



October 2018

# MEDICAID MANAGED CARE

## Additional CMS Actions Needed to Help Ensure Data Reliability

# GAO Highlights

Highlights of [GAO-19-10](#), a report to congressional requesters

## Why GAO Did This Study

Questions have been raised about the reliability of states' Medicaid managed care encounter data, which are often used to set rates paid to MCOs. States collect the data from the Medicaid MCOs they contract with and then submit the data to CMS through T-MSIS. With managed care comprising nearly half of the total federal Medicaid expenditures in 2017, the importance of reliable encounter data is paramount to ensuring that rates are appropriate and beneficiaries in Medicaid managed care are receiving covered services.

GAO was asked to examine Medicaid managed care encounter data reliability. In this report, GAO examined (1) states' oversight practices, and (2) CMS's actions for helping to ensure encounter data reliability. GAO reviewed documents on oversight practices, and interviewed Medicaid officials from eight states, selected based on enrollment and geography; and collected information from two MCOs (one with low and one with high enrollment) in each of the eight states. GAO also reviewed relevant federal regulations and guidance; and interviewed CMS officials.

## What GAO Recommends

The Administrator of CMS should provide states information on (1) scope and methodology requirements for encounter data audits; (2) required content of the annual assessments; and (3) circumstances for deferring or disallowing matching funds in response to noncompliant T-MSIS data submissions. The Department of Health and Human Services agreed with the first two recommendations and neither agreed nor disagreed with the third recommendation.

View [GAO-19-10](#). For more information, contact Carolyn L. Yocom at (202) 512-7114 or [yocomc@gao.gov](mailto:yocomc@gao.gov).

October 2018

# MEDICAID MANAGED CARE

## Additional CMS Actions Needed to Help Ensure Data Reliability

### What GAO Found

The Centers for Medicare & Medicaid Services (CMS) requires states to collect service utilization data—known as encounter data—from Medicaid managed care organizations (MCO). GAO found that, in 2017, all eight selected states it reviewed checked MCO-submitted encounter data for reasonableness—that is, they checked that the data contained valid values, were submitted in a timely manner, and reflected historical trends. Three of the selected states used an additional oversight practice—comparing encounter data with an external data source—which could involve comparing encounter data with a sample of medical records. Such comparisons are recommended by CMS and other experts, such as actuaries, to help ensure data reliability (i.e., accuracy, completeness, and timeliness). Five of the eight selected states reported using mechanisms—such as penalties—to enforce encounter data reporting requirements in 2017.

**Oversight Practices for Encounter Data Used by Selected States, 2017**

Oversight practice	Selected states							
	CA	NE	NH	NY	OH	TX	UT	WV
Conducted reasonableness checks	●	●	●	●	●	●	●	●
Compared to external data sources	●	○	○	○	●	●	○	○
Required corrective action plans, assessed penalties, or provided performance incentives	●	●	●	●	○	●	○	○

Legend: ● = used practice; ○ = did not use practice

Source: GAO analysis of state reported information | GAO-19-10

GAO found that CMS has provided states with limited information on how to fulfill new regulatory requirements related to encounter data reliability. For example, CMS has provided states with limited information on

- the required scope and methodology for the required independent audits of state encounter data; and
- the required content of annual assessments of encounter data reporting that states must submit to the agency.

Because of the limited information from CMS, the agency will not have the information it needs to perform effective oversight of encounter data reliability.

States report encounter data to CMS's Transformed Medicaid Statistical Information System (T-MSIS). However, CMS has not provided states with information on the circumstances under which the agency will determine whether to defer or disallow federal matching funds in response to T-MSIS data submissions that do not comply with the agency's standards. In 2016, CMS indicated that it would provide this information before taking such actions. Until CMS provides this information to states, the effectiveness of deferring or disallowing funds as a potential enforcement tool to ensure state compliance is diminished, thus potentially hampering its efforts to ensure the reliability of encounter data.

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## Abbreviations

CMS	Centers for Medicare & Medicaid Services
EQRO	external quality review organization
FFS	fee-for-service
HEDIS	Healthcare Effectiveness Data and Information Set
HHS	Department of Health and Human Services
IT	information technology
MCO	managed care organization
MMIS	Medicaid Management Information System
MSIS	Medicaid Statistical Information System
T-MSIS	Transformed Medicaid Statistical Information System

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October 19, 2018

Congressional Requesters:

Medicaid, the joint federal-state health care program for low income and medically needy individuals, is one of the nation's largest health care programs. In 2017, federal expenditures for Medicaid were an estimated \$364 billion, nearly half of which (\$171 billion) paid for services delivered under managed care. Under managed care, states typically contract with managed care organizations (MCO) to provide a specific set of Medicaid-covered services to Medicaid beneficiaries in return for a set payment per beneficiary, referred to as a capitated rate.<sup>1</sup> MCOs, in turn, contract with health care providers and pay them for the services they provide. Used effectively, managed care can help states reduce Medicaid program costs and better manage utilization of health care services. However, we have previously reported that oversight of Medicaid managed care remains limited.<sup>2</sup>

Encounter data are the primary record of services provided to beneficiaries in managed care, and these data are used for several critical purposes, including program oversight, expenditure forecasting, and policy analysis.<sup>3</sup> Federal law has long required states to report to the Centers for Medicare & Medicaid Services (CMS) managed care enrollee encounter data as specified by the Secretary of the Department of Health and Human Services (HHS), and, over time, Congress has strengthened

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<sup>1</sup>States may have different types of managed care arrangements in Medicaid. In this report, references to Medicaid managed care are to comprehensive, risk-based managed care, the most common type of managed care arrangement.

<sup>2</sup>We reported in May 2018 that there had been only 27 audits and investigations over a 5-year period that identified program integrity risks related to Medicaid managed care, and they involved a small fraction of the MCOs operating nationwide. See GAO, *Medicaid: CMS Should Take Steps to Mitigate Program Risks in Managed Care*, [GAO-18-291](#) (Washington, D.C.: May 7, 2018.) See also GAO, *Medicaid Managed Care: Improvements Needed to Better Oversee Payment Risks*, [GAO-18-528](#) (Washington, D.C.: July 26, 2018).

<sup>3</sup>The Centers for Medicare & Medicaid Services, within the Department of Health and Human Services, defines enrollee encounter data as the information relating to the receipt of any item(s) or service(s) by an enrollee under a contract between a state and an organization providing comprehensive or more limited services. See 42 C.F.R. § 438.2 (2017).

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CMS's ability to enforce these requirements.<sup>4</sup> Reliable encounter data—which for the purposes of this report we have defined to mean data that are complete, accurate, and submitted in a timely manner, as required by regulation—are central to CMS's and the states' abilities to effectively oversee the Medicaid managed care program. CMS and the states can use encounter data to, for example, identify inappropriate billing patterns and to help ensure that beneficiaries have access to covered services and that capitated rates are set appropriately. However, we and HHS's Office of Inspector General have previously identified reliability problems with these data.<sup>5</sup>

The oversight activities of states and CMS—including the reporting requirements they establish and the ways they monitor data submissions—play an important role in encounter data reliability. In recent years, CMS has taken various actions that could improve reliability, such as updating its regulations for managed care through its 2016 final rule and implementing the Transformed Medicaid Statistical Information System (T-MSIS) initiative, which has been a significant, multi-year effort by CMS and states to improve the collection and reliability of Medicaid utilization and expenditure data.<sup>6</sup>

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<sup>4</sup>The Balanced Budget Act of 1997 required states to submit detailed individual enrollee encounter data to CMS as a condition of receiving federal reimbursement for mechanized claims processing systems. Pub. L. No. 105-33, § 4753, 111 Stat. 251, 525 (codified as amended at 42 U.S.C. § 1396b(r)(1)(F)). In 2010, Congress expanded the required data set and added two new provisions prohibiting federal payment in circumstances in which an MCO contract does not sufficiently require encounter data reporting and in which an MCO fails to report sufficient encounter data. See Patient Protection and Affordable Care Act, Pub. L. No. 111-148, §§ 6402(c), 6504(a)-(b), 124 Stat. 757, 776-7 (2010) (codified as amended at 42 U.S.C. §§ 1396b(i)(25), 1396b(m)(2)(A)(xi), 1396b(r)(1)(F)).

<sup>5</sup>In July 2015, HHS's Office of the Inspector General reviewed states' compliance with federal requirements regarding the submission of Medicaid encounter data and determined that 11 states did not report encounter data for all managed care plans operating in their states as required. In addition, we reported in 2015 that we could not assess utilization patterns in 2010 for Medicaid managed care beneficiaries in 19 states, because Medicaid Statistical Information System data were either not available or we found them to be unreliable. See HHS Office of the Inspector General, *Not All States Reported Medicaid Managed Care Encounter Data as Required*, OEI-07-13-00120 (Washington, D.C.: July 2015), and GAO, *Medicaid: Service Utilization Patterns for Beneficiaries in Managed Care*, [GAO-15-481](#) (Washington, D.C.: May 29, 2015).

<sup>6</sup>Medicaid and Children's Health Insurance Program (CHIP) Programs; Medicaid Managed Care, CHIP Delivered in Managed Care, and Revisions Related to Third Party Liability, 81 Fed. Reg. 27,498 (May 6, 2016) (hereafter, "the final rule").

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You asked us to examine the reliability of Medicaid encounter data and the challenges associated with collecting them. In this report, we examine

1. state oversight practices used to help ensure the reliability of encounter data that states collect from MCOs, and any challenges states and MCOs faced in collecting reliable encounter data; and
2. CMS's actions for helping to ensure the reliability of encounter data that the agency collects from states.

To examine state oversight practices used to help ensure the reliability of encounter data that states collect from MCOs, and any challenges states and MCOs faced in collecting reliable encounter data, we selected eight states to include in our review, based primarily on variations in their level of Medicaid managed care program enrollment and geography. Specifically, for each of the four federal geographic Census regions, we selected one state with high managed care program enrollment—California, New York, Ohio, and Texas—and one state with low managed care enrollment relative to other states in the same region—Nebraska, New Hampshire, Utah, and West Virginia.<sup>7</sup> For each state, we reviewed documentation of state oversight practices—particularly, state guidance to MCOs on how to submit data, contracts or model contracts between the states and their MCOs, and state analyses of MCO-reported data; reviewed information on the financial penalties or other mechanisms the states could use to enforce encounter data reporting; and interviewed state Medicaid officials about their oversight practices and any challenges they faced in collecting reliable encounter data.<sup>8</sup> We compared states' oversight practices with practices recommended by CMS and other experts, including former Medicaid Directors, actuaries with the American Academy of Actuaries, and representatives of external quality review organizations (EQRO).<sup>9</sup> We focused our examination primarily on those

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<sup>7</sup>When selecting states with low managed care enrollment, we excluded states with fewer than 10 percent of their Medicaid beneficiaries in a comprehensive managed care program. To make our selection, we used July 1, 2015, data, the most recent data available at the time of our selection.

<sup>8</sup>A model contract is a contract template as opposed to the signed and executed contract.

<sup>9</sup>EQROs are organizations that meet the competence and independence requirements set forth in 42 C.F.R. § 438.354 (2017), and perform external quality reviews, other related activities as set forth in 42 C.F.R. § 438.358 (2017), or both. States generally must use an EQRO for an annual quality review of the quality, timeliness, and access to health care services provided by states' MCOs, and often use their EQRO to conduct other optional activities, according to CMS officials.

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oversight practices that states used in calendar year 2017, and considered the frequency with which states' used these practices. To understand any challenges MCOs faced in collecting reliable encounter data, we interviewed or collected written responses from officials representing 16 MCOs—those with the fewest and greatest number of beneficiaries in each of the selected states. To supplement our review of these eight states' oversight practices, we also reviewed relevant federal regulations and interviewed the experts described above.

To examine CMS's actions for helping to ensure the reliability of encounter data that the agency collects from states, we reviewed relevant federal regulations, CMS guidance, and other CMS documentation. For example, we reviewed T-MSIS documentation; CMS guidance to its staff on how to conduct State Program Integrity Reviews; and CMS's most recent State Program Integrity Review reports for our selected states.<sup>10</sup> In addition, we reviewed reports describing the results of encounter data validation activities conducted by EQROs on behalf of our selected states. We also assessed CMS's practices against federal internal control standards.<sup>11</sup> To supplement our review, we interviewed CMS officials, state Medicaid officials, and obtained information from CMS on how selected states' T-MSIS data compared with the agency's data quality standards, but did not independently evaluate the quality of these states' encounter data.<sup>12</sup>

We conducted this performance audit from May 2017 to October 2018 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that

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<sup>10</sup>Program integrity refers to the proper management and function of the Medicaid program to ensure that quality and efficient care is provided and that Medicaid payments are used appropriately and with minimal waste. Program integrity efforts encompass a variety of administrative, review, and law enforcement strategies and a number of state stakeholders—including state Medicaid managed care offices and state Medicaid program integrity units—and CMS.

<sup>11</sup>See GAO, *Standards for Internal Control in the Federal Government*, [GAO-14-704G](#) (Washington, D.C.: Sept. 10, 2014). Internal control is a process effected by an entity's oversight body, management, and other personnel that provides reasonable assurance that the objectives of an entity will be achieved.

<sup>12</sup>For the purpose of this report, we define a data quality standard as containing a threshold that is used to assess the measure's outcome.



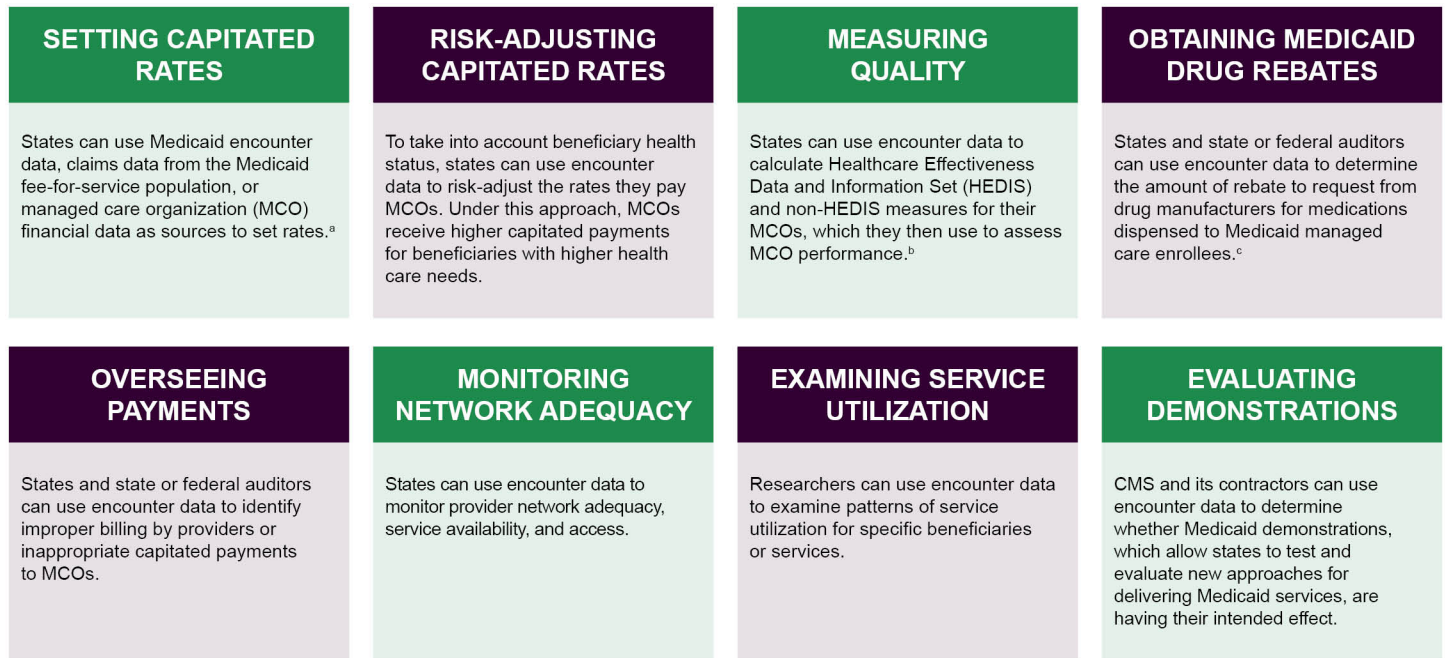
the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

## Background

### Uses of Medicaid Managed Care Encounter Data

Encounter data are used for a variety of purposes by state Medicaid program staff, state actuaries, state program integrity staff, CMS staff and contractors, state and federal auditors, and researchers. Uses of encounter data include, for example, setting the rates that states pay MCOs to provide Medicaid coverage and measuring quality. (See fig. 1.) Encounter data can include a variety of information, such as the beneficiary who received the service, the reason for the health care visit, the service provided, the location of the service provision, the health care provider who cared for the beneficiary, and the amount the MCO paid to the health care provider for the service rendered.

**Figure 1: Examples of Medicaid Managed Care Encounter Data Uses**



Source: GAO. | GAO-19-10

<sup>a</sup>Federal law requires capitation rates to be actuarially sound, meaning that they must be certified by an actuary as being reasonably calculated for the populations expected to be covered and for the services expected to be furnished under contract, among other things. See 42 U.S.C. § 1396b(m)(2)(A)(iii); 42 C.F.R. § 438.4 (2017).

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<sup>b</sup>HEDIS is a standardized dataset designed by the National Committee for Quality Assurance and used by health plans to measure performance on various dimensions of care and service, including effectiveness of care, access and availability of care, experience of care, utilization and risk adjusted utilization, and relative resource use.

<sup>c</sup>Under the Medicaid Drug Rebate Program, pharmaceutical manufacturers agree to pay rebates to states in order to have their outpatient drugs covered by Medicaid.

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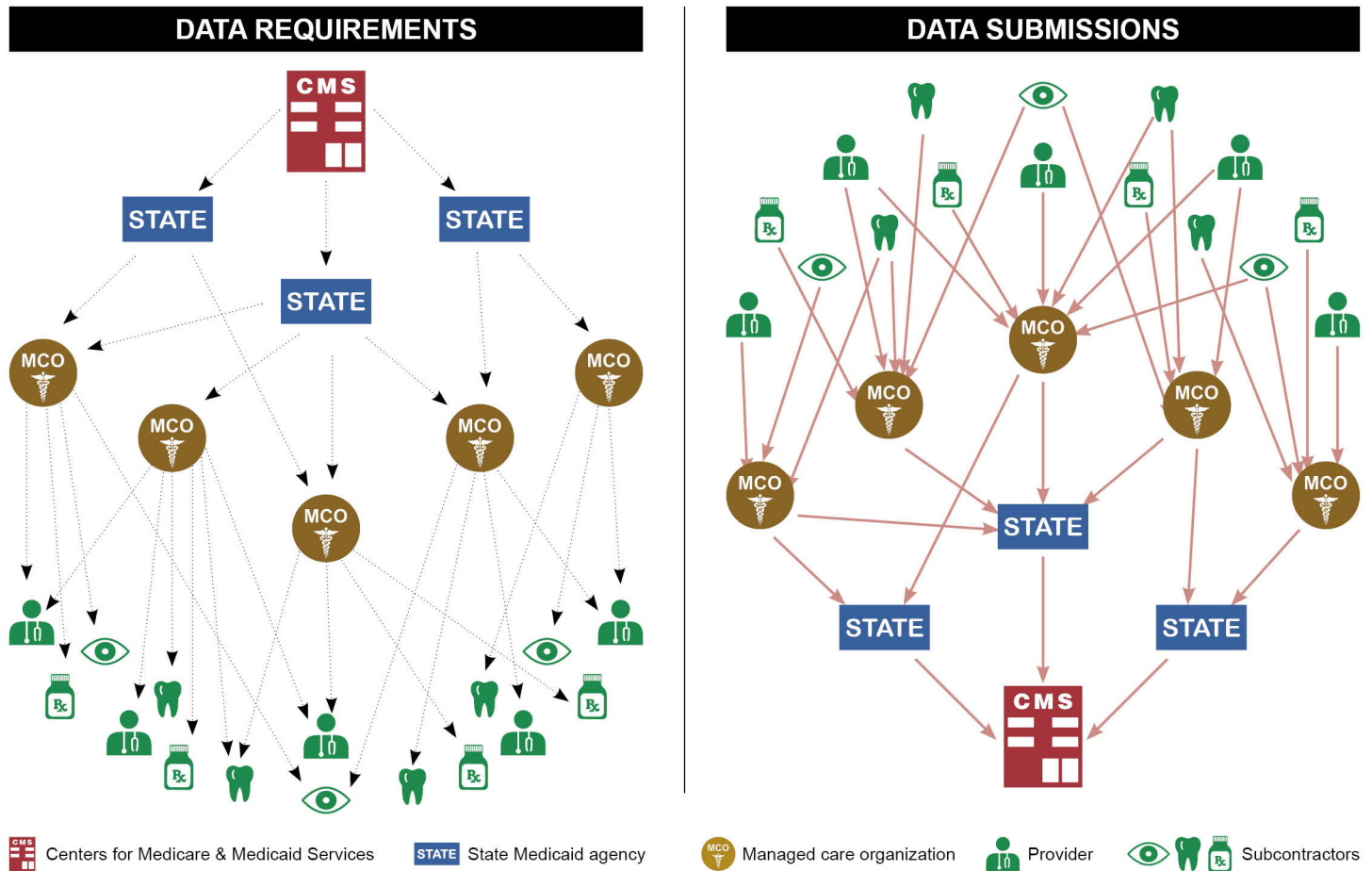
## Collection of Medicaid Managed Care Encounter Data

Although encounter data contain similar information to that captured on a Medicaid fee-for-service (FFS) claim, collecting encounter data is typically more complex, in part, because there are more entities involved in establishing data requirements.<sup>13</sup> Under Medicaid FFS, CMS establishes data requirements for states, and states, in turn, establish requirements for providers. When states operate managed care programs, they are subject to CMS's data requirements, they establish requirements for MCOs, and MCOs establish their own unique requirements for their participating health care providers. Some MCOs operate in multiple states and, thus, may have to report encounter data differently, depending on the requirements established by each state. (See fig. 2.)

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<sup>13</sup>In Medicaid FFS, individual providers receive payment from state Medicaid programs by submitting a claim for each service delivered. Under Medicaid managed care, providers receive payment from the MCO, which has a contract with the state to provide a specific set of Medicaid-covered services to beneficiaries.

Figure 2: Depiction of the Flow of Encounter Data Requirements and Submissions in Medicaid Managed Care



Source: GAO. | GAO-19-10

The additional entities involved in managed care arrangements can increase the complexity of encounter data submissions, because the data are transferred multiple times before being submitted to CMS.<sup>14</sup> At each transfer point, the individual data elements may need to be modified to meet the requirements of the receiving entity, and such modifications may create challenges given the different information technology (IT) systems

<sup>14</sup>According to CMS officials, the claims payment and adjudication process that MCOs have established for providers drives the transmission of encounter data. For a description of the challenges associated with collecting and submitting Medicaid encounter data, see Gerstorff, Jennifer L. and Sabrina Gibson, "Medicaid Encounter Data: The Next National Data Set." *In the Public Interest*, issue 13 (September 2016).

used by CMS, states, MCOs, and providers. Because states do not communicate directly with providers when they identify issues, this can create challenges for states in correcting erroneous encounter data. When MCOs subcontract for certain services—for example, dental or vision services—the complexity of data submissions increases, because there is an additional data transfer involved—providers may first submit data to the subcontractor, which then submits the data to the MCO.

**CMS Encounter Data Requirements and Other Guidance**

In its 2016 managed care final rule, CMS established several new encounter data requirements for states in order to improve the reliability of the encounter data that states collect from MCOs and report to CMS. (See table 1.)

**Table 1: Requirements Related to Encounter Data Reliability Added by the 2016 Medicaid Managed Care Rule**

Requirement	Year applicable <sup>a</sup>
States must submit an annual program report that includes an assessment of encounter data reported by each managed care organization (MCO). 42 C.F.R. § 438.66(e)(2)(ii) (2017).	Not specified <sup>b</sup>
States must require MCOs to ensure encounter data collected from providers are accurate and complete by verifying the accuracy and timeliness of reported data, <i>including data from network providers compensated under capitation arrangements</i> ; screening the data for completeness, logic, and consistency; and collecting data from providers in standardized formats to the extent feasible. <sup>c</sup> 42 C.F.R. § 438.242(b)(3) (2017).	2017
State contracts with MCOs must contain several provisions related to the collection of enrollee encounter data, including the frequency and amount of detail MCOs must report. 42 C.F.R. § 438.242(c) (2017).	2017
States must review and validate that encounter data submitted by MCOs to the state are a complete and accurate representation of the services provided to beneficiaries. 42 C.F.R. § 438.242(d) (2017).	2017
States must conduct at least once every 3 years an independent audit of the accuracy, truthfulness, and completeness of the encounter and financial data submitted by MCOs. 42 C.F.R. § 438.602(e) (2017).	2017 <sup>d</sup>
Before submitting encounter data to CMS, states must ensure (a) the data are validated for accuracy and completeness, and (b) that state submissions to CMS reflect data collected from MCOs. 42 C.F.R. § 438.818(a)(2) (2017).	2018
CMS will assess a state's submission of encounter data to determine if it complies with criteria for accuracy and completeness. 42 C.F.R. § 438.818(b) (2017).	2018
After CMS notifies a state about encounter data submission compliance issues, CMS may defer or disallow federal financial participation for all or a part of an MCO contract for the state's failure to submit accurate and complete data. 42 C.F.R. § 438.818(c) (2017).	2018

Source: GAO analysis of Centers for Medicare & Medicaid Services (CMS) regulations. | GAO-19-10

<sup>a</sup>The final rule requires states to be in compliance with these requirements beginning with the rating period for managed care contracts that begin on or after July 1, 2017, or July 1, 2018. For requirements with the July 1, 2017, compliance date, CMS has separately announced it would consider state requests for enforcement discretion. See Department of Health and Human Services, Centers for Medicare & Medicaid Services, Medicaid Managed Care Regulations with July 1, 2017 Compliance Dates, Informational Bulletin (June 30, 2017). A proposed rule that would streamline the managed care regulatory framework was pending review by the Office of Management and Budget as

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of October 9, 2018. CMS has not specified how this proposed rule, if issued, would revise current Medicaid managed care regulations, including those adopted under the final 2016 managed care rule.

<sup>b</sup>Per 42 C.F.R. § 438.66(e)(1)(i) (2017), the first report will be due after the contract year following the release of CMS guidance on the content and form of the report.

<sup>c</sup>Only the italicized text is a new requirement that applied beginning July 1, 2017. Non-italicized text denotes the requirement in effect prior to July 1, 2017. Compare 42 C.F.R. § 438.242(b) (2015) and (2017).

<sup>d</sup>Since the audits need only be conducted on data submissions once every three years beginning with managed care contract rating periods starting on or after July 1, 2017, a state need not complete such an audit until July 1, 2020, or later depending on when a state's rating period begins. Rating period refers to the 12-month period selected by the state for which the actuarially sound capitation rates are developed and documented in the rate certification. See 42 C.F.R. §438.2 (2017).

In addition to the final rule, CMS issued two other guidance documents in 2012 and 2013 that identify steps that states or their contractors may choose to take to help ensure the collection of reliable encounter data from MCOs, as summarized below.

- **Encounter data toolkit (2013).** The toolkit provides guidance for states on various practices that can help states manage their encounter data collection activities and ensure reliable data.<sup>15</sup> These practices include, for example, having dedicated state staff; establishing clear data reporting expectations in their contracts with MCOs; communicating effectively with MCOs, including through technical manuals or other written communication; and using validation practices to determine whether the data are complete and reliable.
- **Validation of encounter data reported by the MCO (2012).** This external quality review protocol includes steps that a state or a state contractor, such as an EQRO, may take on behalf of states to determine the reliability of data reported by MCOs to the state, such as by comparing encounter data to provider medical records.<sup>16</sup> EQROs are independent organizations that specialize in analyzing information on the quality, timeliness, and access to services provided by MCOs, which may include validating the reliability of encounter data.

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<sup>15</sup>See Mathematica Policy Research, *Encounter Data Toolkit* (Washington, D.C.: Nov. 30, 2013).

<sup>16</sup>See Centers for Medicare & Medicaid Services, *EQR Protocol 4: Validation of Encounter Data Reported by the MCO* (Baltimore, Md.: September 2012).

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## Transformed Medicaid Statistical Information System

CMS developed T-MSIS to improve Medicaid data, including encounter data, and to provide a national data repository to support federal and state program management, financial management, and program integrity activities. To improve the timeliness of data submitted by states, CMS requires states to report data to T-MSIS monthly rather than quarterly, as was the case with its predecessor system, the Medicaid Statistical Information System (MSIS). Regarding data accuracy, T-MSIS includes automated quality checks that provide states with feedback on data format and consistency, according to CMS. This is in contrast to MSIS, which had relatively few automated checks. Like MSIS, though, T-MSIS collects encounter data, as well as FFS claims data and other data—including information on each beneficiary’s Medicaid eligibility—that are important for understanding the utilization data.<sup>17</sup>

Additionally, T-MSIS collects more complete information than MSIS did, which may help CMS examine the reliability of state-reported encounter data. Specifically, T-MSIS captures

- detailed information on MCOs, such as type and name of managed care plans, the eligibility groups they cover, and their service areas;
- additional diagnosis codes and procedure codes associated with treatments, which are included on the encounter data record;<sup>18</sup> and
- the amount paid by MCOs to providers.<sup>19</sup>

We have previously reported on the progress CMS has made in implementing T-MSIS, and have noted that more work needs to be done before CMS or states can use these data for program oversight. In January 2017, we concluded that uncertainty existed with respect to when all states would report T-MSIS data—as of October 2016, only 18 states were submitting T-MSIS data—and we found that CMS had not fully

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<sup>17</sup>T-MSIS includes four files that contain service utilization data, and each file contains both FFS claims and encounters. These files are inpatient, long-term care, pharmacy, and other services (for example, physician and clinic services).

<sup>18</sup>This change applies to FFS claims as well.

<sup>19</sup>Although CMS also collected the amount paid by MCOs to providers in MSIS, states were directed by CMS to report this information differently for encounters than for FFS claims. Mathematica Policy Research, under contract to CMS, reported that this difference contributed to some state confusion. See Byrd, V., and J. Verdier, *Collecting, Using, and Reporting Medicaid Encounter Data: A Primer for States*, Mathematica Policy Research for the Centers for Medicare & Medicaid Services (October 2011).

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developed its plans to ensure data quality.<sup>20</sup> We recommended that CMS take immediate steps to assess and improve T-MSIS data by, for example, refining its T-MSIS data priority areas to identify those critical to reducing improper payments, and expediting efforts to assess and ensure their quality. In December 2017, we reported that 49 states were submitting data to T-MSIS as of November 2017, and that CMS had shifted its focus from assisting states with T-MSIS data submissions to improving T-MSIS data reliability.<sup>21</sup> However, we determined that it was unclear how soon CMS would be able to use T-MSIS data for program oversight and the extent to which these data would be suitable for this purpose. We therefore recommended that CMS articulate a specific plan and associated time frames for using T-MSIS data for oversight. HHS agreed with the recommendations we made in both of these reports, but as of August 2018, the agency had not fully implemented them.

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## Selected States Each Used Basic Data Checks, but Varied in the Use of Other Oversight Practices to Improve the Reliability of Encounter Data

All eight selected states used basic data checks for reasonableness to help ensure encounter data reliability. However, some states did not compare encounter data with external data sources—which are practices recommended by CMS, actuaries, and other experts—or take enforcement actions to help ensure reliability. In addition, states and MCOs identified system and other challenges that could contribute to data reliability weaknesses.

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<sup>20</sup>See GAO, *Medicaid: Program Oversight Hampered by Data Challenges, Underscoring Need for Continued Improvements*, [GAO-17-173](#) (Washington, D.C.: Jan. 6, 2017).

<sup>21</sup>See GAO, *Medicaid: Further Action Needed to Expedite Use of National Data for Program Oversight*, [GAO-18-70](#) (Washington, D.C.: Dec. 8, 2017).

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All Eight Selected States Used Checks for Reasonableness to Help Ensure Data Reliability, and Three Compared Encounter Data with External Data Sources

We found that each of our eight selected states used one or more of three types of checks on the encounter data submitted by MCOs for reasonableness—automated data edits, monitoring timeliness of MCO encounter data submissions, and examining historical trends—in 2017.<sup>22</sup> (See fig. 3.)

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<sup>22</sup>Some selected states monitor the quality of submitted encounter data with additional checks for reasonableness, such as by checking whether summary counts of data elements reported by MCOs in monthly reconciliation reports match the counts of those data elements in the encounter data received by the state, or by conducting additional analyses of the accuracy and completeness of certain data elements.



**Figure 3: Reasonableness Checks Used in Selected States, 2017**

	California	Nebraska	New Hampshire	New York	Ohio	Texas	Utah	West Virginia
<b>TYPE OF REASONABLENESS CHECK</b>								
<b>Automated data edits<sup>a</sup></b>								
Reject encounters with inaccurate or incomplete elements	●	●	●	●	●	●	●	●
Track whether rejected encounters were resubmitted <sup>b</sup>	●	○	●	○	○	○	○	○
<b>Timeliness of encounter data submissions<sup>c</sup></b>								
Monitor whether managed care organizations (MCO) submitted encounter data files on time	●	●	●	●	●	●	○	●
Monitor whether MCOs submitted individual encounters within required timeframes from when the MCO paid or denied the service claim, or after service was provided	●	○	●	○	●	●	●	○
<b>Historical trends<sup>d</sup></b>								
Examined overall trends in encounter volume or payments	●	○	●	●	●	●	●	● <sup>e</sup>
Examined trends by service category	●	○	●	○	●	○	○	● <sup>e</sup>

● Used check    ○ Did not use check

Source: GAO analysis of state reported information. | GAO-19-10

Note: We identified a state as using a given practice above if the state performed the practice in 2017 on a regular basis, which we defined as quarterly or more frequently.

<sup>a</sup>States use automated data edits to reject submitted encounters if they do not conform to state requirements, such as if a submitted data element does not match the expected format or one of the recognized values. For example, a state may reject an encounter if the value reported for a diagnosis code is missing a digit or if it does not match one of the codes on the standardized code set.

<sup>b</sup>We considered a state as having used this practice if the state monitored whether individual rejected encounter records had been resubmitted.

<sup>c</sup>States monitor the timeliness of MCO encounter data submissions to check that MCOs submit encounter data within expected timeframes.

<sup>d</sup>States examine historical trends to check the consistency of submitted encounter data over time. For example, states examine historical trends in the total number of encounters submitted or total MCO payments made in relation to prior time periods.

<sup>e</sup>West Virginia officials told us they conducted this check through July 2017, when the state changed contractors. Officials told us they are uncertain whether they will resume this practice.

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- **Automated data edits.** All eight states used automated data edits to screen encounters, but two of them tracked whether encounters rejected by an edit were later corrected and resubmitted by the MCO.<sup>23</sup> According to two former state Medicaid Directors, monitoring whether rejected encounters are resubmitted with corrections is an important practice for ensuring reliable data.
  - **Timeliness of encounter data submissions.** Seven of the eight states monitored whether encounter data files were submitted on time, whereas five of the states monitored the timeliness of individual encounters within these files—that is, whether MCOs submitted them to the state within the required timeframes after paying or denying the claim, or after service was provided.<sup>24</sup> Monitoring the timeliness of the submission of individual encounters may help mitigate data reliability issues, because late encounter submissions may be more difficult to correct and suggest other problems with MCOs’ information systems that could adversely affect data reliability, according to CMS guidance.<sup>25</sup>
  - **Historical trends.** Seven of the eight states monitored trends in the total number of encounters or the associated payments made by MCOs, and four of those seven states examined trends by category of service—another practice CMS recommends to help ensure encounter data reliability.<sup>26</sup> According to CMS guidance to states, large variations from one time period to the next may indicate incomplete or incorrect encounter data.

In addition to checks for reasonableness, three of the eight states we reviewed compared encounter data with another external data source in 2017. According to CMS, actuaries, and EQRO representatives,

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<sup>23</sup>Automated data edits may flag an encounter with a warning instead of rejecting the encounter, which results in the state accepting the encounter into the state’s data system and notifying the MCO about the issue; similar to a rejected encounter, the state expects the MCO to address the issue.

<sup>24</sup>Nebraska officials told us that the state was working to develop a mechanism to measure encounter timeliness in the future.

<sup>25</sup>See The MEDSTAT Group, *A Guide for States to Assist in the Collection and Analysis of Medicaid Managed Care Data, Second Edition*, report prepared for the Health Care Financing Administration (Santa Barbara, Calif.: 1999), 51; and CMS, *EQR Protocol 4: Validation of Encounter Data Reported by the MCO*, 9.

<sup>26</sup>See Mathematica Policy Research, *Encounter Data Toolkit* (Washington, D.C.: Nov. 30, 2013).

comparing encounter data with external sources in addition to reasonableness checks can further ensure data reliability. (See fig. 4.) External data sources for comparison include provider medical records, MCO extract files, MCO cost summaries, and MCO quality measures, all of which are described in more detail below.

**Figure 4: Comparisons of Encounter Data to External Data Sources Used in Selected States, 2017**

	California	Nebraska	New Hampshire	New York	Ohio	Texas	Utah	West Virginia
<b>DATA SOURCE USED FOR COMPARISON</b>								
Provider medical records <sup>a</sup>	○	○	○	○	○	●	○	○
Managed care organization (MCO) extract files <sup>b</sup>	○	○	○	○	●	○	○	○
MCO cost summaries <sup>c</sup>	○	○	○	○	○	●	○	○ <sup>d</sup>
MCO quality measures <sup>e</sup>	●	○	○	○	○	○	○	○

● Used for comparison      ○ Not used for comparison

Source: GAO analysis of state reported information. | GAO-19-10

<sup>a</sup>We considered a state as having used this practice if the state completed this comparison in 2017 and examined a broad category of services, such as inpatient or outpatient services. Texas’s study examined the reliability of outpatient office or clinic visits. In contrast, Ohio’s study examined a narrow set of services (infant deliveries). California officials told us they began conducting this comparison in 2017, expect to complete it in early 2019, and will conduct this comparison annually thereafter.

<sup>b</sup>We did not count states as having used this practice if they reported conducting this type of comparison on an ad hoc basis—for example, if the state conducted this comparison only for certain MCOs—as was the case for some selected states.

<sup>c</sup>We considered a state as having used this practice if they conducted a cost summary comparison (1) on a regular basis in 2017, which we defined as at least quarterly; and (2) shared the results of it with MCOs—both of which suggest the state used it as an oversight practice for helping to ensure encounter data reliability. Nebraska officials told us they conducted this comparison in 2017, but had not shared the results of the comparisons with its MCOs as of July 2018, because they were addressing data interpretation and aggregation issues. Ohio officials told us they began conducting this comparison during the third quarter of 2017, but did not share the results of this initial comparison with its MCOs until 2018, because of the time needed to conduct the analysis and review discrepancies. Both states plan to continue this comparison as an encounter data oversight practice and share the results of the comparison with MCOs, but Nebraska officials told us they will conduct this comparison annually and Ohio officials told us they would do so quarterly. New York officials told us they conducted this comparison in 2017 for certain MCOs and shared the results of the comparisons with their MCOs in June 2018.

<sup>d</sup>West Virginia requires its MCOs to compare their data with their financial cost summary reports and report the results of those comparisons to the state. West Virginia does not compare encounter data as captured in the states Medicaid Management Information System with MCO financial cost summary reports.

<sup>e</sup>We considered a state as having used this practice if the state compared the results of the measures as calculated by the state with the results derived by MCOs using their own data systems as a practice for helping to ensure encounter data reliability. For example, California officials told us they have conducted this comparison on an annual basis since 2014. In contrast, while Ohio’s external quality review organization calculates some quality measures using state encounter data and shares

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the results with MCOs, state officials reported that MCOs are responsible for comparing the state's results with their own calculations.

- **Provider medical records.** One of our eight selected states—Texas—compared encounter data with a sample of provider medical records in 2017.<sup>27</sup> One other state—California—had issued the results of such a comparison between 2013 and 2016, but not in 2017.<sup>28</sup> CMS has strongly encouraged states to conduct these comparisons.<sup>29</sup> Comparing encounter data with medical records enables states to confirm the accuracy of data elements and services against original source information, and this comparison can identify potential data weaknesses. For example, the Texas study analyzed a sample of 2015 data and found that about 14 to 15 percent of procedure codes in the medical records did not match with state data.<sup>30</sup>
- **MCO extract files.** One of the eight states—Ohio—compared encounter data with an extract of data from MCOs' data systems in 2017.<sup>31</sup> Two other states—California and Nebraska—had issued the results of such a comparison between 2013 and 2016, but not in 2017.<sup>32</sup> This practice can help states evaluate completeness by

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<sup>27</sup>For the last 5 years, Texas has conducted such a review annually, alternating between comparisons with medical and dental records. Officials with six of the eight selected states told us that they had or planned to contract with an EQRO or another contractor to fulfill the regulatory requirement that states audit encounter data at least once every 3 years, and officials in three of the six states noted that they planned to fulfill the requirement through a comparison with provider medical records. Officials in Ohio, the seventh state, said they plan to continue the practice of comparing encounter data with MCO extract files under contract with their EQRO, but were still considering how to fulfill the audit requirement. Officials in Utah, the eighth state, told us they plan to fulfill the requirement using internal state staff.

<sup>28</sup>California and Texas conducted these comparisons under contract with EQROs.

<sup>29</sup>See CMS, *EQR Protocol 4: Validation of Encounter Data Reported by the MCO*, 10; and The MEDSTAT Group, *A Guide for States to Assist in the Collection and Analysis of Medicaid Managed Care Data, Second Edition*, 69. Medical record reviews can also be more resource intensive than other types of data comparisons, according to EQRO officials.

<sup>30</sup>See appendix II for a summary of the findings reported in the California and Texas studies.

<sup>31</sup>Ohio separately provides MCOs on a semi-annual basis a file containing line item details for all encounters the state accepted into its data system. The state expects MCOs to compare that file with the MCO's own claims data, and to submit to the state any missing encounters.

<sup>32</sup>Ohio, California, and Nebraska conducted this comparison under contract with their EQROs. Ohio also issued the results of a similar comparison in 2016.

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identifying encounters contained in one data system, but not the other, and to evaluate accuracy by assessing the extent to which individual data elements in both data systems match. According to an EQRO representative, such identified differences can indicate issues in translating data properly between the MCOs and the state. For example, the Ohio study included an analysis of the completeness of encounter data for services provided in 2015 and found that less than 5 percent of the MCOs' encounters were missing from the state's inpatient and outpatient files.<sup>33</sup>

- **MCO cost summaries.** One of the eight states—Texas—compared total payments as reported on encounters with total medical expenses as reported on MCO financial cost summaries at least quarterly in 2017.<sup>34</sup> In conducting this comparison, states may examine costs by expense categories, such as by service type, provider type, or eligibility category. CMS recommends that states conduct these comparisons, because they can reveal gaps in encounter data reporting.<sup>35</sup> One state's actuary commented that these comparisons can identify gaps that cannot be detected using other checks, such as by examining historical trends. Texas officials identified a comparison to cost summaries as the state's most effective way to improve encounter data reliability, in part, because it focuses MCOs on their own internal data validation processes that may be contributing to identified discrepancies. In conducting this comparison, Ohio—which began conducting this comparison during the third quarter of 2017—included services for which MCOs paid providers or subcontractors under a non-FFS basis; that is, the MCO pays the provider or subcontractor a monthly capitated rate, or a bundled rate to cover a set of services—whereas Texas does not. CMS guidance suggests that states conduct additional oversight of services paid under non-FFS payment arrangements, because collecting complete data can be more challenging than for services paid on a FFS basis.<sup>36</sup>

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<sup>33</sup>See appendix II for a summary of the findings reported in the Ohio and Nebraska studies.

<sup>34</sup>In addition to Nebraska, New York, and Ohio, as explained in figure 4 above, officials in another two selected states told us they planned to begin using cost summary comparisons as a monitoring practice. Specifically, officials in California and Utah told us that they began or plan to begin conducting these reconciliations in 2018 or 2019.

<sup>35</sup>See Mathematica Policy Research, *Encounter Data Toolkit*, 36.

<sup>36</sup>See Mathematica Policy Research, *Encounter Data Toolkit*, 20.

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- **MCO quality measures.** One of the eight selected states—California—compared the results of health care quality measures calculated by the state with the results derived by MCOs using their own data systems.<sup>37</sup> CMS recommends that states conduct this comparison, which can help identify problems in the completeness or accuracy of the data submitted by the MCO for the specific populations and services captured by the measures.<sup>38</sup>

Although all of the selected states used at least some of the oversight practices described above to help ensure data reliability, they differed in the data quality standards they used, if any, to help implement these practices. For example, a data quality standard in Nebraska required that no more than 5 percent of encounters were rejected by the state’s automated data edits, whereas Ohio’s standard required that no more than 19 to 34 percent were rejected, depending on the type of service. In addition, some selected states used encounter data quality standards to focus on the accuracy of specific data elements. For example, New Hampshire requires that 98 percent of encounters contain accurate provider identification numbers.

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### All Eight Selected States Established Mechanisms to Enforce Encounter Data Reporting Requirements, but Varied in the Use of These Mechanisms

All eight selected states had established mechanisms to enforce encounter data reporting requirements, and five of these states used such mechanisms—that is, required corrective actions, assessed penalties, or provided performance incentives—in 2017. (See fig. 5.) The five selected states that used these mechanisms—California, Nebraska, New Hampshire, New York, and Texas—most commonly required corrective actions, whereby the state notifies the MCO of an instance of noncompliance and the MCO develops a plan to address the identified deficiencies. Two of these five states assessed penalties in 2017. Officials in three of the five states told us that using these enforcement

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<sup>37</sup>States may use a combination of Healthcare Effectiveness Data and Information Set (HEDIS) and non-HEDIS measures to assess quality performance of their participating MCOs. HEDIS is a standardized dataset designed by the National Committee for Quality Assurance and used by health plans to measure performance on various dimensions of care and service, including effectiveness of care, access and availability of care, experience of care, utilization and risk adjusted utilization, and relative resource use. Nebraska officials told us they plan to conduct this comparison in 2018 after the close of the HEDIS reporting period for 2017, depending on resource availability.

<sup>38</sup>See Mathematica Policy Research, *Encounter Data Toolkit*, 9.

mechanisms helped to focus the attention of MCO leadership to improve encounter data reliability.

**Figure 5: State-Reported Mechanisms to Enforce Encounter Data Reporting Requirements, 2017**

	California	Nebraska	New Hampshire	New York	Ohio	Texas	Utah	West Virginia
TYPE OF ENFORCEMENT MECHANISM								
Corrective action plans	●	◐	●	●	◐	●	◐	◐
Financial penalties	●	◐	◐	◐	◐	●	◐	◐
Performance incentive	● <sup>a</sup>	● <sup>b</sup>	○	◐ <sup>c</sup>	○	○	○	○

● Established and used mechanism    ◐ Established but had not used mechanism    ○ Did not have mechanism

Source: GAO analysis of state reported information. | GAO-19-10

Note: States established these mechanisms in managed care organization (MCO) contracts or through other requirements. The table indicates that a state used a given mechanism if the state required a corrective action, assessed a financial penalty, or provided performance incentives to MCOs in 2017.

<sup>a</sup>California officials told us that in four of the state's six managed care programs in 2017, the state assigned a greater percentage of beneficiaries who had not selected their own MCO into MCOs with high performance on five encounter data quality standards. The state's remaining two managed care programs have only one MCO in each participating county.

<sup>b</sup>Nebraska's performance incentive—a withhold mechanism—was established in January 2017 and, according to state officials, involves withholding 0.3 percent of an MCO's aggregate annual capitation revenue (approximately \$3.6 million in 2017). Nebraska officials told us that all three MCOs earned back the withhold for meeting the state's encounter data quality standard in 2017.

<sup>c</sup>New York has two performance incentives for enforcing encounter data reliability, according to state officials. First, it can exclude MCO capitation payments from risk adjustment if the MCO fails to correct issues identified from the state's comparison of encounter data to cost summaries. Second, it can reduce an MCO's bonus payment from the state's quality incentive program upon receipt of a statement of deficiency.

In addition, three of the five states that used enforcement mechanisms in 2017—California, Nebraska, and New York—told us that in 2017 they had still been in the process of implementing some of their enforcement mechanisms.

- **California:** State officials told us that the state's sanction policy is still maturing and that the state has issued only two penalties (both to the same MCO) since 2016, both of which were assessed in 2017.
- **Nebraska:** State officials told us that MCOs are still adapting to the state's encounter data reporting requirements and that the state made

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adjustments to align reporting requirements with the limitations of the state's IT system.<sup>39</sup>

- **New York:** State officials told us they have not collected penalties authorized under state law, because MCOs submitted satisfactory plans of correction or due to issues with the state's encounter data processing system—implemented in 2015—which they are working to resolve.<sup>40</sup> State officials in New York told us that state law permits the state to assess penalties equal to 0.5 percent to 1.5 percent of the administrative portion of the capitated rate for failure to submit encounter data consistent with data quality standards.

The remaining three states—Utah, West Virginia, and Ohio—reported that they did not use the enforcement mechanisms that they had in place in 2017. Officials in two of these states—Utah and West Virginia—could not recall ever having to assess financial penalties or corrective actions for encounter data-related reliability issues, because they have been able to address issues through cooperative problem solving with their MCOs. For example, West Virginia officials explained that the state is small and has established longstanding relationships with its four MCOs; thus, the state prefers to resolve data issues directly with the MCOs. Although the collaborative approach used by Utah and West Virginia is consistent with what CMS recommends, it is unclear whether it has led to improved encounter data reliability.<sup>41</sup> This is, in part, because neither state has yet assessed the reliability of their encounter data using an optional encounter data validation study performed by an EQRO. With regard to Ohio, the state did not use its established enforcement mechanisms in 2017, but did assess penalties and issue a corrective action in 2016.

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<sup>39</sup>Nebraska implemented a new managed care program—known as Heritage Health—on January 1, 2017, which integrated medical, behavioral health, and pharmacy services.

<sup>40</sup>Two incentives that state officials told us they have used in the past, but have not utilized since implementing the state's encounter data processing system, are (1) excluding an MCO's capitation payments from risk adjustment if the MCO fails to correct issues identified from the state's comparison of encounter data to cost summaries; and (2) a reduced bonus payment from the state's data quality incentive program upon receipt of a statement of deficiency.

<sup>41</sup>See Mathematica Policy Research, *Encounter Data Toolkit*, 24.



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## Selected States and MCOs Identified System and Other Challenges that Could Diminish Data Reliability

### West Virginia Strategy for Information Technology Challenge

West Virginia requires managed care organizations to submit data to two separate information technology systems—the state’s Medicaid Management Information System (MMIS) and a separate data repository created by the state, known as the “Blue Box”—because the state’s MMIS was not capturing all encounter data, according to state officials. One set of edits is applied to the encounters submitted to MMIS and those data are submitted to the Centers for Medicare & Medicaid Services’ Transformed Medicaid Statistical Information System, whereas a fewer number of edits are applied to the encounters submitted to the “Blue Box” and those data are used by state actuaries for rate setting.

Source: GAO analysis of state information. | GAO-19-10

Our eight selected states identified challenges that could diminish encounter data reliability, including challenges involving state IT systems. Officials from four selected states reported challenges in using FFS claims processing systems to process managed care encounter data, which is a challenge that CMS officials noted many states have faced.<sup>42</sup> These state IT systems may introduce data reliability problems when, for example, they apply automated data edits that are designed for FFS claims, but may be incompatible with encounter data, thereby affecting encounter data completeness. For example, Nebraska officials told us that their current system incorrectly rejects encounters for services rendered, but denied by the MCO, which could occur if the provider submitted the claim with missing information.<sup>43</sup> To address this issue, officials in these states described strategies such as modifying the automated data edits to make them more compatible with encounter data, capturing information in supplemental file submissions that could not be captured through the existing IT systems, or using a separate submission process. For example, West Virginia officials reported that when the state implemented changes to the format of its encounter data, they found that the state’s Medicaid Management Information System (MMIS) was not capturing all encounter data needed for rate setting. As a result, the state uses an additional submission process for MCOs to help ensure the state has more complete data for rate setting purposes. However, reliability problems could persist, because the data submitted to CMS originate from the MMIS, which may contain incomplete data (see sidebar).

Another challenge—related to limited staff resources—also has implications for data reliability and was mentioned by officials in four states. For example, West Virginia officials told us that the state has relied primarily on its contractors to monitor encounter data reporting and acknowledged the need for more state staff who can implement additional oversight activities. Texas officials also noted that limited staff and the

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<sup>42</sup>In 2015, we reported that prepayment edits designed to analyze FFS claims data can provide erroneous results when applied to encounter data, causing problems for states trying to use their information systems to prevent and detect improper payments for managed care services. See GAO, *Medicaid Information Technology: CMS Supports Use of Program Integrity Systems, but Should Require States to Determine Effectiveness*, [GAO-15-207](#) (Washington, D.C.: Jan. 30, 2015).

<sup>43</sup>Officials told us the state is in the process of developing a new system, which will enable the state to accept these encounters and then submit them to CMS’s T-MSIS. According to CMS documentation, states should submit denied encounters to T-MSIS.

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large volumes of encounter data collected have made proactively analyzing the data a challenge. As a result, Texas officials stated that they are in the process of developing a data mining tool that would help state officials compare encounter data with provider claims data on a large scale.<sup>44</sup>

Among the 16 MCOs we interviewed, several also noted challenges in reporting encounter data that could affect reliability, including those related to IT systems and to obtaining guidance for encounter data reporting. For example, some MCOs reported that implementing state-required changes to MCO IT systems—such as changes to automated data edits—or educating providers about the changes to ensure they submit information correctly within expected time frames can be challenging. Additionally, some selected MCOs identified untimely updates by states to standard code sets—such as codes that identify diagnoses, procedures, and drugs—as contributing to inappropriate rejections or leading to rejections that occur after providers are paid for services. According to one MCO, once providers have been paid for the associated services, they have less incentive to correct the claims. With regard to guidance, several MCOs reported that state guidance can be unclear, lack details, or may not be updated consistently. For example, one MCO noted that state guidance for most errors related to National Drug Codes—unique identifiers for different types of drugs—does not adequately explain the reasons the encounter data failed an automated data edit, making it difficult to resolve errors and resubmit encounters correctly.

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<sup>44</sup>Texas officials noted that they plan to begin using this tool in December 2018.

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## CMS Has Provided Limited Information to States on Certain Requirements Related to Encounter Data Reliability, but Continues Efforts to Ensure Data Reliability

We found that CMS has provided states with limited information on how to fulfill requirements related to the reliability of encounter data that states collect from MCOs. While CMS continues to help ensure the reliability of the encounter data states submit to T-MSIS, it has not provided states with information on the agency's method for assessing states' encounter data submissions for the purposes of determining whether a state is in compliance with reporting requirements and whether to defer or disallow federal financial participation for noncompliant submissions.

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## CMS Has Provided Limited Information on How to Fulfill New Requirements Related to the Reliability of State-Collected Encounter Data

In the 2016 managed care final rule, CMS established several new managed care requirements for states that have the potential to improve the reliability of the encounter data that states collect from MCOs. Under the rule, states are required to (1) conduct an independent audit of encounter data reported by each MCO; (2) provide CMS with an annual assessment of encounter data reporting; and (3) review and validate that the encounter data MCOs submit are reliable.<sup>45</sup> These requirements are applicable to certain plan years as specified in table 1 and the rule is currently in effect, though CMS has indicated it may revise the rule's requirements in the future.<sup>46</sup> Federal internal control standards require

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<sup>45</sup>See 42 C.F.R. §§ 438.602(e), 438.66(e)(2)(ii), and 438.242(d). Regarding the audits, since they need only be conducted on data submissions once every 3 years for contracts with rating periods starting on or after July 1, 2017, a state need not complete such an audit until July 1, 2020, or later depending on when a state's rating period begins. To promote transparency, CMS has required states to make the results of these audits publicly available.

<sup>46</sup>A proposed rule that would streamline the managed care regulatory framework is pending review by the Office of Management and Budget as of October 9, 2018. CMS has not specified how this proposed rule, if issued, would revise current Medicaid managed care regulations, including those adopted under the final 2016 managed care rule. See Department of Health and Human Services, Medicaid and CHIP Managed Care and Medicaid Provider Enrollment and Terminations (CMS-2408-P), *Spring 2018 Unified Agenda of Federal Regulatory and Deregulatory Actions*, RIN 0938-AT40, accessed May 28, 2018, <http://www.reginfo.gov>. CMS has also announced that states may apply for enforcement discretion for certain provisions of the final 2016 managed care rule. In April 2018, CMS officials told us that while three states had applied, only one state had been granted discretion for a period of five months. This state was not among our sample of eight states.

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organizations to establish and operate activities to monitor the internal control system.<sup>47</sup> However, we found that CMS has provided limited information to states on how to fulfill these three new encounter data requirements, as described below.

**Independent encounter data audit.** CMS has provided limited information on how states should conduct independent encounter data audits. Specifically, in the preamble to the final rule, CMS indicated that states could fulfill this requirement by conducting an encounter data validation study based on the external quality review protocol on encounter data validation.<sup>48</sup> Agency officials stated that they had not provided information about other ways states could fulfill the audit requirement, because their efforts have focused on other activities, such as updating the agency's guidance to states on best practices for collecting reliable encounter data. However, CMS officials acknowledged that the primary purpose of the protocol is to guide optional encounter data validation studies rather than inform states on how to complete the required audits of encounter data. Officials noted that CMS is in the process of completing revisions to the protocol; although, the primary purpose of the protocol will remain focused on guiding optional encounter data validation studies. The optional validation studies issued by our selected states varied in their scope and methodologies, including the types of services analyzed and the extent to which they measured the accuracy, completeness, and timeliness of the data (see sidebar). CMS officials told us that they did not track which states had previously conducted encounter data validation studies using this protocol, and they had not reviewed the resulting studies to identify encounter data reliability issues as part of the agency's oversight efforts. Without providing additional information to states on how to conduct and report on the required audits, CMS may not know whether each state is collecting reliable encounter data from MCOs or where data weaknesses may exist.

**Differences in Encounter Data Validation Studies among Selected States**

Ohio's study examined encounters associated with outpatient and inpatient services provided in institutions, whereas Texas examined encounters associated with outpatient office or clinic visits.

Texas's study did not include the percentage of encounters that could not be corroborated by matching them to medical records, whereas California's study did.

Source: GAO analysis of state information. | GAO-19-10

**Annual assessment of encounter data reporting.** CMS has not provided information describing the required content or form of the annual assessment of encounter data reporting that states must submit to

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<sup>47</sup>See [GAO-14-704G](#).

<sup>48</sup>81 Fed. Reg. 27,498, 27,603 (May 6, 2016).

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CMS.<sup>49</sup> In addition, CMS has not provided an effective date for the annual assessment to begin. The agency indicated in the preamble to the final rule that these assessments would provide states the opportunity to describe their evolving efforts to improve the reliability and uses of encounter data.<sup>50</sup> In July 2018, CMS officials told us they were working with a contractor to determine what information to collect related to encounter data, as well as the other components of the annual program report, but did not yet know when they would disseminate such information to states. Until CMS disseminates information on how states should implement this assessment, and the requirement goes into effect, the agency will continue to lack the knowledge it needs to monitor how states validate their encounter data and address data weaknesses, such as those that may be identified by the encounter data audit.

**Validate encounter data reliability.** As noted above, CMS has provided states with guidance describing practices to fulfill the requirement for validating encounter data, as well as optional support in this area.<sup>51</sup> In prior work, we recommended that CMS establish minimum standards for state validation practices given that encounter data are important to establishing accurate capitation rates, and HHS concurred with this recommendation.<sup>52</sup> CMS officials have since told us they are revising this voluntary guidance with input from the states, in part, to address this recommendation. To fully address our recommendation, this information will need to specify minimum standards for state validation practices that

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<sup>49</sup>This assessment—referred to by CMS in the final rule as an assessment of the operation of encounter data reporting by each MCO—is one component of a report that states must provide to CMS annually, 180 days after each contract year. CMS indicated in the final rule that this report would address the agency’s fragmented information on states’ managed care programs, provide valuable and timely information, and improve its oversight activities. However, in response to comments in the preamble to the final rule, the agency indicated that, out of concern for state burden, it would not require states to begin submitting annual reports until the contract year after CMS releases guidance on the required content and form of the reports. See 81 Fed. Reg. 27,498, 27,717, 27,722 (May 6, 2016).

<sup>50</sup>81 Fed. Reg. 27,498, 27,722 (May 6, 2016).

<sup>51</sup>According to CMS officials, the agency provided two states technical assistance related to encounter data through CMS’s Medicaid Innovation Accelerator Program—an agency initiative to help states improve beneficiary health and reduce cost—to help them to improve their data analytic capabilities.

<sup>52</sup>In commenting on our prior report, HHS noted that it would work towards developing additional guidance on standards as it relates to encounter data validation procedures. See GAO, *Medicaid Managed Care: Improved Oversight Needed of Payment Rates for Long-Term Services and Supports*, [GAO-17-145](#) (Washington, D.C.: Jan. 9, 2017).

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states are required to meet. Without such minimum standards for state validation efforts, it is unclear whether states' efforts will be sufficient to minimize the risk of encounter data being unreliable.

Other CMS activities can provide the agency with limited information on encounter data reliability. For example, CMS staff conduct reviews of state program integrity activities, including how state program integrity staff use encounter data.<sup>53</sup> Through these reviews, CMS can identify deficiencies in state practices for ensuring the collection of reliable data, as was the case in the most recent reviews of two of our eight selected states. In 2017, CMS recommended that Nebraska develop written policies and procedures to validate encounter data. In 2016, CMS recommended that New York require its MCOs to submit encounter data in a single reporting format and institute penalties for non-compliance. According to CMS officials, both states have taken action to address CMS's recommendations. However, CMS may conduct a focused program integrity review for a state once every 3 years or more, and the focus of these reviews may not be related to encounter data. CMS staff also review states' MCO contracts to ensure that they include requirements intended to promote the collection of reliable encounter data, but CMS officials told us that this practice does not provide the agency with assurance that states are collecting reliable data.<sup>54</sup> In particular, they noted these reviews generally do not address the extent to which states hold MCOs accountable to contractual requirements.

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## CMS Continues to Help Ensure Reliability of T-MSIS Encounter Data

According to CMS officials, a key component of CMS's efforts to help ensure T-MSIS encounter data reliability is its data quality process.<sup>55</sup> Through its data quality process, CMS (1) assesses whether state

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<sup>53</sup>CMS's focused program integrity reviews are intensive, on-site reviews of states' program integrity efforts and compliance with federal requirements. States are required to provide CMS with corrective action plans identifying how they will address any areas where they are not in compliance with regulations.

<sup>54</sup>According to CMS officials, only one state—as of April 2018—had submitted contracts for review that CMS determined did not conform to the encounter data related requirements in the 2016 final rule, effective for rating periods beginning on or after July 1, 2017.

<sup>55</sup>CMS also provides states with feedback on errors in their reported T-MSIS data through an online "operational dashboard" for each state. Prior to implementing its data quality process, states completed a data testing process, which included validating whether the data met specified requirements.

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reported data meets the agency's data quality standards; and (2) works with states to help them understand and make corrections to address data reliability issues.<sup>56</sup> To evaluate T-MSIS data quality, the agency has developed approximately 2,200 data quality standards, which evaluate the data against thresholds CMS has established.<sup>57</sup> According to CMS officials, most states were participating in the data quality process as of August 2018, which has focused primarily on assessing state data against the quality standards in 12 priority areas, 5 of which are relevant to encounter data.<sup>58</sup> (See table 2.) Not meeting a given quality standard can indicate an incomplete or inaccurate data submission. For example, five of our eight selected states were not reporting the expected volume of inpatient encounters, and three of them were not reporting the expected volume of pharmacy encounters, according to CMS officials in June 2018.<sup>59</sup> In August 2018, CMS officials announced the agency would request a corrective action plan from any state that could not resolve certain issues related to the 12 priority areas by February 10, 2019.<sup>60</sup> The agency has also expanded the data quality process to provide feedback to states on additional data quality standards, according to CMS officials. We estimate that CMS's expanded data quality process includes approximately 100 data quality standards related to encounter data.

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<sup>56</sup>According to CMS officials, CMS identifies data anomalies for states through its data quality database. This database, which is separate from T-MSIS, enables the agency and states to dynamically share information about identified issues. CMS updates the database every other month to reflect new or modified data received from the states and meets with states monthly to discuss the results. To address the data reliability issues identified through this process, some states may need to change the way they convert data elements to the T-MSIS format or they may need to collect data from MCOs that they had not previously collected.

<sup>57</sup>For the purpose of this report, we define a data quality standard as containing a threshold that is used to assess the measure's outcome. According to CMS officials, the thresholds consist of fixed numbers, 6-month averages, or both. For example, one T-MSIS data quality standard is that 95 percent of Medicaid enrollees with encounters in T-MSIS were enrolled on the date of the service.

<sup>58</sup>One of the 12 priority areas is unique to encounter data, and 4 other areas evaluate both encounter data and FFS claims data.

<sup>59</sup>CMS officials said the time period of the data analyzed was between January and April 2018, depending on the state.

<sup>60</sup>See Department of Health and Human Services, Centers for Medicare & Medicaid Services, *Transformed-Medicaid Statistical Information System*, State Health Official Letter 18-008 (Aug. 10, 2018).

**Table 2: Transformed Medicaid Statistical Information System (T-MSIS) Data Quality Priority Areas and Standards Relevant to Encounter Data**

Priority area	Data quality standard
Consistency of managed care organization (MCO) reporting	All MCOs with enrollment records link to records for capitation payments or encounters.
	All MCOs with enrollment or capitation payment records link to encounters.
	For each MCO, the average number of encounters per enrollee is within the following ranges as specified by Centers for Medicare & Medicaid Services (CMS): <ul style="list-style-type: none"> <li>• 0.01 and 2 for inpatient encounters</li> <li>• 0.02 and 5 for pharmacy encounters</li> <li>• 0.10 and 20 for other types of encounters</li> </ul>
Link between eligibility and services provided	At least 99 percent of enrollees with encounters are identified on the state’s eligibility file. <sup>a</sup>
	At least 95 percent of enrollees with encounters were enrolled on the date of the service.
Link between providers and claims and encounter data	At least 90 percent of claims and encounters had provider identifiers that linked to the state’s provider file. <sup>b</sup>
Duplicate claims and encounter data	At least 99.9 percent of claims and encounters do not contain the same values in a specific combination of fields as other data the state submitted.
Acceptable values to identify the record status used	At least 99.9 percent of claims and encounters are not missing a code that CMS has defined for identifying whether the record is an original submission or a change to a submission.

Source: GAO analysis of CMS-reported information. | GAO-19-10

Note: Among the five priority areas related to encounter data, only the first one—consistency of MCO reporting—is unique to encounter data. The other four areas evaluate both encounter data and fee-for-service claims data.

<sup>a</sup>The state’s eligibility file contains information about each Medicaid beneficiary enrolled in the state.

<sup>b</sup>The state’s provider file contains information such as unique provider identifiers, provider specialty, and other information about a state’s Medicaid providers.

In addition to CMS’s data quality process, the agency continues to implement other practices to help ensure T-MSIS encounter data reliability, such as the following practices to promote consistent reporting by states.

- **State-specific data quality standards:** CMS officials acknowledged that the agency’s current standards are not state-specific. Therefore, these standards do not account for the wide variation in population and benefits across states, and are limited in their ability to identify data reliability issues. The agency plans to refine its data quality standards to identify reliability issues with greater precision, by developing state-specific standards. These plans are consistent with the agency’s recommended practices for states, which indicate that targeted standards are appropriate when there is wide variation in population and benefits.



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- **T-MSIS coding blog:** CMS officials told us that they help to ensure encounter data reliability through the “T-MSIS Coding Blog” located on Medicaid.gov, which supplements the T-MSIS data dictionary—the document that defines the required T-MSIS elements and their reporting formats. According to CMS officials, they developed the coding blog to promote greater consistency in reporting across states where CMS has determined that states have interpreted the T-MSIS data dictionary specifications differently or where CMS needed to add more clarifications regarding its coding expectations. The coding blog covers such topics as how to submit accurate and complete encounter data, and how to report billed and paid amounts in encounter data.
  - **T-MSIS reliability scorecard:** The agency is beginning to develop a scorecard intended to provide information about the reliability of encounter and FFS data to states and other T-MSIS data users in a user-friendly format, but as of August 2018 agency officials told us they had not determined a time frame for when this work would be completed. According to CMS officials, this scorecard will create greater state accountability and public transparency, thereby leading to improvements in state data quality.
  - **Technical Expert Panel:** CMS convened a Technical Expert Panel in the summer of 2018 to obtain feedback from external stakeholders on T-MSIS data, including quality concerns, but CMS officials indicated the findings of that effort are not expected until early 2019.

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### CMS Has Not Informed States of the Circumstances under Which It Would Defer or Disallow Funding for Noncompliant Encounter Data

Although the agency has taken important steps to improve T-MSIS encounter data reliability through its T-MSIS data quality process, the agency has not determined or informed states of the circumstances under which the agency would defer or disallow matching funds in response to noncompliant data submissions.<sup>61</sup> For example, CMS has not provided states with information on the specific standards it would use to determine noncompliance or the amount of time states would have to rectify noncompliant submissions before matching funds are deferred or disallowed. In July 2018, CMS officials indicated that the agency had not

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<sup>61</sup>Regulations provide that CMS will take steps to defer or disallow federal matching funds if a state’s T-MSIS data submissions are noncompliant with certain standards. Additionally, federal law prohibits federal financial participation for medical assistance for any individuals for whom the state fails to report encounter data as specified by HHS. See 42 U.S.C. § 1396b(i)(25) and 42 C.F.R. § 438.818 (2017).

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yet done so, because it is still in the early stages of evaluating T-MSIS data quality. In the preamble to the final rule, the agency stated that it would provide states “adequate advance notification” of how the agency would determine whether to defer and disallow matching funds before taking such actions.<sup>62</sup> Moreover, the lack of information on the circumstances for deferral or disallowance is inconsistent with federal internal control standards, which require agencies to externally communicate the necessary information to achieve the agency’s objectives.<sup>63</sup> Until CMS determines the circumstances for deferral and disallowance and provides this information to states, the effectiveness of this as a potential enforcement tool to ensure state compliance is diminished.

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## Conclusions

By establishing requirements for reliable encounter data, CMS has taken important steps to improve the reliability of Medicaid encounter data, which are critical for overseeing managed care and the Medicaid program, as well as policy analysis and to forecast expenditures. However, states lack the information they need from CMS on how to fulfill three new requirements: independent encounter data audits, annual assessments, and validating encounter data reliability. Because of the limited information from CMS, states may fulfill the requirement for the independent audits inconsistently, and states are not yet required to conduct the annual assessments. We previously recommended that CMS provide additional information to states on how to fulfill the third requirement on validating encounter data reliability, but the agency has not yet implemented this recommendation. Until these issues are addressed, CMS will not have the information needed to perform effective oversight of encounter data reliability. CMS has also taken steps to help ensure the reliability of T-MSIS data. However, CMS has not informed states of the circumstances under which the agency would defer or disallow federal funding for noncompliant data submissions. The agency has indicated it would provide this information before taking such actions. Until CMS provides this information to states, the effectiveness of this as a potential enforcement tool is diminished, thus potentially hampering its

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<sup>62</sup>CMS also indicated in the preamble to the final rule that “details on the specific standards to be used to determine the necessity for a deferral or disallowance” would be provided through sub-regulatory guidance. 81 Fed. Reg. 27,498, 27,743 (May 6, 2016).

<sup>63</sup>See [GAO-14-704G](#).

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efforts to address concerns about the reliability of Medicaid encounter data.

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## Recommendations for Executive Action

We are making the following three recommendations to CMS to help improve encounter data reliability.

The Administrator of CMS should provide states with more information on how to fulfill the requirement for independent encounter data audits, including information on the required audit scope and methodology, and what should be described in the resulting report. (Recommendation 1)

The Administrator of CMS should provide states information on the required content of the annual assessment of encounter data reporting. (Recommendation 2)

The Administrator of CMS should provide states with information on the circumstances under which CMS would defer or disallow matching funds in response to noncompliant encounter data submissions. (Recommendation 3)

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## Agency Comments

We provided a draft of this report to HHS for review, and HHS provided written comments, which are reprinted in appendix I. HHS agreed with our first two recommendations and neither agreed nor disagreed with the third recommendation. Regarding our first recommendation, HHS noted that it will provide states with information on how to fulfill the requirement for independent encounter data audits. Regarding our second recommendation, HHS noted that it will provide states with further information on the required content of the annual assessment. We modified the terminology in this recommendation slightly in response to technical comments from HHS—we use the term encounter data reporting rather than encounter data reliability— but the substance of the recommendation is unchanged. Providing such guidance to states could help improve encounter data reliability. Regarding our third recommendation, HHS did not indicate whether it agreed or disagreed, but did note the steps it has already taken to remind states of their obligation to submit timely, quality encounter data, and prioritize data quality. In addition, HHS noted that it could consider using its authority to withhold federal matching funds in the event a state's encounter data are not meeting minimum thresholds. HHS also provided other technical comments, which we incorporated as appropriate.

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As agreed with your offices, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the report date. At that time, we will send copies to the Secretary of Health and Human Services, the Administrator of CMS, appropriate congressional committees, and other interested parties. In addition, the report will be available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staff members have any questions about this report, please contact me at (202) 512-7114 or at [yocomc@gao.gov](mailto:yocomc@gao.gov). Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff that made key contributions to this report are listed in appendix III.



Carolyn L. Yocom  
Director, Health Care

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*List of Requesters*

The Honorable Orrin G. Hatch  
Chairman  
Committee on Finance  
United States Senate

The Honorable Greg Walden  
Chairman  
Committee on Energy and Commerce  
House of Representatives

The Honorable Gregg Harper  
Chairman  
Subcommittee on Oversight and Investigations  
Committee on Energy and Commerce  
House of Representatives

The Honorable Fred Upton  
House of Representatives

# Appendix I: Comments from the Department of Health and Human Services



DEPARTMENT OF HEALTH & HUMAN SERVICES

OFFICE OF THE SECRETARY

Assistant Secretary for Legislation  
Washington, DC 20201

SEP 25 2018

Carolyn Yocom  
Director, Health Care  
U.S. Government Accountability Office  
441 G Street NW  
Washington, DC 20548

Dear Ms. Yocom:

Attached are comments on the U.S. Government Accountability Office's (GAO) report entitled, "*Medicaid Managed Care: Additional CMS Actions Needed to Help Ensure Data Reliability*" (GAO-19-10).

The Department appreciates the opportunity to review this report prior to publication.

Sincerely,

A handwritten signature in cursive script that reads "Matthew D. Bassett".

Matthew D. Bassett  
Assistant Secretary for Legislation

Attachment

**GENERAL COMMENTS OF THE DEPARTMENT OF HEALTH & HUMAN SERVICES (HHS) ON THE GOVERNMENT ACCOUNTABILITY OFFICE'S DRAFT REPORT ENTITLED - MEDICAID MANAGED CARE: ADDITIONAL CMS ACTIONS NEEDED TO HELP ENSURE DATA RELIABILITY (GAO-19-10)**

The U.S. Department of Health and Human Services (HHS) appreciates the opportunity to review and comment on the Government Accountability Office's (GAO) draft report on Medicaid managed care encounter data. HHS takes seriously its responsibilities to ensure the complete and accurate reporting of data to enhance Medicaid program management and oversight.

The state/federal partnership structure of Medicaid is an important feature allowing states the flexibility to design Medicaid managed care programs that work best in their unique environments, however, improving Medicaid data and systems is a high priority for HHS. Through strong data and systems, HHS and states can drive toward better health outcomes and improve program integrity, performance, and financial management in the Medicaid program. HHS has been working with states to implement changes to the way in which Medicaid data is collected by moving to the Transformed Medicaid Statistical Information System (T-MSIS). As part of the transition to T-MSIS, HHS has strengthened reporting requirements by standardizing definitions, expanding the data collected, adding data quality enhancements, and improving the timeliness of data submission by moving from quarterly to monthly state data submissions. As of June 2018 all states, the District of Columbia, and Puerto Rico are successfully in production of T-MSIS data.

In an August 2018 letter to State Health Officials<sup>1</sup>, HHS provided guidance to states regarding expectations for the quality of T-MSIS data submitted to HHS. HHS is committed to working with states on improving their data submissions by addressing known issues and through ongoing data integrity reviews. HHS expects states to develop achievable goals and commit the necessary resources to make steady progress in improving the quality of their data submissions over reasonable timeframes. If a state cannot resolve data quality issues identified by HHS with respect to previously identified top priority items within six months, HHS will request a corrective action plan from the state.

In addition, HHS has reminded states of their obligations under the Medicaid managed care regulation published in 2016 which further describes the requirements for the submission of encounter data to include complete, timely and accurate encounter data submissions including all actual payment-related fields.<sup>2</sup>

GAO's recommendations and HHS' responses are below.

**Recommendation**

The Administrator of CMS should provide states with more information on how to fulfill the requirement for independent encounter data audits, including information on the required audit scope and methodology and what should be described in the resulting report.

**HHS Response**

<sup>1</sup> <https://www.medicaid.gov/federal-policy-guidance/downloads/sho18008.pdf>

<sup>2</sup> 42 CFR 438.242, 438.604 and 438.818

**GENERAL COMMENTS OF THE DEPARTMENT OF HEALTH & HUMAN SERVICES  
(HHS) ON THE GOVERNMENT ACCOUNTABILITY OFFICE'S DRAFT REPORT  
ENTITLED - MEDICAID MANAGED CARE: ADDITIONAL CMS ACTIONS NEEDED  
TO HELP ENSURE DATA RELIABILITY (GAO-19-10)**

HHS concurs with this recommendation. CMS will provide states with additional information on how to fulfill the requirement for independent encounter data audits.

**Recommendation**

The Administrator of CMS should provide states information on the required content of the annual assessment of encounter data reliability.

**HHS Response**

HHS concurs with this recommendation. HHS will provide states further information on the required content of the annual assessment of encounter data reliability.

**Recommendation**

The Administrator of CMS should provide states with information on the circumstances under which CMS would defer or disallow matching funds in response to noncompliant encounter data submissions.

**HHS Response**

HHS has recently issued a letter to State Health Officials reminding states of their obligations to submit timely, quality T-MSIS data, including Medicaid managed care encounter data, to HHS. HHS has identified 12 top priority items for post-production T-MSIS data quality all states should address. If a state cannot resolve data quality issues identified by HHS with respect to previously identified top priority items within six months, HHS will request a corrective action plan from the state. HHS will continue to monitor the quality of states' T-MSIS submissions. In the future, HHS could consider using its regulatory authority to withhold state information technology system funding in the event a state's T-MSIS data is not meeting minimum thresholds.



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# Appendix II: Summary of Selected States' External Quality Review Organization Encounter Data Validation Studies

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Of the eight selected states, four issued one or more encounter data validation studies conducted by an external quality review organization (EQRO) between 2013 and 2017. A review of the most recent study for these four states demonstrated that the studies' methods varied, including how they measured encounter data reliability.

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## California

Most recent study: Health Services Advisory Group, *Encounter Data Validation Study Aggregate Report: July 1, 2013, to June 30, 2014* (February 2015).

Time period evaluated: Encounters with dates of service between January 1, 2012, and December 31, 2012, or June 1, 2012, and December 31, 2012, depending on beneficiary population.

Methodology: Medical record review of 24 managed care organizations (MCO) participating in a variety of the state's Medicaid managed care programs.<sup>1</sup> Reviewed professional encounters for medical services, excluding durable medical equipment, dental, or vision services. Proportional random sampling was used to select 120 members from each MCO and participating county combination. A second round of random sampling obtained one visit per sampled member. A second visit was selected by the provider to determine whether any encounter data were missing from state data. In total, between 120 and 240 medical records were reviewed for each combination of MCO and county.

Data elements examined: Date of service, diagnosis code, procedure code, procedure code modifier, rendering provider name, and billing provider name.

Examples of key findings:

- **Completeness:** Twenty-six percent of the dates of service in the state's encounter data were not found in the medical records. This was also the case for 32 percent of diagnosis codes, 44 percent of procedure codes, 59 percent of procedure code modifiers, 25 percent of rendering provider names, and 35 percent of the billing provider names. The study also reported that, for example, 35 percent of the

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<sup>1</sup>Plans operating under the state's Two-Plan Model, the Geographic Managed Care model, and the County Organized Health Systems model, as well as two specialty plans were included in the study.

diagnosis codes and 23 percent of procedure codes documented in the medical records were not found in the state's encounter data.

- Accuracy: When a given data element was present in both the state's encounter data and the medical record, 16 percent of diagnosis codes were not supported by the medical records. This was also the case for 22 percent of procedure codes, 0.5 percent of procedure code modifiers, 37 percent of rendering provider names, and 31 percent of the billing provider names. Less than 5 percent of records located in both data sources were accurate on all five of the following data elements: diagnosis code, procedure code, procedure modifier code, rendering provider name, and billing provider name.

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## Nebraska

Most recent study: IPRO, *State of Nebraska Department of Health and Human Services Division of Medicaid and Long-Term Care: 2016 Encounter Data Validation Study* (Lake Success, N.Y.: August 2016).

Time period evaluated: Claims adjudicated between July 1, 2015, and September 30, 2015.

Methodology: Comparison of an extract from the state's database with an extract from the database of each of three MCOs participating in the state's physical health managed care program. An encounter was found to be a match between the two databases if the member identification number, date of service, Current Procedural Terminology (CPT) codes, diagnosis, and International Classification of Diseases version 9 (ICD-9) codes, or claim numbers were the same.

Data elements examined: Member identification number, dates of service, adjudication and admission submission dates, ICD-9 codes, diagnosis, and procedure codes (limited to the first four codes reported on the claim line detail), CPT codes, place of service, provider name and national provider identifier, payment totals, revenue, and diagnosis-related group codes.

Examples of key findings:

- Completeness: Overall, 16.9 percent of MCO-reported records could not be matched to the state's encounter data records, and this percentage ranged from 8.5 to 20.8 percent, depending on the MCO. Reasons cited for the discrepancy included that the MCOs did not submit encounters and that the encounters had been rejected by the

state's edits. The study was unable to determine what percentage of rejected encounters had been resubmitted by MCOs.

- Accuracy: Among the records MCOs reported, 6.5 percent did not accurately capture the member identification number and 17.9 percent did not accurately capture the National Provider Identifier.
- Other: The study also found that 31.5 percent of encounters were submitted 30 days after the MCOs adjudicated them, and some claims adjudicated in third quarter of 2015 had dates of service as early as 2012.

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## Ohio

Most recent study: Health Services Advisory Group, *Validation of Managed Care Plan Encounter Data Report: Ohio Medicaid Managed Care and MyCare Ohio Programs—State Fiscal Year 2017* (June 2017).

Time period evaluated: Encounters with dates of service between January 1, 2015, and December 31, 2015, with a paid status in the MCO's data systems as of September 30, 2016.

Methodology: Comparison of institutional encounter data collected in the state's Medicaid Management Information System with data collected from MCOs for the child, family, aged, blind, and disabled populations. In addition, the EQRO visited MCOs' offices to review if the data stored on the MCOs' systems matched the data stored by the state, and to investigate the root cause of a random sample of encounters identified as discrepant during the comparative analysis.

Data elements examined: Key data fields evaluated were the MCO paid amount, third-party liability paid amount, and provider information, such as the National Provider Identification number for attending and billing providers.

Examples of key findings:

- Completeness: Less than 5 percent of the state's inpatient and outpatient encounters were missing from the MCOs' files and less than 5 percent of the MCOs' encounters were missing from the state's inpatient and outpatient files. Among encounters in the other category (e.g., long-term care), more than 15 percent of institutional encounters in the state's files were missing from the MCOs' files.
- Accuracy: Less than 4 percent of encounters present in both the state's and MCOs' databases had MCO payment discrepancies. Less

than 1 percent of the state's encounters had third-party liability payment information not present in the MCOs' files, but almost 30 percent of encounters in MCOs' files were not present in the state's files. Among matched institutional encounters, 13 percent had billing and attending National Provider Identification numbers that were not in agreement when comparing the state's and MCOs' files.

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## Texas

Most recent study: The Institute for Child Health Policy, University of Florida, *Texas Medicaid and Children's Health Insurance Program, Summary of Activities and Trends in Health Care Quality: Addendum: Performance Improvement Projects and Encounter Data Validation: Medical Record Review*, Contract Year 2016 (July 28, 2017).

Time period evaluated: Encounters with dates of service between January 1, 2015, and December 31, 2015.

Methodology: Medical record review of encounters associated with outpatient office or clinic visits for MCOs participating in a variety of the state's Medicaid managed care programs.<sup>2</sup> A random sample identified 239 initial claims for each MCO, which represented an enrollee-provider pair.<sup>3</sup> Once the member-provider pair was established, all medical records for that member-provider pair were requested for all of 2015 and compared to encounters from the state's data warehouse. Match rates between the medical record and state data were weighted by length of enrollment, to account for variability among members, and also accounted for single members with a large number of medical records or for single providers who served many members.

Data elements examined: Date of service, place of service, primary diagnoses, and procedures.

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<sup>2</sup>The study reported the results for MCOs operating under the State of Texas Access Reform (STAR), the STAR+PLUS, STAR Health programs, and the Children's Health Insurance Program. We have excluded findings from STAR+PLUS and the Children's Health Insurance Program as those programs were outside of the scope of our work.

<sup>3</sup>Specifically, the sample was drawn from the following place of service codes: office, walk-in retail health clinic, independent clinic, federally qualified health center, and community mental health center.

Examples of key findings:

- Accuracy: Depending on the program, from 11.8 percent to 19.3 percent of dates of service in the medical records did not match with the state's encounter data. In addition, 11.5 to 18.8 percent of places of service, 13.6 to 21.7 percent of primary diagnosis codes, and 13.7 percent to 15.3 percent of procedure codes in the medical records did not match with state data.
- Completeness: The study indicated that it reviewed whether medical records had a corresponding encounter, but did not separately report the results of the analysis.

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# Appendix III: GAO Contact and Staff Acknowledgments

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## GAO Contact

Carolyn L. Yocom, (202) 512-7114 or [yocomc@gao.gov](mailto:yocomc@gao.gov).

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## Staff Acknowledgments

In addition to the contact named above, individuals making key contributions to this report include William Black (Assistant Director), Shannon Legeer (Analyst-in-Charge), Kerry Casey, and Elise Pressma. Also contributing were Emei Li, Drew Long, Vikki Porter, Lisa Rogers, Jennifer Rudisill, Julie Stewart, and Walter Vance.

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