

2024 Montana Affirmative Action Plan

I. Background Information

- A. Montana has 29 regions consisting of 56 counties and 12 recognized Tribes across 8 Tribal Nations (Reservations). The Tribal WIC Programs on the Tribal Nations include portions of 11 counties.
- B. The data used in this study are statistically reliable. The Office of Epidemiology and Scientific Support (OESS) of DPHHS have reviewed the Affirmative Action Plan for appropriate statistical technique and analysis in previous years. Data presented included the 56 counties. In 2024, Yarrow, LLC compiled data provided by state offices and official reports using the same methodologies approved by the OESS in previous years.

II. Metrics Used

The 2024 Montana WIC Affirmative Action Plan is based on six maternal and child health metrics:

- A. Term Births: proportion of term births (proportion of births who were delivered from 37-41 weeks gestational age).
- B. Adequate/Adequate+ Prenatal Care: proportion of mothers who received adequate or adequate plus prenatal care, as defined by the Kotelchuck Index.¹
- C. Infants on Medicaid by First Birthday: proportion of infants on Medicaid by 1st birthday.
- D. Food Insecurity: estimates of food insecurity prevalence in each county.
- E. Low Birth Weight: proportion of low-birth-weight infants (proportion of infants born that weight 1500 to 2499 grams at birth).
- F. People Not Accessing WIC that are Eligible: difference between the proportion of individuals eligible for WIC and the proportion actually accessing WIC services, after accounting for the variations in eligibility rates across individual counties.

Data for 56 Montana counties, spanning 2019-2023, was obtained from the Office of Epidemiology and Scientific Support for the following three metrics: "Term Births," "Adequate/Adequate+ Prenatal Care," "Low Birth Weight."² For the same span of years, "Infants on Medicaid by First Birthday" was obtained across all 56 counties from the Montana Medicaid program.³ Data were pooled across multiple years to increase stability of the estimates. Where data was suppressed due to small counts, statewide average was used in place of a county average.

Percentage of individuals with food insecurity, the metric titled, “Food Insecurity,” came from Feeding America’s *Map the Meal Gap 2022*.⁴ This data has a two year lag, meaning that the data used for the 2024 WIC Affirmative Action represents 2022 food insecurity rates. According to the methodology outlined in the *Map the Meal: Technical Brief* county-level food insecurity data is drawn from the American Community Survey (ACS), except for county unemployment data, which are drawn from the Bureau of Labor Statistics (BLS) and are calculated using the following variables: unemployment rates, median income, poverty rates, homeownership rates, percent of the population that is Black, and percent of the population that is Hispanic, disability rates, and an adjusted poverty variable that excludes college students to better reflect the socio economic status of communities with sizeable student populations.

The metric, “People Not Accessing WIC that are Eligible,” was sourced from the *Research Profile of WIC Eligibility and Participation in Montana, 2022: Evidence from Administrative Records and the American Community Survey*. Data from this source was pooled from 2020-2022.⁵ It is important to note that additional calculations are required to calculate percent of people not accessing WIC that are eligible. The data source utilized provides the percent of people eligible for WIC and out of those that are eligible, the percent accessing WIC. For the purposes of this plan, the percent accessing WIC from the whole county was calculated in order to subtract it from the percent eligible to get the true percent of those accessing WIC that are eligible per county.

The six metrics were standardized by statewide proportions as follows:

$$\begin{aligned}
 \text{Standardized Term Births}_{(county)} &= \frac{\text{Proportion Term Births}_{(county)}}{\text{Proportion Term Births}_{(state)}} \\
 \text{Standardized Adequate Care}_{(county)} &= \frac{\text{Proportion Adequate Care}_{(county)}}{\text{Proportion Adequate Care}_{(state)}} \\
 \text{Standardized Infants on Medicaid by First Birthday}_{(county)} &= \frac{1 - \text{Proportion Infants on Medicaid by First Birthday}_{(county)}}{1 - \text{Proportion Infants on Medicaid by First Birthday}_{(state)}} \\
 \text{Standardized Food Insecurity}_{(county)} &= \frac{1 - \text{Proportion Food Insecurity}_{(county)}}{1 - \text{Proportion Food Insecurity}_{(state)}} \\
 \text{Standardized Low Birth Weight}_{(county)} &= \frac{1 - \text{Proportion LBW Births}_{(county)}}{1 - \text{Proportion LBW Births}_{(state)}} \\
 \text{Standardized People Not Accessing WIC that are Eligible}_{(county)} &= \frac{1 - (\text{Proportion Eligible} - \text{Proportion Accessing (adjusted for each county)})_{(county)}}{1 - (\text{Proportion Eligible} - \text{Proportion Accessing (adjusted for the State)})_{(state)}}
 \end{aligned}$$

Once a standardized score for all six metrics was established across each county, an overall standardized score is assigned to each county by taking the mean score across all six metrics. The

resulting overall standardized score indicates the relative need of each county. Counties with standardized scores of less than one have a greater need for WIC support than the statewide average; counties with standardized scores of greater than one have lower needs than the statewide average.

III. Description of Ranking System

To establish ranking among counties, the overall standardized scores were ranked from smallest (highest need county) to largest (county with least need).

IV. Affirmative Action Plan Ranking

The Affirmative Action Plan rankings would be used as one tool among many to assist in the expansion of WIC in Montana, when and if funds become available. If funds were available, new agencies or satellites would be opened in descending order from the top in the Plan, with no WIC agency receiving funds until the eligible agencies above were funded.

V. Considerations for Future Metrics

Various metrics have been used throughout the years to determine the Affirmative Action ranking for WIC. Below are several considerations to make when choosing metrics in future years.

- a. There was significant suppression in the “Low Birth Rate” metric in the 2023 Affirmative Action plan. The MT Office of Vital Statistics changed their suppression guidelines in 2023 and has resulted in less metric suppression. This metric has been retained for future use.
- b. Due to the significant amount of data suppression and lack of relevancy to program objectives, the “Teen Pregnancy” (15-19 years) rate was replaced with “People Not Accessing WIC that are Eligible” provided by the Census. This metric also has significant suppression but is in line with programmatic goals.
- c. The “Births Covered by Medicaid” metric was replaced with “Infants on Medicaid by First Birthday.” This is a more accurate indicator of the WIC-eligible population in a county, since births paid for by Medicaid is often a low estimate of the true proportion of Medicaid-covered births.
- d. At several points in the past, the MT Medicaid Office has completed a project that matches data between participants on Medicaid and the Census to more accurately estimate the percentage of people who are eligible for WIC in each county. This data has not been updated recently and was not included in this Affirmative Action table. Instead, similar data has been calculated using the *Research Profile of WIC Eligibility and Participation in Montana, 2022: Evidence from Administrative Records and the American Community Survey*. Data from this source utilizes statistical models to provide estimates. These estimates will be compared to the Montana Medicaid matching findings if the project is conducted again.
- e. Plan methodologies will be reviewed every five years to ensure efficacy.

References

1. Kotelchuck M. An Evaluation of the Kessner Adequacy of Prenatal Care Index and a Proposed Adequacy of Prenatal Care Utilization Index. *Am J Public Health*. 1994;84(9).
2. MT Department of Public Health and Human Services (DPHHS), Office of Vital Statistics. 2019-2023. Provided to WIC March 2024.
3. MT Department of Public Health and Human Services (DPHHS), Montana Medicaid. 2019-2023. Provided to WIC April 2024.
4. Feeding America: Map the Meal Gap Food Insecurity in the United States. 2022. <https://map.feedingamerica.org/> Accessed May 2024.
5. Center for Economic Studies, US Census Bureau. *Research Profile of WIC Eligibility and Participation in Montana, 2022: Evidence from Administrative Records and the American Community Survey*. July 2024.