Qlarant

Medicaid Managed Care Organization

Encounter Data Validation Report

Measurement Year 2022

Maryland
DEPARTMENT OF HEALTH

Submitted February 2024

Table of Contents

Measurement Year 2022 Encounter Data Validation Report

Introduction and Purpose **1**

Methodology **2**

Results **3**

State Requirements for Collecting and Submitting Encounter Data 3

MCO's Capability to Produce Accurate and Complete Encounter Data 5

Analysis of MCO's Electronic Encounter Data for Accuracy and Completeness 6

Analysis of Medical Records to Confirm Encounter Data Accuracy 15

Inpatient Encounters 18

Outpatient Encounters 20

Office Visit Encounters 22

All Encounters "No Match" Summary 24

MCO Encounter Data Validation Results 25

Corrective Action Plans **26**

Conclusion **26**

MCO Recommendations 27

MDH Recommendations 32

Appendix A: Validation of Encounter Data MY 2022 Completed by the Hilltop Institute, University of Maryland Baltimore County (Hilltop) **34**

Encounter Data Validation Report

Measurement Year 2022

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 1,528,338 enrollees by HealthChoice's managed care organizations.

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 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 external quality review organizations (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 to evolving payment methodologies and value-based payment elements. MDH contracts with Qlarant to serve as the EQRO for the HealthChoice Program. Qlarant reviews aggregate encounters to determine the timeliness of submission, number, and type of rejections, accuracy of the data when compared to medical record reviews, and 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) 2022, encompassing January 1, through December 31, 2022, 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)[1]

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.*[2] To assess the completeness and accuracy of encounter data, Qlarant completed the following activities:

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.

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.

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 2020 through MY 2022 to determine the validity of the encounter data and ensure the data are complete, accurate, and of high quality.

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

[1] Previously Amerigroup Community Care (ACC) prior to January 1, 2023.
[2] CMS EQRO Protocols

medical record and the level of documentation supported the billed service codes. Reviewers further validated the date of service, place of service, primary and secondary diagnoses and procedure codes, and if applicable, revenue codes.

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 2020 to CY 2022*.
- 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 a vendor or use data intermediaries to perform encounter data submission.

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 2022 are established by MDH in MY 2022 HealthChoice MCO Agreements and Appendix M 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 2022 HealthChoice MCO Agreement (pages 12-13). All COMAR provisions applicable to MCOs, including regulations concerning encounter data, are established in Appendix M of each MCO's contract. Regulations applying to encounters in MY 2022 are noted in Table 1.

Table 1. MY 2022 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.

COMAR	Requirement
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 PM for transmission of a single encounter data file for an MCO to receive an 835 the next 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 Information Systems Capability Assessments (ISCA).
2. Interview MCO personnel, as needed.

The purpose of the ISCA review is to assess the MCO's information system 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 Table 2 below.

Table 2. MY 2022 ISCA Summary

Information Systems Component	HealthChoice Aggregate
Captures accurate encounter data	Yes
Captures all appropriate data elements for claims processing	Yes
Clean Claims in 30 Days Timeliness Standard	96%
Clean Claims in 30 Days Timeliness Rate	97%
Electronic professional and facility claims	96%

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. Those Activity 3 results follow, and the full report of Hilltop's encounter data validation can be found in **Appendix A**.

Activity 3 requires 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

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

MDH began evaluating the MCO electronic encounter data by performing a series of validation checks on the EDI data. This process included analysis of critical data fields, consistency between data points, duplication, and validity. Encounters that failed to meet these standards were reported to the MCOs, and the 835 and the 8ER reports were returned to the MCOs for possible correction and resubmission.

MDH sent Hilltop the 8ER reports for MY 2020 through MY 2022, which included encounters that failed initial EDI edits (rejected encounters). Hilltop classified these rejected encounters into five categories: missing data, participant not eligible for service, value not valid for the field, inconsistent data, and duplicates.

Hilltop performed checks on critical fields for missing, invalid, 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.

Overall, the number of rejected encounters decreased by 43.2% from MY 2020 to MY 2022. However, the number of rejected encounters increased from 1,894,008 in MY 2019 to 6,799,831 in MY 2020; an increase of 259%. While the rejected encounters from the 8ER reports are not de-duplicated, the number of rejected encounters in MY 2022 is still much higher as compared to MY 2019. In 2023, MDH required via MCO contracts that less than 5% of total encounters be rejected. MDH asked Hilltop to analyze rejected encounters for purposes of capitated rate risk adjustment. To determine the total number of rejected encounters that were potentially missing from the base data used for risk adjustment, Hilltop developed a process to identify and de-duplicate rejected encounters using data received via MMIS2 rather than the 8ER reports. Once de-duplicated, all MCOs would have met the 5% threshold in MY 2022 had it been in effect. This indicates that the 8ER reports include many duplicate encounters.

Most of the rejected encounters were due to invalid data, and this can largely be attributed to the addition of provider enrollment encounter edits that went live on January 1, 2020 (see Provider Enrollment-Related Encounter Data Validation section below for details). MDH 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). However, many providers failed to enroll by January 1, 2020, or submitted enrollment information that was inconsistent with the encounter data submitted to MDH. The total number of rejected encounters due to invalid data decreased by 44.8% during the evaluation period, but the share of all rejected encounters attributed to invalid data only experienced a slight decrease by 2.0 percentage points between MY 2020 and MY 2022.

The two primary reasons encounters were rejected in MY 2020 and MY 2021 were missing data and invalid data for MCO services. In MY 2022, a third top reason arose. The share of rejected encounters due to participants ineligible for MCO services increased by 7.1 percentage points between MY 2020 and MY 2022, with a 17.6% increase from 450,374 in MY 2020 to 529,468 in MY 2022. The following categories of rejections decreased in number: duplicate encounters, missing encounters, and invalid encounters.

Analyzing rejected encounters by MCO is useful for assessing trends and identifying issues that are specific to each MCO. This allows MDH to monitor and follow up with the MCOs on potential problem areas.

The volume of rejected encounters decreased across many MCOs between MY 2020 and MY 2022, largely due to improvements in provider data, explained in greater detail below. While there was an overall increase for ABH, JMS, and KPMAS, there was a dramatic decrease for WPM and CFCHP, followed by MPC, MSFC, PPMCO, and UHC.

PPMCO had the highest share (34.9%) of all rejections in MY 2022—a notable increase from 22.1% in MY 2021, and an increase of 13.6 percentage points since MY 2020. MPC had 15.2% of all rejections in MY 2022—a decrease of 2.2 percentage points from MY 2021 and a decrease of 0.3 percentage points from MY 2020. UHC submitted 14.5% of the total rejected encounters in MY 2022—a decrease of 0.6 percentage points from MY 2021, and an increase of 2.3 percentage points from MY 2020. WPM had 9.8% of all rejections in MY 2022, which was a decrease of 3.7 percentage points from MY 2021 and a decrease of 8.1 percentage points from MY 2020.

ABH, CFCHP, JMS, KPMAS, and MSFC each had less than 9% of the rejected encounters in MY 2022. MSFC decreased its share of rejections by 3.5 percentage points from MY 2020 to MY 2022, while ABH's, JMS's, and KPMAS's share of rejections fluctuated during the evaluation period.

Although there was some variation among MCOs in the distribution of the total rejected encounters from MY 2020 to MY 2022, there was very little variation in the distribution of accepted encounters among MCOs, except for KPMAS and PPMCO, whose shares increased by 1.4 and 1.6 percentage points, respectively. All the other MCOs had less than 1.0 percentage points change during the evaluation period.

For all MCOs, the primary reasons for rejection of encounters in MY 2022 were categorized as "Not Valid" (from 62.6% to 79.8%). The second most common rejection category for most MCOs was "Missing"—except for CFCHP, which was "Inconsistent," and MPC and PPMCO, which was "Not Eligible." For all MCOs, encounters rejected for reasons grouped under the "Duplicate" category remained below 5.0%. Encounters rejected as "Not Eligible" showed mixed performance across MCOs, ranging from 1.8% to 22.6%.

The greatest number of rejected encounters during the evaluation period were in the "Not Valid" category. The total number of "Not Valid" encounters decreased from 4,737,893 to 2,613,590 between MY 2020 and MY 2022, but the proportion of all rejected encounters categorized as "Not Valid" remained fairly stable throughout the evaluation period. The impact of invalid data was not spread evenly across MCOs. In MY 2022, more than one-half (62.6%) of PPMCO's rejections were in this category on the low end, with ABH closer to 80.0% on the high end.

The second most common rejection category for all MCOs during the evaluation period was "Missing." The number of rejections categorized as "Missing" decreased for the majority of MCOs: CFCHP, MPC, MSFC, PPMCO, UHC and WPM. However, there was an increase in missing encounters for ABH, JMS, and KPMAS.

MCOs showed varied results in the numbers and percentages of rejected encounters in the "Inconsistent" category. The total number of rejections categorized as "Inconsistent" fluctuated for all MCOs during the evaluation period, except for MPC, which decreased throughout the evaluation period from 14,243 in MY 2020 to 1,501 in MY 2022. Notable outliers include the steep increases for UHC between MY 2021 and MY

2022 (1.4% to 7.6%) and CFCHP between MY 2021 and MY 2022 (0.7% to 18.3%). CFCHP had the highest percentage of rejections for inconsistency in MY 2022, followed by UHC at 7.6%.

While the number of encounter rejections categorized as "Duplicate" increased for five of the nine MCOs (JMS, KPMAS, MPC, MSFC, and PPMCO), the remaining MCOs (ABH, CFCHP, UHC, and WPM) decreased in the number of these rejections, with CFCHP having the greatest decline from 440,785 in MY 2020 to 8,759 in MY 2022. In MY 2022, PPMCO had the largest percentage of encounters rejected in the "Not Eligible" category (22.6%), and ABH had the lowest (1.8%).

Overall, there was a decrease in rejections marked "Duplicate," "Missing," and "Not Valid," while there was an increase in rejections marked "Inconsistent" and "Not Eligible" between MY 2020 and MY 2022. In MY 2022, the greatest decrease in the share of rejections was in the "Duplicate" category, which decreased by 5.5 percentage points.

Hilltop conducted an additional review of the 8ER reports to analyze the high rates of encounters that failed initial EDI edits—particularly for invalid data. Further research revealed that the 8ER high rejection rates were related to provider enrollment issues. The provider data, which are collected via ePREP, underwent changes that affected data beginning January 1, 2020. After two years of collaborative preparation with the MCOs, the provider system implemented new rules that require the National Provider Identifier (NPI) on any encounter to match the active NPI under which the provider enrolled with Medicaid for both the billing and rendering fields. 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, a provider could use any NPI on the encounter in the billing and rendering fields; as long as it matched any active NPI in MMIS2, the encounter linked with that provider/claim was accepted. The provider enrollment edits—intended to improve the accuracy of provider details—were implemented in response to CMS requirements.

The number of provider enrollment-related rejections decreased for all MCOs from MY 2020 to MY 2022, except for JMS and KPMAS. The decline was lowest for ABH (2.7%) and highest for MSFC (82.3%). Almost all MCOs had a notable decrease in the number of rejections due to provider enrollment-related encounters from MY 2021 to MY 2022, except for PPMCO (increased by 41.1%).

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

During MY 2022, the MCOs submitted a total of 45.6 million accepted encounters (records), which was an increase from 39.5 million in MY 2020 and 44.3 million in MY 2021. Despite increased enrollment in MY 2020, overall utilization decreased across all MCOs due to the COVID-19 pandemic. However, utilization started to rebound in MY 2021. Because the 8ER data received do not include dates of service, Hilltop estimated the total number of encounters submitted by adding the number of EDI rejected encounters to the number of accepted encounters. Using that

method, a total of approximately 46.3 million encounters were submitted in MY 2020. This number increased to 48.7 million encounters in MY 2021 and 49.4 million encounters in MY 2022. Approximately 92% of the MY 2022 encounters were accepted into MMIS2, which is higher than the 91% acceptance rate during MY 2021 and the 85% acceptance rate during MY 2020.

Hilltop received a monthly copy of all encounters accepted by MMIS2. 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 files with errors were excluded before being imported into Hilltop's data warehouse.

The distribution of accepted encounters by claim type changed slightly from MY 2020 to MY 2022. Physician claims represented most of the encounters during the evaluation period (roughly two-thirds), followed by pharmacy claims. 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.

The distribution of accepted encounters remained relatively consistent across MCOs and calendar years. In MY 2022, physician encounters ranged from 59.8% of encounters (JMS) to 74.5% of encounters (KPMAS). JMS had the largest percentage of MY 2022 pharmacy encounters (36.2%), while KPMAS had the lowest percentage (23.7%). Outpatient hospital encounters ranged from a low of 1.1% for KPMAS to a high of 3.7% for ABH and MPC.

All MCOs except for UHC increased the percentage of institutional encounters with a populated pay amount during the evaluation period. In MY 2022, the percentage of institutional encounters with a populated amount ranged from 83.1% (JMS) to 95.1% (WPM). The MCOs showed mixed results from MY 2021 to MY 2022: CFCHP, KPMAS, MPC, and WPM increased the percentage of populated pay amounts, while ABH, JMS, MSFC, PPMCO, and UHC decreased.

During MY 2022, JMS submitted 65.8% of its medical encounters with a $0 pay amount, and MSFC submitted nearly half of its medical encounters the same way. All other MCOs ranged from 6.3% (KPMAS) to 25.2% (UHC) of accepted medical encounters with $0 pay. Only JMS, MPC, and MSFC among all the MCOs had a lower share of encounters with $0 pay during MY 2022 than in MY 2020.

Adherence to the requirement that encounters with $0 pay include a reporting indicator varied significantly among the MCOs during MY 2022. MSFC and UHC submitted nearly all their $0 encounters with an indicator. By contrast, CFCHP, MPC, and WPM submitted more than one-half and JMS more than three-quarters of their $0 pay medical encounters without an indicator. The percentage of $0 pay medical encounters without an indicator submitted by the remaining MCOs ranged from 17.4% (KPMAS), 32% (PPMCO), to 39.4% (ABH).

Hilltop also analyzed the accepted medical encounters during MY 2022 by comparing the price paid against the price listed for the same service on the FFS fee schedule. Of the almost 28 million medical encounters in this analysis, around 20% 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 half. 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, 75% were greater than the fee schedule payment amount and 25% were less; 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 54% to 99%. The overall utilization of the pay field has not changed significantly in MY 2022 as compared to previous years. MDH should continue to work with the MCOs to ensure that appropriate utilization and accuracy of the pay field on accepted encounters improves.

In MY 2019, Hilltop determined that TPL was reported inconsistently in MMIS2 across MCOs. Some MCOs had up to 95% of their encounters with a positive TPL amount in a sample of trauma encounters from MY 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 MY 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.

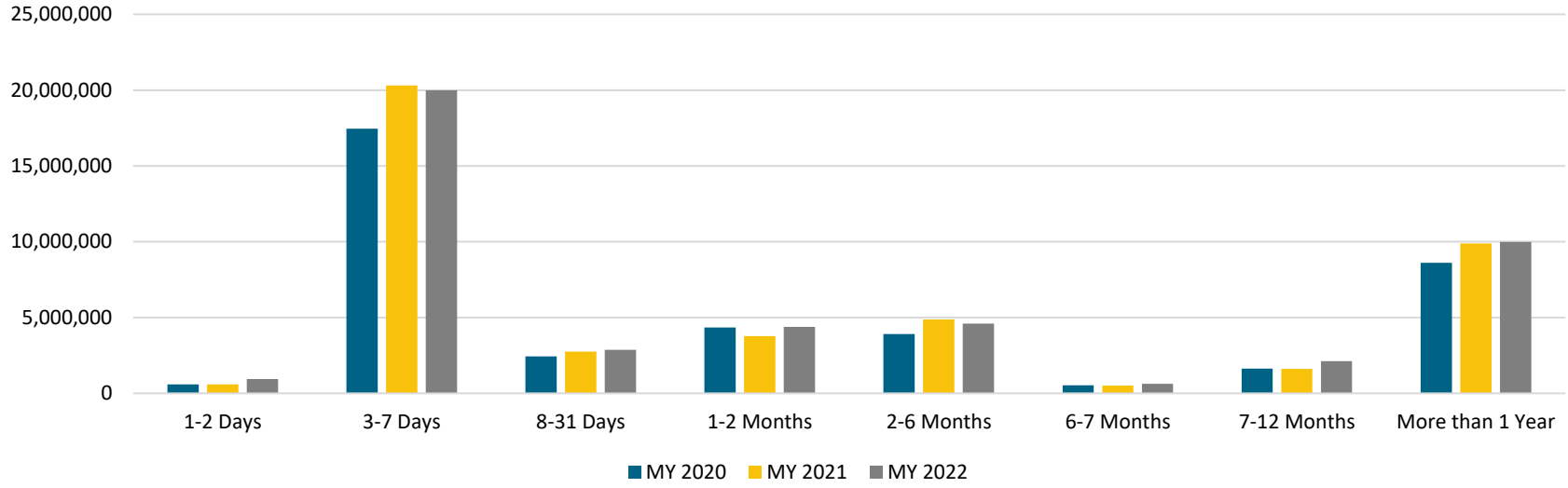
MDH reported that TPL for professional encounters was corrected in MMIS2 as of May 1, 2022. Analysis of trauma encounters pulled from the professional file found that the two MCOs who previously had no TPL still had no TPL after May 1, 2022. Four MCOs had TPL on the majority of their claims before May 1, 2022, and no TPL at all after May 1, 2022. Two MCOs had TPL on the majority of their encounters before May 1, 2022, and TPL on a small number of encounters after May 1, 2022. Finally, one MCO had TPL on a majority of their encounters before and after May 1, 2022 through the end of MY 2022. This suggests that only two MCOs have TPL properly recorded in professional files in MY 2022. Hilltop will continue to investigate TPL on all encounters and will review the results with MDH to develop a resolution.
Hilltop has not used the MCO-reported TPL amount in any analyses since MY 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 MDH. 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. Maryland regulations require MCOs to submit encounter data to MDH "within 60 calendar days after receipt of the claim from the provider." Therefore, the maximum acceptable processing time allotted for an encounter between the end date of service and the date of submission to MDH 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 1 shows the timeliness of processing accepted encounter submissions from the end date of service for MY 2020 through MY 2022.

Figure 1. Number of Accepted Encounters Submitted by Processing Time, MY 2020– MY 2022



Overall, timelines of encounter submissions improved during the evaluation period, with more MCOs submitting encounters within 1 to 2 days in MY 2022, and an increase in encounters submitted between 8 days and 2 months.

Most pharmacy encounters were submitted within 1 to 2 days throughout the evaluation period (over 80%), and more than 65% of all physician encounters were submitted within 31 days. Over 50% of outpatient hospital encounters were submitted within 31 days during the evaluation period.

The timeliness of encounter submissions remained relatively consistent across all months. An average of 43.9% of MY 2022 encounters were processed by MDH within 1 to 2 days of the end date of service—a decrease from 44.1% in MY 2020 and 45.9% in MY 2021.

While six MCOs (ABH, CFCHP, JMS, KPMAS, MPC, WPM) submitted a higher percentage of their encounters within 1 to 2 days in MY 2022 than in MY 2020, half of these MCOs (ABH, KPMAS, WPM) experienced a decrease in the percentage of encounters submitted within 1 to 2 days from MY 2021 to MY 2022. In MY 2022, the percentage of encounters submitted by MCOs within 1 to 2 days ranged from 25.3% (MSFC) to 57.5%

(KPMAS). The percentage of encounters submitted within 3 to 7 days increased slightly for ABH, CFCHP, JMS, KPMAS, UHC, and WPM, and decreased for MPC, MSFC, and PPMCO. JMS had the lowest (4.0%) percentage of encounters submitted within 3 to 7 days in MY 2022.

Provider Analysis

Evaluating encounters by provider type for fluctuations across MCOs contributes to the assessment of encounter data volume and consistency. The following provider analysis examines encounter data for PCPs and establishes a comparison rate of PCP visits in HealthChoice. For this analysis, Hilltop matched the Medicaid identification numbers the MCOs provided for their members to eligibility data in MMIS2. Only participants listed in an MCO's files and enrolled in MMIS2 were included in the analysis.

The MY 2022 PCP visit rate (defined as a visit to the assigned PCP, group practice, or partner PCP) ranged from 34.7% (ABH) to 71.5% (KPMAS). Using the broadest definition of a PCP visit—that is, a visit to any PCP within any MCO's network—the PCP visit rate ranged from 62.6% (ABH) to 78.6% (WPM). The PCP visit rate increased across all measures between MY 2020 and MY 2022, but the percentage of participants with a visit to any PCP in any MCO network and a visit with their assigned PCP, group practice, or partner PCPs decreased slightly from MY 2021 to MY 2022.

Service Type Analysis

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. The percentages for both the total inpatient hospitalizations and observation stays combined were less than 1.0% of visits each year. ED visits, which were 3.1% of all visits in MY 2022, ranged from 2.2% of all visits (KPMAS) to 4.0% of all visits (JMS). Overall, during the evaluation period, the percentage of inpatient visits decreased slightly, and ED visits increased slightly. As shown in the annual HealthChoice evaluation, the overall percentage of HealthChoice participants with an outpatient ED visit and inpatient admission decreased between MY 2017 and MY 2021 (The Hilltop Institute, 2023).

Analysis by Age and Sex

Hilltop conducted an analysis of encounter data submitted by MCOs to determine the effectiveness of encounter data edit checks between MY 2020 and MY 2022. 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 and sex-appropriate diagnoses for delivery, 4) age-appropriate dementia diagnoses, and 5) children aged 0 to 20 years with dental encounters.

Because participants older than 65 are ineligible for HealthChoice, Hilltop searched for any encounters for those aged 66 or older. Between MY 2020 and MY 2021, the number of encounters for MCO participants aged 66 or older fell before rising again in MY 2022. The number of individuals with a service date before their date of birth decreased between MY 2020 and MY 2022, although the number of such individuals fell to its lowest point during MY 2021. The MCOs and MDH improved the quality of reporting encounter data for age-appropriate diagnoses in MY 2021.

The Maryland Healthy Smiles Dental Program (Healthy Smiles) provides dental coverage for children under the age of 21. 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 MY 2020 through MY 2022. As of January 1, 2023, Healthy Smiles is available to adults who receive full Medicaid benefits and will be included in the analysis for MY 2023's report.

Hilltop analyzed the volume of participants who had a diagnosis for delivery (births) by age group between MY 2020 and MY 2022. Participants aged 0 to 11 and 51 or older are typically considered to be outside of the expected age range for delivery. This analysis only considers female participants with a delivery diagnosis. Across all MCOs, the number of female participants identified as delivering outside of the expected age ranges was 118 in CY 2020, 122 in MY 2021, and 136 in MY 2022. The data substantiate that, overall, the encounters submitted are age-appropriate for delivery (see Appendix K in the Hilltop report for delivery codes).

Hilltop also validated encounter data for sex-appropriate delivery diagnoses. A diagnosis for delivery should typically be present only on encounters for female participants. All MCOs had a similar distribution, with nearly 100% of deliveries being reported for females. Delivery diagnoses for male participants in the encounter data are negligible, totaling 45 reported deliveries across all MCOs in MY 2020, 52 deliveries in MY 2021, and 48 deliveries in MY 2022.

The final analysis focused on age-appropriate diagnoses of dementia (see Appendix L for dementia codes) from MY 2020 to MY 2022. 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 (298 participants were reported across all MCOs in MY 2022).

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 MDH. 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.

Analysis of Medical Records to Confirm Encounter Data Accuracy

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 MDH's vendor (Hilltop), Qlarant identified all enrollees with inpatient, outpatient, and office visit service claims. The sample size was selected to ensure a 90% confidence interval with a +/-5% margin of error rate for sampling. Oversampling was used 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, and treatment setting. Targeted follow-up was conducted with providers who had not responded 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 Table 3 below.

Table 3. MYs 2020 through 2022 EDV Minimum Sample Required for Review by Encounter Type

Sample Size by Encounter Type	MY 2020	MY 2021	MY 2022
Inpatient	64 (3%)	55 (2%)	52 (2%)
Outpatient	484 (20%)	507 (21%)	497 (20%)
Office Visit	1,906 (78%)	1,892 (77%)	1,907 (78%)
Total	**2,454**	**2,454**	**2,456**

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

MY 2022's minimum sample increased from MYs 2020 and 2021 (2,454 compared to 2,456, respectively). The majority of encounters in the sample were office visits (78%), followed by outpatient encounters (20%), and inpatient encounters (2%). The percentage of inpatient encounters in the sample remained the same for both MYs 2021 and 2022 (2%), but decreased in actual percentage from MY 2020 (3%) and actual count (52) from MYs 2020 (64) and 2021 (55). The reduced number of inpatient encounters within the sample may indicate a trend toward fewer inpatient encounters within the HealthChoice program. The percentage of outpatient records remained the same for MY 2020 (20%), while the amount of records increased from MY 2020 (484 compared to 497) and decreased from MY 2021 (507 compared to 497). The

percentage of office visit encounters in the sample remained the same as in MY 2020 (78%), from a smaller percentage in MY 2021 (77%), while the amount increased from both MYs 2020 and 2021 (1,906 compared to 1,907 and 1,892 compared to 1,907).

The total number of MCO record review response rates by encounter type is displayed in Table 4 below.

Table 4. MY 2022 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	8	6	Yes	66	60	Yes	213	206	Yes
CFCHP	6	6	Yes	53	51	Yes	221	216	Yes
JMS	8	7	Yes	75	74	Yes	197	191	Yes
KPMAS	4	4	Yes	18	17	Yes	254	252	Yes
MPC	7	6	Yes	73	66	Yes	210	201	Yes
MSFC	6	6	Yes	57	55	Yes	217	212	Yes
PPMCO	6	6	Yes	61	61	Yes	209	207	Yes
UHC	6	6	Yes	58	58	Yes	218	209	Yes
WPM	5	5	Yes	56	55	Yes	214	213	Yes
Total	**56**	**52**	**Yes**	**517**	**497**	**Yes**	**1,953**	**1,907**	**Yes**

All MCOs submitted the sufficient number of medical records required to meet the minimum samples for each setting type of the encounter data review.

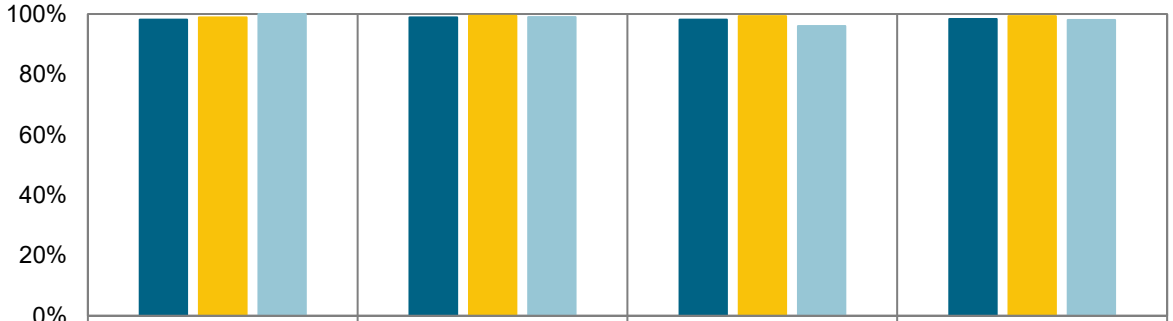
Medical records received were verified against the sample listing and enrollee demographics information from the data file to ensure consistency between submitted encounter data and corresponding medical records. Documentation was noted in the database as to whether the diagnosis, procedure, and if applicable, revenue codes were substantiated by the medical record. For inpatient encounters, the reviewers also verified the principal diagnosis code against the primary sequenced diagnosis. 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 below:

- *Match* - Determinations were a "Match" when documentation was found in the record.
- *No Match* - Determinations were a "No Match" when there was a lack of documentation in the record, coding error(s), or upcoding.

- *Invalid* - Determinations were "Invalid" when a medical record was not legible or could not be verified against the encounter data by patient name, account number, gender, date of birth, or date(s) of service. When this situation occurred, the reviewer ended the review process.

For MY 2022, Qlarant received 2,456 medical records collectively from 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 2020 through 2022 EDV Results by Encounter Type



	Inpatient	Outpatient	Office Visit	Composite
MY 2020	98%	99%	98%	98%
MY 2021	99%	99%	99%	99%
MY 2022	100%	99%	96%	98%

The percentage of match rates remained above the standard compliance of 90% by six percentage points or above for all three encounter types and the composite rates. The composite match rate decreased by one percentage point from MY 2021 (99% to 98%), maintaining MY 2020's match rate. Inpatient match rates increased by one percentage point from MY 2021 (99% to 100%). Outpatient match rates remained the same across all three trended MYs from 2020 to 2022 (99%). Office visit match rate decreased by three percentage points from MY 2021 (96% compared to 99%).

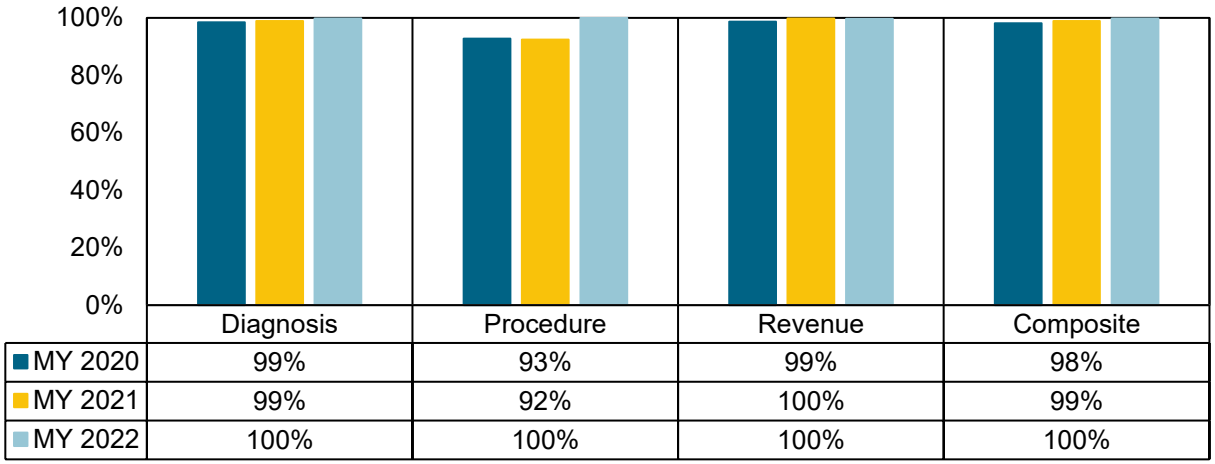
Table 5. MYs 2020 through 2022 EDV Results by Encounter Type

Encounter Type	Records Reviewed			Total Possible Elements			Total Matched Elements			Percentage of Matched Elements		
	MY 2020	MY 2021	MY 2022	MY 2020	MY 2021	MY 2022	MY 2020	MY 2021	MY 2022	MY 2020	MY 2021	MY 2022
Inpatient	72	56	56	1,572	1,186	1,206	1,543	1156	1,203	98%	97%	100%
Outpatient	492	514	517	6,149	6,812	7,106	6,078	6,774	7,033	99%	99%	99%
Office Visit	1,934	1,915	1,953	8,860	9,124	9,753	8,692	9,056	9,409	98%	99%	96%
Total	**2,498**	**2,485**	**2,526**	**16,581**	**17,122**	**18,065**	**16,313**	**16,986**	**17,645**	**98%**	**99%**	**98%**

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

Inpatient Encounters

Figure 3. MYs 2020 through 2022 Inpatient EDV Results by Code Type



MY 2022 inpatient encounter types achieved match rates of 100% across all code types (diagnosis, procedure, revenue, and the total composite rate). Revenue codes sustained a 100% match rate from MY 2021. Procedure codes increased by eight percentage points from MY 2021 to MY 2022 (92% to 100%, respectively).

Table 6. MYs 2020 through 2022 EDV Inpatient Encounter Type Results by Code

Inpatient Encounter Type	Diagnosis Codes			Procedure Codes			Revenue Codes			Total Codes		
	MY 2020	MY 2021	MY 2022	MY 2020	MY 2021	MY 2022	MY 2020	MY 2021	MY 2022	MY 2020	MY 2021	MY 2022
Match	593	473	469	115	85	117	835	615	617	1,543	1,173	1,203
No Match	9	5	1	9	7	0	11	1	2	29	13	3
Total	602	478	470	124	92	117	846	616	616	1,572	1,186	1,206
Match Percent	**99%**	**99%**	**100%**	**93%**	**92%**	**100%**	**99%**	**99%**	**100%**	**98%**	**99%**	**100%**

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

Total diagnosis codes, procedure codes, revenue codes, and total codes all received a match rate of 100% for MY 2022. Total revenue codes increased by one percentage point from MY 2021 to MY 2022, after maintaining MY 2020's performance (99%). Total procedure codes increased by eight percentage points from MY 2021 to achieve a match rate of 100% for MY 2022.

The amount of inpatient encounter types *No Match* findings successfully decreased for diagnosis codes and procedure codes for MY 2022. Procedure codes matched all records. Diagnosis and revenue codes had one and two *No Match* findings, respectively. Diagnosis, procedure, and revenue codes decreased the amount of *No Match* findings from MY 2020 to MY 2021 (Diagnosis Codes: nine for MY 2020 to five for MY 2021; Procedure Codes: nine for MY 2020 to seven for MY 2021; and Revenue Codes: 11 for MY 2020 to one for MY 2021).

Table 7. MY 2022 MCO Inpatient Results by Code Type

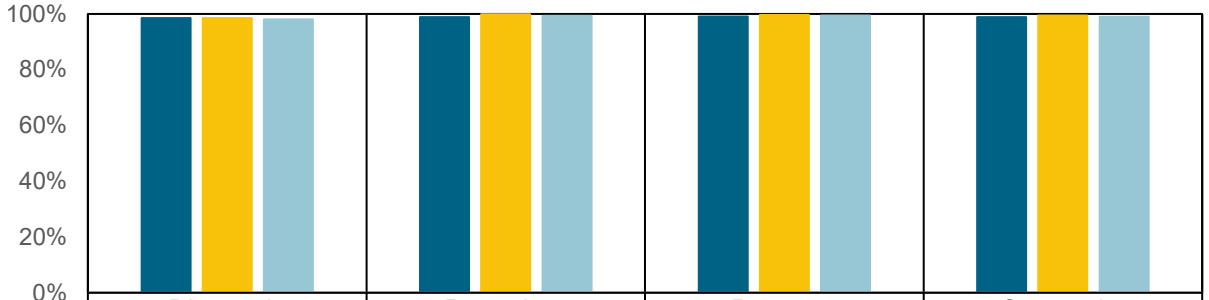
MCO	# of Reviews	Diagnosis Codes			Procedure Codes			Revenue Codes			Total Codes		
		Match	Total	%	Match	Total	%	Match	Total	%	Match	Total	%
ABH	8	75	75	100%	43	43	100%	89	89	100%	207	207	100%
CFCHP	6	57	57	100%	14	14	100%	75	75	100%	146	146	100%
JMS	8	80	80	100%	7	7	100%	96	96	100%	183	183	100%
KPMAS	4	29	29	100%	5	5	100%	36	36	100%	70	70	100%
MPC	7	52	52	100%	8	8	100%	63	64	98%	123	124	99%
MSFC	6	45	45	100%	10	10	100%	77	78	99%	132	133	99%
PPMCO	6	43	43	100%	7	7	100%	64	64	100%	114	114	100%
UHC	6	55	56	98%	12	12	100%	74	74	100%	141	142	99%
WPM	5	33	33	100%	11	11	100%	43	43	100%	87	87	100%

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

UHC was the only MCO with *No Match* findings (2%) for diagnosis codes with all other MCOs achieving 100%. All MCOs achieved 100% match rates for procedure codes. MPC and MSFC were the only two MCOs with *No Match* findings for revenue codes (2% and 1% respectively) with all other MCOs achieving 100%.

Outpatient Encounters

Figure 4. MYs 2020 through 2022 Outpatient EDV Results by Code Type



	Diagnosis	Procedure	Revenue	Composite
MY 2020	99%	99%	99%	99%
MY 2021	98%	100%	100%	99%
MY 2022	98%	99%	99%	99%

All code types for outpatient encounters maintained 98% or higher match rates across MYs 2020 to 2022. Diagnosis codes maintained performance from MY 2021 (98%), after decreasing by one percentage point from MY 2020 to MY 2021 (99% to 98%). Procedure and revenue codes decreased performance from MY 2021 by one percentage point (from a 100% match rate in MY 2021 to 99% in MY 2022), after an increase of one percentage point from MY 2020 to MY 2021 (99% to 100%).

Table 8. MYs 2020 through 2022 EDV Outpatient Encounter Type by Code

Outpatient Encounter Type	Diagnosis Codes			Procedure Codes			Revenue Codes			Total Codes		
	MY 2020	MY 2021	MY 2022	MY 2020	MY 2021	MY 2022	MY 2020	MY 2021	MY 2022	MY 2020	MY 2021	MY 2022
Match	1,628	1,902	2,046	2,525	2,848	2,887	1,925	2,024	2,100	6,078	6,774	7,033
No Match	24	29	41	30	3	19	17	6	13	71	38	73
Total	1652	1,931	2,087	2,555	2,851	2,906	1,942	2,030	2,113	6,149	6,812	7,106
Match Percent	**99%**	**98%**	**98%**	**99%**	**100%**	**99%**	**99%**	**100%**	**99%**	**99%**	**99%**	**99%**

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

The amount of *No Match* findings for outpatient encounter types increased from MY 2021 (38) to MY 2022 (73). Diagnosis and total codes maintained MY 2021's match rate of 98% and 99%, respectively. Total codes maintained a 99% match rate for MYs 2020 to 2022. Procedure and revenue codes decreased by one percentage point from MY 2021 (100% to 99%).

Table 9. MY 2022 MCO Outpatient Results by Code Type

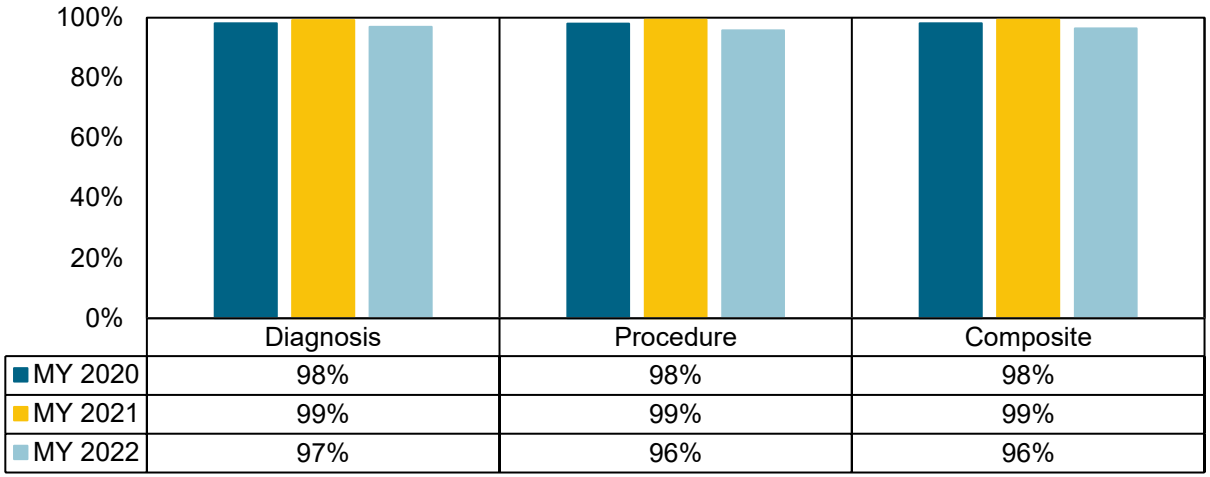
MCO	# of Reviews	Diagnosis Codes			Procedure Codes			Revenue Codes			Total Codes		
		Match	Total	%	Match	Total	%	Match	Total	%	Match	Total	%
ABH	66	269	276	98%	287	289	99%	200	200	100%	756	765	99%
CFCHP	53	220	221	100%	318	318	100%	222	222	100%	760	761	100%
JMS	75	268	275	98%	414	415	100%	318	319	100%	1,000	1,009	99%
KPMAS	18	61	61	100%	144	144	100%	93	93	100%	298	298	100%
MPC	73	322	327	99%	356	357	100%	258	259	100%	936	943	99%
MSFC	57	216	221	98%	318	318	100%	233	234	100%	767	773	99%
PPMCO	61	264	276	96%	407	416	98%	266	273	97%	937	965	97%
UHC	58	212	212	100%	284	287	99%	238	239	100%	734	738	100%
WPM	56	214	218	98%	359	362	99%	272	274	99%	845	854	99%

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

All MCOs achieved match rates at or above 96% for outpatient encounters, representing six to ten percentage points above minimum compliance of 90%. Across all code types, PPMCO had the lowest match rate for MY 2022 (ranging from 96% to 98%).

Office Visit Encounters

Figure 5. MYs 2020 through 2022 Office Visit EDV Results by Code Type*



*Revenue codes are not applicable for office visit encounters

Diagnosis, procedure, and composite codes achieved 96% and higher across MYs 2020 to 2022 for office visit encounters. Diagnosis, procedure, and composite codes all decreased in match rate by two and three percentage points. Diagnosis and procedure codes decreased by two percentage points from MY 2021 (99%) to MY 2022 (97%). Procedure codes decreased by three percentage points from MY 2021 (99%) to MY 2022 (96%).

Table 10. MYs 2020 through 2022 EDV Office Visit Encounter Type Results by Code*

Office Visit Encounter Type	Diagnosis Codes			Procedure Codes			Total		
	MY 2020	MY 2021	MY 2022	MY 2020	MY 2021	MY 2022	MY 2020	MY 2021	MY 2022
Match	5,403	5,592	5,669	3,289	3,464	3,740	8,692	9,056	9,409
No Match	102	43	165	66	25	158	168	68	323
Total Elements	5,505	5,635	5,848	3,355	3,489	3,905	8,860	9,124	9,753
Match Percent	**98%**	**99%**	**97%**	**98%**	**99%**	**96%**	**98%**	**99%**	**97%**

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

The diagnosis and procedure codes match rates decreased from MY 2020 to MY 2022 by two and three percentage points, respectively.

Table 11. MY 2022 MCO Office Visit Results by Code Type*

MCO	# of Reviews	Diagnosis Codes			Procedure Codes			Total Codes		
		Match	Total	%	Match	Total	%	Match	Total	%
ABH	213	639	663	96%	393	421	93%	1,032	1,084	95%
CFCHP	221	628	672	94%	430	466	92%	1,058	1,138	93%
JMS	197	567	586	97%	299	312	96%	866	898	96%
KPMAS	254	702	706	99%	461	467	99%	1,163	1,173	99%
MPC	210	597	617	97%	348	364	96%	945	981	96%
MSFC	217	654	659	99%	480	490	98%	1,134	1,149	99%
PPMCO	209	614	630	98%	497	515	97%	1,111	1,145	97%
UHC	218	671	680	99%	460	476	97%	1,131	1,156	98%
WPM	214	597	635	94%	372	394	94%	969	1,029	94%

*Revenue codes are not applicable for office visit encounters.

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

Office visit encounters accounted for the highest range of match rates from (92%) to (99%), still achieving percentage point increases of two to nine above the standard compliance (90%).

All Encounters "No Match" Summary

Table 12. MYs 2020 through 2022 Reasons for "No Match" by Encounter Type

Encounter Type	MY 2020							MY 2021							MY 2022						
	Coding Error		Lack of Documentation		Upcoding		Total Elements	Coding Error		Lack of Documentation		Upcoding		Total Elements	Coding Error		Lack of Documentation		Upcoding		Total Elements
	#	%	#	%	#	%	#	#	%	#	%	#	%	#	#	%	#	%	#	%	#
Diagnosis																					
Inpatient	0	0%	9	100%	0	0%	9	1	20%	4	80%	0	0%	5	0	0%	1	100%	0	0%	1
Outpatient	2	8%	22	92%	0	0%	24	2	7%	27	93%	0	0%	29	2	5%	39	95%	0	0%	41
Office Visit	27	26%	75	72%	0	0%	102	15	35%	27	63%	1	2%	43	9	6%	156	95%	0	0%	165
Procedure																					
Inpatient	4	44%	5	56%	0	0%	9	4	57%	3	43%	0	0%	7	0	--	0	--	0	--	0
Outpatient	1	3%	29	97%	0	0%	30	0	0%	3	100%	0	0%	3	0	0%	19	100%	0	0%	19
Office Visit	9	14%	57	86%	0	0%	66	11	44%	14	56%	0	0%	25	6	4%	152	96%	0	0%	158
Revenue																					
Inpatient	0	0%	11	100%	0	0%	11	1	100%	0	0%	0	0%	2	0	0%	2	100%	0	0%	2
Outpatient	0	0%	17	100%	0	0%	17	0	0%	6	100%	0	0%	6	0	0%	13	100%	0	0%	13

When comparing encounter and code types across MYs, lack of documentation and coding errors are the most frequent combination of errors. Lack of documentation and coding errors are the reasons for *No Match* findings for diagnosis codes across all encounter types, with the highest percentage being lack of documentation (95%) for both outpatient and office visit encounters. Reasons for *No Match* findings for procedure codes for MY 2022 office visit encounters consisted of coding errors and lack of documentation, with lack of documentation being the highest percentage (96%). Coding errors and lack of documentation accounted for nearly 100% of the reason for *No Match* findings across MYs 2020 to 2022.

Lack of documentation continues to account for the majority reason for *No Match* findings across encounter and code types. Lack of documentation was the only reason for *No Match* findings in diagnosis and revenue codes for inpatient encounters in MYs 2020 and 2022, and procedure codes for MY 2022 outpatient encounters. MY 2022 revenue codes across both inpatient and outpatient encounters had lack of documentation as the only reason for *No Match* findings. Outpatient encounters, across MYs 2020 to 2022, had lack of documentation as the only reason for *No Match* findings for revenue codes, and procedure codes for MYs 2021 and 2022.

A few notable observations when comparing the amount of *No Match* findings across MYs are procedure codes for MY 2022 inpatient encounters did not have any *No Match* findings; total reasons for inpatient encounters have successfully declined from MYs 2020 to 2022,

indicating a higher match rate. Office visit encounters account for the majority of total *No Match* findings across MYs 2020 to 2022 for diagnosis and procedure codes.

Upcoding accounted for only one element across MYs 2020 to 2022, with the finding being a *No Match* in MY 2021.

MCO Encounter Data Validation Results

MCO results by encounter type are displayed in Table 13.

Table 13. MYs 2020 through 2022 MCO and HealthChoice Results by Encounter Type

MCO	Inpatient			Outpatient			Office Visit		
	MY 2020	MY 2021	MY 2022	MY 2020	MY 2021	MY 2022	MY 2020	MY 2021	MY 2022
ABH	100%	100%	100%	99%	98%	99%	98%	99%	95%
CFCHP	99%	100%	100%	99%	100%	100%	98%	99%	93%
JMS	92%	96%	100%	100%	99%	99%	100%	99%	96%
KPMAS	99%	100%	100%	100%	100%	100%	99%	100%	99%
MPC	100%	100%	99%	100%	99%	99%	97%	100%	96%
MSFC	99%	100%	99%	100%	100%	99%	100%	100%	99%
PPMCO	99%	98%	100%	99%	99%	97%	99%	99%	97%
UHC	100%	98%	99%	98%	100%	99%	97%	99%	98%
WPM	99%	100%	100%	97%	99%	99%	97%	98%	94%
HealthChoice	**98%**	**99%**	**100%**	**99%**	**99%**	**99%**	**98%**	**99%**	**96%**

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

All MCOs achieved match rates ranging from two to ten percentage points above the standard of compliance (90%), across all MYs from 2020 to 2022. Inpatient encounters ranged the most in match rates from 92% to 100% across MYs 2020 to 2022. MY 2022 office visit encounters ranged from 93% to 99% for match rates. Inpatient encounters ranged from 99% to 100% match rates for MY 2022. Outpatient encounters ranged from 97% to 100% for MY 2022.

Trended HealthChoice aggregate match rates revealed a few notable observations. Office visit encounter match rates dropped three percentage points from MY 2021 to MY 2022, after an increase of one percentage point from MY 2020 to MY 2021 (98% to 99%, respectively). Inpatient encounter match rates steadily increased one percentage point each MY, starting at 98% and achieving a 100% match rate for MY 2022. Outpatient encounter match rates maintained a match rate of 99% for MYs 2020 to 2022.

Corrective Action Plans

The 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 only 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 2022's EDV, all of the HealthChoice MCOs achieved match rates that are equal to or above the 90% standard. There are no corrective action plans required as a result of the MY 2022 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 2022. Qlarant conducted a medical record review on a sample of inpatient, outpatient, and office visit encounters (2,456 to confirm the accuracy of codes. Overall, MCOs achieved a match rate of 98%, meaning 98% of claims submitted were supported by medical record documentation. MCOs achieved a high match rate for each encounter setting: 100% for inpatient, 99% for outpatient, and 96% 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 2022 EDV review include:
    - A decrease in the likelihood that inpatient and outpatient encounter documentation will result in coding errors, lack of documentation, or upcoding due to overall or sustained improvement in match rates from MY 2021 to MY 2022.
    - An increase in likelihood that office visit encounter match rates will result in coding errors or have lack of documentation due to the decline in match rate across MCOs ranging from one percentage point to six percentage points compared to MY 2021.

- **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 2022 EDV review include:

  - An increase in likelihood that MCOs are accurately demonstrating and reporting outcome information related to encounter data validation due to the high percentage of match rates sustained at 96% or higher from MY 2020 to MY 2022.

- **Timeliness** – MCOs must ensure the timeliness of encounter data submissions. Areas of impact during the MY 2022 EDV review include:
  - An increase in likelihood that MCOs' information systems are providing timely and accurate data due to all 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 98% or higher for MY 2022.

Recommendations

MCO Recommendations

Although all MCOs maintained high performance, the following recommendations are based on results from the MY 2022 EDV.

Decline in Office Visit Encounter Match Rates. All MCOs should investigate reasons for declines in match rates for office visit encounters. With MDH's MY 2024 target of 99% match rates, any decline should be investigated to determine the reasons for decline.

Amount of *No Match* Findings. After a successful decline in total outpatient *No Match* findings from MY 2020 to MY 2021, MY 2022 total *No Match* findings increased (73), exceeding both MY 2020 (71) and MY 2021's (38) totals for outpatient encounters. The same situation occurs for office visit encounters. After a successful decline of *No Match* findings from MY 2020 (168) to MY 2021 (68), MY 2022's amount exceeded both MYs with MY 2022's total amount of *No Match* findings (323). Office visit encounters account for the most amount of total *No Match* findings for revenue and procedure codes for both MYs 2021 and 2022.

Types of *No Match* Findings. Outpatient encounters maintained a lack of documentation as a reason for *No Match* findings across MYs 2020 to 2022, with lack of documentation being the only reason for revenue and procedure codes in MYs 2021 and 2022.

Activity 3: Step 3 Provider Analysis. The MCOs should continue to encourage enrollees to change or update their "assigned" PCP to improve selection rates through MCO New Member Welcome packet and in the member handbook.

ABH's Strengths, Opportunities, and Recommendations

While all encounter match rates for ABH exceeded the compliance standard of 90%, the following opportunities for improvement were noted:

ABH's MY 2022 match rates achieved 100% across all code types for inpatient encounters and for revenue code types for outpatient encounters. ABH's match rate for outpatient diagnosis and procedure codes achieved 98% and 99%, respectively. Trended results reveal high-performing match rates across MYs. Inpatient encounters achieved 100% match rates for all three MYs (2020 through 2022). Outpatient encounters achieved a 98% match rate in MY 2021, and 99% match rates in MYs 2020 and 2022.

Office visit encounters present an opportunity for improvement. For MY 2022, ABH achieved match rates of 93% (procedure codes) and 96% (diagnosis codes) for office visit encounters. Trended results also reveal the most variety in match rates for ABH, with a 95% match rate in MY 2022, a 98% match rate in MY 2020, and a 99% match rate in MY 2021. ABH's match rate for office visit encounters declined four percentage points from MY 2021's match rate (99% in MY 2021 to 95% in MY 2022). Comparatively, ABH was one of three MCOs with the lowest MY 2022 match rates for total and procedure office visit codes.

CFCHP's Strengths, Opportunities, and Recommendations

While all encounter match rates for CFCHP exceeded the compliance standard of 90%, the following opportunities for improvement were noted:

CFCHP's MY 2022 match rates achieved 100% across all code types for inpatient and outpatient encounters. Trended results reveal high-performing match rates across MYs. Inpatient and outpatient encounters achieved 100% match rates for both MYs 2021 and 2022. Inpatient and outpatient encounters achieved a 99% match rate in MY 2020, and office visit encounters in MY 2021. A 98% match rate was achieved in MY 2020 for office visit encounters. CFCHP showed steady improvement from MYs 2020 to 2021 for both inpatient and outpatient encounters and maintained a 100% match rate from MY 2021 and for MY 2022 in both encounter types.

Office visit encounters present an opportunity for improvement. CFCHP achieved a 93% match rate for MY 2022 office visit encounters, with match rates of 92% for procedure codes) and 94% for diagnosis codes. MY 2022's match rate for office visit encounters declined six percentage points from MY 2021's match rate (99%), also making CFCHP's MY 2022 match rate the lowest across MCOs in office visit encounters.

JMS' Strengths, Opportunities, and Recommendations

While all encounter match rates for JMS exceeded the compliance standard of 90%, the following opportunities for improvement were noted:

JMS' MY 2022 match rates achieved 100% across all code types for inpatient encounters and for procedure and revenue code types for outpatient encounters. Diagnosis codes for outpatient encounters were also high-performing, with a match rate of 98%. Trended results reveal high-performing match rates across MYs. Outpatient encounters decreased in match rates from MY 2020's 100% to 99% match rates in both MYs 2021 and 2022. JMS achieved a 100% match rate for MY 2022's inpatient encounters, an improvement year over year from MY 2020's 92%

match rate to MY 2021's 96% match rate. Comparatively, JMS had the lowest match rates in MYs 2020 (92%) and 2021 (96%) for inpatient encounters.

Office visit encounters present an opportunity for improvement. After achieving a 100% match rate for office visit encounters in MY 2020, MY 2021's match rate declined one percentage point (99%), and MY 2022's match rate declined three percentage points from MY 2021 (96%) and four percentage points from MY 2020 (100%). The most notable decrease in percentage points was from MY 2021 to MY 2022. JMS achieved match rates of 96% (procedure codes) and 97% (diagnosis codes) for MY 2022 office visit encounters.

KPMAS' Strengths, Opportunities, and Recommendations

While all encounter match rates for KPMAS exceeded the compliance standard of 90%, the following opportunities for improvement were noted:

KPMAS' MY 2022 match rates achieved 100% across all code types for inpatient and outpatient encounters. KPMAS' office visit match rate was also high-performing, with a MY 2022 match rate of 99% for all code types. Notably, KPMAS achieved the highest match rate for MY 2022 office visit encounters, including all code types. Outpatient results also achieved match rates of 100% for all MY 2022 code types. Comparatively, KPMAS was one of three MCOs with 100% match rates for diagnosis codes in outpatient encounters.

Trended results from MYs 2020 to 2022 revealed high-performing match rates across all encounter types and MYs for KPMAS. Match rates of 100% were achieved for inpatient encounters in both MYs 2021 and 2022, all MYs for outpatient encounters, and MY 2021 for office visit encounters. Match rates of 99% were achieved for MY 2020's inpatient encounters, and both MYs 2020 and 2022 for office visit encounters. Inpatient trended performance shows KPMAS improved performance by one percentage point in inpatient encounters (MY 2020 to MY 2021), and maintained the 100% match rate in MY 2021 to MY 2022. Outpatient trended performance shows KPMAS achieved and maintained 100% match rates for all three MYs. KPMAS' match rate for office visit encounters declined one percentage point from MY 2021's match rate (100% in MY 2021 to 99% in MY 2022).

MPC's Strengths, Opportunities, and Recommendations

While all encounter match rates for MPC exceeded the compliance standard of 90%, the following opportunities for improvement were noted:

MPC's MY 2022 match rates achieved 100% for diagnosis and procedure code types for inpatient encounters, and procedure and revenue code types for outpatient encounters. Revenue codes for inpatient encounters were also high-performing, with a match rate of 98%. Diagnosis codes for outpatient encounters achieved a match rate of 99%.

Trended results from MYs 2020 to 2022 also revealed high-performing match rates across MYs, and encounter and code types. MPC achieved match rates of 100% for inpatient encounters in both MYs 2020 and 2021, outpatient encounters in MY 2020, and office visit encounters for MY 2021. Inpatient and outpatient encounters declined one percentage point each; with MPC's decline from MY 2021's 100% to MY 2022's 99% for inpatient encounters, and MY 2020's 100% to MY 2021's and MY 2022's 99% for outpatient encounters.

Office visit encounters provide an opportunity for improvement. After an increase of three percentage points from MY 2020's 97% match rate to MY 2021's 100% match rate, MPC's MY 2022 match rate for office visit encounters declined four percentage points to 96%. For MY 2022, MPC achieved match rates of 96% (procedure codes) and 97% (diagnosis codes) for office visit encounters.

MPC was one of two MCOs with *No Match* findings for revenue codes in inpatient encounters (2%), after two years of match rates of 100% for MYs 2020 and 2021 in inpatient encounters.

MSFC's Strengths, Opportunities, and Recommendations

While all encounter match rates for MSFC exceeded the compliance standard of 90%, the following opportunities for improvement were noted:

MSFC's MY 2022 match rates achieved 100% for diagnosis and procedure code types for inpatient encounters, and procedure and revenue code types for outpatient encounters. Revenue codes for inpatient encounters were also high-performing, with a match rate of 99%. Diagnosis codes achieved a match rate of 98% for outpatient encounters.

Trended performance from MYs 2020 to 2022 revealed high-performing match rates across all encounter types and MYs for MSFC. MSFC achieved match rates of 100% for inpatient encounters in MY 2021, and for both outpatient and office visit encounters in MYs 2020 and 2021. MSFC demonstrated an increase of one percentage point for inpatient encounters match rate from MY 2020 to MY 2021 (99% to 100%), only to decline one percentage point from MY 2021 to MY 2022 (100% to 99%). After attaining and maintaining a 100% match rate for outpatient and office visit encounters in both MYs 2020 and 2021, MY 2022's match rate declined one percentage point to 99%.

MSFC achieved the highest match rate for MY 2022 office visit encounters (99%), with match rates of 98% for procedure codes and 99% for diagnosis codes. Comparatively, MSFC achieved the highest match rate for total and diagnosis codes (99%) within office visit encounters.

Inpatient encounters present an opportunity for improvement as MSFC was one of two MCOs with *No Match* findings for revenue codes (1%).

PPMCO's Strengths, Opportunities, and Recommendations

While all encounter match rates for PPMCO exceeded the compliance standard of 90%, the following opportunities for improvement were noted:

PPMCO's MY 2022 match rates achieved 100% across all code types for inpatient encounters. Match rates per code type for outpatient encounters were high performing, with 96% for diagnosis codes, 97% for revenue codes, and 98% for procedure codes. Code types for MY 2022 office visit encounters achieved match rates of 97% for procedure codes and 98% for diagnosis codes.
Trended results also reveal PPMCO's capacity for improvement. PPMCO achieved a match rate of 100% for inpatient encounters after a decline of one percentage point from MY 2020's 99% match rate to MY 2021's 98% match rate, demonstrating an increase of two percentage points to MY 2022.

Office visit and outpatient encounters provide opportunities for improvement. For both outpatient and office visit encounters, match rates of 99% were achieved for both MYs 2020 and 2021, with a decline of two percentage points in MY 2022 (97%).

UHC's Strengths, Opportunities, and Recommendations

While all encounter match rates for UHC exceeded the compliance standard of 90%, the following opportunities for improvement were noted:

Both inpatient and outpatient encounters demonstrate a one percent decline from MY 2021 (100%) to MY 2022 (99%). UHC's MY 2022 match rates achieved 100% for procedure and revenue code types for inpatient encounters, and diagnosis and revenue code types for outpatient encounters. Diagnosis codes for inpatient encounters in MY 2022 were high-performing, with a match rate of 98%. Procedure codes achieved a MY 2022 match rate of 99% for outpatient encounters. Outpatient match rates for revenue and diagnosis codes achieved 100%. UHC was one of three MCOs to achieve match rates of 100% for diagnosis codes in outpatient encounters.

Office visit encounters provide an opportunity for improvement. After achieving an increase of two percentage points from MY 2020's office visit match rate of 97% to MY 2021's match rate of 99%, MY 2022's match rate declined one percentage point to 98%. For MY 2022, UHC achieved match rates of 97% for procedure codes and 99% for diagnosis codes for office visit encounters. Notably, UHC was one of three MCOs to achieve the highest match rate (99%) for diagnosis codes for office visit encounters.

Other notable results revealed UHC was the only MCO with *No Match* findings for diagnosis codes in inpatient results (2%).

WPM's Strengths, Opportunities, and Recommendations

While all encounter match rates for WPM exceeded the compliance standard of 90%, the following opportunities for improvement were noted:

WPM's MY 2022 match rates achieved 100% across all code types for inpatient encounters. Match rates for outpatient encounters were also high-performing, with 98% for diagnosis codes and 99% for procedure and revenue codes. Trended results reveal high-performing match rates across MYs, and demonstrate WPM's capacity for achieving and maintaining improvement. Inpatient encounters achieved and maintained a 100% match rate in MY 2021 and MY 2022, after increasing one percentage point from MY 2020's 99%. Outpatient encounters also had an increase of two percentage points from MY 2020's 97%, maintaining MY 2021's 99% match rate in MY 2022.

Office visit encounters provide an opportunity for improvement. For MY 2022, WPM achieved a 94% match rate for all code types. Office visit encounters in MY 2022 declined by four percentage points (94%), when compared to MY 2021 (98%).

MDH Recommendations

- MDH should encourage MCOs to conduct internal investigations/audits in order to determine the cause of office visit encounter match rate decline 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 at 99% match rates. At this time, office visit encounters are not meeting that target goal.
- MDH should continue to monitor and work with the MCOs to resolve the provider enrollment data problems as the volume of rejected encounters remains high (The Hilltop Institute, 2024).
- MDH should work with the MCOs to instill best practices to improve their numbers of rejected encounters (The Hilltop Institute, 2024).
- MDH should consider evaluating each MCO's sub-capitation arrangements with other organizations and comparing those arrangements with the MCO's use of the sub-capitation indicator (The Hilltop Institute, 2024).
- MDH should continue to work with the MCOs to ensure appropriate utilization and improvement in the accuracy of the payment field on accepted encounters (The Hilltop Institute, 2024).
- 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 to address the high volume of rejected encounters (The Hilltop Institute, 2024).
- MDH should monitor the MCOs' TPL-reported amounts (The Hilltop Institute, 2024).
- MDH should continue to monitor monthly submissions to evaluate consistency and ensure that the MCOs submit data in a timely manner (The Hilltop Institute, 2024).
- MDH should continue to monitor PCP visits by MCOs in future encounter data validations. (The Hilltop Institute, 2024).
- MDH should continue to review the service type analysis 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, pediatric dental, and missing age outlier data measures (The Hilltop Institute, 2024).

Appendix A: MY 2022 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 2020 to CY 2022

January 31, 2024

Suggested Citation: The Hilltop Institute. (2024, January 31). *EQR protocol 5, activity 3: Validation of encounter data, CY 2020 to CY 2022.* Baltimore, MD: UMBC.

EQR Protocol 5, Activity 3: Validation of Encounter Data, CY 2020 to CY 2022

Table of Contents

Introduction 1

Methodology 2

Activity 3. Analysis of Electronic Encounter Data 3

Step 1. Develop a Data Quality Test Plan Based on Data Element Validity Requirements 3

Step 2. Encounter Data Macro-Analysis—Verification of Data Integrity 6

Step 3. Encounter Data Micro-Analysis—Generate and Review Analytic Reports 6

Step 4. Compare Findings to State-Identified Benchmarks 7

Results of Activity 3: Analysis of Electronic Encounter Data 7

Step 1. Develop a Data Quality Test Plan Based on Data Element Validity Requirements 7

Provider Enrollment-Related Encounter Data Validation 12

Step 2. Encounter Data Macro-Analysis—Verification of Data Integrity 14

Managed Care Regulations: Accurate and Complete Encounter Data 18

Step 3. Encounter Data Micro-Analysis—Generate and Review Analytic Reports 23

Time Dimension Analysis 23

Provider Analysis 28

Service Type Analysis 29

Analysis by Age and Sex 30

Recommendations 31

Step 1. Develop a Data Quality Test Plan Based on Data Element Validity Requirements 31

Step 2. Encounter Data Macro-Analysis—Verification of Data Integrity 32

Step 3. Encounter Data Micro-Analysis—Generate and Review Analytic Reports 33

Time Dimension Analysis 33

Provider Analysis 33

Service Type Analysis 33

Analysis by Age and Sex 34

Conclusion 34

References 36

Appendices

A. Rejected Encounters Error Rate Methodology 37

B. Percentage of Encounters Rejected by EDI Rejection Category, by MCO, CY 2022 42

C. Rejection Codes, Errors, by Category with Provider-Related and Other Rejection Codes, CY 2022 43

D. Top Three EDI Rejection Descriptions by Number of Rejected Encounters by MCO, CY 2022 45

E. Number and Percentage of Accepted Encounters by Claim Type and MCO, CY 2022 .. 46

F. Number of Accepted Medical Encounters by MCO and Pay Category, CY 2020-2022 ... 47

G. Distribution of Accepted Encounters by Processing Time and Claim Type, CY 2020–CY 2022 48

H. Percentage of the Total Number of Accepted Encounters Submitted by Claim Type and Processing Time, CY 2020–CY 2022 49

I. Distribution of Accepted Encounters Submitted by MCO and Processing Time, CY 2022 50

J. Percentage of Accepted Encounters Submitted by MCO and Processing Time, CY 2020–CY 2022 51

K. Delivery Codes 52

L. Dementia Codes 53

List of Tables and Figures

Tables

1. Distribution of Rejected Encounter Submissions by EDI Rejection Category, CY 2019–CY 2022 8

2. Distribution of Rejected and Accepted Encounter Submissions by MCO, CY 2020–CY 2022 9

3. Percentage of Rejected Encounters by EDI Rejection Category by MCO, CY 2022 10

4. Number and Percentage of Rejected Encounters by EDI Rejection Category and MCO, CY 2020–CY 2022 11

5. Number of Rejected Encounters for Provider Enrollment-Related and Other Rejection Types by MCO, CY 2020–CY 2022 13

6. Distribution of Accepted Encounters by Claim Type and MCO, CY 2020–CY 2022 17

7. Percentage of HealthChoice Participants and Accepted Encounters by MCO, CY 2020–CY 2022 18

8. Distribution of the Total Number of Accepted Encounters Submitted, by Claim Type and Processing Time, CY 2020–CY 2022 25

9. Percentage of Accepted Encounters Submitted, by Month and Processing Time, CY 2020–CY 2022 26

10. Percentage of Accepted Encounters Submitted by MCO and Processing Time, CY 2020–CY 2022 27

11. Number and Percentage of HealthChoice Participants (Any Period of Enrollment) with a PCP Visit by MCO, CY 2020–CY 2022 28

12. Number and Percentage of Inpatient Visits, ED Visits, and Observation Stays by MCO, CY 2020–CY 2022 29

Figures

1. Number and Percentage of Accepted Encounter Submissions by Claim Type, CY 2018–CY 2020 15

2. Count of Accepted Institutional Encounters by MCO and Pay Category, CY 2020 19

3. Number of Accepted Medical Encounters, by MCO and Pay Category, CY 2018–CY 2020 21

4. Accepted Encounters with $0 Pay Data by Reporting Indicator (05/09) by MCO, CY 2020 22

5. Number of Accepted Encounters Submitted by Processing Time, CY 2018–CY 2020 24

EQR Protocol 5, Activity 3: Validation of Encounter Data, CY 2020 to CY 2022

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) 2022, 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 (MDH) 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 MDH 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]

[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).

In 2018, MDH 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 MDH'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. MDH 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 2020 through CY 2022. The two primary validation areas are 1) MDH'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 (MMIS2), as well as the validation process for submitted encounters before acceptance. For this analysis, Hilltop obtained information from MDH about encounter data that failed/were denied during the edit checks (referred to as rejected records) 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 MDH.

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 encounter analysis given that its directive is to ensure the EQRO has a complete understanding of state requirements for collecting and submitting encounter data (CMS, 2023).

MDH required the MCOs to submit all CY 2022 encounters by June 16, 2023. In July 2023, 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. Hilltop also participated in Encounter Data Workgroup meetings with MDH and MCOs regarding the

quality of encounter data. Hilltop then confirmed the proposed procedures for data validation with MDH and reviewed and finalized the methodology prior to performing this encounter data validation analysis. Next, Hilltop analyzed encounter data as of August 2023, including both rejected encounters and accepted encounters with 2022 dates of service. The review and audit processes for CY 2022 encounters concluded in October 2023.

Activity 3. Analysis of Electronic Encounter Data

In accordance with Hilltop's interagency governmental agreement with MDH 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 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

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 EDI (front-end) edits built into the state's data system so that it pursues data problems that the state may have inadvertently missed or allowed (CMS, 2023).

Hilltop first met with MDH 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 MDH 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 a X12 data standard (837), via a secure EDI system, to MDH; the transfer of those data to MDH's mainframe for processing and validation checks; generation of exception (error) reports (8ER and 835); and the uploading of the accepted data to MMIS2.
    - The 837 transaction set contains patient claim information, and the 835 system contains the claim payment and/or explanation of benefits data.
    - MDH receives, via an EDI system, encounter data from the MCOs in a format that is HIPAA EDI X12 837-compliant. Once it 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 EDI to generate exception (error) reports that are in HIPAA X12 835-compliant file format, as well as a summarized version known to MDH as the "8ER" report.

- Encounter data fields validated through 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 payment fields submitted by the MCOs.
- After the data have been validated by the MMIS, MDH processes incoming data from the MCOs within one to two business days.
- Error code (exception) reports (835 and 8ER) are generated by the validation 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 encounter submissions for each MCO. This report includes an analysis of the frequency of different error types and rejection categories. The 8ER error descriptions were used to develop a comprehensive overview of the validation process.

Successfully processed encounters receive additional code validation that identifies the criteria each encounter must meet to be accepted into MMIS2. In addition, Hilltop reviews the accepted encounter data for accuracy, completeness, and timeliness of MCO data submission.

Hilltop meets with MDH annually to discuss encounter data analysis, strategize efforts for improvement, and coordinate messaging on these topics. Major topics of discussion have included the completion of payment fields, the use of sub-indicators in payment fields, provider enrollment edits, and rejected encounter error rates. Hilltop also discussed with MDH 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.[5] Hilltop met with MDH regarding the increase in provider-related encounter rejections in May 2021, October 2022, and July 2023 to coordinate a further investigation of the issue. In consultation with MDH, Hilltop developed and maintains the categorization of provider-related rejection codes to distinguish the provider-related issues tied to enrollment from all other provider-related rejection codes.

The CY 2023 MCO contract initially established potential penalties for MCOs for submitting a high volume of rejected 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.

[5] 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).

During 2023, in response to concerns about the increased number of rejected encounters impacting rate setting and risk adjustment, MDH requested that Hilltop collect rejected encounters from the MCOs. Hilltop was able to identify rejected encounters (or encounters with a claim type 'X') 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 rejected 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. Additional workgroup meetings will be held with the MCOs to further refine the appropriateness of these rejections. The universe of encounters that were appropriately rejected 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. The rejected encounter de-duplication and error identification method is described in Appendix A. Claim type 'X' encounters were not analyzed in this report. Our next report will analyze 8ER and claim type 'X' encounters.

MDH re-established the technical Encounter Data Workgroup with the MCOs in 2018 to ensure the submission of data that are complete, accurate, high-quality, and compliant with the new requirements for pay fields. The Workgroup also provides an opportunity to review the new structure in which CMS requires states to submit data: the Transformed Medicaid Statistical Information System (T-MSIS). States must comply with T-MSIS requirements and follow all guidance for managed care data submitted to CMS.[6]

Due to the COVID-19 public health emergency, the Workgroup paused its in-person meetings and reconvened virtually in July 2021. During these meetings, the Workgroup addressed the issues of exception errors, encounter denials, provider enrollment, and provider enrollment edit exceptions ("free agent") usage and monitoring. MDH also provided updates on T-MSIS, procedure codes, diagnosis codes, duplicate rejections, and encounter processing resolutions, including a solution for avoiding duplicate rejected encounters with instructions on how to bill for specific modifiers. Hilltop also presented the rejected encounter error rate and de-duplication methodology, and MDH explained that the de-duplication process is designed to help define the encounters that should be excluded from the HFMR.

To conduct the analysis, Hilltop used MDH's information regarding encounter data that failed the edit checks (rejected encounters), reasons for failure by the EDI, and comparisons with CY 2020 through CY 2022 rejection results. 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.

[6] 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

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) 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 MDH during the EDI process in Step 1 were assessed for completeness and accuracy. Hilltop investigated how completely and accurately the MCOs populated payment fields when submitting encounter data to MDH following the new mandate effective January 1, 2018.

Hilltop then assessed how many medical encounters with a paid amount of $0 were identified as sub-capitated payments or denied payments and compared the amount entered in the pay field with the amount listed in the FFS fee schedule. In addition, Hilltop analyzed the completion of the institutional paid amounts. 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. Encounters received and accepted with MCO provider numbers that were not active within the HealthChoice program were excluded from the analysis.

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 four primary areas: time, provider type, service type, and appropriateness of diagnosis and procedure codes based on patient age and sex. MDH 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.

Hilltop analyzed encounter data by provider type to identify missing data. This analysis evaluates trends in provider services and seeks to determine any fluctuation in visits between CY 2020 and CY 2022. Provider analysis is focused on primary care visits—specifically the number of participants who had a visit with their PCPs within the calendar year. The service type analysis

concentrated on three main service areas: inpatient hospitalizations, emergency department (ED) visits, and observation stays. The CY 2020 analysis provides baseline data and would typically allow MDH to identify any inconsistencies in utilization patterns for these types of services in CY 2021 and CY 2022. The public health emergency, however, resulted in declines in health care service utilization across the board in CY 2020, limiting the usefulness of the comparison.

Finally, Hilltop analyzed the age and sex appropriateness of diagnosis and procedure codes. Specifically, Hilltop conducted analyses of enrollees aged 66 years or older, deliveries (births), the presence of a dementia diagnosis, and dental services. Hilltop conducted a sex 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 aged 0 to 20 years whose dental services should have been paid 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 MDH. 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

MDH began evaluating the MCO electronic encounter data by performing a series of validation checks on the EDI data. This process included analysis of critical data fields, consistency between data points, duplication, and validity. Encounters that failed to meet these standards were reported to the MCOs, and the 835 and the 8ER reports were returned to the MCOs for possible correction and resubmission.

MDH sent Hilltop the 8ER reports for CY 2020 through CY 2022, which included encounters that failed initial EDI edits (rejected encounters). Hilltop classified these rejected encounters into five categories: missing data, participant not eligible for service, value not valid for the field, inconsistent data, and duplicates.

Hilltop performed checks on critical fields for missing, invalid, 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 rejected encounters submitted by all MCOs, by category, for CY 2020 to CY 2022.

Table 1. Distribution of Rejected Encounter Submissions by EDI Rejection Category, CY 2019–CY 2022

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

*The number of "Inconsistent" and "Not Valid" rejected encounters in CY 2021 were revised due to recategorizing a rejection code in prior years' reports.

Overall, the number of rejected encounters decreased by 43.2% from CY 2020 to CY 2022. However, the number of rejected encounters increased from 1,894,008 in CY 2019 to 6,799,831 in CY 2020; an increase of 259%. While the rejected encounters from the 8ER reports are not de-duplicated, the number of rejected encounters in CY 2022 is still much higher as compared to CY 2019. In 2023, MDH required via MCO contracts that less than 5% of total encounters be rejected. MDH asked Hilltop to analyze rejected encounters for purposes of capitated rate risk adjustment. To determine the total number of rejected encounters that were potentially missing from the base data used for risk adjustment, Hilltop developed a process to identify and de-duplicate rejected encounters using data received via MMIS2 rather than the 8ER reports. Once de-duplicated, all MCOs would have met the 5% threshold in CY 2022 had it been in effect. This indicates that the 8ER reports include many duplicate encounters. See Appendix A for a description of the de-duplication methodology.

Most of the rejected encounters were due to invalid data, and this can largely be attributed to the addition of provider enrollment encounter edits that went live on January 1, 2020 (see Provider Enrollment-Related Encounter Data Validation section below for details). MDH 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). However, many providers failed to enroll by January 1, 2020, or submitted enrollment information that was inconsistent with the encounter data submitted to MDH. The total number of rejected encounters due to invalid data decreased by 44.8% during the evaluation period, but the share of all rejected encounters attributed to invalid data only experienced a slight decrease by 2.0 percentage points between CY 2020 and CY 2022.

The two primary reasons encounters were rejected in CY 2020 and CY 2021 were missing data and invalid data for MCO services. In CY 2022, a third top reason arose. The share of rejected encounters due to participants ineligible for MCO services increased by 7.1 percentage points between CY 2020 and CY 2022, with a 17.6% increase from 450,374 in CY 2020 to 529,468 in CY

2022. The following categories of rejections decreased in number: duplicate encounters, missing encounters, and invalid encounters.

Analyzing rejected encounters by MCO is useful for assessing trends and identifying issues that are specific to each MCO. This allows MDH to monitor and follow up with the MCOs on potential problem areas. Table 2 presents the distribution of rejected and accepted encounter submissions across MCOs for CY 2020 through CY 2022.

Table 2. Distribution of Rejected and Accepted Encounter Submissions by MCO, CY 2020–CY 2022

Rejected Encounters						
MCO	CY 2020		CY 2021		CY 2022	
	Number of Rejected Encounters	Percentage of All Rejected Encounters	Number of Rejected Encounters	Percentage of All Rejected Encounters	Number of Rejected Encounters	Percentage of All Rejected Encounters
ABH	100,444	1.5%	432,360	9.8%	105,659	2.7%
ACC*	1,217,777	17.9%	595,665	13.5%	380,019	9.8%
CFCHP	1,569,819	23.1%	323,604	7.3%	342,384	8.9%
JMS	97,575	1.4%	197,734	4.5%	252,155	6.5%
KPMAS	119,369	1.8%	286,174	6.5%	218,981	5.7%
MPC	1,053,040	15.5%	768,064	17.4%	585,477	15.2%
MSFC	361,709	5.3%	170,138	3.9%	70,142	1.8%
PPMCO	1,450,364	21.3%	977,473	22.1%	1,346,750	34.9%
UHC	829,734	12.2%	666,075	15.1%	558,659	14.5%
Total	**6,799,831**	**100%**	**4,417,287**	**100%**	**3,860,226**	**100%**
Accepted Encounters						
MCO	CY 2020		CY 2021		CY 2022	
	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	989,996	2.5%	1,312,880	3.0%	1,465,995	3.2%
ACC*	7,708,937	19.5%	8,399,279	19.0%	8,614,423	18.9%
CFCHP	2,237,433	5.7%	1,892,492	4.3%	2,393,506	5.3%
JMS	1,168,449	3.0%	1,235,612	2.8%	1,141,684	2.5%
KPMAS	2,080,743	5.3%	2,914,875	6.6%	3,059,397	6.7%
MPC	7,386,436	18.7%	8,250,416	18.6%	8,240,573	18.1%
MSFC	3,231,387	8.2%	3,413,822	7.7%	3,340,877	7.3%
PPMCO	9,906,093	25.0%	11,472,685	25.9%	12,115,262	26.6%
UHC	4,838,602	12.2%	5,390,628	12.2%	5,195,084	11.4%
Total	**39,548,076**	**100%**	**44,282,689**	**100%**	**45,566,801**	**100%**

* ACC's name changed to Wellpoint Maryland, effective January 1, 2023, and will be reflected in measurement year (MY) 2023's report.

The volume of rejected encounters decreased across many MCOs between CY 2020 and CY 2022, largely due to improvements in provider data, explained in greater detail below. While there was an overall increase for Aetna Better Health of Maryland (ABH), Jai Medical Systems (JMS), and Kaiser Permanente of the Mid-Atlantic States, Inc. (KPMAS), there was a dramatic decrease for Amerigroup Community Care (ACC) and CareFirst Community Health Plan (CFCHP), followed by Maryland Physicians Care (MPC), MedStar Family Choice, Inc. (MSFC), Priority Partners (PPMCO), and UnitedHealthcare Community Plan (UHC).

PPMCO had the highest share (34.9%) of all rejections in CY 2022—a notable increase from 22.1% in CY 2021, and an increase of 13.6 percentage points since CY 2020. MPC had 15.2% of all rejections in CY 2022—a decrease of 2.2 percentage points from CY 2021 and a decrease of 0.3 percentage points from CY 2020. UHC submitted 14.5% of the total rejected encounters in CY 2022—a decrease of 0.6 percentage points from CY 2021, and an increase of 2.3 percentage points from CY 2020. ACC had 9.8% of all rejections in CY 2022, which was a decrease of 3.7 percentage points from CY 2021 and a decrease of 8.1 percentage points from CY 2020.

ABH, CFCHP, JMS, KPMAS, and MSFC each had less than 9% of the rejected encounters in CY 2022. MSFC decreased its share of rejections by 3.5 percentage points from CY 2020 to CY 2022, while ABH's, JMS's, and KPMAS's share of rejections fluctuated during the evaluation period.

Although there was some variation among MCOs in the distribution of the total rejected encounters from CY 2020 to CY 2022, there was very little variation in the distribution of accepted encounters among MCOs, except for KPMAS and PPMCO, whose shares increased by 1.4 and 1.6 percentage points, respectively. All the other MCOs had less than 1.0 percentage points change during the evaluation period.

Tables 3 and 4 show the rate of encounters rejected by the EDI by category and MCO. Specifically, Table 3 presents the percentage of rejected encounters by EDI rejection category and MCO for CY 2022. See Appendix B for a graphical representation of Table 3.

Table 3. Percentage of Rejected Encounters by EDI Rejection Category by MCO, CY 2022

Rejection Category	ABH	ACC	CFCHP	JMS	KPMAS	MPC	MSFC	PPMCO	UHC
Duplicate	0.0%	1.0%	2.6%	0.4%	0.4%	4.7%	0.9%	0.3%	2.6%
Inconsistent	4.9%	1.5%	18.3%	0.0%	1.6%	0.3%	1.1%	0.1%	7.6%
Missing	13.5%	13.9%	8.3%	29.0%	19.7%	9.4%	14.3%	14.4%	11.2%
Not Eligible	1.8%	6.6%	6.8%	4.9%	9.1%	14.3%	12.5%	22.6%	9.0%
Not Valid	79.8%	76.9%	64.0%	65.7%	69.2%	71.4%	71.3%	62.6%	69.6%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

For all MCOs, the primary reasons for rejection of encounters in CY 2022 were categorized as "Not Valid" (from 62.6% to 79.8%). The second most common rejection category for most MCOs was "Missing"—except for CFCHP, which was "Inconsistent," and MPC and PPMCO, which was "Not Eligible." For all MCOs, encounters rejected for reasons grouped under the "Duplicate" category remained below 5.0%. Encounters rejected as "Not Eligible" showed mixed performance across MCOs, ranging from 1.8% to 22.6%.

Table 4 presents the distribution of the rejection reason category and how it changed for each MCO between CY 2020 and CY 2022. Table 3. Number and Percentage of Rejected Encounters by EDI Rejection Category and MCO, CY 2020–CY 2022

Rejection Category	Year	ABH	ACC	CFCHP	JMS	KPMAS	MPC	MSFC	PPMCO	UHC	Total
Duplicate	CY 2020	1,165	9,206	440,785	325	342	8,703	499	2,408	16,574	**480,007**
		1.2%	0.8%	28.1%	0.3%	0.3%	0.8%	0.1%	0.2%	2.0%	**7.1%**
	CY 2021	2,054	1,521	39,546	665	3,790	11,082	45	2,439	16,205	**77,347**
		0.5%	0.3%	12.2%	0.3%	1.3%	1.4%	0.0%	0.2%	2.4%	**1.8%**
	CY 2022	16	3,982	8,759	957	823	27,283	607	3,738	14,558	**60,723**
		0.0%	1.0%	2.6%	0.4%	0.4%	4.7%	0.9%	0.3%	2.6%	**1.6%**
Inconsistent	CY 2020	271	5,110	41,135	125	562	14,243	1,493	737	14,341	**78,017**
		0.3%	0.4%	2.6%	0.1%	0.5%	1.4%	0.4%	0.1%	1.7%	**1.1%**
	CY 2021	6,386*	7,689	2,399	209	3,771	6,792	3,000	1,145	9,450	**40,841**
		1.5%	1.3%	0.7%	0.1%	1.3%	0.9%	1.8%	0.1%	1.4%	**0.9%**
	CY 2022	5,162	5,698	62,819	75	3,523	1,501	741	1,253	42,262	**123,034**
		4.9%	1.5%	18.3%	0.0%	1.6%	0.3%	1.1%	0.1%	7.6%	**3.2%**
Missing	CY 2020	12,980	241,554	102,409	35,798	16,126	136,058	100,515	289,479	118,621	**1,053,540**
		12.9%	19.8%	6.5%	36.7%	13.5%	12.9%	27.8%	20.0%	14.3%	**15.5%**
	CY 2021	82,627	91,105	31,378	78,907	55,501	89,383	52,811	189,734	82,140	**753,586**
		19.1%	15.3%	9.7%	39.9%	19.4%	11.6%	31.0%	19.4%	12.3%	**17.1%**
	CY 2022	14,259	52,708	28,442	73,168	43,191	55,069	9,998	193,751	62,825	**533,411**
		13.5%	13.9%	8.3%	29.0%	19.7%	9.4%	14.3%	14.4%	11.2%	**13.8%**
Not Eligible	CY 2020	2,839	50,198	52,338	10,800	8,502	54,866	10,956	175,366	84,509	**450,374**
		2.8%	4.1%	3.3%	11.1%	7.1%	5.2%	3.0%	12.1%	10.2%	**6.6%**
	CY 2021	2,201	19,531	36,708	12,929	13,326	37,778	8,609	129,848	60,205	**321,135**
		0.5%	3.3%	11.3%	6.5%	4.7%	4.9%	5.1%	13.3%	9.0%	**7.3%**
	CY 2022	1,887	25,258	23,185	12,291	19,887	83,513	8,762	304,498	50,187	**529,468**
		1.8%	6.6%	6.8%	4.9%	9.1%	14.3%	12.5%	22.6%	9.0%	**13.7%**
Not Valid	CY 2020	83,189	911,709	933,152	50,527	93,837	839,170	248,246	982,374	595,689	**4,737,893**
		82.8%	74.9%	59.4%	51.8%	78.6%	79.7%	68.6%	67.7%	71.8%	**69.7%**
	CY 2021	339,092*	475,819	213,573	105,024	209,786	623,029	105,673	654,307	498,075	**3,224,378**
		78.4%	79.9%	66.0%	53.1%	73.3%	81.1%	62.1%	66.9%	74.8%	**73.0%**
	CY 2022	84,335	292,373	219,179	165,664	151,557	418,111	50,034	843,510	388,827	**2,613,590**
		79.8%	76.9%	64.0%	65.7%	69.2%	71.4%	71.3%	62.6%	69.6%	**67.7%**
Total (100%)	**CY 2020**	**100,444**	**1,217,777**	**1,569,819**	**97,575**	**119,369**	**1,053,040**	**361,709**	**1,450,364**	**829,734**	**6,799,831**
	CY 2021	**432,360**	**595,665**	**323,604**	**197,734**	**286,174**	**768,064**	**170,138**	**977,473**	**666,075**	**4,417,287**
	CY 2022	**105,659**	**380,019**	**342,384**	**252,155**	**218,981**	**585,477**	**70,142**	**1,346,750**	**558,659**	**3,860,226**

* The number of "Inconsistent" and "Not Valid" rejected encounters in CY 2021 for ABH were revised due to recategorizing a rejection code from prior years' reports.

The greatest number of rejected encounters during the evaluation period were in the "Not Valid" category. The total number of "Not Valid" encounters decreased from 4,737,893 to 2,613,590 between CY 2020 and CY 2022, but the proportion of all rejected encounters categorized as "Not Valid" remained fairly stable throughout the evaluation period. The impact of invalid data was not spread evenly across MCOs. In CY 2022, more than one-half (62.6%) of PPMCO's rejections were in this category on the low end, with ABH closer to 80.0% on the high end.

The second most common rejection category for all MCOs during the evaluation period was "Missing." The number of rejections categorized as "Missing" decreased for the majority of MCOs: ACC, CFCHP, MPC, MSFC, PPMCO, and UHC. However, there was an increase in missing encounters for ABH, JMS, and KPMAS.

MCOs showed varied results in the numbers and percentages of rejected encounters in the "Inconsistent" category. The total number of rejections categorized as "Inconsistent" fluctuated for all MCOs during the evaluation period, except for MPC, which decreased throughout the evaluation period from 14,243 in CY 2020 to 1,501 in CY 2022. Notable outliers include the steep increases for UHC between CY 2021 and CY 2022 (1.4% to 7.6%) and CFCHP between CY 2021 and CY 2022 (0.7% to 18.3%). CFCHP had the highest percentage of rejections for inconsistency in CY 2022, followed by UHC at 7.6%.

While the number of encounter rejections categorized as "Duplicate" increased for five of the nine MCOs (JMS, KPMAS, MPC, MSFC, and PPMCO), the remaining MCOs (ABH, ACC, CFCHP, and UHC) decreased in the number of these rejections, with CFCHP having the greatest decline from 440,785 in CY 2020 to 8,759 in CY 2022. In CY 2022, PPMCO had the largest percentage of encounters rejected in the "Not Eligible" category (22.6%), and ABH had the lowest (1.8%).

Overall, there was a decrease in rejections marked "Duplicate," "Missing," and "Not Valid," while there was an increase in rejections marked "Inconsistent" and "Not Eligible" between CY 2020 and CY 2022. In CY 2022, the greatest decrease in share of rejections was in the "Duplicate" category, which decreased by 5.5 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 EDI edits—particularly for invalid data. Further research revealed that the 8ER high rejection rates were related to provider enrollment issues. The provider data, which are collected via ePREP, underwent changes that affected data beginning January 1, 2020. After two years of collaborative preparation with the MCOs, the provider system implemented new rules that require the National Provider Identifier (NPI) on any encounter to match the active NPI under which the provider enrolled with Medicaid for both the billing and rendering fields.[7] To remain actively enrolled with Medicaid, providers must perform actions such as updating their

[7] 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).

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, a provider could use any NPI on the encounter in the billing and rendering fields; as long as it matched any active NPI in MMIS2, the encounter linked with that provider/claim was accepted. 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 rejection codes divided into those relating to provider data and all others, and then subdivided by rejection category for CY 2022 encounters.

Table 5 presents rejected encounters by MCO, divided into provider enrollment-related and all other rejections for CY 2020 to CY 2022. See Appendix D for more specific information about the top three most common MCO-specific EDI rejection codes (errors) for CY 2022.

Table 5. Number of Rejected Encounters for Provider Enrollment-Related and Other Rejection Types by MCO, CY 2020–CY 2022

Rejection Type	MCO	CY 2020	CY 2021	CY 2022
Provider Enrollment-Related	ABH	62,852	213,977	61,134
	ACC	581,764	358,314	221,095
	CFCHP	792,889	171,835	167,242
	JMS	39,849	87,223	79,497
	KPMAS	58,026	161,576	101,865
	MPC	655,323	462,622	316,131
	MSFC	165,243	44,877	29,275
	PPMCO	690,775	428,998	605,207
	UHC	410,302	323,994	250,417
	Subtotal	**3,457,023**	**2,253,416**	**1,831,863**
Other	ABH	37,592	218,383	44,525
	ACC	636,013	237,351	158,924
	CFCHP	776,930	151,769	175,142
	JMS	57,726	110,511	172,658
	KPMAS	61,343	124,598	117,116
	MPC	397,717	305,442	269,346
	MSFC	196,466	125,261	40,867
	PPMCO	759,589	548,475	741,543
	UHC	419,432	342,081	308,242
	Subtotal	**3,342,808**	**2,163,871**	**2,028,363**
Total		**6,799,831**	**4,417,287**	**3,860,226**

The number of provider enrollment-related rejections decreased for all MCOs from CY 2020 to CY 2022, except for JMS and KPMAS. The decline was lowest for ABH (2.7%) and highest for MSFC (82.3%). Almost all MCOs had a notable decrease in the number of rejections due to provider enrollment-related encounters from CY 2021 to CY 2022, except for PPMCO (increased by 41.1%).

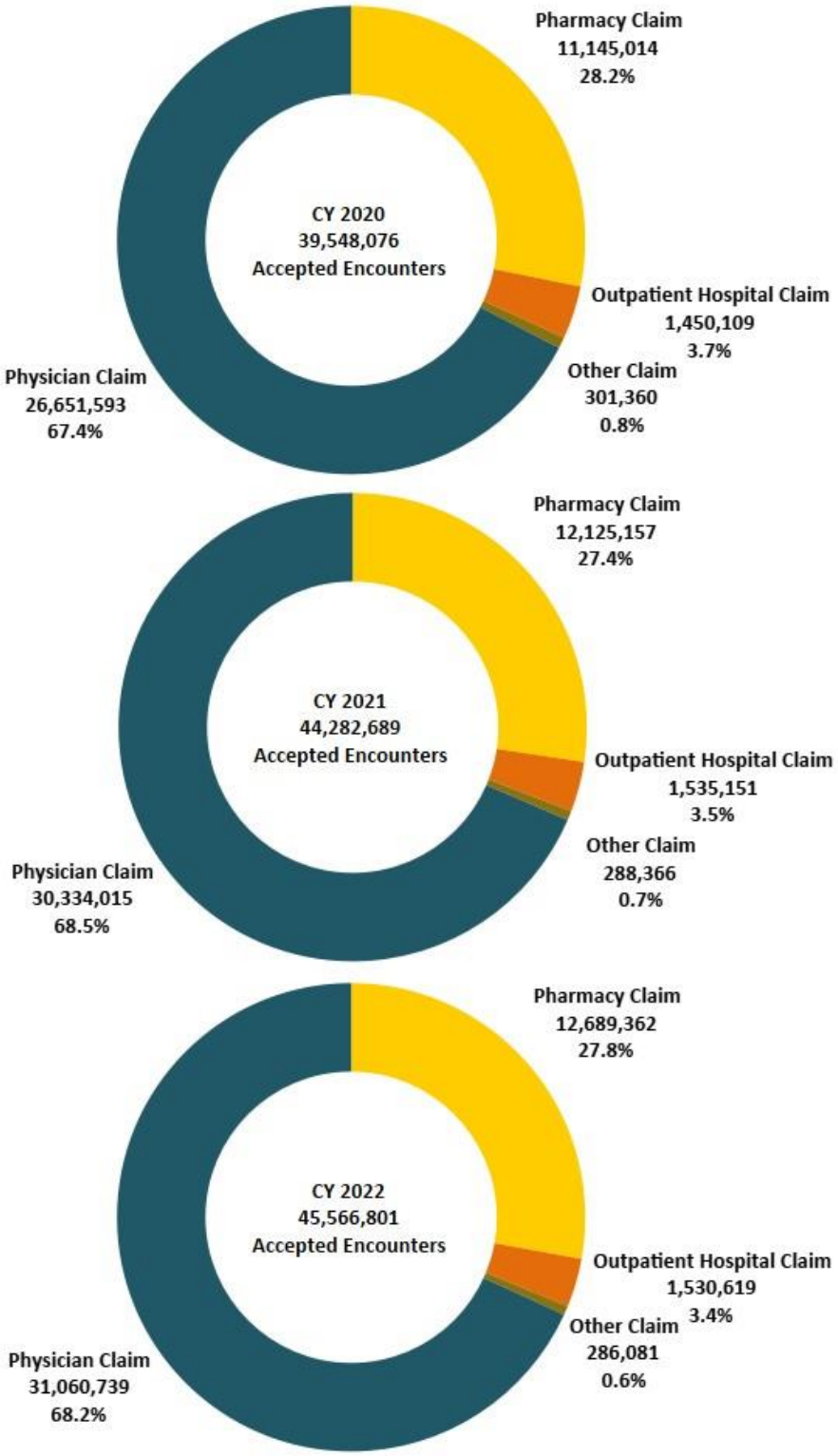
Step 2. Encounter Data Macro-Analysis—Verification of Data Integrity

During CY 2022, the MCOs submitted a total of 45.6 million accepted encounters (records), which was an increase from 39.5 million in CY 2020 and 44.3 million in CY 2021. Despite increased enrollment in CY 2020, overall utilization decreased across all MCOs due to the COVID-19 pandemic. However, utilization started to rebound in CY 2021. Because the 8ER data received do not include dates of service, Hilltop estimated the total number of encounters submitted by adding the number of EDI rejected encounters to the number of accepted encounters. Using that method, a total of approximately 46.3 million encounters were submitted in CY 2020. This number increased to 48.7 million encounters in CY 2021 and 49.4 million encounters in CY 2022. Approximately 92% of the CY 2022 encounters were accepted into MMIS2, which is higher than the 91% acceptance rate during CY 2021 and the 85% acceptance rate during CY 2020.

Hilltop received a monthly copy of all encounters accepted by MMIS2. 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 files with errors were 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 2020 to CY 2022.

Figure 1. Number and Percentage of Accepted Encounters by Claim Type, CY 2020–CY 2022



The distribution of accepted encounters by claim type changed slightly from CY 2020 to CY 2022. Physician claims represented most of the encounters during the evaluation period (roughly two-thirds), followed by pharmacy claims. 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 2020 to CY 2022.

Table 6. Distribution of Accepted Encounters by Claim Type and MCO, CY 2020–CY 2022

Claim Type	Year	ABH	ACC*	CFCHP	JMS	KPMAS	MPC	MSFC	PPMCO	UHC
Physician Claim	CY 2020	71.7%	66.4%	77.4%	62.6%	74.0%	65.9%	67.0%	64.3%	70.7%
		709,927	5,115,977	1,731,798	731,706	1,540,478	4,866,194	2,163,553	6,369,837	3,422,123
	CY 2021	71.8%	67.2%	67.5%	62.6%	75.9%	66.8%	67.7%	67.2%	73.3%
		943,246	5,646,100	1,277,419	773,641	2,212,349	5,510,114	2,311,286	7,710,525	3,949,335
	CY 2022	69.1%	67.5%	68.7%	59.8%	74.5%	66.3%	66.5%	67.6%	72.1%
		1,013,129	5,817,693	1,644,307	682,602	2,280,214	5,463,440	2,222,432	8,191,130	3,745,792
Pharmacy Claim	CY 2020	23.9%	28.1%	18.5%	33.6%	24.5%	29.7%	28.6%	31.2%	25.2%
		236,632	2,162,803	412,828	392,016	509,958	2,195,708	924,461	3,093,170	1,217,438
	CY 2021	24.4%	28.0%	27.4%	33.1%	22.4%	28.3%	28.4%	29.0%	22.9%
		319,923	2,355,627	517,959	408,946	653,626	2,333,598	969,219	3,330,404	1,235,855
	CY 2022	26.4%	28.3%	27.5%	36.2%	23.7%	29.2%	29.2%	28.5%	23.9%
		386,874	2,435,990	657,020	413,751	726,213	2,406,846	973,973	3,447,617	1,241,078
Outpatient Hospital Claim	CY 2020	3.4%	4.9%	3.3%	3.4%	0.8%	3.4%	3.6%	3.9%	3.4%
		33,887	373,886	73,827	39,863	17,162	251,207	115,213	382,663	162,401
	CY 2021	3.0%	4.1%	4.2%	3.9%	1.0%	4.0%	3.1%	3.3%	3.2%
		39,698	344,237	79,830	47,750	30,602	332,752	106,394	381,918	171,970
	CY 2022	3.7%	3.6%	3.1%	3.6%	1.1%	3.7%	3.5%	3.5%	3.3%
		54,446	308,844	74,166	40,800	34,086	306,000	115,292	425,008	171,977
Other	CY 2020	1.0%	0.7%	0.8%	0.4%	0.6%	1.0%	0.9%	0.6%	0.8%
		9,550	56,271	18,980	4,864	13,145	73,327	28,160	60,423	36,640
	CY 2021	0.8%	0.6%	0.9%	0.4%	0.6%	0.9%	0.8%	0.4%	0.6%
		10,013	53,315	17,284	5,275	18,298	73,952	26,923	49,838	33,468
	CY 2022	0.8%	0.6%	0.8%	0.4%	0.6%	0.8%	0.9%	0.4%	0.7%
		11,546	51,896	18,013	4,531	18,884	64,287	29,180	51,507	36,237
Total (100%)	**CY 2020**	**989,996**	**7,708,937**	**2,237,433**	**1,168,449**	**2,080,743**	**7,386,436**	**3,231,387**	**9,906,093**	**4,838,602**
	CY 2021	**1,312,880**	**8,399,279**	**1,892,492**	**1,235,612**	**2,914,875**	**8,250,416**	**3,413,822**	**11,472,685**	**5,390,628**
	CY 2022	**1,465,995**	**8,614,423**	**2,393,506**	**1,141,684**	**3,059,397**	**8,240,573**	**3,340,877**	**12,115,262**	**5,195,084**

* ACC's name changed to Wellpoint Maryland, effective January 1, 2023, and will be reflected in MY 2023's report.

The distribution of accepted encounters remained relatively consistent across MCOs and calendar years. In CY 2022, physician encounters ranged from 59.8% of encounters (JMS) to 74.5% of encounters (KPMAS). JMS had the largest percentage of CY 2022 pharmacy encounters (36.2%), while KPMAS had the lowest percentage (23.7%). Outpatient hospital encounters ranged from a low of 1.1% for KPMAS to a high of 3.7% for ABH and MPC.

See Appendix E for a visual display of the number and percentage of accepted encounters by claim type and MCO in CY 2022.

Table 7 illustrates the distribution of HealthChoice participants and the volume of accepted encounters for each MCO during CY 2020 through CY 2022.

Table 7. Percentage of HealthChoice Participants and Accepted Encounters by MCO, CY 2020–CY 2022

MCO	CY 2020		CY 2021		CY 2022	
	Percentage of Total Participants	Percentage of Total Encounters	Percentage of Total Participants	Percentage of Total Encounters	Percentage of Total Participants	Percentage of Total Encounters
ABH	3.8%	2.5%	4.0%	3.0%	4.1%	3.2%
ACC	22.8%	19.5%	22.3%	19.0%	21.9%	18.9%
CFCHP	4.3%	5.7%	5.0%	4.3%	5.8%	5.3%
JMS	2.3%	3.0%	2.2%	2.8%	2.1%	2.5%
KPMAS	7.3%	5.3%	7.9%	6.6%	8.1%	6.7%
MPC	17.5%	18.7%	17.1%	18.6%	16.8%	18.1%
MSFC	7.8%	8.2%	7.6%	7.7%	7.4%	7.3%
PPMCO	24.7%	25.0%	24.1%	25.9%	23.7%	26.6%
UHC	12.3%	12.2%	11.9%	12.2%	11.7%	11.4%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

PPMCO and ACC were the largest MCOs in CY 2022, followed by MPC, UHC, KPMAS, MSFC, CFCHP, ABH, and JMS. The distribution of accepted encounters among MCOs in CY 2020 through CY 2022 was nearly proportional to the participant distribution. For example, in CY 2022, MPC had 16.8% of all HealthChoice participants and 18.1% of all MMIS2 encounters.

Managed Care Regulations: Accurate and Complete Encounter Data

In 2016, CMS issued its final rule, updating Medicaid managed care regulations.[8] One of the requirements specified that MCOs must submit encounter data that are accurate and complete by January 2018.[9] To address this requirement, MDH notified Maryland MCOs in September 2017 that all encounter data submitted to MDH on or after January 1, 2018, must include allowed amounts and paid amounts on each encounter (Maryland Department of Health, 2017).

[8] 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).
[9] 42 CFR § 438.818(a)(2).

In November 2020, CMS released a new final rule on managed care[10] that included technical modifications; however, it did not include changes to the EQR or encounter data reporting regulations.

In 2010, MDH and the MCOs worked together to ensure complete and accurate submission of paid amounts on 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 MDH has confidence in the integrity and quality of the payment amounts. Beginning in October 2017, MDH used the pharmacy paid encounter process as a framework to begin receiving payment data for all encounters.

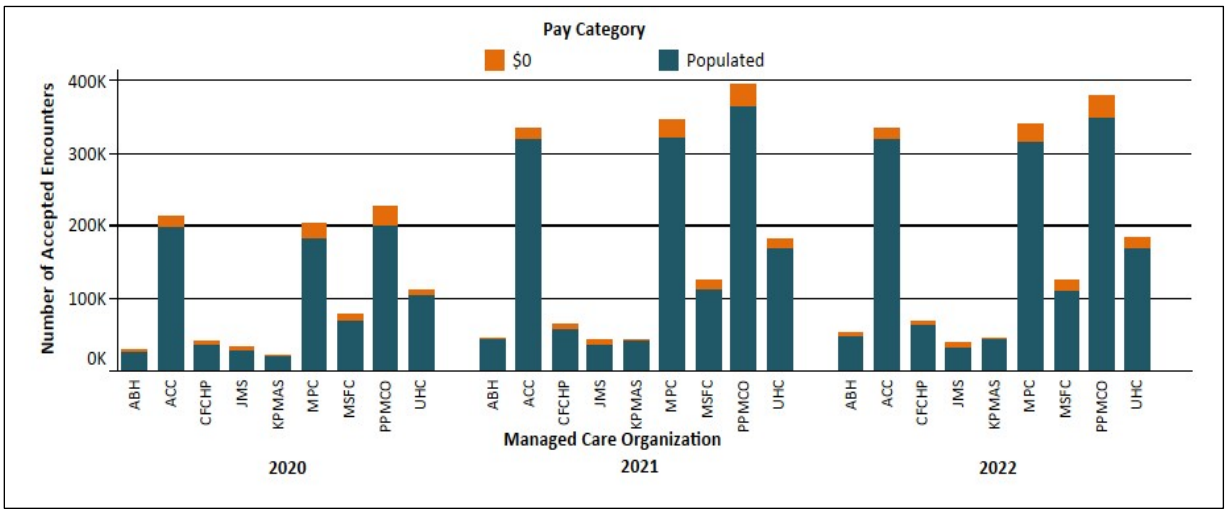
MDH staff prepared MMIS2 to accept payment data for all encounters in the fall of 2017, convened technical MCO workgroups, and updated the 837 Companion Guides for professional (medical) and institutional encounters. Soon after MCOs began submitting payment data for all encounters in January 2018, MDH staff identified errors in processing the paid amount for medical and institutional encounters. In February 2018, MDH reviewed MCO paid submissions to determine how many encounters had missing paid amounts, how many were $0 (separated by denied ('09' on CN1 segment) and sub-capitated ('05' on CN1 segment)), and how many were populated. MDH shared its findings and met with MCOs individually to improve their submission processes. By August 2018, MMIS2 had received populated payment data for all medical encounters.

In Fall 2018, MDH staff discovered that only the paid 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; MMIS2 now stores the correct sum for all the total paid institutional service lines. MDH continues to work with the MCOs to ensure the validity of institutional and medical encounter data.

Figure 2 displays the distribution of pay category for accepted institutional encounter data by MCO in CY 2022.

[10] 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 Pay Category, CY 2020–CY 2022

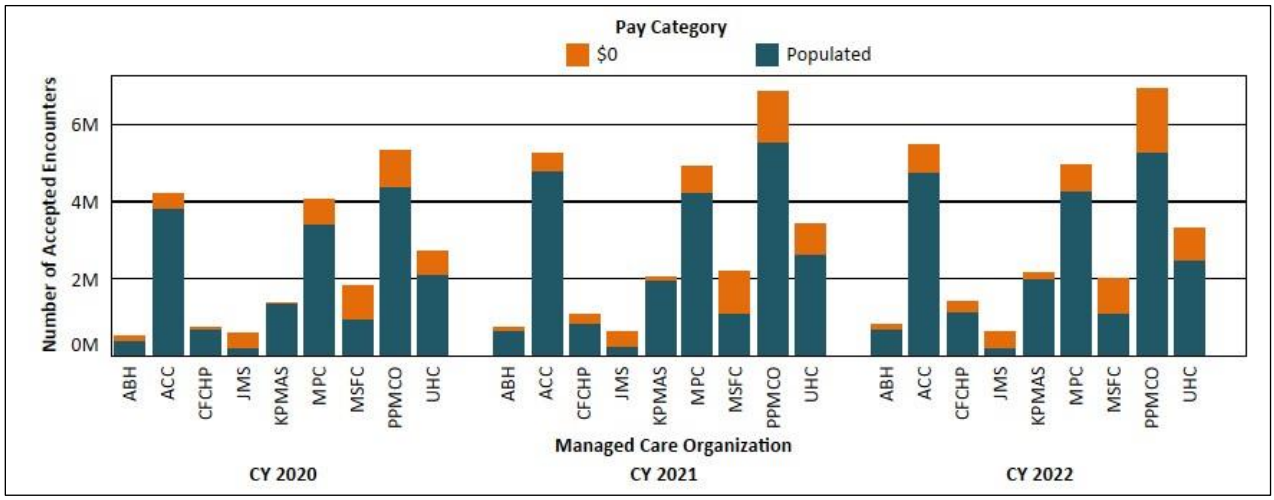


Year	Pay Category	ABH	ACC	CFCHP	JMS	KPMAS	MPC	MSFC	PPMCO	UHC
CY 2020	Populated	86.1%	92.4%	87.6%	78.7%	93.9%	89.5%	86.5%	88.2%	91.3%
		26,802	197,517	36,627	27,573	20,770	183,970	69,681	201,121	102,668
	$0	13.9%	7.6%	12.4%	21.3%	6.1%	10.5%	13.5%	11.8%	8.7%
		4,312	16,142	5,179	7,472	1,352	21,595	10,852	26,916	9,724
	Subtotal	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
		31,114	**213,659**	**41,806**	**35,045**	**22,122**	**205,565**	**80,533**	**228,037**	**112,392**
CY 2021	Populated	95.1%	94.7%	90.0%	84.6%	93.8%	92.7%	89.4%	92.0%	91.0%
		42,079	318,900	57,983	36,632	39,840	320,922	111,588	364,217	167,132
	$0	4.9%	5.3%	10.0%	15.4%	6.2%	7.3%	10.6%	8.0%	9.0%
		2,178	17,700	6,451	6,648	2,638	25,219	13,300	31,556	16,432
	Subtotal	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
		44,257	**336,600**	**64,434**	**43,280**	**42,478**	**346,141**	**124,888**	**395,773**	**183,564**
CY 2022	Populated	90.0%	95.1%	91.6%	83.1%	94.0%	92.8%	88.9%	91.4%	90.7%
		48,316	319,452	62,241	32,292	42,532	316,808	110,643	348,593	168,690
	$0	10.0%	4.9%	8.4%	16.9%	6.0%	7.2%	11.1%	8.6%	9.3%
		5,367	16,372	5,695	6,562	2,691	24,422	13,816	32,885	17,318
	Subtotal	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
		53,683	**335,824**	**67,936**	**38,854**	**45,223**	**341,230**	**124,459**	**381,478**	**186,008**

All MCOs except for UHC increased the percentage of institutional encounters with a populated pay amount during the evaluation period. In CY 2022, the percentage of institutional encounters with a populated amount ranged from 83.1% (JMS) to 95.1% (ACC). The MCOs showed mixed results from CY 2021 to CY 2022: ACC, CFCHP, KPMAS, and MPC increased the percentage of populated pay amounts, while ABH, JMS, MSFC, PPMCO, and UHC decreased.

Figure 3 displays the number and percentage of accepted medical encounters by MCO and pay category for CY 2020 through CY 2022. Appendix F displays the number of accepted medical encounters by MCO and pay category for CY 2020 to CY 2022.

Figure 3. Number of Accepted Medical Encounters by MCO and Pay Category, CY 2020–CY 2022



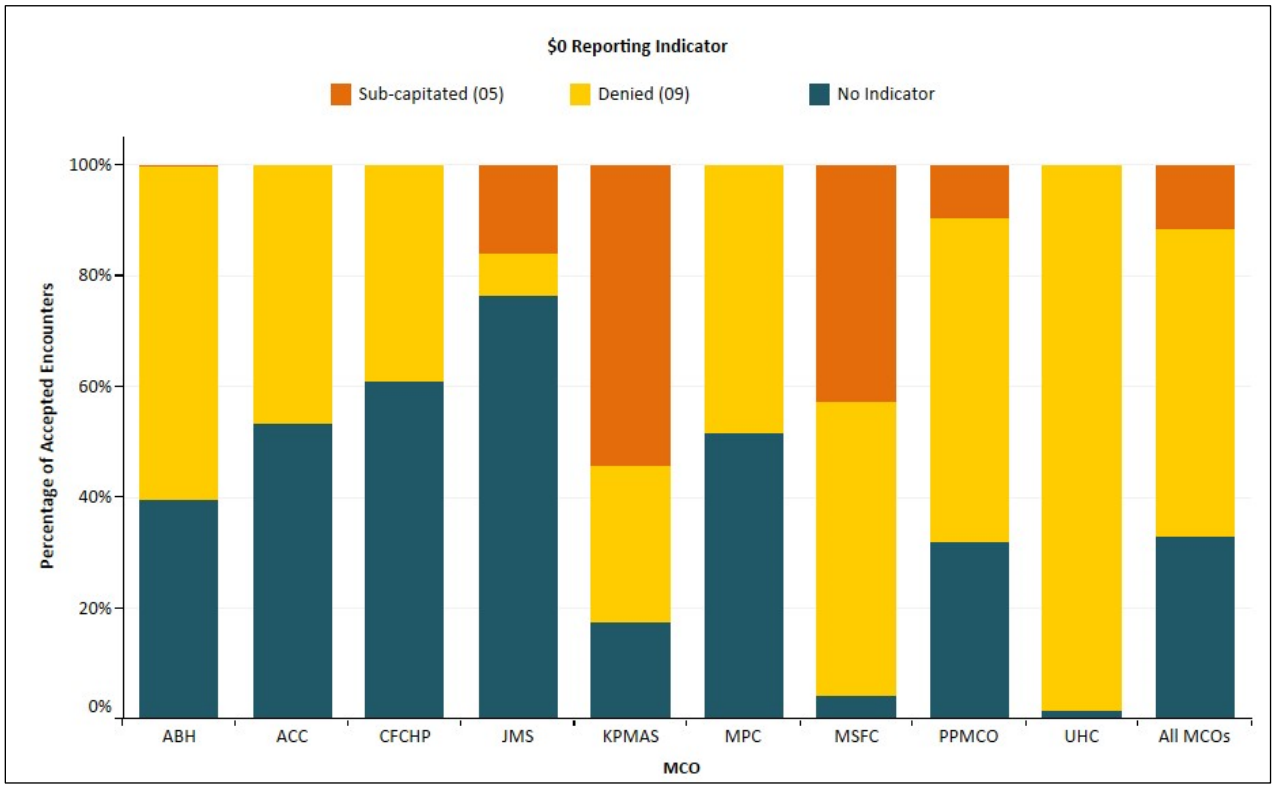
Year	Pay Category	ABH	ACC	CFCHP	JMS	KPMAS	MPC	MSFC	PPMCO	UHC
CY 2020	Populated	81.3%	91.1%	85.6%	34.0%	96.6%	83.0%	50.9%	81.9%	78.5%
		427,437	3,813,960	680,020	209,224	1,332,909	3,384,552	936,837	4,381,528	2,132,482
	$0	18.7%	8.9%	14.4%	66.0%	3.4%	17.0%	49.1%	18.1%	21.5%
		98,213	374,433	114,605	405,416	47,118	691,817	904,435	970,711	585,247
	Subtotal	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
		525,650	**4,188,393**	**794,625**	**614,640**	**1,380,027**	**4,076,369**	**1,841,272**	**5,352,239**	**2,717,729**
CY 2021	Populated	82.0%	90.8%	78.6%	37.5%	94.3%	85.5%	51.0%	80.5%	76.3%
		639,721	4,789,407	869,961	247,332	1,973,718	4,217,329	1,117,795	5,531,945	2,622,037
	$0	18.0%	9.2%	21.4%	62.5%	5.7%	14.5%	49.0%	19.5%	23.7%
		140,020	488,070	237,519	412,501	118,827	717,480	1,074,314	1,341,220	814,233
	Subtotal	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
		779,741	**5,277,477**	**1,107,480**	**659,833**	**2,092,545**	**4,934,809**	**2,192,109**	**6,873,165**	**3,436,270**
CY 2022	Populated	80.8%	86.2%	79.8%	34.2%	93.7%	84.7%	55.2%	76.3%	74.8%
		697,565	4,729,467	1,151,967	222,651	2,021,446	4,230,981	1,117,555	5,284,443	2,511,339
	$0	19.2%	13.8%	20.2%	65.8%	6.3%	15.3%	44.8%	23.7%	25.2%
		165,635	757,248	290,813	428,663	136,943	766,411	907,070	1,641,938	845,955
	Subtotal	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
		863,200	**5,486,715**	**1,442,780**	**651,314**	**2,158,389**	**4,997,392**	**2,024,625**	**6,926,381**	**3,357,294**

During CY 2022, JMS submitted 65.8% of its medical encounters with a $0 pay amount, and MSFC submitted nearly half of its medical encounters the same way. All other MCOs ranged from 6.3% (KPMAS) to 25.2% (UHC) of accepted medical encounters with $0 pay. Only JMS, MPC, and

MSFC among all the MCOs had a lower share of encounters with $0 pay during CY 2022 than in CY 2020.

Figure 4 displays the percentage of accepted medical encounters with a $0 pay field with the sub-capitated reporting indicator (05), the denied reporting indicator (09), and no indicator by MCO.

Figure 4. Accepted Medical Encounters with $0 Pay Data by Reporting Indicator (05/09) and MCO, CY 2022



$0 Reporting Indicator	ABH	ACC	CFCHP	JMS	KPMAS	MPC	MSFC	PPMCO	UHC	All MCOs
Sub-capitated (05)	0.1%	0.0%	0.0%	16.0%	54.4%	0.0%	42.8%	9.7%	0.0%	**11.6%**
Denied (09)	60.5%	46.8%	39.2%	7.6%	28.3%	48.4%	53.2%	58.3%	98.6%	**55.3%**
No Indicator	39.4%	53.2%	60.8%	76.4%	17.4%	51.6%	4.0%	32.0%	1.4%	**33.1%**
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Adherence to the requirement that encounters with $0 pay include a reporting indicator varied significantly among the MCOs during CY 2022. MSFC and UHC submitted nearly all their $0 encounters with an indicator. By contrast, ACC, CFCHP, and MPC submitted more than one-half and JMS more than three-quarters of their $0 pay medical encounters without an indicator. The percentage of $0 pay medical encounters without an indicator submitted by the remaining MCOs ranged from 17.4% (KPMAS), 32% (PPMCO), to 39.4% (ABH).

Hilltop also analyzed the accepted medical encounters during CY 2022 by comparing the price paid against the price listed for the same service on the FFS fee schedule. Of the almost 28 million medical encounters in this analysis, around 20% 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 half. 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, 75% were greater than the fee schedule payment amount and 25% were less; 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 54% to 99%. The overall utilization of the pay field has not changed significantly in CY 2022 as compared to previous years. MDH should continue to work with the MCOs to ensure that appropriate utilization and accuracy of the pay field on accepted encounters improves.

In CY 2019, Hilltop determined that TPL was reported inconsistently in MMIS2 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.

MDH reported that TPL for professional encounters was corrected in MMIS2 as of May 1, 2022. Analysis of trauma encounters pulled from the professional file found that the two MCOs who previously had no TPL still had no TPL after May 1, 2022. Four MCOs had TPL on the majority of their claims before May 1, 2022, and no TPL at all after May 1, 2022. Two MCOs had TPL on the majority of their encounters before May 1, 2022, and TPL on a small number of encounters after May 1, 2022. Finally, one MCO had TPL on a majority of their encounters before and after May 1, 2022. through the end of CY 2022. This suggests that only two MCOs have TPL properly recorded in professional files in CY 2022. Hilltop will continue to investigate TPL on all encounters and will review the results with MDH to develop a resolution.

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

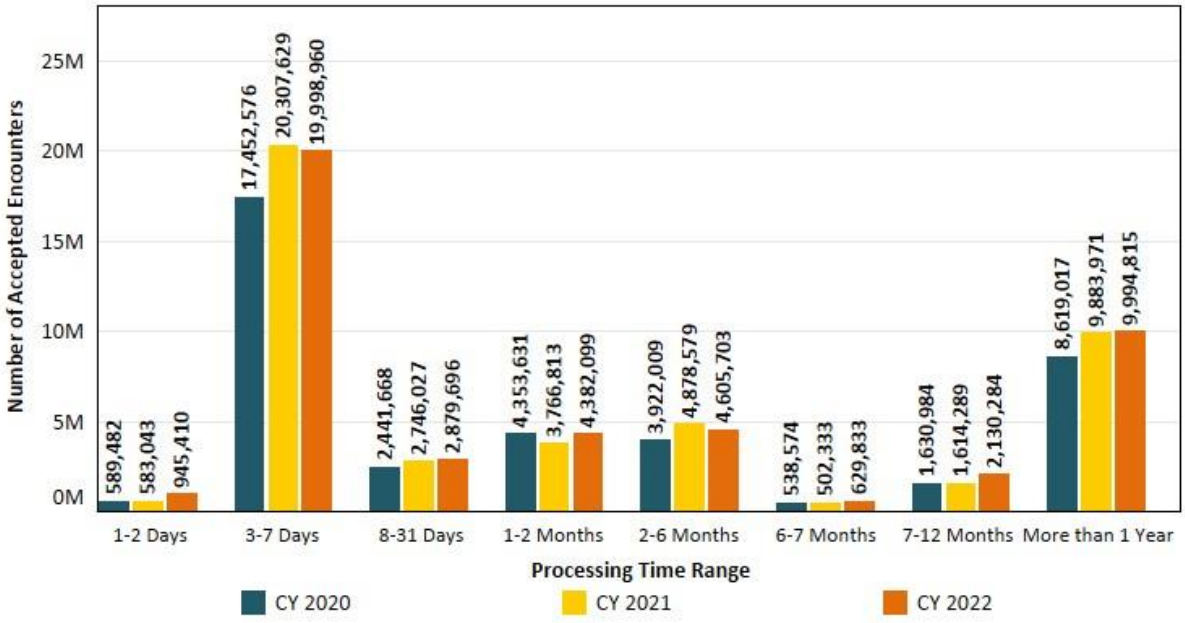
Time Dimension Analysis

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 MDH. 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.[11] Maryland regulations require MCOs to submit encounter data to MDH "within 60 calendar days after receipt of the claim from the provider."[12] Therefore, the maximum acceptable processing time allotted for an encounter between the end date of service and the date of submission to MDH 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 4 shows the timeliness of processing accepted encounter submissions from the end date of service for CY 2020 through CY 2022.

Figure 5. Number of Accepted Encounters Submitted by Processing Time, CY 2020–CY 2022



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.

Overall, timelines of encounter submissions improved during the evaluation period, with more MCOs submitting encounters within 1 to 2 days in CY 2022, and an increase in encounters submitted between 8 days and 2 months.

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

Table 8 shows the processing times for encounters submitted by claim type for CY 2020 through CY 2022.

Table 8. Distribution of the Total Number of Accepted Encounters Submitted, by Claim Type and Processing Time, CY 2020–CY 2022

Processing Time Range	Pharmacy Claims			Physician Claims			Outpatient Hospital Claims*			Other**		
	CY 2020	CY 2021	CY 2022	CY 2020	CY 2021	CY 2022	CY 2020	CY 2021	CY 2022	CY 2020	CY 2021	CY 2022
1-2 Days	83.3%	82.7%	82.8%	29.4%	32.6%	29.4%	20.0%	22.6%	20.3%	16.3%	17.0%	15.2%
	9,284,451	10,026,380	10,510,053	7,829,006	9,884,739	9,135,115	290,059	347,471	310,346	49,060	49,039	43,446
3-7 Days	11.0%	11.5%	11.1%	9.6%	11.0%	9.9%	7.7%	8.8%	7.7%	7.7%	8.0%	6.7%
	1,229,931	1,392,401	1,407,027	2,557,495	3,327,402	3,061,363	111,235	135,723	118,118	23,348	23,053	19,195
8-31 Days	5.3%	5.4%	5.4%	28.3%	28.8%	28.4%	27.2%	26.9%	26.7%	32.5%	30.8%	27.4%
	596,126	650,512	680,381	7,530,801	8,731,435	8,826,893	394,196	413,259	409,013	97,894	88,765	78,528
1-2 Months	0.2%	0.3%	0.2%	8.1%	8.2%	8.3%	14.5%	12.9%	14.6%	14.3%	12.6%	14.9%
	25,139	32,578	26,697	2,163,246	2,478,225	2,587,218	210,294	198,767	223,184	42,989	36,457	42,597
2-6 Months	0.1%	0.2%	0.3%	14.9%	11.3%	12.7%	21.2%	17.6%	21.1%	19.1%	18.2%	23.0%
	8,798	21,363	39,678	3,979,681	3,423,369	3,953,948	307,591	269,617	322,630	57,561	52,464	65,843
More than 6 Months	0.0%	0.0%	0.2%	9.7%	8.2%	11.3%	9.4%	11.1%	9.6%	10.1%	13.4%	12.7%
	569	1,923	25,526	2,591,238	2,488,840	3,496,201	136,730	170,314	147,328	30,503	38,588	36,472
Total (100%)	**11,145,014**	**12,125,157**	**12,689,362**	**26,651,467**	**30,334,010**	**31,060,738**	**1,450,105**	**1,535,151**	**1,530,619**	**301,355**	**288,366**	**286,081**

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

Most pharmacy encounters were submitted within 1 to 2 days throughout the evaluation period (over 80%), and more than 65% of all physician encounters were submitted within 31 days. Over 50% of outpatient hospital encounters were submitted within 31 days during the evaluation period. See Appendix G for a visual display of the number and percentage of encounters submitted by time processing range and claim type in CY 2020 through CY 2022.

Table 9 displays the monthly processing time for accepted encounters in CY 2020 through CY 2022.

Table 9. Percentage of Accepted Encounters Submitted, by Month and Processing Time, CY 2020–CY 2022

Processing Time Range	Year	January	February	March	April	May	June	July	August	September	October	November	December	Annual Total
1-2 Days	CY 2020	34.0%	35.2%	46.8%	48.8%	46.8%	51.4%	42.9%	47.4%	49.3%	45.3%	46.7%	43.6%	**44.1%**
	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%**
3-7 Days	CY 2020	9.6%	9.6%	6.4%	12.0%	12.3%	10.5%	11.2%	12.2%	11.3%	10.2%	7.7%	7.8%	**9.9%**
	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%**
8-31 Days	CY 2020	20.9%	23.4%	19.2%	18.9%	21.0%	19.6%	21.8%	21.6%	18.5%	24.0%	25.2%	25.9%	**21.8%**
	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%**
1-2 Months	CY 2020	8.1%	5.2%	8.1%	5.2%	5.1%	4.2%	5.6%	4.0%	5.5%	6.8%	6.4%	8.4%	**6.2%**
	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%**
2-6 Months	CY 2020	14.0%	14.6%	11.0%	6.8%	6.2%	8.0%	12.3%	9.3%	11.2%	10.1%	10.6%	13.1%	**11.0%**
	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%**
6-7 Months	CY 2020	2.0%	1.6%	0.6%	0.7%	3.0%	0.9%	0.9%	1.6%	1.1%	1.1%	2.5%	0.4%	**1.4%**
	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%**
7-12 Months	CY 2020	6.7%	5.7%	5.1%	6.1%	4.4%	5.1%	5.0%	3.6%	2.9%	2.5%	1.0%	0.8%	**4.1%**
	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%**
More than 1 Year	CY 2020	4.8%	4.6%	2.8%	1.4%	1.3%	0.3%	0.2%	0.2%	0.1%	0.0%	0.0%	0.0%	**1.5%**
	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%**
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. An average of 43.9% of CY 2022 encounters were processed by MDH within 1 to 2 days of the end date of service—a decrease from 44.1% in CY 2020 and 45.9% in CY 2021.

Table 10 displays processing times for accepted encounters submitted to MDH by MCO from CY 2020 to CY 2022.

Table 10. Percentage of Accepted Encounters Submitted by MCO and Processing Time, CY 2020–CY 2022

MCO	1-2 Days			3-7 Days			8-31 Days			1-2 Months		
	CY 2020	CY 2021	CY 2022	CY 2020	CY 2021	CY 2022	CY 2020	CY 2021	CY 2022	CY 2020	CY 2021	CY 2022
ABH	33.2%	35.7%	33.3%	7.0%	8.9%	7.3%	17.4%	21.7%	17.1%	6.8%	7.7%	5.1%
ACC	45.4%	49.5%	47.5%	10.3%	11.9%	10.9%	21.0%	21.6%	20.5%	6.2%	5.0%	4.4%
CFCHP	37.1%	42.2%	54.0%	7.1%	9.3%	10.7%	10.9%	17.4%	16.6%	4.3%	8.4%	5.8%
JMS	28.3%	27.9%	30.6%	3.7%	4.1%	4.0%	9.4%	15.9%	16.7%	12.7%	17.4%	14.8%
KPMAS	51.1%	60.0%	57.5%	12.1%	14.0%	13.4%	20.5%	18.8%	21.2%	7.2%	2.1%	2.1%
MPC	44.4%	46.4%	47.1%	10.0%	10.2%	9.9%	22.1%	16.9%	17.5%	5.1%	4.9%	4.7%
MSFC	30.4%	28.0%	25.3%	8.2%	8.6%	5.7%	32.0%	35.5%	23.4%	9.2%	11.3%	17.4%
PPMCO	53.7%	56.2%	46.2%	11.5%	12.5%	10.7%	21.4%	19.0%	22.4%	4.7%	4.2%	5.8%
UHC	37.7%	28.8%	32.7%	9.7%	10.4%	10.5%	25.9%	35.7%	34.6%	7.6%	9.7%	7.4%
MCO	**2-6 Months**			**More than 1 Year**			**6-7 Months**			**7-12 Months**		
	CY 2020	CY 2021	CY 2022	CY 2020	CY 2021	CY 2022	CY 2020	CY 2021	CY 2022	CY 2020	CY 2021	CY 2022
ABH	13.3%	12.1%	16.5%	7.7%	4.0%	6.5%	3.3%	1.7%	3.9%	11.3%	8.1%	10.3%
ACC	12.5%	6.7%	7.6%	1.0%	2.0%	2.8%	0.9%	0.6%	1.0%	2.8%	2.8%	5.2%
CFCHP	15.6%	15.8%	9.5%	1.3%	1.1%	0.6%	3.9%	1.4%	0.6%	19.8%	4.3%	2.3%
JMS	31.0%	11.8%	14.6%	6.1%	4.9%	3.8%	3.7%	2.6%	2.4%	5.0%	15.5%	13.1%
KPMAS	5.1%	3.8%	3.2%	0.4%	0.1%	0.5%	0.7%	0.5%	0.5%	2.9%	0.7%	1.7%
MPC	11.0%	10.6%	10.2%	1.8%	1.7%	3.2%	1.3%	2.0%	1.6%	4.3%	7.3%	5.8%
MSFC	14.1%	12.1%	17.3%	1.4%	0.5%	1.9%	2.0%	1.7%	1.9%	2.7%	2.2%	6.9%
PPMCO	6.5%	5.2%	8.6%	0.5%	0.9%	1.3%	0.6%	0.6%	1.4%	1.2%	1.5%	3.6%
UHC	10.9%	11.2%	10.3%	2.1%	0.4%	0.9%	1.5%	1.2%	1.1%	4.5%	2.5%	2.4%

While six MCOs (ABH, ACC, CFCHP, JMS, KPMAS, MPC) submitted a higher percentage of their encounters within 1 to 2 days in CY 2022 than in CY 2020, half of these MCOs (ABH, ACC, KPMAS) experienced a decrease in the percentage of encounters submitted within 1 to 2 days from CY 2021 to CY 2022. In CY 2022, the percentage of encounters submitted by MCOs within 1 to 2 days ranged from 25.3% (MSFC) to 57.5% (KPMAS). The percentage of encounters submitted within 3 to 7 days increased slightly for ABH, ACC, CFCHP, JMS, KPMAS, and UHC, and decreased for MPC, MSFC, and PPMCO. JMS had the lowest (4.0%) percentage of encounters submitted within 3 to 7 days in CY 2022.

See Appendix H for a stacked bar chart displaying the number and percentage of encounters within each claim type from CY 2020 to CY 2022 by processing time. Appendix I provides a table outlining the number and percentage of encounters submitted by MCOs by processing time in CY 2022. See Appendix J for a stacked bar chart displaying the percentage of encounters submitted by MCO by processing time in CY 2020 through CY 2022.

Provider Analysis

Evaluating encounters by provider type for fluctuations across MCOs contributes to the assessment of encounter data volume and consistency. The following provider analysis examines encounter data for PCPs and establishes a comparison rate of PCP visits in HealthChoice. For this analysis, Hilltop matched the Medicaid identification numbers the MCOs provided for their members to eligibility data in MMIS2. Only participants listed in an MCO's files and enrolled in MMIS2 were included in the analysis. Table 11 shows the distribution of all HealthChoice participants enrolled for any length of time who received a PCP visit by an MCO during CY 2020 through CY 2022.

Table 11. Number and Percentage of HealthChoice Participants (Any Period of Enrollment) with a PCP Visit by MCO, CY 2020–CY 2022

	Year	ABH	ACC*	CFCHP	JMS	KPMAS	MPC	MSFC	PPMCO	UHC	Total
Number of Participants (any period of enrollment)	CY 2020	51,501	317,912	59,073	32,184	101,834	243,944	108,468	344,584	170,640	**1,430,140**
	CY 2021	59,058	332,173	73,931	32,367	117,044	255,039	113,288	359,863	177,570	**1,520,333**
	CY 2022	64,730	346,723	92,054	32,823	128,331	266,005	117,398	374,444	184,917	**1,607,425**
Percentage of participants with a visit with any PCP in any MCO network	CY 2020	16.9%	75.8%	65.3%	73.5%	70.3%	73.8%	71.3%	74.7%	67.8%	**70.9%**
	CY 2021	61.8%	80.8%	64.4%	75.2%	79.1%	77.4%	74.7%	78.0%	69.2%	**76.0%**
	CY 2022	62.6%	78.6%	66.2%	73.9%	75.9%	75.4%	73.6%	77.8%	73.5%	**75.3%**
Percentage of participants with a visit with their assigned PCP	CY 2020	1.6%	42.5%	24.6%	25.8%	47.3%	31.6%	26.1%	32.7%	28.6%	**33.1%**
	CY 2021	21.4%	44.1%	23.5%	27.0%	54.4%	31.5%	26.2%	38.1%	24.7%	**35.5%**
	CY 2022	23.2%	42.0%	23.2%	29.6%	50.5%	31.8%	25.7%	38.3%	31.6%	**35.7%**
Percentage of participants with a visit with their assigned PCP, group practice, or partner PCPs	CY 2020	2.4%	60.4%	37.1%	52.5%	67.3%	48.8%	43.3%	35.5%	41.4%	**46.1%**
	CY 2021	31.0%	62.8%	35.6%	54.0%	74.8%	50.2%	44.3%	40.8%	38.5%	**49.4%**
	CY 2022	34.7%	59.7%	34.8%	55.3%	71.5%	49.9%	43.4%	40.3%	45.2%	**49.1%**

Notes: Because a participant can be enrolled in multiple MCOs during the year, the total number of participants shown above is not a unique count. Counts do not include FFS claims. Please read ABH's results with caution: the MCO only began providing acceptable files in 2021. The methodology was updated in 2021 to account for changes in the rendering vs. billing provider fields in MMIS2, so the CY 2020 numbers have changed significantly in some cases.
* ACC's name changed to Wellpoint Maryland, effective January 1, 2023, and will be reflected in MY 2023's report.

The CY 2022 PCP visit rate (defined as a visit to the assigned PCP, group practice, or partner PCP) ranged from 34.7% (ABH) to 71.5% (KPMAS). Using the broadest definition of a PCP visit—that is, a visit to any PCP within any MCO's network—the PCP visit rate ranged from 62.6% (ABH) to 78.6% (ACC). The PCP visit rate increased across all measures between CY 2020 and CY 2022, but

the percentage of participants with a visit to any PCP in any MCO network and a visit with their assigned PCP, group practice, or partner PCPs decreased slightly from CY 2021 to CY 2022.

Service Type Analysis

Table 12 shows the number and percentage of encounter visits for inpatient hospitalizations, ED visits, and observation stays by MCO for CY 2020 to CY 2022.

Table 12. Number and Percentage of Inpatient Visits, ED Visits, and Observation Stays by MCO, CY 2020–CY 2022

Visits	Year	ABH	ACC	CFCHP	JMS	KPMAS	MPC	MSFC	PPMCO	UHC	Total
Number of Visits	CY 2020	432,167	3,604,824	671,679	461,007	797,758	3,564,836	1,495,891	4,718,567	2,131,056	**17,877,785**
	CY 2021	613,502	4,296,251	887,454	502,290	1,144,056	4,035,993	1,699,091	5,534,477	2,470,312	**21,183,426**
	CY 2022	672,857	4,316,397	1,093,093	469,075	1,143,675	4,048,013	1,666,516	5,512,901	2,393,716	**21,316,243**
Percentage of All Visits	CY 2020	2.4%	20.2%	3.8%	2.6%	4.5%	19.9%	8.4%	26.4%	11.9%	**100%**
	CY 2021	2.9%	20.3%	4.2%	2.4%	5.4%	19.1%	8.0%	26.1%	11.7%	**100%**
	CY 2022	3.2%	20.2%	5.1%	2.2%	5.4%	19.0%	7.8%	25.9%	11.2%	**100%**
Number of Inpatient Visits	CY 2020	3,792	21,966	5,009	3,510	6,603	21,181	8,590	28,685	12,717	**112,053**
	CY 2021	4,047	22,569	6,080	3,556	7,609	22,247	9,141	29,423	13,042	**117,714**
	CY 2022	4,176	22,277	6,923	3,086	7,679	20,100	9,272	28,102	12,816	**114,431**
Percentage of Visits that were Inpatient	CY 2020	0.9%	0.6%	0.7%	0.8%	0.8%	0.6%	0.6%	0.6%	0.6%	**0.6%**
	CY 2021	0.7%	0.5%	0.7%	0.7%	0.7%	0.6%	0.5%	0.5%	0.5%	**0.6%**
	CY 2022	0.6%	0.5%	0.6%	0.7%	0.7%	0.5%	0.6%	0.5%	0.5%	**0.5%**
Number of ED Visits	CY 2020	15,762	109,255	23,287	18,740	13,001	110,516	43,988	138,115	62,984	**535,648**
	CY 2021	21,509	131,335	30,394	20,795	23,246	125,517	51,392	165,869	73,567	**643,624**
	CY 2022	23,569	135,907	33,155	18,701	25,341	127,470	54,528	170,435	75,401	**664,507**
Percentage of Visits that were ED	CY 2020	3.6%	3.0%	3.5%	4.1%	1.6%	3.1%	2.9%	2.9%	3.0%	**3.0%**
	CY 2021	3.5%	3.1%	3.4%	4.1%	2.0%	3.1%	3.0%	3.0%	3.0%	**3.0%**
	CY 2022	3.5%	3.1%	3.0%	4.0%	2.2%	3.1%	3.3%	3.1%	3.1%	**3.1%**
Number of Observation Stays	CY 2020	1,074	7,426	1,552	1,182	928	8,232	2,901	8,740	5,469	**37,504**
	CY 2021	1,239	8,115	1,994	1,173	1,472	8,926	3,134	10,698	6,789	**43,540**
	CY 2022	1,430	6,928	1,811	979	1,623	8,416	2,738	9,413	7,951	**41,289**
Percentage of All Visits that were Observation Stays	CY 2020	0.2%	0.2%	0.2%	0.3%	0.1%	0.2%	0.2%	0.2%	0.3%	**0.2%**
	CY 2021	0.2%	0.2%	0.2%	0.2%	0.1%	0.2%	0.2%	0.2%	0.3%	**0.2%**
	CY 2022	0.2%	0.2%	0.2%	0.2%	0.1%	0.2%	0.2%	0.2%	0.3%	**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. The percentages for both the total inpatient hospitalizations and observation stays combined were less than 1.0% of visits each year. ED visits, which were 3.1% of all visits in CY 2022, ranged from 2.2% of all visits (KPMAS) to 4.0% of all visits (JMS). Overall, during the evaluation period, the percentage of inpatient visits decreased slightly, and ED visits increased slightly. As shown in

the annual HealthChoice evaluation, the overall percentage of HealthChoice participants with an outpatient ED visit and inpatient admission decreased between CY 2017 and CY 2021 (The Hilltop Institute, 2023).

Analysis by Age and Sex

Hilltop conducted an analysis of encounter data submitted by MCOs to determine the effectiveness of encounter data edit checks between CY 2020 and CY 2022. 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 and sex-appropriate diagnoses for delivery, 4) age-appropriate dementia diagnoses, and 5) children aged 0 to 20 years with dental encounters.

Because participants older than 65 are ineligible for HealthChoice, Hilltop searched for any encounters for those aged 66 or older. Between CY 2020 and 2021, the number of encounters for MCO participants aged 66 or older fell before rising again in CY 2022.[13] The number of individuals with a service date before their date of birth decreased between CY 2020 and CY 2022, although the number of such individuals fell to its lowest point during CY 2021. The MCOs and MDH improved the quality of reporting encounter data for age-appropriate diagnoses in CY 2021.

The Maryland Healthy Smiles Dental Program (Healthy Smiles) provides dental coverage for children under the age of 21. 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 2020 through CY 2022. As of January 1, 2023, Healthy Smiles is available to adults who receive full Medicaid benefits[14] and will be included in the analysis for MY 2023's report.

Hilltop analyzed the volume of participants who had a diagnosis for delivery (births) by age group between CY 2020 and CY 2022. Participants aged 0 to 11 and 51 or older are typically considered to be outside of the expected age range for delivery. This analysis only considers female participants with a delivery diagnosis.[15] Across all MCOs, the number of female participants identified as delivering outside of the expected age ranges was 118 in CY 2020, 122 in CY 2021, and 136 in CY 2022. The data substantiate that, overall, the encounters submitted are age-appropriate for delivery. See Appendix K for delivery codes.

Hilltop also validated encounter data for sex-appropriate delivery diagnoses. A diagnosis for delivery should typically be present only on encounters for female participants.[16] All MCOs had a similar distribution, with nearly 100% of deliveries being reported for females. Delivery

[13] Data not shown due to small cell sizes.
[14] 2022 MD Laws Ch. 303.
[15] In MMIS2, male or female are the only two options.
[16] In MMIS2, male or female are the only two options.

diagnoses for male participants in the encounter data are negligible, totaling 45 reported deliveries across all MCOs in CY 2020, 52 deliveries in CY 2021, and 48 deliveries in CY 2022.[17]

The final analysis focused on age-appropriate diagnoses of dementia (see Appendix L for dementia codes) from CY 2020 to CY 2022. 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 (298 participants were reported across all MCOs in CY 2022).[18]

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 49.4 million overall encounters, more than 3.8 million encounters (approximately 7.8%) were rejected through the EDI process in CY 2022. This represents a decrease from 4.4 million rejected encounters in CY 2021 and 6.8 million in CY 2020. The main cause of this decrease in rejected encounters is an improvement in invalid encounters related to provider information, which indicates a positive trend. However, in CY 2019—before the provider enrollment edits were implemented—the number of rejected encounters was 1.9 million, which increased by 259% in CY 2020. When Hilltop applied the de-duplication method, all MCOs' rate of rejected encounters remained below the 5% threshold. The volume of rejected encounters remains high, so MDH should continue to monitor and work with the MCOs to resolve the provider enrollment data problems.

From CY 2020 to CY 2022, all MCOs except for JMS and KPMAS experienced a decrease in the incidence of provider enrollment-related rejected encounters. From CY 2021 to CY 2022, all MCOs except for PPMCO (which increased by 41.1%) experienced a decrease. CFCHP, JMS, and PPMCO are the only MCOs to have an increase in non-provider enrollment-related rejected encounters from CY 2021 to CY 2022, with PPMCO increasing by 35.2%.

There was an increase in PPMCO's rejected encounters for both provider enrollment-related and other from CY 2021 to CY 2022, while there was a decrease in its share of all HealthChoice enrollees (from 24.1% in CY 2021 to 23.7% in CY 2022). This may indicate problems with PPMCO's encounter submission processes. It is also possible that the duplicate encounters in the 8ER reports are contributing to the increase in rejected encounters. MDH should work with the MCOs to instill best practices to improve their numbers of rejected encounters.

[17] Data not shown by MCO due to small cell sizes.
[18] Data not shown by MCO due to small cell sizes.

The variance between an MCO's share of all rejections and its share of all accepted encounters might warrant further attention. If an MCO's share of rejections 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 rejections, the MCO might have some best practices to share. PPMCO had 34.9% of all rejected encounters in CY 2022, but only 26.6% of accepted encounters. Conversely, ACC's share of accepted encounters (18.9%) exceeded its share of rejections (9.8%) during the same period. In CY 2022, when Hilltop applied the de-duplication method, the error rate for submissions for all MCOs was below the 5% threshold.

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

Hilltop analyzed and interpreted the encounter data and found that, during CY 2022, the MCOs submitted a total of 45.6 million accepted encounters (records), an increase from 39.5 million in CY 2020 and 44.3 million in CY 2021, respectively. 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 payment data on medical encounters and found that all HealthChoice MCOs continued to submit their medical encounters with populated payment fields from CY 2020 to CY 2022, as required. However, all MCOs except for JMS, MPC, and MSFC increased the share of encounters with $0 pay over the evaluation period, which could indicate that the MCOs are not accurately populating the pay field. During CY 2022, JMS submitted 65.8% of its medical encounters with a $0 pay amount, and MSFC submitted nearly half of its medical encounters the same way. All other MCOs ranged from 6.3% (KPMAS) to 25.2% (UHC) of accepted medical encounters with $0 pay. The MCOs with unusually high volumes of $0 encounters should provide an explanation to MDH and ensure accuracy with future submissions.

Hilltop further analyzed the MCOs' use of the 05/09 indicator on medical encounters with $0 in the pay field. Adherence to this requirement is uneven across MCOs, and none demonstrated full compliance in CY 2022, although MSFC and UHC submitted the majority of their $0 encounters with an indicator. The issue was particularly pronounced with JMS, who had no indicator for over three quarters of $0 encounters. MDH should consider evaluating each MCO's sub-capitation arrangements with other organizations and comparing those arrangements with the MCO's use of the sub-capitation indicator.

Hilltop also analyzed the variance between the pay amounts included in accepted encounters and the FFS fee schedule. The overall utilization of the pay field had not changed significantly in CY 2022 as compared to previous years. MDH should continue to work with the MCOs to ensure appropriate utilization and improvement in the accuracy of the payment field on accepted encounters. MDH also resolved an MMIS2 issue, which allowed institutional pay to be captured more accurately in July 2020. This field is now populated for all MCOs. Hilltop determined that

the TPL was not captured consistently across MCOs, so the MCO TPL amount is not used in any analyses. Hilltop will continue to investigate TPL and will work with MDH to develop a resolution.

To address the high volume of rejected 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. MDH should also monitor the MCOs' TPL-reported amounts.

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 2022 were submitted to MDH within one month of the end date of service, which is consistent with CY 2021 and CY 2020 findings. Nearly all (82.8%) pharmacy encounters were submitted within one to two days of the date of service. All MCOs except for MSFC, PPMCO, and UHC showed improvement in the submission of accepted encounters within two days of the end date of service. JMS's proportion of accepted encounters submitted more than seven months after the service date increased significantly from 5% in CY 2020 to 13.1% in CY 2022, while CFCHP's decreased from 19.8% to 2.3%. PPMCO's rate of encounters processed within one to two days fell by 7.5 percentage points over the evaluation period. MDH should continue to monitor monthly submissions to evaluate consistency and ensure that the MCOs submit data in a timely manner. 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.

Provider Analysis

Hilltop compared the percentage of participants with a PCP visit by MCO between CY 2020 and CY 2022 and found that all categories of PCP visits increased from CY 2020 to CY 2022. However, the percentage of participants with a visit to any PCP in any MCO network and the percentage of participants with a visit with their assigned PCP, group practice, or partner PCPs decreased slightly from CY 2021 to CY 2022. MDH should continue to monitor PCP visits by MCOs in future encounter data validations. In addition, the MCOs should continue to encourage enrollees to change or update their "assigned" PCP to improve selection rates through MCO New Member Welcome packet and in the member handbook.

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 2020 and CY 2022. MDH should continue to review these data and compare trends in future annual encounter data validations to ensure consistency.

Analysis by Age and Sex

The MCOs and MDH continued to improve the quality of reporting encounter data for age-appropriate and sex-appropriate diagnoses in CY 2022. MDH should continue to review and audit the participant-level, MCO-specific reports that Hilltop generated for delivery, dementia, individuals over age 65, pediatric 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 and, overall, analysis of the CY 2022 electronic encounter data submitted indicates that, while there have been improvements in provider-related rejected encounters, MCOs continue to struggle with the changes in encounter editing logic, despite having had two years' lead time to prepare for the change. In many other respects, however, MDH and the MCOs have continued to strengthen gains made in recent years.

The most concerning issue arising in CY 2022 data is the continued volume of encounter rejections, largely due to the aforementioned change in encounter editing logic. Although MDH did not use encounter data from CY 2020 for rate setting because of the COVID-19 health emergency, it should continue to work with the MCOs to resolve their provider enrollment issues, which will allow for more accurate rate setting in the future. The CY 2023 MCO Agreement initially included penalties for MCOs whose total number of rejected encounters exceeds 5% of their total encounters. This penalty was intended to improve the accuracy and quality of encounter data to better support rate setting and maintain compliance with the federal rule strengthening requirements for data, transparency, and accountability.[19] Once de-duplicated, the error rate for CY 2022 submissions for all MCOs was below the 5% threshold (see Appendix A). In the MCO CY 2024 contract, workgroup meetings with MCOs will continue to refine encounters that should be removed from the HFMR. Hilltop will continue to use the methodology outlined in Appendix A to identify and de-duplicate rejected encounters. MDH will work with the MCOs to ensure that appropriately rejected 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 not be reported on the HFMRs. MDH will also work with the MCOs to provide an explanation and ensure the accuracy of the pay field with future submissions.

In general, the MCOs have similar distributions of rejections, 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 made progress. Hilltop generated recipient-level reports for MDH staff to discuss with the MCOs. MDH 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

[19] 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).

encounter submissions and increase MDH'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 MDH. The slight decrease in encounters submitted within one to two days that was observed for CY 2020 to CY 2021 rebounded in CY 2022. MDH should work with MCOs to continue improving the timeliness of encounter submissions, especially for MCOs with high rates of submissions occurring more than six months after the end date of service.

References

Centers for Medicare & Medicaid Services. (2012, September). *EQR protocol 4 validation of encounter data reported by the MCO*. https://www.medicaid.gov/medicaid/quality-of-care/downloads/eqr-protocol-4.pdf

Centers for Medicare & Medicaid Services. (2019, October). *CMS external quality review (EQR) protocols*. https://www.medicaid.gov/medicaid/quality-of-care/downloads/2019-eqr-protocols.pdf

Centers for Medicare & Medicaid Services. (2023, February). *CMS external quality review (EQR) protocols*. https://www.medicaid.gov/sites/default/files/2023-03/2023-eqr-protocols.pdf

The Hilltop Institute. (2023, June 30). *Evaluation of the Maryland Medicaid HealthChoice program: CY 2016 to CY 2020*. Baltimore, MD: UMBC. https://health.maryland.gov/mmcp/healthchoice/Documents/HealthChoice%20Monitoring%20and%20Evaluation/HealthChoice%20Post-Award%20Forum/2023/EvaluationOfTheHealthChoiceProgram-June2023%20Final.pdf#search=%28Ch%2E%20656%20of%20the%20Acts%20of%202009%29%3B

Maryland Department of Health. (2017, September 20). *Maryland Medical Assistance program: MCO transmittal No. 120*. https://mmcp.health.maryland.gov/MCOupdates/Documents/pt_04-18.pdf

Maryland Department of Health. (2018, September). *HealthChoice managed care organization agreement*. https://mmcp.health.maryland.gov/healthchoice/Documents/MCO%20Agreement%202019%20for%20CY%202019%20MCO%20file.pdf

Appendix A. Rejected Encounters Error Rate Methodology

The Hilltop Institute

University of Maryland, Baltimore County
Sondheim Hall, Third Floor
1000 Hilltop Circle
Baltimore, Maryland 21250

phone: 410-455-6854
fax: 410-455-6850
www.hilltopinstitute.org

memorandum

To: Tricia Roddy, Alyssa Brown, Monchel Pridget, and Jennifer McIlvaine
CC: Cynthia Woodcock
From: Jim Clavin, Laura Spicer, Todd Switzer, and Alice Middleton
Date: November 7, 2023
Re: Rejected Encounters Error Rate Methodology

Introduction

Effective calendar year (CY) 2020, the Maryland Department of Health (MDH) implemented changes to the electronic provider revalidation and enrollment portal (ePREP) in response to Centers for Medicare & Medicaid Services (CMS) requirements. The changes require the national provider identifier (NPI) on any encounter to match the active NPI under which the provider enrolled with Medicaid for both the billing and rendering provider fields. To remain actively enrolled with Medicaid, providers had to perform such actions as updating their licensure within ePREP. Failure to do so causes the Medicaid Management Information System (MMIS2) to reject these encounters. MDH worked with the Medicaid managed care organizations (MCOs) for two years prior to the implementation of this change to help ensure a seamless transition. Despite these planning efforts, provider-related encounter rejections increased significantly in CY 2020. While the data improved slightly for CY 2021, the number of provider-related rejected encounters remained above pre-2020 levels.[20]

Concerned that this increase in rejected encounters would affect the validity of the base data for setting the MCO payment rates, MDH added the following language to the MCO contracts for CY 2023 that would have established a penalty for submitting rejected encounters.

> *The Department will require MCOs to submit all unreconciled encounters rejected by the Department's Medicaid Management Information System (MMIS) to its data warehouse vendor, The Hilltop Institute at University of Maryland Baltimore County (Hilltop), for the period covered by this Agreement to determine enrollee utilization for risk adjustment during the capitation rate setting process.*

[20] See the 2021 *Encounter Data Validation Report*.

The MCO is expected to submit less than five (5) percent of its total encounters for the calendar year using the rejected encounter submission process developed by the Department and Hilltop, beginning in calendar year 2023 for 2021, 2022, and 2023 encounters submitted for capitation rate risk adjustment.

Penalties will be assessed for rejected encounters at or exceeding five (5) percent of total encounters for failing to submit accurate and complete encounter data. Penalties will follow the scheme on the following page as a percentage of the MCO's total capitation for the period covered by this Agreement.[21]

% of Encounters Accepted in MMIS	% of Encounters Submitted to Hilltop after Encounter Deadline	Revenue Penalty %
> 95%	≤ 5%	0.0%
≥ 94.0% - ≤ 95.0%	≥ 5.0% - ≤ 6.0%	0.5%
≥ 93.0% - ≤ 94.0%	≥ 6.0% - ≤ 7.0%	0.6%
≥ 92.0% - ≤ 93.0%	≥ 7.0% - ≤ 8.0%	0.7%
≥ 91.0% - ≤ 92.0%	≥ 8.0% - ≤ 9.0%	0.8%
≥ 90.0% - ≤ 91.0%	≥ 9.0% - ≤ 10.0%	0.9%
≤ 90.0%	≤ 10.0%	1.0%

Upon further investigation, after the MCO contracts were signed, Hilltop determined that the data necessary to evaluate rejected encounters are present in Hilltop's monthly MMIS2 data feeds, eliminating the need for a separate encounter submission process. As a result, MDH determined any penalties for rejected encounters exceeding 5% of total encounters would not be assessed. The purpose of this memorandum is to explain Hilltop's methodology for identifying rejected encounters that would have been subject to the policy and for calculating the penalty.

Methodology

Step 1: Identifying Rejected Encounters

MDH provides Hilltop with monthly feeds of MMIS2 data. As part of the production process, Hilltop filters out rejected encounters based upon CLMSTAT = 'X' and stores them in a separate file. These rejected encounters have historically been excluded from rate setting and other analyses.

Hilltop pulled these rejected encounters and identified those as provider-related using the following codes from Table 1. Encounters with multiple denial reasons are only counted once. If an encounter has multiple denial reasons, if any of them are provider-related, the encounter is categorized as provider-related. Pharmacy encounters were removed from the calculation.

[21] 2023 Contract Requirement

Table 1. Provider-Related Code Categorization

Category	Error Code
Provider Enrollment	122, 412, 951, 961, 962, 963, 964, 965, 971, 975, 976
Provider but Not Enrollment	000, 100, 200, 300, 367, 400, 500, 531, 600, 700, 800, 900, 922, 937, 950, 952
Not Provider-Related	All else

Step 2: De-Duplication and Identifying Whether a Rejected Encounter was Ultimately Accepted

Because new ICNs are generated upon re-submission, creating a complete history of an encounter's rejection to acceptance pathway is impossible to trace. Therefore, a fuzzy match algorithm was developed to de-duplicate encounter submissions (i.e., match a rejected encounter to an encounter that was ultimately accepted). From the universe of accepted and denied encounters, Hilltop identifies rejected encounters that were eventually accepted by using Medicaid ID (RECIPNO), beginning date of service (BEGDOS), and Revenue code or Procedure code (REVCODE/PROCODE). Medicaid provider number (PROV) is also used for de-duplication only if there are no provider-related error codes on the rejected encounter. Rejected encounters that were never accepted are then merged into the set of accepted encounters to form "submitted encounters," or the denominator. Hilltop categorizes the rejected encounter into Provider-Related – Enrollment, Provider-Related – Not Enrollment, and Not Provider-Related as described in Step 1. Hilltop validated the rejection identification algorithm against samples from the MCOs. Scenarios validated included:

- An encounter is rejected after it was accepted. In this case, the encounter is not included in the numerator and does not count against the rejection rate.
- Encounters with $0 payment with CN1 = '09' are not included in the numerator and do not count against the rejection rate.
- Encounters rejected for NPI, including exceptions 961, 962, 971, and 975, are used in both the rejection rate calculation and risk adjustment.
- Submitted and resubmitted encounters from a two-day period totaling over 200,000 unique ICNs were tested. Of these, approximately 9,000 were rejected, of which 23% had a CN01 segment of '09'; therefore around 77% (6,990) of the sample's rejected encounters would be included in the numerator.
- A procedure that is rejected for being a duplicate of a previously paid claim is never included in the numerator.

Step 3: Calculating the Error Rate

The calculation for the error rate is as follows, noting that pharmacy encounters are excluded:

$$Error\ Rate\ = \frac{Rejected\ Encounters\ (excluding\ CN1\ '09')}{Submitted\ Encounters}$$

$Rejected\ Encounter$ = Encounter with CLMSTAT 'X' that was never accepted

$Accepted\ Encounter$ = Encounter with CLMSTAT not equal to 'X' that may have been rejected one or more times

$Submitted\ Encounters$ = Rejected Encounters + Accepted Encounters

All rejected encounters have a CN1 segment that is "used to identify a denied claim between the MCO and the Provider or a sub-capitated agreement between the MCO and Provider;" valid values are "05 – Sub-capitated," "09 – Denied", or blank.[22] For the error rate, those rejected encounters with the CN1 segment not equal to "09" are included in the numerator. Note that, separately, both "05" and "09" were included in the ACG model and used for RAC assignment.

Table 2 presents the number and percentage of rejected encounters for each MCO for CY 2022, reflecting the MMIS as of August 2023. The statewide average was 2.1% with a range of 0.3% to 4.0%. Overall, the data show a 0.2% improvement over CY 2021.

Table 2. Numerator and Denominator by MCO for CY 2022

MCO	Rejected Encounters (excluding CN1 "09") [Error Rate Numerator]	Submitted Encounters [Error Rate Denominator]	Error Rate [Numerator/ Denominator]
1	11,017	1,152,191	1.0%
2	50,359	1,766,454	2.9%
3	18,291	737,083	2.5%
4	61,304	2,346,267	2.6%
5	50,031	6,118,912	0.8%
6	45,091	2,563,262	1.8%
7	362,888	9,038,359	4.0%
8	11,533	4,228,569	0.3%
9	99,806	6,469,491	1.5%

Conclusion

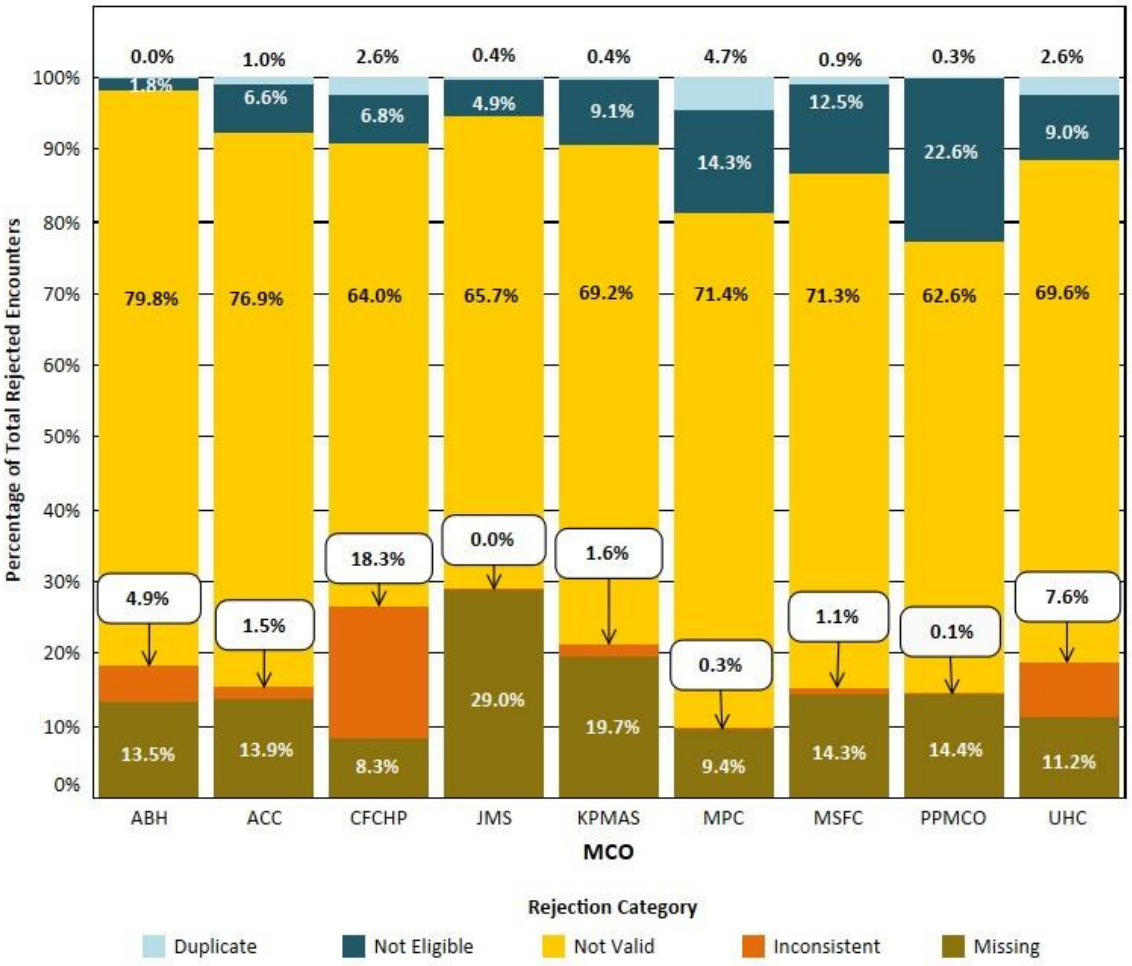
Pursuant to the MCO 2023 contracts' inclusion of improving encounter submission error rates with a target of error rates below 5%, Hilltop identified denied encounters in its MMIS data warehouse. In collaboration with MDH, Hilltop developed a method to calculate the error rate of submitted encounters and to categorize errors into provider and non-provider related. Hilltop validated the methodology by testing samples provided by the MCOs against various scenarios of

[22] 837 Companion Guide

accepted and rejected encounter history. The error rate for CY 2022 submissions for all MCOs is below the 5% threshold.

Applying this methodology going forward, all encounters for a given calendar year will be accepted up until the mid-June encounter cutoff date the following year. As noted in the MCO CY 2024 contract, MDH will convene a workgroup to define which encounters should be removed from the HFMR. Hilltop will use the methodology outlined above to identify and de-duplicate rejected encounters. Hilltop will also apply any additional business rules as agreed to by the encounter data workgroup to define the universe of encounters that should not be included in the HFMR. These data will be shared with MDH's contracted independent accounting firm (currently Myers & Stauffer) to perform procedures to verify that these encounters have been excluded from the HFMR.

Appendix B. Percentage of Encounters Rejected by EDI Rejection Category, by MCO, CY 2022



Appendix C. Rejection Codes, Errors, by Category with Provider-Related and Other Rejection Codes, CY 2022

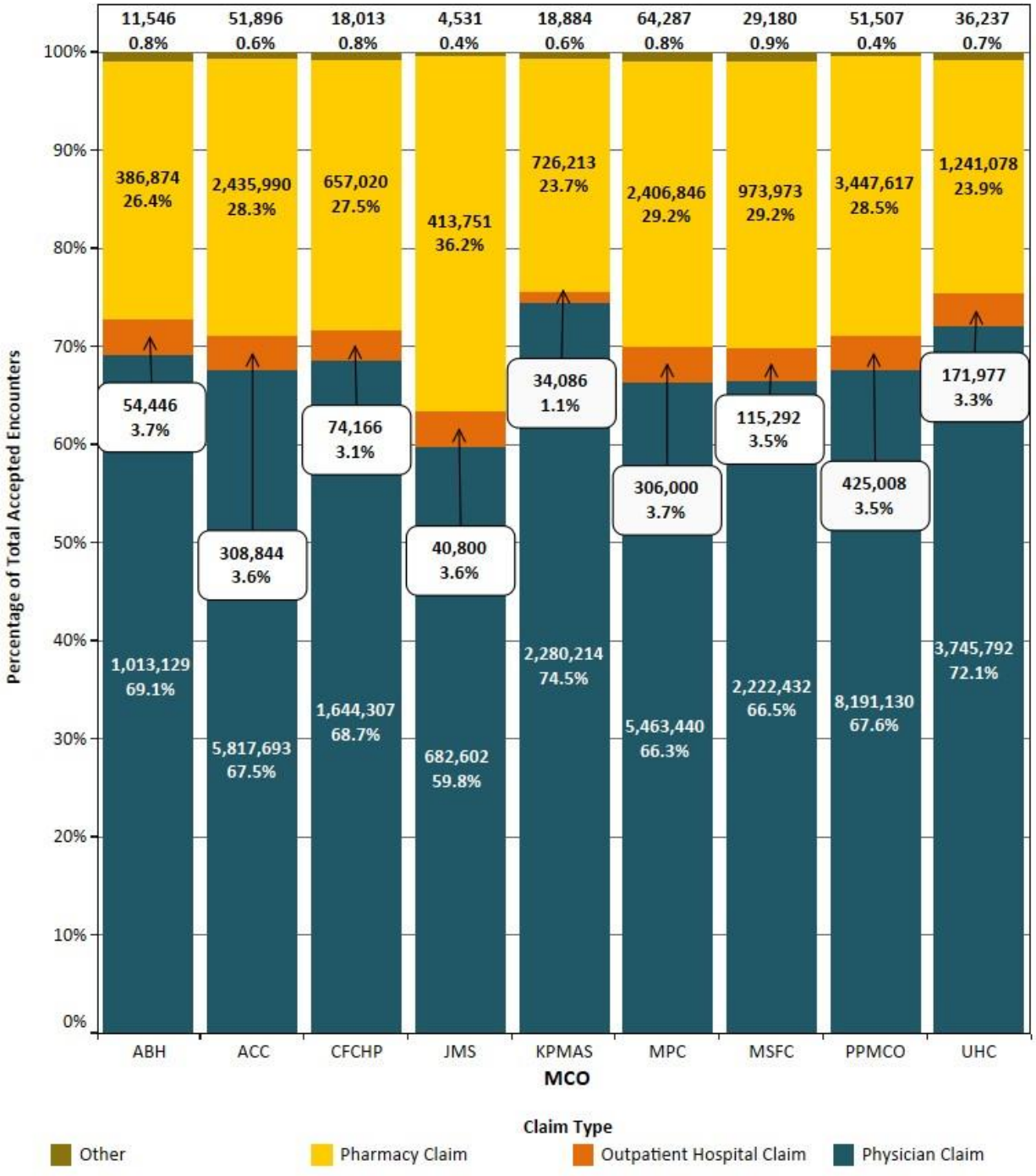
Rejection Type	Rejection Category	Last 3 of ICN	Error Description
Provider-Related	Provider Enrollment	122	INVALID RENDERING PROV NUMBER
		412	REND PROV NOT ON FILE
		961	PAY-TO/FAC PROVIDER SUSPENDED
		962	RENDERING PROVIDER SUSPENDED
		963	PAY-TO/FAC PROV NOT ACT DOS
		964	REND PROV NOT ACT ON DOS
		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

Rejection Type	Rejection Category	Last 3 of ICN	Error Description
Other (cont.)	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
		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.
		951	PROVIDER NUMBER NOT VALID
		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 Rejection Descriptions by Number of Rejected Encounters by MCO, CY 2022

MCO	Error Description	CY 2020	Error Description	CY 2021	Error Description	CY 2022
ABH	INVALID RENDERING PROV NUMBER	25,063	PROVIDER NUMBER NOT VALID	95,559	PROVIDER NUMBER NOT VALID	20,227
	PROVIDER NUMBER NOT VALID	18,862	BILLING PROV NUM MISSING	81,186	INVALID RENDERING PROV NUMBER	14,422
	NPI NUMBER INVLD FR PYTOPROV	13,486	INVALID RENDERING PROV NUMBER	75,487	BILLING PROV NUM MISSING	13,144
ACC	PROVIDER NUMBER NOT VALID	296,648	PAY-TO/FAC PROV NOT ACT DOS	148,131	PAY-TO/FAC PROV NOT ACT DOS	96,012
	BILLING PROV NUM MISSING	201,778	PROVIDER NUMBER NOT VALID	103,159	PROVIDER NUMBER NOT VALID	62,768
	INVALID RENDERING PROV NUMBER	180,265	BILLING PROV NUM MISSING	85,744	NPI NUMBER INVLD FR PYTOPROV	48,722
CFCHP	ORIG ICN FD ON HIST ALRD VOID	439,756	INVALID RENDERING PROV NUMBER	71,050	INVALID RENDERING PROV NUMBER	70,336
	INVALID RENDERING PROV NUMBER	352,329	ORIG ICN FD ON HIST ALRD VOID	38,922	ORIG ICN N/FOUND ON HISTORY	62,413
	REND PROV NOT ACT ON DOS	126,315	BILLING PROV NUM MISSING	30,250	PROVIDER NUMBER NOT VALID	40,799
JMS	BILLING PROV NUM MISSING	35,694	BILLING PROV NUM MISSING	78,790	PROVIDER NUMBER NOT VALID	73,311
	NPI NUMBER INVLD FR PYTOPROV	35,244	NPI NUMBER INVLD FR PYTOPROV	78,619	BILLING PROV NUM MISSING	72,728
	RECIP NOT ENRLD W/RPT MCO DOS	5,422	PROC/REV CODE NOT COVD DOS	7,333	NPI NUMBER INVLD FR PYTOPROV	72,713
KPMAS	PROVIDER NUMBER NOT VALID	34,533	REND PROV NOT ACT ON DOS	65,188	PROVIDER NUMBER NOT VALID	45,888
	INVALID RENDERING PROV NUMBER	15,026	NPI NUMBER INVLD FR PYTOPROV	50,865	NPI NUMBER INVLD FR PYTOPROV	43,197
	NPI NUMBER INVLD FR PYTOPROV	14,761	BILLING PROV NUM MISSING	49,696	BILLING PROV NUM MISSING	41,877
MPC	INVALID RENDERING PROV NUMBER	177,630	INVALID RENDERING PROV NUMBER	189,825	PAY-TO/FAC PROV NOT ACT DOS	119,963
	PROVIDER NUMBER NOT VALID	146,992	PAY-TO/FAC PROV NOT ACT DOS	125,802	PROVIDER NUMBER NOT VALID	85,691
	BILLING PROV NUM MISSING	126,517	PROVIDER NUMBER NOT VALID	124,747	RECIP NOT ENRLD W/RPT MCO DOS	67,711
MSFC	BILLING PROV NUM MISSING	93,903	BILLING PROV NUM MISSING	47,996	PAY-TO/FAC PROV NOT ACT DOS	20,532
	PROVIDER NUMBER NOT VALID	79,936	PAY-TO/FAC PROV NOT ACT DOS	30,791	PROVIDER NUMBER NOT VALID	11,300
	NPI NUMBER INVLD FR PYTOPROV	73,427	PROVIDER NUMBER NOT VALID	30,182	BILLING PROV NUM MISSING	6,398
PPMCO	PROVIDER NUMBER NOT VALID	259,111	PROVIDER NUMBER NOT VALID	199,364	RECIP NOT ENRLD W/RPT MCO DOS	227,772
	BILLING PROV NUM MISSING	243,694	BILLING PROV NUM MISSING	180,024	PROVIDER NUMBER NOT VALID	225,291
	NPI NUMBER INVLD FR PYTOPROV	185,075	NPI NUMBER INVLD FR PYTOPROV	122,306	BILLING PROV NUM MISSING	159,157
UHC	PROVIDER NUMBER NOT VALID	176,208	PROVIDER NUMBER NOT VALID	157,534	PROVIDER NUMBER NOT VALID	131,176
	INVALID RENDERING PROV NUMBER	143,864	PAY-TO/FAC PROV NOT ACT DOS	125,534	NPI#NFDONPROVFLFRENREFFACLTY	86,177
	BILLING PROV NUM MISSING	106,311	INVALID RENDERING PROV NUMBER	72,331	PAY-TO/FAC PROV NOT ACT DOS	55,829

Appendix E. Number and Percentage of Accepted Encounters by Claim Type and MCO, CY 2022

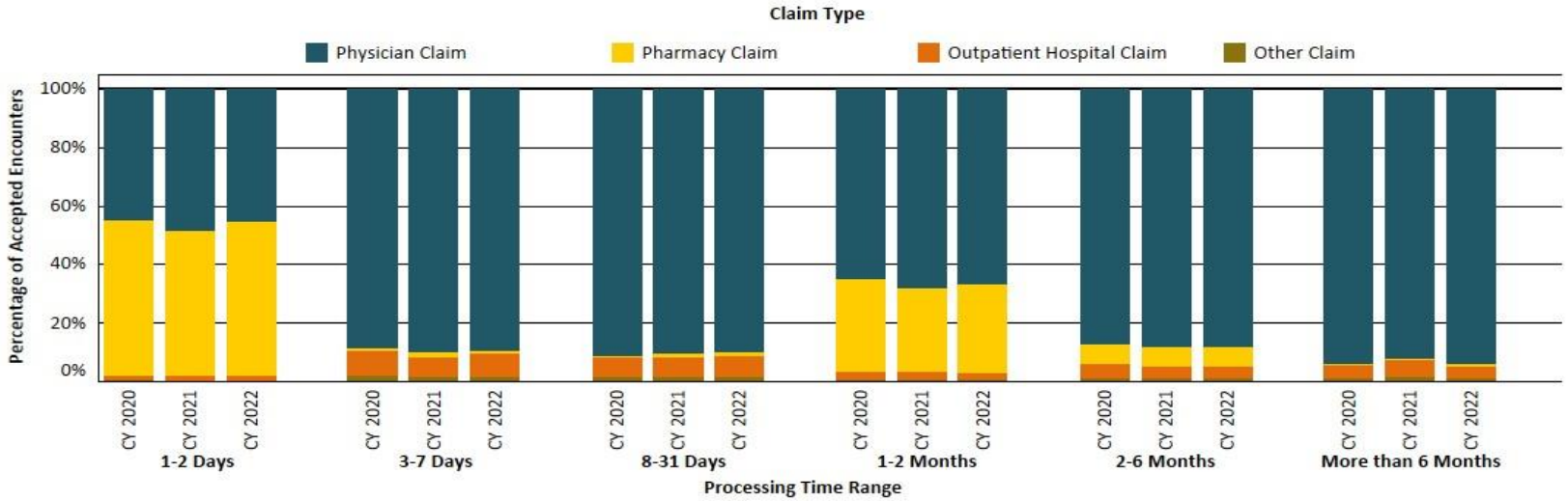


Note: "Other" is a combination of inpatient hospital claims, community-based services claims, and long-term care claims.

Appendix F. Number of Accepted Medical Encounters by MCO and Pay Category, CY 2020–CY 2022

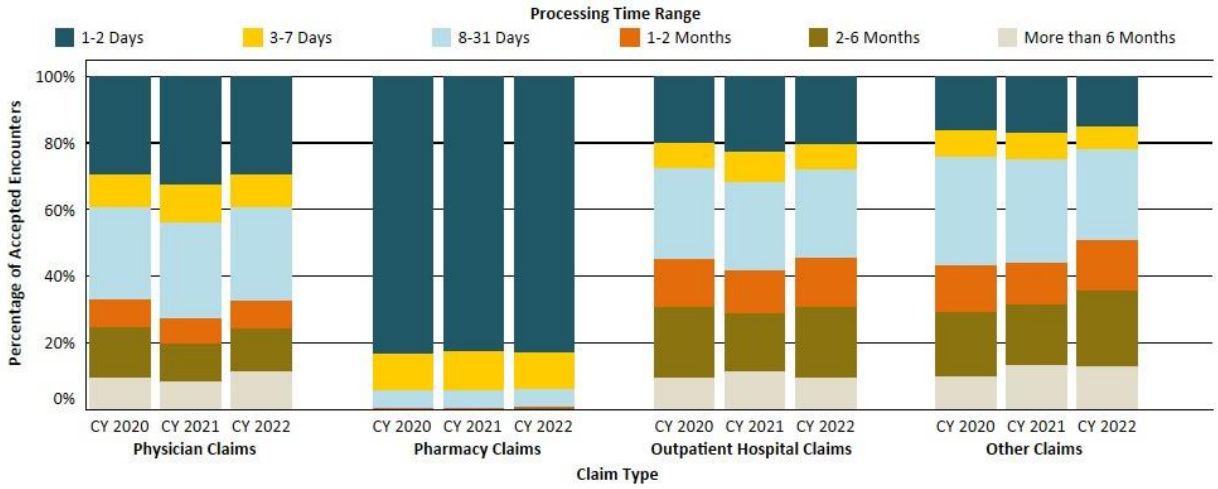
MCO	Populated			$0		
	CY 2020	CY 2021	CY 2022	CY 2020	CY 2021	CY 2022
ABH	427,437	639,721	697,565	98,213	140,020	165,635
ACC	3,813,960	4,789,407	4,729,467	374,433	488,070	757,248
CFCHP	680,020	869,961	1,151,967	114,605	237,519	290,813
JMS	209,224	247,332	222,651	405,416	412,501	428,663
KPMAS	1,332,909	1,973,718	2,021,446	47,118	118,827	136,943
MPC	3,384,552	4,217,329	4,230,981	691,817	717,480	766,411
MSFC	936,837	1,117,795	1,117,555	904,435	1,074,314	907,070
PPMCO	4,381,528	5,531,945	5,284,443	970,711	1,341,220	1,641,938
UHC	2,132,482	2,622,037	2,511,339	585,247	814,233	845,955
Total	**17,298,949**	**22,009,245**	**21,967,414**	**4,191,995**	**5,344,184**	**5,940,676**

Appendix G. Distribution of Accepted Encounters by Processing Time and Claim Type, CY 2020–CY 2022



Processing Time Range	CY 2020				CY 2021				CY 2022			
	Physician Claim	Outpatient Hospital Claim	Pharmacy Claim	Other Claim	Physician Claim	Outpatient Hospital Claim	Pharmacy Claim	Other Claim	Physician Claim	Outpatient Hospital Claim	Pharmacy Claim	Other Claim
1-2 Days	44.9%	1.7%	53.2%	0.3%	48.7%	1.7%	49.4%	0.2%	45.7%	1.6%	52.6%	0.2%
	7,829,006	290,059	9,284,451	49,060	9,884,739	347,471	10,026,380	49,039	9,135,115	310,346	10,510,053	43,446
3-7 Days	65.2%	2.8%	31.4%	0.6%	68.2%	2.8%	28.5%	0.5%	66.5%	2.6%	30.5%	0.4%
	2,557,495	111,235	1,229,931	23,348	3,327,402	135,723	1,392,401	23,053	3,061,363	118,118	1,407,027	19,195
8-31 Days	87.4%	4.6%	6.9%	1.1%	88.3%	4.2%	6.6%	0.9%	88.3%	4.1%	6.8%	0.8%
	7,530,801	394,196	596,126	97,894	8,731,435	413,259	650,512	88,765	8,826,893	409,013	680,381	78,528
1-2 Months	88.6%	8.6%	1.0%	1.8%	90.2%	7.2%	1.2%	1.3%	89.8%	7.8%	0.9%	1.5%
	2,163,246	210,294	25,139	42,989	2,478,225	198,767	32,578	36,457	2,587,218	223,184	26,697	42,597
2-6 Months	91.4%	7.1%	0.2%	1.3%	90.9%	7.2%	0.6%	1.4%	90.2%	7.4%	0.9%	1.5%
	3,979,681	307,591	8,798	57,561	3,423,369	269,617	21,363	52,464	3,953,948	322,630	39,678	65,843
More than 6 Months	93.9%	5.0%	0.0%	1.1%	92.2%	6.3%	0.1%	1.4%	94.4%	4.0%	0.7%	1.0%
	2,591,238	136,730	569	30,503	2,488,840	170,314	1,923	38,588	3,496,201	147,328	25,526	36,472
Total	**67.4%**	**3.7%**	**28.2%**	**0.8%**	**68.5%**	**3.5%**	**27.4%**	**0.7%**	**68.2%**	**3.4%**	**27.8%**	**0.6%**
	26,651,467	**1,450,105**	**11,145,014**	**301,355**	**30,334,010**	**1,535,151**	**12,125,157**	**288,366**	**31,060,738**	**1,530,619**	**12,689,362**	**286,081**

Appendix H. Percentage of the Total Number of Accepted Encounters Submitted by Claim Type and Processing Time, CY 2020–CY 2022

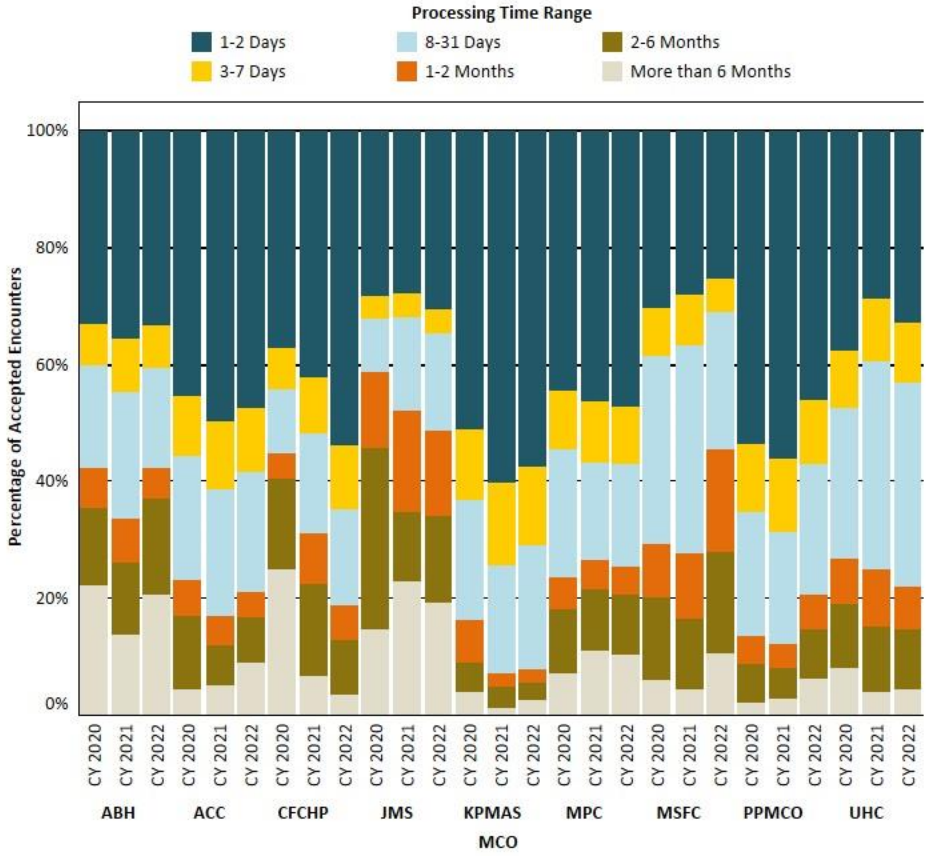


Processing Time Range	Physician Claim			Pharmacy Claim			Outpatient Hospital Claim			Other Claim		
	CY 2020	CY 2021	CY 2022	CY 2020	CY 2021	CY 2022	CY 2020	CY 2021	CY 2022	CY 2020	CY 2021	CY 2022
1-2 Days	29.4%	32.6%	29.4%	83.3%	82.7%	82.8%	20.0%	22.6%	20.3%	16.3%	17.0%	15.2%
	7,829,006	9,884,739	9,135,115	9,284,451	10,026,380	10,510,053	290,059	347,471	310,346	49,060	49,039	43,446
3-7 Days	9.6%	11.0%	9.9%	11.0%	11.5%	11.1%	7.7%	8.8%	7.7%	7.7%	8.0%	6.7%
	2,557,495	3,327,402	3,061,363	1,229,931	1,392,401	1,407,027	111,235	135,723	118,118	23,348	23,053	19,195
8-31 Days	28.3%	28.8%	28.4%	5.3%	5.4%	5.4%	27.2%	26.9%	26.7%	32.5%	30.8%	27.4%
	7,530,801	8,731,435	8,826,893	596,126	650,512	680,381	394,196	413,259	409,013	97,894	88,765	78,528
1-2 Months	8.1%	8.2%	8.3%	0.2%	0.3%	0.2%	14.5%	12.9%	14.6%	14.3%	12.6%	14.9%
	2,163,246	2,478,225	2,587,218	25,139	32,578	26,697	210,294	198,767	223,184	42,989	36,457	42,597
2-6 Months	14.9%	11.3%	12.7%	0.1%	0.2%	0.3%	21.2%	17.6%	21.1%	19.1%	18.2%	23.0%
	3,979,681	3,423,369	3,953,948	8,798	21,363	39,678	307,591	269,617	322,630	57,561	52,464	65,843
More than 6 Months	9.7%	8.2%	11.3%	0.0%	0.0%	0.2%	9.4%	11.1%	9.6%	10.1%	13.4%	12.7%
	2,591,238	2,488,840	3,496,201	569	1,923	25,526	136,730	170,314	147,328	30,503	38,588	36,472
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
	26,651,467	**30,334,010**	**31,060,738**	**11,145,014**	**12,125,157**	**12,689,362**	**1,450,105**	**1,535,151**	**1,530,619**	**301,355**	**288,366**	**286,081**

Appendix I. Distribution of Accepted Encounters Submitted by MCO and Processing Time, CY 2022

Processing Time Range	ABH	ACC	CFCHP	JMS	KPMAS	MPC	MSFC	PPMCO	UHC	Total
1-2 Days	33.3%	47.5%	54.0%	30.6%	57.5%	47.1%	25.3%	46.2%	32.7%	**43.9%**
	487,509	4,091,315	1,292,233	348,967	1,759,690	3,879,689	846,462	5,592,468	1,700,627	**19,998,960**
3-7 Days	7.3%	10.9%	10.7%	4.0%	13.4%	9.9%	5.7%	10.7%	10.5%	**10.1%**
	107,111	938,817	255,441	46,089	408,538	817,168	190,869	1,296,341	545,329	**4,605,703**
8-31 Days	17.1%	20.5%	16.6%	16.7%	21.2%	17.5%	23.4%	22.4%	34.6%	**21.9%**
	250,583	1,767,395	396,159	190,298	648,137	1,441,499	782,908	2,719,358	1,798,478	**9,994,815**
1-2 Months	5.1%	4.4%	5.8%	14.8%	2.1%	4.7%	17.4%	5.8%	7.4%	**6.3%**
	75,281	380,594	138,808	168,487	64,619	383,584	581,766	704,562	381,995	**2,879,696**
2-6 Months	16.5%	7.6%	9.5%	14.6%	3.2%	10.2%	17.3%	8.6%	10.3%	**9.6%**
	241,981	654,923	227,331	166,282	97,091	843,801	579,281	1,036,417	534,992	**4,382,099**
6-7 Months	3.9%	1.0%	0.6%	2.4%	0.5%	1.6%	1.9%	1.4%	1.1%	**1.4%**
	56,975	89,146	14,474	27,832	14,978	134,212	63,008	169,653	59,555	**629,833**
7-12 Months	10.3%	5.2%	2.3%	13.1%	1.7%	5.8%	6.9%	3.6%	2.4%	**4.7%**
	151,565	447,272	55,176	150,127	52,034	474,105	231,563	441,632	126,810	**2,130,284**
More than 1 Year	6.5%	2.8%	0.6%	3.8%	0.5%	3.2%	1.9%	1.3%	0.9%	**2.1%**
	94,990	244,961	13,884	43,602	14,310	266,514	65,020	154,831	47,298	**945,410**
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
	1,465,995	**8,614,423**	**2,393,506**	**1,141,684**	**3,059,397**	**8,240,572**	**3,340,877**	**12,115,262**	**5,195,084**	**45,566,800**

Appendix J. Percentage of Accepted Encounters Submitted by MCO and Processing Time, CY 2020–CY 2022



MCO	Year	1-2 Days	3-7 Days	8-31 Days	1-2 Months	2-6 Months	More than 6 Months
ABH	CY 2020	33.2%	7.0%	17.4%	6.8%	13.3%	22.3%
	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%
ACC	CY 2020	45.4%	10.3%	21.0%	6.2%	12.5%	4.6%
	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%
CFCHP	CY 2020	37.1%	7.1%	10.9%	4.3%	15.6%	24.9%
	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%
JMS	CY 2020	28.3%	3.7%	9.4%	12.7%	31.0%	14.8%
	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%
KPMAS	CY 2020	51.1%	12.1%	20.5%	7.2%	5.1%	4.0%
	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%
MPC	CY 2020	44.4%	10.0%	22.1%	5.1%	11.0%	7.4%
	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%
MSFC	CY 2020	30.4%	8.2%	32.0%	9.2%	14.1%	6.1%
	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%
PPMCO	CY 2020	53.7%	11.5%	21.4%	4.7%	6.5%	2.3%
	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%
UHC	CY 2020	37.7%	9.7%	25.9%	7.6%	10.9%	8.2%
	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%

Appendix K. 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 2020 through CY 2022.

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 L. Dementia Codes

Dementia-related services in CY 2022 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 additional digits, such as F02.81.

The Hilltop Institute

UMBC

Sondheim Hall, 3rd Floor
1000 Hilltop Circle
Baltimore, MD 21250
410-455-6854
www.hilltopinstitute.org