Missing Eligibility Group Codes in 2017

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Key Findings

- Eligibility group codes allow T-MSIS Analytic File users to identify the basis on which an individual was deemed eligible for Medicaid or the Children's Health Insurance Program. This brief identifies states in which (1) the eligibility group code had high rates of missing values in 2017, which suggests that the data were incomplete or (2) codes for certain large mandatory Medicaid eligibility groups were not used, which suggests that states may not be assigning the eligibility group code correctly.

- Although the majority of states (38) had an eligibility group code assigned to more than 95 percent of their beneficiaries, only 13 states had at least one beneficiary in every mandatory eligibility group in which we would expect to see enrollment in all states. When we account for both beneficiaries who were missing an eligibility group code and the use of all expected mandatory eligibility group codes, 37 states fell into the medium or high concern category for the quality of the eligibility group code data. Table 3 shows the results for all states.

- When we examined patterns in the use of codes for the large mandatory eligibility groups, we found that all but one state (South Carolina) had enrollment in three groups: (1) parents and other caretaker relatives, (2) infants and children under age 19, and (3) qualified Medicare beneficiaries. We also found that all states except Idaho had enrollment in the pregnant women group. The mandatory eligibility groups in which states were least likely to have enrolled beneficiaries were the two disability groups—working disabled under 1619(b) and disabled adult children. Only 27 states and 32 states, respectively, had beneficiaries in these two groups. Figure 1 shows more detailed results of our analysis of the mandatory eligibility groups.

Background

To be eligible for Medicaid, individuals typically must meet financial requirements or be a part of a group that is categorically eligible for coverage (for instance, individuals covered under the Supplemental Security Income [SSI] program). Federal law requires that all state Medicaid programs cover certain groups of individuals, known as mandatory eligibility groups, whereas coverage of other groups is optional.[1] The makeup of these groups has changed over time.

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[1] For a full description of the eligibility groups, see the TAF Data Dictionary.

Historically, coverage was more limited, focusing on low-income children and their parents, qualified pregnant women, the elderly, and people with disabilities. Several policies have expanded eligibility for both the mandatory and the optional groups. For example, the State Children's Health Insurance Program (CHIP) under the Balanced Budget Act of 1997 gave states additional funding opportunities and greater flexibility in covering uninsured children in families whose income is too high to qualify for Medicaid. In 2010, the Patient Protection and Affordable Care Act expanded coverage to former foster care children and gave states the option to further expand Medicaid to other low-income adults.[2]

The eligibility group code in the T-MSIS Analytic Files (TAF), the research-ready version of T-MSIS, can be used to identify the basis on which an individual was deemed eligible for Medicaid or CHIP.[3] This data element defines 72 eligibility group values, including 26 mandatory eligibility groups that every state is required by law to cover and 46 optional eligibility groups that may or may not be relevant to beneficiaries in a given state, depending on that state's Medicaid and CHIP state plan and waiver arrangements.[4] States should assign every Medicaid and CHIP beneficiary to one of the 72 eligibility groups. However, TAF users would not expect the code for every eligibility group to be represented in every state's data because some of the mandatory eligibility groups represent small populations that are not present in every state, whereas other mandatory eligibility groups represent populations that are large enough to exist in every state. This brief examines (1) the missingness of eligibility group codes, which suggests that the data were incomplete, and (2) the frequency of no enrollment in the large mandatory eligibility groups, which suggests that a state may not be assigning eligibility group codes to enrollment records accurately.

Methods

We conducted two types of analyses based on the 2017 TAF annual Demographic and Eligibility (DE) file for 46 states, the District of Columbia, and Puerto Rico.[5] First, we calculated the percentage of enrollment records for Medicaid and CHIP beneficiaries that were missing eligibility group codes for the entire year.[6] Second, we examined whether the state had

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[2] See TAF DQ Brief #4041, "Identifying and Benchmarking the Medicaid Adult Expansion Population in 2016" for an analysis of the TAF-based counts of this population state by state.

[3] Historically, states reported the basis of eligibility in the legacy MSIS in two fields populated with the Maintenance Assistance Status (MAS) and Basis of Eligibility (BOE) codes. These codes were combined in T-MSIS but are no longer required fields. Although MAS/BOE may continue to be reported, fewer states are reporting this data element over time. In place of MAS and BOE, CMS developed a new coding system for classifying eligibility, known as the Eligibility Group, which is the focus of this brief.

[4] See the T-MSIS Coding Blog on Reporting Eligibility Group at https://www.medicaid.gov/medicaid/data-and-systems/macbis/tmsis/tmsis-blog/?entry=47569.

[5] 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).

[6] We used the latest available eligibility group code (ELGBLTY_GRP_CD_LTST) to define beneficiaries for whom the eligibility group code was missing. ELGBLTY_GRP_CD_LTST was constructed in the TAF DE by selecting the value in the most recent month in which an eligibility group code was present. Its value would be NULL if all 12 monthly T-MSIS source values for the eligibility group were missing, unknown, or not on the valid value list.

enrollment in each of the 12 large mandatory eligibility groups.[7] Of all the mandatory eligibility groups, we selected these 12 because they are large enough that we would expect every state to report at least one beneficiary in each group (Table 1). One of the eligibility groups, low-income beneficiaries with disabilities, is captured by one of two eligibility group codes, depending on the state's 209(b) status, so we examined 13 codes in total.[8] We excluded the remaining mandatory eligibility groups from the second analysis, because they either have limited applicability—for example, individuals who are essential spouses (eligibility group code 14)—or are expected to have relatively low enrollment, such as disabled widows and widowers ineligible for SSI due to early receipt of Social Security (eligibility group code 20).

When a state did not have a beneficiary in one of the 12 large mandatory eligibility groups, we assumed that the state may be incorrectly assigning eligibility group codes in its T-MSIS data.[9] Therefore, we flagged it as a possible data quality issue and counted the total number of groups in which no beneficiary appeared, by state. The greater the number of large mandatory eligibility categories with no beneficiaries, the greater the concern that the state is not correctly mapping eligibility information to the T-MSIS eligibility group codes.

We confirmed that an invalid value was not observed in this specific data element in TAF. Because the DE file contains one record for every Medicaid and CHIP beneficiary ever enrolled during the year, every beneficiary should have a known eligibility group code. We did not, however, further examine whether the months with a known eligibility group code correspond to the months enrolled or whether the mapping of every known eligibility group code is accurate.

[7] Puerto Rico is exempted by statute from providing coverage to certain eligibility groups (https://www.macpac.gov/wp-content/uploads/2019/03/Medicaid-and-CHIP-in-the-Territories.pdf), so it was excluded from the analysis on the count of large mandatory eligibility groups.

[8] Federal law requires states to cover low-income individuals with disabilities. Most states automatically grant Medicaid to all individuals who receive SSI benefits and assign them to eligibility group code 11. Other states (known as the 209(b) states) use their own eligibility criteria, which are different from the SSI program eligibility criteria, and they also use eligibility group code 12 instead of 11. There are nine 209(b) states: Connecticut, Hawaii, Illinois, Minnesota, Missouri, New Hampshire, North Dakota, Oklahoma, and Virginia. For our analysis, we considered eligibility group codes 11 and 12 as one mandatory coverage category and verified that at least one beneficiary was assigned either code. If neither code was populated, we considered the state to have one mandatory eligibility group with no enrollment (Table 3). In addition, we also compared the states' 209(b) status against the exact eligibility code that they used. For example, if a 209(b) state used eligibility group code 11 as opposed to 12, or if it used both, there would be concerns about the quality of the data (see Figure 1).

[9] However, some individuals are eligible for Medicaid under more than one mandatory eligibility group, and states do not have a consistent way of assigning these individuals to a primary eligibility group. In some cases, it may be the absence of a hierarchy for eligibility group codes that leads to non-reporting for certain mandatory groups.

Table 1. Eligibility group codes for large mandatory Medicaid eligibility groups

Eligibility group code	Large mandatory Medicaid eligibility group
1	Parents and other caretaker relatives
5	Pregnant women
6	Deemed newborns
7	Infants and children under age 19
8	Children with Title IV-E adoption assistance, foster care, or guardianship care
9	Former foster care children
11	Individuals receiving SSI automatically
12	Individuals receiving SSI through 209(b) provisions
21	Working disabled under 1619(b)
22	Disabled adult children
23	Qualified Medicare beneficiaries
25	Specified low-income Medicare beneficiaries
26	Qualifying individuals

Source: TAF Data Dictionary.

To synthesize the findings from the two analyses, we grouped states into three levels of concern—low, medium, and high—about the quality of eligibility group codes, depending on the percentage of records that were missing an eligibility group code and the count of large mandatory eligibility groups with no enrollment (Table 2). States with particularly high rates of missing data or a large number of mandatory eligibility group codes with no enrollment were classified as unusable.

Table 2. Criteria for grouping states into different levels of concern about the quality of eligibility group codes

Percentage of beneficiaries missing an eligibility group code	Count of large mandatory eligibility groups with no enrollment			
	0	1-2	3–6	7–12
5% or less	Low	Medium	High	Unusable
More than 5% and up to 10%	Medium	Medium	High	Unusable
More than 10% and up to 20%	High	High	High	Unusable
Greater than 20% missing	Unusable	Unusable	Unusable	Unusable

Findings

We considered both analyses, the percentage of ever-enrolled beneficiaries who were missing an eligibility group code and the count of large mandatory eligibility groups with no enrollment in 2017, by state, and grouped states based on levels of concern about their data quality (Table 3). We found the following:

- Eleven states presented a low level of concern about the data quality of eligibility group codes in 2017. These states had at least one beneficiary in every large mandatory eligibility group included in the analysis, and less than 5 percent of their beneficiaries were missing an eligibility group code.

- Twenty-six states presented a medium level of concern about the quality of eligibility group codes in 2017. Although 21 of these states had relatively complete data (i.e., an eligibility group code was missing for less than 5 percent of beneficiaries), the accuracy of the coding is concerning because there were no beneficiaries in one or two of the large mandatory eligibility groups. In the other five states—Kansas, Louisiana, New Hampshire, Tennessee, and Wyoming—an eligibility group code was missing for anywhere from 8 to 9 percent of the beneficiaries; however, Louisiana and Wyoming had at least one beneficiary in every large mandatory eligibility group.

- Eleven states presented a high level of concern about the data quality of eligibility group codes in 2017. In six of these states, an eligibility group code was missing for less than 5 percent of the beneficiaries, but no beneficiaries were in 3 to 5 of the large mandatory eligibility groups. The remaining five states—Idaho, Iowa, Maine, North Dakota, and Oregon—had higher rates of missing eligibility group codes (ranging from 11 to 16 percent of beneficiaries). Maine was the only state that had at least one beneficiary in all large mandatory eligibility groups.

Not all large mandatory eligibility groups were equally likely to be missing beneficiaries. This suggests that states may have more difficulty reporting eligibility for beneficiaries who qualify for benefits through certain pathways (Figure 1):

- Of the 12 mandatory eligibility groups (13 codes total) included in this analysis, all but one state had beneficiaries in the following four groups: "parents and other caretaker relatives" (eligibility group code 1); "pregnant women" (eligibility group code 5); "infants and children under age 19" (eligibility group code 7); and "qualified Medicare beneficiaries" (eligibility group code 23).

- A large majority of states had beneficiaries in "children with Title IV-E adoption assistance, foster care, or guardianship care" (eligibility group code 8).

- A large majority of states also had low-income individuals with disabilities in eligibility group code 11 or 12. However, a number of states used these codes in a manner that is inconsistent with their 209(b) status. Ten states—Arkansas, Colorado, Kentucky, Ohio, Oklahoma, Pennsylvania, South Carolina, Vermont, Virginia, and West Virginia—as well as the District of Columbia assigned eligibility group codes 11 *and* 12 to beneficiaries, which is not what we would expect. In most cases like this, however, one code was used predominately, reflecting the state's 209(b) status.

- Just over half of the states had beneficiaries in two of the mandatory eligibility groups related to disability—"working disabled under 1619(b)" (eligibility group code 21) and "disabled adult children" (eligibility group code 22).

Overall, we found that most states had low rates of missing eligibility group code. However, most states did not report beneficiaries in at least one large mandatory eligibility group, which suggests that beneficiaries may not always be classified correctly. It is possible that the eligibility group code is not missing at random, and some eligibility groups may be affected by the missingness more than others. TAF users should consider both our analyses and the states' specific context when determining the extent to which they should be concerned about the quality of a state's data if they decide to use eligibility group code information in their own analyses.

Table 3. Percentage of beneficiaries with a missing eligibility group code and count of large mandatory eligibility groups into which states did not report beneficiaries in 2017

State	Total Medicaid and CHIP beneficiaries ever enrolled in 2017	Count of beneficiaries with a missing eligibility group code	Percentage of beneficiaries with a missing eligibility group code	Count of 12 large mandatory eligibility groups with no one enrolled
Low data quality concern (*n* = 11 states)				
Wisconsin	1,432,971	0	0.0	0
Georgia	2,490,925	106	0.0	0
Delaware	291,623	85	0.0	0
South Dakota	153,830	74	0.0	0
California	17,468,412	95,598	0.5	0
Kentucky	1,660,887	13,380	0.8	0[a]
Arkansas	1,966,254	25,051	1.3	0[a]
Rhode Island	382,380	5,091	1.3	0
Puerto Rico	3,157,270	108,996	3.5	N/A
Ohio	3,620,327	148,665	4.1	0[a]
Nevada	868,280	40,825	4.7	0
Medium data quality concern (*n* = 26 states)				
Alaska	233,821	0	0.0	1
Connecticut	1,084,299	0	0.0	2
New Mexico	1,010,936	3	0.0	2
Maryland	1,600,452	5	0.0	2
Minnesota	1,361,527	6	0.0	1
Michigan	2,909,774	77	0.0	2
Oklahoma	1,042,230	31	0.0	1[a]
Illinois	3,673,460	144	0.0	1
Colorado	1,697,599	757	0.0	1[a]
Utah	429,816	1,502	0.3	2
Washington	2,222,609	10,623	0.5	2
Alabama	1,455,113	8,240	0.6	1
Virginia	1,437,392	10,433	0.7	1[a]
Massachusetts	2,234,106	21,306	1.0	1
Indiana	1,818,441	21,801	1.2	1
Hawaii	427,279	9,598	2.2	2
West Virginia	684,933	15,817	2.3	1[a]
Arizona	2,385,689	63,420	2.7	1
Pennsylvania	3,922,125	116,941	3.0	1[a]
Texas	5,936,044	249,025	4.2	1
Florida	5,227,826	241,532	4.6	1

Table 3 (*continued*)

State	Total Medicaid and CHIP beneficiaries ever enrolled in 2017	Count of beneficiaries with a missing eligibility group code	Percentage of beneficiaries with a missing eligibility group code	Count of 12 large mandatory eligibility groups with no one enrolled
Wyoming	90,585	7,101	7.8	0
Tennessee	1,835,052	145,718	7.9	2
New Hampshire	260,179	21,065	8.1	1
Kansas	517,407	44,390	8.6	1
Louisiana	1,983,085	179,799	9.1	0
High data quality concern (*n* = 11 states)				
South Carolina	1,452,452	1	0.0	5[a]
District of Columbia	289,733	365	0.1	5[a]
Vermont	209,055	1,694	0.8	3[a]
New Jersey	2,240,367	34,697	1.5	3
North Carolina	2,509,045	58,442	2.3	3
New York	8,433,237	341,296	4.0	4
Oregon	1,363,602	146,616	10.8	1
Maine	363,686	51,840	14.3	0
North Dakota	72,344	11,143	15.4	3
Iowa	978,663	159,125	16.3	3
Idaho	432,591	72,194	16.3	4

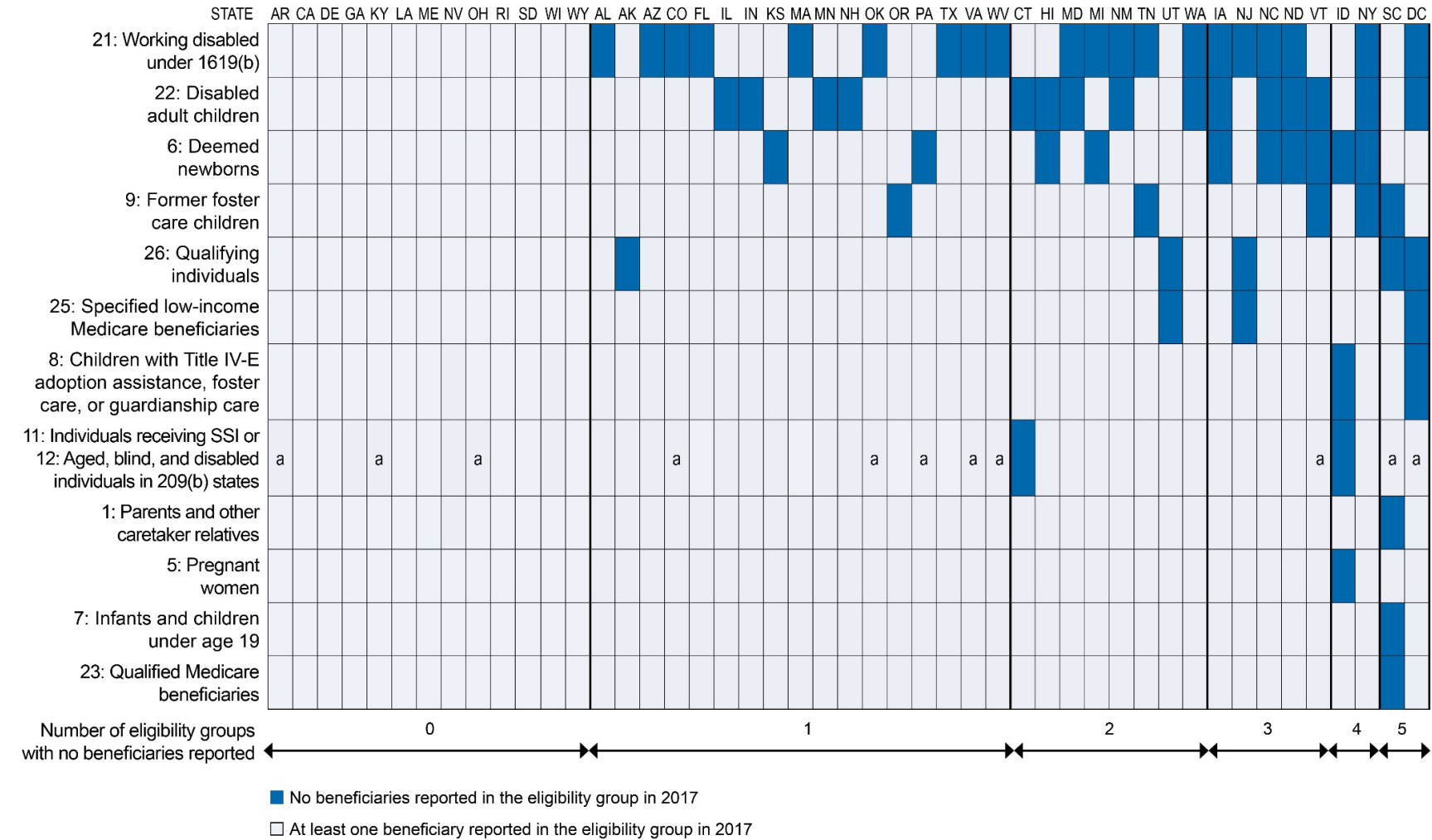Source: 2017 TAF as of January 2019.

Note: States are grouped according to the level of concern about the quality of their data. Within each group, they are ordered from the lowest to the highest percentage of beneficiaries for whom an eligibility group code was missing in 2017.

Puerto Rico was excluded from the analysis of the reporting beneficiaries into large mandatory eligibility groups because, by statute, it is allowed to exclude some mandatory groups.

[a] State has beneficiaries in both the "individuals receiving SSI" (eligibility group code 11) and in the "aged, blind, and disabled individuals in 209(b) states" (eligibility group code 12).

N/A = not applicable

Figure 1. States' patterns of reporting beneficiaries into large mandatory eligibility groups

Source: 2017 TAF as of January 2019.

Note: Puerto Rico was excluded from this analysis. See the TAF DE Data Dictionary for a full description of the eligibility groups.

For the SSI population, we expected states to have at least one beneficiary in either of two eligibility groups: "individuals receiving SSI" (eligibility group code 11) or "aged, blind, and disabled individuals in 209(b) states" (eligibility group code 12), depending on whether the state elected the 209(b) option.

[a]State had beneficiaries in both the "individuals receiving SSI" (eligibility group code 11) and in the "aged, blind, and disabled individuals in 209(b) states" (eligibility group code 12).