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One Quarter of Medicaid Enrollees with HIV May Not Have Received Critical Services in 2021

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One Quarter of Medicaid Enrollees with HIV May Not Have Received Critical Services in 2021

Key Results

We identified 265,493 enrollees with HIV nationwide. Of these enrollees, in 2021:

- **72,391 enrollees** (27 percent) **may not have received one of three services critical for achieving viral suppression**—a medical visit, viral load test, or antiretroviral therapy (ART) prescription.
- **11,316 enrollees** (4 percent) **may not have received any of the three services.** This is **particularly concerning** because missing these services may mean that these enrollees were at greater risk of negative impacts on their overall health and greater risk of transmitting HIV.
- Enrollees with **Medicaid only were more likely to have not received critical services** compared to dual-eligible enrollees.
- **All States had enrollees with HIV who may not have received critical services**, but State rates varied widely.

Why OIG Did This Review

Human Immunodeficiency Virus (HIV) is a virus that infects tens of thousands of people in the United States (U.S.) each year. While HIV affects people from all walks of life; the epidemic continues to disproportionately impact gay and bisexual men; transgender people; youth ages 13-24; and Black and Hispanic/Latino people.¹

People diagnosed with HIV need **regular care to improve their health outcomes, reduce HIV-related deaths, and ultimately reduce new HIV transmissions.** The ultimate goal of HIV care is to achieve viral suppression—meaning that the amount of HIV in the body is very low or undetectable in viral load tests.² At the individual level, viral suppression allows people with HIV to stay healthy, enjoy an improved quality of life, and live longer than if they were not virally suppressed. At the population level, viral suppression prevents transmission of HIV because people with HIV who reach and maintain viral suppression have effectively no risk of passing HIV to others.^{3,4} Lack of viral suppression among people with HIV is often attributed to appropriate care not being initiated or not being regularly received.^{5,6} The Department of Health and Human Services (HHS) recognizes the importance of HIV care and developed guidelines on the clinical needs of people with HIV to achieve viral suppression.⁷

The Medicaid program plays a critical role in ensuring that people with HIV receive care that can improve their ability to achieve and maintain viral suppression. In 2018, Medicaid covered an estimated 40 percent of all nonelderly people with HIV in the U.S.⁸ People with HIV who are covered by Medicaid also tend to be part of populations disproportionately impacted by HIV overall, including Black and Hispanic/Latino people.⁹

How OIG Did This Review

We reviewed the extent to which the Medicaid enrollees who had HIV diagnoses in their Medicaid or Medicare claims data had evidence of critical services in 2021. This review included both enrollees with Medicaid only and those who were enrolled in both Medicaid and Medicare (dual-eligible enrollees). We determined

whether these enrollees had evidence in their Medicaid and Medicare claims data of three medical services that are critical for all people with HIV according to HHS guidelines: (1) medical visits (in-person or telehealth), (2) viral load tests, and (3) antiretroviral therapy (ART) prescriptions. Because inaccuracies in claims data could impact our results, we reviewed the completeness of Medicaid claims data for these services and removed States from our analysis where we had concerns.

Why This Matters

This data brief provides insight into the extent to which people with HIV enrolled in Medicaid had evidence of receiving **services that are critical for achieving viral suppression, which is vital to the overall health of people with HIV and for the prevention of HIV transmission**. Medicaid enrollees with HIV may have gaps in care for various reasons. For example, the COVID-19 public health emergency had a widespread impact on the health care system, including recommendations for certain patients in seeking care as well as patients' access to services. Our results provide a foundation for understanding the scale of potential gaps in care and where further action may be needed to ensure that Medicaid enrollees with HIV are receiving critical services to increase their likelihood of viral suppression. Future OIG work will shed light on specific challenges and strategies that impact Medicaid programs' abilities to ensure HIV care.

Primer on HHS Guidelines on HIV Care

HHS developed clinical guidelines that detail select aspects of medical care that people with HIV need to help them achieve and maintain viral suppression.¹⁰ HHS recommends¹¹ that all people with HIV:



Attend regular **medical visits** with HIV providers to manage care.



Monitor their **viral load**, or the amount of HIV in the body, to determine HIV progression and if antiretroviral therapy (ART) is successfully reducing HIV in the body to achieve and/or maintain viral suppression.



Initiate and adhere to **ART**, medicine prescribed by health care providers to reduce the amount of HIV in the body.¹²

HHS guidelines do not recommend specific frequencies for these services that should apply to all people with HIV. For example, HHS notes that there are multiple valid ways to assess whether people with HIV are attending regular medical visits—such as looking for at least two visits that are at least 90 days apart over 1 year, or looking for at least one visit at least every 6 months over a 2-year period.¹³ The guidelines also note that appropriate service frequencies can depend on individual care needs.^{14, 15}

In this review, we used a conservative approach to assess whether Medicaid enrollees with HIV had evidence of services that aligned with these guidelines. Specifically, we determined whether enrollees with HIV had **at least one** medical visit (in-person or telehealth), viral load test, and/or ART prescription filled at any point in 2021. See Methodology for additional details.

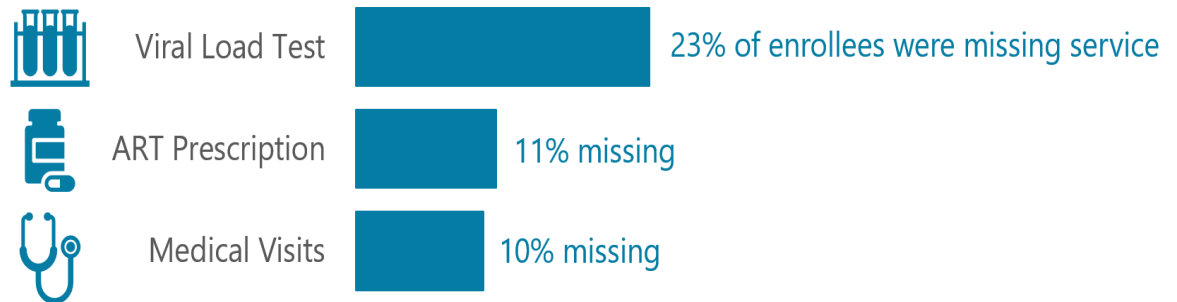
FINDINGS

In this data brief, **Medicaid enrollees with HIV** refers to Medicaid enrollees with HIV-related diagnosis codes in their Medicaid or Medicare claims from 2019 or 2020, and **evidence of critical services** refers to the presence of at least one Medicaid or Medicare claim record for a medical visit (in-person or telehealth), viral load test, or antiretroviral therapy (ART) prescription filled in 2021. This review included Medicaid fee-for-service and Medicaid managed care plan (MCP) claims, as well as Medicare fee-for-service and Medicare Advantage plan claims for dual-eligible enrollees. See Methodology for additional details.

About one in four Medicaid enrollees with HIV, nationwide, did not have evidence of one or more critical services in 2021, with the absence of viral load tests being the most common gap in care.

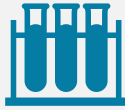
In 2021, 72,391 of the 265,493 Medicaid enrollees with HIV did not have evidence of at least one of three services through Medicaid or Medicare in 2021—a medical visit, a viral load test, and/or a filled antiretroviral therapy (ART) prescription—recommended by HHS for all people with HIV.

Exhibit 1. Of the three critical services, enrollees were most frequently missing viral load tests in 2021.



Source: OIG analysis of Medicaid and Medicare claims among enrollees with HIV, 2021.

Of the 265,493 enrollees with HIV, **23 percent** (61,854 enrollees) did not have evidence of at least one **viral load test** in 2021, more than for the other two critical services.



Without viral load tests,

- **Medical providers** do not know patients' viral load levels to see how well treatment is working and to monitor HIV infection.¹⁶
- **CMS and State Medicaid programs** cannot determine viral load suppression rates of enrollees with HIV to gauge if the program is meeting their care needs.^{17, 18}
- **National, State and local public health officials** cannot track viral suppression of residents and identify where improvements are needed.¹⁹

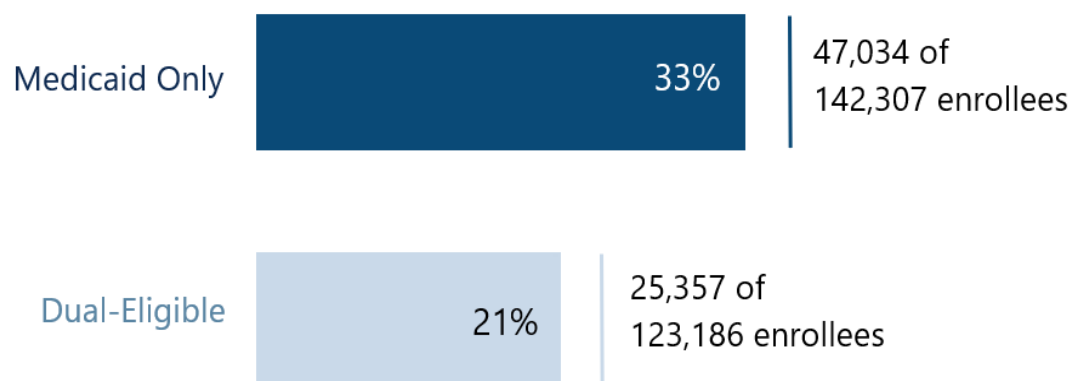
Over 11,000 Medicaid enrollees with HIV did not have evidence of any of the three services in 2021, which may mean that they were at greater risk of negative health impacts and HIV transmission.

In 2021, 11,316 enrollees, or 4 percent of the 265,493 enrollees in Medicaid with HIV, did not have evidence of **any** of the following: at least one medical visit, viral load test, or ART prescription filled through Medicaid or Medicare in 2021.

Enrollees without evidence of any of these services critical for people with HIV are particularly concerning. Without critical services, enrollees with HIV may not be able to **achieve and maintain viral suppression**.²⁰ If not virally suppressed, people with HIV have levels of HIV in their body that negatively impact their health and put them at risk for transmitting HIV to HIV-negative sexual partners.²¹

Enrollees with HIV in Medicaid only were more frequently missing evidence of critical services than dual-eligible enrollees in 2021.

Exhibit 2: Enrollees with Medicaid only were more likely to be missing one or more services compared to dual-eligible enrollees.



Source: OIG analysis of Medicaid and Medicare claims among enrollees with HIV, 2021.



Enrollees with **Medicaid only** were also **three times** more likely to not have evidence of **any of the three critical services** compared to dual-eligible enrollees—6 percent of 142,307 enrollees compared to 2 percent of 123,186 enrollees respectively.

Factors related to programmatic differences between Medicaid and Medicare may contribute to the differences in evidence of critical services between enrollees in Medicaid only and dual-eligible enrollees, for whom Medicare provides primary coverage for most care,²² including:

- Higher Medicare fee-for-service payment rates for physician services compared to Medicaid fee-for-service, which may impact access to care as providers are more likely to accept new patients with Medicare;^{23, 24} and
- Long-term adherence to care among older adults who have lived with HIV since younger ages and are eligible for Medicare based on age.²⁵

Differences in data quality and completeness between Medicaid and Medicare claims data may also contribute to differences in evidence of critical services between enrollees in Medicaid only and the dually enrolled who received services paid by Medicare. Specifically, OIG has raised concerns about the quality and completeness

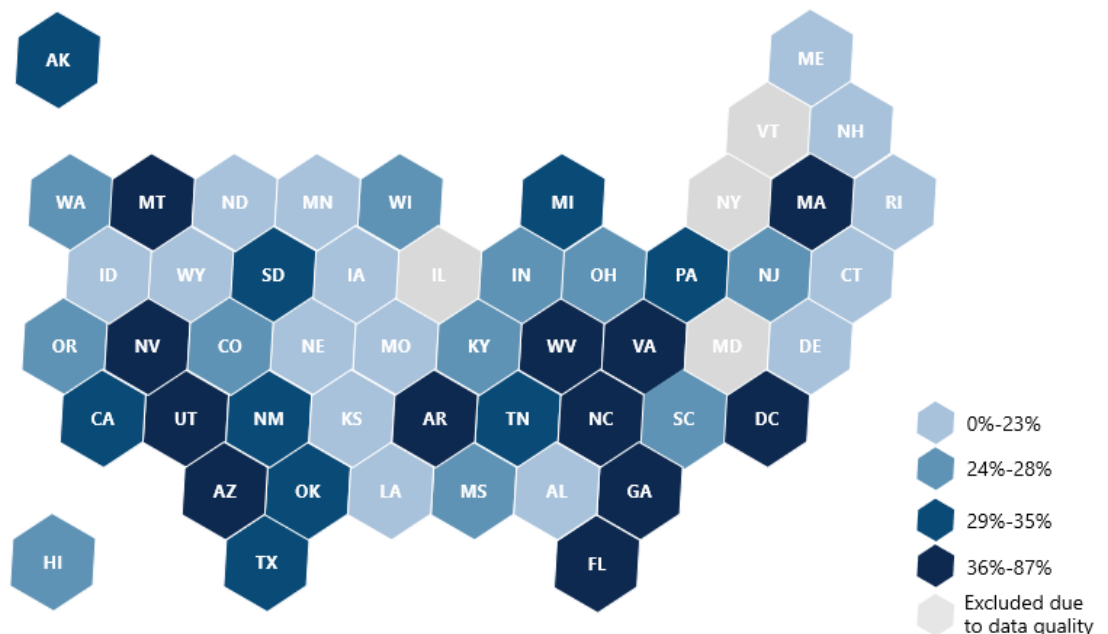
of national Medicaid data available through the Transformed Medicaid Statistical Information System (T-MSIS). However, the Centers for Medicare and Medicaid Services (CMS) and State efforts have led to ongoing improvements in T-MSIS data.²⁶
²⁷ We conducted checks to assess and account for the quality and completeness of T-MSIS data used in our study. Specifically, we reviewed the completeness of codes needed for our analysis by State and excluded States with high percentages of missing codes to minimize the impact of poor data quality on our results—see Methodology for additional details.

All States in this review had enrollees with HIV who did not have evidence of one or more critical services in 2021, but State rates varied widely.

All States included in this review, including the District of Columbia, had enrollees in Medicaid only and dual-eligible enrollees without evidence of one or more of the three critical services in 2021. See Appendix A and Appendix B for more details on evidence of critical services for individual States.

The proportion of **Medicaid-only** enrollees missing one or more services varied across States, from **16 percent to 87 percent**. We identified four States as outliers on the basis of proportions of Medicaid-only enrollees who did not have evidence of one of the three critical services that were significantly higher than for other States: Arizona (59 percent), Arkansas (60 percent), the District of Columbia (61 percent), and Utah (87 percent).

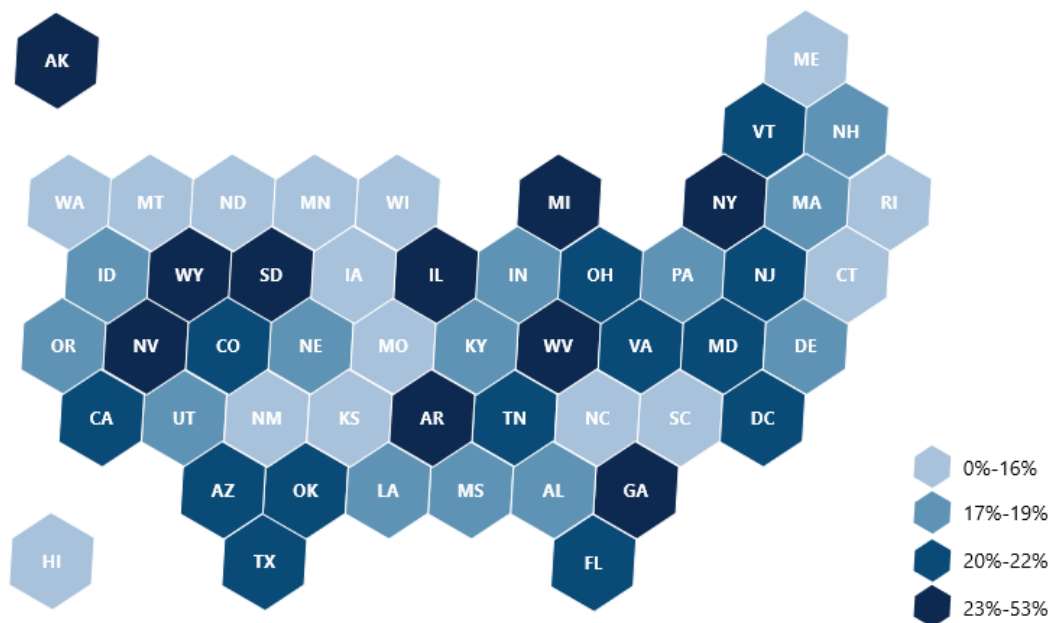
Exhibit 3: Many (20 of 47 States) State rates for Medicaid-only enrollees without evidence of one or more services fell between 24% and 35%.



Source: OIG analysis of Medicaid claims among Medicaid enrollees with HIV, 2021.

The proportion of **dual-eligible enrollees** who did not have evidence of one or more services also varied across States, from **9 percent to 53 percent**. We identified three States as outliers on the basis of proportions of dual-eligible enrollees who did not have evidence of one of the three critical services that were significantly higher than for other States: Alaska (38 percent), West Virginia (47 percent), and South Dakota (53 percent).

Exhibit 4: Half (26 of 51 States) of State rates for dual-eligible enrollees without evidence of one or more services fell between 17% and 22%.



Source: OIG analysis of Medicaid and Medicare claims among dual-eligible enrollees with HIV, 2021.

While these State-specific rates provide a means of comparison across States that account for population differences, they can hide differences in the actual number of enrollees with HIV who did not have evidence of services across States. For example, South Dakota had a higher rate (34 percent) of Medicaid-only enrollees without evidence of one or more critical services than Louisiana (23 percent); however, South Dakota had far fewer actual Medicaid-only enrollees (25) without evidence of critical services than did Louisiana (1,663).

Data quality and completeness may contribute to differences in evidence of critical services for Medicaid enrollees with HIV across States. As previously discussed, OIG has raised concerns about T-MSIS data quality and completeness, although improvements have been made over time. Even with the data quality checks we conducted for this study, State differences in T-MSIS data quality and completeness may impact our results.

The types of challenges States face in improving HIV care for their enrollees, as well as the most effective strategies for doing so, may also depend on the specific characteristics of each State's Medicaid program and enrollee population. State

Medicaid programs vary significantly in size (e.g., number of enrollees, staff, and resources) and structure (e.g., use of managed care, eligibility for Medicaid, and other policy options), and this variation could impact the feasibility or value of different approaches across States.^{28, 29} For example, States that have very few enrollees with HIV missing critical services may be able to conduct individual outreach, while this may not be practical in States with hundreds or thousands of enrollees missing critical services. Our future work will dig deeper into the specific challenges States face in ensuring care for enrollees with HIV and strategies they use to try to overcome those challenges.

CONCLUSION

Our finding in this data brief—that in 2021, over a quarter of Medicaid enrollees with HIV did not have evidence in their claims data of receiving one or more critical services—demonstrates that further action is needed to ensure that enrollees are receiving appropriate HIV care. Of particular concern, over 11,000 enrollees did not have evidence of receiving **any** of the three services we reviewed. These services are recommended by HHS for all people with HIV, and are vital to their overall health as well as the prevention of HIV transmission within the general population.

Future OIG work will examine efforts by State Medicaid agencies, Medicaid managed care plans, and CMS to ensure that Medicaid enrollees with HIV receive critical services. That work will cover strategies used and challenges faced, and will focus on actionable steps that these entities can take to improve HIV care in Medicaid.

CMS and States may wish to consider taking more immediate steps to address the potential gaps in care that we found. For example, States may wish to follow-up with Medicaid-only enrollees with HIV who do not have evidence of critical services, or with their providers, to ensure that these enrollees can readily access all necessary care. Similarly, CMS may wish to follow-up with dual-eligible enrollees with HIV who do not have evidence of critical services, given Medicare's role as the primary payer for their services.

METHODOLOGY

We based this review on an analysis of data from (1) the Transformed Medicaid Statistical Information System (T-MSIS)—the national Medicaid claims and encounter database for all 50 States and D.C., and (2) Medicare National Claims History (NCH) files, Medicare Encounter data, Medicare Prescription Drug Event (PDE) data, and the Medicare Enrollment DataBase (EDB).^{30, 31, 32, 33} This review includes services and prescriptions that Medicaid enrollees received through Medicaid (including the Children’s Health Insurance Program (CHIP)) and Medicare (if enrolled in both programs).

T-MSIS Data Quality

Because of ongoing concerns with the quality of T-MSIS data, we assessed the completeness of key variables used in our analysis to ensure that incomplete claims did not significantly limit our ability to identify evidence of critical HIV services for Medicaid-only enrollees.

For the viral load tests and medical visit measures, we first identified the claim types most frequently associated with procedure codes for these two services among all 2021 claims for enrollees with HIV. We found that medical visits were almost always associated with professional (i.e., physician office) claims, whereas viral load tests were associated with both professional claims and hospital outpatient claims. We then reviewed the completeness of the procedure code variable for both professional and hospital outpatient claims in each State. For the ART measure, we reviewed the completeness of the National Drug Code (NDC) variable (used to identify ART prescriptions) for RX claims in each State.³⁴

We removed States from measures in our analysis if the completeness of the key variable for associated claims fell below thresholds that CMS uses in the Data Quality (DQ) Atlas to identify “high concern” or “unusable” data for similar claim types.³⁵ On the basis of these criteria, we excluded four States (Illinois, Maryland, New York, and Vermont) from the viral load test measure in our analysis due to high rates of missing procedure codes in their hospital outpatient claims. We did not exclude any States from the ART or medical visit measures in our analysis.

We further excluded Medicaid-only enrollees in these four States from our national analyses across all three measures. Dual-eligible enrollees in these States were included in the national analyses because Medicare provides primary coverage for most care.³⁶ Though they are not included in our national analyses, we report results for the ART and medical visit measures for Medicaid-only enrollees in these States in Appendix B.

Identifying Enrollees with HIV

To identify enrollees with HIV, we reviewed 2019 and 2020 Medicaid and Medicare claims data for enrollees with HIV-related diagnosis codes and Diagnosis Related Group (DRG) codes as defined in CMS's Chronic Conditions Data Warehouse (CCW) algorithm.³⁷ We made minor modifications to the algorithm by adding codes to include pregnant people with HIV and excluding obsolete codes.

We looked for HIV diagnoses in 2019 and 2020, instead of 2021, so that our analysis of enrollees with documented HIV diagnosis did not include people who were newly diagnosed with HIV in the same year that we looked for services. Newly diagnosed people with Medicaid may have what appear to be gaps in their care in the year of diagnosis that are related to when they were diagnosed (i.e., earlier in the year versus later) and/or the onset of HIV treatment (e.g., a delay in starting ART to allow a person with HIV and their provider to assess and address potential barriers to treatment adherence).³⁸

For enrollees identified with HIV, we used 2021 Medicaid enrollment data to determine whether anyone was not continuously enrolled in Medicaid for all 365 days of 2021. We excluded enrollees who were not continuously enrolled from our analysis to limit the possibility that evidence of missing care was due to enrollment gaps. In 2021, most enrollees were continuously enrolled, as coverage for Medicaid coverage was protected under the COVID-19 public health emergency.³⁹

Gaps in Critical Services Analysis

For each person with HIV, we used their 2021 Medicaid FFS and managed care plan (MCP) claims (and Medicare FFS and Medicare Advantage plan claims, if they were enrolled in Medicaid and Medicare) to find evidence of the three critical services. We adapted and operationalized HHS care guidelines in claims data (e.g., codes, timeframe, scope) to meet our study objective. To do so, we consulted with Health Resources and Services Administration (HRSA) experts to learn about specific code sets and expectations for frequencies of services based on their experiences operationalizing measurement of these three critical services as part of their Ryan White HIV/AIDS Program performance measures.⁴⁰ From this learning, we used a conservative approach to our review by searching for evidence of just one instance of each of the three critical services at any point in 2021. Specifically, we reviewed 2021 claims data for:

- At least one claim with a code indicating an outpatient medical visit (in-person or telehealth) for evaluation and management;
- At least one claim with a procedure code for a quantitative viral load test; and
- At least one claim with a National Drug Code (NDC) associated with an HIV antiretroviral therapy (ART) prescription that was filled.

We then calculated the proportion of enrollees who did not have evidence of all three critical services nationally, by type of enrollment (Medicaid only or dual-eligible), and by State.

To determine national results, we summed the number of enrollees who did not have evidence of at least one of the three critical services in 2021 and divided it by the total number of enrollees with HIV. We also summed the number of enrollees who did not have evidence of any of the three critical services in 2021 and divided by the total number of enrollees with HIV.

To determine results by type of enrollment, we calculated the proportion of enrollees who did not have evidence of all three critical services by Medicaid and Medicare enrollment. Specifically, we used Medicaid and Medicare enrollment files to determine if enrollees with HIV were enrolled in Medicaid only or dual-eligible in 2021. Then, we summed the total number of enrollees with HIV with Medicaid only who did not have evidence of at least one of the three services in 2021 and divided it by the total number of enrollees with HIV who were enrolled in Medicaid only. Further, we summed the total number of these Medicaid-only enrollees who did not have evidence of any of the three services in 2021 and divided by the total number of enrollees with HIV who were enrolled in Medicaid only.

We conducted similar calculations for dual-eligible enrollees. We summed the total number of dual-eligible enrollees who did not have evidence of at least one of the three services in 2021 and divided it by the total number of dual-eligible enrollees with HIV. Further, we summed the total number of these dual-eligible enrollees who did not have evidence of any of the three services in 2021 and divided by the total number of dual-eligible enrollees with HIV.

To determine results by State, we calculated the proportion of enrollees with HIV who did not have evidence of each of the three services and evidence of all three critical services across States. We conducted this analysis separately for enrollees with Medicaid only and dual-eligible enrollees. To do so, we identified the States in which enrollees with HIV were enrolled and received services in 2021. We excluded enrollees who were enrolled or received services in multiple States from this State-level analysis. Then we summed the number of enrollees in each State who did not have evidence of at least one of the three critical services in 2021 and divided by the total number of enrollees with HIV in the State. Similarly, we summed the number of enrollees in each State who did not have evidence of any of the three critical services in 2021 and divided by the total number of enrollees with HIV in the State. See Appendix A. Finally, we summed the number of enrollees with Medicaid only and dual-eligible enrollees in each State who did not have evidence of each service in 2021 and divided by the total number of Medicaid-only and dual-eligible enrollees with HIV in the State. See Appendix B. We also used the Tukey method to identify outliers in States' proportion of enrollees with HIV who (1) were missing one or more of the critical services or did not have evidence of all three critical services (see Appendix A) and (2) did not have evidence of each of the three individual services (see Appendix B).⁴¹

Limitations

Our review focuses on three services critical for all people with HIV; however, individual care needs could warrant different recommendations. For example, providers may delay ART prescriptions briefly for some people with HIV with specific infections.⁴² Also, Federal guidance in 2021 on considerations for COVID-19 advised people with HIV to weigh the risks and benefits of attending versus not attending in-person HIV-related clinic appointments.⁴³ However, our analysis does include medical visits provided via telehealth, which was used to help continue care during the COVID-19 public health emergency.⁴⁴

Further, this analysis is based on Medicaid and Medicare claims data available; it is not based on a review of medical records. Any inaccuracies in claims data could impact our analysis. For example, some claims may have incorrectly included HIV-related diagnosis codes, leading us to determine that the enrollee had HIV when they, in fact, did not. Also, if service claims were missing, incorrect, or billed through bundled payments, we could have underestimated actual evidence of critical services. Further, because OIG has raised concerns about T-MSIS data quality and completeness in the past, we reviewed our Medicaid data for completeness and made some exclusions to minimize the impact of incomplete data on our results.




Finally, this review only covers services paid for by Medicare or Medicaid. It does not capture any services and prescriptions enrollees received that were not paid for by Medicaid or Medicare, such as those covered by TRICARE or paid for out of pocket. Enrollees who received critical services that were not paid for by Medicaid or Medicare, including Medicaid-only enrollees with limited benefits, may have what appear to be gaps in their services.

Standards

We conducted this study in accordance with the *Quality Standards for Inspection and Evaluation* issued by the Council of the Inspectors General on Integrity and Efficiency.

APPENDIX A

Enrollees without Evidence of Services by State

 State	 Enrollees with HIV		 Missing One or More Services				 Missing All Three Services			
	Medicaid Only		Medicaid Only		Dual-Eligible		Medicaid Only		Dual-Eligible	
	n	n	n	%	n	%	n	%	n	%
Alabama	1289	1820	292	23%	327	18%	70	5%	33	2%
Alaska	226	98	65	29%	37	38%	14	6%	-	-
Arizona	3994	1738	2341	59%	340	20%	329	8%	30	2%
Arkansas	745	716	450	60%	195	27%	225	30%	21	3%
California	28596	13792	8514	30%	2997	22%	2026	7%	242	2%
Colorado	2602	1014	691	27%	208	21%	199	8%	22	2%
Connecticut	3085	1939	614	20%	266	14%	125	4%	16	1%
Delaware	831	543	188	23%	105	19%	45	5%	15	3%
District of Columbia	4134	1952	2528	61%	415	21%	269	6%	46	2%
Florida	11806	16655	4929	42%	3389	20%	987	8%	374	2%
Georgia	4407	5305	1915	43%	1358	26%	280	6%	104	2%
Hawaii	445	300	126	28%	28	9%	32	8%	-	-
Idaho	190	153	30	16%	26	17%	-	-	-	-
Illinois	NR	3758	NR	NR	1023	27%	NR	NR	106	3%
Indiana	2332	1541	660	28%	275	18%	139	6%	23	1%
Iowa	707	393	131	19%	44	11%	41	6%	-	-

Kansas	177	334	33	19%	48	14%	-	-	-	-
Kentucky	1978	789	536	27%	152	19%	119	6%	16	2%
Louisiana	7116	3364	1663	23%	589	18%	464	7%	59	2%
Maine	400	400	80	20%	42	11%	18	5%	-	-
Maryland	NR	3359	NR	NR	700	21%	NR	NR	36	1%
Massachusetts	5810	4220	2409	41%	730	17%	477	8%	47	1%
Michigan	5120	2239	1645	32%	565	25%	275	7%	46	2%
Minnesota	1933	884	415	21%	117	13%	66	3%	16	2%
Mississippi	1050	1502	274	26%	256	17%	53	5%	21	1%
Missouri	1061	1886	227	21%	276	15%	50	5%	26	1%
Montana	166	81	70	42%	13	16%	-	-	-	-
Nebraska	174	202	28	16%	35	17%	-	-	-	-
Nevada	2298	721	903	39%	188	26%	178	8%	22	3%
New Hampshire	219	134	39	18%	26	19%	-	-	-	-
New Jersey	6118	2824	1657	27%	616	22%	218	4%	57	2%
New Mexico	1145	550	357	31%	83	15%	81	7%	13	2%
New York	NR	16266	NR	NR	3926	24%	NR	NR	207	1%
North Carolina	3420	4352	1248	36%	632	15%	301	9%	58	1%
North Dakota	73	39	17	23%	-	-	-	-	-	-
Ohio	6517	2808	1815	28%	592	21%	316	5%	48	2%
Oklahoma	464	679	139	30%	143	21%	41	9%	18	3%
Oregon	1772	1004	495	28%	170	17%	91	5%	-	-

Pennsylvania	10045	5240	3040	30%	934	18%	359	4%	59	1%
Rhode Island	681	411	137	20%	58	14%	22	3%	-	-
South Carolina	1776	2350	448	25%	283	12%	147	3%	22	1%
South Dakota	73	87	25	34%	46	53%	-	-	-	-
Tennessee	1925	2184	567	29%	452	21%	89	5%	65	3%
Texas	5810	7437	1894	33%	1665	22%	461	8%	170	2%
Utah	396	208	343	87%	40	19%	29	6%	-	-
Vermont	NR	156	NR	NR	31	20%	NR	NR	-	-
Virginia	4184	2126	1630	39%	423	20%	222	5%	36	2%
Washington	2973	1403	778	26%	227	16%	152	5%	28	2%
West Virginia	528	295	283	54%	138	47%	34	6%	11	4%
Wisconsin	1494	893	362	24%	114	13%	87	6%	-	-
Wyoming	22	42	-	-	-	-	-	-	-	-






NR Not Reported due to concerns with T-MSIS data quality.

Shaded cells are rates that we identified as outliers compared to those of other States.

-Number of enrollees was 10 or under and therefore results not reported to protect enrollee privacy.⁴⁵

APPENDIX B

Enrollees without Evidence of Each Service by State

 State	 Enrollees with HIV		 Missing Medical Visits				 Missing Viral Load Tests				 Missing ART Prescription Filled			
	Medicaid Only	Dual-Eligible	Medicaid Only	Dual-Eligible	Medicaid Only	Dual-Eligible	Medicaid Only	Dual-Eligible	Medicaid Only	Dual-Eligible	Medicaid Only	Dual-Eligible		
	n	n	n	%	n	%	n	%	n	%	n	%	n	%
Alabama	1289	1820	118	9%	53	3%	240	19%	294	16%	195	15%	166	9%
Alaska	226	98	19	8%	-	-	64	28%	35	36%	23	10%	-	-
Arizona	3994	1738	871	22%	65	4%	2153	54%	307	18%	578	15%	141	8%
Arkansas	745	716	357	48%	53	7%	343	46%	170	24%	267	36%	87	12%
California	28596	13792	4096	14%	1143	8%	7410	26%	2215	16%	3596	13%	1033	8%
Colorado	2602	1014	337	13%	43	4%	614	24%	185	18%	365	14%	78	8%
Connecticut	3085	1939	239	8%	59	3%	510	17%	207	11%	284	9%	112	6%
Delaware	831	543	84	10%	23	4%	161	19%	98	18%	104	13%	51	9%
District of Columbia	4134	1952	1219	30%	147	8%	2101	51%	341	18%	419	10%	174	9%
Florida	11806	16655	2208	19%	790	5%	4222	36%	3052	18%	1821	15%	1514	9%

Georgia	4407	5305	483	11%	238	5%	1797	41%	1266	24%	598	14%	434	8%
Hawaii	445	300	55	12%	-	-	91	20%	22	7%	73	16%	-	-
Idaho	190	153	-	-	-	-	29	15%	23	15%	-	-	12	8%
Illinois	8738	3758	1600	18%	252	7%	NR	NR	908	24%	1672	19%	529	14%
Indiana	2332	1541	256	11%	41	3%	578	25%	257	17%	292	13%	120	8%
Iowa	707	393	58	8%	-	-	116	16%	37	9%	81	12%	20	5%
Kansas	177	334	12	7%	-	-	29	16%	42	13%	17	10%	22	7%
Kentucky	1978	789	210	11%	36	5%	456	23%	130	17%	282	14%	70	9%
Louisiana	7116	3364	813	11%	145	4%	1438	20%	537	16%	860	12%	265	8%
Maine	400	400	27	7%	-	-	75	19%	37	9%	37	9%	18	5%
Maryland	7707	3359	1048	14%	132	4%	NR	NR	610	18%	743	10%	284	9%
Massachusetts	5810	4220	1230	21%	150	4%	1472	25%	647	15%	1299	22%	205	5%
Michigan	5120	2239	604	12%	95	4%	1484	29%	532	24%	604	12%	257	12%
Minnesota	1933	884	156	8%	27	3%	369	19%	107	12%	151	8%	49	6%
Mississippi	1050	1502	75	7%	48	3%	250	24%	234	16%	142	14%	106	7%
Missouri	1061	1886	94	9%	57	3%	200	19%	250	13%	116	11%	145	8%

Montana	166	81	17	10%	-	-	68	41%	12	15%	22	13%	-	-
Nebraska	174	202	-	-	-	-	27	16%	34	17%	13	8%	20	10%
Nevada	2298	721	371	16%	54	8%	777	34%	164	23%	404	18%	88	12%
New Hampshire	219	134	-	-	-	-	34	16%	24	18%	19	9%	15	11%
New Jersey	6118	2824	516	8%	136	5%	1454	24%	557	20%	759	12%	324	12%
New Mexico	1145	550	170	15%	24	4%	324	28%	76	14%	154	13%	35	6%
New York	34644	16266	5902	17%	1095	7%	NR	NR	3296	20%	3616	10%	1203	7%
North Carolina	3420	4352	505	15%	126	3%	798	23%	567	13%	855	25%	302	7%
North Dakota	73	39	-	-	-	-	17	23%	-	-	-	-	-	-
Ohio	6517	2808	648	10%	114	4%	1648	25%	539	19%	749	12%	243	9%
Oklahoma	464	679	69	15%	34	5%	119	26%	124	18%	76	16%	80	12%
Oregon	1772	1004	192	11%	37	4%	445	25%	147	15%	182	10%	57	6%
Pennsylvania	10045	5240	1192	12%	194	4%	2485	25%	821	16%	820	8%	384	7%
Rhode Island	681	411	41	6%	15	4%	120	18%	47	11%	57	8%	29	7%
South Carolina	1776	2350	225	13%	53	2%	362	20%	243	10%	275	16%	142	6%
South Dakota	73	87	-	-	-	-	24	33%	45	52%	20	27%	45	52%

Tennessee	1925	2184	160	8%	109	5%	485	25%	401	18%	297	15%	249	11%
Texas	5810	7437	873	15%	437	6%	1595	28%	1463	20%	1036	18%	730	10%
Utah	396	208	35	9%	-	-	88	22%	34	16%	338	85%	22	11%
Vermont	156	156	17	11%	-	-	NR	NR	27	17%	24	15%	15	10%
Virginia	4184	2126	416	10%	78	4%	1507	36%	382	18%	476	11%	180	9%
Washington	2973	1403	305	10%	64	5%	691	23%	203	15%	293	10%	91	7%
West Virginia	528	295	55	10%	15	5%	268	51%	135	46%	77	15%	44	15%
Wisconsin	1494	893	156	10%	15	2%	312	21%	104	12%	156	10%	45	5%
Wyoming	22	42	-	-	-	-	-	-	-	-	-	-	-	-

NR Not Reported due to concerns with T-MSIS data quality.

Shaded cells are rates that we identified as outliers compared to those of other States.

-Number of enrollees was 10 or under and therefore results not reported to protect enrollee privacy.⁴⁶

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