

Burden Facts

- Certain populations reported a higher prevalence of diabetes. Adults aged 65-or-more-years, American Indians and Alaska Natives, adults in households earning less than \$25,000 per year, adults with disability, and veterans all reported a prevalence of diabetes of at least 14 percent, compared to a state rate of 9 percent.
- Receiving Supplemental Nutrition Assistance Program (SNAP) benefits, experiencing frequent food insecurity, and receiving a threat of utility shut-off in the past year were all higher among adults with diabetes compared to those without.

Introduction

Social determinants of health (SDOH) are the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health outcomes and risks (Figure 1) and can contribute to health differences. For example, people who don't have access to grocery stores with healthy foods are less likely to have good nutrition, which raises their risk of health conditions like heart disease, diabetes, and obesity — and even lowers life expectancy relative to people who do have access to healthy foods. Just promoting healthy choices will not eliminate these imbalances. Instead, public health organizations and their partners in sectors like education, transportation, and housing need to collaborate to take action to improve the conditions in people's environments¹.

The purpose of this report is to examine the overlap of experiencing select social determinants of health and living with diabetes among Montana adults.

FIGURE 1. Social determinants of health are non-medical factors affecting health².



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RESOURCES

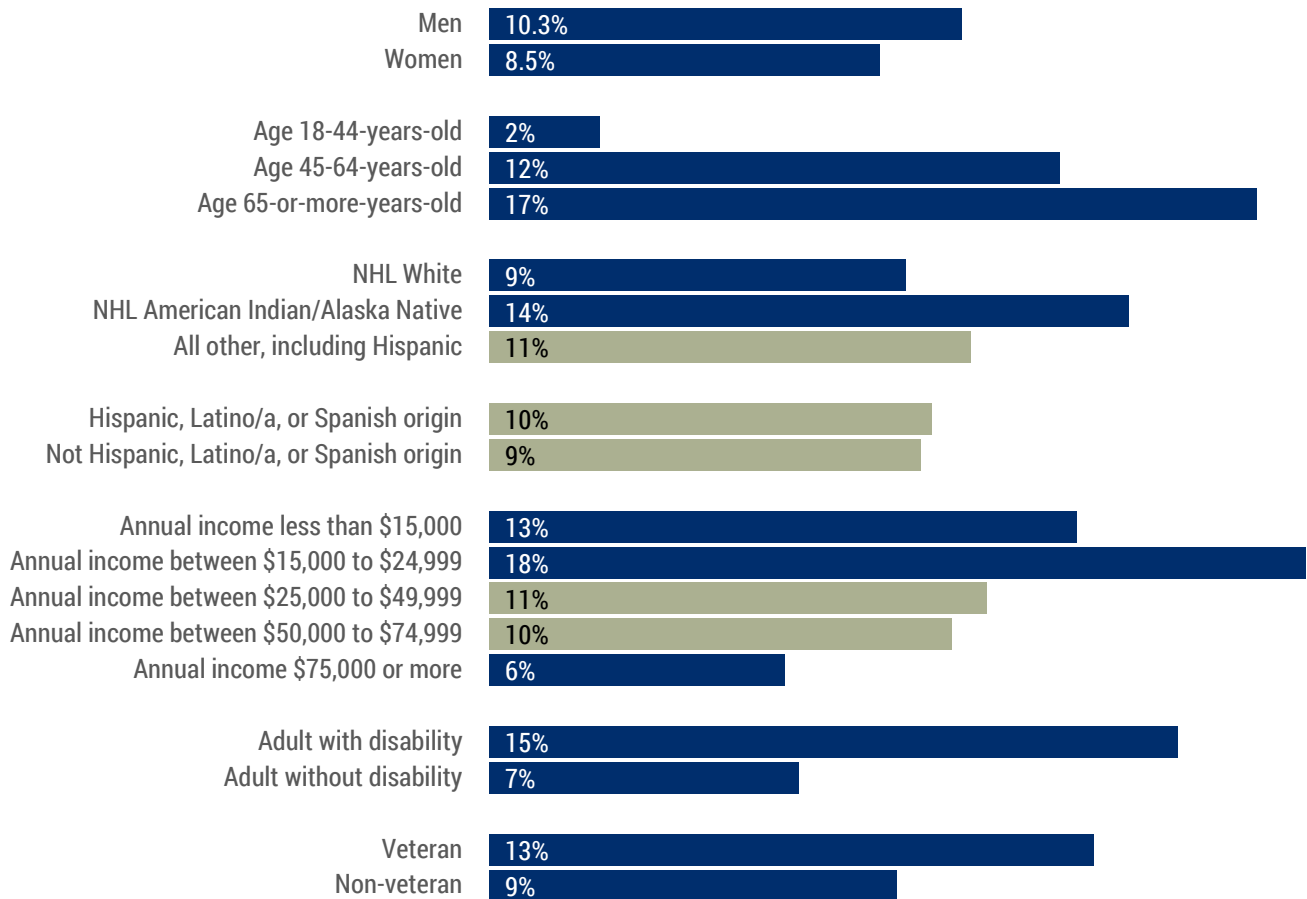
- Food, heating, medical, and cash assistance are available in the state of Montana. To check eligibility and apply for these resources visit the [Department of Public Health and Human Services online application page](#).
- Montana 211 is a free, confidential, 24/7 service that connects people to essential health and human services. Call 211 or visit online at Montana211.org.

Results

Nine percent of Montana adults reported having diabetes. There were notable differences in the prevalence of diabetes when broken down by gender, age, race, income, disability status, and veteran status; ethnicity did not yield any difference (Figure 2). The prevalence of diabetes among adults aged 65-or-more-years-old was eight times higher than among 18- to 44-year-old adults (17 percent versus two percent). Similarly, non-Hispanic or Latino (NHL) American Indian and Alaska Native adults reported a prevalence of diabetes that was 1.5 times greater than that of NHL white adults (14 percent versus nine percent). Adults in low-income households had a higher prevalence than those in high-income households, with those earning less than \$15,000 per year having twice the prevalence as adults in households earning \$75,000 or more per year (13 percent versus six percent). Adults with disability had more than twice the prevalence of diabetes compared to adults without disability (15 percent versus seven percent). Veterans also had nearly one-and-a-half times the prevalence of diabetes compared to non-veterans (13 percent versus nine percent)³.

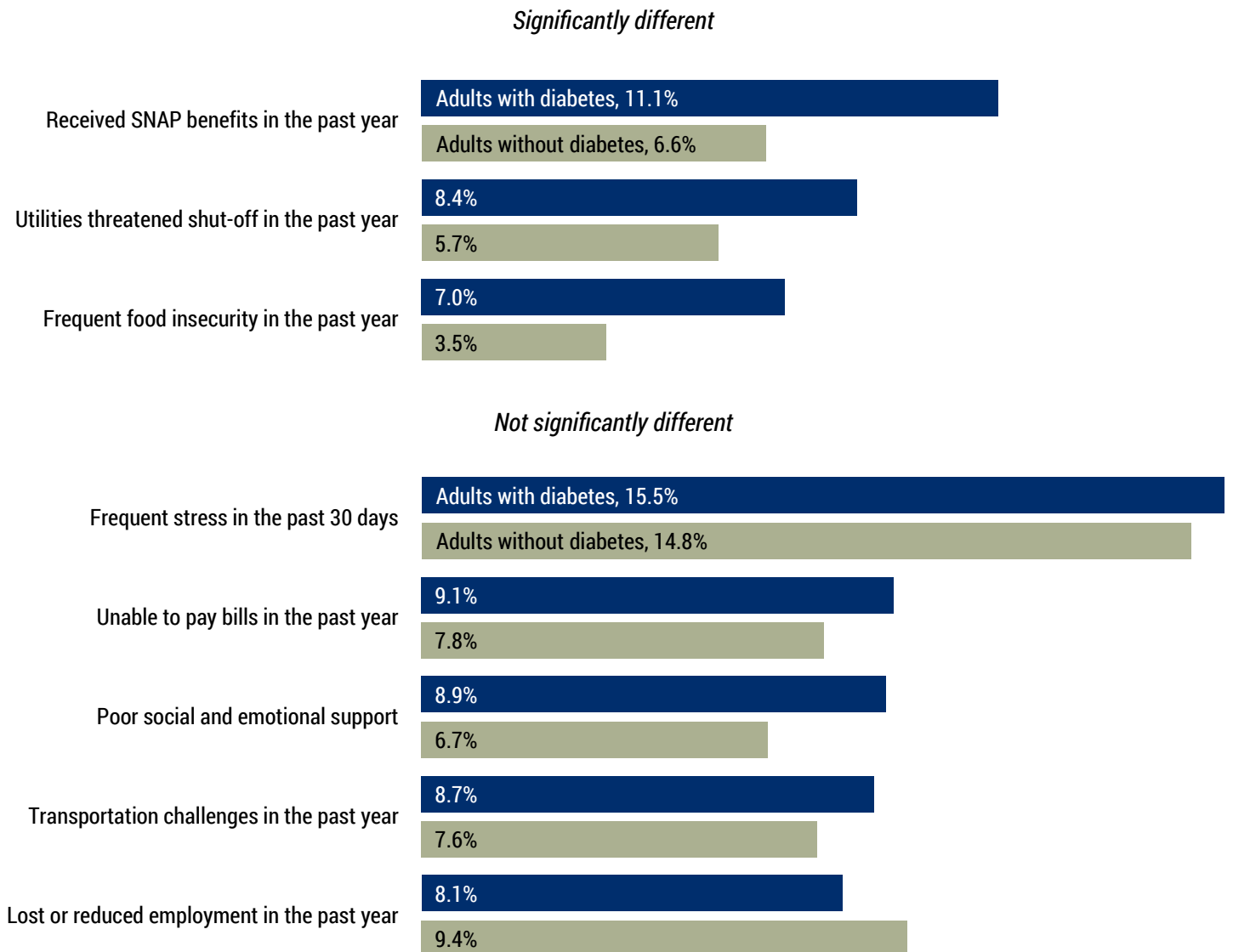
Figure 2. There were differences in diabetes prevalence based on age, race, household income, disability status, and veteran status³.

Percent of adults who reported having diabetes. Dark blue bars indicate statistically significant differences within the group ($p \leq 0.05$).



There were differences in social determinants of health experienced by people with diabetes compared to people without diabetes (Figure 3). More adults with diabetes reported receiving SNAP benefits in the past year (11 percent versus 7 percent), and frequent food insecurity in the past year (7 percent versus 4 percent). Additionally, adults with diabetes reported a threat to shut off their utilities in the past year more than adults without diabetes (8 percent versus 6 percent). Other measured social determinants of health yielded results that were not significantly different³.

Figure 3. People with diabetes reported social determinants of health related to food and utilities more than people without diabetes³.





Conclusions

People with diabetes reported more experiences with social factors which may increase difficulty in managing the disease or risks for complications. While there were three social determinants of health (SDOH) experiences measured in which people with diabetes reported the SDOH more often, there were none in which people without diabetes had a statistically significant higher prevalence. Food related SDOH are more impactful for people with Type 2 diabetes, as lack of access to healthy food contributes to factors leading towards the development or complications of the disease. Utility shut-off, on the other hand, affects people with both Type 1 and Type 2 diabetes, as a loss of electricity would threaten the ability to keep both food and insulin refrigerated and contribute to cost burdens. Additionally, some groups of people were more likely to report having diabetes, depending on characteristics like gender, age, race, income, disability, and whether they served in the military. Not all SDOH factors are within individual control and modifiable through behavior changes.

Organizational collaboration can be an effective way to reduce SDOH burden and alleviate pressure on people with diabetes in Montana. The Montana Department of Public Health and Human Services supports a wide variety of community-based programs that can help Montanans prevent or manage diabetes, including addressing social needs. These programs include diabetes self-management education, the National Diabetes Prevention Program, and projects to improve screening for diabetes-related comorbidities.

Data and Methods

The data presented in this report come from the 2023 Behavioral Risk Factor Surveillance System (BRFSS). The BRFSS is a telephone survey conducted annually among non-institutionalized persons aged 18-or-more-years. Participants are randomly selected using both cell phone and land line numbers. In 2023 there were 7,143 Montanans aged 18-years-or-older who participated in the survey.

Statistical differences were determined using chi-square tests for proportions. Analysis was conducted using a Group versus Non-Group approach to compare the percentage within the group of interest compared to all other participants not in the group of interest. Results with a p-value below 0.05 were considered statistically significant. This is not a reflection of clinical significance, in which lived experiences may be more impactful than what can be detected using a mathematical test.

References

1. US Department of Health and Human Services, Office of Disease Prevention and Health Promotion. Social Determinants of Health. Healthy People 2030. [Online] [Cited: February 10, 2025.] <https://odphp.health.gov/healthypeople/priority-areas/social-determinants-health>.
2. The Centers for Disease Control and Prevention (CDC). Social Determinants of Health. Public Health Professionals Gateway. [Online] May 14, 2024. [Cited: February 24, 2025.] <https://www.cdc.gov/public-health-gateway/php/about/social-determinants-of-health.html>.
3. Montana Department of Public Health and Human Services (MT DPHHS) and CDC. (2023). *Behavioral Risk Factor Surveillance System Survey Data*. Helena, MT: Public Health and Safety Division (PHSD), MT DPHHS.