

The Volume of Encounter Claim Records from Comprehensive Managed Care Organizations in 2017

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This analysis focused on the 35 states and the District of Columbia that had beneficiaries enrolled in comprehensive managed care programs in 2017. Mississippi, Missouri, and Nebraska, which had comprehensive managed care programs, were excluded from the analysis due to a low volume of claims.

Key Findings

- States are required to report in T-MSIS encounter records that reflect services provided to Medicaid and CHIP beneficiaries by managed care organizations. These encounter records include one header and one or more associated line records per claim. Header records summarize information about the entire claim, and line records provide details about the individual goods and services billed as part of the claim. This brief examines the number of header- and line-level encounter records from comprehensive plans relative to the size of a state's comprehensive managed care program. The analysis is conducted separately for the 2017 IP, LT, OT, and RX files. The purpose of this analysis is to identify states with completeness or quality problems in their managed care encounter data.
- Of the 35 states and the District of Columbia that reported beneficiaries enrolled in comprehensive managed care programs in T-MSIS, 2 states fell into the low-concern category with respect to the volume of encounter records across all four claims files. Seven states fell into the low-concern category with respect to the volume of encounter records in the IP file, 6 states fell into this category with respect to the volume of encounter records in the OT file. These states are identified in Tables 2 and 3.
- One states—North Dakota—did not have any encounter data in the T-MSIS Analytic Files; as a result, its claims data are unusable for research requiring encounter claims data. Iowa (IP and OT), South Carolina (LT), Tennessee (RX), and Wisconsin (RX) had no encounter data in one or more files, and therefore had unusable encounter claims data for some files.

Background

In 2017, 69 percent of Medicaid beneficiaries received care through comprehensive managed care (CMC) organizations (Centers for Medicare & Medicaid Services 2019). States are required to report the services provided to beneficiaries through CMC organizations in their monthly T-MSIS claims records (42 C.F.R. § 438.818 [2016]). These service records are known as encounter claims and are structured so that each encounter record is represented by

one header record and one or more line-level records that link to the header.¹ Header records include summary information about the claim as a whole, whereas line records include detailed information about the individual goods and services billed as part of the claim. Users of the T-MSIS Analytic Files (TAF) must link the header- and line-level records to get all the information for an encounter.

Since states can choose the optional populations and benefit categories they cover, their Medicaid and Children’s Health Insurance Program (CHIP) programs vary accordingly in the characteristics of their covered populations, their benefit packages, and their average service use per covered beneficiary. However, examining the volume of encounter records adjusted for the number of beneficiaries enrolled in CMC plans in a state can identify outlier states that TAF users should examine more closely before beginning their analytic work. An unusually low volume of encounters may occur, for example, if (1) a state submits incomplete data on encounters or (2) missing or erroneous reporting of key data elements result in some or all of a claim not being included in the TAF.² In these cases, TAF users may underestimate utilization, expenditures, and the prevalence of medical conditions in beneficiaries who are enrolled in managed care. An unusually high volume of encounter records may indicate problems in how a state formatted or submitted its managed care encounter data.

This brief examines the volume of encounter records in each state with comprehensive managed care in its Medicaid program in 2017 to identify states with potentially incomplete or incorrectly formatted data.

Methods

Using the 2017 TAF,³ we tabulated the number of headers and non-denied⁴ line records that were classified as managed care encounters⁵ in the inpatient (IP), long-term care (LT), other services (OT), and pharmacy (RX) files. The analysis included managed care encounter records for all CMC plans serving Medicaid and CHIP beneficiaries. In 2017, 35 states and the

¹ The previous version of the research-ready Medicaid administrative data files, the Medicaid Analytic eXtract, was structured to include one record per stay in the inpatient (IP) file, one record per claim in the long-term care (LT) and pharmacy (RX) files, and one record per claim line in the other services (OT) file.

² The TAF only includes final action header records with a known service date and their associated line records. If data elements related to the service date are missing on a record that a state submits to T-MSIS, the header record and all associated lines would not be included in the TAF. In addition, TAF excludes header and line records that are not identified by the final action algorithm as representing the final version of the claim and line records that cannot be matched to a header record.

³ This analysis used the same TAF data as the T-MSIS Substance Use Disorder Data Book, which is not the version of the data that will be released as Research Identifiable Files (RIFs).

⁴ Fully denied claims (also referred to as “denied headers”) are completely excluded from the TAF even when states submit these records in T-MSIS. Thus, all header records in the TAF represent non-denied headers. However, partly denied claims are in the TAF, including the header and both the paid and denied claim lines.

⁵ We identified managed care encounters by using claim type code (CLM_TYPE_CD) values of 3 and C. We limited the analysis to encounters with a managed care plan ID (MC_PLAN_ID) that linked to a managed care plan type code (MC_PLAN_TYPE_CD) of 02 or 03.

District of Columbia enrolled beneficiaries in CMC plans. Mississippi, Missouri, and Nebraska, which had comprehensive managed care programs in 2017, were excluded from the SUD Data Book and from this brief because of a very low overall volume of claims. We also excluded some states from the analysis of encounter record volume in the LT and RX files because these services are not covered by their CMC programs and are typically carved out and paid on a fee-for-service basis.⁶

We then calculated the following four measures to understand potential issues with the completeness or quality of the TAF service use data: (1) total volume of encounter header records, (2) total volume of encounter line records, (3) average number of encounter lines per header, and (4) number of CMC plans with no header records.

Total volume of encounter header records

For the first measure, we calculated the number of encounter header records per 1,000 enrolled months for each file.⁷ This measure identifies states with an unusually low or an unusually high volume of header records compared with other states, while controlling for the size of the program in each state, as an assessment of the overall completeness of the encounter data.

We adjusted the expected volume of service use records according to the number of Medicaid and CHIP beneficiaries enrolled in CMC plans in 2017. We did not require a header record to link to an enrollment record to be included in the analysis (that is, we calculated the numerator and the denominator independent of one another). However, we excluded from the analysis the header records—and their associated line records—that had a missing or invalid beneficiary identifier.

Total volume of encounter line records

For the second measure, we calculated the number of non-denied encounter line records per 1,000 enrolled months for each file. Line-level volume that appears low relative to the size of a state's CMC program population can be a sign of incomplete detail on the individual goods and services billed as part of the claim. An unusually high volume may indicate a problem in how the state formatted or submitted its encounter records.

Because both metrics for the total volume of header records and the total volume of line records are adjusted on the basis of the number of CMC enrollment months in the TAF, outliers could be driven by either incomplete managed care encounters or incomplete or inaccurate information about managed care enrollment in the eligibility data. Further, a low

⁶ Colorado and Louisiana were excluded from the analysis of the LT file and West Virginia was excluded from the analysis of the RX file.

⁷ We counted enrolled months for each state by tabulating the number of months on each record in the 2017 TAF annual Demographic and Eligibility file that had a managed care plan ID associated with a managed care plan type code (MC_PLAN_TYPE_CD_mm where mm represents a month in the calendar year) value of 01 (Comprehensive MCO) or 04 (Health Insuring Organization).

volume of encounter header or line records could be driven by claims with an invalid beneficiary identifier.

Average number of encounter lines per header

For the third measure, we calculated the average number of non-denied line records per header record for managed care encounters in each file. Each header record should have one or more associated line records, and header records with no line records indicate a data quality concern. This measure can identify states in which the header data are complete, but some of the associated line-record data are incomplete. We included all CMC encounter header records in a state’s TAF claims files when we tabulated the header volume for this measure, including headers that did not link to any line records. Line records that cannot be matched to a header record are not included in the TAF and are therefore not included in this measure.

Number of CMC plans with no header records

For the fourth measure, we tabulated the number of CMC plans that had beneficiaries enrolled in 2017 but did not have any encounters in each claims file. This pattern suggests that specific CMC plans are not submitting complete encounter records.

Level of concern

To identify states with probable data completeness or quality problems, we used the criteria presented in Table 1.

Table 1. Criteria for classifying states by level of concern about data quality

Level of concern about data completeness or quality	Total header volume and total line volume as a percentage of the national median ^a	Average number of line records per header as a percentage of the national median ^a	Number of CMC plans with no encounter header records
Low level of concern	75 percent ≤ x ≤ 150 percent	50 percent ≤ x ≤ 200 percent	None
Medium level of concern because of moderately low record volume	50 percent ≤ x < 75 percent	N/A	Greater than one but less than half of CMC plans
Medium level of concern because of moderately high record volume	150 percent < x ≤ 200 percent	N/A	—
High level of concern because of low record volume	10 percent ≤ x < 50 percent	10 percent ≤ x < 50 percent	Half or more of all CMC plans, but not all
High level of concern because of high record volume	> 200 percent	> 200 percent	—
Unusable data	< 10 percent	< 10 percent	All CMC plans

^aThese criteria only apply to the IP and OT claims files.

N/A = not applicable, as the level of concern was not assigned.

For the IP and OT claims files, we compared the first three measures to the national median (calculated across all the states with CMC programs) using the criteria above. For the LT and RX files, we did not classify states into the low or medium categories of concern based on the measures of total volume because CMC coverage of long-term care and prescription drug services varies widely by state and plan. We would therefore expect there to be substantial variation in the volume of LT and RX records across states. However, we classified states into the high-concern category if the number of lines per header record in their LT or RX file averaged less than one line per header. This pattern is highly suggestive of missing data rather than true state-by-state variation in service use or policy.

Across all file types, the overall level of concern was based on the measure with the highest data quality concern. For instance, if a state had at least one measure that was deemed unusable, the overall level of concern was deemed unusable.

Findings

Tables 2 through 5 show the encounter volume for header- and line-level records, the average volume of lines per header record, and the number of CMC plans that had no encounters, by file type for each state. Overall, 11 states had encounters for every CMC plan across all files.⁸ One state—North Dakota—did not have any CMC encounter data in the TAF when they were expected to have such data. Its claims data are unusable for research requiring encounter claims data. Below we present the findings by file.

IP file

Across all 36 states with CMC programs included in the analysis, the median number of encounter header records per 1,000 enrolled months in the IP file was 9.0, with an average of 10.7 lines per header (Table 2). Overall, 7 states fell into the low-concern category based on volume of encounter records and 18 states fell into the medium concern category.

Eight states fell into the high-concern category, 7 of which were based on the volume of encounter records in their IP file.

- Colorado, Nevada, New Hampshire, and Rhode Island had an unusually low volume of both header and line records, suggesting that entire claims were missing from its IP file.
- Indiana had a slightly lower volume of encounter header records than expected and a substantially lower volume of line records than expected, suggesting that the state may have been missing both entire claims and some line-level detail in its IP file.
- Kentucky had an unusually low number of encounter lines and encounter lines per record, suggesting that line-level data may be incomplete.
- Georgia had a higher-than-expected volume of total encounter headers and lines in their IP files. Georgia is known to be submitting outpatient facility claims in its IP file when those claims belong in its OT file, which explains why the volume of total headers and total lines

⁸ These states include Georgia, Hawaii, Indiana, Kansas, Louisiana, Michigan, Minnesota, Nevada, New Jersey, New Mexico, and Ohio.

in the IP file was higher than expected.

- New Hampshire, Rhode Island, and Virginia had half or more of their CMC plans with no encounter records in the IP file, placing them in the high concern category.

Three states had unusable data. In Iowa, both the volume of claim headers and claim lines were less than 10 percent of the national median. Massachusetts had higher-than-expected volume of encounter records and an unusually low percentage of lines to headers. It is submitting encounter records to T-MSIS that have a separate header-level claim for each line-level claim (which is atypical compared with the encounter records submitted by other states).⁹ This issue explains why Massachusetts had a higher-than-expected volume of total headers in 2017. North Dakota had no encounters in the IP file.

LT file

Across all states, the median number of header claims in the LT file per 1,000 enrolled months was 1.3, with an average of 2.0 lines per header (Table 3).

States varied widely in the volume of header- and line-level records in the LT file, which likely reflects state- and CMC plan-level variation in coverage for long-term care services. For instance, two states do not require CMC plans to cover any long-term care services and seven states only require CMC plans to cover hospice care, which can be facility or home-based care. Further, variation in billing practices for stays in long-term care facilities can result in substantial variation in the overall number of claims associated with a given stay. For these reasons, we did not flag states that deviated from the national median as having potential issues with data quality.

We did, however, classify states in the high-concern category or as having unusable data based on the average number of lines per header record in their LT file. We put states in the high-concern category if the number of lines per header record in the LT file averaged less than one line per header. No states included in the analysis demonstrated this pattern.

Fifteen states had more than one but less than half of their CMC plans with no encounter records in the LT file, placing them in the medium concern category. Five states had greater than half of their CMC plans with no encounter records in the LT file, placing them in the high concern category. Two additional states—North Dakota and South Carolina—require their CMCs to cover long-term care but had no encounter records in the LT file, and their LT data cannot be used for research that requires CMC long-term care claims records.

⁹ The TAF claims files are structured so that each claim is represented by one header record, which summarizes the information about the overall claim, and one or more line records, which link back to the header and provide information on each individual service or good included as part of the larger claim.

OT file

Across all states, the median number of header claims per 1,000 enrolled months in the OT file was 1,248.3 with an average of 2.1 lines per header (Table 4). Overall, 6 states fell into the low-concern category and 19 states fell into the medium-concern category.

Nine states were classified into the high-concern category, 7 of which were based on the volume of header and line records in their OT files.

- Colorado, Nevada, and Utah had an unusually low volume of both header and line records, suggesting that entire claims were missing from its OT file. However, the average number of lines per header was similar to the national average for both states, suggesting that the claims that were present in the files were complete.
- Louisiana had a normal volume of header and line records, but an abnormally low proportion of line records per header. This suggests that the state may have incomplete line records and detail in the OT file.
- Massachusetts and New Jersey were outliers on the upper end of the spectrum. In both states, the volume of header records in the OT file exceeded 200 percent of the median national volume, but the number of lines per header was unusually low, suggesting an issue with how these states formatted the encounter data in the OT file.
- In Minnesota, the volume of line records in the OT file exceeded 200 percent of the median national volume, and the volume of header records was moderately high. The state did not have an unusually high proportion of line records per header. These patterns suggest that Minnesota had correctly-formatted OT encounter records, but an unusually high overall volume of lines.
- New Hampshire and Virginia had more than half of CMC plans serving beneficiaries had no encounter records in the OT file, placing it in the high concern category.

Two states—Iowa and North Dakota—had unusable encounter record data in the OT file. In Iowa, both the volume of claim headers and claim lines were less than 10 percent of the national media. North Dakota had no encounter records in the OT file.

RX file

Across all states, the median number of RX header records per 1,000 enrolled months was 798.4, with an average of 1.0 lines per header (Table 5). States varied widely in the volume of header- and line-level records in the RX file, likely reflecting state- and CMC plan-level variation in prescription drug coverage.

Again, we classified states in the high-concern category or as having unusable data based on the average number of lines per header record in their RX file. We considered the data to be unusable if the number of lines per header record in the RX file was less than 10 percent of the national median. In addition, we put states in the high-concern category if the number of lines per header record in the RX file averaged less than one line per header. No states included in the analysis demonstrated either pattern.

Thirteen states had more than one but less than half of their CMC plans with no encounter records in the RX file, placing them in the medium concern category. Five states had greater than half of their CMC plans with no encounter records in the LT file, placing them in the high concern category. Three additional states—North Dakota, Tennessee, and Wisconsin—had no encounters in the RX file when they were expected to have these types of records, and their RX data cannot be used for research that requires CMC pharmacy claims records.

Table 2. Volume of encounter records in the IP file, 2017

State	Overall level of concern	Total number of IP headers			Total number of IP lines			Average IP lines per header			Number of plans with IP headers		
		Per 1,000 enrolled months	As a percentage of national median	Level of concern	Per 1,000 enrolled months	As a percentage of national median	Level of concern	Per header record	As a percentage of national median	Level of concern	Number of plans	Number plans with no headers	Level of concern
National median		9.0			81.4			10.7					
Low data quality concern (n = 7 states)													
Hawaii	Low	9.5	105.9	Low	115.9	142.4	Low	12.2	113.3	Low	10	0	Low
Kansas	Low	10.4	116.2	Low	67.7	83.2	Low	6.5	60.3	Low	3	0	Low
Michigan	Low	7.9	88.0	Low	77.5	95.3	Low	9.8	91.2	Low	11	0	Low
New Jersey	Low	7.4	82.3	Low	109.7	134.8	Low	14.8	137.9	Low	5	0	Low
New Mexico	Low	9.1	101.1	Low	119.3	146.7	Low	13.1	122.2	Low	4	0	Low
South Carolina	Low	11.2	124.1	Low	104.1	128.0	Low	9.3	86.9	Low	6	0	Low
Texas	Low	9.9	110.2	Low	114.1	140.3	Low	11.5	107.2	Low	136	0	Low
Medium data quality concern (n = 18 states)													
Arizona	Medium	10.2	113.8	Low	124.9	153.5	Medium	12.2	113.6	Low	23	4	Medium
California	Medium	6.5	72.2	Medium	69.7	85.6	Low	10.7	99.9	Low	125	7	Medium
Delaware	Medium	8.9	98.9	Low	103.0	126.7	Low	11.6	107.8	Low	3	1	Medium
District of Columbia	Medium	6.7	74.5	Medium	80.0	98.4	Low	11.9	111.2	Low	9	4	Medium
Florida	Medium	15.1	168.1	Medium	131.0	161.1	Medium	8.7	80.7	Low	128	10	Medium
Illinois	Medium	8.4	93.0	Low	97.8	120.3	Low	11.7	108.9	Low	35	17	Medium
Louisiana	Medium	5.0	55.7	Medium	60.3	74.1	Medium	12.0	112.0	Low	10	0	Low
Maryland	Medium	10.9	121.7	Low	138.5	170.2	Medium	12.7	117.8	Low	9	0	Low
Minnesota	Medium	13.6	150.9	Medium	152.0	186.9	Medium	11.2	104.3	Low	8	0	Low
New York	Medium	12.0	133.4	Low	101.4	124.7	Low	8.5	78.7	Low	75	28	Medium
Ohio	Medium	12.2	135.9	Low	151.9	186.8	Medium	12.4	115.7	Low	10	0	Low
Oregon	Medium	7.2	80.0	Low	80.8	99.3	Low	11.2	104.5	Low	56	14	Medium
Pennsylvania	Medium	6.7	74.8	Medium	81.9	100.7	Low	12.2	113.3	Low	31	2	Medium

Table 2 (continued)

State	Overall level of concern	Total number of IP headers			Total number of IP lines			Average IP lines per header			Number of plans with IP headers		
		Per 1,000 enrolled months	As a percentage of national median	Level of concern	Per 1,000 enrolled months	As a percentage of national median	Level of concern	Per header record	As a percentage of national median	Level of concern	Number of plans	Number plans with no headers	Level of concern
Tennessee	Medium	10.5	117.1	Low	57.4	70.5	Medium	5.4	50.7	Low	11	0	Low
Utah	Medium	11.9	132.1	Low	127.7	157.0	Medium	10.8	100.1	Low	10	0	Low
Washington	Medium	6.5	72.3	Medium	72.6	89.2	Low	11.2	103.9	Low	24	1	Medium
West Virginia	Medium	6.0	66.6	Medium	78.4	96.3	Low	13.1	121.8	Low	4	0	Low
Wisconsin	Medium	9.6	106.8	Low	93.5	115.0	Low	9.7	90.6	Low	74	2	Medium
High data quality concern (n = 8 states)													
Colorado	High	4.1	45.1	High	35.8	44.0	High	8.8	82.2	Low	10	4	Medium
Georgia	High	96.6	1074.2	High	301.8	371.0	High	3.1	29.1	High	5	0	Low
Indiana	High	5.9	65.8	Medium	36.9	45.4	High	6.2	58.1	Low	11	0	Low
Kentucky	High	10.2	113.5	Low	40.0	49.1	High	3.9	36.5	High	6	1	Medium
Nevada	High	3.1	34.0	High	32.7	40.1	High	10.7	99.3	Low	6	0	Low
New Hampshire	High	3.1	33.9	High	36.4	44.8	High	11.9	111.1	Low	6	5	High
Rhode Island	High	3.1	34.8	High	33.2	40.8	High	10.6	98.7	Low	10	6	High
Virginia	High	10.1	112.9	Low	106.5	130.9	Low	10.5	97.7	Low	21	12	High
Unusable (n = 3 states)													
Iowa	Unusable	0.1	0.6	Unusable	0.6	0.7	Unusable	10.1	94.3	Low	297	294	High
Massachusetts	Unusable	63.2	702.7	High	63.2	77.7	Low	1.0	9.3	Unusable	21	10	High
North Dakota	Unusable	0.0	0.0	Unusable	0.0	0.0	Unusable	0.0	0.0	Unusable	1	1	Unusable
Excluded from analysis (n = 3 states)													
Mississippi	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
Missouri	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
Nebraska	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ

Source: 2017 TAF as of January 2019; Medicaid Managed Care Enrollment and Program Characteristics 2019 report.

Table 2 (continued)

Note: This table includes the four measures that we used to understand potential issues with the completeness or quality of the TAF encounter record data in the IP file: (1) the number of header records per 1,000 enrolled months, (2) the number of line records per 1,000 enrolled months, (3) the average number of line records per header record, and (4) the number of CMC plans with no encounters in the IP file. Alabama, Alaska, Arkansas, Connecticut, Idaho, Maine, North Carolina, Oklahoma, South Dakota, and Wyoming were excluded from the analysis because they do not operate a CMC program. Mississippi, Missouri, and Nebraska were excluded from the analysis because of concerns about the low volume of claims. Montana was excluded for both reasons. Vermont has a CMC program but was excluded from the analysis because it reports claims as fee-for-service.

DQ = Not reported because of concerns about the low volume of claims.

Table 3. Volume of encounter records in the LT file, 2017

State	Overall level of concern	Total number of LT headers			Total number of LT lines			Average LT lines per header			Number of plans with LT headers		
		Per 1,000 enrolled months over age 65	As a percentage of national median	Level of concern	Per 1,000 enrolled months over age 65	As a percentage of national median	Level of concern	Per header record	As a percentage of national median	Level of concern	Number of plans	Number plans with no headers	Level of concern
National median		1.3			4.0			2.0					
Low data quality concern (n = 12 states)													
Georgia	Low	0.2	15.8	NA	1.1	25.6	NA	5.2	253.7	Low	5	0	Low
Hawaii	Low	7.4	574.5	NA	23.3	566.6	NA	3.2	154.8	Low	10	0	Low
Indiana	Low	0.2	19.2	NA	0.5	13.0	NA	2.2	106.2	Low	11	0	Low
Kansas	Low	52.2	4,075.1	NA	54.8	1,332.1	NA	1.1	51.3	Low	3	0	Low
Michigan	Low	1.0	79.1	NA	10.2	248.1	NA	10.1	492.3	Low	11	0	Low
Minnesota	Low	3.5	269.6	NA	12.2	296.2	NA	3.5	172.5	Low	8	0	Low
Nevada	Low	0.2	13.7	NA	0.4	8.7	NA	2.0	99.4	Low	6	0	Low
New Jersey	Low	7.7	599.3	NA	12.0	290.7	NA	1.6	76.2	Low	5	0	Low
New Mexico	Low	8.1	634.4	NA	13.2	321.9	NA	1.6	79.7	Low	4	0	Low
Ohio	Low	1.6	123.6	NA	7.2	174.7	NA	4.5	221.9	Low	10	0	Low
Tennessee	Low	18.4	1,433.2	NA	18.9	458.9	NA	1.0	50.3	Low	11	0	Low
West Virginia	Low	0.6	47.6	NA	3.0	73.5	NA	5.0	242.5	Low	4	0	Low
Medium data quality concern (n = 15 states)													
Arizona	Medium	9.8	767.0	NA	15.2	370.0	NA	1.6	75.7	Low	23	5	Medium
California	Medium	9.8	768.4	NA	16.7	406.2	NA	1.7	83.0	Low	125	9	Medium
Delaware	Medium	18.2	1,424.8	NA	31.3	761.7	NA	1.7	83.9	Low	3	1	Medium
District of Columbia	Medium	0.6	50.3	NA	1.6	39.2	NA	2.5	122.4	Low	9	4	Medium
Florida	Medium	13.4	1,045.9	NA	14.2	344.0	NA	1.1	51.6	Low	128	40	Medium
Kentucky ^a	Medium	0.9	69.6	NA	1.8	44.6	NA	2.1	100.6	Low	6	1	Medium
Maryland ^d	Medium	0.6	47.8	NA	0.9	21.6	NA	1.5	70.8	Low	9	1	Medium

Table 3 (continued)

State	Overall level of concern	Total number of LT headers			Total number of LT lines			Average LT lines per header			Number of plans with LT headers		
		Per 1,000 enrolled months over age 65	As a percentage of national median	Level of concern	Per 1,000 enrolled months over age 65	As a percentage of national median	Level of concern	Per header record	As a percentage of national median	Level of concern	Number of plans	Number plans with no headers	Level of concern
Massachusetts	Medium	10.5	819.3	NA	10.5	255.0	NA	1.0	48.9	Low	21	10	Medium
New York	Medium	2.9	228.4	NA	7.1	173.2	NA	2.4	119.0	Low	75	31	Medium
Pennsylvania	Medium	0.3	23.0	NA	0.9	21.7	NA	3.0	148.2	Low	31	10	Medium
Rhode Island	Medium	13.0	1,016.5	NA	13.0	316.3	NA	1.0	48.9	Low	10	3	Medium
Texas	Medium	39.7	3,098.9	NA	41.4	1,006.7	NA	1.0	51.0	Low	136	2	Medium
Utah ^a	Medium	0.3	25.4	NA	1.8	43.7	NA	5.5	270.7	Low	10	3	Medium
Washington	Medium	0.2	12.5	NA	0.9	21.9	NA	5.6	274.5	Low	24	7	Medium
Wisconsin	Medium	0.2	13.9	NA	0.4	8.8	NA	2.0	99.4	Low	74	14	Medium
High data quality concern (n = 5 states)													
Illinois	High	2.7	211.3	NA	3.2	78.4	NA	1.2	58.2	Low	35	19	High
Iowa	High	0.1	9.8	NA	0.4	8.8	NA	2.9	141.4	Low	297	294	High
New Hampshire ^a	High	0.1	11.0	NA	0.4	9.5	NA	2.8	135.4	Low	6	4	High
Oregon	High	0.3	23.8	NA	1.5	36.5	NA	4.9	241.2	Low	56	40	High
Virginia ^a	High	1.5	120.9	NA	5.0	121.6	NA	3.2	158.0	Low	21	18	High
Unusable (n = 2 states)													
North Dakota ^a	Unusable	0.0	0.0	NA	0.0	0.0	NA	0.0	0.0	Unusable	1	1	Unusable
South Carolina	Unusable	0.0	0.0	NA	0.0	0.0	NA	0.0	0.0	Unusable	6	6	Unusable
Excluded from analysis (n = 5 states)													
Colorado	—	—	—	—	—	—	—	—	—	—	—	—	—
Louisiana	—	—	—	—	—	—	—	—	—	—	—	—	—
Mississippi	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
Missouri	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ

Table 3 (continued)

State	Overall level of concern	Total number of LT headers			Total number of LT lines			Average LT lines per header			Number of plans with LT headers		
		Per 1,000 enrolled months over age 65	As a percentage of national median	Level of concern	Per 1,000 enrolled months over age 65	As a percentage of national median	Level of concern	Per header record	As a percentage of national median	Level of concern	Number of plans	Number plans with no headers	Level of concern
Nebraska	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ

Source: 2017 TAF as of January 2019; Medicaid Managed Care Enrollment and Program Characteristics 2019 report.

Note: This table includes the four measures that we used to understand potential issues with the completeness or quality of the TAF encounter record data in the LT file: (1) the number of header records per 1,000 enrolled months, (2) the number of line records per 1,000 enrolled months, (3) the average number of line records per header record, and (4) the number of CMC plans with no encounters in the LT file. Alabama, Alaska, Arkansas, Connecticut, Idaho, Maine, North Carolina, Oklahoma, South Dakota, and Wyoming were excluded from the analysis because they do not operate a CMC program. Colorado and Louisiana excluded from the analysis because they do not require CMC plans to cover long-term care services. Mississippi, Missouri, and Nebraska were excluded from the analysis because of concerns about the low volume of claims. Montana was excluded for both reasons. Vermont has a CMC program but was excluded from the analysis because it reports claims as fee-for-service.

^aState only requires CMC program to cover hospice services.

DQ = Not reported because of concerns about the low volume of claims; NA = Not assessed.

Table 4. Volume of claims in the OT file, 2017

State	Overall concern level	Total number of OT headers			Total number of OT lines			Average OT lines per header			Number of plans with OT headers		
		Per 1,000 enrolled months	As a percentage of national median	Level of concern	Per 1,000 enrolled months	As a percentage of national median	Level of concern	Per header record	As a percentage of national median	Level of concern	Number of plans	Number plans with no headers	Level of concern
National median		1,248.3			2,262.3			2.1					
Low data quality concern (n = 6 states)													
Michigan	Low	1,221.9	97.9	Low	2,848.1	125.9	Low	2.3	110.1	Low	11	0	Low
New Mexico	Low	1,439.2	115.3	Low	3,367.2	148.8	Low	2.3	110.5	Low	4	0	Low
Tennessee	Low	1,274.8	102.1	Low	2,488.6	110.0	Low	2.0	92.2	Low	11	0	Low
Texas	Low	1,288.4	103.2	Low	2,729.5	120.7	Low	2.1	100.1	Low	136	0	Low
West Virginia	Low	1,059.9	84.9	Low	2,495.3	110.3	Low	2.4	111.2	Low	4	0	Low
Wisconsin	Low	1,173.7	94.0	Low	2,152.2	95.1	Low	1.8	86.6	Low	74	0	Low
Medium data quality concern (n = 19 states)													
Arizona	Medium	2,452.2	196.4	Medium	3,435.9	151.9	Medium	1.4	66.2	Low	23	4	Medium
California	Medium	805.8	64.6	Medium	1,881.7	83.2	Low	2.3	110.3	Low	125	1	Medium
Delaware	Medium	1,399.5	112.1	Low	3,209.9	141.9	Low	2.3	108.3	Low	3	1	Medium
District of Columbia	Medium	949.2	76.0	Low	2,154.9	95.3	Low	2.3	107.2	Low	9	4	Medium
Florida	Medium	1,543.1	123.6	Low	3,054.2	135.0	Low	2.0	93.5	Low	128	3	Medium
Georgia	Medium	797.8	63.9	Medium	1,604.3	70.9	Medium	2.0	95.0	Low	5	0	Low
Hawaii	Medium	913.4	73.2	Medium	2,227.1	98.4	Low	2.4	115.2	Low	10	0	Low
Illinois	Medium	1,012.5	81.1	Low	1,455.9	64.4	Medium	1.4	67.9	Low	35	17	Medium
Indiana	Medium	654.4	52.4	Medium	1,384.3	61.2	Medium	2.1	99.9	Low	11	0	Low
Kansas	Medium	1,786.6	143.1	Low	3,684.9	162.9	Medium	2.1	97.4	Low	3	0	Low
Kentucky	Medium	1,307.4	104.7	Low	2,780.5	122.9	Low	2.1	100.5	Low	6	1	Medium
Maryland	Medium	1,905.4	152.6	Medium	2,298.4	101.6	Low	1.2	57.0	Low	9	0	Low
New York	Medium	1,483.0	118.8	Low	3,479.4	153.8	Medium	2.3	110.8	Low	75	25	Medium
Ohio	Medium	1,317.3	105.5	Low	3,464.4	153.1	Medium	2.6	124.2	Low	10	0	Low

Table 4 (continued)

State	Overall concern level	Total number of OT headers			Total number of OT lines			Average OT lines per header			Number of plans with OT headers		
		Per 1,000 enrolled months	As a percentage of national median	Level of concern	Per 1,000 enrolled months	As a percentage of national median	Level of concern	Per header record	As a percentage of national median	Level of concern	Number of plans	Number plans with no headers	Level of concern
Oregon	Medium	1,522.7	122.0	Low	2,903.8	128.4	Low	1.9	90.1	Low	56	1	Medium
Pennsylvania	Medium	855.1	68.5	Medium	1,941.0	85.8	Low	2.3	107.2	Low	31	1	Medium
Rhode Island	Medium	2,133.5	170.9	Medium	2,465.7	109.0	Low	1.2	54.6	Low	10	3	Medium
South Carolina	Medium	1,096.2	87.8	Low	2,099.8	92.8	Low	1.9	90.5	Low	6	1	Medium
Washington	Medium	821.0	65.8	Medium	1,761.8	77.9	Low	2.1	101.4	Low	24	1	Medium
High data quality concern (n = 9 states)													
Colorado	High	408.0	32.7	High	955.0	42.2	High	2.3	110.6	Low	10	1	Medium
Louisiana	High	1,385.2	111.0	Low	1,386.6	61.3	Medium	1.0	47.3	High	10	0	Low
Massachusetts	High	2,297.5	184.0	Medium	2,297.5	101.6	Low	1.0	47.2	High	21	9	Medium
Minnesota	High	2,081.4	166.7	Medium	5,327.6	235.5	High	2.6	120.9	Low	8	0	Low
Nevada	High	232.9	18.7	High	555.6	24.6	High	2.4	112.7	Low	6	0	Low
New Hampshire	High	1,056.5	84.6	Low	1,848.5	81.7	Low	1.7	82.7	Low	6	4	High
New Jersey	High	3,366.7	269.7	High	3,366.7	148.8	Low	1.0	47.2	High	5	0	Low
Utah	High	393.9	31.6	High	1,090.6	48.2	High	2.8	130.8	Low	10	0	Low
Virginia	High	1,557.1	124.7	Low	1,842.6	81.4	Low	1.2	55.9	Low	21	12	High
Unusable (n = 2 states)													
Iowa	Unusable	3.9	0.3	Unusable	9.1	0.4	Unusable	2.3	108.9	Low	297	294	High
North Dakota	Unusable	0.0	0.0	Unusable	0.0	0.0	Unusable	0.0	0.0	Unusable	1	1	High
Excluded from analysis (n = 3 states)													
Mississippi	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
Missouri	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
Nebraska	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ

Source: 2017 TAF as of January 2019; Medicaid Managed Care Enrollment and Program Characteristics 2019 report.

Table 4 (continued)

Note: This table includes the four measures that we used to understand potential issues with the completeness or quality of the TAF encounter record data in the IP file: (1) the number of header records per 1,000 enrolled months, (2) the number of line records per 1,000 enrolled months, (3) the average number of line records per header record, and (4) the number of CMC plans with no encounters in the OT file. Alabama, Alaska, Arkansas, Connecticut, Idaho, Maine, North Carolina, Oklahoma, South Dakota, and Wyoming were excluded from the analysis because they do not operate a CMC program. Mississippi, Missouri, and Nebraska were excluded from the analysis because of concerns about the low volume of claims. Montana was excluded for both reasons. Vermont has a CMC program but was excluded from the analysis because it reports claims as fee-for-service. Vermont has a CMC program but was excluded from the analysis because it reports claims as fee-for-service.

DQ = Not reported because of concerns about the low volume of claims.

Table 5. Volume of claims in the RX file, 2017

State	Overall level of concern	Total number of RX headers			Total number of RX lines			Average RX lines per header			Number of plans with RX headers		
		Per 1,000 enrolled months	As a percentage of national median	Level of concern	Per 1,000 enrolled months	As a percentage of national median	Level of concern	Per header record	As a percentage of national median	Level of concern	Number of plans	Number plans with no headers	Level of concern
National median		798.4			800.5			1.0					
Low data quality concern (n = 14 states)													
Georgia	Low	573.6	71.8	NA	573.6	71.7	NA	1.0	100.0	Low	5	0	Low
Hawaii	Low	768.0	96.2	NA	768.0	95.9	NA	1.0	100.0	Low	10	0	Low
Indiana	Low	575.4	72.1	NA	577.9	72.2	NA	1.0	100.4	Low	11	0	Low
Kansas	Low	881.3	110.4	NA	887.9	110.9	NA	1.0	100.7	Low	3	0	Low
Louisiana	Low	609.7	76.4	NA	609.7	76.2	NA	1.0	100.0	Low	10	0	Low
Maryland	Low	832.1	104.2	NA	832.1	103.9	NA	1.0	100.0	Low	9	0	Low
Michigan	Low	1,052.5	131.8	NA	1,072.4	134.0	NA	1.0	101.8	Low	11	0	Low
Minnesota	Low	1,700.1	212.9	NA	1,702.8	212.7	NA	1.0	100.1	Low	8	0	Low
Nevada	Low	840.1	105.2	NA	840.1	104.9	NA	1.0	100.0	Low	6	0	Low
New Jersey	Low	1,197.5	150.0	NA	1,200.6	150.0	NA	1.0	100.2	Low	5	0	Low
New Mexico	Low	752.6	94.3	NA	755.1	94.3	NA	1.0	100.3	Low	4	0	Low
Ohio	Low	1,509.2	189.0	NA	1,526.6	190.7	NA	1.0	101.1	Low	10	0	Low
Rhode Island	Low	1,226.3	153.6	NA	1,226.3	153.2	NA	1.0	100.0	Low	10	0	Low
Texas	Low	732.1	91.7	NA	733.6	91.6	NA	1.0	100.2	Low	136	0	Low
Medium data quality concern (n = 13 states)													
Arizona	Medium	875.4	109.6	NA	875.4	109.3	NA	1.0	100.0	Low	23	4	Medium
California	Medium	753.4	94.4	NA	753.4	94.1	NA	1.0	100.0	Low	125	2	Medium
Delaware	Medium	956.7	119.8	NA	959.8	119.9	NA	1.0	100.3	Low	3	1	Medium
District of Columbia	Medium	650.5	81.5	NA	650.8	81.3	NA	1.0	100.0	Low	9	3	Medium
Florida	Medium	838.0	105.0	NA	838.0	104.7	NA	1.0	100.0	Low	128	39	Medium
Kentucky	Medium	1,551.5	194.3	NA	1,561.5	195.1	NA	1.0	100.6	Low	6	1	Medium

Table 5 (continued)

State	Overall level of concern	Total number of RX headers			Total number of RX lines			Average RX lines per header			Number of plans with RX headers		
		Per 1,000 enrolled months	As a percentage of national median	Level of concern	Per 1,000 enrolled months	As a percentage of national median	Level of concern	Per header record	As a percentage of national median	Level of concern	Number of plans	Number plans with no headers	Level of concern
Massachusetts	Medium	872.3	109.2	NA	872.3	109.0	NA	1.0	100.0	Low	21	9	Medium
New York	Medium	1,360.5	170.4	NA	1,361.1	170.0	NA	1.0	100.0	Low	75	28	Medium
Oregon	Medium	766.5	96.0	NA	767.8	95.9	NA	1.0	100.1	Low	56	25	Medium
Pennsylvania	Medium	1,013.7	127.0	NA	1,017.8	127.1	NA	1.0	100.4	Low	31	7	Medium
South Carolina	Medium	729.6	91.4	NA	729.6	91.1	NA	1.0	100.0	Low	6	1	Medium
Utah	Medium	527.1	66.0	NA	527.9	65.9	NA	1.0	100.1	Low	10	1	Medium
Washington	Medium	858.7	107.5	NA	859.5	107.4	NA	1.0	100.1	Low	24	1	Medium
High data quality concern (n = 5 states)													
Colorado	High	40.2	5.0	NA	40.2	5.0	NA	1.0	100.0	Low	10	8	High
Illinois	High	798.4	100.0	NA	800.5	100.0	NA	1.0	100.2	Low	35	18	High
Iowa	High	1.4	0.2	NA	1.4	0.2	NA	1.0	100.0	Low	297	294	High
New Hampshire	High	650.3	81.4	NA	651.7	81.4	NA	1.0	100.2	Low	6	4	High
Virginia	High	924.6	115.8	NA	928.3	116.0	NA	1.0	100.4	Low	21	12	High
Unusable (n = 4 states)													
North Dakota	Unusable	0.0	0.0	NA	0.0	0.0	NA	0.0	0.0	Unusable	1	1	Unusable
Tennessee	Unusable	0.0	0.0	NA	0.0	0.0	NA	0.0	0.0	Unusable	11	11	Unusable
Wisconsin	Unusable	0.0	0.0	NA	0.0	0.0	NA	0.0	0.0	Unusable	74	74	Unusable
Excluded from analysis (n = 4 states)													
Mississippi	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
Missouri	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
Nebraska	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
West Virginia	—	—	—	—	—	—	—	—	—	—	—	—	—

Source: 2017 TAF as of January 2019; Medicaid Managed Care Enrollment and Program Characteristics (MMCEPC) 2019 report.

Table 5 (continued)

Note: This table includes the four measures that we used to understand potential issues with the completeness or quality of the TAF encounter record data in the OT file: (1) the number of header records per 1,000 enrolled months, (2) the number of line records per 1,000 enrolled months, (3) the average number of line records per header record, and (4) the number of CMC plans with no encounters in the RX file. Alabama, Alaska, Arkansas, Connecticut, Idaho, Maine, North Carolina, Oklahoma, South Dakota, and Wyoming were excluded from the analysis because they do not operate a CMC program. Mississippi, Missouri, and Nebraska were excluded from the analysis because of concerns about the low volume of claims. Montana was excluded for both reasons. Vermont has a CMC program but was excluded from the analysis because it reports claims as fee-for-service. West Virginia was excluded from the analysis because it does not require CMC plans to cover prescription drugs.

DQ = Not reported because of concerns about the low volume of claims; NA = Not assessed.

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Julia Baller¹, Andres Arguello¹, Mary Allison Geibel¹, Brenda Natzke¹, Kimberly Proctor², and Jessie Parker². "The Volume of Encounter Claim Records from Comprehensive Managed Care Organizations in 2017." TAF DQ Brief #5162. Baltimore, MD: CMS, 2019.

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