**TOPIC**
**Type of Service - LT**

**TOPIC AREA**
**Service Use Information**

## Summary

**TAF service use records capture data that providers enter on standard claim forms as well as additional fields specific to T-MSIS that state Medicaid agencies are responsible for populating. One of these additional fields is the type of service code, which states use to classify individual services appearing on a claim into standard categories that map to benefit and provider definitions in the Code of Federal Regulations. This analysis examines how often LT line records have missing or unexpected type of service codes.**

***Related topics include:***

- Type of Service - IP
- Type of Service - OT
- Type of Service - RX

## Background

The T-MSIS Analytic Files (TAF), the research-ready version of T-MSIS, include data on service use for all beneficiaries enrolled in Medicaid or in the Children's Health Insurance Program (CHIP). Service use records in the TAF are contained in the inpatient (IP), long-term care (LT), other services (OT), and pharmacy (RX) files. TAF service use records capture both data that providers enter on claim forms for payment as well as additional fields specific to T-MSIS that state Medicaid agencies are responsible for populating.

One of these additional fields is the type of service code, which states use to classify individual services appearing on a claim into standard categories that map to benefit and provider definitions in

the Code of Federal Regulations (CFR). States have been reporting type of service codes for many years as part of their reporting into the original Medicaid Statistical Information System (MSIS). With the transition to T-MSIS, the set of codes was expanded and refined to reflect more current definitions. In some cases, new codes were introduced that represent services or providers covered through the CHIP (not Medicaid) state plan, which means that some services such as well-child visits may have a different type of service code if delivered to an S-CHIP beneficiary versus a Medicaid or M-CHIP beneficiary. In other cases, new codes were introduced that represent finer, more granular services that were bundled together in previous type of service codes under MSIS. For example, a new code for services provided at critical access hospitals was introduced, while the older code for inpatient hospital services remains available.

Since some services may qualify for Medicaid or CHIP coverage under more than one section of the CFR, they may meet the definition of multiple type of service categories in T-MSIS. For example, depending on the type of provider delivering the service, a well-child visit delivered to a Medicaid-enrolled beneficiary might be coded as "Early and periodic screening and diagnosis and treatment (EPSDT) services" (code 010), as "Preventive services," (code 041), as "Physician services" (code 012), or as "Clinic services" (code 028). The same service delivered to an S-CHIP-enrolled child could be coded as "Well-baby and well-child care services as defined by the State" (code 042), a type of service code that is specific to the CHIP benefit package. Thus, even in the absence of T-MSIS reporting errors, we would expect to observe differences in the type of service code assigned to the same service in different states. TAF users should be very cautious in using the type of service data element to try to systematically identify a specific service across different states without including information from other fields, such as procedure or revenue codes, as it is unlikely that type of service code alone can consistently identify the same set of services across all states.

The T-MSIS data dictionary defines for states the type of service codes that are expected on records submitted into the IP, LT, OT, and RX files. This data quality assessment examines how often the states' TAF data have a missing or invalid type of service code. The assessment does not examine whether states appear to be consistent in assigning type of service values to similar claims, because some variation is expected and may reflect differences in what program a benefit is covered under (Medicaid or S-CHIP) or differences in the benefit category used to cover the service.

## Methods

We examined the type of service code (TOS_CD) values on all line records in the TAF [1] IP, LT, OT, and RX files. [2] We included all record types from these files, including fee-for-service claims, managed care encounters, capitation payments, service tracking claims, and supplemental payments, because states are expected to populate every line record submitted to T-MSIS with a valid type of service value. [3] We examined each file separately and excluded states from each file-specific analysis if the number of line records in the TAF were unusably low given the size of the state's Medicaid and CHIP programs. [4] For Illinois, we restricted our analysis to the original version of the claim, and we excluded all subsequent adjustment records in the state's TAF data. [5] We then examined the extent of missing or invalid type of service codes on records in each state.

We classified all line-level records into one of three categories: (1) valid type of service value for the file, (2) invalid type of service value for the file, or (3) missing value. We used the T-MSIS submission guidelines to define what type of service values are valid in each file. [6] Using the criteria shown in Table 1, we classified states as having type of service data that presented a low, medium, or high level of concern about data completeness—or as having sufficiently incomplete data as to be unusable. Our evaluation of whether the type of service code was valid only examined whether the code was allowable for the file under T-MSIS submission guidelines. We did not evaluate whether the code was consistent with other service-specific information on the record, such as procedure code or revenue code.

**Table 1. Criteria for DQ assessment of type of service code**

| Percentage of line records with missing or invalid type of service code | DQ assessment |
|---|---|
| x ≤ 10 percent | Low concern |
| 10 percent < x ≤ 20 percent | Medium concern |
| 20 percent < x ≤ 50 percent | High concern |
| x > 50 percent | Unusable |

1. This analysis used the TAF data that were released as TAF Research Identifiable Files (RIF). During the transformation into RIF, some TAF data elements were suppressed, changed, or renamed. Additional details are available on the DQ Atlas Resources page , and a crosswalk of variable names can be found in the guide "Production of the TAF Research Identifiable Files."
2. The T-MSIS claims files are structured to include one header record per claim and one or more line records that link to a header record. Header-level records capture data that apply to the entire claim. Line-level records capture data about the specific goods or services provided as part of the overall claim. Since the type of service categories relate to specific services, this data element is captured on line records. It is possible that a single claim would have lines with different type of service values.
3. We used the claim type code to exclude "other" records (claim type code values of U, V, W, X, and Y) that the state did not classify as either Medicaid or CHIP payment records. More information can be found in the DQ Atlas single topic display for Non-Program (Other) Claims .
4. More information about the completeness of each state's TAF data can be found in the DQ Atlas single topic displays for Claims Volume - IP , Claims Volume - LT , Claims Volume - OT , and Claims Volume - RX .
5. Because of limitations in its claims processing system, Illinois captures adjustments to original claims as incremental credits or debits rather than voiding the original claim and submitting a replacement record with the new payment amount. As a result, the version of a record with the latest adjudication date may not represent the final action claim as it does in all other states. To ensure the TAF correctly captures all expenditures reported by Illinois into T-MSIS, all service use records are included in the IP, OT, LT, and RX files. This means that in some cases, the TAF will include multiple versions of a single claim for Illinois, so including all records in an analysis will overcount service utilization. To ensure that utilization counts are correct, we restricted our analysis to the original claim from each claim family by selecting only records where ADJSTMT_IND = 0 and ADJSTMT_CLM_NUM = null. For more information, see the guide, "How to Use Illinois Claims Data," on ResDAC.org.
6. A list of valid values for the type of service code can be found in the TAF Claims Codebook at https://www2.ccwdata.org/web/quest/data-dictionaries .