatient visits, ED visits, and observation stays by MCO. Trends in service type were consistent across MCOs and years. There was a slight increase in ED visits between CY 2021 and CY 2023. MDH should continue to review these data and compare trends in future annual encounter data validations to ensure consistency (The Hilltop Institute, 2024).
- MDH should continue to review and audit the participant-level, MCO-specific reports that Hilltop generated for delivery, dementia, individuals over age 65, dental, and missing age outlier data measures. MCOs that submit the encounter outliers should be notified, demographic information should be updated, and adjustments should be made, as needed (The Hilltop Institute, 2024).

Appendix A: MY 2023 Validation of Encounter Data

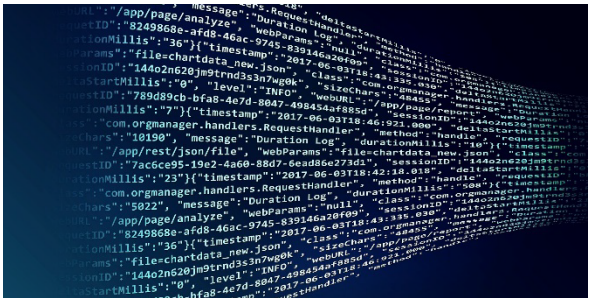
Completed by the Hilltop Institute, University of Maryland Baltimore County (Hilltop)

The Hilltop Institute
UMBC

report

EQR Protocol 5, Activity 3: Validation of Encounter Data, CY 2021 to CY 2023

December 20, 2024



Suggested Citation: The Hilltop Institute. (2024, December 20). *EQR protocol 5, activity 3: Validation of encounter data, CY 2021 to CY 2023.* Baltimore, MD: UMBC.

EQR Protocol 5, Activity 3: Validation of Encounter Data, CY 2021 to CY 2023

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Introduction

HealthChoice—Maryland's statewide mandatory Medicaid and Children's Health Insurance Program (CHIP) managed care system—was implemented in 1997 under the Social Security Act's §1115 waiver authority and provides participants with access to a wide range of health care services arranged or provided by managed care organizations (MCOs). In calendar year (CY) 2023, nearly 90% of the state's Medicaid and Maryland Children's Health Program (MCHP) populations were enrolled in HealthChoice. HealthChoice participants are given the opportunity to select an MCO and primary care provider (PCP) from their MCO's network to oversee their medical care. Participants who do not select an MCO or PCP are automatically assigned to one. HealthChoice participants receive the same comprehensive benefits as those available to Maryland Medicaid (including MCHP) participants through the fee-for-service (FFS) system.

In addition to providing a wide range of services, one of the goals of the HealthChoice program is to improve the access to and quality of health care services delivered to participants by the MCOs. The Maryland Department of Health (the Department) contracted with The Hilltop Institute at the University of Maryland, Baltimore County (UMBC) to analyze and evaluate the validity of encounter data submitted by the HealthChoice MCOs. Hilltop has conducted the annual encounter data evaluations and assisted the Department with improving the quality and integrity of encounter data submissions since the inception of the HealthChoice program.

In 2012, the Centers for Medicare & Medicaid Services (CMS) issued a set of external quality review (EQR) protocols to states receiving encounter data from contracted MCOs. The EQR process included eight protocols—three mandatory and five optional—used to analyze and evaluate state encounter data for quality, timeliness, and access to health care services (CMS, 2012). In April 2016, CMS released its final rule on managed care,[1] which included a new regulation that states must require contracted MCOs to submit encounter data that comply with specified standards, formatting, and criteria for accuracy and completeness.[2] This final rule required substantive changes to the EQR protocols[3] and provided an opportunity to revise the protocol design. In October 2019, CMS released updated protocols for the EQR to help states and external quality review organizations (EQROs) improve reporting in EQR technical reports. Hilltop evaluated the new managed care final rule released in November 2020 and found that it did not include substantive changes to the EQR regulations.[4] Hilltop reviewed a managed care final rule released in May 2024 and found that CMS is required to issue protocols to support a requirement that states' EQR technical reports must include outcomes data and results from

[1] Medicaid and CHIP Managed Care Final Rule. 81 Fed. Reg. 27,498 (May 6, 2016) (to be codified at 42 CFR Parts 431, 433, 438, 440, 457 and 495).
[2] 42 CFR § 438.818.
[3] 42 CFR § 438.350–438.370; 457.1250.
[4] Medicaid and CHIP Managed Care Final Rule. 85 Fed. Reg. 72,574 (November 13, 2020) (to be codified at 42 CFR Parts 438 and 457).

quantitative assessments in addition to validation information.[5] States will have one year to begin implementation after CMS publishes the protocols; Hilltop will monitor the release of the updated protocols.

In 2018, the Department asked Hilltop to work with Qlarant, Maryland's EQRO, to evaluate all electronic encounter data submitted by the MCOs on an annual basis as part of the encounter data validation activity. Hilltop serves as the Department's data warehouse and currently stores and evaluates all Maryland Medicaid encounter data, providing data-driven policy consultation, research, and analytics. This specific analysis—Activity 3 of the CMS EQR Protocol 5 for encounter data validation—is the core function used to determine the validity of encounter data and ensure the data are complete, accurate, and of high quality. The Department can use the results of the evaluation to monitor and collaborate with the MCOs to improve the quality and usefulness of their data submissions.

Hilltop evaluated all electronic encounter data submitted by the MCOs for CY 2021 through CY 2023. The two primary validation areas are 1) the Department's encounter data processing before acceptance of data and 2) the accepted encounter data review. Documentation of the data processing involves an overview of the electronic data interchange (EDI) and the Medicaid Management Information System (MMIS), as well as the validation process for submitted encounters before acceptance. For this analysis, Hilltop obtained information from the Department about encounter data that failed or were denied during the edit checks (previously referred to as rejected records)[6] and the reasons for failure. Hilltop conducted a review of accepted encounters and analyzed the volume and consistency of encounters submitted over time, utilization rates, data accuracy and completeness of identified fields, appropriateness of diagnosis and procedure codes, and the timeliness of MCOs' submissions to the Department.

Methodology

The following methodology was designed to address the five required activities of CMS EQR Protocol 5:

- Activity 1: Review state requirements
- Activity 2: Review MCO's capability
- Activity 3: Analyze electronic encounter data
- Activity 4: Review of medical records
- Activity 5: Submission of findings

Information from Activities 1 and 2 is necessary to evaluate Activity 3. The primary focus of Activity 3 is to analyze the electronic encounter data submitted by the MCOs, and this analysis composes a substantive portion of this report. Activity 1 is necessary to develop the plan for

[5] Medicaid and CHIP Managed Care Access, Finance, and Quality Final Rule. 89 Fed. Reg. 41,003 (May 10, 2024) (to be codified at 42 CFR Parts 430, 438 and 457).
[6] If encounters are "non-compliant 837," they are rejected and sent back to the MCO for resubmission.

encounter analysis given that its directive is to ensure the EQRO has a complete understanding of state requirements and standards for collecting and submitting encounter data (CMS, 2023). Activity 1 includes types of encounters to validate, definitions of encounter data error types, format for submitting encounters (837 standard transactions), and edit checks. Activity 2 is the evaluation of MCOs' information systems and capability to collect complete and accurate encounter data and report high-quality encounter data, understand the flow of data, and how encounter processing issues are handled.

The Department required the MCOs to submit all CY 2023 encounters by June 28, 2024. In July 2024, Hilltop reviewed the 2023 release of the CMS Protocol 5 requirements and encounter data validation activities and found that no changes were required to the procedures for data validation (CMS, 2023). Hilltop also participated in Encounter Data Workgroup meetings with the Department and MCOs regarding the quality of encounter data. Hilltop then confirmed the proposed procedures for data validation with the Department and reviewed and finalized the methodology prior to performing this encounter data validation analysis. Next, Hilltop analyzed encounter data as of August 2024, including both denied encounters and accepted encounters with 2023 dates of service. The review and audit processes for CY 2023 encounters concluded in October 2024.

Activity 3. Analysis of Electronic Encounter Data

In accordance with Hilltop's interagency governmental agreement with the Department to host a secure data warehouse for its encounters and provide data-driven policy consultation, research, and analytics, Hilltop completed Activity 3 of the encounter data validation.

Activity 3 requires the following four steps for analysis:

1. Develop a data quality test plan based on data element validity requirements
2. Encounter data macro-analysis—verification of data integrity
3. Encounter data micro-analysis—generate and review analytic reports
4. Compare findings to state-identified benchmarks

Step 1. Develop a Data Quality Test Plan Based on Data Element Validity Requirements

Hilltop incorporated information in Activities 1 and 2 to develop a data quality test plan. This plan accounts for the MMIS (front-end) edits and adjudication edits built into the state's data system (MMIS) so that it pursues data problems that the state may have inadvertently missed or allowed (CMS, 2023).

Hilltop first met with the Department in August 2018 to obtain pertinent information regarding the processes and procedures used to receive, evaluate, and report on the validity of MCO encounter data. Hilltop also interviewed the Department staff to document state processes for

accepting and validating the completeness and accuracy of encounter data; this information was used to investigate and determine the magnitude and types of missing encounter data and identify potential data quality and MCO submission issues. Information provided included, but was not limited to, the following:

- MCO submission of encounter data in an X12 data standard (837), via a secure EDI system, to the Department; the transfer of those data to the Department's mainframe for processing and validation checks; generation of exception (error) reports (8ER) and Remittance Advice (835).
    - The 837 transaction set contains patient claim information, and the 835 transaction set contains the claim remittance advice/payment and/or explanation of benefits data.
    - The Department's EDI system receives encounter data from the MCOs in a format that is HIPAA EDI X12 837-compliant. If the 837 is non-compliant it will be rejected back to the MCO for resubmission and MMIS never sees this type of rejection. Once MMIS confirms that the 837 compliance is sound, it then translates the data for MMIS to adjudicate. The results of the adjudication are then given back to the EDI system to generate exception (error) reports and a HIPAA X12 835-compliant file. The summarized version of exceptions is known to the Department and the MCOs as the "8ER" report.
- Encounter data fields validated through the MMIS process include recipient ID, sex, age, diagnosis codes, and procedure codes.
    - Beyond checking for numeric characters, the MMIS does not perform validation checks on the completeness or accuracy of provider reimbursement fields,[7] (those showing how much the MCO paid the provider for delivering the service).
- The Department processes incoming encounter data from the MCOs within one to two business days.
- Error code (exception) reports (835 and 8ER) are generated by the adjudication process and sent to the MCOs.

Hilltop receives the daily EDI error report data (the 8ER report) and analyzes the number, types, and reasons for failed/denied encounter submissions for each MCO. This report includes an analysis of the frequency of different error types and denial categories. The 8ER error descriptions were used to develop a comprehensive overview of the validation process.

Hilltop also reviews the accepted encounter data for accuracy, completeness, and timeliness of MCO data submission.

Hilltop meets with the Department annually to discuss encounter data analysis, strategize efforts for improvement, and coordinate messaging on these topics. Major topics of discussion have

[7] For Institutional and Medical encounters, this is the "amt_pay_by_mco" field.

included the completion of provider reimbursement fields, the use of sub-indicators in the same, provider enrollment edits, and denied encounter error rates. Hilltop also discussed with the Department the provider enrollment edits that took effect in January 2020. These edits were a response to the 2016 Medicaid managed care final rule, which required states to screen and enroll all managed care network providers who are not already enrolled in FFS.[8] Hilltop met with the Department regarding the increase in provider-related encounter denials in May 2021, October 2022, July 2023, February 2024, and June 2024 to coordinate further investigation of the issue. In consultation with the Department, Hilltop developed and maintains the categorization of provider-related denial codes to distinguish the provider-related issues tied to enrollment from all other provider-related denial codes.

The CY 2023 MCO contract initially established potential penalties for MCOs for submitting a high volume of denied encounters. This penalty was intended to improve the accuracy and quality of encounter data used for risk adjustment of capitated rates and to maintain compliance with the federal rule strengthening the requirements for data, transparency, and accountability.

During 2023, in response to concerns about the increased number of denied encounters impacting rate setting and risk adjustment, the Department requested that Hilltop collect denied encounters from the MCOs. Hilltop was able to identify denied encounters (or encounters with a claim status type 'X')[9] in its data warehouse that were previously unknown and therefore did not need to separately collect these encounters from the MCOs directly. Hilltop analyzed these denied encounters and found they may provide a more complete picture of the final adjudication status of encounters than using the 8ER reports alone. This analysis uses a methodology developed by Hilltop to de-duplicate the encounter submissions, which is not done when generating the 8ER reports. Per the MCO CY 2024 contract, the Department convened workgroups with the MCOs and Hilltop to further refine the appropriateness of these denials. The universe of encounters that were appropriately denied will then be sent to the state's auditor. The auditor will ensure that these encounters are not included in MCO HealthChoice Financial Monitoring Report (HFMR) costs, which are used to set MCO capitation for future calendar years. See Appendix A for additional instructions on which denied encounters to include and exclude in the HFMR.

Hilltop compared the Claim Status Type X (CLMSTAT=X) data sets[10] and the 8ER data and determined these data sets can be linked to identify the procedure/revenue codes causing specific kinds of errors. For example, Hilltop examined the invoice control numbers (ICNs) with error code 437 and linked them to the 8ER data to determine which procedure or revenue code caused the error. Hilltop generated a complete list of procedure and revenue codes that triggered the 437 exceptions and identified which codes occur most often and can be included in

[8] Medicaid and CHIP Managed Care Final Rule. 81 Fed. Reg. 27,890 (May 6, 2016) (to be codified at 42 CFR Parts 431, 433, 438, 440, 457 and 495).
[9] X is an internal MMIS code that goes to Hilltop.
[10] Data sets are now maintained as part of Hilltop's data warehouse.

the HFMR. For validation, Hilltop examined 835 data that contained an associated error of 437 and linked the ICN to the equivalent 8-ER and CLMSTAT=X data sets.

The Encounter Data Workgroup with the MCOs has addressed the issues of exception errors, encounter denials, provider enrollment, and provider enrollment edit exceptions ("free agent") usage and monitoring. The Department also provided updates on the Transformed Medicaid Statistical Information System (T-MSIS),[11] procedure codes, diagnosis codes, duplicate denials, and encounter processing resolutions, including a solution for avoiding duplicate denied encounters with instructions on how to bill for specific modifiers. Hilltop also presented the rejected encounter error rate and de-duplication methodology, and the Department explained that this process was designed to help define the encounters that should be excluded from the HFMR. During the April 2024 Workgroup meeting, Hilltop presented the HFMR instructions, the results of the exception code 437 analysis, conditions where the provider paid amount is $0, and the MCO suggested exceptions.

Hilltop used the Department's information regarding encounter data that failed the edit checks (denied encounters), reasons for failure by the EDI, and comparisons with CY 2021 through CY 2023 denial results to conduct analyses. Hilltop also used these data and knowledge of the MCOs' relationships with providers to identify specific areas to investigate for missing services; data quality problems, such as the inability to process or retain certain fields; and problems MCOs might have compiling their encounter data and submitting the data files.

Step 2. Encounter Data Macro-Analysis—Verification of Data Integrity

Hilltop reviewed encounter data for accuracy and completeness by conducting integrity checks of the data files and automating the analyses. The analysis includes verifying that the state's identifiers (IDs)[12] are accurately incorporated into the MCO information system; applying other consistency checks, such as verifying critical fields containing non-missing data; and inspecting the data fields for quality and general validity. Hilltop evaluated the ratio of participants to total accepted encounters by MCO to assess whether the distribution was similar across MCOs. Selected fields not verified by the Department during the EDI process in Step 1 were assessed for completeness and accuracy. Hilltop investigated how completely and accurately the MCOs populated provider reimbursement fields when submitting encounter data to the Department following the new mandate effective January 1, 2018.

Hilltop then assessed how many medical encounters with a provider reimbursement amount of $0 were identified as sub-capitated reimbursements or denied reimbursements (MCO denied the provider claim) and compared the amount entered in the provider reimbursement field with the amount listed in the FFS fee schedule. In addition, Hilltop analyzed the completion of the institutional provider reimbursement data. Hilltop performed an analysis of the $0

[11] See August 10, 2018 letter to State Health Officials (SHO# 18-008) providing guidance to states regarding expectations for Medicaid and CHIP data and ongoing T-MSIS implementation at https://www.medicaid.gov/Federal-Policy-Guidance/downloads/SHO18008.pdf

[12] recipno, begdos, enddos, ICN, prov, icd10 diagnosis codes, icd10 procedure codes, billdate.

reimbursement encounters by MCO, aggregated by the contract information segment, CN1, with indicators of 05 (sub-capitated), 09 (denied), and indicator not present.

Hilltop investigated the third-party liability (TPL) variable in MCO encounters to determine whether MCOs are reporting these encounters appropriately. Finally, Hilltop assessed the MCO provider numbers to ensure that encounters received and accepted only included providers currently active within the HealthChoice program.

Step 3. Encounter Data Micro-Analysis—Generate and Review Analytic Reports

Hilltop analyzed and interpreted data based on the submitted fields, volume and consistency of the encounter data, and utilization rates. Hilltop specifically conducted analyses for other volume/consistency dimensions in three primary areas: time, service type, and appropriateness of diagnosis and procedure codes based on patient age. The Department helped identify several specific analyses for each primary area related to policy interests; the results can inform the development of long-term strategies for monitoring and assessing the quality of encounter data.

Hilltop conducted an analysis of encounter data by time dimensions (i.e., service date and processing date) to show trends and evaluate data consistency. After establishing the length of time between service dates and processing dates, Hilltop compared these dimensions with state standards or benchmarks for data submission and processing. Hilltop also compared time dimension data between MCOs to determine whether they process data within similar time frames.

The service type analysis concentrated on three main service areas: inpatient hospitalizations, emergency department (ED) visits, and observation stays. The CY 2021 analysis provides baseline data and allows the Department to identify any inconsistencies in utilization patterns for these types of services in CY 2022 and CY 2023. Rates of inpatient hospitalizations and observation stays remained stable, while ED visits increased slightly over the evaluation period.

Finally, Hilltop analyzed the age appropriateness of diagnosis and procedure codes. Specifically, Hilltop conducted analyses of enrollees aged 66 years or older, deliveries (births), the presence of Alzheimer's disease and other types of dementia diagnosis, and dental services. Hilltop conducted an analysis for delivery diagnosis codes. Participants older than 65 are ineligible for HealthChoice; therefore, any encounters for this population were noted, which could indicate an error in a participant's date of birth. Hilltop also conducted an analysis of dental encounters for enrollees whose dental services should have been covered through the FFS system.

Step 4. Compare Findings to State-Identified Benchmarks

In Steps 2 and 3, Hilltop compared the encounter data submitted by each MCO with benchmarks identified by the Department. Hilltop performed the analyses by MCO and calendar year to benchmark each MCO against its own performance over time, as well as against other MCOs. Hilltop also identified and compared outlier data with overall trends noted among the MCOs.

Results of Activity 3: Analysis of Electronic Encounter Data

Step 1. Develop a Data Quality Test Plan Based on Data Element Validity Requirements

The Department sent Hilltop the 8ER reports for CY 2021 through CY 2023, which included encounters that failed the initial National Provider ID (NPI) Crosswalk process (denied encounters). Overall, Hilltop classifies the MMIS edits resulting in denied encounters into five categories: missing data, participant not eligible for service, value not valid for the field, inconsistent data, and duplicates[13] (Note: duplicates are not reported in the 8ER file).

Hilltop performed checks on critical fields for missing, invalid (incorrect), and inconsistent data, including provider number, units of service, drug number, drug quantity, revenue code, procedure code, and diagnosis code. Hilltop identified eligibility issues for participants who were not eligible for MCO services at the time of the service. Examples of inconsistent data include discrepancies between dates, inconsistencies between diagnosis and age or sex, and inconsistencies between original and resubmitted encounters.

Table 1 presents the distribution of denied encounters submitted by all MCOs, by category, for CY 2019 to CY 2023.

Table 1. Distribution of Denied Encounter Submissions by EDI Denial Category, CY 2019–CY 2023

Denial Category	CY 2019 (Baseline)		CY 2020		CY 2021		CY 2022		CY 2023	
	# of Denied Encounters	% of Total	# of Denied Encounters	% of Total	# of Denied Encounters	% of Total	# of Denied Encounters	% of Total	# of Denied Encounters	% of Total
Duplicate	**103,108**	**5.4%**	**480,007**	**7.1%**	77,347	1.8%	60,723	1.6%	49,319	1.6%
Inconsistent	**46,438**	**2.5%**	**78,017**	**1.1%**	40,841	0.9%	123,034	3.2%	51,590	1.6%
Missing	**595,697**	**31.5%**	**1,053,540**	**15.5%**	753,586	17.1%	533,411	13.8%	456,532	14.4%
Not Eligible	**814,451**	**43.0%**	**450,374**	**6.6%**	321,135	7.3%	529,468	13.7%	440,067	13.8%
Not Valid	**334,314**	**17.7%**	**4,737,893**	**69.7%**	3,224,378	73.0%	2,613,590	67.7%	2,180,179	68.6%
Total	**1,894,008**	**100%**	**6,799,831**	**100%**	**4,417,287**	**100%**	**3,860,226**	**100%**	**3,177,687**	**100%**

Overall, the number of denied encounters decreased by 28.1% from CY 2021 to CY 2023. However, the number of denied encounters increased from 1,894,008 in CY 2019 to 6,799,831 in CY 2020; an increase of 259%. While the denied encounters from the 8ER reports are not de-duplicated, the number of rejected encounters in CY 2023 is still much higher as compared to CY 2019. In 2023, the Department asked Hilltop to analyze denied encounters for purposes of capitated rate risk adjustment. To determine the total number of denied encounters that were potentially missing from the base data used for risk adjustment, Hilltop developed a process to identify and de-duplicate denied encounters using data received from MMIS, which is not done

[13] Refer to Appendix C for categorization of denials.

when generating the 8ER reports. The 8ER reports include many encounters that are resubmitted with new ICNs for a previously submitted denied encounter that had a different ICN.

Most of the denied encounters were due to invalid data or incorrect provider data, and this can largely be attributed to the addition of provider enrollment encounter (NPI Crosswalk) edits that went live on January 1, 2020 (see Provider Enrollment-Related Encounter Data Validation section below for details). The Department worked with the MCOs for two years prior to the provider enrollment edits becoming effective to ensure that their providers were enrolled in FFS via the electronic provider revalidation and enrollment portal (ePREP). In addition, the Department worked with the MCOs on how to implement the Provider Master File and crosswalk the Billing/PayTo and Rendering NPI to a Medicaid Provider ID using the NPI crosswalk flowchart. However, many providers failed to enroll by January 1, 2020, or submitted enrollment information that was inconsistent with the encounter data submitted to the Department. The total number of denied encounters due to invalid data decreased by 32.4% during the evaluation period, but the share of all denied encounters attributed to invalid data decreased by only 4.4 percentage points between CY 2021 and CY 2023.

Throughout the reporting period, "Not Valid" denials were the most common, with "Missing" and "Not Eligible" denials rounding out the top three. The following categories of denials decreased in number: duplicate encounters, missing encounters, and invalid encounters.

Analyzing denied encounters by MCO is useful for assessing trends and identifying issues that are specific to each MCO. This allows the Department to monitor and follow up with the MCOs on potential problem areas. Table 2 presents the distribution of denied and accepted encounter submissions across MCOs for CY 2021 through CY 2023.

Table 2. Distribution of Denied and Accepted Encounter Submissions by MCO, CY 2021–CY 2023

Denied Encounters						
MCO	CY 2021		CY 2022		CY 2023	
	Number of Denied Encounters	Percentage of All Denied Encounters	Number of Denied Encounters	Percentage of All Denied Encounters	Number of Denied Encounters	Percentage of All Denied Encounters
ABH	432,360	9.8%	105,659	2.7%	86,015	2.7%
CFCHP	323,604	7.3%	342,384	8.9%	92,812	2.9%
JMS	197,734	4.5%	252,155	6.5%	39,812	1.3%
KPMAS	286,174	6.5%	218,981	5.7%	163,828	5.2%
MPC	768,064	17.4%	585,477	15.2%	548,767	17.3%
MSFC	170,138	3.9%	70,142	1.8%	354,471	11.2%
PPMCO	977,473	22.1%	1,346,750	34.9%	1,102,763	34.7%
UHC	666,075	15.1%	558,659	14.5%	369,009	11.6%
WPM*	595,665	13.5%	380,019	9.8%	420,210	13.2%
Total	**4,417,287**	**100%**	**3,860,226**	**100%**	**3,177,687**	**100%**
Accepted Encounters						
MCO	CY 2021		CY 2022		CY 2023	
	Number of Accepted Encounters	Percentage of All Accepted Encounters	Number of Accepted Encounters	Percentage of All Accepted Encounters	Number of Accepted Encounters	Percentage of All Accepted Encounters
ABH	1,312,880	3.0%	1,465,995	3.2%	1,493,493	3.3%
CFCHP	1,892,492	4.3%	2,393,506	5.3%	2,833,925	6.2%
JMS	1,235,612	2.8%	1,141,684	2.5%	1,056,101	2.3%
KPMAS	2,914,875	6.6%	3,059,397	6.7%	3,148,718	6.9%
MPC	8,250,416	18.6%	8,240,573	18.1%	8,080,070	17.6%
MSFC	3,413,822	7.7%	3,340,877	7.3%	3,389,419	7.4%
PPMCO	11,472,685	25.9%	12,115,262	26.6%	11,833,483	25.8%
UHC	5,390,628	12.2%	5,195,084	11.4%	5,030,139	11.0%
WPM*	8,399,279	19.0%	8,614,423	18.9%	8,973,366	19.6%
Total	**44,282,689**	**100%**	**45,566,801**	**100%**	**45,838,714**	**100%**

* Wellpoint Maryland (WPM). Previously Amerigroup Community Care (ACC) prior to January 1, 2023.

The volume of denied encounters decreased across many MCOs between CY 2021 and CY 2023, largely due to the implementation and usage of the Department's Provider Master File. While there was an overall increase in denied encounters for MedStar Family Choice, Inc. (MSFC) and Priority Partners (PPMCO), there were decreases for Aetna Better Health (ABH), CareFirst Community Health Plan (CFCHP), and Jai Medical Systems (JMS), followed by Kaiser Permanente of the Mid-Atlantic States (KPMAS), Maryland Physicians Care (MPC), United Health Care (UHC), and Wellpoint Maryland (WPM).

PPMCO had the highest share (34.7%) of all denials in CY 2023—an increase of 12.6 percentage points from CY 2021. Also notable, MPC had 17.3% of all denials although that rate has been steady from CY 2021 to CY 2023. MSFC had 11.2% of all denials in CY 2023, an increase of 9.4 percentage points from CY 2022, and an increase of 7.3 percentage points from CY 2021. ABH remained at 2.7% from CY 2022 to CY 2023, a decrease of 7.1 percentage points from CY 2021. CFCHP submitted 2.9% of the total denied encounters in CY 2023—a decrease of 6.0 percentage points from CY 2022, and a decrease of 4.4 percentage points from CY 2021. Additionally, JMS experienced a decrease of 3.4 percentage points of all denials from CY 2021 to 2023 followed by UHC with a decrease of 3.5 percentage points.

ABH, CFCHP, JMS, and KPMAS each had less than 6.0% of the denied encounters in CY 2023. KPMAS decreased its share of denials by 1.3 percentage points from CY 2021 to CY 2023, while ABH's, CHFCHP's, and JMS's share of denials fluctuated during the evaluation period.

Although there was some variation among MCOs in the distribution of the total denied encounters from CY 2021 to CY 2023, there was very little variation in the distribution of accepted encounters among MCOs, except for UHC and MPC, whose shares decreased by 1.2 and 1.0 percentage points, respectively, and CFCHP, whose shares increased by 1.9 percentage points. All the other MCOs had less than a 1.0 percentage point change during the evaluation period.

Tables 3 and 4 show the rate of encounters denied by the MMIS by category and MCO. Specifically, Table 3 presents the percentage of denied encounters by MMIS denial category and MCO for CY 2023. See Appendix B for a graphical representation of Table 3.

Table 3. Percentage of Denied Encounters by MMIS Denial Category by MCO, CY 2023

Denial Category	ABH	CFCHP	JMS	KPMAS	MPC	MSFC	PPMCO	UHC	WPM
Duplicate	0.2%	0.9%	1.5%	0.9%	0.6%	2.2%	0.5%	6.9%	0.9%
Inconsistent	0.5%	0.2%	0.2%	2.1%	0.5%	0.1%	0.1%	2.7%	7.9%
Missing	18.8%	12.2%	11.1%	22.5%	13.5%	15.4%	13.3%	11.4%	16.6%
Not Eligible	2.8%	13.6%	28.5%	8.4%	9.4%	24.4%	13.3%	12.7%	16.3%
Not Valid	77.7%	73.1%	58.7%	66.1%	75.9%	57.9%	72.8%	66.2%	58.3%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

For all MCOs, the primary reasons for denial of encounters in CY 2023 were categorized as "Not Valid" (ranging from 57.9% to 77.7%). The second most common denial category was tied between "Missing" and "Not Eligible." ABH, KPMAS, MPC, and WPM had "Missing" as their second-highest category, while CFCHP, JMS, MSFC, and UHC had "Not Eligible" as their second-highest category. PPMCO's second-highest category was equally distributed between "Missing" and "Not Eligible." For all MCOs, encounters denied for reasons grouped under the "Duplicate" category remained below 3.0%, other than UHC, where "Duplicate" represented 6.9% of denied encounters. Encounters denied as "Inconsistent" remained below 3.0% for all MCOs except WPM, where "Inconsistent" represented 7.9% of denied encounters.

Table 4 presents the distribution of the rejection reason category and how it changed for each MCO between CY 2021 and CY 2023.

Table 3. Number and Percentage of Denied Encounters by Denial Category and MCO, CY 2021–CY 2023

Denial Category	Year	ABH	CFCHP	JMS	KPMAS	MPC	MSFC	PPMCO	UHC	WPM	Total
Duplicate	CY 2021	2,054	39,546	665	3,790	11,082	45	2,439	16,205	1,521	**77,347**
		0.5%	12.2%	0.3%	1.3%	1.4%	0.0%	0.2%	2.4%	0.3%	**1.8%**
	CY 2022	16	8,759	957	823	27,283	607	3,738	14,558	3,982	**60,723**
		0.0%	2.6%	0.4%	0.4%	4.7%	0.9%	0.3%	2.6%	1.0%	**1.6%**
	CY 2023	186	843	594	1,430	3,309	7,729	5,892	25,473	3,863	**49,319**
		0.2%	0.9%	1.5%	0.9%	0.6%	2.2%	0.5%	6.9%	0.9%	**1.6%**
Inconsistent	CY 2021	6,386	2,399	209	3,771	6,792	3,000	1,145	9,450	7,689	**40,841**
		1.5%	0.7%	0.1%	1.3%	0.9%	1.8%	0.1%	1.4%	1.3%	**0.9%**
	CY 2022	5,162	62,819	75	3,523	1,501	741	1,253	42,262	5,698	**123,034**
		4.9%	18.3%	0.0%	1.6%	0.3%	1.1%	0.1%	7.6%	1.5%	**3.2%**
	CY 2023	396	190	76	3,472	2,865	349	1,090	9,883	33,269	**51,590**
		0.5%	0.2%	0.2%	2.1%	0.5%	0.1%	0.1%	2.7%	7.9%	**1.6%**
Missing	CY 2021	82,627	31,378	78,907	55,501	89,383	52,811	189,734	82,140	91,105	**753,586**
		19.1%	9.7%	39.9%	19.4%	11.6%	31.0%	19.4%	12.3%	15.3%	**17.1%**
	CY 2022	14,259	28,442	73,168	43,191	55,069	9,998	193,751	62,825	52,708	**533,411**
		13.5%	8.3%	29.0%	19.7%	9.4%	14.3%	14.4%	11.2%	13.9%	**13.8%**
	CY 2023	16,175	11,279	4,430	36,940	74,222	54,668	147,022	42,153	69,643	**456,532**
		18.8%	12.2%	11.1%	22.5%	13.5%	15.4%	13.3%	11.4%	16.6%	**14.4%**
Not Eligible	CY 2021	2,201	36,708	12,929	13,326	37,778	8,609	129,848	60,205	19,531	**321,135**
		0.5%	11.3%	6.5%	4.7%	4.9%	5.1%	13.3%	9.0%	3.3%	**7.3%**
	CY 2022	1,887	23,185	12,291	19,887	83,513	8,762	304,498	50,187	25,258	**529,468**
		1.8%	6.8%	4.9%	9.1%	14.3%	12.5%	22.6%	9.0%	6.6%	**13.7%**
	CY 2023	2,393	12,665	11,331	13,768	51,771	86,358	146,334	47,036	68,411	**440,067**
		2.8%	13.6%	28.5%	8.4%	9.4%	24.4%	13.3%	12.7%	16.3%	**13.8%**
Not Valid	CY 2021	339,092	213,573	105,024	209,786	623,029	105,673	654,307	498,075	475,819	**3,224,378**
		78.4%	66.0%	53.1%	73.3%	81.1%	62.1%	66.9%	74.8%	79.9%	**73.0%**
	CY 2022	84,335	219,179	165,664	151,557	418,111	50,034	843,510	388,827	292,373	**2,613,590**
		79.8%	64.0%	65.7%	69.2%	71.4%	71.3%	62.6%	69.6%	76.9%	**67.7%**
	CY 2023	66,865	67,835	23,381	108,218	416,600	205,367	802,425	244,464	245,024	**2,180,179**
		77.7%	73.1%	58.7%	66.1%	75.9%	57.9%	72.8%	66.2%	58.3%	**68.6%**
Total Denied Encounters	**CY 2021**	**432,360**	**323,604**	**197,734**	**286,174**	**768,064**	**170,138**	**977,473**	**666,075**	**595,665**	**4,417,287**
	CY 2022	**105,659**	**342,384**	**252,155**	**218,981**	**585,477**	**70,142**	**1,346,750**	**558,659**	**380,019**	**3,860,226**
	CY 2023	**86,015**	**92,812**	**39,812**	**163,828**	**548,767**	**354,471**	**1,102,763**	**369,009**	**420,210**	**3,177,687**

The greatest number of denied encounters during the evaluation period were in the "Not Valid" category. The total number of "Not Valid" encounters decreased from 3,224,378 to 2,180,179 between CY 2021 and CY 2023, but the proportion of all denied encounters categorized as "Not Valid" remained fairly stable. The impact of invalid data was not spread evenly across MCOs throughout the evaluation period. In CY 2023, the rate of denials categorized as "Not Valid" ranged from 57.9% of MSFC's denials on the low end to 77.7% of ABH's denials at the high end.

In the "Missing" denial category, all MCOs except one experienced a decrease in the number of denials throughout the evaluation period. From CY 2021 to CY 2023, MSFC experienced an increase of 1,857 encounter denials.

MCOs showed varied results in the numbers and percentages of denied encounters in the "Inconsistent" category. The total number of denials categorized as "Inconsistent" during the evaluation period decreased for all MCOs except UHC, which increased slightly (4.6% increase), and WPM, which increased significantly (over 300% increase). Expressed as a percentage of all denied encounters, JMS, KPMAS, MPC, MSFC, and PPMCO demonstrated stability in the rate of denials categorized as "Inconsistent," with year-over-year changes of one percentage point or less. By contrast, the rate for ABH, CFCHP, UHC, and WPM varied widely, up to 18.1 percentage points (CFCHP, CY 2022 to CY 2023).

While the number of encounter denials categorized as "Duplicate" increased for four of the nine MCOs (MSFC, PPMCO, UHC, and WPM), the remaining MCOs (ABH, CFCHP, JMS, KPMAS, and MPC) decreased in the number of these denials, with CFCHP having the greatest decline from 39,546 in CY 2021 to 843 in CY 2023. UHC saw the largest increase in the number of denials categorized as "Duplicate," from 16,205 in CY 2021 to 25,473 in CY 2023.

In CY 2023, JMS had the largest percentage of encounters denied in the "Not Eligible" category (28.5%), and ABH had the lowest (2.8%). The percentage of denials for all MCOs increased from CY 2021 to CY 2023—except for PPMCO, which initially increased from 13.3% in CY 2021 to 22.6% in CY 2022 and decreased to 13.3% in CY 2023.

Overall, between CY 2021 and CY 2023, there was a decrease in denials marked "Duplicate," "Missing," and "Not Valid" while there was an increase in denials marked "Inconsistent" and "Not Eligible," though both decreased since CY 2022. In CY 2023, the greatest decrease in the share of denials was in the "Not Valid" category, which decreased by 4.4 percentage points.

Provider Enrollment-Related Encounter Data Validation

Hilltop conducted an additional review of the 8ER reports to analyze the high rates of encounters that failed initial MMIS edits—particularly for incorrectly submitted or invalid data. Further research revealed that the 8ER high denial rates were related to issues with the MCO implementation and usage of the Provider Master File. The provider data, which are collected via ePREP and rekeyed into MMIS, underwent changes that affected the data beginning January 1, 2020. After two years of collaborative preparation with the MCOs, the provider system

implemented new rules that require the NPI on any encounter to match the active NPI under which the provider enrolled with Medicaid for both the billing and rendering fields.[14] To remain actively enrolled with Medicaid, providers must perform actions such as updating their licensure on the ePREP portal. Failure to do so can affect a provider's active status and thus jeopardize the successful submission of encounters.

Prior to 2020, MCOs used the MCO Network Provider File and could use any NPI on the encounter in the billing and rendering fields if it matched an active Medicaid Provider ID on the MCO Network Provider File stored in MMIS. The encounter process would attempt to link the NPI with that provider and adjudicate the encounter (accepted/denied). The provider enrollment edits—intended to improve the accuracy of provider details—were implemented in response to CMS requirements. See Appendix C for a list of denial codes divided into those relating to provider data and all others, and then subdivided by denial category for CY 2023 encounters.

Table 5 presents denied encounters by MCO, divided into provider enrollment-related and all other denials for CY 2021 to CY 2023. See Appendix D for more specific information about the top three most common MCO-specific EDI denial codes (errors) for CY 2023.

Table 5. Number of Denied Encounters for Provider Enrollment-Related and Other Denial Types by MCO, CY 2021–CY 2023

Denial Type	MCO	CY 2021	CY 2022	CY 2023
Provider Enrollment-Related	ABH	213,977	61,134	47,145
	CFCHP	171,835	167,242	47,600
	JMS	87,223	79,497	8,082
	KPMAS	161,576	101,865	70,375
	MPC	462,622	316,131	332,459
	MSFC	44,877	29,275	62,434
	PPMCO	428,998	605,207	592,545
	UHC	323,994	250,417	179,948
	WPM	358,314	221,095	170,511
	Subtotal	**2,253,416**	**1,831,863**	**1,511,099**
Other	ABH	218,383	44,525	38,870
	CFCHP	151,769	175,142	45,212
	JMS	110,511	172,658	31,730
	KPMAS	124,598	117,116	93,453
	MPC	305,442	269,346	216,308
	MSFC	125,261	40,867	292,037
	PPMCO	548,475	741,543	510,218
	UHC	342,081	308,242	189,061
	WPM	237,351	158,924	249,699
	Subtotal	**2,163,871**	**2,028,363**	**1,666,588**
Total		**4,417,287**	**3,860,226**	**3,177,687**

*In the CY 2020 to CY2022 report, one denial code was miscategorized as "other" instead of "provider-enrollment related." This has been corrected, and the results for CY 2021 and 2022 were revised.

[14] Medicaid and CHIP Managed Care Final Rule. 81 Fed. Reg. 27,890 (May 6, 2016) (to be codified at 42 CFR Parts 431, 433, 438, 440, 457 and 495).

The number of provider enrollment-related denials decreased for all MCOs from CY 2021 to CY 2023, except for MSFC and PPMCO. The decline was lowest for MPC (28.1%) and highest for JMS (90.7%). Almost all MCOs had a notable decrease in the number of denials due to provider enrollment-related encounters from CY 2022 to CY 2023, except for MPC (increased by 5.2%), and MSFC (increased by 113.3%).

Step 2. Encounter Data Macro-Analysis—Verification of Data Integrity

During CY 2023, the MCOs submitted a total of 45.8 million accepted encounters (records), which was an increase from 45.6 million in CY 2022 and 44.3 million in CY 2021. Enrollment continued to be high during the evaluation period due to continuous eligibility requirements of the COVID-19 public health emergency (PHE), which ended May 11, 2023.[15] Although with the Department's redetermination efforts, enrollment remained high through the end of CY 2023, despite the unwinding of the continuous eligibility requirements.[16] Utilization as measured by the volume of accepted encounters continued to rise from CY 2021 through CY 2023. To estimate the overall total number of encounters submitted, Hilltop added the number of accepted encounters to the number of MMIS-denied encounters. Using that method, a total of approximately 48.7 million encounters were submitted in CY 2021. This number increased to 49.4 million encounters in CY 2022 but fell to 49.0 million encounters in CY 2023. Approximately 93.5% of the CY 2023 encounters were accepted into MMIS, which is higher than the 92.2% acceptance rate during CY 2022 and the 90.0% acceptance rate during CY 2021.

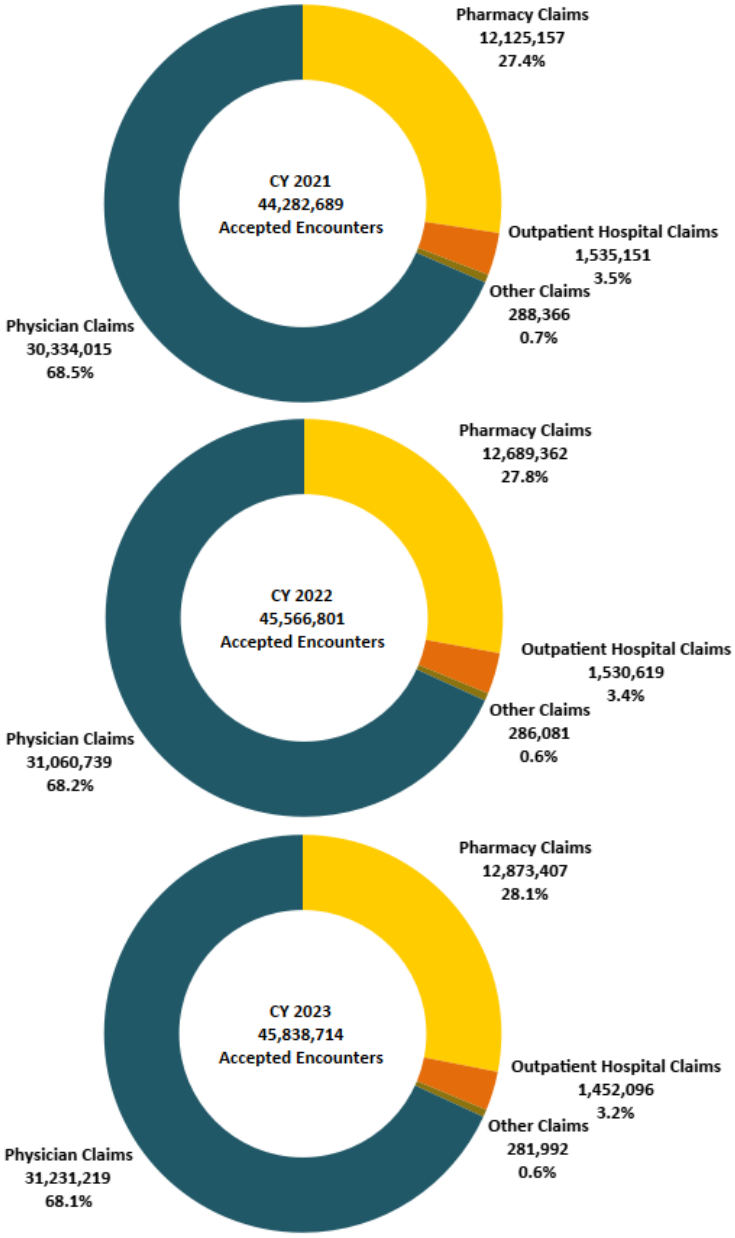
Hilltop received a monthly copy of all encounters accepted by MMIS. Upon receipt of the accepted encounters, Hilltop performed several validation assessments and integrity checks of the fields to analyze and interpret the accuracy and completeness of the data. These assessments included determining whether there was an invalid end date of service or other errors. The Department sends monthly encounter files to Hilltop. Denied encounter records are excluded before being imported into Hilltop's data warehouse.

Figure 1 shows the distribution of accepted encounter submissions by claim type (physician claim, pharmacy claim, outpatient hospital claim, and other claims) from CY 2021 to CY 2023.

[15] https://www.medicaid.gov/resources-for-states/coronavirus-disease-2019-covid-19/unwinding-and-returning-regular-operations-after-covid-19/index.html

[16] https://health.maryland.gov/newsroom/Pages/Maryland-Department-of-Health-recognized-as-a-top-state-as-it-completes-yearlong-Medicaid-redeterminations-process.aspx

Figure 1. Number and Percentage of Accepted Encounters by Claim Type, CY 2021–CY 2023



The distribution of accepted encounters by claim type changed slightly from CY 2021 to CY 2023. Physician claims represented most of the encounters during the evaluation period (roughly two-thirds), followed by pharmacy claims (just over one-quarter). Across the evaluation period, other encounters—including inpatient hospital stays, community-based services, and long-term care services—accounted for less than 1% of services.

Table 6 displays the percentage and number of accepted encounters by claim type for each MCO from CY 2021 to CY 2023.

Table 6. Distribution of Accepted Encounters by Claim Type and MCO, CY 2021–CY 2023

Claim Type	Year	ABH	CFCHP	JMS	KPMAS	MPC	MSFC	PPMCO	UHC	WPM
Physician Claims	CY 2021	71.8%	67.5%	62.6%	75.9%	66.8%	67.7%	67.2%	73.3%	67.2%
		943,246	1,277,419	773,641	2,212,349	5,510,114	2,311,286	7,710,525	3,949,335	5,646,100
	CY 2022	69.1%	68.7%	59.8%	74.5%	66.3%	66.5%	67.6%	72.1%	67.5%
		1,013,129	1,644,307	682,602	2,280,214	5,463,440	2,222,432	8,191,130	3,745,792	5,817,693
	CY 2023	67.4%	69.1%	58.0%	73.7%	67.3%	68.9%	65.6%	71.6%	69.0%
		1,006,943	1,958,456	612,772	2,321,226	5,439,299	2,335,553	7,765,292	3,603,109	6,188,569
Pharmacy Claims	CY 2021	24.4%	27.4%	33.1%	22.4%	28.3%	28.4%	29.0%	22.9%	28.0%
		319,923	517,959	408,946	653,626	2,333,598	969,219	3,330,404	1,235,855	2,355,627
	CY 2022	26.4%	27.5%	36.2%	23.7%	29.2%	29.2%	28.5%	23.9%	28.3%
		386,874	657,020	413,751	726,213	2,406,846	973,973	3,447,617	1,241,078	2,435,990
	CY 2023	29.0%	26.9%	37.3%	24.5%	29.1%	27.6%	29.4%	24.9%	27.8%
		433,636	763,158	394,177	772,994	2,350,299	935,295	3,478,092	1,253,464	2,492,292
Outpatient Hospital Claims	CY 2021	3.0%	4.2%	3.9%	1.0%	4.0%	3.1%	3.3%	3.2%	4.1%
		39,698	79,830	47,750	30,602	332,752	106,394	381,918	171,970	344,237
	CY 2022	3.7%	3.1%	3.6%	1.1%	3.7%	3.5%	3.5%	3.3%	3.6%
		54,446	74,166	40,800	34,086	306,000	115,292	425,008	171,977	308,844
	CY 2023	2.9%	3.2%	3.7%	1.1%	3.0%	2.8%	4.4%	2.9%	2.8%
		43,665	91,048	38,968	35,585	238,727	94,068	515,552	145,480	249,003
Other Claims	CY 2021	0.8%	0.9%	0.4%	0.6%	0.9%	0.8%	0.4%	0.6%	0.6%
		10,013	17,284	5,275	18,298	73,952	26,923	49,838	33,468	53,315
	CY 2022	0.8%	0.8%	0.4%	0.6%	0.8%	0.9%	0.4%	0.7%	0.6%
		11,546	18,013	4,531	18,884	64,287	29,180	51,507	36,237	51,896
	CY 2023	0.6%	0.8%	1.0%	0.6%	0.6%	0.7%	0.6%	0.6%	0.5%
		9,249	21,263	10,184	18,913	51,745	24,503	74,547	28,086	43,502
Total (100%)	**CY 2021**	**1,312,880**	**1,892,492**	**1,235,612**	**2,914,875**	**8,250,416**	**3,413,822**	**11,472,685**	**5,390,628**	**8,399,279**
	CY 2022	**1,465,995**	**2,393,506**	**1,141,684**	**3,059,397**	**8,240,573**	**3,340,877**	**12,115,262**	**5,195,084**	**8,614,423**
	CY 2023	**1,493,493**	**2,833,925**	**1,056,101**	**3,148,718**	**8,080,070**	**3,389,419**	**11,833,483**	**5,030,139**	**8,973,366**

The distribution of accepted encounters remained relatively consistent across MCOs and calendar years. In CY 2023, physician encounters ranged from 58.0% of encounters (JMS) to 73.7% of encounters (KPMAS). JMS had the largest percentage of CY 2023 pharmacy encounters (37.3%), while KPMAS had the lowest percentage (24.5%). Outpatient hospital encounters in CY 2023 ranged from a low of 1.1% for KPMAS to a high of 4.4% for PPMCO.

See Appendix E for a visual display of the number and percentage of accepted encounters by claim type and MCO in CY 2023.

Table 7 illustrates the distribution of HealthChoice participants and the volume of accepted encounters for each MCO during CY 2021 through CY 2023.

Table 7. Percentage of HealthChoice Participants and Accepted Encounters by MCO, CY 2021–CY 2023

MCO	CY 2021		CY 2022		CY 2023	
	Percentage of Total Participants	Percentage of All Accepted Encounters	Percentage of Total Participants	Percentage of All Accepted Encounters	Percentage of Total Participants	Percentage of All Accepted Encounters
ABH	4.0%	3.0%	4.1%	3.2%	4.5%	3.3%
CFCHP	5.0%	4.3%	5.8%	5.3%	6.7%	6.2%
JMS	2.2%	2.8%	2.1%	2.5%	2.1%	2.3%
KPMAS	7.9%	6.6%	8.1%	6.7%	8.4%	6.9%
MPC	17.1%	18.6%	16.8%	18.1%	16.5%	17.6%
MSFC	7.6%	7.7%	7.4%	7.3%	7.2%	7.4%
PPMCO	24.1%	25.9%	23.7%	26.6%	23.5%	25.8%
UHC	11.9%	12.2%	11.7%	11.4%	11.6%	11.0%
WPM	22.3%	19.0%	21.9%	18.9%	21.5%	19.6%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

PPMCO and WPM were the largest MCOs in CY 2023, followed by MPC, UHC, KPMAS, MSFC, CFCHP, ABH, and JMS. The distribution of accepted encounters among MCOs in CY 2021 through CY 2023 was nearly proportional to the participant distribution. For example, in CY 2023, MPC had 16.5% of all HealthChoice participants and 17.6% of all MMIS encounters.

Managed Care Regulations: Accurate and Complete Encounter Data

In 2016, CMS issued its final rule, updating Medicaid managed care regulations.[17] One of the requirements specified that MCOs must submit encounter data that are accurate and complete by January 2018.[18] To address this requirement, the Department notified Maryland MCOs in September 2017 that all encounter data submitted to the Department on or after January 1,

[17] Medicaid and CHIP Managed Care Final Rule. 81 Fed. Reg. 27,498 (May 6, 2016) (to be codified at 42 CFR Parts 431, 433, 438, 440, 457 and 495).
[18] 42 CFR § 438.818(a)(2).

2018, must include allowed amounts and provider reimbursement amounts on each encounter (Maryland Department of Health, 2017). In November 2020, CMS released a new final rule on managed care[19] that included technical modifications; however, it did not include changes to the EQR or encounter data reporting regulations.

In 2010, the Department and the MCOs worked together to ensure the complete and accurate submission of data showing the amount paid on behalf of MCO members for their pharmacy encounters. Pharmacy encounter data flow through a point of sale (POS) system, which ensures data accuracy at the time of submission. For nearly a decade, pharmacy encounters have been reliable, and the Department has confidence in the integrity and quality of the payment data. Beginning in October 2017, the Department used the pharmacy paid encounter process as a framework to begin receiving provider reimbursement data for all encounters.

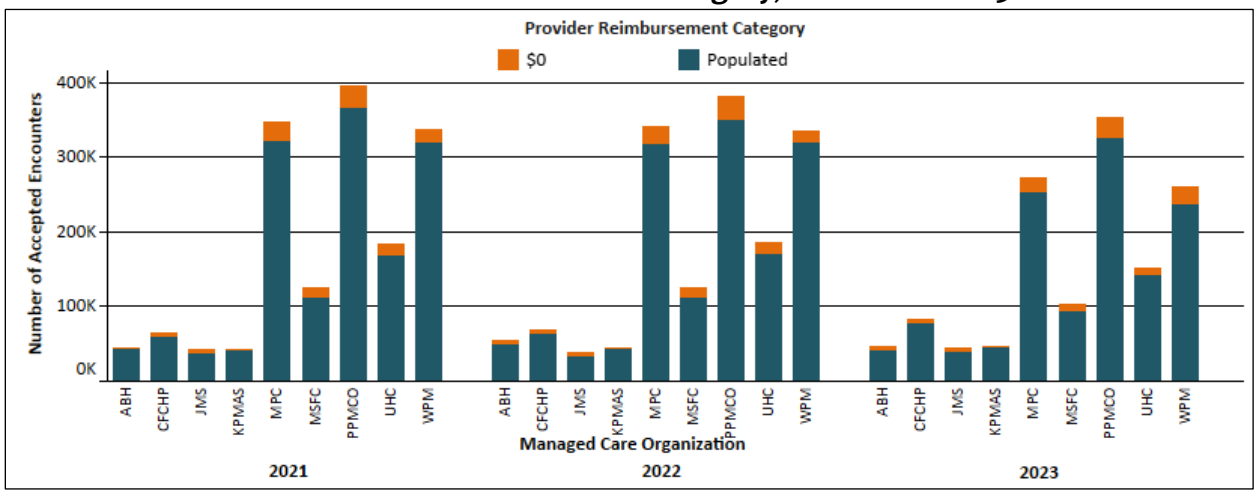
The Department staff prepared MMIS to accept provider reimbursement data for all encounters in the fall of 2017, convened technical MCO workgroups, and updated the 837 Companion Guides for professional (medical) and institutional encounters. Soon after MCOs began submitting provider reimbursement data for all encounters in January 2018, the Department staff identified errors in processing the reimbursement amount for medical and institutional encounters. In February 2018, the Department reviewed MCO submissions to determine how many encounters had missing provider reimbursement data, how many were $0 (separated by denied ('09' on the CN1 segment) and sub-capitated ('05' on the CN1 segment), and how many were or were not populated with any data at all. The Department shared its findings and met with MCOs individually to improve their submission processes. By August 2018, MMIS had received populated provider reimbursement data for all medical encounters.

In Fall 2018, the Department staff discovered that only the provider reimbursement amount for the first service line of each institutional encounter was being recorded, which underreported the total amount paid. This issue was corrected in mid-2020; MMIS now stores the correct sum for all the total paid institutional service lines. The Department continues to work with the MCOs to ensure the validity of institutional and medical encounter data.

Figure 2 displays the distribution of provider reimbursement category for accepted institutional encounter data by MCO from CY 2021 to CY 2023.

[19] Medicaid and CHIP Managed Care Final Rule. 85 Fed. Reg. 72,574 (November 13, 2020) (to be codified at 42 CFR Parts 438 and 457).

Figure 2. Number of Accepted Institutional Encounters by MCO and Provider Reimbursement Category, CY 2021–CY 2023



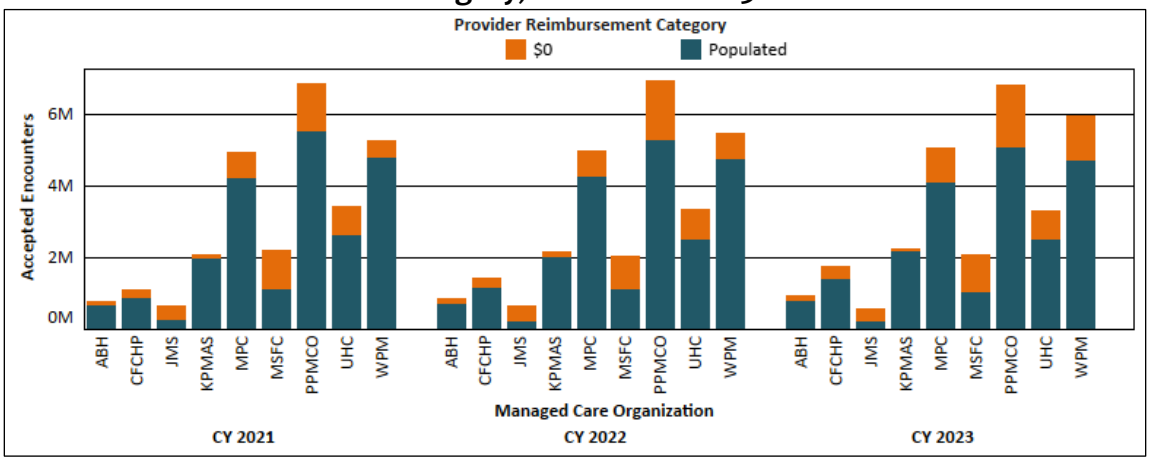
Year	Pay Category	ABH	CFCHP	JMS	KPMAS	MPC	MSFC	PPMCO	UHC	WPM
CY 2021	Populated	95.1%	90.0%	84.6%	93.8%	92.7%	89.4%	92.0%	91.0%	94.7%
		42,079	57,983	36,632	39,840	320,922	111,588	364,217	167,132	318,900
	$0	4.9%	10.0%	15.4%	6.2%	7.3%	10.6%	8.0%	9.0%	5.3%
		2,178	6,451	6,648	2,638	25,219	13,300	31,556	16,432	17,700
	Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
		44,257	**64,434**	**43,280**	**42,478**	**346,141**	**124,888**	**395,773**	**183,564**	**336,600**
CY 2022	Populated	90.0%	91.6%	83.1%	94.0%	92.8%	88.9%	91.4%	90.7%	95.1%
		48,316	62,241	32,292	42,532	316,808	110,643	348,593	168,690	319,452
	$0	10.0%	8.4%	16.9%	6.0%	7.2%	11.1%	8.6%	9.3%	4.9%
		5,367	5,695	6,562	2,691	24,422	13,816	32,885	17,318	16,372
	Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
		53,683	**67,936**	**38,854**	**45,223**	**341,230**	**124,459**	**381,478**	**186,008**	**335,824**
CY 2023	Populated	87.6%	92.2%	86.5%	93.5%	92.4%	91.6%	92.0%	92.9%	90.6%
		40,833	76,305	37,767	43,644	251,297	93,735	324,549	140,516	236,450
	$0	12.4%	7.8%	13.5%	6.5%	7.6%	8.4%	8.0%	7.1%	9.4%
		5,775	6,487	5,875	3,016	20,679	8,631	28,090	10,736	24,536
	Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
		46,608	**82,792**	**43,642**	**46,660**	**271,976**	**102,366**	**352,639**	**151,252**	**260,986**

The MCOs showed mixed results over the evaluation period: CFCHP, JMS, MSFC, and UHC increased the percentage of institutional encounters with populated provider reimbursement amounts, while ABH, KPMAS, MPC, and WPM decreased and PPMCO remained the same (92.0%). In CY 2023, the percentage of institutional encounters with a populated amount ranged from 86.5% (JMS) to 93.5% (KPMAS).

Figure 3 displays the number and percentage of accepted medical encounters by MCO and provider reimbursement category for CY 2021 through CY 2023. Appendix F displays the number

of accepted medical encounters by MCO and provider reimbursement category for CY 2021 to CY 2023.

Figure 3. Number of Accepted Medical Encounters by MCO and Provider Reimbursement Category, CY 2021–CY 2023

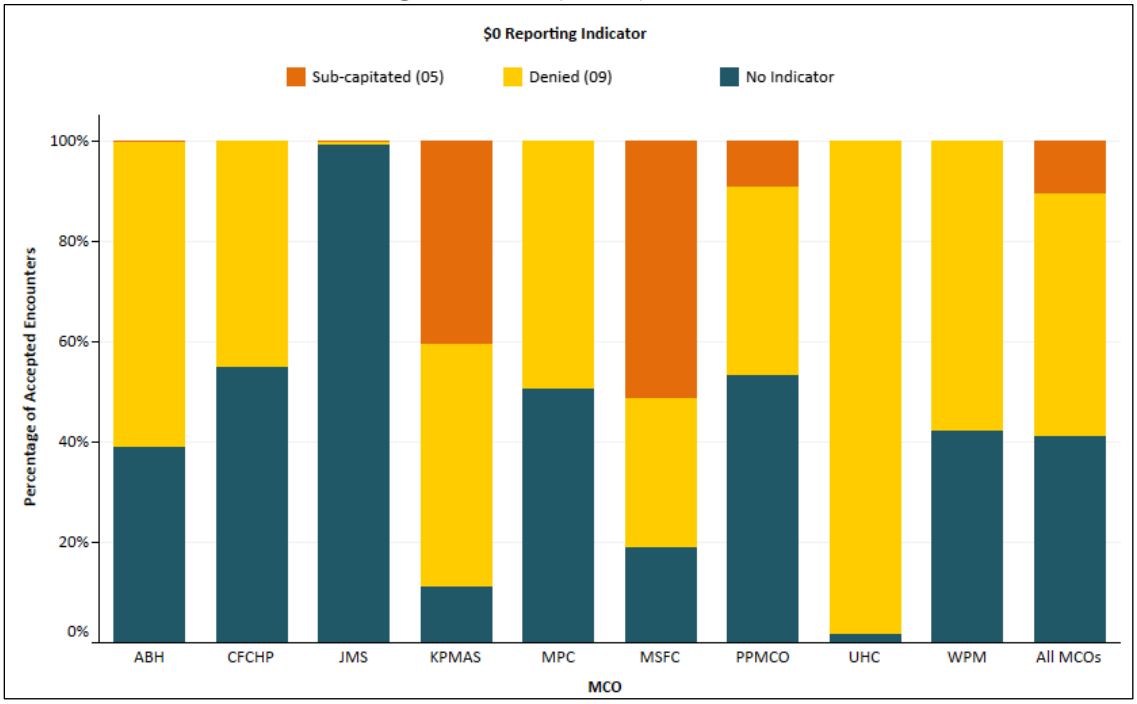


Year	Pay Category	ABH	CFCHP	JMS	KPMAS	MPC	MSFC	PPMCO	UHC	WPM
CY 2021	Populated	82.0%	78.6%	37.5%	94.3%	85.5%	51.0%	80.5%	76.3%	90.8%
		639,721	869,961	247,332	1,973,718	4,217,329	1,117,795	5,531,945	2,622,037	4,789,407
	$0	18.0%	21.4%	62.5%	5.7%	14.5%	49.0%	19.5%	23.7%	9.2%
		140,020	237,519	412,501	118,827	717,480	1,074,314	1,341,220	814,233	488,070
	Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
		779,741	**1,107,480**	**659,833**	**2,092,545**	**4,934,809**	**2,192,109**	**6,873,165**	**3,436,270**	**5,277,477**
CY 2022	Populated	80.8%	79.8%	34.2%	93.7%	84.7%	55.2%	76.3%	74.8%	86.2%
		697,565	1,151,967	222,651	2,021,446	4,230,981	1,117,555	5,284,443	2,511,339	4,729,467
	$0	19.2%	20.2%	65.8%	6.3%	15.3%	44.8%	23.7%	25.2%	13.8%
		165,635	290,813	428,663	136,943	766,411	907,070	1,641,938	845,955	757,248
	Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
		863,200	**1,442,780**	**651,314**	**2,158,389**	**4,997,392**	**2,024,625**	**6,926,381**	**3,357,294**	**5,486,715**
CY 2023	Populated	79.6%	79.2%	35.9%	96.3%	80.4%	50.3%	73.9%	74.4%	78.9%
		757,319	1,384,037	212,726	2,155,695	4,089,597	1,037,694	5,050,314	2,475,091	4,693,008
	$0	20.4%	20.8%	64.1%	3.7%	19.6%	49.7%	26.1%	25.6%	21.1%
		194,248	364,427	379,478	83,740	994,630	1,027,232	1,785,564	849,931	1,257,830
	Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
		951,567	**1,748,464**	**592,204**	**2,239,435**	**5,084,227**	**2,064,926**	**6,835,878**	**3,325,022**	**5,950,838**

During CY 2023, JMS submitted 64.1% of its medical encounters with a $0 provider reimbursement amount, and MSFC submitted nearly half of its medical encounters the same way. All other MCOs ranged from 3.7% (KPMAS) to 26.1% (PPMCO) of accepted medical encounters with $0 provider reimbursement. Only CFCHP and KPMAS had a lower share of encounters with $0 provider reimbursement during CY 2023 than in CY 2021.

Figure 4 displays the percentage of accepted medical encounters with a $0 provider reimbursement amount with the sub-capitated reporting indicator (05) on the CN1 segment, the denied reporting indicator (09) on the CN1 segment, and no indicator by MCO.

Figure 4. Accepted Medical Encounters with $0 Provider Reimbursement Data by Reporting Indicator (05/09) and MCO, CY 2023



$0 Reporting Indicator	ABH	CFCHP	JMS	KPMAS	MPC	MSFC	PPMCO	UHC	WPM	All MCOs
Sub-capitated (05)	0.1%	0.0%	0.0%	40.5%	0.0%	51.5%	9.4%	0.0%	0.0%	**10.5%**
Denied (09)	61.1%	45.1%	0.9%	48.5%	49.4%	29.6%	37.4%	98.5%	57.9%	**48.4%**
No Indicator	38.8%	54.9%	99.1%	11.0%	50.6%	18.9%	53.2%	1.5%	42.1%	**41.1%**
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Adherence to the requirement that encounters with $0 provider reimbursement include a reporting indicator varied significantly among the MCOs during CY 2023. UHC was the only MCO that submitted nearly all its $0 medical encounters with an indicator. By contrast, CFCHP, MPC, and PPMCO submitted more than one-half and JMS close to 100% of their $0 provider reimbursement medical encounters without an indicator. The percentage of $0 provider reimbursement medical encounters without an indicator submitted by the remaining MCOs were 11% (KPMAS), 18.9% (MSFC), 38.8% (ABH), and 42.1% (WPM). Appendix G displays the number and percentage of accepted institutional encounters by MCO with $0 reimbursement data by reporting indicator and MCO.

In October 2024, the Department distributed files to each MCO detailing their CY 2023 $0 reimbursement encounters submitted with a 05 and 09 indicator on the CN1 segment and without an indicator. This data will help the MCOs estimate the impact of failing to comply with

the requirement to include a reporting indicator on $0 medical encounters and to improve the quality of their encounter data.

Hilltop also analyzed the accepted medical encounters during CY 2023 by comparing the price paid against the price listed for the same service on the FFS fee schedule. Of the almost 29 million medical encounters in this analysis, 24% of the encounters were reported with a $0 pay amount. Approximately 40% of these were laboratory procedures. The proportion of encounters with $0 ranged greatly by MCO from less than 10% to over 60%. Of the encounters matched to the fee schedule with a non-zero payment amount, nearly 50% of encounters had some degree of difference between the amount paid by MCOs and the amount specified in the fee schedule. Of those encounters matched to the FFS fee schedule with a non-zero payment amount where there was some degree of difference, 70% were greater than the fee schedule payment amount and 30% were less; more than a third of these encounters were more than 20% greater than the FFS payment amount. The range by MCO of the percentage of encounters matched to the FFS fee schedule with a non-zero payment that was greater than the FFS fee schedule was from 19% to 84%.

In CY 2019, Hilltop determined that TPL was reported inconsistently in MMIS across MCOs. Some MCOs had up to 95% of their encounters with a positive TPL amount in a sample of trauma encounters from CY 2019, whereas others had no encounters with a positive TPL amount during the same time period. FFS claims generally had positive TPL amounts in 1% to 3% of cases. Further analysis of a sample of trauma encounters from CY 2021 showed that the inconsistencies remained; three MCOs had no TPL for any encounters, and six MCOs had positive TPL in 85% to 99% of the encounters.

The Department reported that TPL for professional encounters was corrected in MMIS as of May 1, 2022. Analysis of trauma encounters from CY 2022 pulled from the professional file found that inconsistencies still remained in TPL reporting, suggesting that only two MCOs have TPL properly recorded in professional files in CY 2022. The 2023 analysis of trauma encounters found more consistency, with four MCOs reporting TPL payments on 1% to 6% of their encounters. However, the other five MCOs did not report any TPL on their encounters, suggesting that TPL may be routinely missing from MMIS reporting for some MCOs. Hilltop will continue to investigate TPL on all encounters and will review the results with the Department.

Hilltop has not used the MCO-reported TPL amount in any analyses since CY 2018.

Step 3. Encounter Data Micro-Analysis—Generate and Review Analytic Reports

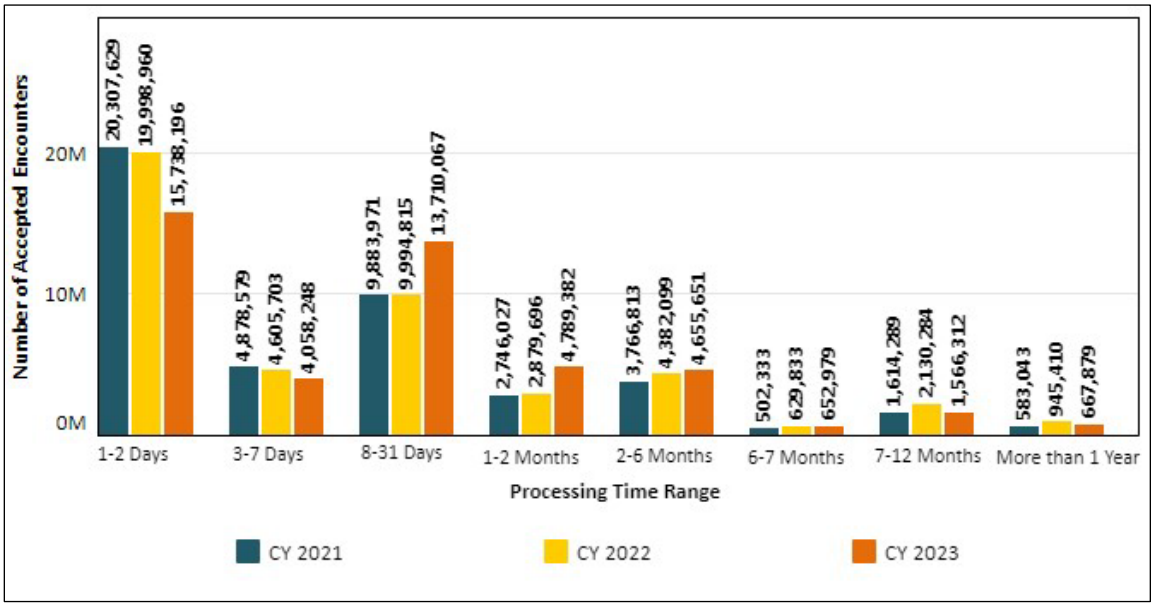
Time Dimension Analysis

Effective analysis of the Medicaid program requires complete, accurate, and timely processing of encounter data. Encounter processing time spans the interval between the end date of service and the date on which the encounter is submitted to the Department. After providers render a service, they are required to invoice the MCO within six months. The MCO must then adjudicate

the encounter within 30 days of invoice submission.[20] Maryland regulations require MCOs to submit encounter data to the Department "within 60 calendar days after receipt of the claim from the provider."[21] Therefore, the maximum acceptable processing time allotted for an encounter between the end date of service and the date of submission to the Department is eight months.

The Medicaid program requires MCOs to submit encounters in a timely fashion; however, delays in submission occur, and some variation from month to month is expected. Noticeable changes related to timeliness may indicate irregular submission of encounter data. Figure 5 shows the timeliness of processing accepted encounter submissions from the end date of service for CY 2021 through CY 2023.

Figure 5. Number of Accepted Encounters Submitted by Processing Time, CY 2021–CY 2023



Note for Figure 5 and Tables 8-10: An encounter is labeled as "1-2 months" if the encounter was submitted between 32 and 60 days after the date of service; "2-6 months" if the encounter was submitted between 61 and 182 days after the date of service; "6-7 months" if the encounter was submitted between 183 and 212 days after the date of service; and "7-12 months" if the encounter was submitted between 213 and 364 days after the date of service. In addition, there was an error in the reporting of timeliness in last year's report that has been corrected.

Overall, timelines of encounter submissions declined during the evaluation period, with MCOs submitting fewer encounters within 1 to 7 days in CY 2023. However, there was an increase in encounters submitted between 8 and 31 days.

[20] Md. Code Ann., Health-Gen. § 15-102.3; § 15-1005.
[21] COMAR 10.09.65.15(B)(4).

Table 8 shows the processing times for encounters submitted by claim type for CY 2021 through CY 2023.

Table 8. Distribution of the Total Number of Accepted Encounters Submitted, by Claim Type and Processing Time, CY 2021–CY 2023

Processing Time Range	Pharmacy Claims			Physician Claims			Outpatient Hospital Claims			Other Claims		
	CY 2021	CY 2022	CY 2023	CY 2021	CY 2022	CY 2023	CY 2021	CY 2022	CY 2023	CY 2021	CY 2022	CY 2023
1-2 Days	82.7%	82.8%	61.6%	32.6%	29.4%	24.0%	22.6%	20.3%	18.1%	17.0%	15.2%	15.5%
	10,026,380	10,510,053	7,933,056	9,884,739	9,135,115	7,498,311	347,471	310,346	263,259	49,039	43,446	43,570
3-7 Days	11.5%	11.1%	10.2%	11.0%	9.9%	8.4%	8.8%	7.7%	7.0%	8.0%	6.7%	6.7%
	1,392,401	1,407,027	1,317,925	3,327,402	3,061,363	2,619,596	135,723	118,118	101,900	23,053	19,195	18,827
8-31 Days	5.4%	5.4%	24.1%	28.8%	28.4%	32.4%	26.9%	26.7%	28.1%	30.8%	27.4%	28.5%
	650,512	680,381	3,097,107	8,731,435	8,826,893	10,125,137	413,259	409,013	407,392	88,765	78,528	80,431
1-2 Months	0.3%	0.2%	3.7%	8.2%	8.3%	13.0%	12.9%	14.6%	14.5%	12.6%	14.9%	15.5%
	32,578	26,697	473,473	2,478,225	2,587,218	4,061,330	198,767	223,184	210,900	36,457	42,597	43,679
2-6 Months	0.2%	0.3%	0.2%	11.3%	12.7%	13.8%	17.6%	21.1%	18.9%	18.2%	23.0%	18.5%
	21,363	39,678	31,399	3,423,369	3,953,948	4,297,378	269,617	322,630	274,650	52,464	65,843	52,224
More than 6 Months	0.0%	0.2%	0.2%	8.2%	11.3%	8.4%	11.1%	9.6%	13.4%	13.4%	12.7%	15.3%
	1,923	25,526	20,447	2,488,840	3,496,201	2,629,467	170,314	147,328	193,995	38,588	36,472	43,261
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
	12,125,157	**12,689,362**	**12,873,407**	**30,334,010**	**31,060,738**	**31,231,219**	**1,535,151**	**1,530,619**	**1,452,096**	**288,366**	**286,081**	**281,992**

*"Outpatient hospital claims" include emergency department (ED) visits. **"Other" includes inpatient hospital stays, community-based services, and long-term care services.

In both CYs 2021 and 2022, over 80% of pharmacy encounters were submitted within 1 to 2 days; in CY 2023, this dropped to 61.6%. During the evaluation period, the share of all physician encounters submitted within 31 days decreased by 7.6 percentage points from over 70% in CY 2021 to under 65% in CY 2023. Outpatient hospital encounters showed a similar but less severe decline, by 5.1 percentage points between CY 2021 and CY 2023. See Appendix H for a visual display of the number and percentage of encounters submitted by time processing range and claim type in CY 2021 through CY 2023.

Table 9 displays the monthly processing time for accepted encounters in CY 2021 through CY 2023.

Table 9. Percentage of Accepted Encounters Submitted, by Month and Processing Time, CY 2021–CY 2023

Processing Time Range	Year	January	February	March	April	May	June	July	August	September	October	November	December	Annual Total
1-2 Days	CY 2021	35.9%	41.0%	47.1%	41.9%	44.5%	51.4%	47.1%	50.9%	46.6%	45.5%	51.4%	45.6%	**45.9%**
	CY 2022	40.9%	42.4%	45.4%	45.8%	45.2%	43.9%	43.2%	48.0%	35.2%	44.6%	44.5%	47.4%	**43.9%**
	CY 2023	6.2%	39.0%	5.0%	37.3%	6.5%	45.7%	42.2%	46.1%	48.1%	47.3%	49.7%	45.9%	**34.3%**
3-7 Days	CY 2021	11.9%	15.1%	9.9%	11.7%	12.4%	10.7%	10.6%	10.2%	11.6%	12.9%	5.8%	10.2%	**11.0%**
	CY 2022	10.6%	11.7%	10.7%	10.9%	9.6%	10.5%	13.1%	9.4%	10.9%	10.0%	6.7%	7.7%	**10.1%**
	CY 2023	9.9%	0.0%	10.5%	0.0%	7.9%	11.7%	12.1%	11.0%	11.7%	10.1%	10.8%	10.2%	**8.9%**
8-31 Days	CY 2021	23.8%	22.3%	22.0%	24.8%	24.2%	19.0%	21.6%	19.7%	22.5%	22.2%	22.0%	23.9%	**22.3%**
	CY 2022	23.0%	21.4%	23.5%	21.1%	23.4%	23.4%	20.7%	18.4%	24.9%	17.5%	24.4%	21.6%	**21.9%**
	CY 2023	57.3%	0.0%	62.2%	0.0%	64.5%	22.6%	26.2%	25.0%	21.8%	25.0%	20.8%	24.7%	**29.9%**
1-2 Months	CY 2021	9.8%	6.1%	5.5%	6.4%	4.7%	6.0%	5.0%	5.1%	6.3%	5.9%	7.3%	6.5%	**6.2%**
	CY 2022	6.9%	7.5%	4.8%	5.9%	4.6%	6.0%	4.6%	5.7%	8.0%	10.3%	5.7%	5.7%	**6.3%**
	CY 2023	0.7%	44.0%	0.0%	46.9%	4.4%	5.5%	6.0%	4.7%	5.1%	5.0%	6.5%	0.0%	**10.4%**
2-6 Months	CY 2021	9.1%	7.5%	7.6%	7.5%	7.0%	5.5%	5.6%	6.9%	8.9%	9.7%	13.0%	13.3%	**8.5%**
	CY 2022	8.2%	7.4%	6.9%	7.2%	6.7%	7.4%	7.8%	9.1%	12.0%	9.7%	16.0%	16.4%	**9.6%**
	CY 2023	16.3%	11.0%	15.7%	8.0%	7.9%	6.9%	6.5%	5.7%	7.1%	7.3%	10.4%	18.5%	**10.2%**
6-7 Months	CY 2021	1.2%	1.2%	0.7%	0.5%	0.5%	0.5%	2.3%	1.7%	0.9%	3.3%	0.3%	0.5%	**1.1%**
	CY 2022	1.5%	0.8%	0.9%	0.8%	0.8%	0.4%	1.2%	1.2%	1.3%	5.2%	1.6%	0.6%	**1.4%**
	CY 2023	3.2%	1.2%	1.6%	1.0%	0.6%	0.6%	0.0%	2.1%	0.7%	3.6%	1.4%	0.6%	**1.4%**
7-12 Months	CY 2021	2.8%	3.1%	3.3%	4.1%	6.4%	6.9%	7.8%	5.5%	3.3%	0.5%	0.3%	0.0%	**3.6%**
	CY 2022	3.0%	3.7%	2.8%	3.4%	8.4%	7.4%	7.1%	8.2%	7.9%	2.6%	1.0%	0.7%	**4.7%**
	CY 2023	2.6%	1.8%	2.2%	3.6%	4.4%	6.6%	6.9%	5.5%	5.4%	1.7%	0.5%	0.0%	**3.4%**
More than 1 Year	CY 2021	5.5%	3.7%	3.8%	3.0%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**1.3%**
	CY 2022	5.9%	5.1%	5.1%	5.0%	1.3%	0.9%	2.3%	0.0%	0.0%	0.0%	0.0%	0.0%	**2.1%**
	CY 2023	3.9%	3.1%	2.9%	3.2%	3.8%	0.3%	0.0%	0.0%	N/A	N/A	N/A	N/A	**1.5%**
Total		**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

The timeliness of encounter submissions remained relatively consistent across all months for CY 2021 and CY 2022. In CY 2023, there was a significant increase in processing time in January, March, and May, with only 6.2%, 5.0%, and 6.5% of accepted encounters submitted within 1-2 days, respectively. On average, 34.3% of CY 2023 encounters were processed within 1 to 2 days of the end date of service—a decrease from 45.9% in CY 2021 and 43.9% in CY 2022.

Table 10 displays processing times for accepted encounters submitted to the Department by MCO from CY 2021 to CY 2023.

Table 10. Percentage of Accepted Encounters Submitted by MCO and Processing Time, CY 2021–CY 2023

MCO	1-2 Days			3-7 Days			8-31 Days			1-2 Months		
	CY 2021	CY 2022	CY 2023	CY 2021	CY 2022	CY 2023	CY 2021	CY 2022	CY 2023	CY 2021	CY 2022	CY 2023
ABH	35.7%	33.3%	29.2%	8.9%	7.3%	7.9%	21.7%	17.1%	28.2%	7.7%	5.1%	10.3%
CFCHP	42.2%	54.0%	39.2%	9.3%	10.7%	8.6%	17.4%	16.6%	21.8%	8.4%	5.8%	7.5%
JMS	27.9%	30.6%	23.5%	4.1%	4.0%	3.9%	15.9%	16.7%	21.2%	17.4%	14.8%	15.2%
KPMAS	60.0%	57.5%	45.3%	14.0%	13.4%	11.0%	18.8%	21.2%	30.7%	2.1%	2.1%	8.0%
MPC	46.4%	47.1%	36.3%	10.2%	9.9%	8.8%	16.9%	17.5%	29.0%	4.9%	4.7%	8.5%
MSFC	28.0%	25.3%	26.4%	8.6%	5.7%	7.7%	35.5%	23.4%	33.9%	11.3%	17.4%	14.2%
PPMCO	56.2%	46.2%	33.5%	12.5%	10.7%	8.9%	19.0%	22.4%	30.1%	4.2%	5.8%	11.2%
UHC	28.8%	32.7%	24.1%	10.4%	10.5%	8.3%	35.7%	34.6%	36.4%	9.7%	7.4%	13.9%
WPM	49.5%	47.5%	39.1%	11.9%	10.9%	9.6%	21.6%	20.5%	29.0%	5.0%	4.4%	9.1%
MCO	**2-6 Months**			**6-7 Months**			**7-12 Months**			**More than 1 Year**		
	CY 2021	CY 2022	CY 2023	CY 2021	CY 2022	CY 2023	CY 2021	CY 2022	CY 2023	CY 2021	CY 2022	CY 2023
ABH	12.1%	16.5%	11.4%	1.7%	3.9%	1.8%	8.1%	10.3%	6.5%	4.0%	6.5%	4.7%
CFCHP	15.8%	9.5%	7.4%	1.4%	0.6%	1.0%	4.3%	2.3%	5.0%	1.1%	0.6%	9.5%
JMS	11.8%	14.6%	27.6%	2.6%	2.4%	4.6%	15.5%	13.1%	3.8%	4.9%	3.8%	0.3%
KPMAS	3.8%	3.2%	2.9%	0.5%	0.5%	0.3%	0.7%	1.7%	1.0%	0.1%	0.5%	0.7%
MPC	10.6%	10.2%	8.3%	2.0%	1.6%	2.8%	7.3%	5.8%	5.7%	1.7%	3.2%	0.7%
MSFC	12.1%	17.3%	10.6%	1.7%	1.9%	0.9%	2.2%	6.9%	5.5%	0.5%	1.9%	1.0%
PPMCO	5.2%	8.6%	10.9%	0.6%	1.4%	1.0%	1.5%	3.6%	3.0%	0.9%	1.3%	1.4%
UHC	11.2%	10.3%	13.6%	1.2%	1.1%	1.3%	2.5%	2.4%	2.1%	0.4%	0.9%	0.3%
WPM	6.7%	7.6%	9.9%	0.6%	1.0%	1.2%	2.8%	5.2%	1.6%	2.0%	2.8%	0.4%

All the MCOs submitted a lower percentage of their encounters within 1 to 2 days in CY 2023 than in CY 2021. MSFC experienced an increase in the percentage of encounters submitted within 1 to 2 days from CY 2022 to CY 2023. In CY 2023, the percentage of encounters submitted by MCOs within 1 to 2 days ranged from 23.5% (JMS) to 45.3% (KPMAS). The percentage of encounters submitted within 3 to 7 days decreased for all MCOs between CY 2021 and CY 2023. JMS had the lowest (3.9%) percentage of encounters submitted within 3 to 7 days in CY 2023.

See Appendix I for a stacked bar chart displaying the number and percentage of encounters within each claim type from CY 2021 to CY 2023 by processing time. Appendix J provides a table outlining the number and percentage of encounters submitted by MCOs by processing time in CY 2023. See Appendix K for a stacked bar chart displaying the percentage of encounters submitted by MCO by processing time in CY 2020 through CY 2023.

Service Type Analysis

Table 11 shows the number and percentage of encounter visits for inpatient hospitalizations, ED visits, and observation stays by MCO for CY 2021 to CY 2023.

Table 11. Number and Percentage of Inpatient Visits, ED Visits, and Observation Stays by MCO, CY 2021–CY 2023

Visits	Year	ABH	CFCHP	JMS	KPMAS	MPC	MSFC	PPMCO	UHC	WPM	Total
Number of Visits	CY 2021	613,502	887,454	502,290	1,144,056	4,035,993	1,699,091	5,534,477	2,470,312	4,296,251	**21,183,426**
	CY 2022	672,857	1,093,093	469,075	1,143,675	4,048,013	1,666,516	5,512,901	2,393,716	4,316,397	**21,316,243**
	CY 2023	725,534	1,286,938	455,712	1,155,967	4,023,229	1,590,177	5,456,680	2,345,972	4,320,909	**21,361,118**
Percentage of All Visits	CY 2021	2.9%	4.2%	2.4%	5.4%	19.1%	8.0%	26.1%	11.7%	20.3%	**100%**
	CY 2022	3.2%	5.1%	2.2%	5.4%	19.0%	7.8%	25.9%	11.2%	20.2%	**100%**
	CY 2023	3.4%	6.0%	2.1%	5.4%	18.8%	7.4%	25.5%	11.0%	20.2%	**100%**
Number of Inpatient Visits	CY 2021	4,047	6,080	3,556	7,609	22,247	9,141	29,423	13,042	22,569	**117,714**
	CY 2022	4,176	6,923	3,086	7,679	20,100	9,272	28,102	12,816	22,277	**114,431**
	CY 2023	4,850	8,579	3,237	8,050	21,226	8,333	29,778	12,871	22,688	**119,612**
Percentage of Visits that were Inpatient	CY 2021	0.7%	0.7%	0.7%	0.7%	0.6%	0.5%	0.5%	0.5%	0.5%	**0.6%**
	CY 2022	0.6%	0.6%	0.7%	0.7%	0.5%	0.6%	0.5%	0.5%	0.5%	**0.5%**
	CY 2023	0.7%	0.7%	0.7%	0.7%	0.5%	0.5%	0.5%	0.5%	0.5%	**0.6%**
Number of ED Visits	CY 2021	21,509	30,394	20,795	23,246	125,517	51,392	165,869	73,567	131,335	**643,624**
	CY 2022	23,569	33,155	18,701	25,341	127,470	54,528	170,435	75,401	135,907	**664,507**
	CY 2023	25,879	39,534	18,633	26,038	128,584	47,049	172,795	77,602	135,116	**671,230**
Percentage of Visits that were ED	CY 2021	3.5%	3.4%	4.1%	2.0%	3.1%	3.0%	3.0%	3.0%	3.1%	**3.0%**
	CY 2022	3.5%	3.0%	4.0%	2.2%	3.1%	3.3%	3.1%	3.1%	3.1%	**3.1%**
	CY 2023	3.6%	3.1%	4.1%	2.3%	3.2%	3.0%	3.2%	3.3%	3.1%	**3.1%**
Number of Observation Stays	CY 2021	1,239	1,994	1,173	1,472	8,926	3,134	10,698	6,789	8,115	**43,540**
	CY 2022	1,430	1,811	979	1,623	8,416	2,738	9,413	7,951	6,928	**41,289**
	CY 2023	1,723	2,282	949	1,741	8,052	2,273	9,513	7,601	6,925	**41,059**
Percentage of Visits that were Observation Stays	CY 2021	0.2%	0.2%	0.2%	0.1%	0.2%	0.2%	0.2%	0.3%	0.2%	**0.2%**
	CY 2022	0.2%	0.2%	0.2%	0.1%	0.2%	0.2%	0.2%	0.3%	0.2%	**0.2%**
	CY 2023	0.2%	0.2%	0.2%	0.2%	0.2%	0.1%	0.2%	0.3%	0.2%	**0.2%**

Note: Visits were duplicated between inpatient visits, ED visits, and observation stays.

For this analysis, a visit was defined as one encounter per person per provider per day. MCOs reported a consistent distribution of visits by service type for all years of the evaluation period. Total inpatient hospitalizations and observation stays combined made up less than 1.0% of all visits each year. ED visits, which were 3.1% of all visits in CY 2023, ranged from 2.3% of all visits (KPMAS) to 4.1% of all visits (JMS). Overall, during the evaluation period, the percentage of all inpatient visits decreased from 0.6% in CY 2021 to 0.5% in CY 2022 but increased back to 0.6% in CY 2023. The percentage of all ED visits increased slightly from CY 2021 (3.0%) to CY 2022 (3.1%) and remained stable through CY 2023 (3.1%). As shown in the annual HealthChoice evaluation, the overall percentage of HealthChoice participants with an outpatient ED visit and inpatient admission decreased between CY 2018 and CY 2022 (The Hilltop Institute, 2024).

Outlier Data Analysis

Hilltop conducted an analysis of encounter data submitted by MCOs to determine the effectiveness of encounter data edit checks between CY 2021 and CY 2023. The following areas were analyzed: 1) individuals over age 65 with encounters, 2) individuals with a service date before their date of birth, 3) age-appropriate diagnoses for delivery (births), 4) age-appropriate dementia diagnoses, 5) children aged 0 to 20 years with dental encounters, and 6) duplicate behavioral health services submitted both as encounters and as claims through the FFS system.

Because participants older than 65 are ineligible for HealthChoice, Hilltop searched for any encounters for those aged 66 or older. The number of MCO participants aged 66 or older who had encounters during the evaluation period reached a peak in CY 2022 before falling again in CY 2023.[22] The number of individuals with a service date before their date of birth increased between CY 2021 and CY 2022 before falling again in CY 2023.

Through CY 2022, the Maryland Healthy Smiles Dental Program (Healthy Smiles) provided dental coverage for children under the age of 21. As of January 1, 2023, Healthy Smiles was available to adults who received full Medicaid benefits.[23] The program is paid on an FFS basis—not through the MCO service package. Hilltop found very few dental encounters for children under the age of 21 covered by an MCO in CY 2021 through CY 2022. During CY 2023, the total number of dental encounters was not directly comparable to previous years due to the expansion of Healthy Smiles to include adults.[24] Nearly all dental encounters took place during January 2023 when the Healthy Smiles transition began. Roughly one-third of these encounters were submitted with a provider reimbursement amount. This may indicate that MCOs were paying for dental care inappropriately during this period.

Hilltop analyzed the volume of participants who had a diagnosis for delivery by age group between CY 2021 and CY 2023. Participants aged 0 to 11 and 51 or older are typically considered to be outside of the expected age range for delivery. This analysis considers both female and

[22] Data not shown due to small cell sizes.
[23] 2022 MD Laws Ch. 303.
[24] Prior to CY 2023, some MCOs offered limited dental services to adult participants as a value-added incentive for enrollment. The Healthy Smiles expansion made these benefits redundant.

male participants with a delivery diagnosis.[25] Across all MCOs, the number of participants identified as delivering outside of the expected age ranges was 122 in CY 2021, 136 in CY 2022, and 124 in CY 2023. The data substantiate that, overall, the encounters submitted are age-appropriate for delivery. See Appendix L for delivery codes.

The fifth analysis focused on age-appropriate diagnoses of dementia (see Appendix M for dementia codes) from CY 2021 to CY 2023. Although dementia is a disease generally associated with older age, onset can occur as early as 30 years of age. Thus, the prevalence of dementia diagnoses should increase with age after 30. Hilltop identified the number of participants under the age of 30 with an encounter with a dementia diagnosis. While each MCO had participants under the age of 30 with a dementia diagnosis, the total numbers were relatively small (226 participants were reported across all MCOs in CY 2023).[26]

In late 2024, the Department requested that Hilltop analyze the extent to which each MCO submitted behavioral health encounters that were duplicates of claims submitted through the FFS system. The Department continues to analyze the results.

Recommendations

Step 1. Develop a Data Quality Test Plan Based on Data Element Validity Requirements

In Step 1, Hilltop reviewed 8ER reports and found that, out of approximately 49.0 million overall encounters, more than 3.1 million encounters (approximately 6.5%) were denied by the Department in CY 2023. This represents a decrease from 3.9 million denied encounters in CY 2022 and 4.4 million in CY 2021. The main cause of this decrease in denied encounters is an improvement in invalid encounters related to provider information, which indicates a positive trend. However, in CY 2019—before the use of the provider NPI crosswalk, validation, and provider enrollment edits was implemented—the number of denied encounters was 1.9 million, which increased by 259% in CY 2020. The volume of denied encounters continues to decline, although it remains high relative to CY 2019. The Department should continue to monitor and work with the MCOs to resolve the usage of the Department Provider Master file and NPI Crosswalk process.

From CY 2021 to CY 2023, all MCOs except for MSFC and PPMCO experienced a decrease in the incidence of provider enrollment-related denied encounters. From CY 2022 to CY 2023, all MCOs except for MPC (which increased by 5.2%) and MSFC (which increased by 113.3%) experienced a decrease. MSFC and WPM are the only MCOs to have an increase in denied encounters due to non-provider exception codes from CY 2022 to CY 2023, with MSFC increasing by over 600%.

There was an increase in MSFC's denied encounters for both provider enrollment-related and other reasons from CY 2022 to CY 2023, while there was a decrease in its share of all

[25] In MMIS, male or female are the only two options.
[26] Data not shown by MCO due to small cell sizes.

HealthChoice participants (from 7.6% in CY 2022 to 7.2% in CY 2023). This may indicate problems with MSFC's encounter submission processes. It is also possible that multiple submissions of the same encounters with different ICNs as recorded in the 8ER reports are contributing to the increase. The 8ER reports include many encounters that are resubmissions for a previously denied encounter, but each has a different ICN upon resubmission. The Department should continue to work with the MCOs to instill best practices to improve their numbers of denied encounters.

The variance between an MCO's share of all denials and its share of all accepted encounters might warrant further attention. If an MCO's share of denials is much higher than its share of accepted encounters, then the organization might have a specific problem. If, on the other hand, the share of accepted encounters is greater than the share of denials, then the MCO might have some best practices to share. PPMCO had 34.7% of all rejected encounters in CY 2023, but only 25.8% of accepted encounters. Conversely, WPM's share of accepted encounters (19.6%) exceeded its share of rejections (13.2%) during the same period.

Step 2. Encounter Data Macro-Analysis—Verification of Data Integrity

Hilltop analyzed and interpreted the encounter data and found that, during CY 2023, the MCOs submitted a total of 45.8 million accepted encounters (records), an increase from 44.3 million in CY 2021 and 45.6 million in CY 2022. Hilltop reviewed encounters by claim type and found the distribution to be similar among MCOs. Each MCO's distribution of encounters across claim types remained stable and consistent throughout the years. Hilltop also compared the proportion of HealthChoice participants by MCO with the proportion of accepted encounters by MCO and found similar trends.

Hilltop conducted an analysis of provider reimbursement data on medical encounters and found that all HealthChoice MCOs continued to submit their medical encounters with populated provider reimbursement fields from CY 2021 to CY 2023, as required. However, all MCOs except for CFCHP and KPMAS increased the share of medical encounters with $0 provider reimbursement over the evaluation period, which could indicate that the MCOs are not accurately populating the provider reimbursement field. During CY 2023, JMS submitted 64.1% of its medical encounters with a $0 provider reimbursement amount, and MSFC submitted nearly half of its medical encounters the same way. All other MCOs ranged from 3.7% (KPMAS) to 26.1% (PPMCO) of accepted medical encounters with $0 provider reimbursement. The MCOs with unusually high volumes of $0 encounters should provide an explanation to the Department and ensure accuracy with future submissions.

Hilltop further analyzed the MCOs' use of the 05/09 indicator on the CN1 segment on accepted medical encounters with $0 in the provider reimbursement field. Adherence to this requirement is uneven across MCOs, and none demonstrated full compliance in CY 2023, although ABH, KPMAS, MSFC, UHC, and WPM submitted the majority of their $0 encounters with an indicator. The issue was particularly pronounced with JMS, which had no indicator for nearly all its $0 medical encounters. The Department should consider implementing measures to enforce

adherence to this requirement, such as automatic denial of $0 encounters submitted without an indicator.

Hilltop also analyzed the variance between the provider reimbursement amounts included in accepted encounters and the FFS fee schedule. The overall utilization of the provider reimbursement field had not changed significantly in CY 2023 as compared to previous years. The Department should continue to work with the MCOs to ensure appropriate utilization and improvement in the accuracy of the provider reimbursement field on accepted encounters. The Department also resolved an MMIS issue, which allowed accepted institutional provider reimbursement to be more accurately captured in July 2020. This field is now populated for all MCOs. Hilltop analyzed TPL data and determined that the TPL was not captured consistently across MCOs, so the MCO TPL amount in accepted encounters is not used in any analyses. Hilltop will continue to investigate the MCO TPL-reported amounts and will work with the Department to continue to develop a resolution.

To address the high volume of denied encounters, the Department should continue to encourage MCOs to work with their providers to ensure that they are enrolled on the date of service and that they know how to check their current status.

Step 3. Encounter Data Micro-Analysis—Generate and Review Analytic Reports

Time Dimension Analysis

Hilltop compared dates of service with MCO encounter submission dates and found that most encounters in CY 2023 were submitted to the Department within one month of the end date of service, which is consistent with CY 2022 and CY 2021 findings. In CY 2021 and 2022, nearly all (82.7% and 82.8%, respectively) pharmacy encounters were submitted within one to two days of the date of service. In CY 2023, this rate fell to 61.6%. All MCOs demonstrated a decline in the submission of accepted encounters within two days of the end date of service. MCOs that submit encounters more than eight months after the date of service—the maximum time allotted for an encounter to be submitted to the Department—should be flagged for improvement. The Department should consider automatically denying encounters submitted after this period has ended.

Service Type Analysis

Hilltop reviewed the volume of inpatient visits, ED visits, and observation stays by MCO. Trends in service type were consistent across MCOs and years. There was a slight increase in ED visits between CY 2021 and CY 2023. The Department should continue to review these data and compare trends in future annual encounter data validations to ensure consistency.

Outlier Data Analysis

The MCOs and the Department continued to improve the quality of reporting encounter data for age-appropriate diagnoses in CY 2023. The Department should continue to review and audit the

participant-level, MCO-specific reports that Hilltop generated for delivery, dementia, individuals over age 65, dental, and missing age outlier data measures. MCOs that submit the encounter outliers should be notified, demographic information should be updated, and adjustments should be made, as needed.

Conclusion

HealthChoice is a mature managed care program; overall, analysis of the CY 2023 electronic encounter data submitted indicates improvements in provider enrollment-related denied encounters. Although the MCOs continue to struggle with the changes in encounter editing logic, the Department and the MCOs have continued to strengthen gains made in recent years.

The most concerning issue in CY 2023 data is the continued volume of encounter denials, largely due to the change in encounter editing logic. Although the Department did not use encounter data from CY 2021 for rate setting because of the COVID-19 PHE, it should continue to work with the MCOs to resolve their NPI Crosswalk and provider exceptions and enrollment issues, which will allow for more accurate rate setting in the future. In the MCO CY 2024 contract, workgroup meetings with MCOs continued to refine encounters that should be removed from the HFMR. The Department will work with the MCOs to ensure that appropriately denied encounters will not be reported on the HFMR. In addition, of concern is that some of the MCOs had unusually high volumes of $0 encounters, which should also not be reported on the HFMRs. The Department will continue to work with the MCOs to provide an explanation and ensure the accuracy of the provider reimbursement field with future submissions.

In general, the MCOs have similar distributions of denials, types of encounters, types of visits, and outliers, except where specifically noted in the results. This analysis identified minor outliers that merit further monitoring and investigation, although the MCOs have made progress. Hilltop generated recipient-level reports for Department staff to discuss with the MCOs. The Department should review the content standards and criteria for accuracy and completeness with the MCOs. Continued work with each MCO to address identified discrepancies will improve the quality and integrity of encounter submissions and increase the Department's ability to assess the efficiency and effectiveness of the Medicaid program.

Hilltop found that the volume of accepted encounters was generally consistent with MCO enrollment. Although the time dimension analysis showed some variation among MCOs regarding the timeliness of encounter submissions, most encounters were submitted within the eight-month maximum time frame allotted by the Department. The decreases in encounters submitted within one to two days and three to seven days that were observed for CY 2023 are offset by the increase in the number of encounters submitted within eight to 31 days and one to two months. The Department should work with MCOs to improve the timeliness of encounter submissions, especially for MCOs with high rates of submissions occurring more than eight months after the end date of service.

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Appendix A. Ineligible, Improper Costs Removal from the CY 2023 HFMR

An "Office of Legislative Audits" (OLA) report dated June 21, 2023, relayed three findings. One of those findings stated that ineligible, improper costs reported by the MCOs were included in HFMRs and therefore in capitation rate calculations. These ineligible costs included 1) denied claims (e.g., duplicates) and claims which were not the responsibility of the MCO, such as, 2) claims for carved out services (e.g., behavioral health) or for 3) incarcerated individuals.

Regarding denied claims the items below should be included in the HFMR.

1. Error/Exception Codes 437 (Procedure Not Covered For Date of Service), 430 (Procedure or Revenue Code Not on File) when paired with revenue code 810 or 948, and 986 (Duplicate NDC Code), 435 (Recipient Sex Not Valid for Procedure) when associated with gender-neutral CPTs 81479 (Unlisted Molecular Pathology) or 81400-81408 (Molecular Pathology Levels 1-9).
2. $0 Pay Encounters, 05-Subcapitated reporting indicators.
3. Claim amounts for encounters denied for ePREP-related reasons (i.e., related to provider enrollment defined as falling under error/exception codes 122, 412, 951, 961, 962, 963, 964, 965, 971, 975, 976).

Also, the instances below should not be considered duplicates and therefore should not be excluded as duplicates (i.e., they should be included in the HFMR).

1. Anesthesia codes billed for the same date of service by different providers with different modifiers (QZ nurse anesthetist without medical direction by physician, QY medical direction of nurse anesthetist by anesthesiologist, QX non-physician anesthetist with medical direction by physician, QK medical direction of concurrent anesthesia procedures).
2. Modifiers 76 (repeat procedure by same physician) and 77 (repeat procedure by another physician).
3. Modifier 59 is not meant to identify a repeat procedure, rather procedures not normally reported together but appropriate under the circumstances (per the MCS CPT Manual). This modifier is frequently billed by providers WITHOUT the provider billing a separate line that does NOT include the modifier; denial of such encounters based on the use of modifier 59 is not appropriate.

The items below should be excluded from the HFMR.

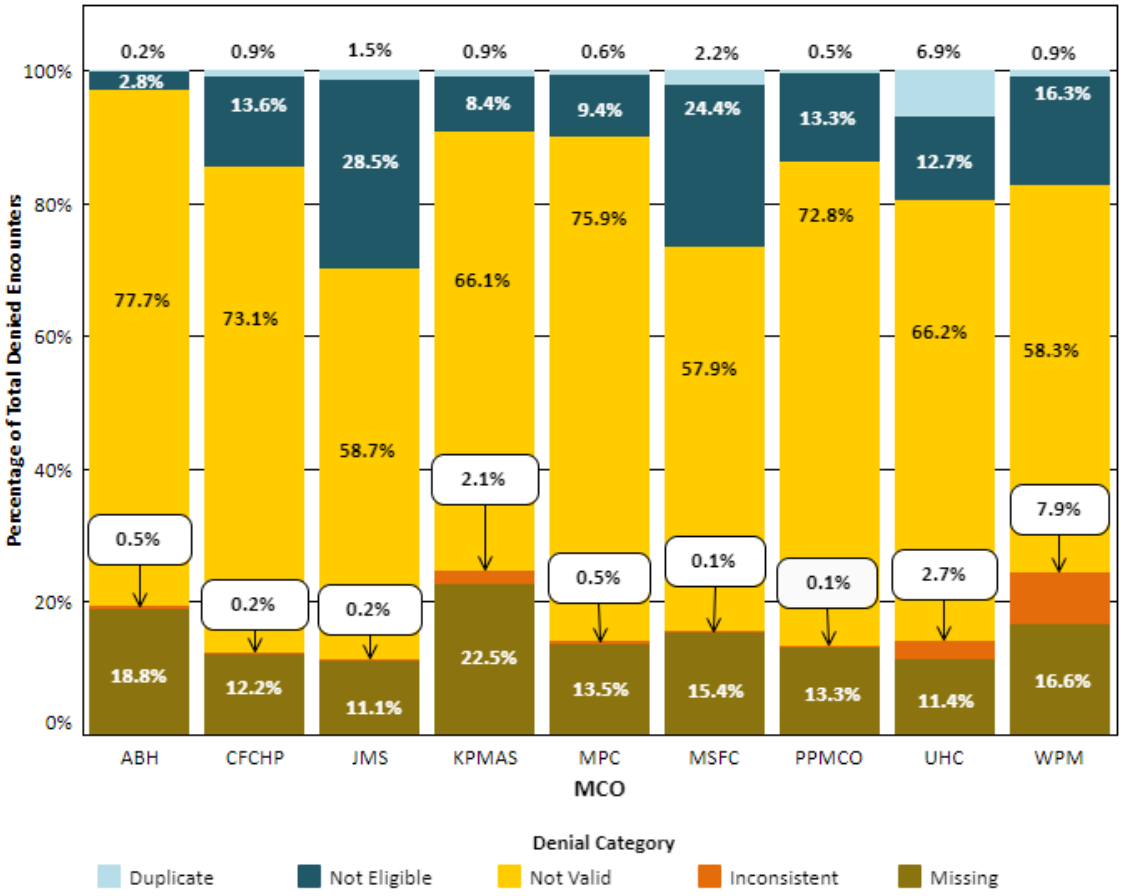
1. All denied encounters, except for error codes listed above.
2. $0 Pay Encounters, 09-Denied reporting indicators.
3. $0 Pay Encounters with no indicator.

CY 2023 HFMRs will be audited to ensure that denied encounters and $0 pay encounters are appropriately excluded from reporting as described above. All denied encounters and their associated diagnosis codes will be utilized for risk adjustment (i.e., RAC assignments.)

Regarding carved out or reimbursable services, please ensure that 1) behavioral health, 2) rare and expensive case management (REM), and 3) high cost, low utilization drugs are excluded from the HFMR but instead itemized in § V.II.

Regarding incarcerated individuals, since their healthcare costs are generally covered by the Department of Public Safety and Correctional Services (DPSCS), these costs should be excluded.

Appendix B. Percentage of Encounters Denied by EDI Denial Category, by MCO, CY 2023



Appendix C. Denial Codes, Errors, by Category with Provider-Related and Other Denial Codes, CY 2023

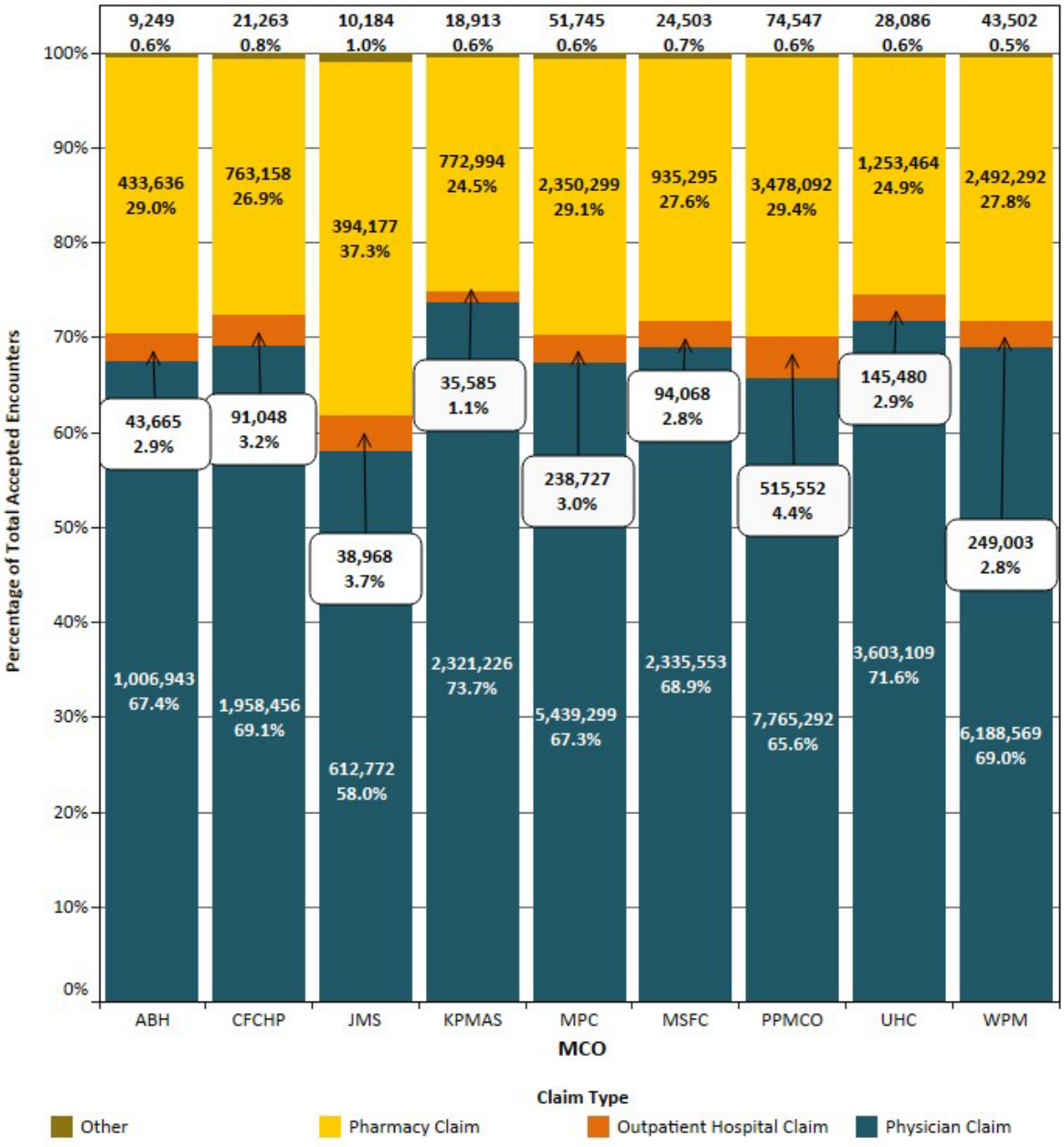
Denial Type	Denial Category	Last 3 of ICN	Error Description
Provider-related	Provider Enrollment	122	INVALID RENDERING PROV NUMBER
		412	REND PROV NOT ON FILE
		951	PROVIDER NUMBER NOT VALID
		961	PAY-TO/FAC PROVIDER SUSPENDED
		962	RENDERING PROVIDER SUSPENDED
		963	PAY-TO/FAC PROV NOT ACT DOS
		964	REND PROV NOT ACT ON DOS
		965	BILL/PAY2 PROV NPI <> MA ID
		971	NPI NUMBER INVLD FR PYTOPROV
		975	NPI#NFDONPROVFLFRENREFFACLTY
		976	REND PROV NPI NO MATCH FFS ID
	Not Valid	367	PRO TYP RENDPROV N/ATH REP PRO
		531	SVC/REND PROV# N/9 NUM DIGITS
		922	INVLD DEFAULT PROVIDER NUMBER
		950	SUB PROV NOT ON MASTER FILE
Other	Inconsistent	113	ADMIT DATE AFTER 1ST DATE SER
		126	THRU DOS PRIOR TO BEGIN DOS
		182	PAT STAT CD DISCHRG DTE CNFLT
		190	FIRST SURG DOS W/IN SVC PERIOD
		290	ORIG ENC TP A/RES DN AGREE
		435	SEX RECIP N/VALD F/REPT PROC
		454	FIRST DIAGNOSIS AGE CONFLICT
		455	FIRST DIAGNOSIS SEX CONFLICT
		464	2ND DIAGNOSIS AGE CONFLICT
		465	2ND DIAG SEX CONFLICT
		474	3RD DIAGNOSIS AGE CONFLICT
		484	4TH DIAGNOSIS AGE CONFLICT
		485	4TH DIAGNOSIS SEX CONFLICT
		589	FRM DOS PRIOR TO RECIP DOB
		901	ORIG ICN N/FOUND ON HISTORY
		912	VD/RESB MCO# NOT EQL HISTORY
		913	VOID RESUBMIT RECPT NOT = HIST
	Missing	135	BILLING PROV NUM MISSING
		170	INV/MISS PLACE OF SERVICE
		172	INVLD OR MISS REV/HCPCS CODE
		249	UNITS OF SERVICE EQUAL ZERO

Denial Type	Denial Category	Last 3 of ICN	Error Description
		259	PROC CODE REQ DIAG CODE
		361	TOOTH # REQD FOR PROC IS MISS
		362	TOOTH SURF REQ F/PROC IS MISS
		970	NPI NUMBER IS MISSING
		971	NPI ON ENC NOT FOUND IN MMIS
		982	NDC MISSING OR NOT VALID
		985	NDC QUANTITY MISSING
	Not Eligible	250	RECPT NOT ON ELIGIBILITY FILE
		271	RECIP NOT ENRLD W/RPT MCO DOS
		437	PROC/REV CODE NOT COVD DOS
		961	EXCEPTION 961
		962	EXCEPTION 962
		963	EXCEPTION 963
		964	EXCEPTION 964
	Not Valid	124	FIRST DOS NOT STRUCTURED PROP
		129	RECPT NUMBER NOT 11 NUM DIGITS
		138	UB92 TYPE OF BILL INVALID
		144	LAST DOS AFTER BATCH PROC DATE
		153	NDC NOT VALID STRUCTURE
		167	ADMIT DATE NOT STRUCTURED PROP
		197	1ST SURG PROC DATE INVALID
		207	PATIENT DISCHARGE STATUS INVAL
		213	CHARGE EXCEEDS EXCESS AMOUNT
		217	FACILITY NUMBER NOT VALID
		430	PROC/REV CODE NOT ON FILE
		450	FIRST DIAGNOSIS NOT ON FILE
		460	2ND DIAG NOT ON FILE
		470	3RD DIAG NOT ON FILE
		480	4TH DIAG NOT ON FILE
		550	FIRST PROC NOT ON FILE
		560	SECOND PROC NOT ON FILE
		600	CLAIM EXCEEDS 50 SERVICE LINES
		896	RELATED HISTORY REC MAX EXCEED
		898	RECIP CLAIM OVERFLOW
		900	VD/RESB RECD WOUT/ORIG ICN.
		925	PROC BLD N/VLD F CLMTYP
		926	DENTAL CODE NOT VALID FOR DOS.
		973	NPI/MA# NOT MATCHED IN MMIS
	Duplicate	902	ORIG ICN FD ON HIST ALRD VOID
		986	NDC CODE IS DUPLICATE

Appendix D. Top Three EDI Denial Descriptions by Number of Denied Encounters by MCO, CY 2023

MCO	Error Description	CY 2021	Error Description	CY 2022	Error Description	CY 2023
ABH	PROVIDER NUMBER NOT VALID	95,559	PROVIDER NUMBER NOT VALID	20,227	PROVIDER NUMBER NOT VALID	17,185
	BILLING PROV NUM MISSING	81,186	INVALID RENDERING PROV NUMBER	14,422	NPI NUMBER INVLD FR PYTOPROV	15,981
	INVALID RENDERING PROV NUMBER	75,487	BILLING PROV NUM MISSING	13,144	BILLING PROV NUM MISSING	15,339
CFCHP	INVALID RENDERING PROV NUMBER	71,050	INVALID RENDERING PROV NUMBER	70,336	PAY-TO/FAC PROV NOT ACT DOS	15,483
	ORIG ICN FD ON HIST ALRD VOID	38,922	ORIG ICN N/FOUND ON HISTORY	62,413	PROVIDER NUMBER NOT VALID	14,852
	BILLING PROV NUM MISSING	30,250	PROVIDER NUMBER NOT VALID	40,799	BILLING PROV NUM MISSING	10,297
JMS	BILLING PROV NUM MISSING	78,790	PROVIDER NUMBER NOT VALID	73,311	RECIP NOT ENRLD W/RPT MCO DOS	7,315
	NPI NUMBER INVLD FR PYTOPROV	78,619	BILLING PROV NUM MISSING	72,728	PROVIDER NUMBER NOT VALID	4,398
	PROC/REV CODE NOT COVD DOS	7,333	NPI NUMBER INVLD FR PYTOPROV	72,713	PROC/REV CODE NOT COVD DOS	3,777
KPMAS	REND PROV NOT ACT ON DOS	65,188	PROVIDER NUMBER NOT VALID	45,888	NPI NUMBER INVLD FR PYTOPROV	35,222
	NPI NUMBER INVLD FR PYTOPROV	50,865	NPI NUMBER INVLD FR PYTOPROV	43,197	PROVIDER NUMBER NOT VALID	34,596
	BILLING PROV NUM MISSING	49,696	BILLING PROV NUM MISSING	41,877	BILLING PROV NUM MISSING	33,992
MPC	INVALID RENDERING PROV NUMBER	189,825	PAY-TO/FAC PROV NOT ACT DOS	119,963	PAY-TO/FAC PROV NOT ACT DOS	113,794
	PAY-TO/FAC PROV NOT ACT DOS	125,802	PROVIDER NUMBER NOT VALID	85,691	PROVIDER NUMBER NOT VALID	78,369
	PROVIDER NUMBER NOT VALID	124,747	RECIP NOT ENRLD W/RPT MCO DOS	67,711	BILLING PROV NUM MISSING	66,895
MSFC	BILLING PROV NUM MISSING	47,996	PAY-TO/FAC PROV NOT ACT DOS	20,532	RECPT NUMBER NOT 11 NUM DIGITS	72,328
	PAY-TO/FAC PROV NOT ACT DOS	30,791	PROVIDER NUMBER NOT VALID	11,300	RECIP NOT ENRLD W/RPT MCO DOS	64,967
	PROVIDER NUMBER NOT VALID	30,182	BILLING PROV NUM MISSING	6,398	PROVIDER NUMBER NOT VALID	64,192
PPMCO	PROVIDER NUMBER NOT VALID	199,364	RECIP NOT ENRLD W/RPT MCO DOS	227,772	PAY-TO/FAC PROV NOT ACT DOS	192,012
	BILLING PROV NUM MISSING	180,024	PROVIDER NUMBER NOT VALID	225,291	PROVIDER NUMBER NOT VALID	183,527
	NPI NUMBER INVLD FR PYTOPROV	122,306	BILLING PROV NUM MISSING	159,157	BILLING PROV NUM MISSING	135,870
UHC	PROVIDER NUMBER NOT VALID	157,534	PROVIDER NUMBER NOT VALID	131,176	PROVIDER NUMBER NOT VALID	59,159
	PAY-TO/FAC PROV NOT ACT DOS	125,534	NPI#NFDONPROVFLFRENREFFACLTY	86,177	PAY-TO/FAC PROV NOT ACT DOS	38,732
	INVALID RENDERING PROV NUMBER	72,331	PAY-TO/FAC PROV NOT ACT DOS	55,829	RENDERING PROVIDER SUSPENDED	37,611
WPM	PAY-TO/FAC PROV NOT ACT DOS	148,131	PAY-TO/FAC PROV NOT ACT DOS	96,012	PROVIDER NUMBER NOT VALID	66,543
	PROVIDER NUMBER NOT VALID	103,159	PROVIDER NUMBER NOT VALID	62,768	NPI NUMBER INVLD FR PYTOPROV	64,340
	BILLING PROV NUM MISSING	85,744	NPI NUMBER INVLD FR PYTOPROV	48,722	BILLING PROV NUM MISSING	60,597

Appendix E. Number and Percentage of Accepted Encounters by Claim Type and MCO, CY 2023



Note: "Other" is a combination of inpatient hospital claims, community-based services claims, and long-term care claims.

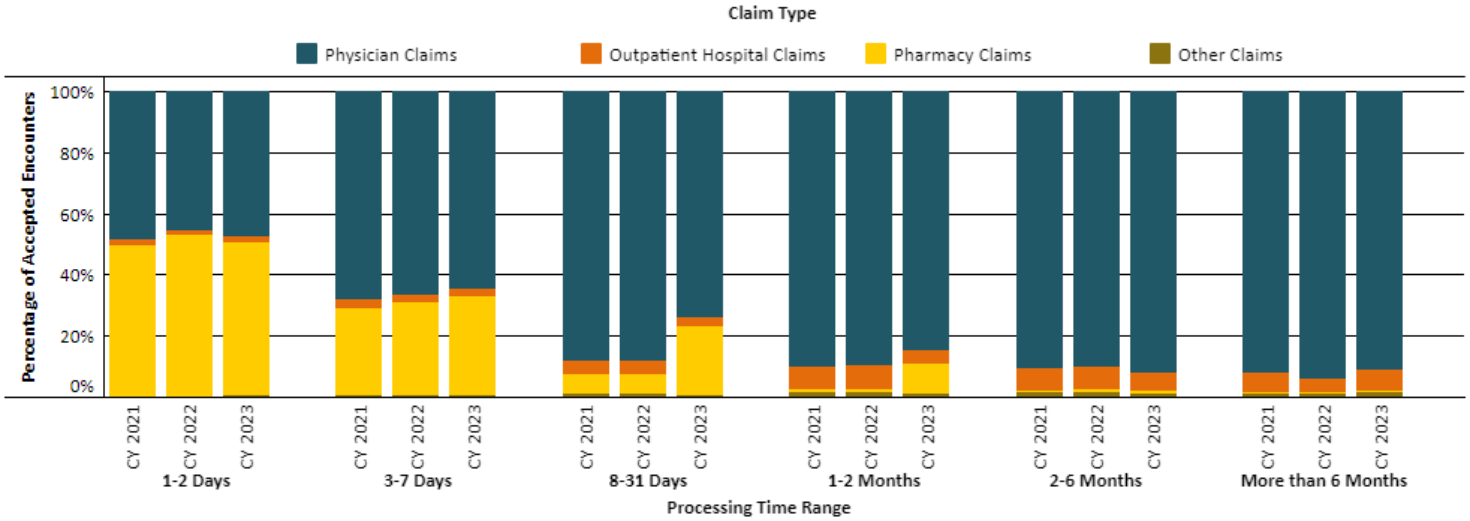
Appendix F. Number of Accepted Medical Encounters by MCO and Provider Reimbursement Category, CY 2021–CY 2023

MCO	Populated			$0		
	CY 2021	CY 2022	CY 2023	CY 2021	CY 2022	CY 2023
ABH	639,721	697,565	757,319	140,020	165,635	194,248
CFCHP	869,961	1,151,967	1,384,037	237,519	290,813	364,427
JMS	247,332	222,651	212,726	412,501	428,663	379,478
KPMAS	1,973,718	2,021,446	2,155,695	118,827	136,943	83,740
MPC	4,217,329	4,230,981	4,089,597	717,480	766,411	994,630
MSFC	1,117,795	1,117,555	1,037,694	1,074,314	907,070	1,027,232
PPMCO	5,531,945	5,284,443	5,050,314	1,341,220	1,641,938	1,785,564
UHC	2,622,037	2,511,339	2,475,091	814,233	845,955	849,931
WPM	4,789,407	4,729,467	4,693,008	488,070	757,248	1,257,830
Total	**22,009,245**	**21,967,414**	**21,855,481**	**5,344,184**	**5,940,676**	**6,937,080**

Appendix G. Accepted Institutional Encounters with $0 Reimbursement Data by Reporting Indicator and MCO, CY 2023

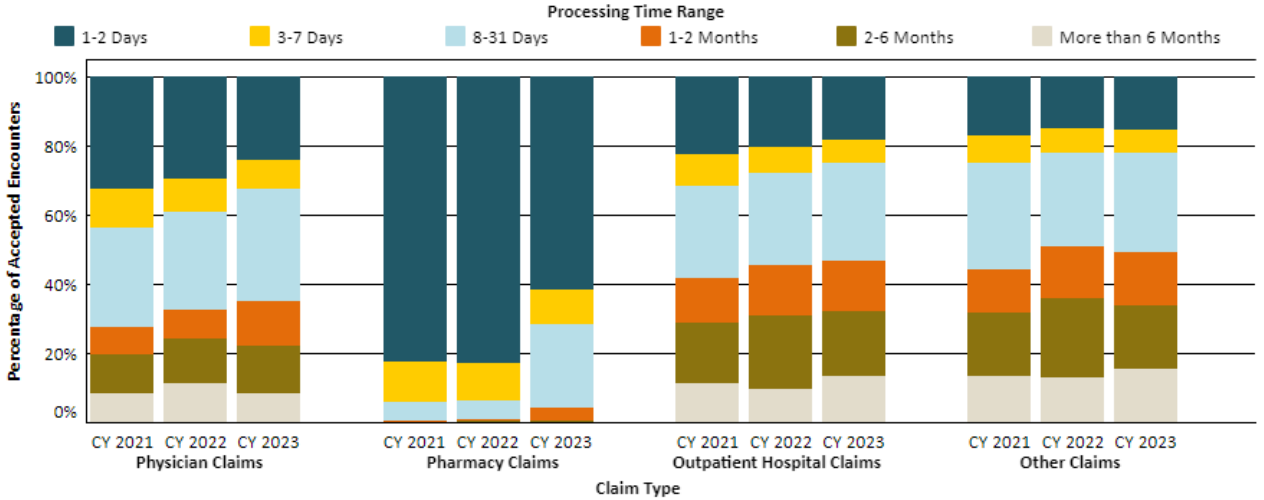
$0 Reporting Indicator	ABH	CFCHP	JMS	KPMAS	MPC	MSFC	PPMCO	UHC	WPM	Total
Denied (09)	5,050	6,263	0	0	15,760	8,040	27,138	10,632	22,256	**95,139**
	87.4%	96.5%	0.0%	0.0%	76.2%	93.2%	96.6%	99.0%	90.7%	**83.6%**
No Indicator	725	224	5,875	3,016	4,919	591	952	104	2,280	**18,686**
	12.6%	3.5%	100%	100%	23.8%	6.8%	3.4%	1.0%	9.3%	**16.4%**
Total	**5,775**	**6,487**	**5,875**	**3,016**	**20,679**	**8,631**	**28,090**	**10,736**	**24,536**	**113,825**
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Appendix H. Distribution of Accepted Encounters by Processing Time and Claim Type, CY 2021–CY 2023



Processing Time Range	CY 2021				CY 2022				CY 2023			
	Physician Claims	Outpatient Hospital Claims	Pharmacy Claims	Other Claims	Physician Claims	Outpatient Hospital Claims	Pharmacy Claims	Other Claims	Physician Claims	Outpatient Hospital Claims	Pharmacy Claims	Other Claims
1-2 Days	48.7%	1.7%	49.4%	0.2%	45.7%	1.6%	52.6%	0.2%	47.6%	1.7%	50.4%	0.3%
	9,884,739	347,471	10,026,380	49,039	9,135,115	310,346	10,510,053	43,446	7,498,311	263,259	7,933,056	43,570
3-7 Days	68.2%	2.8%	28.5%	0.5%	66.5%	2.6%	30.5%	0.4%	64.5%	2.5%	32.5%	0.5%
	3,327,402	135,723	1,392,401	23,053	3,061,363	118,118	1,407,027	19,195	2,619,596	101,900	1,317,925	18,827
8-31 Days	88.3%	4.2%	6.6%	0.9%	88.3%	4.1%	6.8%	0.8%	73.9%	3.0%	22.6%	0.6%
	8,731,435	413,259	650,512	88,765	8,826,893	409,013	680,381	78,528	10,125,137	407,392	3,097,107	80,431
1-2 Months	90.2%	7.2%	1.2%	1.3%	89.8%	7.8%	0.9%	1.5%	84.8%	4.4%	9.9%	0.9%
	2,478,225	198,767	32,578	36,457	2,587,218	223,184	26,697	42,597	4,061,330	210,900	473,473	43,679
2-6 Months	90.9%	7.2%	0.6%	1.4%	90.2%	7.4%	0.9%	1.5%	92.3%	5.9%	0.7%	1.1%
	3,423,369	269,617	21,363	52,464	3,953,948	322,630	39,678	65,843	4,297,378	274,650	31,399	52,224
More than 6 Months	92.2%	6.3%	0.1%	1.4%	94.4%	4.0%	0.7%	1.0%	91.1%	6.7%	0.7%	1.5%
	2,488,840	170,314	1,923	38,588	3,496,201	147,328	25,526	36,472	2,629,467	193,995	20,447	43,261
Total	**68.5%**	**3.5%**	**27.4%**	**0.7%**	**68.2%**	**3.4%**	**27.8%**	**0.6%**	**68.1%**	**3.2%**	**28.1%**	**0.6%**
	30,334,010	**1,535,151**	**12,125,157**	**288,366**	**31,060,738**	**1,530,619**	**12,689,362**	**286,081**	**31,231,219**	**1,452,096**	**12,873,407**	**281,992**

Appendix I. Percentage of the Total Number of Accepted Encounters Submitted by Claim Type and Processing Time, CY 2021–CY 2023

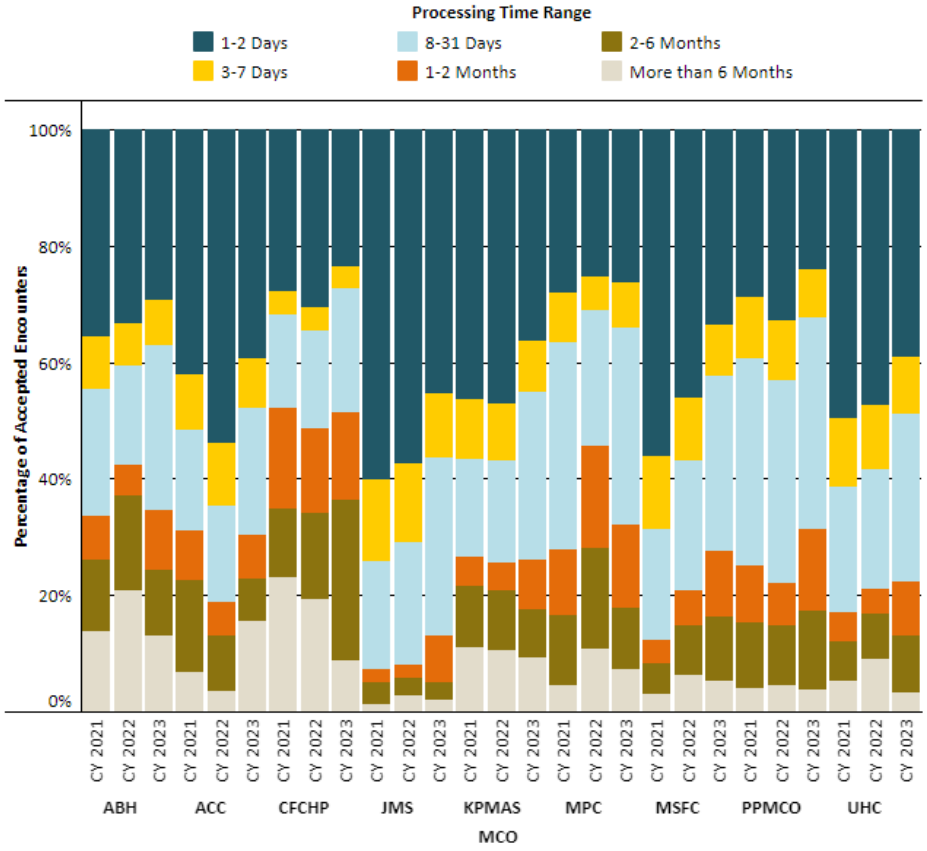


Processing Time Range	Physician Claims			Pharmacy Claims			Outpatient Hospital Claims			Other Claims		
	CY 2021	CY 2022	CY 2023	CY 2021	CY 2022	CY 2023	CY 2021	CY 2022	CY 2023	CY 2021	CY 2022	CY 2023
1-2 Days	32.6%	29.4%	24.0%	82.7%	82.8%	61.6%	22.6%	20.3%	18.1%	17.0%	15.2%	15.5%
	9,884,739	9,135,115	7,498,311	10,026,380	10,510,053	7,933,056	347,471	310,346	263,259	49,039	43,446	43,570
3-7 Days	11.0%	9.9%	8.4%	11.5%	11.1%	10.2%	8.8%	7.7%	7.0%	8.0%	6.7%	6.7%
	3,327,402	3,061,363	2,619,596	1,392,401	1,407,027	1,317,925	135,723	118,118	101,900	23,053	19,195	18,827
8-31 Days	28.8%	28.4%	32.4%	5.4%	5.4%	24.1%	26.9%	26.7%	28.1%	30.8%	27.4%	28.5%
	8,731,435	8,826,893	10,125,137	650,512	680,381	3,097,107	413,259	409,013	407,392	88,765	78,528	80,431
1-2 Months	8.2%	8.3%	13.0%	0.3%	0.2%	3.7%	12.9%	14.6%	14.5%	12.6%	14.9%	15.5%
	2,478,225	2,587,218	4,061,330	32,578	26,697	473,473	198,767	223,184	210,900	36,457	42,597	43,679
2-6 Months	11.3%	12.7%	13.8%	0.2%	0.3%	0.2%	17.6%	21.1%	18.9%	18.2%	23.0%	18.5%
	3,423,369	3,953,948	4,297,378	21,363	39,678	31,399	269,617	322,630	274,650	52,464	65,843	52,224
More than 6 Months	8.2%	11.3%	8.4%	0.0%	0.2%	0.2%	11.1%	9.6%	13.4%	13.4%	12.7%	15.3%
	2,488,840	3,496,201	2,629,467	1,923	25,526	20,447	170,314	147,328	193,995	38,588	36,472	43,261
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
	30,334,010	**31,060,738**	**31,231,219**	**12,125,157**	**12,689,362**	**12,873,407**	**1,535,151**	**1,530,619**	**1,452,096**	**288,366**	**286,081**	**281,992**

Appendix J. Distribution of Accepted Encounters Submitted by MCO and Processing Time, CY 2023

Processing Time Range	ABH	CFCHP	JMS	KPMAS	MPC	MSFC	PPMCO	UHC	WPM	Total
1-2 Days	29.2%	39.2%	23.5%	45.3%	36.3%	26.4%	33.5%	24.1%	39.1%	**34.3%**
	436,424	1,111,769	248,009	1,425,446	2,931,085	895,547	3,969,354	1,210,221	3,510,341	**15,738,196**
3-7 Days	7.9%	8.6%	3.9%	11.0%	8.8%	7.7%	8.9%	8.3%	9.6%	**8.9%**
	118,293	243,889	40,758	346,685	708,388	260,073	1,054,972	419,895	865,295	**4,058,248**
8-31 Days	28.2%	21.8%	21.2%	30.7%	29.0%	33.9%	30.1%	36.4%	29.0%	**29.9%**
	421,664	619,121	223,570	967,416	2,342,359	1,148,013	3,557,681	1,829,418	2,600,825	**13,710,067**
1-2 Months	10.3%	7.5%	15.2%	8.0%	8.5%	14.2%	11.2%	13.9%	9.1%	**10.4%**
	153,515	211,916	160,507	251,782	688,018	480,899	1,326,303	699,585	816,857	**4,789,382**
2-6 Months	11.4%	7.4%	27.6%	2.9%	8.3%	10.6%	10.9%	13.6%	9.9%	**10.2%**
	169,852	209,377	291,337	92,716	670,078	358,299	1,288,934	683,856	891,202	**4,655,651**
6-7 Months	1.8%	1.0%	4.6%	0.3%	2.8%	0.9%	1.0%	1.3%	1.2%	**1.4%**
	26,764	29,472	48,209	10,252	222,856	28,960	114,190	64,633	107,643	**652,979**
7-12 Months	6.5%	5.0%	3.8%	1.0%	5.7%	5.5%	3.0%	2.1%	1.6%	**3.4%**
	97,175	140,371	40,368	31,923	461,608	185,248	359,140	106,309	144,170	**1,566,312**
More than 1 Year	4.7%	9.5%	0.3%	0.7%	0.7%	1.0%	1.4%	0.3%	0.4%	**1.5%**
	69,806	268,010	3,343	22,498	55,678	32,380	162,909	16,222	37,033	**667,879**
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
	1,493,493	**2,833,925**	**1,056,101**	**3,148,718**	**8,080,070**	**3,389,419**	**11,833,483**	**5,030,139**	**8,973,366**	**45,838,714**

Appendix K. Percentage of Accepted Encounters Submitted by MCO and Processing Time, CY 2021–CY 2023



MCO	Year	1-2 Days	3-7 Days	8-31 Days	1-2 Months	2-6 Months	More than 6 Months
ABH	CY 2021	35.7%	8.9%	21.7%	7.7%	12.1%	13.9%
	CY 2022	33.3%	7.3%	17.1%	5.1%	16.5%	20.7%
	CY 2023	29.2%	7.9%	28.2%	10.3%	11.4%	13.0%
CFCHP	CY 2021	42.2%	9.3%	17.4%	8.4%	15.8%	6.8%
	CY 2022	54.0%	10.7%	16.6%	5.8%	9.5%	3.5%
	CY 2023	39.2%	8.6%	21.8%	7.5%	7.4%	15.5%
JMS	CY 2021	27.9%	4.1%	15.9%	17.4%	11.8%	23.0%
	CY 2022	30.6%	4.0%	16.7%	14.8%	14.6%	19.4%
	CY 2023	23.5%	3.9%	21.2%	15.2%	27.6%	8.7%
KPMAS	CY 2021	60.0%	14.0%	18.8%	2.1%	3.8%	1.3%
	CY 2022	57.5%	13.4%	21.2%	2.1%	3.2%	2.7%
	CY 2023	45.3%	11.0%	30.7%	8.0%	2.9%	2.1%
MPC	CY 2021	46.4%	10.2%	16.9%	4.9%	10.6%	11.0%
	CY 2022	47.1%	9.9%	17.5%	4.7%	10.2%	10.6%
	CY 2023	36.3%	8.8%	29.0%	8.5%	8.3%	9.2%
MSFC	CY 2021	28.0%	8.6%	35.5%	11.3%	12.1%	4.4%
	CY 2022	25.3%	5.7%	23.4%	17.4%	17.3%	10.8%
	CY 2023	26.4%	7.7%	33.9%	14.2%	10.6%	7.3%
PPMCO	CY 2021	56.2%	12.5%	19.0%	4.2%	5.2%	3.0%
	CY 2022	46.2%	10.7%	22.4%	5.8%	8.6%	6.3%
	CY 2023	33.5%	8.9%	30.1%	11.2%	10.9%	5.4%
UHC	CY 2021	28.8%	10.4%	35.7%	9.7%	11.2%	4.1%
	CY 2022	32.7%	10.5%	34.6%	7.4%	10.3%	4.5%
	CY 2023	24.1%	8.3%	36.4%	13.9%	13.6%	3.7%
WPM	CY 2021	49.5%	11.9%	21.6%	5.0%	6.7%	5.4%
	CY 2022	47.5%	10.9%	20.5%	4.4%	7.6%	9.1%
	CY 2023	39.1%	9.6%	29.0%	9.1%	9.9%	3.2%

Appendix L. Delivery Codes

Delivery services were identified as any encounter that had one of the ICD-10 diagnosis codes listed in the table below during CY 2021 through CY 2023.

Code Type	Codes Used in Analysis
ICD-10 Diagnosis Codes	O60.1x, O60.2x, O61.x, O64.x, O65.x, O66.x, O67.x, O68*, O69.x, O70.x, O71.x, O72.x, O73.x, O74.x, O75.x, O76*, O77.x, O80*, O82*, Z37.x

*Only the three-character code listed in the table (e.g., 068, 076, and O80) was included as a valid diagnosis. For all other diagnosis codes, the analysis included all other codes that began with the diagnosis code listed in the table (e.g., O61.x), where x equals any number of digits after the decimal. For example, O61.x, the "x" can represent any number of digits after the decimal (e.g., 061.1 or 061.14) or no digits after the decimal (e.g., O61).

Appendix M. Dementia Codes

Dementia-related services in CY 2023 were identified as any encounter that had one of the ICD-10 diagnosis codes listed in the table below. These codes indicate services for Alzheimer's disease and other types of dementia.

Code Type	Codes Used in Analysis
ICD-10 Diagnosis Codes*	F01, F02, F03, G30, G31

* The three-character codes can include any number of alphanumeric characters after the decimal, such as F03.A.

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