Considerations for Analysis by Race in Montana

Office of Management and Budget (OMB) Standards

The OMB sets standards for the collection of race and ethnicity data in all federal data collection. These rules apply to all data collected by the census bureau and to many public health surveillance systems.

OMB requires:

- Race and ethnicity be asked in two separate questions
- Ethnicity includes only one category, Hispanic or Latino
- Race includes a minimum of the following 5 categories: American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or other Pacific Islander, and White
- Individuals may select multiple races.

Single Race

Single race refers to analyzing racial data so that individuals who selected only one racial category are counted in their selected race and anyone who selected multiple racial categories is included in a sixth "multiple race" category regardless of which racial categories they chose. Sometime Hispanic ethnicity is also separated out as a unique category regardless of the race(s) that were selected. In single race analysis racial categories are usually as follows:

- Non-Hispanic White
- Non-Hispanic Black
- American Indian/Alaska Native
- Asian
- Native Hawaiian or other Pacific Islander
- Hispanic
- Multiple Races

In Montana, there is usually only a large enough count in the Non-Hispanic White and American Indian/Alaska Native categories to calculate stable statistics so the other 3 racial groups, Hispanic, and multiple races often get put together into one "all other races" category.

Bridged Race

Bridged race analysis looks very similar to single race except there is no multiple races category. Individuals who select more than one race will be assigned to one of the races they selected based on a model with person-level and county-level covariates used to generate the probability of selecting each single-race category possible for a multiple-race group. In this analysis strategy every individual is counted within a racial category that they selected but for those who selected more than one race it doesn't represent their full identity as selected.

Detailed Race

Detailed race analysis includes an individual in every racial category they selected. Detailed race categories are usually labeled "… alone or in combination with another race". This analysis strategy allows each person to be counted within each race that they selected but it also creates categories that are not mutually exclusive, and the sum of the categories will exceed the total.

Choosing an analysis strategy

Data availability

Deciding which analysis strategy to choose depends most on what denominator data is available and how race is collected in your numerator data. The following table lists what race data is available for the most common data used in the public health and safety division.

Data Set	Race data available	Notes
Death	Detailed race Bridged race thru 2024 Single race from 2021 forward	
Birth	Detailed race Bridged race thru 2024 Single race from 2021 forward	
BRFSS	Single race	Respondents can select multiple races but the data is not available by "alone or in combination"
Hospital Discharge and ED Data	Single race	Race is missing in about 30% of records
Syndromic Surveillance	Single race	
MIDIS	Detailed race Single race	Offers more categories than the standard 5
Tumor Registry	Detailed race Single race	Rules about how to "order" racial categories when more than one is selected
NCHS population data	Bridged race	Only available through 2020
CEIC population data	Detailed race Single race	Only available for 2020-present (each new vintage is released in July of the following year, i.e. 2025 estimates released in July 2026)

Trends and National Comparisons

Prior to 2021 PHSD standardly used the NCHS bridged race population data for all analyses. However, NCHS is no longer producing the bridged race population data and the current recommendation is to use the CEIC population data. This creates a problem with looking at trends within racial groups as neither detailed race nor single race is equivalent to bridged race. There is likely to be a bigger difference in estimates when switching to a detailed race strategy than a single race strategy. Analysts should be

careful to communicate the methods change in race classification and possibly break trend lines in reports.

When comparing Montana data to the US overall or to other states we may not be able to get estimates based on detailed race. At least for birth and death data, available national data is analyzed using single race. In these cases, it is most important to use consistent methods to allow a true comparison.

Equity

Analysis of public health data by race is primarily intended to measure health disparities and plan for strategies to eliminate those disparities. As such, considering how the racial analysis strategies support or undermine that purpose is essential.

Single race analysis excludes all individuals who reported more than one race from being counted in any of their chosen categories. This may be particularly problematic for American Indian populations in Montana. When comparing single race and detailed race population estimates from the CEIC population data, detailed race estimates for American Indian alone or in combination with any other race were about 27% higher statewide than single race estimates. Additionally, there is a huge variation across counties in the difference between detailed race and single race. Six counties had more than 100% increase in the estimate of American Indian population when using detailed race compared to single race: Lincoln, Ravalli, Flathead, Park, Stillwater, and Jefferson counties. 14 counties had between 100% and 50% increase: Gallatin, Teton, Broadwater, Lewis and Clark, Silver Bow, Fergus, Richland, Missoula, Carbon, Custer, Beaverhead, Deer Lodge, Sanders, and Dawson. The counties with the biggest differences are either counties with urban areas or rural counties that do not include a reservation. Most of the counties that contain a reservation had between 4% and 10% increase when using detailed race. The Flathead reservation area was the exception with Lake and Sanders counties having an increase of 26% and 53% respectively. This demonstrates that using single race analysis in non-reservation areas is likely to cause a significant undercount in the American Indian population.

Detailed race may dilute comparisons between racial groups as some individuals will be included in both groups. As demonstrated in the difference in population estimates, some counties will have significant overlap between categories. It may be best to avoid between group comparisons when using detailed race categories and instead compare to all Montanans or don’t make any comparison at all.