



# A Utah Health Disparities Profile

## Diabetes and Gestational Diabetes among Racial and Ethnic Minority Women in Utah

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# Acknowledgments

## Primary Author

Brittney Okada, MPH, CHES (UDOH Office of Health Disparities)

## Data Analysis, Evaluation and Verification

Brittney Okada, MPH, CHES (UDOH Office of Health Disparities)

Dulce Díez, MPH, MCHES (UDOH Office of Health Disparities)

Brittany Brown, MPH (UDOH Healthy Living Through Environment, Policy, and Improved Clinical Care [EPICC])

Brenda Ralls, PhD (UDOH Healthy Living Through Environment, Policy, and Improved Clinical Care [EPICC])

Caitlyn Jasumback, BS (UDOH Healthy Living Through Environment, Policy, and Improved Clinical Care [EPICC])

Laurie Baksh, MPH (UDOH Maternal and Infant Health Program)

Nicole Stone, MPH (UDOH Maternal and Infant Health Program)

Ban Naes (UDOH Office of Health Disparities)

## Contributors

Christine Espinel (UDOH Office of Health Disparities)

Charla Haley (UDOH Office of Public Information and Marketing)

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Utah Department of Health

Office of Health Disparities

disparities@utah.gov

[www.health.utah.gov/disparities](http://www.health.utah.gov/disparities)

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# Table of Contents

Executive Summary .....	1
Introduction.....	4
Health Equity and Health Disparities Measurement.....	5
Context: Demographic, Social, and Geographic.....	7
Health Disparities Profile: Diabetes.....	11
Health Disparities Profile: Gestational Diabetes.....	16
Health Disparities Profile: Diabetes and Gestational Diabetes-Related Indicators .....	18
Moving Forward .....	26
Appendix .....	27

# List of Tables

Table 1: Health Disparities in Diabetes, Gestational Diabetes, and Related Indicators among Native Hawaiian/Pacific Islanders (NHPs) in Utah

Table 2: Number of Utah Women who Identify with Racial and Ethnic Minority Communities, 2019

Table 3: Median Age of Utah's Race and Ethnic Minority Communities, 2014–2018

Table 4: Number of Racial and Ethnic Minority Residents in Utah: Salt Lake, Utah, Weber, and Davis Counties, 2018

Table 5: A Comparison of Birth Rates of Utah's Racial and Ethnic Populations and Utah Overall, 2017–2019

Table 6: A Comparison of Uninsurance Rates of Utah's Racial and Ethnic Communities and Utah Overall, 2018–2019

Table 7: Top Five Languages and Number Speaking English Less Than “Very Well” in Salt Lake County, Davis County, Utah County, and Weber–Morgan Local Health Districts, 2009–2013

Table 8: Percentage of Racial and Ethnic Minority Communities in Very High and High Health Improvement Index (HII) Neighborhoods, 2013–2017

Table 9.1: Percentage of Utah Adults Who Reported Having Diabetes by Race and Ethnicity, 2017–2019

Table 9.2: Percentage of Utah Adults Who Reported Having Diabetes by Age and Sex, 2019

Table 9.3: Percentage of Utah Female Adults Who Reported Having Diabetes by Race and Ethnicity, 2015–2019

Table 10: Percentage of Utah Women Reporting Diabetes Before Conception by Race and Ethnicity, 2016–2018

Table 11.1: Diabetes as an Underlying Cause of Death by Race and Ethnicity, 2017–2019

Table 11.2: Diabetes as an Underlying Cause of Death among Utah Females by Race and Ethnicity, 2017–2019

Table 12: Percentage of Live Births to Utah Women with Gestational Diabetes (GDM) by Race and Ethnicity, 2019

Table 13.1: Obesity (BMI  $\geq 30$ ) among Utah Adults (18+) by Race and Ethnicity, 2018–2019

Table 13.2: Obesity (BMI  $\geq 30$ ) among Utah Female Adults (18+) by Race and Ethnicity, 2018–2019

Table 13.3: Percentage of Live Births to Utah Women with BMI  $\geq 30$  Prior to Pregnancy by Race and Ethnicity, 2018–2019

Table 14.1: Recommended Amount of Aerobic Physical Activity among Utah Adults (18+) by Race and Ethnicity, 2017, 2019

Table 14.2: Recommended Amount of Aerobic Physical Activity among Utah Adults (18+) by Sex, 2017, 2019

Table 14.3: Physical Inactivity among Utah Female Adults (18+) by Race and Ethnicity, 2018–2019

Table 15.1: Fruit Consumed Two or More Times per Day among Utah Adults (18+) by Race and Ethnicity, 2017, 2019

Table 15.2: Fruit Consumed Two or More Times per Day among Utah Adults (18+) by Sex, 2017, 2019

Table 16.1: Vegetables Consumed Three or More Times Per Day among Utah Adults (18+) by Race and Ethnicity, 2017, 2019

Table 16.2: Vegetables Consumed Three or More Times Per Day among Utah Adults (18+) by Sex, 2017, 2019

Table 17: Health Disparities in Maternal Health Status

Table 18.1: Uninsurance Rates in Utah by Race and Ethnicity, 2018–2019

Table 18.2: Adults Reporting Cost as a Barrier to Care in Past Year by Race and Ethnicity, 2017–2019

Table 18.3: Percentage of Utah Infants Who Received 1st Trimester Prenatal Care by Race and Ethnicity, 2019

Table 18.4: Health Disparities in Healthcare Access and Utilization During Pregnancy

# Executive Summary

Utah's racial and ethnic minority communities bear a disproportionate burden of disease and poor health outcomes, which limits the ability of individuals, families, and communities to reach their highest health potential and impacts their well-being, longevity, and economic and social mobility.<sup>1</sup>

The Utah Department of Health (UDOH) Office of Health Disparities (OHD) compiled this health disparities profile to document and report racial and ethnic health disparities in diabetes and gestational diabetes among minority women in Utah. Diabetes is a chronic disease with serious consequences that relate to morbidity, disability, and mortality. It has burdensome consequences for individuals, families, and systems.

Many racial and ethnic communities in Utah experience health disparities in diabetes prevalence and death with diabetes as an underlying cause. The data in the following profiles indicate minority women in Utah may likely also experience these health disparities. Furthermore, nearly all of Utah's racial/ethnic minority communities have a higher percentage of women with gestational diabetes when compared with Utah overall; the highest percentages are among women who identify as American Indian/Alaska Native (AI/AN), Native Hawaiian/Pacific Islander (NHPI), and Asian. Moreover, health disparities in obesity, access to care and related-factors place racial and ethnic minority women and families at higher risk for poor outcomes related to diabetes and gestational diabetes.

The Utah Department of Health (UDOH) Office of Health Disparities (OHD) is committed to better understand and address these health disparities. With funding from the US Department of Health and Human Services Office of Minority Health, Community Program to Improve Minority Health, the OHD will implement a project study with a collaborative community-based participatory research approach that mobilizes academic, health, and community experts.

Partners will bring together resources and expertise to develop and implement data-informed modifications to a mobile diabetes unit. The University of Utah Wellness Bus (TWB) is a mobile health unit provided through the University of Utah, which addresses chronic illnesses through health screenings, health coaching, nutrition education, and referrals to social services. TWB utilizes medical and allied health professionals to provide education on nutrition, weight loss, physical activity, and diabetes and hypertension disease management.

The project study will provide services to racial and ethnic minority women of child-bearing age (18–44). Services will be provided across Utah's Wasatch Front region (four urban counties), where poor diabetes and related outcomes have been identified and where the majority of racial and ethnic minority families reside.

<sup>1</sup> UDOH Office of Health Disparities Moving Forward in 2016 reports.



# Executive Summary (Continued)

The project study will be further modified to meet the specific needs of Native Hawaiian/Pacific Islander (NHPI) populations since Utah ranks five among the ten states with the largest NHPI population <sup>2</sup> and considering the severity of these health disparities in the NHPI community (see Table 1 on the next page).

- NHPI women and NHPI communities overall had the highest diabetes death rate in the state, about three times higher than women overall in Utah (50.5 vs 17.4 per 100,000) and Utah overall (72.2 vs 22.9 per 100,000).
- Diabetes prevalence among NHPI women was significantly higher than Utah women overall and more than double the rate (16.9% vs 7.2%).
- NHPI women had the highest rates of obesity, more than 1.5 times higher than women in Utah overall (48.2% vs 28.4%) and NHPI communities had the highest rates of obesity when compared with Utah overall (49.4% vs 29.0%).
- NHPI women experienced one of the highest rates of gestational diabetes mellitus, which was almost double the rate of Utah women (11.6% vs 6.1%).
- NHPI women also had the highest rate of maternal obesity, more than double Utah women overall (52.7% vs 22.9%).
- NHPI women had the lowest rate of early prenatal care; fewer than half of NHPI women (44.8%) receive early prenatal care compared with 75% of all Utahn women.
- NHPI communities had uninsurance rates higher than Utah overall and reported cost as a barrier to healthcare more than Utah overall (23.1% vs 12.7% and 29.7% vs 13.5%).

As trend analyses show concerning growth in health disparity gaps for diabetes prevalence and/or diabetes deaths, it's important to identify and understand health disparities in diabetes and gestational diabetes among minority women in Utah.<sup>3</sup> In addition, the first trilingual statewide health survey among Utah's NHPIs demonstrated these rates for some communities may be underestimated.<sup>4</sup> Effective and strategic interventions to close health disparities gaps in diabetes and gestational diabetes have the potential to redirect the effects of chronic disease on both communities and systems.

Awareness of health disparities in diabetes and gestational diabetes aims to alleviate this disproportionate burden of disease and poor health outcomes on individuals, families, and communities and is fundamental to the pursuit of health equity in Utah.

<sup>2</sup> HHS Office of Minority Health: Minority Population Profiles: Native Hawaiians/Pacific Islanders, 2020.

<sup>3</sup> UDOH Office of Health Disparities: Moving Forward in 2016 Reports: Fifteen Years of Health Data Trends by Race and Ethnicity, August 2016.

<sup>4</sup> UDOH Office of Health Disparities: Utah Pacific Islanders 2011.

# Executive Summary (Continued)

**Table 1: Health Disparities in Diabetes, Gestational Diabetes, and Related Indicators among Native Hawaiian/Pacific Islanders (NHPIs) in Utah**

Health Indicator*	NHPIs in Utah	Utah Overall
Diabetes Death Age-Adjusted Rate (Deaths/100,000 Population), 2017–2019	72.2 (51.3–98.8)	22.9 (21.9–23.9)
Female Diabetes Crude Death Rate (Female Deaths/100,000 Population), 2017–2019	50.5 (32.4–75.2)	17.4 (16.3–18.7)
Percentage of Utah Adults Who Reported Having Diabetes, 2017–2019	13.1% (7.9–20.9%)	8.1% (7.7–8.4%)
Percentage of Utah Female Adults Who Reported Having Diabetes, 2015–2019	16.9% (10.4–26.2%)	7.2% (6.8–7.5%)
Obesity (BMI $\geq 30$ ) among Utah Adults, 2018–2019	49.4% (38.5–60.3%)	29.0% (28.3–29.8%)
Obesity (BMI $\geq 30$ ) among Utah Female Adults, 2018–2019	48.2% (32.1–63.7%)	28.4% (27.3–29.5%)
Percentage of Live Births to Utah Women Who Had Gestational Diabetes (GDM), 2019	11.6% (8.5–14.8%)	6.1% (5.9–6.4%)
Percentage of Live Births to Utah Women With BMI $\geq 30$ Prior to Pregnancy, 2018–2019	52.7% (47.9–57.4%)	22.9% (22.6–23.2%)
Percentage of Utah Infants Who Received 1st Trimester Prenatal Care, 2019	44.8% (40.3–49.4%)	75.9% (75.5–76.3%)
Age-Adjusted Rate of Individuals without Health Insurance, 2018–2019	23.1% (15.0–33.8%)	12.7% (12.1–13.3%)
Adults Reporting Cost as a Barrier to Care in Past Year, 2017–2019	29.7% (21.9–38.9%)	13.5% (13.0–14.0%)

\*Data sources and notes detailed by indicator in tables throughout the report

# Introduction

Trend analyses of more than 15 years of health data demonstrate not all Utahns have the same risk of developing diseases or experiencing health in the same way; Utah's racial and ethnic communities bear a disproportionate burden of disease and poor health outcomes.<sup>5</sup> Racial and ethnic health disparities limit the ability of individuals, families, and communities to reach their highest health potential, which impacts their well-being, longevity, and economic and social mobility.

## What are health disparities?

Health disparities are differences in health outcomes closely linked to economic, socio-cultural, environmental, and geographic disadvantage.

The Utah Department of Health (UDOH) Office of Health Disparities (OHD) compiled this health disparities profile to document and report racial and ethnic health disparities in diabetes and gestational diabetes among Utah minority women. Identification of health disparities through disaggregated population-based data combined with complementary contextual data is fundamental to better understand, address, and eliminate health disparities to advance health equity.

## What is health equity?

Health equity is the principle underlying the commitment to reduce and, ultimately, eliminate health disparities by addressing its determinants. Pursuit of health equity means striving for the highest possible standard of health for all people with special attention to the needs of those communities at greatest risk for health disparities.

## Why focus on health disparities in diabetes and gestational diabetes among Utah minority women?

Diabetes is a chronic disease with serious consequences related to morbidity, disability, and mortality. It has burdensome consequences for individuals, families, communities, and systems. While gestational diabetes usually resolves after pregnancy, as many as 10 percent of women with gestational diabetes may have undiagnosed type 2 diabetes and at least 40 percent may develop it later in life.<sup>6</sup> Health disparities in diabetes and gestational diabetes are indicative of differences in communities' health and experiences and necessitate further investigation into determinants. Effective and strategic interventions to close health disparities gaps in diabetes and gestational diabetes have the potential to redirect the effects of chronic disease on communities and systems.

<sup>5</sup> UDOH Office of Health Disparities Moving Forward in 2016 reports.

<sup>6</sup> UDOH Public Health Indicator Based Information System (IBIS): Complete Health Indicator Report of Diabetes: Gestational Diabetes, November 2020.



# Health Equity and Health Disparities Measurement

Health disparities are the metrics used to measure and assess health equity. A health disparity exists when the health status for a given measure in one or more groups disadvantaged in opportunity and/or resources is found to be different from other groups.

A key component of health disparities measurement is disaggregating data by group. For the purposes of this report, data will be disaggregated by race and ethnicity. The disaggregation of Asian and Native Hawaiian/Pacific Islander (NHPI) population-based data has been key to unveil health disparities among NHPI women and communities in Utah

## Race and Ethnicity Categories

Per US Department of Health and Human Services Implementation Guidance on Data Collection Standards for Race, Ethnicity, Sex, Primary Language, and Disability Status, “self-identification is the preferred means of obtaining information about an individual’s race and ethnicity.” Additionally this self-identified data is generally collected through two separate questions for race and ethnicity, which means an individual ideally answers both their race and ethnicity separately.

It is acknowledged significant diversity exists within each of the race and ethnicity categories used in this report and the use of broad categories will, at times, obfuscate health disparities among smaller subgroups. Whenever possible, five race categories were used (along with Hispanic origin or ethnicity), in accordance with the federal Office of Management and Budget categories utilized by the US Census Bureau.<sup>7</sup> Abbreviations for race and ethnicity in data tables are as follows: Am. Indian (American Indian), AK Native (Alaska Native), African Am. (African American), N. Hawaiian (Native Hawaiian), and Pac. Islander (Pacific Islander). Data from American Indian/Alaska Native populations are included in this report, with acknowledgment that self-identified American Indians/Alaska Natives may or may not be registered members of federally recognized tribal jurisdictions. Because an individual’s race and ethnicity are collected separately and individuals may identify with more than one racial group, individuals may be included in both a race and ethnicity category or multiple race categories. Additional notes on race and ethnicity analysis are included in individual tables to identify when individuals are included in more than one race and ethnicity category.

<sup>7</sup> Hixson, L., Hepler, B.B., & Kim, M.O. (2012). 2010 Census Briefs: The Native Hawaiian and Other Pacific Islander Population: 2010. US Census Bureau.

# Health Equity and Health Disparities Measurement

Another important consideration in health disparities measurement is the choice of reference group. For the purposes of this report, the reference group is the outcome for the overall population of the state.

As applicable, when comparing a group's health outcome with the overall population's health outcome, the confidence bounds were used to determine whether the group was doing (1) better than, (2) the same as, or (3) worse than Utah overall. The group value was considered statistically significantly different from the state value if the state value was outside the range of the group's confidence interval.

While disaggregating data by group is necessary to detect health disparities, it can be a challenge when working with small populations. Thus, when measuring health disparities in small populations, it is necessary to compile data from a series of years in order to obtain reliable estimates. Even with the compiled data, some samples may not be high enough to yield reliable estimates. In this instance, the data insufficiencies are noted with asterisks and footnotes. Additionally, it is important to give careful consideration to balance relevancy of data; this approach provides the most recent data and granular data.

Additional information on health equity and health disparities measurement is available in the appendix.



# Context: Demographic, Social, and Geographic

Utah's racial and ethnic minority women represent about 10 percent of the population and total more than 332,000 women. More than one in five women in Utah identify as a minority woman (see Table 2). Utah's racial/ethnic minorities communities also tend to have a younger age distribution compared with Utah overall (see Table 3).

The majority of racial and ethnic minority communities reside in Salt Lake, Utah, Weber, and Davis counties along the Wasatch Front (see Table 4 on the next page), which have a combined population of 2.4 million persons. This area is home to approximately 371,000 people who identify as Hispanic/Latino (H/L), 73,000 Asian, 29,000 Native Hawaiian/Pacific Islander (NHPI), 27,000 American Indian/Alaska Native (AI/AN), and 39,000 Blacks/African American (B/AA).<sup>8</sup>

These four counties also house the neighborhoods with the highest rates of death due to diabetes, which are up to 10 times higher than neighborhoods with the lowest rates. These counties also are home to neighborhoods with the highest diabetes prevalence, with rates up to five times higher than neighborhoods with the lowest prevalence. Weber-Morgan local health district has the highest diabetes prevalence in the state, which is almost three times higher than the state overall (25.4% vs. 8.5%).<sup>9</sup> Additionally, within these counties the percentages of births with gestational diabetes ranges from 5.5%–6.7% when compared with the lowest county at 3.9% and the highest at 7.7%.<sup>10</sup>

<sup>8</sup> Population Estimates by Age, Sex, Race, and Hispanic Origin for Counties in Utah, US Bureau of the Census, IBIS Version 2019.

<sup>9</sup> UDOH Public Health Indicator Based Information System (IBIS): Complete Health Indicator Report of Diabetes Prevalence, 2019.

<sup>10</sup> UDOH Utah Birth Certificate Database, Office of Vital Records and Statistics, 2016–2017

**Table 2: Number of Utah Women who Identify with Racial and Ethnic Minority Communities, 2019**

Race/Ethnicity <sup>+</sup>	Female	Male
All Utahns	1,591,041	1,614,917
Am. Indian/AK Native	24,620	25,100
Asian	45,385	40,342
Black/African Am.	20,638	26,899
N. Hawaiian/Pac. Islander	16,327	17,652
White	1,442,385	1,461,747
Hispanic/Latino	225,228	236,823

<sup>+</sup>Race is of any ethnicity unless otherwise noted and Hispanic/Latino is of any race.

Population Estimates by Age, Sex, Race, and Hispanic Origin for Counties in Utah, US Bureau of the Census, IBIS Version 2019.

**Table 3: Median Age of Utah's Race and Ethnic Minority Communities, 2014–2018**

Race/Ethnicity <sup>+</sup>	Median Age	90% Confidence Interval	Significantly Lower
All Utahns	30.7	30.6–30.8	
Am. Indian/AK Native	28.7	28.1–29.3	Yes
Asian	32.9	32.5–33.3	No
Black/African Am.	25.3	24.6–26.0	Yes
N. Hawaiian/Pac. Islander	26.5	25.7–27.3	Yes
White, non-Hispanic	32.5	32.4–32.6	No
Hispanic/Latino	24.5	24.4–24.6	Yes

<sup>+</sup>Race is of any ethnicity unless otherwise noted and Hispanic/Latino is of any race.

US Census, ACS 2014–2018 Race Alone Table DP05 (B01002, B01002C, B1002D, B01002B, B01002E, B01002H, B01002I)

# Context: Demographic, Social, and Geographic

**Table 4: Number of Racial and Ethnic Minority Residents in Utah: Salt Lake, Utah, Weber, and Davis Counties, 2018**

County	Racial/ethnic minority population* (count)	County (Cont.)	Racial/ethnic minority population* (count)
Salt Lake	335,424	Beaver	1065
Utah	111,163	Juab	993
Weber	61,798	Emery	921
Davis	57,555	Kane	704
Washington	27,209	Morgan	634
Cache	20,581	Garfield	586
Tooele	11,934	Wayne	253
San Juan	8,650	Rich	218
Iron	7,404	Piute	151
Box Elder	7,110	Daggett	74
Uintah	6,597	<p>*The racial/ethnic minority population counts were calculated by summing the population estimates for people who identified as Hispanic and people who identified as non-Hispanic and non-White (including two or more races). Population Estimates by Age, Sex, Race, and Hispanic Origin for Counties in Utah, US Bureau of the Census, IBIS Version 2019.</p>	
Summit	6,567		
Wasatch	5,513		
Sanpete	4,346		
Carbon	3,419		
Duchesne	2,945		
Millard	2,206		
Sevier	1,841		
Grand	1,728		

Furthermore, in these counties, one in four women of childbearing age (18–44) belong to a racial/ethnic minority community with 76,000 identifying as H/L, 19,500 as Asian, 7,300 as B/AA, 6,400 as NHPI, and 5,700 as AI/AN.<sup>11</sup>

It's critical to identify and under health disparities in diabetes and gestational diabetes among Utah's minority women as Utah has one of the highest birth rates in the US (14.6 live births per 1,000 Utah residents in 2019 vs. 11.4 births per 1,000 nationally)<sup>12</sup> and largely 2017–2019 birth rates among Utah racial/ethnic minority populations were significantly higher than the overall population (see Table 5).<sup>13</sup>

**Table 5: A Comparison of Birth Rates of Utah's Racial and Ethnic Populations and Utah Overall, 2017–2019**

Race/Ethnicity <sup>+</sup>	Birth Rate per 1,000 Utah Residents	95% Confidence Interval	Significantly Higher
All Utahns	10.6	10.5–10.6	
Am. Indian/AK Native	11.0	10.5–11.6	No
Asian	10.5	10.1–10.9	No
Black/African Am.	13.8	13.2–14.4	Yes
N. Hawaiian/Pac. Islander	18.2	17.3–19.0	Yes
White	11.6	11.6–11.7	Yes
Hispanic/Latino	17.8	17.6–18.0	Yes

<sup>+</sup>Race is of any ethnicity unless otherwise noted and Hispanic/Latino is of any race. UDOH Utah Birth Certificate Database, Office of Vital Records and Statistics, 2017–2019.

<sup>11</sup> Population Estimates by Age, Sex, Race, and Hispanic Origin for Counties in Utah, US Bureau of the Census, IBIS Version 2018.

<sup>12</sup> CDC WONDER; Population Estimates: National Center for Health Statistics (NCHS) through a collaborative agreement with the US Census Bureau, IBIS Version 2019; UDOH Utah Birth Certificate Database, Office of Vital Records and Statistics; CDC National Vital Statistics System, National Center for Health Statistics.

<sup>13</sup> UDOH Utah Birth Certificate Database, Office of Vital Records and Statistics, 2017–2019.



# Context: Demographic, Social, and Geographic

With regard to access to care, uninsurance rates among minority communities are more than double Utah overall, with people who identify as AI/AN (18%), B/AA (26%), NHPI (23%), and H/L (36%) facing the highest rates (see Table 6).<sup>14</sup> Furthermore, anywhere from 14–31% of these communities identify cost as a barrier to health care.<sup>15</sup> These diverse, underrepresented populations face further barriers and challenges in access to care, such as limited English proficiency/language assistance needs, low health literacy levels, and limited familiarity with clinical guidelines and local health systems.

**Table 6: A Comparison of Uninsurance Rates of Utah’s Racial and Ethnic Communities and Utah Overall, 2018–2019**

Race/Ethnicity <sup>+</sup>	Age-Adjusted Rate of Individuals without Health Insurance*	95% Confidence Interval	Significantly Higher
All Utahns	12.7%	12.1–13.3%	
Am. Indian/AK Native	18.3%	14.0–23.5%	Yes
Asian	8.1%	4.9–13.0%	No
Black/African Am.	26.1%	19.4–34.1%	Yes
N. Hawaiian/Pac. Islander	23.1%	15.0–33.8%	Yes
White	9.9%	9.4–10.5%	No
Hispanic/Latino	36.2%	33.7–38.9%	Yes

<sup>+</sup>Race is of any ethnicity unless otherwise noted and Hispanic/Latino is of any race.

<sup>\*</sup>Age-adjusted rates are based on three age groups: 18–34, 35–49, and 50+ for race and five age groups: 18–24, 25–34, 35–44, 45–64, and 65+ for ethnicity.

UDOH Behavioral Risk Factor Surveillance System, 2018–2019

<sup>14</sup> UDOH Behavioral Risk Factor Surveillance System, 2018–2019.

<sup>15</sup> UDOH Behavioral Risk Factor Surveillance System, 2017–2019.

**Table 7: Top Five Languages and Number Speaking English Less Than “Very Well” in Salt Lake County, Davis County, Utah County, and Weber–Morgan Local Health Districts, 2009–2013**

Local Health District	Top 5 Languages		# of Speakers	# Speaking English Less Than “Very Well”
	#	Language		
Salt Lake County	1	English	778,418	0
	2	Spanish or Spanish Creole	127,200	49,421
	3	Other Pacific Island Languages	8,895	1,851
	4	Chinese	6,920	3,566
	5	Vietnamese	5,645	3,364
Davis County	1	English	261,540	0
	2	Spanish or Spanish Creole	16,409	4,570
	3	Chinese	980	360
	4	Other Pacific Island Languages	929	114
	5	German	895	152
Utah County	1	English	418,915	0
	2	Spanish or Spanish Creole	45,969	17,774
	3	Portuguese or Portuguese Creole	2,316	372
	4	Other Pacific Island Language	1,995	295
	5	Chinese	1,903	725
Weber–Morgan	1	English	195,684	0
	2	Spanish or Spanish Creole	24,388	10,808
	3	German	846	169
	4	Chinese	563	399
	5	Vietnamese	484	247

American Community Survey (ACS) 2009–2013

# Context: Demographic, Social, and Geographic

Located within Utah's counties and local health districts along the Wasatch Front are very high and high Utah Health Improve Index (HII) areas. The Utah Health Improvement Index (HII) is a composite measure of the social determinants of health. Very high and high HII areas are home to populations with lower education attainment, median family income, homeownership, and unemployment as well as higher poverty rates and single-parent households with children.<sup>16</sup> This is consistent with the socioeconomic status of many of Utah's racial/ethnic minority populations. For example, poverty rates are higher among Utah's racial/ethnic minority populations with more than one in five AI/ANs and B/AAs who live in poverty.<sup>17</sup> In 2018, high school graduation rates in Utah overall were 87%, but 77% for AI/ANs, 76% for B/AAs, 85% for NHPIs and 78% for H/Ls. Moreover, dropout rates among some of these same communities sometimes doubled that of Utah overall (11%), ranging from 14–21%.<sup>18</sup>

It is crucial to understand and acknowledge health disparities faced by racial and ethnic minority women in Utah are complex and multifaceted, affected by economic, socio-cultural, and environmental conditions and cannot be fully explained or explored by population-based data sets alone.

<sup>16</sup> UDOH Office of Health Disparities: The Utah Health Improvement Index, December 2018.

<sup>17</sup> US Bureau of the Census, American Community Survey, 1-Year Estimates, Table S1701, 2018.

<sup>18</sup> Utah State Board of Education: Utah 2018 Graduation Rates, December 2018.

**Table 8: Percentage of Racial and Ethnic Minority Communities in Very High and High Health Improvement Index (HII) Neighborhoods, 2013–2017**

Local Health District	Utah Small Area	HII Group	Population* (2017)	% Racial/Ethnic Minority**
Utah	99 Small Areas	N/A	3,101,989	21.0%
Salt Lake County	Salt Lake City (Rose Park)	Very high	36,676	64.4%
	Magna	High	28,303	36.4%
	Salt Lake City (Glendale) V2	Very high	25,631	65.4%
	West Valley (Center)	Very high	52,999	51.8%
	West Valley (East) V2	Very high	53,253	55.5%
	Salt Lake City (Downtown) V2	High	39,037	28.2%
	South Salt Lake	Very high	27,420	44.3%
	Kearns V2	Very high	41,292	40.4%
	Taylorsville (East)/Murray (West)	High	38,345	30.8%
	Murray	High	35,173	24.5%
	Midvale	Very high	31,669	34.2%
	Sandy (West)	High	27,577	21.6%
Utah County	Orem (North)	High	39,647	29.2%
	Orem (West)	High	35,265	24.7%
	Provo/BYU	Very high	53,657	15.2%
	Provo (West City Center) 3	Very high	34,403	37.6%
	Provo (East City Center)	Very high	34,967	22.7%
	Utah County (South) V2	High	13,900	16.3%
	Payson	High	27,286	13.6%
Weber-Morgan	Ben Lomond	High	62,407	28.9%
	Ogden (Downtown)	Very high	39,706	32.3%
	South Ogden	High	37,963	25.9%

\*Utah Department of Health, Center for Health Data and Informatics, IBIS version 2017

\*\*American Community Survey (ACS) 2013–2017. Calculated as the difference of non-Hispanic White population.



In general, diabetes is a chronic disease which affects how the body processes blood glucose or sugar.<sup>19</sup>

## Indicator: Diabetes Prevalence

Definition: Percentage of Utah adults (18+) diagnosed with diabetes.

Calculation: # of Utah adults who reported being told by a healthcare professional they have diabetes (excludes women who were told they had diabetes only during pregnancy or those who reported they had “borderline” or prediabetes)/Total # of Utah adults 18 and older.

## Health Disparities

Many racial and ethnic communities experience a higher prevalence of diabetes when compared with Utah overall; however, it is significantly higher for people who identify as AI/AN and H/L (see Table 9.1). Diabetes prevalence among females in Utah is 7.7, but ranges from 2.7%–18.0% across different age groups (see Table 9.2). A combination of years 2015–2019, indicates female minorities in general experience a higher prevalence of diabetes when compared with Utah females overall and prevalence is significantly higher among females who identified as AI/AN, NHPI, and H/L; however, this must be interpreted carefully as sample sizes are small (see Table 9.3).

**Table 9.1: Percentage of Utah Adults Who Reported Having Diabetes by Race and Ethnicity, 2017–2019**

Race/Ethnicity <sup>+</sup>	Percentage of Adults with Diabetes (# of Adults with Diabetes/Population 18+)*	95% Confidence Interval	Significantly Higher
All Utahn Adults 18+	8.5%	7.9–9.1%	
Am. Indian/AK Native	13.2%	10.2–16.8%	Yes
Asian	8.8%	5.6–13.4%	No
Black/African Am.	10.8%	6.8–16.6%	No
N. Hawaiian/Pac. Islander	13.1%	7.9–20.9%	No
White	7.7%	7.3–8.0%	No
Hispanic/Latino	11.4%	9.8–13.2%	Yes

<sup>+</sup>Race is of any ethnicity unless otherwise noted and Hispanic/Latino is of any race.

<sup>\*</sup>Age-adjusted to US 2000 standard population based on three age groups: 18–34, 35–49, and 50+ and five age groups: 18–24, 25–34, 35–44, 45–64, and 65+ for ethnicity.

Utah BRFSS, Office of Public Health Assessment, UDOH, 2017–2019

<sup>19</sup> UDOH EPICC Program: Health Conditions–Diabetes, 2015.

## Indicator: Diabetes Prevalence

**Table 9.2: Percentage of Utah Adults Who Reported Having Diabetes by Age and Sex, 2019**

Sex and Age	Percentage of Adults with Diabetes (# of Adults with Diabetes/ Population 18+)*	95% Confidence Interval
<b>All Utahn Adults 18+</b>	<b>8.0%</b>	<b>7.5–8.6%</b>
All Utahn Adults 18–34	1.9%	1.3–2.6%
All Utahn Adults 35–49	5.6%	4.6–6.9%
All Utahn Adults 50–64	13.1%	11.6–14.7%
All Utahn Adults 65+	19.7%	18.1–21.4%
<b>All Adult Males 18+</b>	<b>8.4%</b>	<b>7.6–9.2%</b>
Males 18–34	1.0%	0.6–1.7%
Males 35–49	6.3%	4.8–8.3%
Males 50–64	14.8%	12.5–17.5%
Males 65+	21.6%	19.2–24.3%
<b>All Adult Females 18+</b>	<b>7.7%</b>	<b>6.9–8.5%</b>
Females 18–34	2.7%	1.8–4.1%
Females 35–49	4.9%	3.7–6.6%
Females 50–64	11.3%	9.5–13.5%
Females 65+	18.0%	15.9–20.3%

\*“Don’t know” and “Refused” responses were eliminated from the denominator.  
Utah BRFSS, Office of Public Health Assessment, UDOH, 2019

**Table 9.3: Percentage of Utah Female Adults Who Reported Having Diabetes by Race and Ethnicity, 2015–2019**

Race/Ethnicity <sup>+</sup>	Percentage of Female Adults with Diabetes (# of Female Adults with Diabetes/ Population 18+)*	95% Confidence Interval	Significantly Higher	# of Responses
All Utahn Female Adults 18+	7.2%	6.8–7.5%		2,588
Am. Indian/AK Native	14.3%	10.7–18.8%	Yes	88
Asian	4.8%	2.7–8.3%	No	16
Black/African Am.	10.5%	6.1–17.4%	No	14
N. Hawaiian/Pac. Islander	16.9%	10.4–26.2%	Yes	19
White	6.7%	6.4–7.1%	No	2,323
Hispanic/Latina	10.8%	9.1–12.7%	Yes	196

<sup>+</sup>Race is of any ethnicity unless otherwise noted and Hispanic/Latino is of any race.

\*Age-adjusted to US 2000 standard population based on three age groups: 18–34, 35–49, and 50+ and five age groups: 18–24, 25–34, 35–44, 45–64, and 65+ for ethnicity.

Utah BRFSS, Office of Public Health Assessment, UDOH, 2015–2019

## Indicator: Diabetes Before Conception

Definition: Rate of Utah women who report having type 1 or type 2 diabetes during the three months before conception.

Calculation: # of Utah women reporting having type 1 or type 2 diabetes during the three months before conception/ # of Women with Live Birth

### Health Disparities

Racial and ethnic minority women may experience a higher prevalence of diabetes before conception compared with Utah overall; however, estimates are unreliable or not statistically significant and should be interpreted with caution (see Table 10).

**Table 10: Percentage of Utah Women Reporting Diabetes Before Conception by Race and Ethnicity, 2016–2018**

Race/Ethnicity <sup>+</sup>	Percentage of Women with Diabetes Before Conception (# with Diabetes Before Conception/# of Women with Live Birth)	95% Confidence Interval	Significantly Higher
All Utahn live births	2.8%	2.2–3.5%	
White, Non-Hispanic	2.4%	1.8–3.3%	No
Other <sup>+</sup> , Non-Hispanic	5.7%*	3.0–10.3%*	Yes*
Hispanic	3.7%	2.4–5.9%	No

<sup>+</sup>Other combined women who identified as American Indian/Alaska Native, Asian, Black/African American, and Native Hawaiian/Pacific Islander.

\*Use caution in interpretation; the estimate has a coefficient of variation > 30% and is therefore deemed unreliable by Utah Department of Health standards.

Pregnancy Risk Assessment Monitoring System (PRAMS), 2016–2018

## Indicator: Deaths due to Diabetes as Underlying Cause

Definition: Diabetes as the underlying cause of death refers to the first-listed cause of death with ICD-10 codes E10–E14.

Calculation: # of deaths with diabetes as the underlying cause of death/Total # of Utah residents

### Health Disparities

Many racial and ethnic communities experience a higher death rate with diabetes as an underlying cause of death; this is significantly higher for AI/AN and NHPI communities (see Table 11.1). Among minority women, these death rates are also generally higher and significantly so for women who identified as NHPI; however, this must be interpreted carefully as sample sizes are small (see Table 11.2).

**Table 11.1: Diabetes as an Underlying Cause of Death by Race and Ethnicity, 2017–2019**

Race/Ethnicity <sup>+</sup>	Diabetes Death Rate (Deaths/100,000 Population)*	95% Confidence Interval	Significantly Higher
All Utahns	22.9	21.9–23.9	
Am. Indian/AK Native	50.7	35.9–69.5	Yes
Asian	15.6	10.3–22.3	No
Black/African Am.	28.6	16.3–46.7	No
N. Hawaiian/Pac. Islander	72.2	51.3–98.8	Yes
White	22.2	21.2–23.3	No
Hispanic/Latino	25.5	21.4–30.1	No

<sup>+</sup>Race is of any ethnicity unless otherwise noted and Hispanic/Latino is of any race.

\*Average Annual # of Deaths/Average Annual Population, age-adjusted to the 2000 US standard population using 11 age groups.

Utah Death Certificate Database, Office of Vital Records and Statistics, UDOH, 2017–2019

Population Estimates: National Center for Health Statistics (NCHS) through a collaborative agreement with the US Census Bureau, IBIS Version 2018.

**Table 11.2: Diabetes as an Underlying Cause of Death among Utah Females by Race and Ethnicity, 2017–2019**

Race/Ethnicity <sup>+</sup>	Female Diabetes Crude Death Rate (Female Deaths/100,000 Population)	95% Confidence Interval	Significantly Higher	# of Deaths
All Utahn Females	17.4	16.3–18.7		818
Am. Indian/AK Native	26.3	15.8–41.0	No	19
Asian	6.9*	3.2–13.1*	No*	9*
Black/African Am.	18.5*	9.3–33.2*	No*	11*
N. Hawaiian/Pac. Islander	50.5	32.4–75.2	Yes	24
White	17.5	16.3–18.8	No	748
Hispanic/Latina	8.8	6.7–11.4	No	58

<sup>+</sup>Race is of any ethnicity unless otherwise noted and Hispanic/Latino is of any race.

\*Use caution in interpretation; the estimate has a coefficient of variation > 30% and is therefore deemed unreliable by Utah Department of Health standards.

Utah Death Certificate Database, Office of Vital Records and Statistics, UDOH, 2017–2019

Population Estimates: National Center for Health Statistics (NCHS) through a collaborative agreement with the US Census Bureau, IBIS Version 2018.

### Additional Information on Diabetes

[UDOH Public Health Indicator Based Information System \(IBIS\): Complete Health Indicator Report of Diabetes Prevalence](#)

[UDOH Public Health Indicator Based Information System \(IBIS\): Complete Health Indicator Report of Deaths due to Diabetes as Underlying Cause](#)

### A Closer Look

Trend analyses show growth in disparity gaps for diabetes prevalence and/or diabetes deaths among people who identify as AI/AN, B/AA, H/L, and NHPI.<sup>20</sup> Furthermore, the first tri-lingual statewide health survey among Utah's NHPIs demonstrated rates for some communities may be underestimated, as "PIs interviewed in Tongan were particularly likely to have diabetes, with a rate of 44.0%."<sup>21</sup> In addition, health disparities in obesity and related-factors place racial and ethnic minority women and families at higher risk for poor outcomes related to diabetes. In Utah, people who identified as AI/AN, B/AA, and especially NHPI communities face significantly higher rates of obesity compared with Utahns overall (37.3%, 38.4, and 49.4% respectively vs. 29.0%).<sup>22</sup> Access to care may be problematic for many of these families with as much as 18–36% of these communities uninsured.<sup>23</sup> Additionally, up to one in three adults from these communities reported cost as a barrier to care in the past year.<sup>24</sup>

<sup>20</sup> UDOH Office of Health Disparities: Moving Forward in 2016 Reports: Fifteen Years of Health Data Trends by Race and Ethnicity, August 2016.

<sup>21</sup> UDOH Office of Health Disparities: Utah Pacific Islanders 2011.

<sup>22</sup> UDOH Behavioral Risk Factor Surveillance System, 2017–2019.

<sup>23</sup> UDOH Behavioral Risk Factor Surveillance System, 2018–2019.

<sup>24</sup> UDOH Behavioral Risk Factor Surveillance System, 2017–2019

**Gestational diabetes mellitus (GDM) is defined as having abnormally high blood glucose levels during pregnancy.**

## Indicator: Percentage of Women with Gestational Diabetes (GDM)

**Definition:** Percentage of births which list gestational diabetes on the birth certificate

**Calculation:** # of live births which list gestational diabetes on birth certificate/# of live births for Utah residents

## Health Disparities

Almost all of Utah's racial/ethnic minority communities have a higher percentage of women with gestational diabetes when compared with Utah overall. The highest percentages are among women who identify as AI/AN, NHPI, and Asian (see Table 12).

**Table 12: Percentage of Live Births to Utah Women Who Had Gestational Diabetes (GDM) by Race and Ethnicity, 2019**

Race/Ethnicity <sup>+</sup>	Percentage of Births with GDM (# Births to GDM Mothers/Total # of Live Births)	95% Confidence Interval	Significantly Higher
All Utahns	6.1%	5.9–6.4%	
Am. Indian/AK Native	11.3%	8.3–14.3%	Yes
Asian	13.8%	11.7–16.0%	Yes
Black/African Am.	5.2%	3.7–6.7%	No
N. Hawaiian/Pac. Islander	11.6%	8.5–14.8%	Yes
White	5.7%	5.4–5.9%	No
Hispanic/Latino	7.7%	7.1–8.3%	Yes

<sup>+</sup>Race is of any ethnicity unless otherwise noted and Hispanic/Latino is of any race. Utah Birth Certificate Database, Office of Vital Records and Statistics, 2019



## A Closer Look

Gestational diabetes is significantly higher among Utah mothers with maternal obesity compared with Utah mothers overall (13.1 vs 3.3).<sup>25</sup> Among Utah minority women, rates of obesity in pregnancy (a pre-pregnancy BMI  $\geq 30$ ) were significantly higher among women who identified as AI/AN, B/AA, NHPI, and H/L when compared with Utah women overall (35.1%, 27.2%, 52.7%, and 27.6%, respectively, vs. 22.9 %).<sup>26</sup> With regard to generational health it is interesting to note, “infants born to women with gestational diabetes have a higher risk of developing diabetes and obesity themselves.”<sup>27</sup> Additionally, women with gestational diabetes are more likely to have large babies (more than 4,000 grams), which is a risk factor for non-elective cesarean section delivery.<sup>28</sup> The highest rates of severe maternal morbidity (SMM) are seen among women who have cesarean section deliveries. Women who identify as Hispanic (24.2%) and non-White, non-Hispanic (28.4%) face higher rates of cesarean section deliveries among all live births women when compared with Utah women overall (22.7%). These health disparities exist even among low-risk women without a previous cesarean delivery (18.9% and 21.9%, respectively vs. 16.8%).<sup>29</sup>

## Additional Information on Gestational Diabetes

[UDOH Public Health Indicator Based Information System \(IBIS\): Complete Health Indicator Report of Diabetes: Gestational Diabetes](#)

<sup>25</sup> UDOH Utah Birth Certificate Database, Office of Vital Records and Statistics, 2017.

<sup>26</sup> Utah Birth Certificate Database, Office of Vital Records and Statistics, Utah Department of Health, 2018–2019.

<sup>27</sup> UDOH Public Health Indicator Based Information System (IBIS): Complete Health Indicator Report of Diabetes: Gestational Diabetes.

<sup>28</sup> UDOH Public Health Indicator Based Information System (IBIS): Complete Health Indicator Report of Diabetes: Gestational Diabetes.

<sup>29</sup> UDOH Maternal and Infant Health Program Report: Maternal, Infant & Child Health Indicators in Utah, 2019.

Overall, minority women in Utah face health disparities in many areas of health which likely contribute to health disparities in diabetes and gestational diabetes.<sup>30</sup> These health disparities are documented in following data, but are in no way comprehensive, given that often, limited granular health-related data exists on minority women in Utah.

**Table 13.1: Obesity (BMI ≥30) among Utah Adults (18+) by Race and Ethnicity, 2018–2019**

Race/Ethnicity <sup>+</sup>	Percentage of Adults with Obesity (# Obese/Population 18+)*	95% Confidence Interval	Significantly Higher
All Utahn Adults 18+	29.0%	28.3–29.8%	
Am. Indian/AK Native	37.3%	31.0–44.0%	Yes
Asian	15.1%	10.0–22.2%	No
Black/African Am.	38.4%	30.2–47.3%	Yes
N. Hawaiian/Pac. Islander	49.4%	38.5–60.3%	Yes
White	28.5%	27.7–29.3%	No
Hispanic/Latino	31.8%	29.0–34.8%	No

<sup>+</sup>Race is of any ethnicity unless otherwise noted and Hispanic/Latino is of any race.

<sup>\*</sup>Age-adjusted to US 2000 standard population based on three age groups: 18–34, 35–49, and 50+ and five age groups: 18–24, 25–34, 35–44, 45–64, and 65+ for ethnicity.

Utah BRFSS, Office of Public Health Assessment, UDOH, 2018–2019

**Table 13.2: Obesity (BMI ≥30) among Utah Female Adults (18+) by Race and Ethnicity, 2018–2019**

Race/Ethnicity <sup>+</sup>	Percentage of Female Adults with Obesity (# Obese Female Adults/Population 18+)*	95% Confidence Interval	Significantly Higher	# of Responses
All Utahn Female Adults 18+	28.4%	27.3–29.5%		2,904
Am. Indian/AK Native	42.0%	32.1–52.7	Yes	84
Asian	15.3%	8.4–26.4%	No	14
Black/African Am.	41.3%	28.3–55.6%	No	20
N. Hawaiian/Pac. Islander	48.2%	32.1–63.7%	Yes	19
White	27.6%	26.5–28.8%	No	2,646
Hispanic/Latina	34.1%	29.9–38.5%	Yes	257

<sup>+</sup>Race is of any ethnicity unless otherwise noted and Hispanic/Latino is of any race.

<sup>\*</sup>Age-adjusted to US 2000 standard population based on three age groups: 18–34, 35–49, and 50+ and five age groups: 18–24, 25–34, 35–44, 45–64, and 65+ for ethnicity.

Utah BRFSS, Office of Public Health Assessment, UDOH, 2018–2019

<sup>30</sup> UDOH Maternal and Infant Health Program Report: Maternal, Infant & Child Health Indicators in Utah, 2019.

Overall, minority women in Utah face health disparities in many areas of health which likely contribute to health disparities in diabetes and gestational diabetes.<sup>30</sup> These health disparities are documented in following data, but are in no way comprehensive, given that often, limited granular health-related data exists on minority women in Utah.

**Table 13.3: Percentage of Live Births to Utah Women With BMI  $\geq 30$  Prior to Pregnancy by Race and Ethnicity, 2018–2019**

Race/Ethnicity <sup>+</sup>	Percentage of Women with Maternal Obesity (# Obese Mothers/ Average Annual # Live Births)	95% Confidence Interval	Significantly Higher
All Utahns	22.9%	22.6–23.2%	
Am. Indian/AK Native	35.1%	31.5–38.7%	Yes
Asian	8.9%	7.7–10.1%	No
Black/African Am.	27.2%	24.7–29.7%	Yes
N. Hawaiian/Pac. Islander	52.7%	47.9–57.4%	Yes
White	22.1%	21.8–22.5%	No
Hispanic/Latino	27.6%	26.7–28.4%	Yes

<sup>+</sup>Race is of any ethnicity unless otherwise noted and Hispanic/Latino is of any race. Utah Birth Certificate Database, Office of Vital Records and Statistics, 2018–2019

**Table 14.1: Recommended Amount of Aerobic Physical Activity among Utah Adults (18+) by Race and Ethnicity, 2017, 2019**

Race/Ethnicity <sup>+</sup>	Percentage of Adults Getting Physical Activity (# Getting Activity/ Average Annual 18+ Population)*	95% Confidence Interval	Significantly Lower
All Utahn Adults 18+	54.8%	53.9–55.6%	
Am. Indian/AK Native	52.9%	45.9–59.9%	No
Asian	51.9%	43.3–60.4%	No
Black/African Am.	48.8%	39.3–58.4%	No
N. Hawaiian/Pac. Islander	45.5%	34.0–57.5%	No
White	56.6%	55.7–57.5%	No
Hispanic/Latino	42.2%	39.3–45.2%	Yes

<sup>+</sup>Race is of any ethnicity unless otherwise noted and Hispanic/Latino is of any race.

\*Age-adjusted to US 2000 standard population based on three age groups: 18–34, 35–49, and 50+ and five age groups: 18–24, 25–34, 35–44, 45–64, and 65+ for ethnicity. Utah BRFSS, Office of Public Health Assessment, UDOH, 2017, 2019

<sup>30</sup> UDOH Maternal and Infant Health Program Report: Maternal, Infant & Child Health Indicators in Utah, 2019.

Overall, minority women in Utah face health disparities in many areas of health which likely contribute to health disparities in diabetes and gestational diabetes.<sup>30</sup> These health disparities are documented in following data, but are in no way comprehensive, given that often, limited granular health-related data exists on minority women in Utah.

**Table 14.2: Recommended Amount of Aerobic Physical Activity among Utah Adults (18+) by Sex, 2017, 2019**

Sex	Percentage of Adults Getting Physical Activity (# Adults Getting Physical Activity/Population 18+)*	95% Confidence Interval
All Utahn Adults 18+	54.8%	53.9–55.7%
All Adult Females 18+	54.9%	53.7–56.1%
All Adult Males 18+	54.8%	53.6–56.0%

\*Age-adjusted rates are based on five age groups: 18–24, 25–34, 35–44, 45–64, and 65+.

Utah BRFSS, Office of Public Health Assessment, UDOH, 2017, 2019

**Table 14.3: Physical Inactivity Among Utah Female Adults (18+) by Race and Ethnicity, 2018– 2019**

Race/Ethnicity <sup>+</sup>	Percentage of Females Who are Physically Inactive (# Female Physically Inactive/Population 18+)*	95% Confidence Interval	Significantly Higher
All Utahn Female Adults 18+	19.4%	18.5–20.4%	
Am. Indian/AK Native	19.1%	12.8–27.4	No
Asian	21.9%	13.8–32.9%	No
Black/African Am.	26.4%	15.6–40.9%	No
N. Hawaiian/Pac. Islander	16.0%**	7.2–32.0%**	No**
White	17.9%	17.0–18.9%	No
Hispanic/Latina	32.6%	28.7–36.7%	Yes

<sup>+</sup>Race is of any ethnicity unless otherwise noted and Hispanic/Latino is of any race.

\*Age-adjusted to US 2000 standard population based on three age groups: 18–34, 35–49, and 50+ and five age groups: 18–24, 25–34, 35–44, 45–64, and 65+ for ethnicity.

\*\*Use caution in interpretation; the estimate has a coefficient of variation > 30% and is therefore deemed unreliable by Utah Department of Health standards

Utah BRFSS, Office of Public Health Assessment, UDOH, 2018–2019

<sup>30</sup> UDOH Maternal and Infant Health Program Report: Maternal, Infant & Child Health Indicators in Utah, 2019.

Overall, minority women in Utah face health disparities in many areas of health which likely contribute to health disparities in diabetes and gestational diabetes.<sup>30</sup> These health disparities are documented in following data, but are in no way comprehensive, given that often, limited granular health-related data exists on minority women in Utah.

**Table 15.1: Fruit Consumed Two or More Times per Day Among Utah Adults (18+) by Race and Ethnicity, 2017, 2019**

Race/Ethnicity <sup>+</sup>	Percentage of Adults Consuming 2+ Servings Daily (# Eating 2+ servings Fruits/ Population 18+)*	95% Confidence Interval	Significantly Lower
All Utahn Adults 18+	32.6%	31.8–33.4%	
Am. Indian/AK Native	29.9%	23.3–37.3%	No
Asian	32.2%	25.0–40.3%	No
Black/African Am.	35.2%	26.3–45.2%	No
N. Hawaiian/Pac. Islander	39.1%	28.2–51.2%	No
White	32.6%	31.7–33.4%	No
Hispanic/Latino	33.6%	30.8–36.6%	No

<sup>+</sup>Race is of any ethnicity unless otherwise noted and Hispanic/Latino is of any race.

<sup>\*</sup>Age-adjusted to US 2000 standard population based on three age groups: 18–34, 35–49, and 50+ and five age groups: 18–24, 25–34, 35–44, 45–64, and 65+ for ethnicity.

Utah BRFSS, Office of Public Health Assessment, UDOH, 2017, 2019

**Table 15.2: Fruit Consumed Two or More Times per Day Among Utah Adults (18+) by Sex, 2017, 2019**

Sex	Percentage of Adults Consuming 2+ Servings Daily (# Eating 2+ servings Fruits/ Population 18+)*	95% Confidence Interval	Significantly Lower
All Utahn Adults 18+	32.6%	31.8–33.4%	
All Adult Females 18+	37.0%	35.9–38.2%	No
All Adult Males 18+	28.1%	27.0–29.2%	Yes

<sup>\*</sup>Age-adjusted rates are based on five age groups: 18–24, 25–34, 35–44, 45–64, and 65+. Utah BRFSS, Office of Public Health Assessment, UDOH, 2017, 2019

<sup>30</sup> UDOH Maternal and Infant Health Program Report: Maternal, Infant & Child Health Indicators in Utah, 2019.

Overall, minority women in Utah face health disparities in many areas of health which likely contribute to health disparities in diabetes and gestational diabetes.<sup>30</sup> These health disparities are documented in following data, but are in no way comprehensive, given that often, limited granular health-related data exists on minority women in Utah.

**Table 16.1: Vegetables Consumed Three or More Times per Day Among Utah Adults (18+) by Race and Ethnicity, 2017, 2019**

Race/Ethnicity <sup>+</sup>	Percentage of Adults Consuming 3+ Servings Daily (# Eating 3+ servings Vegetables/ Population 18+)*	95% Confidence Interval	Significantly Lower
All Utahn Adults 18+	13.0%	12.5–13.6%	
Am. Indian/AK Native	14.9%	10.3–21.2%	No
Asian	19.4%	13.6–27.0%	No
Black/African Am.	13.1%	8.2–20.1%	No
N. Hawaiian/Pac. Islander	8.7%**	4.2–16.9%**	No**
White	13.2%	12.6–13.8%	No
Hispanic/Latino	9.3%	7.7–11.2%	Yes

<sup>+</sup>Race is of any ethnicity unless otherwise noted and Hispanic/Latino is of any race.

<sup>\*</sup>Age-adjusted to US 2000 standard population based on three age groups: 18–34, 35–49, and 50+ and five age groups: 18–24, 25–34, 35–44, 45–64, and 65+ for ethnicity.

<sup>\*\*</sup>Use caution in interpretation; the estimate has a coefficient of variation > 30% and is therefore deemed unreliable by Utah Department of Health standards.

Utah BRFSS, Office of Public Health Assessment, UDOH, 2017, 2019

**Table 16.2: Vegetables Consumed Three or More Times per Day Among Utah Adults (18+) by Sex, 2017, 2019**

Sex	Percentage of Adults Consuming 3+ Servings Daily (# Eating 3+ servings Vegetables/ Population 18+)*	95% Confidence Interval	Significantly Lower
All Utahn Adults 18+	13.0%	12.5–13.6%	
All Adult Females 18+	15.0%	14.2–15.9%	No
All Adult Males 18+	11.0%	10.2–11.8%	Yes

<sup>\*</sup>Age-adjusted rates are based on five age groups: 18–24, 25–34, 35–44, 45–64, and 65+. Utah BRFSS, Office of Public Health Assessment, UDOH, 2017, 2019

<sup>30</sup> UDOH Maternal and Infant Health Program Report: Maternal, Infant & Child Health Indicators in Utah, 2019.



Overall, minority women in Utah face health disparities in many areas of health which likely contribute to health disparities in diabetes and gestational diabetes.<sup>30</sup> These health disparities are documented in following data, but are in no way comprehensive, given that often, limited granular health-related data exists on minority women in Utah.

**Table 17: Health Disparities in Maternal Health Status**

Indicator	Utah	White, non-Hispanic	Other <sup>+</sup> , non-Hispanic	Hispanic	Data Year
Percentage of women of reproductive age who reported being obese <sup>a</sup>	21.1%	19.7%	12.6%	32.8%	2017
Percentage of women who reported she exercised prior to pregnancy <sup>b</sup>	58.9%	61.0%	51.7%	50.3%	2015
Percentage of women with a normal BMI prior to pregnancy <sup>a,b</sup>	50.6%	53.3%	46.2%	41.3%	2017
Percentage of women with Gestational Diabetes or pre-existing <sup>c</sup>	7.1%	6.0%	11.2%	10.0%	2017
Percentage of women with adequate weight gain during pregnancy <sup>d</sup>	31.1%	30.9%	28.4%	31.4%	2017

+Other combines American Indian/Alaska Native, Asian, Black/African American, and Native Hawaiian/Pacific Islander races.

a. The Behavioral Risk Factor Surveillance System (BRFSS), Reproductive age: Defined women ages 18–44

b. Pregnancy Risk Assessment Monitoring System (PRAMS)

c. Utah Birth Certificate Database, Office of Vital Records and Statistics, UDOH

d. Utah Office of Vital Records and Statistics (OVRs), Adequate weight gain during pregnancy: Defined as gaining the recommended amount of weight during pregnancy, based upon the mother's pre-pregnancy BMI and whether the pregnancy is a single or multiple gestation. <http://www.babyyourbaby.org/pregnancy/during-pregnancy/weight-gain.php>

<sup>30</sup> UDOH Maternal and Infant Health Program Report: Maternal, Infant & Child Health Indicators in Utah, 2019.

Overall, minority women in Utah face health disparities in many areas of health which likely contribute to health disparities in diabetes and gestational diabetes.<sup>30</sup> These health disparities are documented in following data, but are in no way comprehensive, given that often, limited granular health-related data exists on minority women in Utah.

**Table 18.1: Uninsurance rates in Utah by Race and Ethnicity, 2018–2019**

Race/Ethnicity <sup>+</sup>	Age-Adjusted Rate of Individuals without Health Insurance*	95% Confidence Interval	Significantly Higher
All Utahns	12.7%	12.1–13.3%	
Am. Indian/AK Native	18.3%	14.0–23.5%	Yes
Asian	8.1%	4.9–13.0%	No
Black/African Am.	26.1%	19.4–34.1%	Yes
N. Hawaiian/Pac. Islander	23.1%	15.0–33.8%	Yes
White	9.9%	9.4–10.5%	No
Hispanic/Latino	36.2%	33.7–38.9%	Yes

<sup>+</sup>Race is of any ethnicity unless otherwise noted and Hispanic/Latino is of any race.

<sup>\*</sup>Age-adjusted rates are based on three age groups: 18–34, 35–49, and 50+ and five age groups: 18–24, 25–34, 35–44, 45–64, and 65+ for ethnicity.

UDOH Behavioral Risk Factor Surveillance System, 2018–2019

**Table 18.2: Adults Reporting Cost as a Barrier to Care in Past Year by Race and Ethnicity, 2017–2019**

Race/Ethnicity <sup>+</sup>	Percentage of Adults Unable to Access Care (# Unable to Access Care/Population 18+)*	95% Confidence Interval	Significantly Higher
All Utahn Adults 18+	13.5%	13.0–14.0%	
Am. Indian/AK Native	30.9%	25.7–36.5%	Yes
Asian	13.8%	10.1–18.6%	No
Black/African Am.	25.3%	19.5–32.0%	Yes
N. Hawaiian/Pac. Islander	29.7%	21.9–38.9%	Yes
White	12.1%	11.7–12.6%	No
Hispanic/Latino	20.2%	18.5–22.0%	Yes

<sup>+</sup>Race is of any ethnicity unless otherwise noted and Hispanic/Latino is of any race.

<sup>\*</sup>Age-adjusted to US 2000 standard population based on three age groups: 18–34, 35–49, and 50+ and five age groups: 18–24, 25–34, 35–44, 45–64, and 65+ for ethnicity.

UDOH Behavioral Risk Factor Surveillance System, 2017–2019

<sup>30</sup> UDOH Maternal and Infant Health Program Report: Maternal, Infant & Child Health Indicators in Utah, 2019.

Overall, minority women in Utah face health disparities in many areas of health which likely contribute to health disparities in diabetes and gestational diabetes.<sup>30</sup> These health disparities are documented in following data, but are in no way comprehensive, given that often, limited granular health-related data exists on minority women in Utah.

**Table 18.3: Percentage of Utah Infants Who Received 1st Trimester Prenatal Care by Race and Ethnicity, 2019**

Race/Ethnicity <sup>+</sup>	Percentage of Births with Early Prenatal Care (# with Prenatal Care/Total # of Live Births)	95% Confidence Interval	Significantly Lower
All Utahns	75.9%	75.5–76.3%	
Am. Indian/AK Native	64.0%	59.7–68.3%	Yes
Asian	74.9%	72.3–77.4%	No
Black/African Am.	58.4%	55.1–61.6%	Yes
N. Hawaiian/Pac. Islander	44.8%	40.3–49.4%	Yes
White	77.9%	67.2–70.8%	No
Hispanic/Latino	69.0%	68.0–70.0%	Yes

<sup>+</sup>Race is of any ethnicity unless otherwise noted and Hispanic/Latino is of any race.  
Utah Birth Certificate Database, Office of Vital Records and Statistics, 2019

**Table 18.4: Health Disparities in Healthcare Access and Utilization During Pregnancy**

Indicator	Utah	White, non-Hispanic	Other <sup>+</sup> , non-Hispanic	Hispanic	Data Year
Percentage of women who reported having health insurance prior to pregnancy <sup>a</sup>	87.1%	90.6%	89.8%*	65.5%	2016
Percentage of women who reported not having health insurance to pay for prenatal care <sup>a</sup>	4.7%	2.6%	**	18.2%	2016
Percentage of women who received prenatal care during their first trimester <sup>b</sup>	77.0%	83.2%	73.4%	68.0%	2017

<sup>+</sup>Other combines American Indian/Alaska Native, Asian, Black/African American, and Native Hawaiian/Pacific Islander races.

a. Utah Pregnancy Risk Assessment Monitoring System (PRAMS)

b. Utah Birth Certificate Database, Office of Vital Records and Statistics, UDOH.

\*Estimate is unreliable and should be interpreted with caution.

\*\*Indicator is not reportable due to a very small number of observed events.

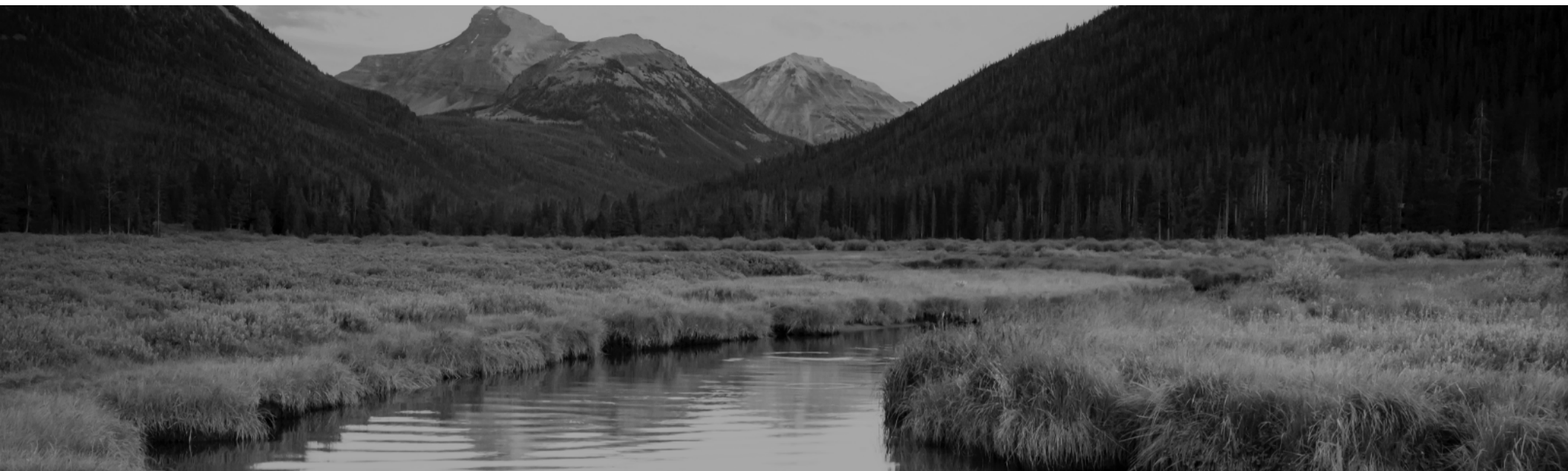
<sup>30</sup> UDOH Maternal and Infant Health Program Report: Maternal, Infant & Child Health Indicators in Utah, 2019.

# Moving Forward

The data in these profiles indicate racial and ethnic minority women and their communities in Utah experience health disparities in diabetes and gestational diabetes and related indicators. This disproportionate burden of disease and poor health outcomes has far-reaching impacts on individuals, families, and communities.

The Utah Department of Health (UDOH) Office of Health Disparities (OHD) is committed to better understand and address these health disparities. With funding from the Community Program to Improve Minority Health from the US Department of Health and Human Services Office of Minority Health, the OHD will implement a project study that uses a collaborative community-based participatory research approach, which mobilizes academic, health, and community experts.

Partners will collaborate to develop and implement data-informed modifications for a mobile diabetes unit. The project study will provide services to racial and ethnic minority women of child-bearing age (18–44) living throughout Utah’s Wasatch Front region. Since Utah ranks five among the ten states with the largest population of people who identify as Native Hawaiian/Pacific Islander (NHPI) and considering the severity of these health disparities in the NHPI community, the project study will further be modified for this community.



# Appendix

## Additional Information on Health Equity and Health Disparities Measurement

Health equity is the principle underlying the commitment to reduce and, ultimately, eliminate health disparities by addressing its determinants. Pursuit of health equity means striving for the highest possible standard of health for all people and with special attention to the needs of those communities at greatest risk for health disparities.

Health disparities are the metrics used to measure and assess health equity. A health disparity exists when the health status on a given measure in one or more groups that is disadvantaged in opportunity and/or resources is found to be different from other groups. As such, health equity cannot be achieved as long as health disparities persist.

For that reason, when we report on health disparities, it is important to include not only the health indicator (the one that reflects the health disparity), but also other measures that provide additional information about why the population experiencing the health disparity is “disadvantaged in opportunities and/or resources.” These additional measures may include race/ethnicity, socio-economic status, educational status, disability status, access to health care, geographic location, etc.

A key component of health disparities measurement is disaggregating data by group. When disaggregated data is collected and reported, it is possible to identify health disparities. For example, in Utah, data on people who identify as Asian and Native Hawaiian/Pacific Islander were traditionally collected in aggregate. However, when Utah decided to collect and report the groups separately, many health disparities were detected among people who identify as Native Hawaiians/Pacific Islanders. This included a previously unknown higher rate of infant mortality in Native Hawaiians/Pacific Islanders when compared with Utah overall.

Another important consideration in health disparities measurement is the choice of reference group. Popular options for reference groups when measuring health disparities include the group with the healthiest outcomes, the group which represents the majority of the population, the total or average outcome for all groups, or standard measures such as those determined by Healthy People 2030.

# Appendix

## Health Disparities Detection in Small Populations

While disaggregating data by group is necessary to detect health disparities, it can be a challenge when working with small populations. For example, in Utah when data are disaggregated by race, small sample sizes make it difficult or impossible to reliably detect statistically significant differences. Thus, when measuring health disparities in small populations, it is necessary to compile data from a series of years in order to obtain reliable estimates. Even with the compiled data, some samples may not be high enough to yield reliable estimates. In this instance, the data insufficiencies should be noted with asterisks and footnotes.

## Other Limitations

The report utilizes various data sources, all of which have different strengths and weaknesses. For example, the Behavioral Risk Factor Surveillance System (BRFSS) is a telephone survey that does not include data from individuals who do not have a telephone or who were unable to respond to the survey in a non-English or non-Spanish language. The data is self-reported, which can introduce different biases. Small numbers of survey respondents who belong to a minority race lower the reliability of the estimates. Hospitalization use by race/ethnicity would have allowed this report to provide a comprehensive health picture but hospital data is not available by each individual race.