Medicaid Spending on Managed-Care Capitation and Fee-for-Service Claims among Dual Medicare-Medicaid Enrollees

T-MSIS Analytic Files Data Quality

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Executive Summary

In this data quality report, we investigate Medicaid spending data on people dually enrolled in Medicare and Medicaid (hereafter “dual enrollees”) in the Transformed Medicaid Statistical Information System (T-MSIS) Analytic Files (TAF). For select states, we investigate capitation payments among Medicaid managed-care plan enrollees by type of comprehensive plan, including the Financial Alignment Initiative’s Medicare-Medicaid Plans, and by type of more limited benefit plans, including behavioral health plans, long-term care plans, and transportation service plans. For those who receive benefits on a fee-for-service basis, we investigate Medicaid spending for specific services for which Medicaid is typically the primary payer among dual enrollees: nursing home care; behavioral health services; and long-term services and supports, such as personal care, nonemergency transportation, and other home- and community-based services. Our analysis produced several key findings.

- Analyzing Medicaid managed-care plan capitation payments, we find that
  - most managed-care plan enrollees had corresponding capitation claims with a positive payment amount, which is necessary for the data to be usable (i.e., missing or negative amounts are unusable);
  - the most common data quality issue is a lack of corresponding capitation claims for certain combinations of enrollees and plan types; and
  - the proportion of enrollees whose plans had no capitation claim was almost 100 percent for some plan types and states, making the data unusable, and was very moderate (e.g., less than 1 percent) in other plan types and states, leading to few data quality concerns.

- Analyzing Medicaid fee-for-service noncrossover (meaning no Medicare responsibility) claim payments, we find that
  - most states' claims had positive Medicaid payments, which are necessary for the data to be usable;
  - the most common data quality issue is claim lines with a reported $0 Medicaid payment amount; and
  - data quality across the services studied varies significantly within states, though Montana and Iowa had consistently high shares of $0 payment amounts across four of the five services studied.
Taken together, this analysis shows Medicaid spending contained in the TAF can be used for various analyses of care delivered to dual enrollees. However, given the significant state-by-state variation in data quality by type of service, researchers will need to use these results on a case-by-case basis to determine the quality of the data for a given state-specific application. Further, the data will not support national studies without exclusions.
Medicaid Spending on Managed-Care Capitation and Fee-for-Service Claims among Dual Medicare-Medicaid Enrollees

To study those dually enrolled in Medicare and Medicaid (hereafter “dual enrollees”), having administrative data from both programs is vital. On November 8, 2020, the Centers for Medicare & Medicaid Services announced the availability of new Medicaid administrative data files spanning calendar years 2014 to 2016 for the research community, namely the Transformed Medicaid Statistical Information System (T-MSIS) Analytic Files (TAF). Importantly, the TAF data are available in the Centers for Medicare & Medicaid Services’ Chronic Conditions Data Warehouse Virtual Research Data Center (CCW), meaning they can be linked to administrative Medicare data. This linkage opens a range of researchable questions for quantitative analysis, because both Medicare and Medicaid data are necessary to paint a complete picture of health care spending and utilization of care among dual enrollees.

TAF data quality assessments and a data quality website, DQ ATLAS, offer information by topic and state to users of TAF data. Though these resources are valuable, they focus on the Medicaid population more generally. In this work, we contribute to knowledge of the TAF’s data quality by specifically focusing on issues related to dual enrollees. Medicare-Medicaid dual enrollees represent a minority of Medicaid enrollees overall, meaning data quality issues identified in the more general Medicaid population may not apply to dual enrollees. Also, some TAF data features and data quality questions are specific to dual enrollees.

We intend for the information in this report to provide researchers with a basis for understanding the most fundamental quality dimensions of TAF data on dual enrollees by state necessary for designing studies. In doing so, we do not seek to label a state’s data as either “usable” or “unusable”; where we identify issues, researchers may be able to pursue a work-around for their specific research design. This work is intended to identify cases where a work-around or further data quality investigation, at a minimum, is necessary for a specific application.
In this data quality report, we investigate the quality of Medicaid spending data among dual enrollees in the TAF. First, we study the quality of capitation payments to Medicaid managed-care plans. Specifically, we investigate Medicaid payments made on behalf of those enrolled in comprehensive benefit plans, including Medicare-Medicaid Plans (MMPs) in select states, as well as more narrow behavioral health plans, long-term care plans, and transportation service plans. Second, we investigate the quality of fee-for-service Medicaid expenditures for specific services for which Medicaid is typically the primary payer among dual enrollees: nursing home care; behavioral health services; and long-term services and supports, such as personal care, nonemergency transportation, and other home- and community-based services (HCBS).

Interested readers should refer to the glossary at the end of this report that is intended to facilitate interpretation of the terms commonly used in this report and two related companion reports on the quality of enrollment and Medicaid utilization TAF data among dual enrollees (Caswell and Waidmann 2021; Caswell, Waidmann, and Wei 2021).

Data and Methods

Data on dual enrollment are taken from both the TAF and Medicare Master Beneficiary Summary File (MBSF), as described in our report on the quality of TAF dual enrollment data (Caswell and Waidmann 2021). Throughout this work, we report statistics on people identified as dually enrolled in either the TAF or MBSF. We take this approach because a significant number of dual enrollees in some states who are identified in the MBSF are included in the TAF data as Medicaid-only enrollees. Consequently, identifying dual enrollees using only the TAF would exclude these beneficiaries from the analysis. See Caswell and Waidmann (2021) for detailed results on dual enrollment by state, as well as the inputs used from the TAF and MBSF to define dual enrollment.

Medicaid Data

We use the Research Identifiable Files version of the TAF for January 2018, the most recent Research Identifiable Files data available when this study was conducted. The following data elements are the basis for identifying HCBS, behavioral health, and nursing home care claims, as well as managed-care enrollment and capitation payments in the TAF data. For a more detailed explanation of the data elements used to identify service claims, see our related report on the quality of TAF utilization data (Caswell, Waidmann, and Wei 2021).
From the Demographic and Eligibility base file, we use the following data elements:

- state (most recent information based on submitting state)
- Medicare-Medicaid dual eligibility code (identifies Medicare Savings Program categories)
- number of enrollment days in month (for Medicaid and the Children’s Health Insurance Program)

From the Demographic and Eligibility managed-care enrollment file, we use the following data elements:

- managed-care plan-type code (16 possible plans per month)
- managed-care plan ID (16 possible plans per month)

From the Other Services (OT) base claim (header) file, we use the following data elements:

- encrypted CCW beneficiary identifier ("BENE_ID")
- submitting state
- CCW claim identifier
- bill-type code
- claim-type code
- claim beginning date of service
- claim end date of service
- code to indicate if a portion of a claim is paid by Medicare (crossover claim)
- total amount paid by Medicaid

From the OT line file, we use the following data elements:

- encrypted CCW beneficiary identifier ("BENE_ID")
- submitting state
- CCW claim identifier
- line procedure code
- claim line beginning date of service
- claim line end date of service
- total amount paid by Medicaid

From the Long Term Care (LT) base claim (header) file, we use the following data elements:

- encrypted CCW beneficiary identifier ("BENE_ID")
- submitting state
- CCW claim identifier
- bill-type code
- claim-type code
- claim beginning date of service
- claim end date of service
- code to indicate if a portion of claim is paid by Medicare (crossover claim)
- total amount paid by Medicaid

From the LT line file, we use the following data elements:

- encrypted CCW beneficiary identifier ("BENE_ID")
- submitting state
- CCW claim identifier
- type-of-service code
- claim line beginning date of service
- claim line end date of service
- total amount paid by Medicaid

**Methods**

In the first section, we investigate the quality of Medicaid managed-care plan capitation payment data among dual enrollees in comprehensive benefit plans, including MMPs in select states, as well as in more limited benefit plans, including behavioral health plans, long-term care plans, and transportation service plans. The unit of analysis in this work is the unique combination of enrollee, managed-care
plan ID, and month identified in the Demographic and Eligibility managed-care enrollment file, which includes data on up to 16 possible managed-care plans per enrollee per month. We then merge the managed-care plan enrollment data with corresponding capitation payment claims in the OT file. In months with more than one capitation payment claim per enrollee-plan combination, we sum and collapse the capitation payments at the enrollee-plan-month level to reflect total capitation payments paid to a plan per enrollee in a month.

Each enrollee-plan ID combination from the enrollment data should have at least one corresponding capitation payment claim in the OT file with a positive Medicaid payment amount. To test this, we report the proportion of enrollee-plan ID-month combinations with (1) corresponding capitation claims with a positive Medicaid payment amount, (2) corresponding claims with a $0 payment amount, (3) corresponding claims with a negative payment amount, (4) corresponding claims with a missing payment amount, and (5) no corresponding capitation payment claim in the OT file. The last four groups offer additional information on why the Medicaid payment amounts are not positive, leading to a better understanding of the underlying TAF data problems that can vary by state and plan type. Nonetheless, nonpositive capitation payment data are unusable. We also report the mean payment amounts to provide additional insight into whether the capitation amounts paid appear sensible.

In the second section, we investigate the quality of fee-for-service Medicaid payments for services of interest located on both the OT and LT claim files. (See Caswell, Waidmann, and Wei [2021] for a detailed explanation of the data elements used to identify service claims and the quality thereof.) The unit of analysis for this analysis is a claim line for a specific service, because claim lines (not claim headers) include the necessary information to identify specific services. In principle, all fee-for-service noncrossover claim lines, where no Medicare payment is associated with the claim, should include a positive Medicaid payment amount. This is unlike fee-for-service crossover claims, where Medicare pays some portion of the service charges that may or may not have a positive Medicaid payment amount. Therefore, we investigate the proportion of noncrossover claims with (1) a positive payment amount, (2) a $0 payment amount, (3) a negative payment amount, or (4) a missing payment amount.
Results

Results are presented in two parts. The first part is focused on enrollees' Medicaid capitation payments to managed-care plans, whereas the second part is focused on spending for specific services paid on a fee-for-service basis.

Part I: Medicaid Managed-Care Plan Capitation Payments

In this section, we investigate the quality of TAF data on Medicaid capitation payments by managed-care plan type and state among dual enrollees. A necessary condition for adequate data quality is that capitation claims have positive payments for each enrollee-plan combination. Below we report a complete accounting of possible outcomes, namely the proportion of enrollee-plan combinations with (1) positive payment amounts, (2) $0 payment amounts, (3) negative payment amounts, (4) missing payment amounts, and (5) missing capitation payment claims. In addition, we report average payment amounts by state.

COMPREHENSIVE BENEFIT MANAGED-CARE PLANS

Figure 1 reports results from our accounting of capitation payment claims for comprehensive Medicaid managed-care plans. Only states with dual enrollees with managed-care plan enrollment are represented. The main findings are as follows:

- In roughly one-half of states, shares of enrollee-plan combinations with capitation claims and a positive payment amount were high; 26 of the 47 states had positive payment rates above 99.0 percent.

- Enrollee-plan combinations lacking corresponding capitation claims are the most common type of data quality issue revealed in figure 1, compared with capitation claims with zero, negative, or missing amounts.

  - Kansas, Rhode Island, Michigan, Florida, South Carolina, North Dakota, and West Virginia had the highest rates of enrollee-plan combinations without corresponding capitation claims, ranging from 18.1 to 99.9 percent.

  - Wyoming, Illinois, New Jersey, New York, Minnesota, Colorado, Tennessee, Ohio, New Mexico, North Carolina, and Nebraska had moderate rates of combinations without corresponding capitation claims, ranging from 1.0 to 5.4 percent.
- In Wisconsin, 83 percent of enrollee-plan combinations had capitation claims with a negative payment amount, and 12.5 percent of such combinations in Pennsylvania had a negative payment amount.

- Tennessee and Wyoming had the highest rates of enrollee-plan combinations with corresponding capitation claims with $0 payment values, at 1.4 and 0.8 percent.
FIGURE 1
Comprehensive Managed-Care Plan Capitation Claims per Enrollee-Plan Combination, January 2018

Source: Authors’ calculations using administrative TAF RIF data.
Notes: TAF = T-MSIS Analytic Files. RIF = Research Identifiable Files. The unit of analysis is the unique combination of enrollee and plan ID per state. All dual enrollees identified in either the TAF or Medicare Master Beneficiary Summary File and enrolled in at least one comprehensive managed-care plan during the month are included.
Table 1 reports the average capitation payment amount among enrollee-plan combinations. We omit both observations without corresponding capitation payment claims and observations with claims with missing payment amounts from the calculations. That is, in states with high rates of missing claims identified in figure 1, the averages are calculated among only the remaining records with claims and nonmissing payment values. It is impossible to conclude whether the average payment amount is appropriate without further investigation, except for negative or $0 averages, which reflect clear issues with the underlying data. We expect some variation based on differences in benefit packages for plans classified as comprehensive and differences in provider prices and state payment policies. Even with those caveats, however, the range of average payments in states with significant dual enrollment and nearly universal positive payment amounts is quite broad. The main findings are as follows:

- The average monthly capitation payment per enrollee-plan combination ranged from −$1,085 in Kansas, whose only nonmissing claims have negative values, to $4,700 in North Dakota, where almost 40 percent of all such combinations lack corresponding claims.
- Alabama and Louisiana had relatively low average capitation payments per enrollee-plan combination ($72 and $143), despite having no apparent data issues, per figure 1.
- In contrast, Delaware and Indiana had relatively high average capitation payments ($2,794 and $3,196) without presenting notable data issues.

<table>
<thead>
<tr>
<th>State</th>
<th>Average payment ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AL</td>
<td>72</td>
</tr>
<tr>
<td>AR</td>
<td>3,771</td>
</tr>
<tr>
<td>AZ</td>
<td>967</td>
</tr>
<tr>
<td>CA</td>
<td>514</td>
</tr>
<tr>
<td>CO</td>
<td>3,758</td>
</tr>
<tr>
<td>DC</td>
<td>847</td>
</tr>
<tr>
<td>DE</td>
<td>2,794</td>
</tr>
<tr>
<td>FL</td>
<td>2,826</td>
</tr>
<tr>
<td>GA</td>
<td>520</td>
</tr>
<tr>
<td>HI</td>
<td>1,129</td>
</tr>
<tr>
<td>IA</td>
<td>1,793</td>
</tr>
<tr>
<td>ID</td>
<td>1,306</td>
</tr>
<tr>
<td>IL</td>
<td>1,338</td>
</tr>
<tr>
<td>IN</td>
<td>3,196</td>
</tr>
<tr>
<td>KS</td>
<td>−1,085</td>
</tr>
<tr>
<td>KY</td>
<td>775</td>
</tr>
<tr>
<td>LA</td>
<td>143</td>
</tr>
<tr>
<td>MA</td>
<td>1,670</td>
</tr>
</tbody>
</table>

TABLE 1
Average Comprehensive Managed-Care Plan Capitation Payment per Enrollee-Plan Combination, January 2018
<table>
<thead>
<tr>
<th>State</th>
<th>Average payment ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MD</td>
<td>1,140</td>
</tr>
<tr>
<td>MI</td>
<td>2,154</td>
</tr>
<tr>
<td>MN</td>
<td>1,132</td>
</tr>
<tr>
<td>MO</td>
<td>342</td>
</tr>
<tr>
<td>MS</td>
<td>1,070</td>
</tr>
<tr>
<td>NC</td>
<td>3,140</td>
</tr>
<tr>
<td>ND</td>
<td>4,700</td>
</tr>
<tr>
<td>NE</td>
<td>289</td>
</tr>
<tr>
<td>NH</td>
<td>434</td>
</tr>
<tr>
<td>NJ</td>
<td>1,085</td>
</tr>
<tr>
<td>NM</td>
<td>1,408</td>
</tr>
<tr>
<td>NV</td>
<td>587</td>
</tr>
<tr>
<td>NY</td>
<td>1,342</td>
</tr>
<tr>
<td>OH</td>
<td>1,878</td>
</tr>
<tr>
<td>OK</td>
<td>2,744</td>
</tr>
<tr>
<td>OR</td>
<td>532</td>
</tr>
<tr>
<td>PA</td>
<td>273</td>
</tr>
<tr>
<td>RI</td>
<td>-276</td>
</tr>
<tr>
<td>SC</td>
<td>1,017</td>
</tr>
<tr>
<td>TN</td>
<td>933</td>
</tr>
<tr>
<td>TX</td>
<td>1,310</td>
</tr>
<tr>
<td>UT</td>
<td>739</td>
</tr>
<tr>
<td>VA</td>
<td>1,358</td>
</tr>
<tr>
<td>WA</td>
<td>684</td>
</tr>
<tr>
<td>WI</td>
<td>76</td>
</tr>
<tr>
<td>WV</td>
<td>446</td>
</tr>
<tr>
<td>WY</td>
<td>2,295</td>
</tr>
</tbody>
</table>

Source: Authors’ calculations using administrative TAF RIF data.

Notes: TAF = T-MSIS Analytic Files. RIF = Research Identifiable Files. The unit of analysis is the unique combination of enrollee and plan ID. All dual enrollees identified in either the TAF or Medicare Master Beneficiary Survey File and enrolled in at least one comprehensive managed-care plan during the month are included. Records with missing payment information identified in figure 1 are excluded.

MEDICARE-MEDICAID PLANS IN SELECT STATES

In this section and table 2, we report results for capitation payment claims among Financial Alignment Initiative MMP enrollees in select states (Massachusetts, New York, Ohio, and Texas) for which the TAF indicate integrated plan enrollment, the MBSF enrollment data more specifically identify MMP enrollment, and the resulting overlap is high (Caswell and Waidmann 2021). The remaining states with capitated Financial Alignment Initiative demonstrations (California, Illinois, Michigan, Rhode Island, South Carolina, and Virginia) had very low representation of MMP enrollees in the TAF. The main findings include the following:

- All enrollee-plan combinations in all states had corresponding capitation payment claims with positive payment amounts.
Average capitation payments per month ranged from $1,155 to $1,637 across Texas, Massachusetts, and Ohio, states with very similar Financial Alignment Initiative benefit packages and target populations.

New York, whose Financial Alignment Initiative demonstration targets a specialized population (people with intellectual disabilities), was an outlier with an average payment of $6,055.

TABLE 2
Medicare-Medicaid Plan Capitation Payments per Enrollee-Plan Combination in Select States, January 2018

<table>
<thead>
<tr>
<th>State</th>
<th>Claim &gt; $0 (%)</th>
<th>$0 claim (%)</th>
<th>Claim &lt; $0 (%)</th>
<th>Missing claim value (%)</th>
<th>No claim (%)</th>
<th>Average payment ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA</td>
<td>100.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>1,538</td>
</tr>
<tr>
<td>NY</td>
<td>100.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>6,055</td>
</tr>
<tr>
<td>OH</td>
<td>100.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>1,673</td>
</tr>
<tr>
<td>TX</td>
<td>100.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>1,155</td>
</tr>
</tbody>
</table>

Source: Authors’ calculations using administrative TAF RIF data.
Notes: TAF = T-MSIS Analytic Files. RIF = Research Identifiable Files. The unit of analysis is the unique combination of enrollee and plan ID. All dual enrollees identified in either the TAF or Medicare Master Beneficiary Summary File and enrolled in a Medicare-Medicaid Plan during the month are included.

BEHAVIORAL HEALTH SERVICES IN MANAGED-CARE PLANS

Figure 3 reports results from the accounting of capitation payment claims for behavioral health Medicaid managed-care plans in the 10 states that had dual enrollees with behavioral health managed-care plans. The main findings are as follows:

- In Washington, only 11.4 percent of enrollee-plan combinations had capitation claims with positive payments, and the remaining 88.6 percent had no corresponding capitation claim.
- In Pennsylvania, 15.5 percent of enrollee-plan combinations had capitation claims with a negative payment amount.
- Michigan and Idaho had moderate proportions of enrollee-plan combinations with no capitation claims (8.9 and 1.9 percent).
- In Utah, 1.5 percent of enrollee-plan combinations had capitation claims with $0 payment amounts.
Table 3 reports the average capitation payment amount among enrollee–behavioral health plan combinations by state. The main results are as follows:

- Average capitation payments per enrollee-plan combination ranged from $37 in Oregon to $510 in Hawaii.

- The range of average monthly capitation payments per enrollee-plan combination was wide, as was the range of such payments for comprehensive managed-care plans. The wide range may reflect differences in the services included in behavioral health plans across states or the beneficiaries enrolled in such plans.
TABLE 3
Average Behavioral Health Managed-Care Plan Capitation Payment per Enrollee-Plan Combination, January 2018

<table>
<thead>
<tr>
<th>State</th>
<th>Average payment ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO</td>
<td>66</td>
</tr>
<tr>
<td>HI</td>
<td>510</td>
</tr>
<tr>
<td>ID</td>
<td>90</td>
</tr>
<tr>
<td>MA</td>
<td>158</td>
</tr>
<tr>
<td>MI</td>
<td>350</td>
</tr>
<tr>
<td>NC</td>
<td>297</td>
</tr>
<tr>
<td>OR</td>
<td>37</td>
</tr>
<tr>
<td>PA</td>
<td>48</td>
</tr>
<tr>
<td>UT</td>
<td>59</td>
</tr>
<tr>
<td>WA</td>
<td>74</td>
</tr>
</tbody>
</table>

Source: Authors' calculations using administrative TAF RIF data.
Notes: TAF = T-MSIS Analytic Files. RIF = Research Identifiable Files. The unit of analysis is the unique combination of enrollee and plan ID. All dual enrollees identified in either the TAF or Medicare Master Beneficiary Summary File and enrolled in at least one behavioral health managed-care plan during the month are included. Records with missing payment information identified in figure 2 are excluded.

LONG-TERM CARE SERVICES IN MANAGED-CARE PLANS

Only New York, Pennsylvania, and Wisconsin have dual enrollees with managed long-term care plans (table 4). The main findings are as follows:

- In all three states, the share of enrollee-plan combinations with claims with positive payments was greater than 98 percent.
- In New York and Pennsylvania, roughly 1 percent of enrollee-plan combinations had no capitation claims. In Wisconsin, 1.8 percent had claims with negative payment amounts.
- The average payment per enrollee-plan combination ranged from $610 in Pennsylvania to $4,666 in Wisconsin.

TABLE 4
Managed Long-Term Care Plan Capitation Claims per Enrollee-Plan Combination, January 2018

<table>
<thead>
<tr>
<th>State</th>
<th>N</th>
<th>Claim &gt; $0 (%)</th>
<th>$0 claim (%)</th>
<th>Claim &lt; $0 (%)</th>
<th>Missing claim value (%)</th>
<th>No claim (%)</th>
<th>Average payment ($)</th>
<th>Median payment ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NY</td>
<td>184,067</td>
<td>98.9</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>1.1</td>
<td>4,666</td>
<td>4,751</td>
</tr>
<tr>
<td>PA</td>
<td>86</td>
<td>98.8</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>1.2</td>
<td>610</td>
<td>610</td>
</tr>
<tr>
<td>WI</td>
<td>41,029</td>
<td>98.1</td>
<td>0.1</td>
<td>1.8</td>
<td>0.0</td>
<td>0.0</td>
<td>2,871</td>
<td>3,105</td>
</tr>
</tbody>
</table>

Source: Authors' calculations using administrative TAF RIF data.
Notes: TAF = T-MSIS Analytic Files. RIF = Research Identifiable Files. The unit of analysis is the unique combination of enrollee and plan ID. All dual enrollees identified in either the TAF or Medicare Master Beneficiary Summary File and enrolled in at least
one managed long-term care plan during the month are included. For average calculations, records with missing payment information are excluded.

TRANSPORTATION SERVICES PLANS

Figure 4 reports results from the accounting of capitation payment claims for transportation Medicaid managed-care plans. Nineteen states had enrollees with transportation plans. The main findings include the following:

- Iowa and New Hampshire had relatively high rates of enrollee-plan combinations with no corresponding capitation claims (27.8 and 29.7 percent).
- New Jersey, Michigan, Arizona, West Virginia, Wisconsin, Delaware, Pennsylvania, Missouri, Texas, and Idaho had moderate rates of enrollee-plan combinations with no corresponding capitation claims, ranging from 1.5 to 9.4 percent.

FIGURE 4
Transportation Managed-Care Plan Capitation Claims per Enrollee-Plan Combination, January 2018

Source: Authors’ calculations using administrative TAF RIF data.
Notes: TAF = T-MSIS Analytic Files. RIF = Research Identifiable Files. The unit of analysis is the unique combination of enrollee and plan ID. All dual enrollees identified in either the TAF or Medicare Master Beneficiary Summary File and enrolled in at least one transportation managed-care plan during the month are included.
Table 5 reports the average capitation payment amount among enrollee–transportation plan combinations. The following are the main results:

- The average monthly payment per enrollee–transportation plan combination ranged from $2 in Utah to $44 in Washington, DC.

- With its $44 average monthly payment per enrollee, Washington, DC, appears to be an outlier among states with capitated transportation plans; the remaining states have average payments below $20. It is unknown whether the types of transportation covered or the population eligible for such plans are the reason for the District's relatively high capitation payments.

**TABLE 5**

Average Transportation Managed-Care Plan Capitation Payment per Enrollee-Plan Combination, January 2018

<table>
<thead>
<tr>
<th>State</th>
<th>Average payment ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AR</td>
<td>4</td>
</tr>
<tr>
<td>DC</td>
<td>44</td>
</tr>
<tr>
<td>DE</td>
<td>8</td>
</tr>
<tr>
<td>FL</td>
<td>4</td>
</tr>
<tr>
<td>GA</td>
<td>6</td>
</tr>
<tr>
<td>IA</td>
<td>2</td>
</tr>
<tr>
<td>ID</td>
<td>7</td>
</tr>
<tr>
<td>KY</td>
<td>7</td>
</tr>
<tr>
<td>MI</td>
<td>2</td>
</tr>
<tr>
<td>MO</td>
<td>7</td>
</tr>
<tr>
<td>NH</td>
<td>10</td>
</tr>
<tr>
<td>NJ</td>
<td>9</td>
</tr>
<tr>
<td>NV</td>
<td>2</td>
</tr>
<tr>
<td>OK</td>
<td>13</td>
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<td>PA</td>
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</tr>
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<td>TX</td>
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<td>UT</td>
<td>2</td>
</tr>
<tr>
<td>WI</td>
<td>17</td>
</tr>
<tr>
<td>WV</td>
<td>6</td>
</tr>
</tbody>
</table>

**Source:** Authors’ calculations using administrative TAF RIF data.

**Notes:** TAF = T-MSIS Analytic Files. RIF = Research Identifiable Files. The unit of analysis is the unique combination of enrollee and plan ID. All dual enrollees identified in either the TAF or Medicare Master Beneficiary Summary File and enrolled in at least one transportation managed-care plan during the month are included. Records with missing payment information identified in figure 4 are excluded.
Part II: Fee-for-Service Claim Payments

In this section, we investigate the quality of Medicaid fee-for-service payments to providers for specific services among noncrossover claims by state. The unit of analysis is a claim line that identifies a specific service. We focus on noncrossover claims, which lack Medicare coverage or payment. These are unlike crossover claims, for which Medicare pays some portion of the claim and which may or may not have a corresponding Medicaid payment amount. That is, a positive Medicaid payment amount is a necessary but insufficient condition for adequate data quality among noncrossover claims (but not for crossover claims). For each service and state, we report the percentage of claim lines with positive, $0, negative, or missing Medicaid payment amounts.

NURSING HOME CARE

Figure 5 reports results for nursing home care fee-for-service noncrossover claims in the 46 states with at least one such claim line. The main findings are as follows:

- South Carolina was the only state for which all claims had a positive payment amount.
- The most common reason for a nonpositive payment amount was a reported $0 payment amount.
  - Rates of $0 payment amounts were highest in Massachusetts (99.6 percent) and Arizona (98.1 percent). Such rates were moderate to high in the remaining 43 states, ranging from 2.2 percent in Arizona to 57.3 percent in Nevada.
- In Pennsylvania and New Jersey, all claims had missing Medicaid payment amounts. In Kentucky, 4.3 percent of claims had missing Medicaid payment amounts. No other states had missing payment values.
- New York and Nebraska were the only states that had claims with negative payment amounts (4.3 and 4.7 percent).
FIGURE 5
Nursing Home Care Noncrossover Fee-for-Service Claims, January 2018

Source: Authors' calculations using administrative TAF RIF data.
Notes: TAF = T-MSIS Analytic Files. RIF = Research Identifiable Files. The unit of analysis is a fee-for-service claim line for nursing home care. All dual enrollees identified in either the TAF or Medicare Master Beneficiary Summary File with at least one nursing home care fee-for-service noncrossover claim during the month are included.
BEHAVIORAL HEALTH

Figure 6 reports results for behavioral health fee-for-service noncrossover claims in the 49 states with at least one such claim line. The main findings include the following:

- Louisiana, Maryland, South Dakota, Tennessee, and Virginia were the only states where all behavioral health service claims had positive Medicaid spending values.

- The most common reason for a nonpositive payment amount in the remaining states was a $0 payment amount. Rates of nonpositive payments were above 0 but below 1 percent in 17 states, between 1 and 5 percent in 20 states, and above 5 percent in 9 states.

- The rate of claims with $0 payment amounts was above 20 percent in five states: Iowa (52.5 percent), Montana (52.0 percent), Missouri (44.0 percent), Rhode Island (32.8 percent), and Kansas (26.8 percent).

- Missing and negative payment amounts in behavioral health care claims were rare, occurring in only three states and at rates below 1 percent in each of the three states.
FIGURE 6
Behavioral Health Care Noncrossover Fee-for-Service Claims, January 2018

Source: Authors’ calculations using administrative TAF RIF data.
Notes: TAF = T-MSIS Analytic Files. RIF = Research Identifiable Files. The unit of analysis is a fee-for-service claim line for behavioral health care services. All dual enrollees identified in either the TAF or Medicare Master Beneficiary Summary File with at least one fee-for-service noncrossover claim during the month are included.
PERSONAL CARE

Figure 7 reports results for personal care fee-for-service noncrossover claims in the 46 states with at least one such claim line. The main findings are as follows:

- Shares of claims with positive payment values were at or above 99 percent in 30 states, below 99 percent in 16 states, and below 95 percent in 6 states.
- The most common reason for a nonpositive payment amount is a reported $0 payment amount.
- Montana had the highest rate of claims with $0 payments (61.2 percent), followed by Iowa (19.8 percent) and Washington (9.7 percent).
- Kentucky was the only state with missing payment values (0.4 percent), and no states had claims with negative payment amounts.
Personal Care Noncrossover Fee-for-Service Claims, January 2018

Source: Authors' calculations using administrative TAF RIF data.
Notes: TAF = T-MSIS Analytic Files. RIF = Research Identifiable Files. The unit of analysis is a fee-for-service claim line for personal care services. All dual enrollees identified in either the TAF or Medicare Master Beneficiary Summary File with at least one fee-for-service noncrossover claim during the month are included.
NONEMERGENCY TRANSPORTATION

Figure 8 reports results for noncrossover claims for nonemergency transportation services in the 47 states with at least one such claim line. The main findings are as follows:

- In 19 states, 99 percent of nonemergency transportation noncrossover claims had a positive payment amount.

- The most common reason for a nonpositive payment amount was a reported $0 payment amount.
  - Maine (99.8 percent), Montana (61.2 percent), Vermont (29.0 percent), Iowa (27.5 percent), Pennsylvania (26.4 percent), and Georgia (21.5 percent) had rates of $0 payment claims above 20 percent.
  - New Hampshire (17.0 percent), Idaho (16.9 percent), Arizona (10.9 percent), and Michigan (10.2 percent) had rates of $0 payment claims above 10 percent but below 20 percent.

- Texas and Kentucky were the only two states with claim lines with negative payment amounts, at rates of 1.7 and 1.5 percent.
FIGURE 8
Nonemergency Transportation Noncrossover Fee-for-Service Claims, January 2018

Source: Authors' calculations using administrative TAF RIF data.

Notes: TAF = T-MSIS Analytic Files. RIF = Research Identifiable Files. The unit of analysis is a fee-for-service claim line for nonemergency transportation services. All dual enrollees identified in either the TAF or Medicare Master Beneficiary Summary File with at least one noncrossover fee-for-service claim during the month are included.
OTHER HCBS

Figure 9 reports results for noncrossover fee-for-service claims for other HCBS in the 49 states with at least one such claim line. The main findings include the following:

- In 31 states, 99 percent or more of noncrossover other HCBS claims had positive payment amounts. Eighteen states had rates below 99.0 percent.

- The most common reason for a nonpositive payment amount was a $0 reported payment amount.
  - Iowa (50.9 percent), Montana (42.3 percent), and Washington (36.6 percent) were the states with the highest rates of noncrossover claims with missing payment amounts.

- Kentucky was the only state with claims with $0 payment values (0.7 percent), and no states had claims with negative payment amounts.
FIGURE 9
Other HCBS Noncrossover Fee-for-Service Claims, January 2018

Source: Authors’ calculations using administrative TAF RIF data.
Notes: HCBS = home- and community-based services. TAF = T-MSIS Analytic Files. RIF = Research Identifiable Files. The unit of analysis is a fee-for-service claim line for other HCBS. All dual enrollees identified in either the TAF or Medicare Master Beneficiary Summary File with at least one fee-for-service noncrossover claim during the month are included.
Main Findings and Conclusions

Based on the results of this report, using the TAF to conduct research among those dually enrolled in Medicare and Medicaid has several implications. One consistent theme is that data quality across outcomes—in this case, type of managed-care plans for capitation payments and types of services for fee-for-service claims—often varies within states. This implies that researchers must evaluate the quality of TAF data based on their specific needs within a given state, because the data may be of better quality for some outcomes but not others within a state. In addition, TAF data are unlikely to support national analyses without some exclusions. That said, though this report identifies specific states with capitation or fee-for-service payment issues, results for the vast majority of states do not suggest fatal flaws in all data quality dimensions. The most common issues identified among enrollees in managed-care plans were no corresponding capitation payment claims associated with the enrollee-plan combination for the month. And the most common issue identified in the noncrossover fee-for-service claims, where Medicare has no cost sharing, were claims with $0 payment values. Most states appear to have no more than minor problems with each of these metrics, but some states have quite significant problems. In some cases where the data have been identified as problematic, researchers may be able work around the problem, depending on their application. For example, in cases where Medicaid capitation payment data are unusable for managed-care enrollees, imputing capitation payments could be an option if the underlying encounter claims are of sufficient quality. Thus, researchers need to choose study states and outcomes carefully and think creatively about possible work-arounds when the desired data are not perfect.
Appendix A. Glossary

Chronic Conditions Data Warehouse Virtual Research Data Center (CCW). Centers for Medicare & Medicaid Services research database and secured virtual technology available to approved Medicare and Medicaid researchers. ⁶

Dual Eligible Special Needs Plan (D-SNP). Medicare special needs plans for people enrolled in both Medicare and Medicaid.

Fully Integrated Dual Eligible Special Needs Plan (FIDE SNP). A type of D-SNP that requires plans to assume the risk for all Medicare and Medicaid services (Archibald et al. 2019).

Home- and community-based services (HCBS). Services provided in a person's home or community instead of an institutional setting. Medicaid HCBS services are optional, vary significantly by state, and include services such as personal care and nonemergency transportation. ⁷ HCBS is a subset of LTSS.

Long-term services and supports (LTSS). A broad term that spans institutional and community-based services, including a "variety of health, health-related, and social services that assist individuals with functional limitations due to physical, cognitive, or mental conditions or disabilities" (Thach and Wiener 2018). It largely addresses needs related to activities of daily living and instrumental activities of daily living.

Master Beneficiary Summary File (MBSF). Administrative Medicare enrollment and medical claims data.


Medicare-Medicaid Plan (MMP). A specific managed-care plan for those dually enrolled in Medicare and Medicaid that assumes the risk for benefits in both programs, has a high degree of integration, and is available in select states through the Centers for Medicare & Medicaid Services Financial Alignment Initiative. ⁸

Medicare Savings Program (MSP). Four Medicaid-administered programs for eligible Medicare enrollees with limited resources that pay for select Medicare expenditures, including premiums and cost sharing, depending on the program.
Program for All-Inclusive Care for the Elderly (PACE). A program for dual enrollees eligible for nursing home care that allows enrollees to remain safely in the community rather enter an institutional environment.9

Qualified Disabled and Working Individuals (QWDI). One of four MSPs for working people with disabilities under age 65.10

Qualified Individual (QI). One of four MSPs that offers Medicare Part B premium assistance only to eligible enrollees.11

Qualified Medicare Beneficiary (QMB). The most generous of the four MSPs, QMB offers Medicare Part B and cost-sharing assistance to eligible enrollees. “QMB Plus” is distinct from "QMB Only"; the former also includes full Medicaid benefits (beyond just Medicare), whereas the latter excludes Medicaid benefits.

Research Identifiable Files (RIF). A specific version of data available to researchers with appropriate permissions via the Chronic Conditions Data Warehouse Virtual Research Data Center.

Special Needs Plan (SNP). A specific type of Medicare Advantage plan with limited eligibility for people with specific needs targeted by the plan (e.g., chronic conditions, institutionalization, dual enrollment).12

Specified Low-Income Medicare Beneficiary (SLMB). An MSP that offers Medicare Part B payment support. “SLMB Plus” is distinct from “SLMB Only”; the former also includes full Medicaid benefits (beyond just Medicare), whereas the latter excludes Medicaid benefits.

T-MSIS Analytic Files (TAF). A version of the T-MSIS data intended to be more user friendly.

Transformed Medicaid Statistical Information System (T-MSIS). Administrative Medicaid data system that superseded the MSIS circa 2014. The transition date from MSIS to T-MSIS varies by state.
Notes


2 The Research Data Assistance Center established data use agreements with CMS whereby approved team members access the data through the secure CCW.

3 We used the data element “managed care plan type code” from the managed-care enrollment file to stratify plans by type as follows. Comprehensive plans: 01 = comprehensive managed care organization, 04 = health insuring organization, 17 = Program of All-Inclusive Care for the Elderly (PACE), 80 = integrated care for dual eligibles. Behavioral health plans: 08 = mental health PIHP, 09 = mental health PAHP, 10 = substance use disorders PIHP, 11 = substance use disorders PAHP, 12 = mental health and substance use disorders PIHP, 13 = mental health and substance use disorders PAHP. Long term care plans: 07 = long term care PIHP.

Transportation plans: 15 = transportation PAHP.

4 We use service beginning and end dates for capitation payment claims located on the claim header, not the line. Dates were completely missing among capitation claims at the line level in Utah and Oklahoma but were not missing at the header level.

5 Virginia’s demonstration ended December 2017, and the reference period for this work is January 2018. So, we expected low representation in this state.


References


About the Authors

Kyle J. Caswell is a senior research associate in the Health Policy Center at the Urban Institute. His research covers multiple areas related to health and economic well-being, with a focus on vulnerable populations. He is currently working with colleagues to evaluate a demonstration to coordinate health care for dually eligible Medicare-Medicaid beneficiaries, and on a study to evaluate how disability status affects Medicare spending among the elderly. Previous projects include an evaluation of economic well-being among elderly individuals with mental health impairments and disability insurance, the financial burden of medical spending, the impact of managed care among Medicaid beneficiaries, uncompensated health care, and inequalities in health outcomes. Before joining Urban, Caswell was an economist in the US Census Bureau's Health and Disability Statistics Branch, where he contributed to the medical out-of-pocket spending component of the Supplemental Poverty Measure. During his previous tenure at Urban, he worked with colleagues to develop estimates of potential savings in medical spending attributable to preventive health services. Caswell holds a PhD in economics.

Timothy A. Waidmann is a senior fellow in the Health Policy Center. He has over 20 years of experience designing and conducting studies on varied health policy topics, including disability and health among the elderly; Medicare and Medicaid policy; disability and employment; public health and prevention; health status and access to health care in vulnerable populations; health care utilization among high-cost, high-risk populations; geographic variation in health care needs and utilization; and the relationships between health and a wide variety of economic and social factors. Waidmann's publications based on these studies have appeared in high-profile academic and policy journals. He has also been involved in several large-scale federal evaluation studies of health system reforms, assuming a central role in the design and execution of the quantitative analyses for those evaluations. Before joining Urban in 1996, Waidmann was assistant professor in the School of Public Health and postdoctoral fellow in the Survey Research Center at the University of Michigan. He received his PhD in economics from the University of Michigan in 1991.

Keqin Wei is a senior research programmer in the Office of Technology and Data Science at the Urban Institute. She supports health care policy researchers with statistical methods, data visualization, and big data analytics. Wei has been working with Medicare Parts A, B, and D and Medicaid claims data for seven years. Through her work on the Financial Alignment Initiative demonstration evaluation, she has
extensive experience working with the interim versions of the T-MSIS Analytic Files data in the Virtual Research Data Center environment. In that work, she has developed extensive code scripts to analyze data quality and present findings both graphically and in table form to facilitate interpretation.
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