Michigan Medicaid Summary
Diabetes Among Adult Beneficiaries 2020-2023

Health care and public health professionals can use this brief to learn about recent trends in diabetes among adults in a Michigan Medicaid program. Understanding these trends can help professionals identify and address diabetes disparities, understand the public health impact, and act on recommendations to improve care.

Background

- Diabetes is a chronic disease characterized by hyperglycemia (high blood glucose) caused by either the lack of insulin or the body's inability to use insulin efficiently.[1]

- Michigan Medicaid programs provide coverage for health care services to residents in need of financial assistance. MDHHS can monitor diabetes trends among Medicaid beneficiaries using health and pharmacy claims and administrative data in the Michigan Health Data Warehouse.

- Based on these data, a diabetes utilization percentage can serve as a proxy for the estimated percentage of adult beneficiaries having diabetes.

- This summary provides diabetes percentage estimates among adult beneficiaries in Michigan between the ages of 18 to 64 gathered from 2020 to 2023 with a focus on calendar year 2023. This report also identifies disparities among demographics and counties.

Diabetes Trends

Total Number of Beneficiaries, Number with Diabetes, and Diabetes Percentage, Adults (18-64 years), Michigan, Medicaid, 2020-2023

Year	Beneficiaries	Beneficiaries with Diabetes	Diabetes Percentage (95% CI)
2020*	970,667	92,099	9.5 (9.4-9.5)
2021	1,182,493	113,779	9.6 (9.6-9.7)
2022	1,259,745	115,580	9.2 (9.1-9.2)
2023	1,125,766	114,022	10.1 (10.1-10.2)

Source: Michigan Health Data Warehouse *(2020-2023)*

95% CI – 95% Confidence Interval

*Use caution when interpreting 2020 data. The COVID-19 pandemic disrupted health services, leading to delays and reductions in diabetes screening, diagnosis, and reporting to some diabetes databases. This may have contributed to a decline in diabetes cases in 2020.

- In 2020, 9.5% (92,099) of adults in a Michigan Medicaid program had diabetes.

- The diabetes percentage increased from 9.5% to 10.1% from 2020 to 2023.

- In 2023, 10.1% (114,022) of adults in a Medicaid program had diabetes.

For more information about diabetes in Michigan and programs,
visit Michigan.gov/Diabetes.

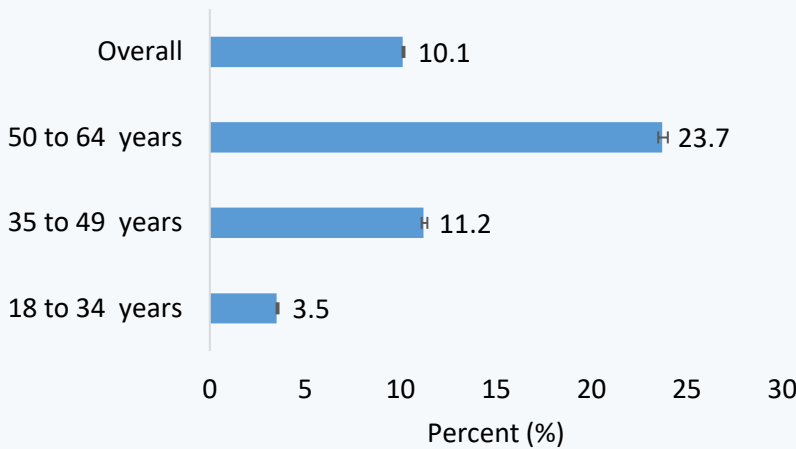# Diabetes Disparities by Sex, Age Group, and Race/Ethnicity

Diabetes Percentage by Sex, Adults (18-64 years), Michigan, Medicaid, 2023

Source: Michigan Health Data Warehouse *(2023)*
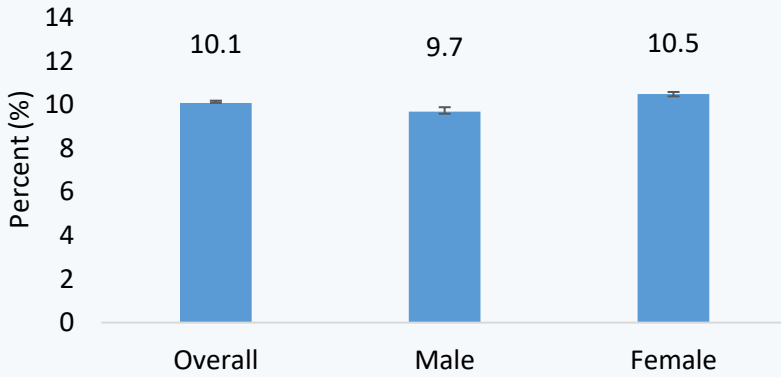
- In 2023, the diabetes prevalence was higher among female (10.5%) beneficiaries compared to male (9.7%) beneficiaries.

Diabetes Percentage by Age Group, Adults (18-64 years), Michigan, Medicaid, 2023

Source: Michigan Health Data Warehouse *(2023)*

- In 2023, older age group beneficiaries had higher reports of having diabetes.
- Adults aged 18-34 years (3.5%) had the lowest percentage, and adults aged 50-64 years had the highest (23.7%).
- The percentage of adults between 35 to 49 was three times more than adults between 18 to 34 years old.
- The percentage among adults between 50 to 64 years was two times the percentage of those between 35 to 49 years old with diabetes.

Diabetes Percentage by Race/Ethnicity, Adults (18-64 years), Michigan, Medicaid, 2023

Am Indian – American Indian/Alaska Native; Asian/PI – Asian/Pacific Islander

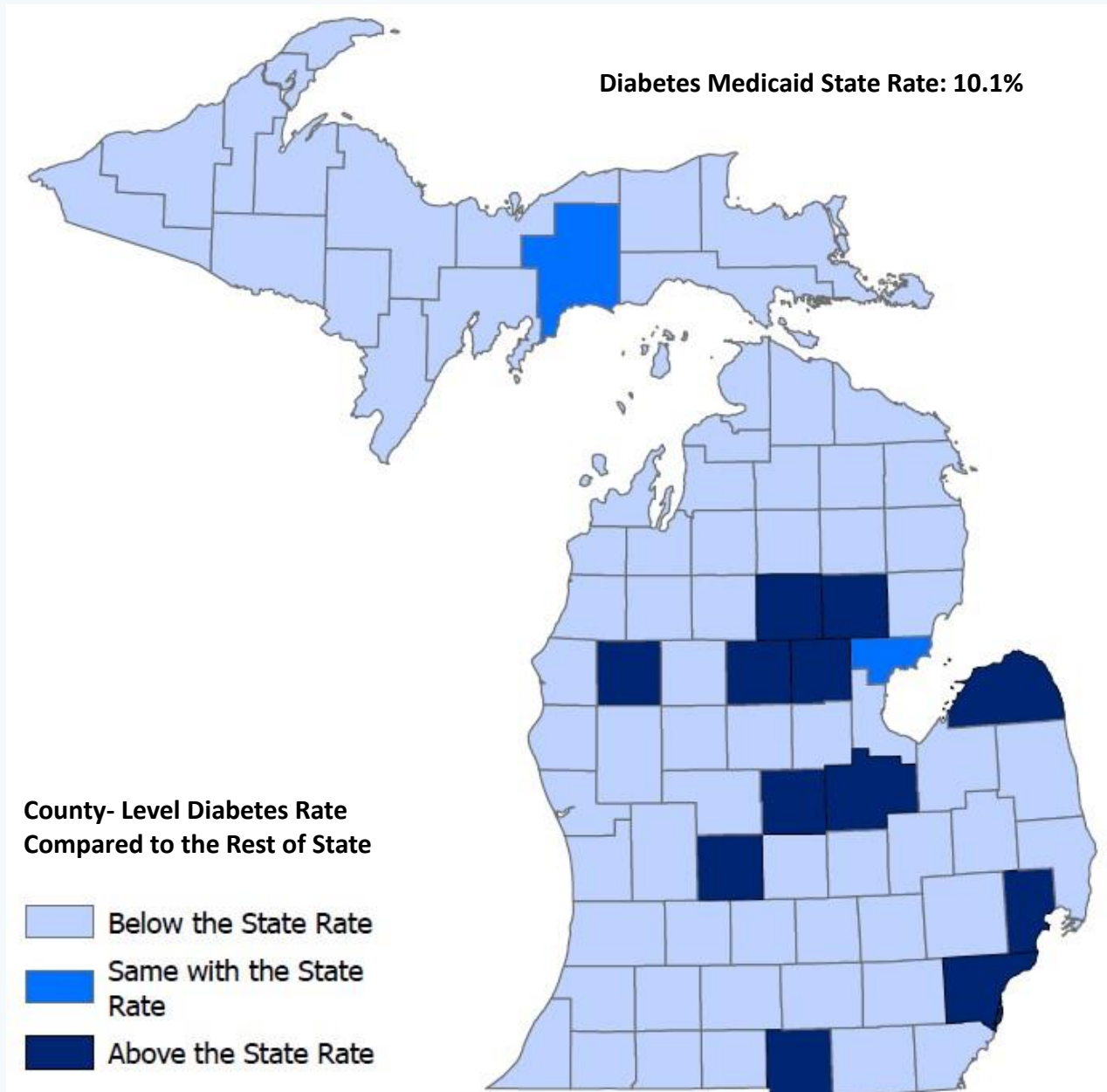*Source:* Michigan Health Data Warehouse *(2023)*
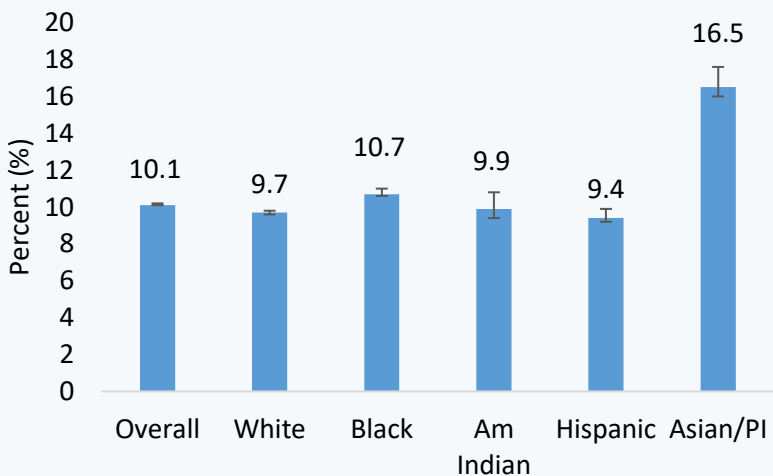
- In 2023, adult Asian/Pacific Islander (16.5%) beneficiaries had the highest diabetes percentage compared to American Indian/Alaska Native (9.9%), non-Hispanic Black (10.7%), Hispanic/Latino (9.4%), and non-Hispanic white (9.7%) adults.
- Hispanic Black was the second highest group reporting to have diabetes.
- People who identify as Hispanic, white, and American Indian/Alaska Native had diabetes percentages lower than the state.

Diabetes Disparities by County

Diabetes Percentage by County, Adults (18-64 years), Michigan, Medicaid, 2023

Diabetes Medicaid State Rate: 10.1%

County- Level Diabetes Rate Compared to the Rest of State

- Below the State Rate
- Same with the State Rate
- Above the State Rate

Source: Michigan Health Data Warehouse *(2023)*

- In 2023, 10.1% of adult Medicaid beneficiaries in Michigan had diabetes. Twelve counties had a higher percentage of diabetes cases compared to others. Among all 12 counties, 75% were in rural areas, 17% in urban areas, and 8% in suburban areas. Two counties had a rate that matched the state, while 69 counties had a lower percentage of diabetes cases than the state.

- The tables at the end of this brief provide details on the total number of beneficiaries, the number of beneficiaries with diabetes, and the corresponding diabetes percentages for each county in Michigan.

Public Health Impact and Recommendations

Diabetes is a complex health condition that requires significant time and resources to manage. Diabetes increases the risk of additional health problems such as heart disease, kidney disease, vision loss and amputation.[1] People who have diabetes can effectively manage their condition, and they can prevent, delay or treat associated complications.[2]

In addition to diabetes, prediabetes is a condition in which blood glucose levels are elevated, but not high enough to be diagnosed with diabetes.[3] People with prediabetes are at high risk for developing type 2 diabetes. Without intervention, 15-30% of people with prediabetes will develop type 2 diabetes within five years.[4]

MDHHS recommends:

❑ **Early Detection and Screening**

  ❑ It is crucial for health care providers to screen all patients 35 years and older for prediabetes and diabetes. Additional information is outlined in the American Diabetes Association (ADA) 2025 Standards of Care.[5]

❑ **Lifestyle Modifications**

  ❑ Health care providers should emphasize to patients with prediabetes or at risk for type 2 diabetes that they can prevent or delay diabetes through healthy lifestyle changes.

  ❑ The Centers for Disease Control and Prevention-recognized Diabetes Prevention Program (DPP) is an evidence-based program shown to reduce a person's risk of type 2 diabetes by 58% through small behavioral changes.[6] DPP services in Michigan can be found at Find a DPP in Michigan.

❑ **Self-Management Education**

  ❑ Health care providers can reinforce the importance of participating in self-management education which can help patients better understand diabetes, increase their knowledge to make healthy choices, and empower them to make informed decisions about their care.

  ❑ Diabetes Self-Management Education and Support (DSMES) training in Michigan can be found at Find a DSMES in Michigan.[7]

❑ **Improve Care**

  ❑ Diabetes complications often go undetected. Screening people with diabetes for related complications as outlined in the ADA 2025 Standards of Care can improve prognosis and care.

❑ **Non-Medical Drivers of Health**

  ❑ The ability to manage and prevent diabetes varies greatly from person to person and is often due to factors beyond an individual's control. Health care providers and community resource agencies can assess a person's non-medical needs that may impact their ability to manage or prevent diabetes. These needs should be considered and included when referring patients to additional care and resources. Learn more about screening and addressing health related non-medical needs at Center for Medicare & Medciaid Services.[8]

Methods

This summary includes the Michigan Medicaid population 18 to 64 years of age (as of the last day of each respective calendar year) and individuals enrolled in a Medicaid benefit plan that covered diabetes-related services and were not dually enrolled in any other insurance plan (such as Medicare) for at least 11 months of the measurement year. Additionally, these data do not include services provided but not billed or paid for by Medicaid. Therefore, the results are not representative of all adults in Michigan Medicaid with diabetes.

Race/ethnic groups were defined using the following classification in the Michigan Health Data Warehouse:

- Non-Hispanic Black beneficiaries were those who were identified as Black, non-Hispanic.

- Non-Hispanic white beneficiaries were those who were identified as white, non-Hispanic, and

- Hispanic/Latinx beneficiaries were those who were identified as Hispanic.

- American Indian/Alaska Native were those who were identified as American Indian or Alaska Native.

- Asian/Pacific Islander beneficiaries were those who were identified as Asian American, East Indian, Pacific Islander, or beneficiaries from an East or Southeast Asian country.

- Hispanic ethnicity was not specified for the American Indian/Alaska Native and Asian/Pacific Islander in the Data Warehouse.

Medicaid beneficiaries were identified as having diabetes according to the HEDIS® 2023 inclusion criteria, which included a beneficiary meeting any of the following criteria in the measurement year or the year prior to the measurement year.

- At least two outpatient visits, observation visits or nonacute inpatient encounters on different dates of service, with a diagnosis of diabetes. Visit type need not be the same for the two visits.

- At least one emergency department visit with a diagnosis of diabetes.

- At least one acute inpatient hospitalization with a diagnosis of diabetes.

- At least one prescription fill for insulin or hypoglycemics/antihyperglycemics during the measurement year or the year prior to the measurement year.

Diabetes percentages were reported with 95% confidence intervals. This report also includes the county-level diabetes percentages and counts in the Supplemental Tables.

References

1. Centers for Disease Control and Prevention. (2024.). *About diabetes*. Retrieved from https://www.cdc.gov/diabetes/about/index.html.
2. Centers for Disease Control and Prevention. (2024.). *Diabetes interventions*. Retrieved from https://www.cdc.gov/nccdphp/priorities/diabetes-interventions.html.
3. National Institute of Diabetes and Digestive and Kidney Diseases. (n.d.). *What is prediabetes?* Retrieved from https://www.niddk.nih.gov/health-information/diabetes/overview/what-is-diabetes/prediabetes-insulin-resistance#:~:text=the%20healthy%20range.-,What%20is%20prediabetes?,could%20develop%20type%202%20diabetes.
4. University of Michigan Health. (n.d.). *Pre-diabetes.* Retrieved from https://www.uofmhealth.org/conditions-treatments/endocrinology-diabetes-and-metabolism/pre-diabetes#:~:text=A%20condition%20when%20a%20person,250%20mg/dl%20or%20higher.
5. American Diabetes Association. (n.d.). *Standards of care in diabetes*. Retrieved from https://professional.diabetes.org/standards-of-care.
6. Centers for Disease Control and Prevention. (2024)*What is the National DPP?* Retrieved from https://www.cdc.gov/diabetes-prevention/programs/what-is-the-national-dpp.html.
7. Michigan Department of Health Human Services. (n.d.). *Michigan Interactive Map*. ArcGIS. Retrieved from https://michigan.maps.arcgis.com/apps/webappviewer/index.html?id=b166c159200b418a9ff5e418e92a7345.
8. Centers for Medicare & Medicaid Services. (n.d.). *Social drivers of health and health-related social needs*. Retrieved from https://www.cms.gov/priorities/innovation/key-concepts/social-drivers-health-and-health-related-social-needs.

The Michigan Department of Health and Human Services (MDHHS) does not discriminate against any individual or group on the basis of race, national origin, color, sex, disability, religion, age, height, weight, familial status, partisan considerations, or genetic information. Sex-based discrimination includes, but is not limited to, discrimination based on sexual orientation, gender identity, gender expression, sex characteristics, and pregnancy.

Supplemental Tables

Counties with diabetes percentage rate higher than the state rate, Adults (18-64 years), Michigan, Medicaid, 2023

County	Number of Beneficiaries	Number with Diabetes	Percent	95% Confidence Interval
Lake	1,925	253	13.1%	(11.7%-14.7%)
Gratiot	4,299	512	11.9%	(11.0%-12.9%)
City of Detroit	159,114	18,700	11.8%	(11.6%-11.9%)
Wayne	319,498	37,098	11.6%	(11.5%-11.7%)
Ionia	5,210	602	11.6%	(10.7%-12.5%)
Macomb	99,311	11,449	11.5%	(11.3%-11.7%)
Huron	2,890	323	11.2%	(10.1%-12.4%)
Saginaw	26,483	2,881	10.9%	(10.5%-11.3%)
Roscommon	3,577	386	10.8%	(9.8%-11.9%)
Gladwin	3,196	341	10.7%	(9.6%-11.8%)
Ogemaw	3,103	326	10.5%	(9.5%-11.6%)
Clare	4,785	500	10.4%	(9.6%-11.3%)
Hillsdale	5,111	524	10.3%	(9.5%-11.1%)

Source: Michigan Health Data Warehouse *(2023)*

Diabetes Disparities

Michigan County List with Diabetes Percentage, Adults (18-64 years), Michigan, Medicaid, 2023

County	Total Beneficiaries	Number with Diabetes	Percent	95% Confidence Interval
Alcona	1,260	114	9.0%	(7.6%-10.8%)
Alger	798	53	6.6%	(5.1%-8.6%)
Allegan	8,710	795	9.1%	(8.5%-9.8%)
Alpena	3,489	300	8.6%	(7.7%-9.6%)
Antrim	2,398	198	8.3%	(7.2%-9.4%)
Arenac	1,885	190	10.1%	(8.8%-11.5%)
Baraga	965	91	9.4%	(7.7%-11.4%)
Barry	4,486	447	10.0%	(9.1%-10.9%)
Bay	12,018	1,136	9.5%	(8.9%-10.0%)
Benzie	1,714	131	7.6%	(6.5%-9.0%)
Berrien	18,175	1,663	9.1%	(8.7%-9.6%)
Branch	4,468	443	9.9%	(9.1%-10.8%)
Calhoun	17,152	1,669	9.7%	(9.3%-10.2%)
Cass	5,625	542	9.6%	(8.9%-10.4%)
Charlevoix	2,261	167	7.4%	(6.4%-8.5%)
Cheboygan	3,278	284	8.7%	(7.7%-9.7%)
Chippewa	3,680	324	8.8%	(7.9%-9.8%)
Clare	4,785	500	10.4%	(9.6%-11.3%)
Clinton	4,543	398	8.8%	(8.0%-9.6%)
Crawford	1,821	168	9.2%	(8.0%-10.6%)

Source: Michigan Health Data Warehouse *(2023)*

Diabetes Disparities

Michigan County List with Diabetes Percentage, Adults (18-64 years), Michigan, Medicaid, 2023

County	Total Beneficiaries	Number with Diabetes	Percent	95% Confidence Interval
Delta	3,681	313	8.5%	(7.6%-9.4%)
Dickinson	2,273	200	8.8%	(7.7%-10.0%)
Eaton	8,946	795	8.9%	(8.3%-9.5%)
Emmet	2,963	251	8.5%	(7.5%-9.5%)
Genesee	64,844	6,158	9.5%	(9.3%-9.7%)
Gladwin	3,196	341	10.7%	(9.6%-11.8%)
Gogebic	2,009	201	10.0%	(8.8%-11.4%)
Grand Traverse	7,359	510	6.9%	(6.4%-7.5%)
Gratiot	4,299	512	11.9%	(11.0%-12.9%)
Hillsdale	5,111	524	10.3%	(9.5%-11.1%)
Houghton	3,154	229	7.3%	(6.4%-8.2%)
Huron	2,890	323	11.2%	(10.1%-12.4%)
Ingham	33,246	3,124	9.4%	(9.1%-9.7%)
Ionia	5,210	602	11.6%	(10.7%-12.5%)
Iosco	3,395	286	8.4%	(7.5%-9.4%)
Iron	1,513	124	8.2%	(6.9%-9.7%)
Isabella	6,814	671	9.8%	(9.2%-10.6%)
Jackson	17,817	1,704	9.6%	(9.1%-10.0%)
Kalamazoo	25,098	2,112	8.4%	(8.1%-8.8%)
Kalkaska	2,268	192	8.5%	(7.4%-9.7%)
Kent	56,652	5,193	9.2%	(8.9%-9.4%)

Source: Michigan Health Data Warehouse *(2019)*

Diabetes Disparities

Michigan County List with Diabetes Percentage, Adults (18-64 years), Michigan, Medicaid, 2023

County	Total Beneficiaries	Number with Diabetes	Percent	95% Confidence Interval
Keweenaw	199	16	8.0%	(5.0%-12.7%)
Lake	1,925	253	13.1%	(11.7%-14.7%)
Lapeer	7,583	610	8.0%	(7.5%-8.7%)
Leelanau	1,180	77	6.5%	(5.3%-8.1%)
Lenawee	8,765	875	10.0%	(9.4%-10.6%)
Livingston	9,466	696	7.4%	(6.8%-7.9%)
Luce	703	61	8.7%	(6.8%-11.0%)
Mackinac	1,051	80	7.6%	(6.2%-9.4%)
Macomb	99,311	11,449	11.5%	(11.3%-11.7%)
Manistee	2,897	283	9.8%	(8.7%-10.9%)
Marquette	6,082	441	7.3%	(6.6%-7.9%)
Mason	3,242	291	9.0%	(8.0%-10.0%)
Mecosta	4,864	434	8.9%	(8.2%-9.8%)
Menominee	2,032	180	8.9%	(7.7%-10.2%)
Midland	7,301	679	9.3%	(8.7%-10.0%)
Missaukee	1,724	156	9.0%	(7.8%-10.5%)
Monroe	12,962	1,173	9.0%	(8.6%-9.6%)
Montcalm	7,122	696	9.8%	(9.1%-10.5%)
Montmorency	1,169	110	9.4%	(7.9%-11.2%)
Muskegon	22,625	2,222	9.8%	(9.4%-10.2%)
Newaygo	5,957	558	9.4%	(8.7%-10.1%)

Diabetes Disparities

Michigan County List with Diabetes Percentage, Adults (18-64 years), Michigan, Medicaid, 2023

County	Number of Beneficiaries	Number with Diabetes	Percent	95% Confidence Interval
Oakland	85,481	7,968	9.3%	(9.1%-9.5%)
Oceana	3,391	328	9.7%	(8.7%-10.7%)
Ogemaw	3,103	326	10.5%	(9.5%-11.6%)
Ontonagon	612	52	8.5%	(6.5%-11.0%)
Osceola	2,963	263	8.9%	(7.9%-10.0%)
Oscoda	1,293	108	8.4%	(7.0%-10.0%)
Otsego	3,010	233	7.7%	(6.8%-8.8%)
Ottawa	14,528	1,158	8.0%	(7.5%-8.4%)
Presque Isle	1,355	135	10.0%	(8.5%-11.7%)
Roscommon	3,577	386	10.8%	(9.8%-11.9%)
Saginaw	26,483	2,881	10.9%	(10.5%-11.3%)
Saint Clair	17,909	1,697	9.5%	(9.1%-9.9%)
Saint Joseph	6,935	686	9.9%	(9.2%-10.6%)
Sanilac	4,575	441	9.6%	(8.8%-10.5%)
Schoolcraft	1,036	105	10.1%	(8.4%-12.1%)
Shiawassee	7,413	719	9.7%	(9.0%-10.4%)
Tuscola	6,057	572	9.4%	(8.7%-10.2%)

Source: Michigan Health Data Warehouse *(2023)*

Diabetes Disparities

Michigan County List with Diabetes Percentage, Adults (18-64 years), Michigan, Medicaid, 2023

County	Number of Beneficiaries	Number with Diabetes	Percent	95% Confidence Interval
Van Buren	8,908	846	9.5%	(8.9%-10.1%)
Washtenaw	25,366	2,058	8.1%	(7.8%-8.5%)
Wayne	319,498	37,098	11.6%	(11.5%-11.7%)
Wexford	4,531	382	8.4%	(7.7%-9.3%)
Wayne County Excluding Detroit	160,384	18,398	11.5%	(11.3%-11.6%)
Detroit	159,114	18,700	11.8%	(11.6%-11.9%)

Source: Michigan Health Data Warehouse *(2023)*