

# Montana Affirmative Action Plan

## I. Background Information

- A. Montana has 29 regions consisting of 56 counties and 7 Native American Reservations. The Tribal WIC Programs on the reservations 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 reviewed the Affirmative Action Plan for appropriate statistical technique and analysis. Data presented included the 56 counties.

## II. Affirmative Action Plan

The 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.<sup>1</sup>
- C. Infants on Medicaid before age one: proportion of infants who were born to Montana residents, who were enrolled in Medicaid prior to their first birthday.
- D. Percentage of individuals with food insecurity: estimates of food insecurity were provided by Feeding America. Estimates were determined by Feeding America using data from the 2001-2016 Current Population Survey, the 2012-2016 American Community Survey, and 2016 data from the Bureau of Labor Statistics.<sup>2</sup>
- E. Low Birth Weight: proportion of low-birth-weight infants (proportion of infants born that weight 1500 to 2499 grams at birth)
- F. Teen birth rate: proportion of births to women aged under 20 years.

Data for each of the six metrics were obtained on the 56 Montana counties. Term birth and prenatal care metrics were obtained from pooling data from years 2017-2021, inclusive, from the Office of Epidemiology and Scientific Support, MT Department of Public Health and Human Services.<sup>3</sup> Teen births were queried from the same source but were for 2016-2020 as teen population data obtained from CDC Wonder was not yet available for 2021. Medicaid enrollment data was from years 2018-2020, obtained through a record linkage project completed by the Family and Community Health Bureau, MT Department of Public Health and Human Services. The project linked birth record data with Medicaid claims and enrollment data. Percentage of individuals with food insecurity came from Feeding America, which used data from the 2001-2020 Current Population Survey on individuals in food insecure households; data from the 2012-2020 American Community Survey on median household incomes, poverty rates, home ownership, and race and ethnic demographics; and 2020 data from the Bureau of Labor Statistics on unemployment rates.<sup>2</sup> Data were pooled across multiple years to increase stability of the estimates. Where data was suppressed due to no counts, statewide average was used in place of a county average.

The six metrics were standardized by statewide proportions as follows:

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$$\text{Standardized Term Births}_{(\text{county})} = \frac{\text{Proportion Term Births}_{(\text{county})}}{\text{Proportion Term Births}_{(\text{state})}}$$

$$\text{Standardized Adequate Care}_{(\text{county})} = \frac{\text{Proportion Adequate Care}_{(\text{county})}}{\text{Proportion Adequate Care}_{(\text{state})}}$$

$$\text{Standardized Infants on Medicaid}_{(\text{county})} = \frac{1 - \text{Proportion Infants on Medicaid}_{(\text{county})}}{1 - \text{Proportion Infants on Medicaid}_{(\text{state})}}$$

$$\text{Standardized Food Insecurity}_{(\text{county})} = \frac{1 - \text{Proportion Food Insecurity}_{(\text{county})}}{1 - \text{Proportion Food Insecurity}_{(\text{state})}}$$

$$\text{Standardized Low Birth Weight}_{(\text{county})} = \frac{1 - \text{Proportion Low Birth Weight Births}_{(\text{county})}}{1 - \text{Proportion Low Birth Weight Births}_{(\text{state})}}$$

$$\text{Standardized Teen Birth}_{(\text{county})} = \frac{1 - \frac{\text{Rate Teen Births}_{(\text{county})}}{1000}}{1 - \frac{\text{Rate Teen Births}_{(\text{state})}}{1000}}$$

As seen above, the calculations for the standardized scores differ slightly by metric. The goal was to have a consistent viewpoint across all measures. Scores were calculated comparing the “positive” outcome of each metric for each county compared to the state rate. Once each county had a standardized score for all six metrics, 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 for a given metric have a greater need for WIC support than the statewide average; counties with standardized scores of greater than one for a given metric 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.

### 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. Feeding America: Food Insecurity in the United States. <http://map.feedingamerica.org/>. Accessed July 22, 2019.
3. MT Department of Public Health and Human Services (DPHHS), Office of Vital Statistics. 2019.