Leveraging State Data Sources to Improve Analysis of Medicaid Participant Race and Ethnicity

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Background

- Maryland has been identified as having Medicaid race and ethnicity data quality of concern.[1]
- States face challenges relating to race and ethnicity data, from variation in collection practices and participant nonresponse to issues with state data.[2]
  - Medicaid applicants may only be required to provide information necessary to make an eligibility determination.[3]
  - Limitations exist in state information systems.
- The Medicaid and CHIP Payment and Access Commission has made recommendations for improvement.[4] States continue to pursue various strategies to enhance their analyses, including linking to additional data sources.[5]

Research Objective

Improve the completeness and accuracy of race and ethnicity data for Medicaid participants in Maryland by using data sources in addition to Maryland's Medicaid Management Information System (MMIS2).

Study Sample

- Maryland Medicaid participants enrolled for any period in calendar year (CY) 2023, as determined by MMIS2 enrollment data.
- Medicaid participants were matched by Medicaid ID to data from the Maryland Health Benefit Exchange (MHBE), the state-based marketplace, and the Chesapeake Regional Information System for Our Patients (CRISP), Maryland's designated health information exchange.
- Race and ethnicity values were kept for each participant from each data source where they were found.

Methodology

Hilltop worked with the Maryland Department of Health (MDH) to determine:

- **File Order:** Finding the most accurate and recent value across data sources
- **Value Order:** Assigning a participant to a single, combined race/ethnicity

A separate data set was created for this analysis. Original MMIS2 values were not changed.

Results

- Most (98%) Medicaid participants were found in MHBE or CRISP
- The percent unknown declined by over 417,000: from 23% to 1%
- The percentage of Hispanic or Latino participants increased by 10 percentage points
- The enhanced race/ethnicity better aligns with American Community Survey estimates

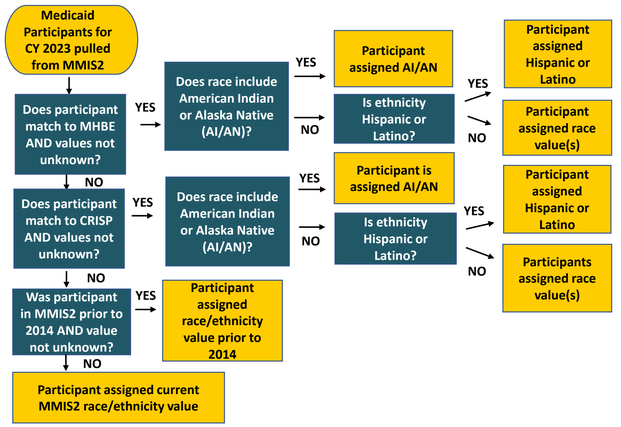
Table 1. Race/Ethnicity of Medicaid Participants, CY 2023

Race/Ethnicity	MMIS2 Alone		Enhanced	
	#	%	#	%
Asian	115,696	6.1%	109,717	5.8%
Black or African American	698,200	36.8%	816,503	43.0%
White	492,956	26.0%	501,725	26.4%
Hispanic or Latino	143,049	7.5%	331,461	17.5%
American Indian or Alaska Native	8,175	0.4%	17,759	0.9%
Other	—	—	52,575	2.8%
Pacific Islander	4,199	0.2%	2,737	0.1%
Two or more races	—	—	21,628	1.1%
Black and White	—	—	25,751	1.4%
Unknown	435,766	23.0%	18,185	1.0%
Total	**1,898,041**	**100.0%**	**1,898,041**	**100.0%**

Developing a Process for Enhancing Medicaid Participant Race and Ethnicity

- Files were obtained from the MHBE and CRISP with Medicaid IDs and participant race and ethnicity values
- Based on consultation with MDH, the following file order was used: 1) the MHBE; 2) CRISP; 3) Historic MMIS2; and 4) Current MMIS2
- Hilltop worked to map the different response options across the data sources into race/ethnicity categories
  - The MHBE data were the most complex, with 183 possible permutations for race and ethnicity responses
  - Figure 1 shows the process map for assigning race and ethnicity based on file order and value order
  - American Indian and Alaska Native participants were prioritized due to special protections in Medicaid[6]
  - Hispanic and Latino participants were prioritized due to undercounting in MMIS2

Figure 1. Process Map for Enhancing Race and Ethnicity



Conclusions

- In Maryland, race and ethnicity data on Medicaid participants are collected in different ways by multiple data systems. Hilltop developed a methodology to combine data sources and assign participants to an enhanced value.
- Using data from the state-based marketplace, health information exchange, and MMIS2, Maryland was able to improve the completeness and accuracy of Medicaid race and ethnicity analyses.

Implications for Policy

- The completeness and accuracy of race and ethnicity data are important for addressing health disparities and advancing health equity goals. As efforts to improve the underlying data collection are underway, alternate data sources can be used to enhance analyses.
- Maryland is working to incorporate these enhanced data into population-level Medicaid data and policy analysis.
- Other states with Medicaid race and ethnicity data quality of concern may be able to replicate this methodology or adapt it to their specific context.

Limitations

- Some participants did not match to either MHBE or CRISP.
  - Race and ethnicity data in MMIS2 are not as detailed and may not be as accurate as MHBE and CRISP.
- Data should be used for population-level analyses only.

Acknowledgments and References

Funding for this research is from the Maryland Department of Health.

1. Centers for Medicare & Medicaid Services. (2021). *Data quality atlas: Race and ethnicity*. https://www.medicaid.gov/dq-atlas/
2. State Health Access Data Assistance Center. (2022). *Collection of race, ethnicity, language (REL) data on Medicaid applications: New and updated information on Medicaid data collection practices in the states, territories, and District of Columbia*. https://www.shadac.org/publications/medicaid-REL-data-collection-SHVS-Brief
3. 42 CFR 435.907. (2013). https://www.ecfr.gov/current/title-42/part-435/section-435.907
4. Medicaid and CHIP Payment and Access Commission. (2023, March). *Chapter 1: Medicaid race and ethnicity data collection and reporting: Recommendations for improvement*. https://www.macpac.gov/wp-content/uploads/2023/03/Chapter-1-Medicaid-Race-and-Ethnicity-Data-Collection-and-Reporting-Recommendations.pdf
5. Lukanen, E., & Zylla, E. (2020, October). *Exploring strategies to fill gaps in Medicaid race, ethnicity, and language data*. State Health Access Data Assistance Center. https://www.shadac.org/news/exploring-strategies-fill-gaps-medicaid-race-ethnicity-and-language-data
6. Centers for Medicare & Medicaid Services. (2024). *Medicaid and Indian health*. https://www.cms.gov/training-education/partner-outreach-resources/american-indian-alaska-native/medicaid-indian-health