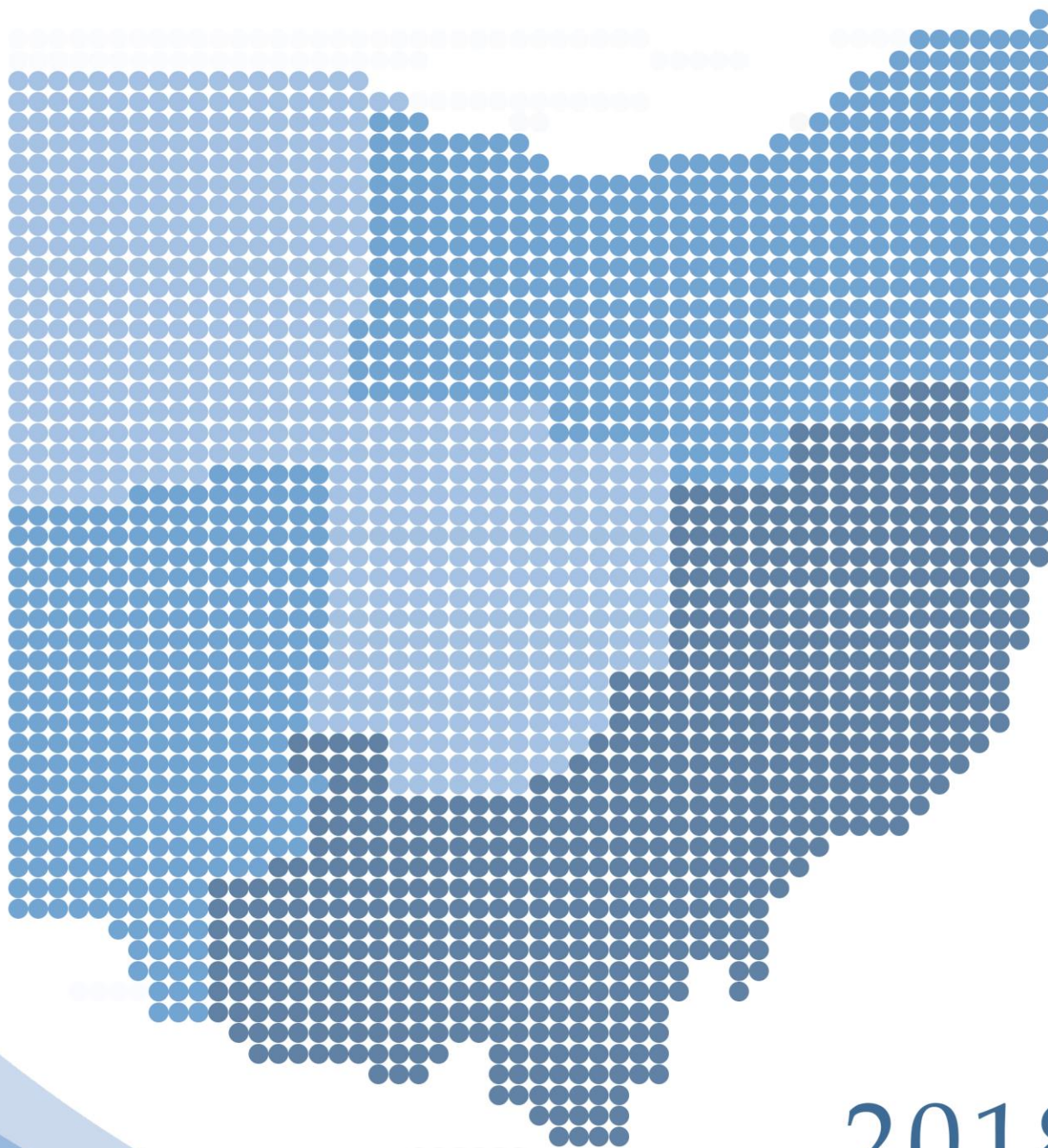


Ohio Diabetes Action Plan



2018

May 24, 2018

Dear Members of the 132nd General Assembly:

I am pleased to submit to you the 2018 Ohio Diabetes Action Plan. This report was jointly developed by the Ohio Department of Health, Ohio Department of Medicaid, Ohio Department of Administrative Services, and the Ohio Commission on Minority Health as required by House Bill 216 passed by the 131st General Assembly and which took effect last April.

The 2018 Ohio Diabetes Action Plan includes current diabetes data (prevalence, mortality, trends, hospitalizations, costs, comorbidities, care and disparities). In addition, this report also contains: (1) state agency goals to reduce the burden of diabetes across all populations, (2) an assessment of health and financial impact that diabetes has on state and local jurisdictions, (3) a description of efforts that the four state agencies have taken to address the diabetes spectrum, (4) proposed recommendations to reduce the impact of diabetes, and (5) estimated cost to implement the recommendations.

Diabetes represents a significant burden in the state of Ohio. In 1996, 1 in 20 Ohio adults had diabetes; today 1 in 9 do. There are significant racial, ethnic and socioeconomic disparities in the prevalence of diabetes in Ohio, and the financial burden is costly. There is some good news—Ohio is making progress in reducing diabetes-related mortality, with the diabetes death rate decreasing 15 percent from 2007-2015, and the disparity between black and white Ohioans narrowing during this time period.

The Ohio Department of Health, Ohio Department of Medicaid, Ohio Department of Administrative Services, and the Ohio Commission on Minority Health are all working together to address chronic disease in the state, including diabetes. Also, chronic disease (including diabetes) is one of the three health priorities in the *Ohio 2017-2019 State Health Improvement Plan*.

Should you have any questions or need additional information, please contact Jessica Crews, Director of Government Affairs for the Ohio Department of Health, at (614) 728-2428.

Sincerely,

A handwritten signature in blue ink, reading "Lance D. Himes".

Lance D. Himes, J.D.
Director



Table of Contents

Executive Summary	3
Introduction	6
Purpose of the Report	6
Report Development	6
Understanding Diabetes in Ohio	6
Type 1 Diabetes	7
Prediabetes	7
Type 2 Diabetes	7
Gestational Diabetes.....	8
Diabetes Comorbidities	8
Diabetes Care.....	8
Economic Burden	8
Section 1: The Scope of Diabetes in Ohio	10
Methods and Data Sources	10
Figures, Tables and Key Findings	13
Section 2: Social Determinants of Health and Diabetes Disparities in Ohio	38
Section 3: Diabetes Prevention and Management Efforts in Ohio	41
Proven Approaches to Diabetes Prevention and Management.....	41
State Agency Diabetes Plans	44
Ohio Department of Health	44
Office of Health Improvement and Wellness.....	44
Diabetes Goal.....	44
Diabetes Activities	44
Stakeholder Collaboration	45
Reach	49
Funding	50
Bureau of Maternal, Child and Family Health	50
Diabetes Goal.....	50
Diabetes Activities	50
Stakeholder Collaboration	51
Reach	51
Funding	51
Ohio Department of Medicaid	52
Diabetes Goal.....	52
Diabetes Activities	52
Stakeholder Collaboration	54
Reach	54
Funding	55

Ohio Department of Administrative Services	55
Diabetes Goal.....	55
Diabetes Activities	55
Stakeholder Collaboration	57
Reach.....	57
Funding	58
Ohio Commission on Minority Health	58
Diabetes Goal.....	58
Diabetes Activities	58
Stakeholder Collaboration	61
Reach.....	61
Funding	61
State Agency Coordinated Efforts	62
State Health Improvement Plan	63
Section 4: Proposed Recommendations to Address Diabetes in Ohio	64
Section 5: Next Steps	69
Monitoring Goals and Reporting Progress.....	69
Future Considerations.....	69
Section 6: References	70
Section 7: Resources	72
Section 8: Appendices	77
Appendix A: Acronym List	77
Appendix B: Diabetes Action Plan Committee Representatives.....	79
Appendix C: Diabetes Action Plan Stakeholders.....	80
Appendix D: Diabetes Prevention Program Site Locations by Drive Time.....	81
Appendix E: Diabetes Self-Management Education/Program Locations by Drive Time.....	82
Appendix F: Ohio Medicaid Diabetes Codes.....	83
Appendix G: Additional County-Level Data	84

Executive Summary

The 2018 Ohio Diabetes Action Plan was developed per legislation (House Bill 216) passed by the 131st General Assembly which directed the Ohio Department of Health, Ohio Department of Medicaid, Ohio Department of Administrative Services and Ohio Commission on Minority Health to jointly develop a report on diabetes. The report addresses current data (prevalence, mortality, trends, hospitalizations, costs, comorbidities, care and disparities), agency goals and efforts to address the diabetes spectrum across all populations, an assessment of the health and financial impact on state and local jurisdictions, and proposed recommendations to reduce the burden and impact of diabetes in Ohio.

Key Findings:

Diabetes is an Epidemic

- Diabetes represents a significant burden in the state of Ohio. Nearly **one million Ohio adults (11.0 percent) have diabetes**, and **an additional 300,000 have diabetes but do not know it**. The percentage of people in Ohio with diabetes exceeds the national average (9.9 percent).
- In 1996, 1 in 20 Ohio adults had diabetes; today **1 in 9 Ohio adults have diabetes**.
- In addition to diabetes, nearly **700,000 Ohio adults (7.5 percent) have been diagnosed with prediabetes**, and **1.3 million have prediabetes but do not know it**.

3.3 million adults in Ohio are estimated to have diabetes or prediabetes.

- **Gestational diabetes impacts about 7 percent of pregnant women** and has been rising. Gestational diabetes pregnancies are associated with longer hospital stays and more birth complications. Without lifestyle change interventions, about 50-70 percent of women with a history of gestational diabetes may develop type 2 diabetes.
- Diabetes disproportionately impacts the adult Medicaid population, among which 16.0 percent (333,000 beneficiaries) have diabetes.
- According to the Centers for Disease Control and Prevention, diabetes is often associated with, and may be complicated by, other diseases and conditions. **Three in four Ohio adults with diabetes also have hypertension, and more than half have high cholesterol, obesity and arthritis.**

Diabetes Disparities are Significant

- There are **significant disparities** in the prevalence of diabetes in Ohio. **Older adults, blacks, those with the lowest household income and education, and those living in southern and Appalachian regions of the state** have the highest diabetes prevalence.

- There are significant racial and ethnic disparities among women with gestational diabetes, with Asians/Pacific Islanders, American Indians/Alaskan Natives and Hispanics having the highest prevalence. There is also a higher prevalence among women who are 35 and older and those with lower education.
- **Black Ohioans have the highest death rate from diabetes.**

The diabetes death rate among blacks is 77 percent higher than whites.

- Ohio is making progress in reducing diabetes-related mortality. The **diabetes death rate decreased 15 percent from 2007-2015**, and the disparity between black and white Ohioans narrowed during this time period.

Diabetes is Costly

- The financial burden of diabetes in Ohio is costly. According to the American Diabetes Association, **people with diabetes have medical expenses approximately 2.3 times higher than those who do not have diabetes.**

The Centers for Disease Control and Prevention estimates that diabetes costs \$15.8 billion in Ohio each year, and these costs are projected to increase.

- Diabetes also has a significant financial impact on the Ohio Medicaid program. Nearly \$76 million was spent on diabetes-related hospital admissions and emergency department visits for Medicaid beneficiaries in 2015.

Current State Initiatives Addressing Diabetes in Ohio

The Ohio Department of Health, Ohio Department of Medicaid, Ohio Department of Administrative Services, and the Ohio Commission on Minority Health are all working together to address chronic disease in the state, including diabetes. Details of these initiatives are outlined later in this report. In addition, chronic disease (including diabetes) is one of the key health priorities in the *Ohio 2017-2019 State Health Improvement Plan*. The plan is a comprehensive framework to improve the health of Ohioans by implementing a strategic set of evidence-based population health initiatives at the scale needed to measurably improve health outcomes and achieve health equity.

Recommendations

The following recommendations were agreed upon unanimously by the Ohio Department of Health, Ohio Department of Medicaid, Ohio Department of Administrative Services and Ohio Commission on Minority Health. Select recommendations also align with strategies to reduce diabetes and improve health outcomes outlined in the *Ohio 2017-2019 State Health Improvement Plan*. The recommendations focus on the prevention and management of diabetes and its complications, with a particular focus on populations that are disproportionately affected by the disease. Reducing the burden of diabetes in Ohio will take a collective and focused effort by many state and local public and private stakeholders and partners from a variety of sectors (e.g., healthcare systems and providers, health insurance payers, local public health, community-based and faith-based organizations and employers).

Recommendation 1	Designate an Ohio Diabetes Awareness Week during the month of November that focuses on prediabetes, type 1 and type 2 diabetes, and gestational diabetes.
Recommendation 2	Explore the feasibility of educating Ohio-based employers on the value of evidence-based lifestyle change programs as a health benefit to their employees.
Recommendation 3	Improve diabetes-related population health outcomes by supporting and expanding the Comprehensive Primary Care model.
Recommendation 4	Coordinate efforts to decrease diabetes prevalence and improve diabetes healthcare outcomes in Ohio.
Recommendation 5	Educate health insurance payers on the value of offering evidence-based lifestyle change programs (cultural and linguistically appropriate) as a health benefit.
Recommendation 6	Improve health value and health equity in Ohio to decrease diabetes morbidity and mortality.
Recommendation 7	Support the implementation of systemic approaches in healthcare systems or practices to screen, test and refer patients across the diabetes spectrum as part of standard care practices, to ensure all Ohioans have the same quality of care.
Recommendation 8	Disseminate data about disparities between population groups across the diabetes spectrum.

PURPOSE OF THE REPORT

In December 2016, the 131st Ohio General Assembly passed House Bill 216 which took effect in April 2017 and required the Ohio Department of Health, Ohio Department of Medicaid, Ohio Department of Administrative Services and Ohio Commission on Minority Health to jointly develop a report on diabetes. To comply with House Bill 216, this report was made available to the public in February 2018, and provided to the Ohio General Assembly in accordance with Ohio Revised Code 101.68. This report includes information about diabetes prevalence, mortality, trends, hospitalizations, costs, comorbidities, care and disparities. In addition, this report contains:

- Agency goals to reduce the burden of diabetes across all populations
- An assessment of the health and financial impact that diabetes has on state and local jurisdictions
- A description of efforts that the four state agencies have taken to address the diabetes spectrum
- Proposed recommendations to reduce the impact of diabetes
- Proposed costs to implement recommendations

REPORT DEVELOPMENT

In accordance with House Bill 216, the Ohio Department of Health convened representatives from the Ohio Department of Medicaid, Ohio Department of Administrative Services and Ohio Commission on Minority Health known as the Diabetes Action Plan Committee to develop this report. (A list of the Diabetes Action Plan Committee members is included in Appendix B.) The committee began meeting in April 2017. Throughout the next several months, the Diabetes Action Plan Committee met frequently to develop a report outline, establish process steps and create a timeline for completing this report. Epidemiologists, data managers and analysts from the committee met separately to discuss diabetes measures collected by each agency and determine which to include in the report. Staff from the three agencies and commission met on September 22, 2017, to develop proposed policy and program recommendations and proposed costs to implement these recommendations. External stakeholders were invited to participate in a meeting with the committee on November 29, 2017, to receive an update on diabetes data, view presentations on current state agencies activities and hear about the overarching themes for the proposed recommendations. External stakeholders were given an opportunity to offer strategies to improve diabetes in Ohio as well. A list of the stakeholders who attended this meeting can be found in Appendix C.

UNDERSTANDING DIABETES IN OHIO

Diabetes is a group of diseases characterized by high blood sugar (glucose). When a person has diabetes, the body either does not make enough insulin (a hormone that helps lower blood sugar) or is unable to use its own insulin well. If blood sugar builds up in the body and its levels are not controlled, it can lead to serious health complications, such as heart disease, stroke, kidney disease, blindness, amputations of the legs and feet, gum disease and early death.

Type 1 Diabetes

Type 1 diabetes (also called juvenile diabetes or insulin-dependent diabetes) occurs when the body's immune system attacks and destroys certain cells in the pancreas which produce insulin. People with type 1 diabetes use insulin constantly to stay alive, via multiple daily injections or an insulin pump, and must carefully balance their food intake and exercise to regulate their blood sugar levels. Hypoglycemia, or dangerously low blood sugar, is a common and potentially life-threatening complication with which people who rely on insulin must manage. Tight control of blood glucose levels, which prevents the long-term complications associated with diabetes, can lead to more frequent hypoglycemia.

Type 1 diabetes is usually diagnosed in children, teenagers or young adults and accounts for about 5 percent of all diagnosed cases of diabetes in U.S. adults. It is not known exactly why some people develop type 1 diabetes, although there appears to be genetic factors. There are no modifiable risk factors, such as obesity or high blood pressure, known to contribute to type 1 diabetes. Research is taking place to develop new treatments, tests for detecting high-risk individuals and hopefully a cure for type 1 diabetes.

Prediabetes

Prediabetes is a condition where blood sugar levels are higher than normal, but not high enough to be considered type 2 diabetes. If not diagnosed and managed, individuals with prediabetes are at 15-20 percent higher risk of developing type 2 diabetes within five years. (Note: Prediabetes is not associated with type 1 diabetes.) Based on national surveys, about one-third of all adults in Ohio have prediabetes, but most of them don't know it. Prediabetes is largely asymptomatic. To identify individuals with prediabetes and type 2 diabetes, guidelines released by the U.S. Preventive Services Task Force in 2016 recommend screening for abnormal blood glucose and type 2 diabetes in adults who are at increased risk for diabetes. Those with prediabetes are also at higher risk of developing gestational diabetes and cardiovascular disease, whether they later develop diabetes or not. Prediabetes indicates that abnormalities in glucose levels have begun, but may be reversed. Once type 2 diabetes is diagnosed, few individuals are able to return to blood glucose levels within the prediabetes or normal ranges.

Type 2 Diabetes

Type 2 diabetes is the most common form of diabetes, accounting for about 90-95 percent of diagnosed diabetes in U.S. adults. In type 2 diabetes, the pancreas makes some insulin but not enough, or the body is unable to use insulin correctly, or both. This type does not always require the use of insulin. The risk of developing type 2 diabetes is associated with non-modifiable and modifiable risk factors. Non-modifiable risk factors include older age, family history of diabetes, personal history of gestational diabetes, and race and ethnicity. Modifiable risk factors for type 2 diabetes that can be changed include excess weight/obesity, lack of physical activity, high blood pressure, high cholesterol and smoking. With the addition of each risk factor, non-modifiable or modifiable, the risk for developing type 2 diabetes increases. Once someone has diabetes (of any type), these factors can worsen the impact.

Gestational Diabetes

Gestational diabetes is a form of diabetes in women during pregnancy, typically developing during the second or third trimester. It increases blood sugar levels and raises the risk of complications for both mother and baby. The risk factors are similar to those for type 2 diabetes, and treatment may include changes in diet or lifestyle or the use of insulin. Complications from gestational diabetes include preeclampsia, high birth weight, birth-related trauma, jaundice, low blood sugar (hypoglycemia) and birth defects.

Gestational diabetes affects about 7 percent of pregnant women. Women who are older than 25, or who have pre-pregnancy hypertension or high cholesterol, a prior pregnancy, a family history of diabetes or a higher body mass index are more likely to develop it. There is no known way to prevent gestational diabetes, but it can be managed through diet, exercise, and, if necessary, insulin. Usually, a woman's blood glucose returns to normal after the birth; if not, she may be diagnosed with type 2 diabetes or prediabetes. Women with gestational diabetes have a higher risk of developing the disease again during future pregnancies. Gestational diabetes also puts both mother and child at a higher risk of developing type 2 diabetes later in life.

Treatments for gestational diabetes may include healthy eating and regular physical activity alone, or in combination with insulin or other medications. When prenatal care is not accessed, gestational diabetes has the potential to go undiagnosed and pose serious risks for both mother and baby. The U.S. Preventive Services Task Force recommends screening for gestational diabetes in asymptomatic pregnant women after 24 weeks of gestation. Women with symptoms of gestational diabetes, or who are at high risk, may be tested for the condition earlier in pregnancy. Also, women who have delivered a baby weighing more than nine pounds are at higher risk of developing diabetes, both immediately following delivery and in subsequent years.

Diabetes Comorbidities

Comorbidities, also known as comorbid conditions, are two or more diseases or conditions that occur simultaneously in an individual. Comorbidities are extremely common among people with diabetes and can complicate disease progression and treatment, as well as increase healthcare costs. Hypertension is the most common comorbidity among people with diabetes; 70 percent of people with diabetes also have hypertension.

Diabetes Care

Proper diabetes care and management is essential for controlling blood glucose and decreasing complications associated with diabetes (e.g., heart disease, stroke, hypertension, blindness, kidney disease, diseases of the nervous system, amputations, premature death, etc.). Common care practices among people with diabetes include professional care such as Hemoglobin A1c (HbA1c) testing, and screening for early complications through annual eye and foot exams, as well as self-care such as daily glucose monitoring, adherence to medications and self-foot exams.

Economic Burden

Diabetes is costly and presents a huge financial burden in the United States and the State of Ohio. According to the American Diabetes Association, people with diabetes have medical expenses approximately 2.3 times higher than those who do not have diabetes. The total direct and indirect

estimated cost of diagnosed diabetes in the United States in 2012 was \$245 billion, which includes \$176 billion in direct medical costs and \$69 billion in lost productivity. This estimate reflects an increase of \$43 billion (41 percent) since 2007 due to the increase in diabetes prevalence, changing demographics of people with diabetes, increased utilization of healthcare services, rising prices of medical goods and refinements in methodology for calculating costs.

The Centers for Disease Control and Prevention, using an alternate statistical methodology, estimates that diabetes costs \$15.8 billion in Ohio each year. Total direct medical costs for diabetes in Ohio are approximately \$7.9 billion per year, and indirect costs due to absenteeism, presenteeism, household productivity, inability to work and death are an additional \$7.9 billion each year.

Lifestyle change interventions are both cost effective as well as cost saving through reductions in healthcare spending. The Centers for Disease Control and Prevention estimates that the annual medical costs of a person with diabetes in Ohio are \$15,800, whereas lifestyle change programs that reduce a person's risk for developing type 2 diabetes are about \$429. Therefore, healthcare coverage for evidence-based diabetes prevention and management programs can substantially reduce the financial burden of diabetes in Ohio.

THE SCOPE OF DIABETES IN OHIO

METHODS AND DATA SOURCES

This section of the report provides data on the scope of diabetes in Ohio, including type 1, type 2, prediabetes and gestational diabetes among adults, youth, Medicaid beneficiaries and members of the Ohio Med Preferred Provider Organization (PPO), the State of Ohio employee health plan. Measures include prevalence (existing cases), mortality (deaths), trends, hospitalizations, healthcare costs, comorbid conditions (other health conditions among individuals with diabetes), and provider- and self-care indices. To identify health disparities and populations at high risk, data were analyzed by sex, race, age group, annual household income, level of education and geographic area, where possible. Data presented are primarily for calendar year 2015 and State Fiscal Year (SFY) 2016 (July 1, 2015-June 30, 2016), depending on the source.

The sources of data presented in this report include the Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health Bureau of Vital Statistics, Medicaid claims, Healthcare Effectiveness Data and Information Set and Ohio Med PPO claims. A description of each source is provided below:

Ohio Behavioral Risk Factor Surveillance System data were collected by the Chronic Disease Epidemiology and Evaluation Section at the Ohio Department of Health. The Ohio Behavioral Risk Factor Surveillance System is an annual landline and cell phone survey designed to collect data on diseases, health behaviors, clinical risk factors and other health-related measures among Ohio adults ages 18 and older. The Ohio Department of Health conducts the Ohio Behavioral Risk Factor Surveillance System in conjunction with the Centers for Disease Control and Prevention. For this report, data were collected among randomly selected, non-institutionalized adults and were weighted to 14 regions to ensure that estimates are representative of Ohio's population. Data from 2011-present were weighted by age, sex, race/ethnicity, geography, marital status, education, home ownership and telephone source using an iterative proportional fitting (raking) method. Data prior to 2011 were weighted by age and sex using a post-stratification method. Thus, Behavioral Risk Factor Surveillance System data for 2011-present should not be compared to data prior to 2011. Respondents who answered that they do not know or refused to answer a question were excluded from the calculations related to that question. Data estimates for fewer than 50 respondents are considered statistically unreliable by the Centers for Disease Control and Prevention and were not presented. Estimates with a relative standard error greater than 30 percent were also excluded. Statistical significance between populations was determined by comparing 95 percent confidence intervals for each estimate; if the confidence intervals did not overlap, the difference was determined to be statistically significant. However, it is important to note that it is often difficult to identify statistically significant differences among smaller populations (e.g., certain racial/ethnic groups) due to greater variability in the estimates.

Death data were collected by the Ohio Department of Health Bureau of Vital Statistics. Data represent the underlying cause of death of Ohio residents regardless of place of death. Diabetes deaths were coded using the International Statistical Classification of Diseases and Related Health Problems (ICD) versions 9 (ICD-9 code 250) and 10 (ICD-10 codes E10 – E14). Death rates were age-adjusted to the 2000 U.S. Standard Population using 11 age groups and are presented per 100,000 population.

Gestational diabetes prevalence data were collected by the Ohio Department of Health Bureau of Vital Statistics. Prevalence is derived from birth certificate (registration) data on live births to Ohio residents in 2015. Gestational diabetes during pregnancy is noted if there is a diagnosis in the mother's medical record. Note that birth certificates are known to have high specificity for gestational diabetes (meaning that when it is recorded, gestational diabetes is almost always present), however, they tend not to be as sensitive (meaning that the estimates presented are likely an underestimate of the true prevalence). Medicaid beneficiary data were derived primarily from Medicaid claims. Claims were included for services rendered in calendar year 2015, and comprised both Fee for Service claims and Managed Care encounters. Diabetes was classified using the following criteria (see Appendix F for detailed codes and descriptions):

- Claims with either a primary or any secondary diagnosis related to diabetes were included.
- Both ICD-9 and ICD-10 code sets were used in the analysis due to the switch in October of the reporting year, 2015, from ICD-9 to ICD-10 classification.
- Therapeutic Drug Class Codes related to the treatment of diabetes were used in classifying diabetic patients to account for individuals currently being treated for diabetes, but for various reasons may not have had a diagnosis code related to diabetes on a claim.

For the analyses of Medicaid claims data by demographics, youth was classified as ages 0-18, and adult was classified as ages 19 and older. It should also be noted that race/ethnicity is no longer a required field when applying for Medicaid benefits, so there is a high percentage of race/ethnicity data that are classified as missing/not provided. Therefore, drawing conclusions based on Ohio Medicaid race/ethnicity data is heavily cautioned and not advised. In addition to Medicaid claims data, National Center for Quality Assurance Healthcare Effectiveness Data and Information Set (HEDIS) quality measures are self-reported to Ohio Department of Medicaid by Medicaid managed care plans. HEDIS is a tool used by more than 90 percent of America's health plans to measure performance on important dimensions of care and service. In this report, HEDIS measures were used to assess diabetes care among Medicaid managed care plan beneficiaries.

Ohio Med PPO member data were acquired from IBM Watson (Truven Health Analytics) and include all health plan claims aggregated from medical, prescription and behavioral health third-party administrators. The Ohio Med PPO Plan is administered to approximately 115,000 permanent full-time and part-time employees and their spouses and dependents. Data were de-identified prior to access by the Ohio Department of Administrative Services. A diabetes-specific dataset was created that included any patient who met the qualifications for Truven's summary episode of care for diabetes. Data for prediabetes, gestational diabetes and comorbidities were identified by ICD diagnosis codes as well as episodes of care within Truven's claims database. Prevalence estimates were calculated using patient counts for SFY 2016. For analyses by demographics, youth was classified as ages 0-18, and adult was classified as ages 19 and older. Counts of less than 25 were not reported due to privacy concerns.

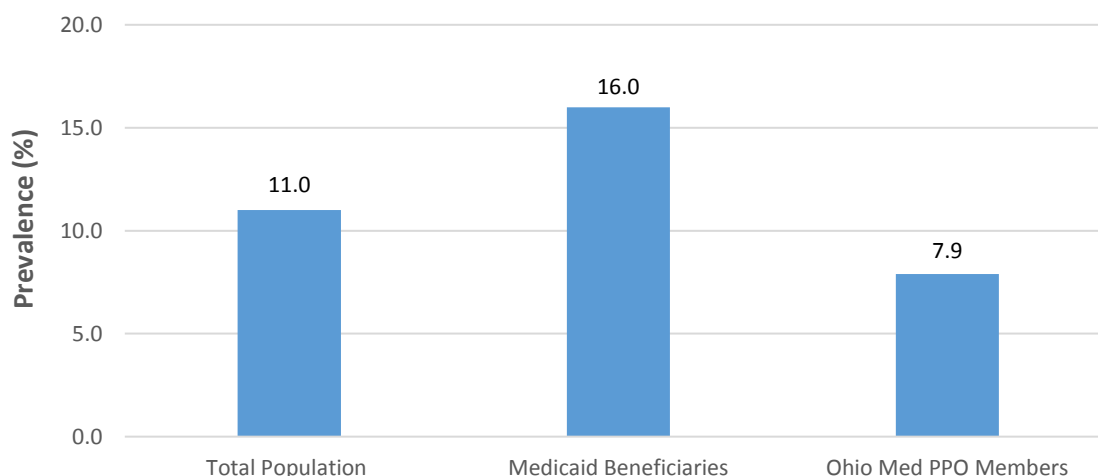
Data and key findings to describe the scope of diabetes in Ohio are subdivided into the following sections:

- Diabetes (type 1 and type 2 combined)
- Type 1 Diabetes
- Type 2 Diabetes
- Prediabetes
- Gestational Diabetes
- Mortality
- Trends
- Hospitalizations/Financial Impact
- Comorbid Conditions
- Care/Quality Measures

FIGURES, TABLES AND KEY FINDINGS

Diabetes (type 1 and type 2 combined)

Figure 1. Prevalence of Adults* with Diabetes among the Total Population, Medicaid Beneficiaries and Ohio Med PPO Members, Ohio, 2015**



Source: 2015 Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health, 2017. 2015 Medicaid Claims Data; Office of Health Innovation and Quality, Ohio Department of Medicaid; Quality Decision Support System – May 2017. SFY 2016 State of Ohio Med PPO Plan aggregate, Ohio Department of Administrative Services, 2017.

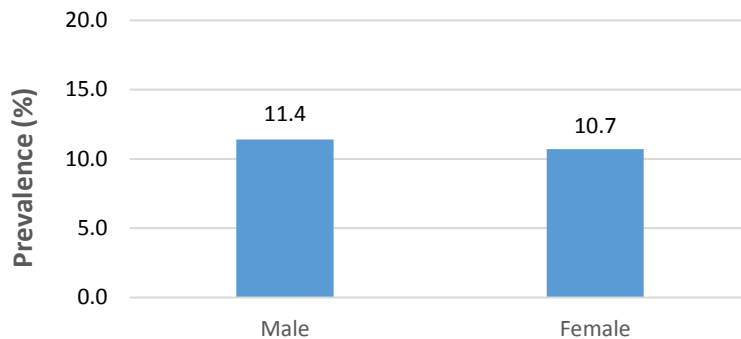
*Adults are defined as individuals ages 18+ for the total population and ages 19+ for Medicaid beneficiaries and Ohio Med PPO members.

**Ohio Med PPO Plan data are for SFY 2016.

- The estimated prevalence of diabetes among adults in Ohio is 11.0 percent. Thus, nearly one million (981,195) adults in Ohio have been diagnosed with diabetes. In addition, it is estimated that an additional 306,462 adults have diabetes but do not know it.
- The prevalence of diabetes is highest among adult Medicaid beneficiaries (16.0 percent) compared to all adults and adult Ohio Med PPO members.
- The prevalence of diabetes is lowest among adult Ohio Med PPO members (7.9 percent).

Diabetes (type 1 and type 2 combined)

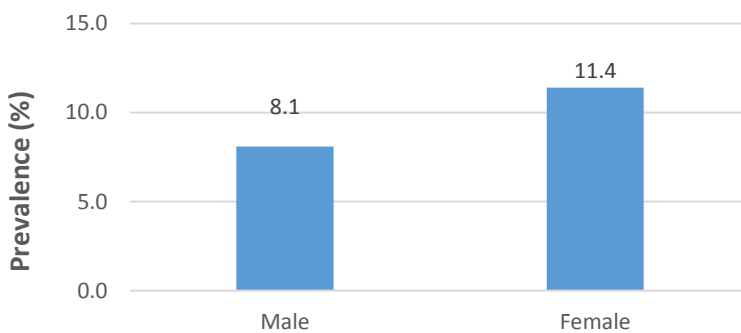
Figure 2. Estimated Prevalence of Adults (Age 18+) with Diabetes by Sex, Ohio, 2015



Source: 2015 Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health, 2017.

- The estimated prevalence of diabetes among adults does not significantly differ by sex.

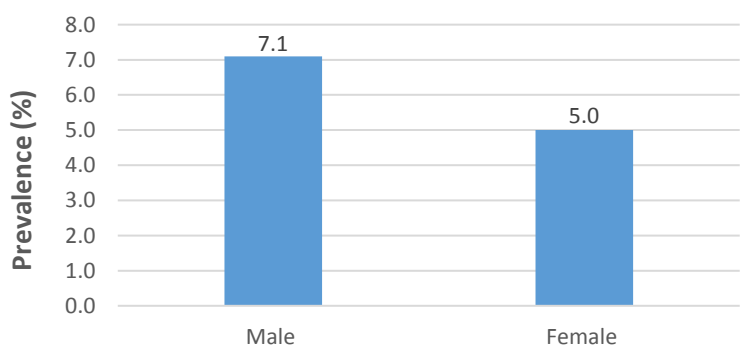
Figure 3. Prevalence of Medicaid Beneficiaries with Diabetes by Sex, Ohio, 2015



Source: 2015 Medicaid Claims Data; Office of Health Innovation and Quality, Ohio Department of Medicaid; Quality Decision Support System – May 2017.

- Female Medicaid beneficiaries have a higher prevalence of diabetes (11.4 percent) compared to males (8.1 percent).

Figure 4. Prevalence of Ohio Med PPO Members with Diabetes by Sex, Ohio, State Fiscal Year 2016

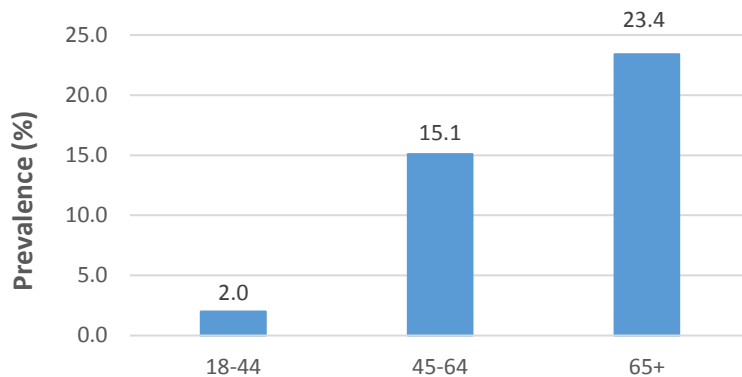


Source: SFY 2016 State of Ohio Med PPO Plan aggregate, Ohio Department of Administrative Services, 2017.

- Male Ohio Med PPO members have a higher prevalence of diabetes (7.1 percent) compared to females (5.0 percent).

Diabetes (type 1 and type 2 combined)

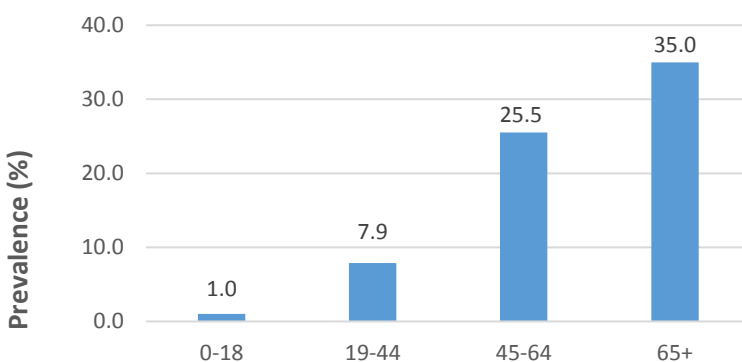
Figure 5. Estimated Prevalence of Adults (Age 18+) with Diabetes by Age Group, Ohio, 2015



Source: 2015 Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health, 2017.

- In 2015, the estimated prevalence of diabetes was significantly higher among adults ages 65 and older (23.4 percent) compared to adults ages 18-44 (2.0 percent) and 45-64 (15.1 percent).

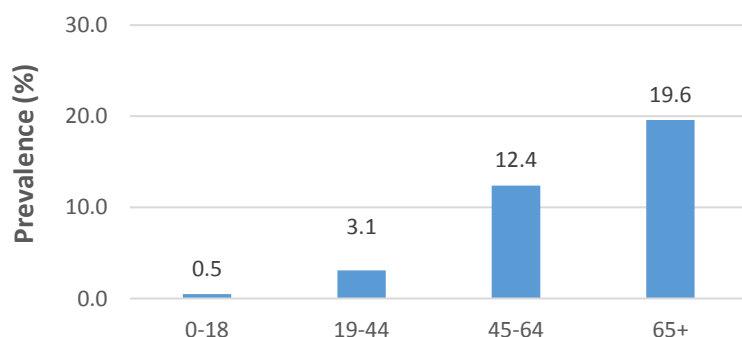
Figure 6: Prevalence of Medicaid Beneficiaries with Diabetes by Age Group, Ohio, 2015



Source: 2015 Medicaid Claims Data; Office of Health Innovation and Quality, Ohio Department of Medicaid; Quality Decision Support System – May 2017.

- The prevalence of diabetes among Medicaid beneficiaries increases with age.
- More than one-third of Medicaid beneficiaries ages 65 and older (35.0 percent) have diabetes.

Figure 7. Prevalence of Ohio Med PPO Members with Diabetes by Age Group, Ohio, State Fiscal Year 2016

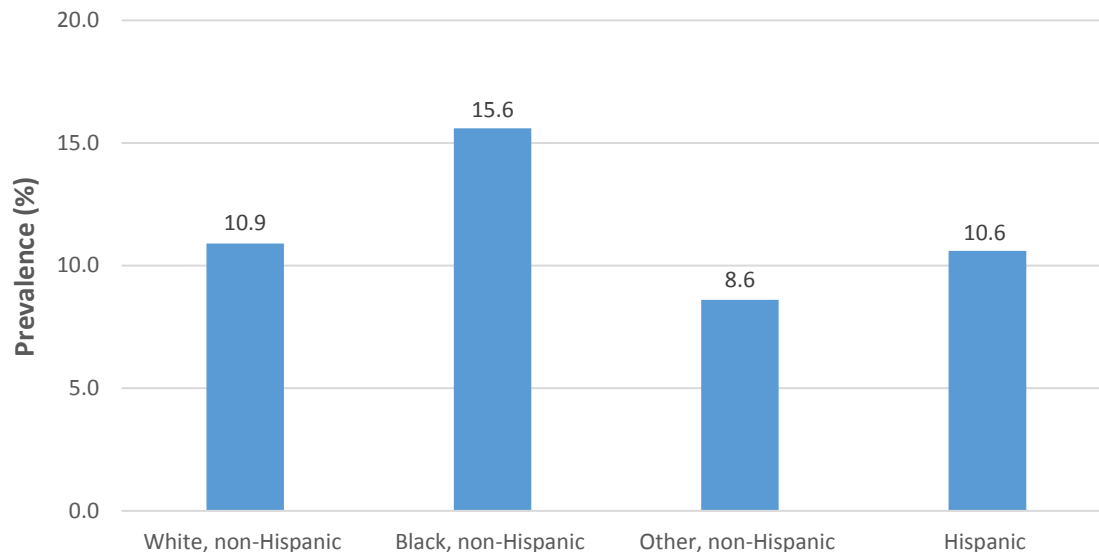


Source: SFY 2016 State of Ohio Med PPO Plan aggregate, Ohio Department of Administrative Services, 2017.

- The prevalence of diabetes among Ohio Med PPO members increases with age, with those ages 65 and older having the highest prevalence (19.6 percent).

Diabetes (type 1 and type 2 combined)

Figure 8. Estimated Prevalence of Adults (Age 18+) with Diabetes by Race/Ethnicity, Ohio, 2014-2015*

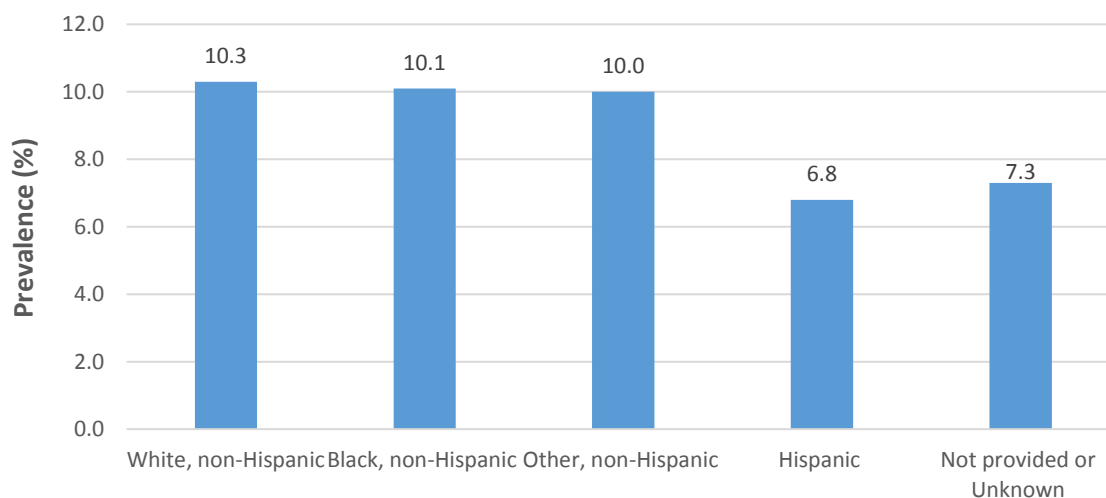


Source: 2014-2015 Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health, 2017.

*2014-2015 data were combined to provide more reliable prevalence estimates.

- The estimated prevalence of diabetes among adults is significantly higher among black, non-Hispanics (15.6 percent) compared to white, non-Hispanics (10.9 percent).

Figure 9. Prevalence of Medicaid Beneficiaries with Diabetes by Race/Ethnicity, Ohio, 2015

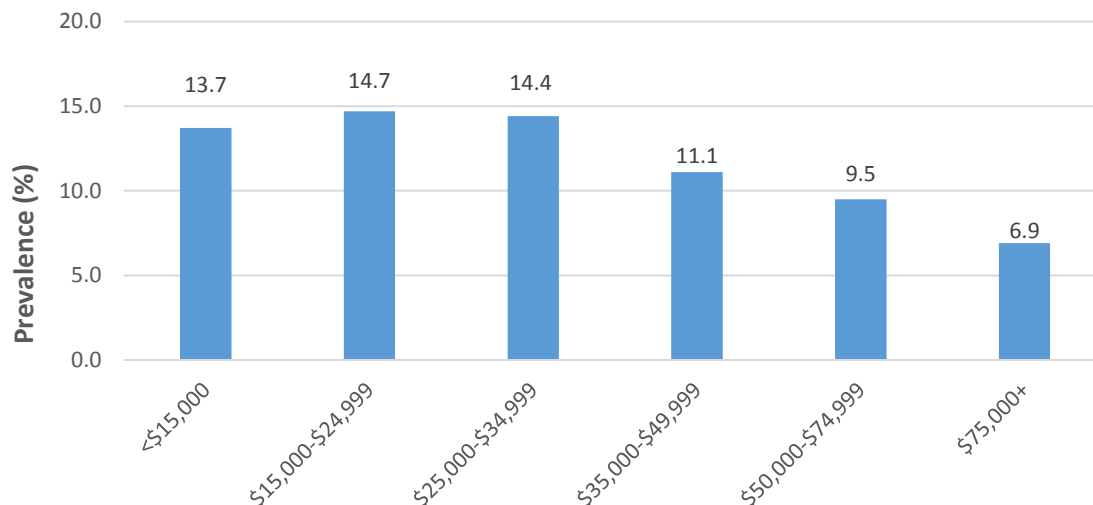


Source: 2015 Medicaid Claims Data; Office of Health Innovation and Quality, Ohio Department of Medicaid; Quality Decision Support System – May 2017.

- The highest prevalence of diabetes among Medicaid beneficiaries is among the white, non-Hispanic population (10.3 percent), followed by black, non-Hispanics (10.1 percent) and other, non-Hispanic races (10.0 percent). Note: Race/ethnicity was not a required field in 2015; findings should be interpreted with caution.

Diabetes (type 1 and type 2 combined)

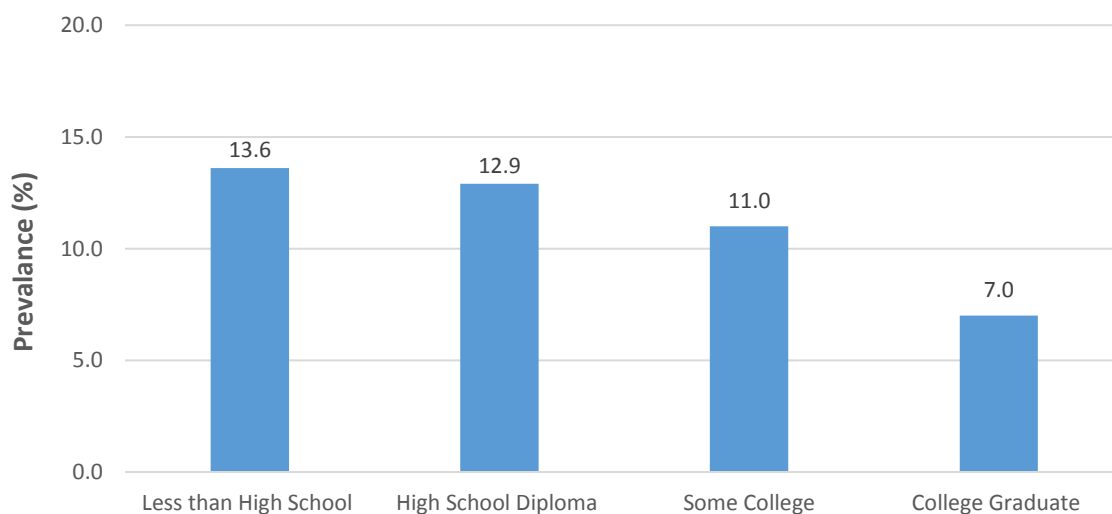
Figure 10. Estimated Prevalence of Adults (Age 18+) with Diabetes by Annual Household Income, Ohio, 2015



Source: 2015 Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health, 2017.

- The estimated prevalence of diabetes among adults generally decreases as annual household income increases.
- Adults from households with an annual income of \$75,000 or more were significantly less likely to have diabetes than adults from households with annual incomes less than \$50,000.

Figure 11. Estimated Prevalence of Adults (Age 18+) with Diabetes by Education Level, Ohio, 2015

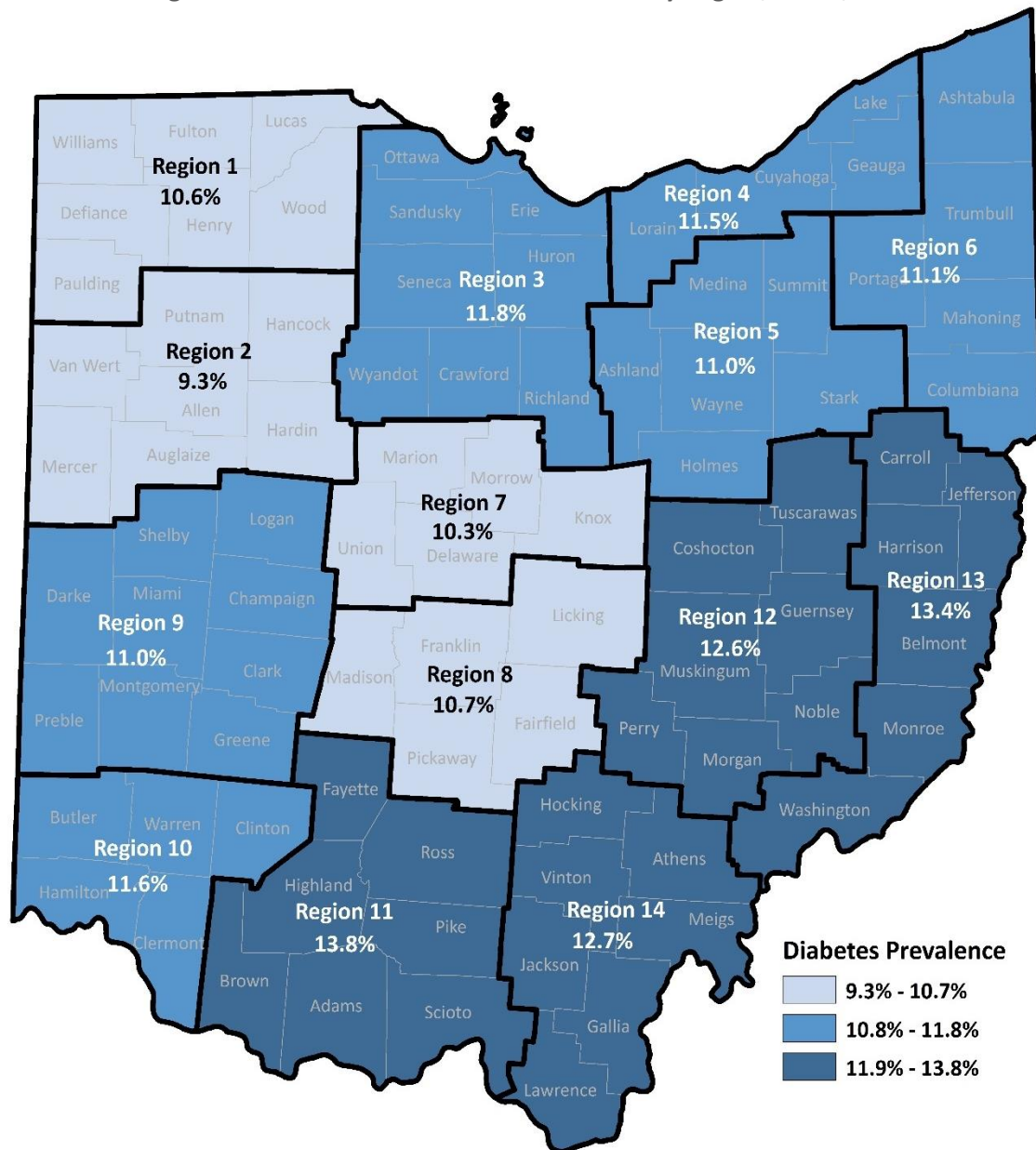


Source: 2015 Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health, 2017.

- The estimated prevalence of diabetes decreases as education level increases; 13.6 percent of adults with less than a high school education have diabetes, compared to 7.0 percent of college graduates.

Diabetes (type 1 and type 2 combined)

Figure 12. Estimated Prevalence of Diabetes by Region,* Ohio, 2015



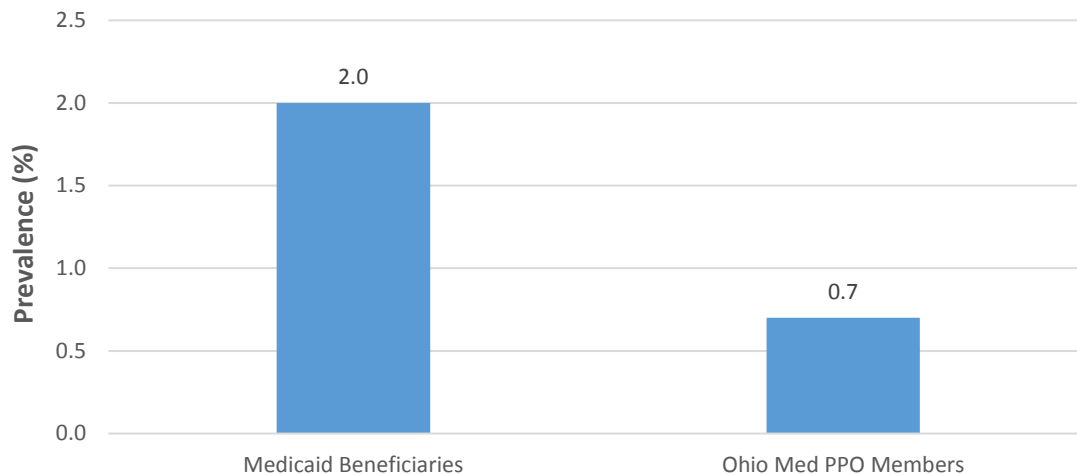
Source: 2015 Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health, 2017.

*Prevalence estimates are weighted to the 14 regions defined by the Ohio Behavioral Risk Factor Surveillance System.

- Regions with the highest prevalence of diabetes in Ohio (regions 11-14) are predominantly in the southern and Appalachian areas of the state.

Type 1 Diabetes

Figure 13. Prevalence of Adults (Age 19+) with Type 1 Diabetes among Medicaid Beneficiaries and Ohio Med PPO Members, Ohio, 2015*

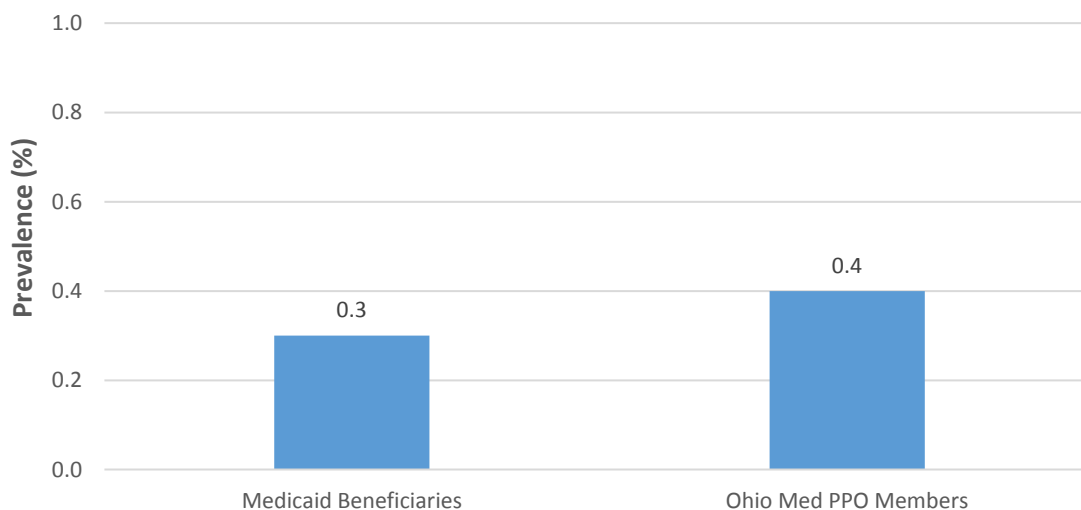


Source: 2015 Medicaid Claims Data; Office of Health Innovation and Quality, Ohio Department of Medicaid; Quality Decision Support System – May 2017. SFY 2016 State of Ohio Med PPO Plan aggregate, Ohio Department of Administrative Services, 2017.

*Ohio Med PPO Plan data are for SFY 2016.

- 2.0 percent of adult Medicaid beneficiaries have type 1 diabetes, compared to 0.7 percent of adults in the Ohio Med PPO.

Figure 14. Prevalence of Youth (Age 0-18) with Type 1 Diabetes among Medicaid Beneficiaries and Ohio Med PPO Members, Ohio, 2015*



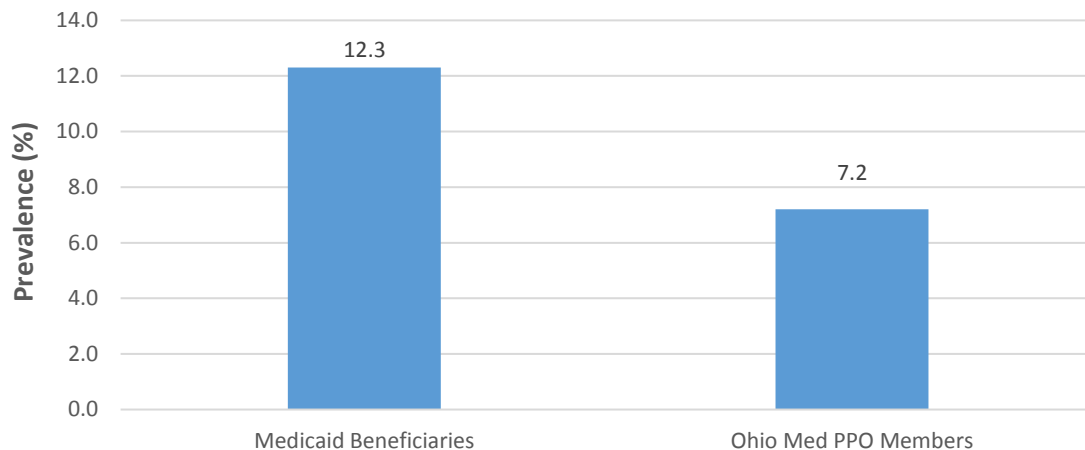
Source: 2015 Medicaid Claims Data; Office of Health Innovation and Quality, Ohio Department of Medicaid; Quality Decision Support System – May 2017. SFY 2016 State of Ohio Med PPO Plan aggregate, Ohio Department of Administrative Services, 2017.

*Ohio Med PPO Plan data are for SFY 2016.

- The prevalence of youth with type 1 diabetes is similar among Medicaid beneficiaries (0.3 percent) and Ohio Med PPO members (0.4 percent).

Type 2 Diabetes

Figure 15. Prevalence of Adults (Age 19+) with Type 2 Diabetes among Medicaid Beneficiaries and Ohio Med PPO Members, Ohio, 2015*

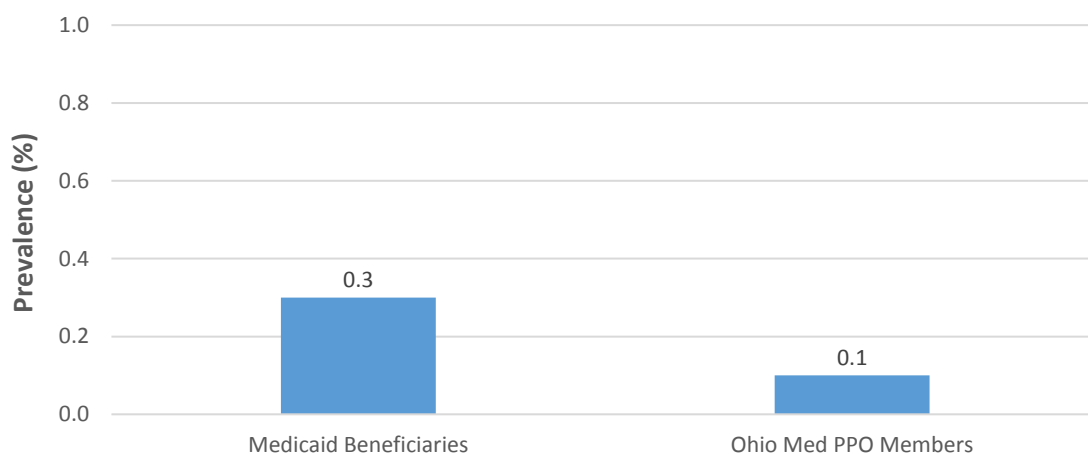


Source: 2015 Medicaid Claims Data; Office of Health Innovation and Quality, Ohio Department of Medicaid; Quality Decision Support System – May 2017. SFY 2016 State of Ohio Med PPO Plan aggregate, Ohio Department of Administrative Services, 2017.

*Ohio Med PPO Plan data are for SFY 2016.

- 12.3 percent of adult Medicaid beneficiaries have type 2 diabetes, compared to 7.2 percent of adult members of the Ohio Med PPO.

Figure 16. Prevalence of Youth (Age 0-18) with Type 2 Diabetes among Medicaid Beneficiaries and Ohio Med PPO Members, Ohio, 2015*



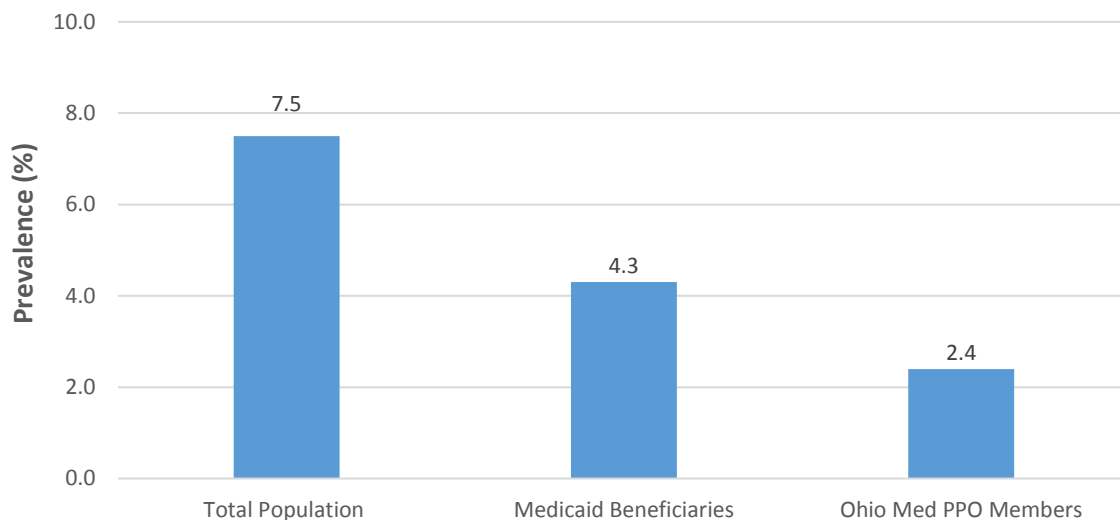
Source: 2015 Medicaid Claims Data; Office of Health Innovation and Quality, Ohio Department of Medicaid; Quality Decision Support System – May 2017. SFY 2016 State of Ohio Med PPO Plan aggregate, Ohio Department of Administrative Services, 2017.

*Ohio Med PPO Plan data are for SFY 2016.

- The prevalence of youth with type 2 diabetes is less than 1 percent among both Medicaid beneficiaries (0.3 percent) and Ohio Med PPO members (0.1 percent).

Prediabetes

Figure 17. Prevalence of Adults* with Prediabetes among the Total Population, Medicaid Beneficiaries and Ohio Med PPO Members, Ohio, 2015**



Source: 2015 Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health, 2017. 2015 Medicaid Claims Data; Office of Health Innovation and Quality, Ohio Department of Medicaid; Quality Decision Support System – May 2017. SFY 2016 State of Ohio Med PPO Plan aggregate, Ohio Department of Administrative Services, 2017.

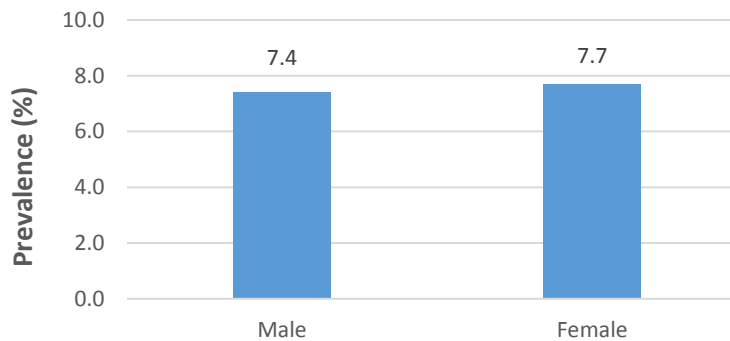
*Adults are defined as individuals ages 18+ for the total population and ages 19+ for Medicaid and Ohio Med PPO members.

**Ohio Med PPO Plan data are for SFY 2016.

- The estimated prevalence of prediabetes among adults in Ohio is 7.5 percent, or approximately 669,000 adults. In addition, it is estimated that 1.3 million Ohio adults have prediabetes but do not know it.
- The prevalence of prediabetes was 4.3 percent among adult Medicaid beneficiaries and 2.4 percent among adult Ohio Med PPO members.
- Note: The prevalence of prediabetes is based on the number of adults who have been diagnosed with prediabetes by a healthcare provider. National data show that approximately two-thirds of people with prediabetes are undiagnosed; thus, prevalence estimates are likely underestimated.

Prediabetes

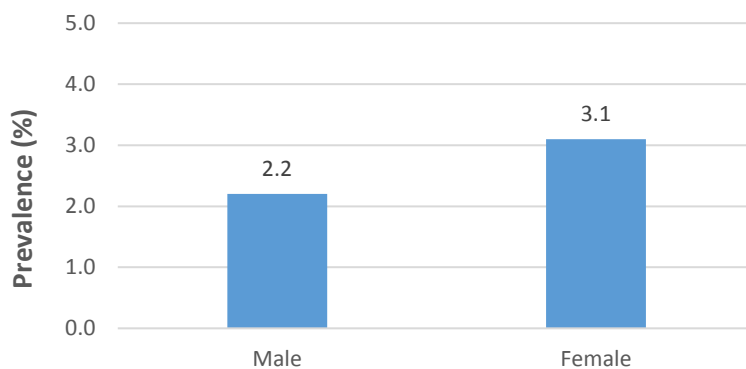
Figure 18. Estimated Prevalence of Adults (Age 18+) with Prediabetes by Sex, Ohio, 2015



Source: 2015 Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health, 2017.

- The estimated prevalence of prediabetes among adults does not significantly differ by sex.

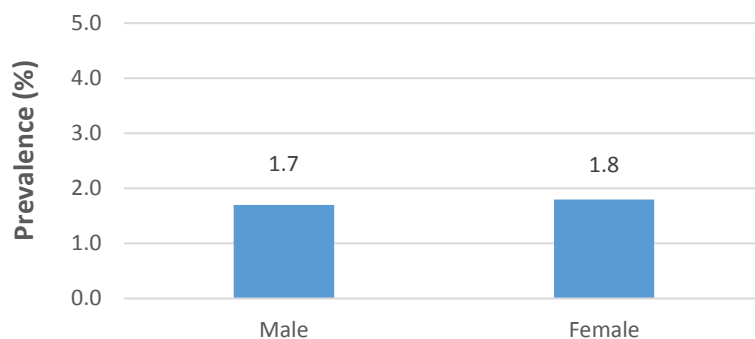
Figure 19. Prevalence of Medicaid Beneficiaries with Prediabetes by Sex, Ohio, 2015



Source: 2015 Medicaid Claims Data; Office of Health Innovation and Quality, Ohio Department of Medicaid; Quality Decision Support System – May 2017.

- The prevalence of prediabetes among Medicaid beneficiaries is slightly higher for females (3.1 percent) compared to males (2.2 percent).

Figure 20. Prevalence of Ohio Med PPO Members with Prediabetes by Sex, Ohio, State Fiscal Year 2016

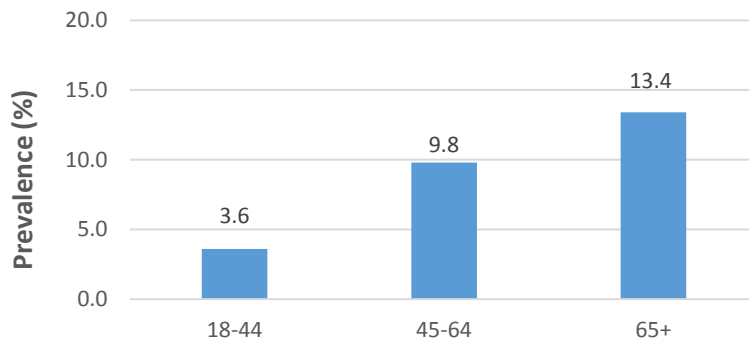


Source: SFY 2016 State of Ohio Med PPO Plan aggregate, Ohio Department of Administrative Services, 2017.

- The prevalence of prediabetes among Ohio Med PPO members is evenly distributed by sex.

Prediabetes

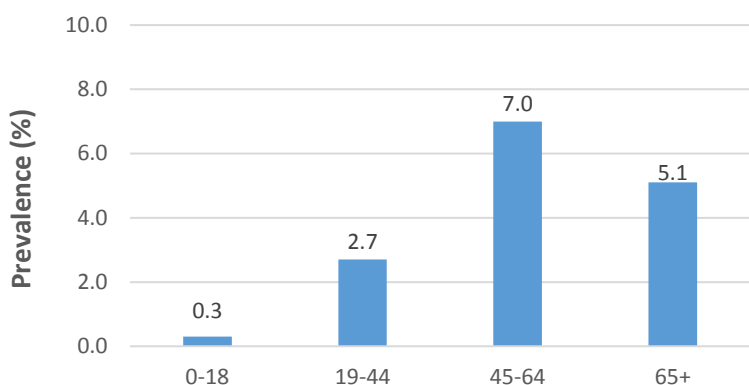
Figure 21. Estimated Prevalence of Adults (Age 18+) with Prediabetes by Age Group, Ohio, 2015



Source: 2015 Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health, 2017.

- The prevalence of prediabetes among adults significantly increases as age increases; 13.4 percent of adults ages 65 and older have prediabetes, compared to 3.6 percent of adults ages 18-44.

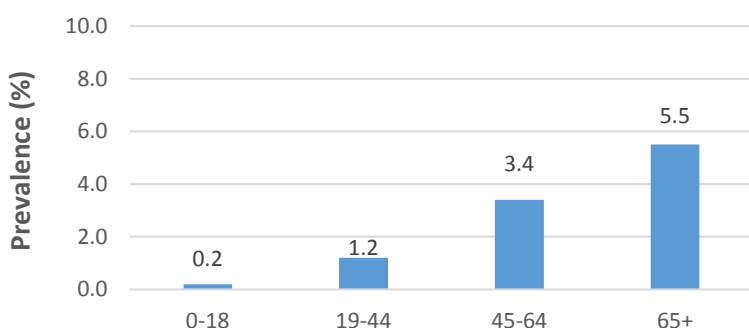
Figure 22. Prevalence of Medicaid Beneficiaries with Prediabetes by Age Group, Ohio, 2015



Source: 2015 Medicaid Claims Data; Office of Health Innovation and Quality, Ohio Department of Medicaid; Quality Decision Support System – May 2017.

- The prevalence of prediabetes among Medicaid beneficiaries increases from ages 0-18 to ages 45-64.
- 7.0 percent of Medicaid beneficiaries ages 45-64 have prediabetes, compared to 2.7 percent of those ages 19-44.

Figure 23. Prevalence of Ohio Med PPO Members with Prediabetes by Age Group, Ohio, State Fiscal Year 2016

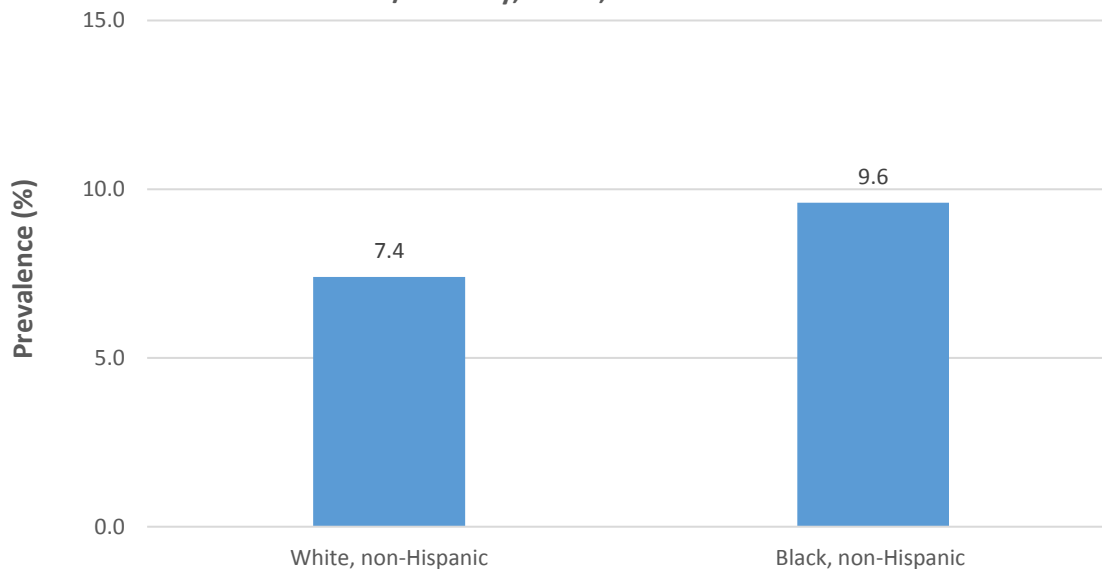


Source: SFY 2016 State of Ohio Med PPO Plan aggregate, Ohio Department of Administrative Services, 2017.

- The prevalence of prediabetes among Ohio Med PPO members increases with age; 5.5 percent of Ohio Med PPO members ages 65 and older have prediabetes, compared to 1.2 percent among those ages 19-44.

Prediabetes

Figure 24. Estimated Prevalence of Adults (Age 18+) with Prediabetes by Race/Ethnicity,* Ohio, 2014-2015**



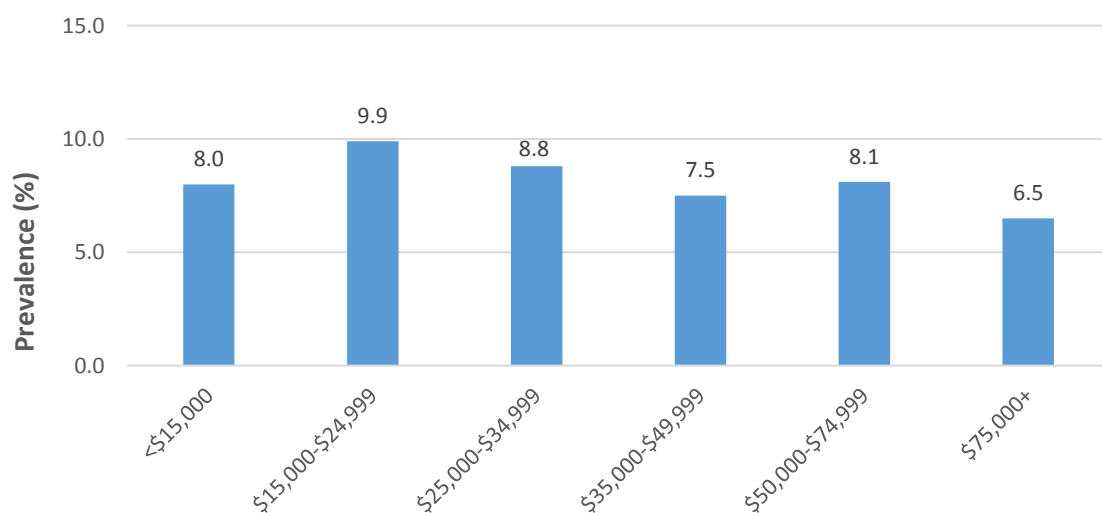
Source: 2014-2015 Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health, 2017.

* Estimates for Hispanic and other, non-Hispanic races do not meet the reliability criteria for reporting set by the CDC.

**2014-2015 data were combined to provide more reliable prevalence estimates.

- The estimated prevalence of prediabetes among adults is higher, but not significantly higher, among black, non-Hispanics compared to white, non-Hispanics.

Figure 25. Estimated Prevalence of Adults (Age 18+) with Prediabetes by Annual Household Income, Ohio, 2015

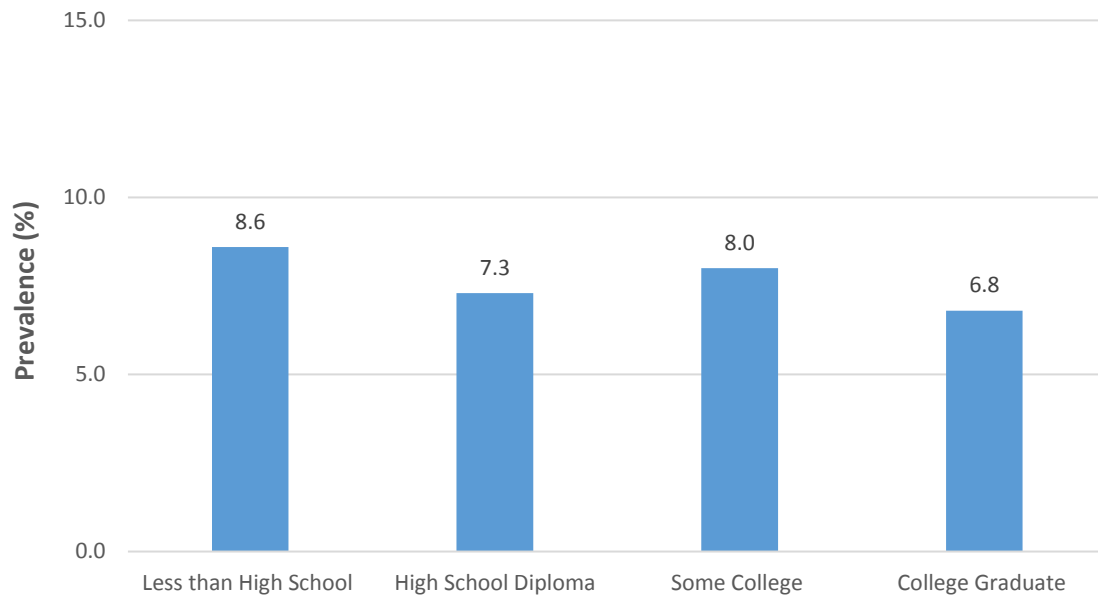


Source: 2015 Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health, 2017.

- The estimated prevalence of prediabetes among adults does not significantly differ by annual household income.

Prediabetes

Figure 26. Estimated Prevalence of Adults (Age 18+) with Prediabetes by Education Level, Ohio, 2015

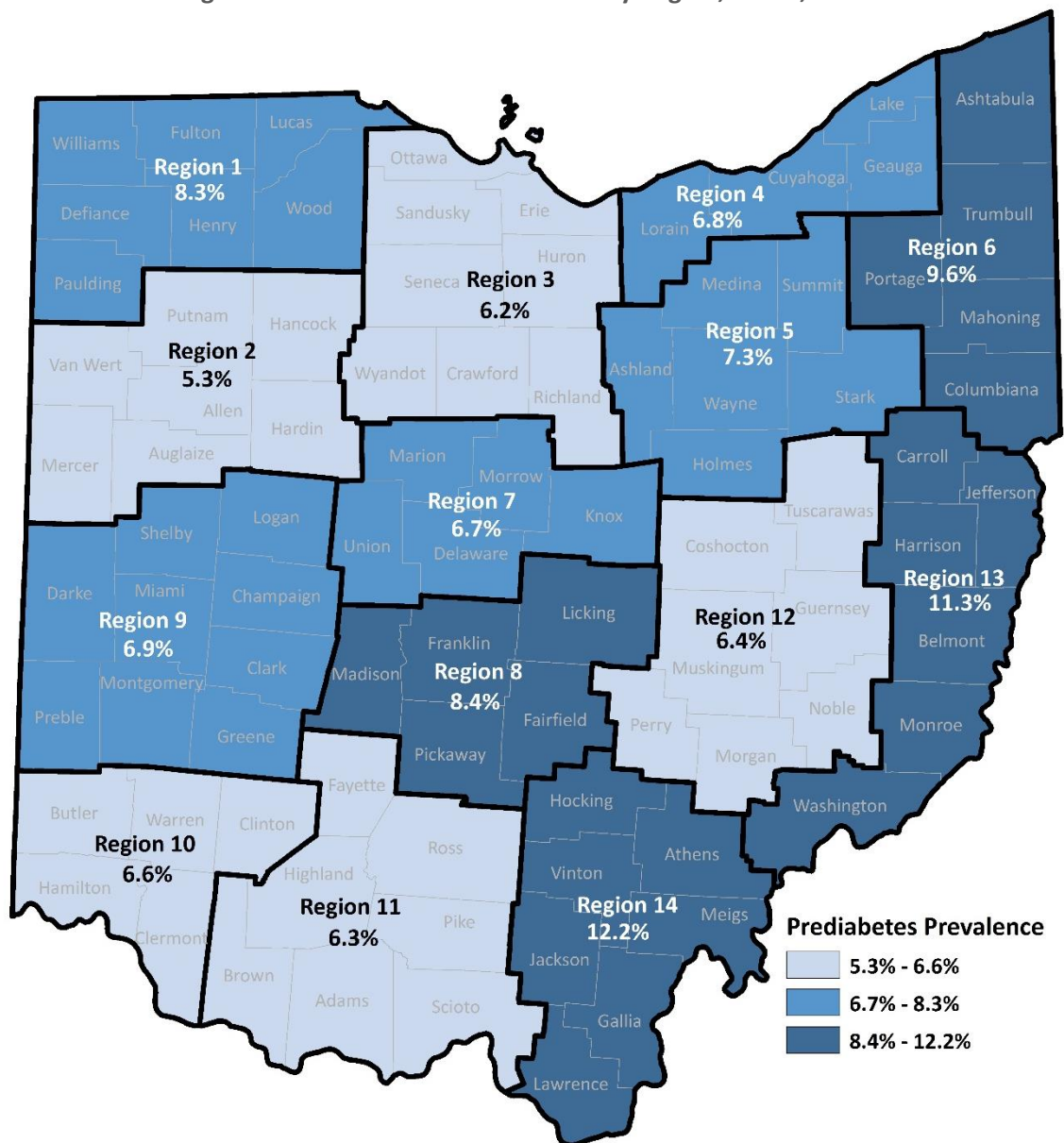


Source: 2015 Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health, 2017.

- The estimated prevalence of prediabetes among adults does not significantly differ by education level.

Prediabetes

Figure 27. Prevalence of Prediabetes by Region,* Ohio, 2015



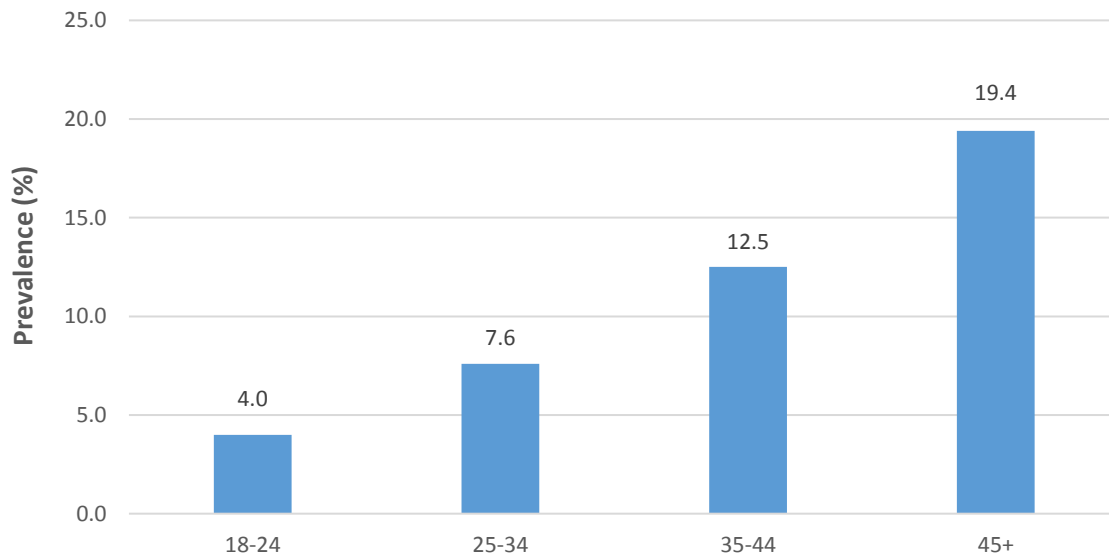
Source: 2015 Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health, 2017.

*Prevalence estimates are weighted to the 14 regions defined by the Ohio Behavioral Risk Factor Surveillance System.

- Regions with the highest prevalence of prediabetes in Ohio (regions 6, 13 and 14) are in the Appalachian area of the state. This could be attributed to differences in actual prevalence of prediabetes or differences in testing and identification of those with prediabetes.

Gestational Diabetes

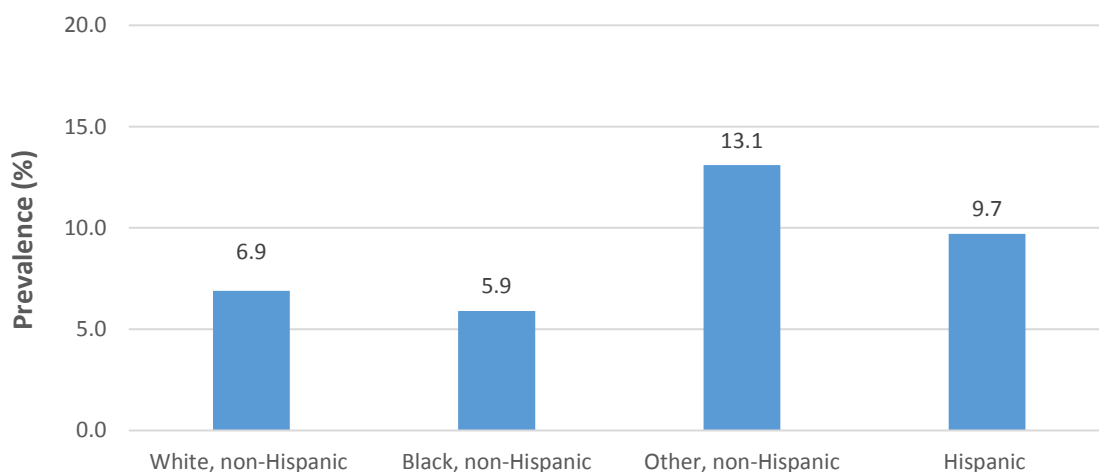
Figure 28. Estimated Prevalence of Live Births to Females with Gestational Diabetes by Maternal Age Group, Ohio, 2015



Source: Bureau of Vital Statistics, Ohio Department of Health, 2017.

- In 2015, 7.1 percent of births were to women who had gestational diabetes diagnosed during that pregnancy (data not shown).
- The prevalence of gestational diabetes increases with a mother's age; about 4.0 percent of pregnant women ages 18-24 have the condition compared to 12.5 percent of pregnant women ages 35-44.

Figure 29. Estimated Prevalence of Live Births to Females with Gestational Diabetes by Race/Ethnicity, Ohio, 2015

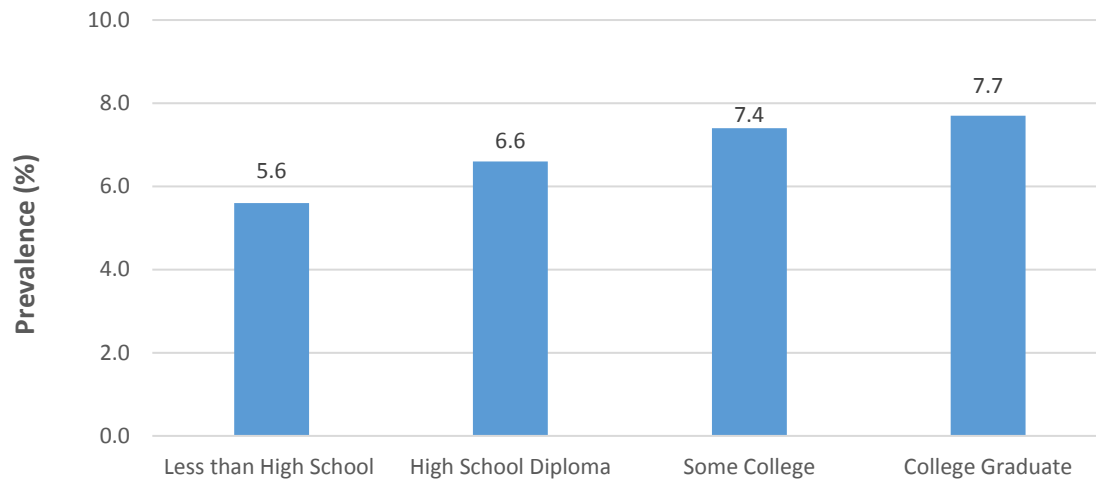


Source: Bureau of Vital Statistics, Ohio Department of Health, 2017.

- Hispanic women (9.7 percent) and women of other, non-Hispanic races (13.1 percent) have a higher prevalence of gestational diabetes compared to non-Hispanic white (6.9 percent) and black (5.9 percent) women.

Gestational Diabetes

Figure 30. Estimated Prevalence of Live Births to Females with Gestational Diabetes by Education Level, Ohio, 2015

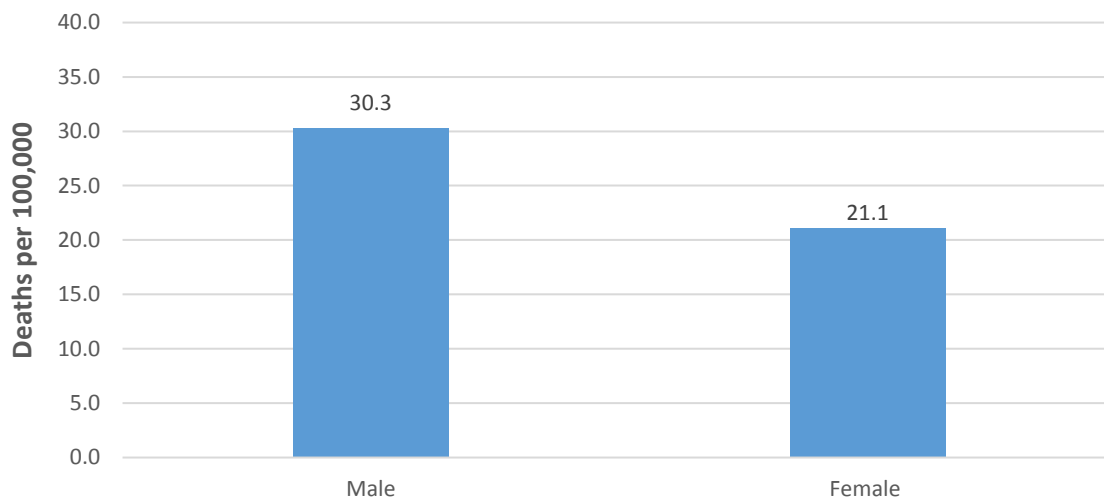


Source: Bureau of Vital Statistics, Ohio Department of Health, 2017.

- Pregnant women with less than a high school degree (5.6 percent) and women who are high school graduates (6.6 percent) have a significantly lower prevalence of gestational diabetes compared to women with at least some college education. However, the relationship between education and gestational diabetes is likely affected by the relationship between education and age.

Mortality

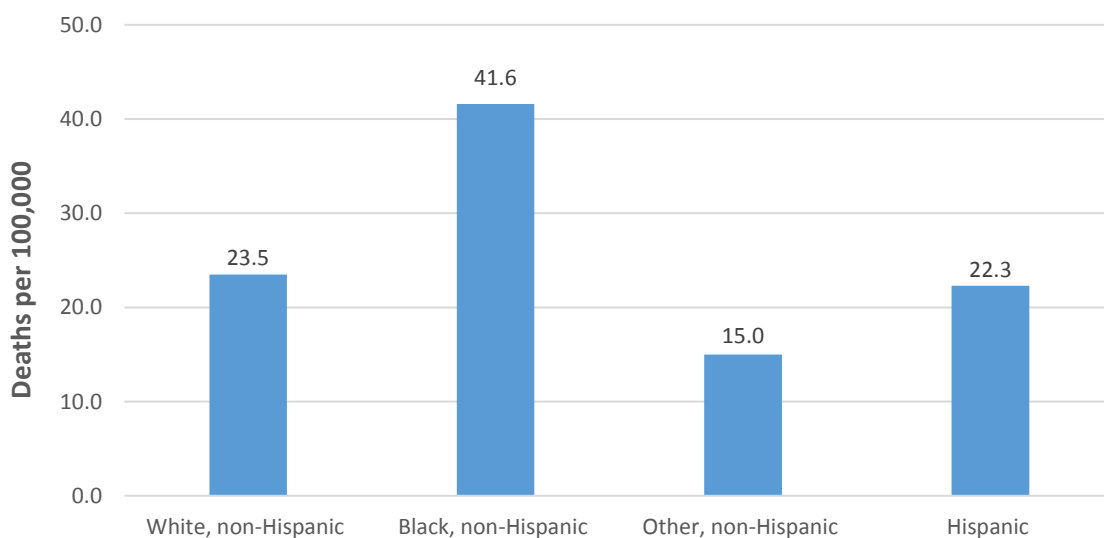
Figure 31. Diabetes Death Rate per 100,000 by Sex, Ohio, 2015



Source: Bureau of Vital Statistics, Ohio Department of Health, 2017.

- The diabetes death rate among males (30.3 per 100,000) is 44 percent higher compared to females (21.1 per 100,000).

Figure 32. Diabetes Death Rate per 100,000 by Race/Ethnicity, Ohio, 2015

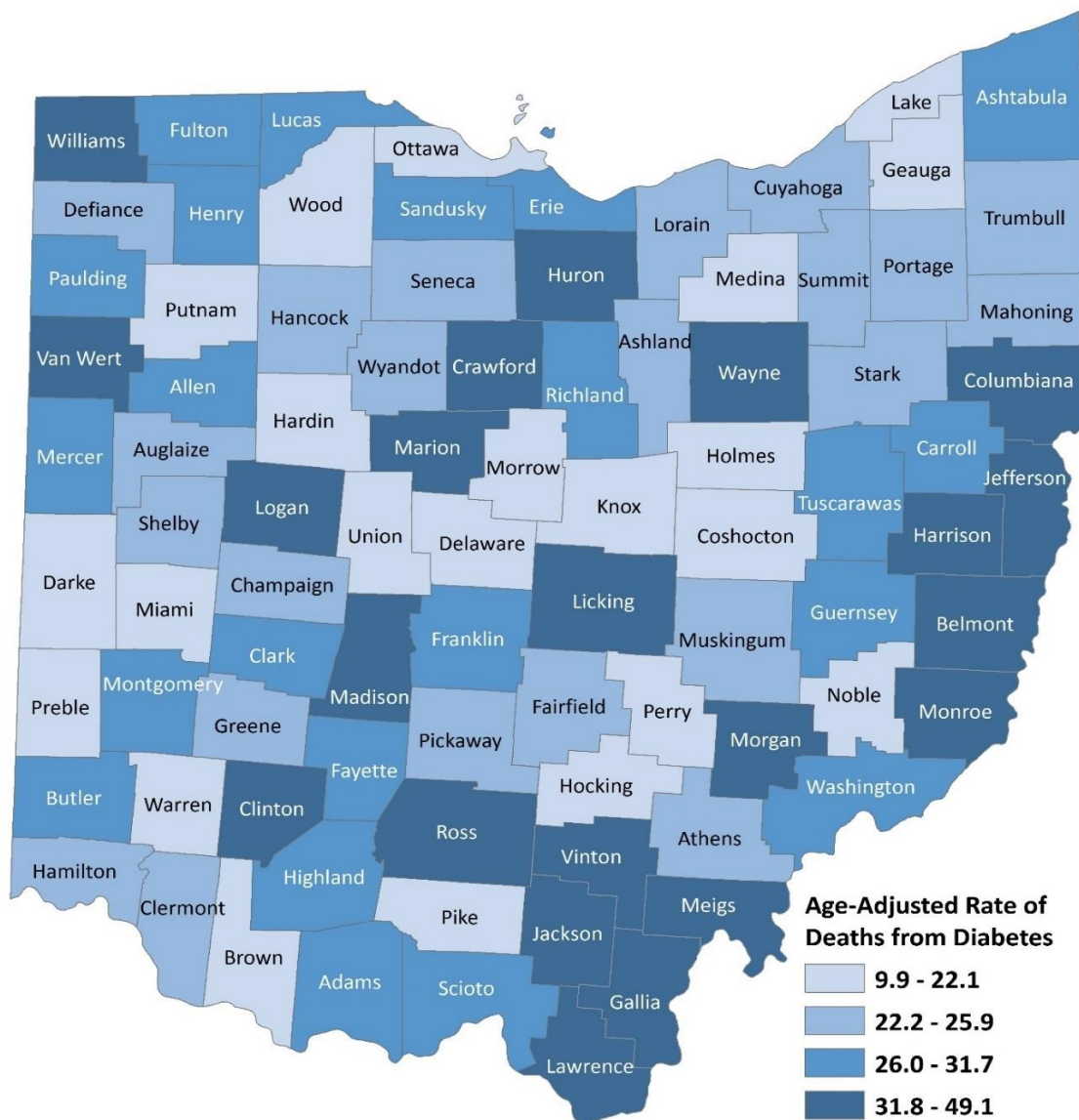


Source: Bureau of Vital Statistics, Ohio Department of Health, 2017.

- Black Ohioans have the highest death rate from diabetes (41.6 per 100,000) compared to other racial/ethnic groups.
- The diabetes death rate for black, non-Hispanics is 77 percent higher compared to white, non-Hispanics and 87 percent higher compared to Hispanics. People of other, non-Hispanic races have the lowest rate of death from diabetes at 15.0 per 100,000.

Mortality

Figure 33. Age-Adjusted Diabetes Death Rate per 100,000 by County, Ohio, 2014-2015

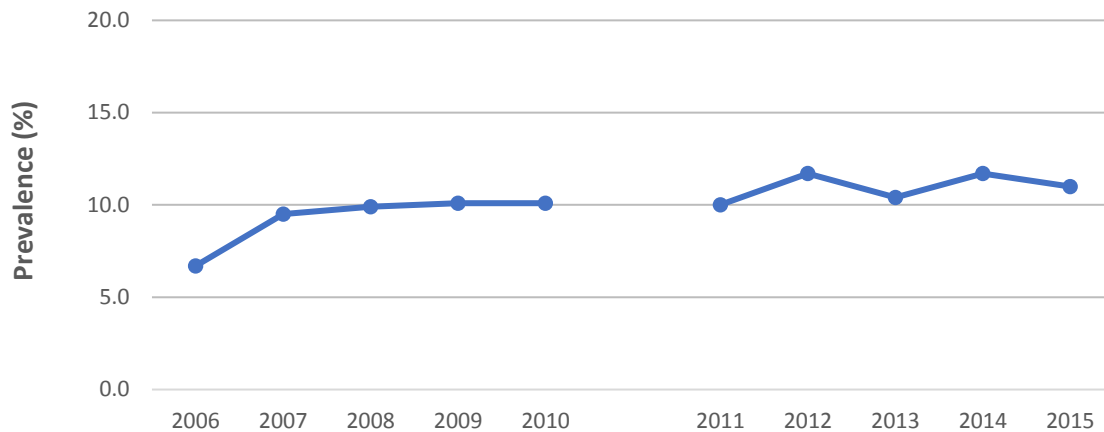


Source: Bureau of Vital Statistics, Ohio Department of Health, 2017.

- County-level diabetes death rates ranged from 9.9 per 100,000 (Delaware County) to 49.1 per 100,000 (Jackson County) across Ohio's 88 counties in 2014-2015. (Note: Two years of data were used to produce this map to ensure stable county-level age-adjusted death rates.)
- Appalachian and rural counties tend to have the highest diabetes death rates.

Trends

Figure 34. Estimated Prevalence of Adults (Age 18+) with Diabetes, Ohio, 2006-2015*

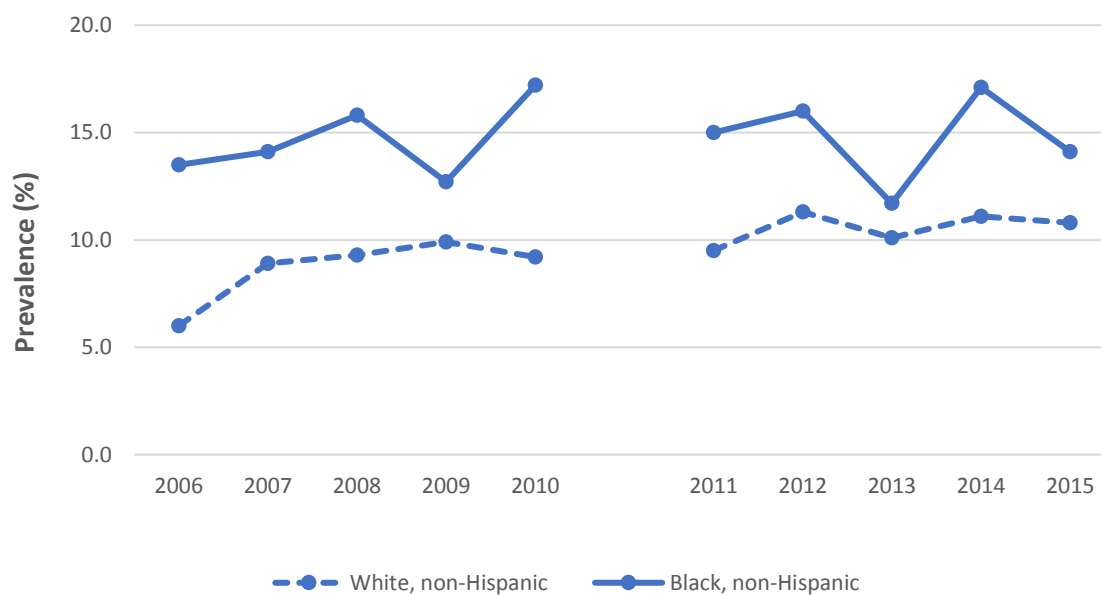


Source: 2015 Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health, 2017.

*Data prior to 2011 cannot be compared with data for 2011 and after due to changes in weighting methodology.

- The estimated prevalence of diabetes among adults increased 51 percent from 2006 (6.7 percent) to 2010 (10.1 percent) but was relatively stable from 2011 to 2015.
- The estimated prevalence of adults with diabetes was 5.0 percent in 1996; whereas, the estimated prevalence only 20 years later is 11.0 percent (data not shown).

Figure 35. Estimated Prevalence of Adults (Age 18+) with Diabetes by Race/Ethnicity*, Ohio, 2006-2015**



Source: 2015 Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health, 2017.

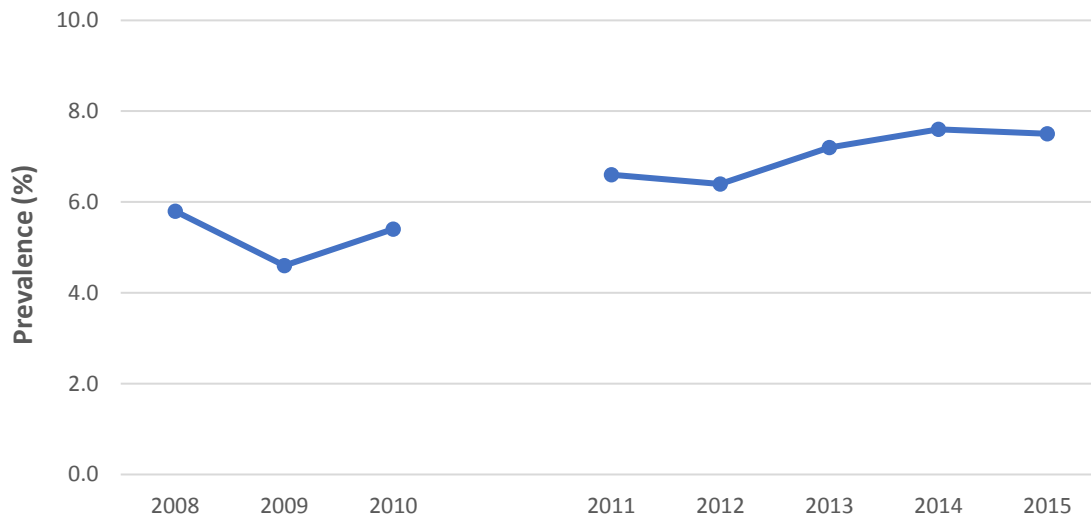
*Estimates for Hispanic and other, non-Hispanic races do not meet the reliability criteria for reporting set by the CDC.

**Data prior to 2011 cannot be compared with data for 2011 and after due to changes in weighting methodology.

- The estimated prevalence of diabetes increased among white, non-Hispanic adults but was variable among black, non-Hispanic adults from 2006 to 2015.

Trends

Figure 36. Estimated Prevalence of Adults (Age 18+) with Prediabetes, Ohio, 2008-2015*

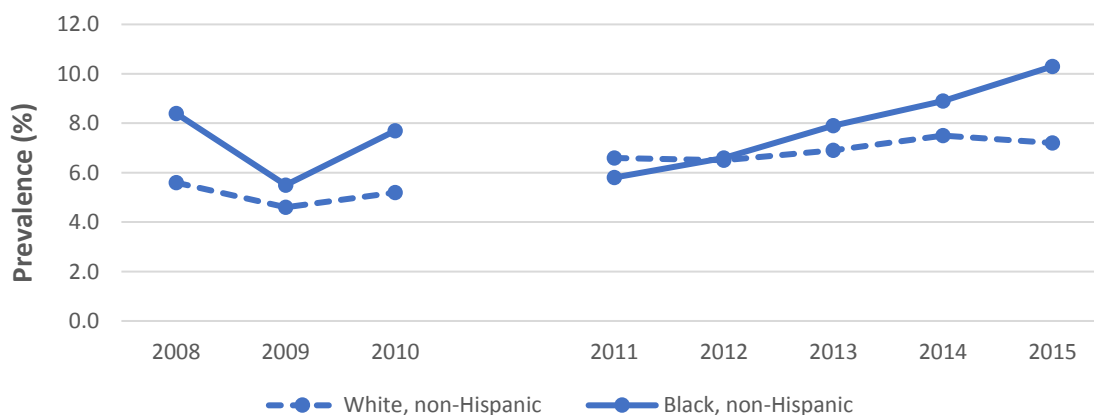


Source: 2015 Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health, 2017.

*Data prior to 2011 cannot be compared with data for 2011 and after due to changes in weighting methodology.

- The estimated prevalence of prediabetes among adults has increased over time; however, this increase is not statistically significant.

Figure 37. Estimated Prevalence of Adults (Age 18+) with Prediabetes by Race/Ethnicity*, Ohio, 2008-2015**



Source: 2015 Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health, 2017.

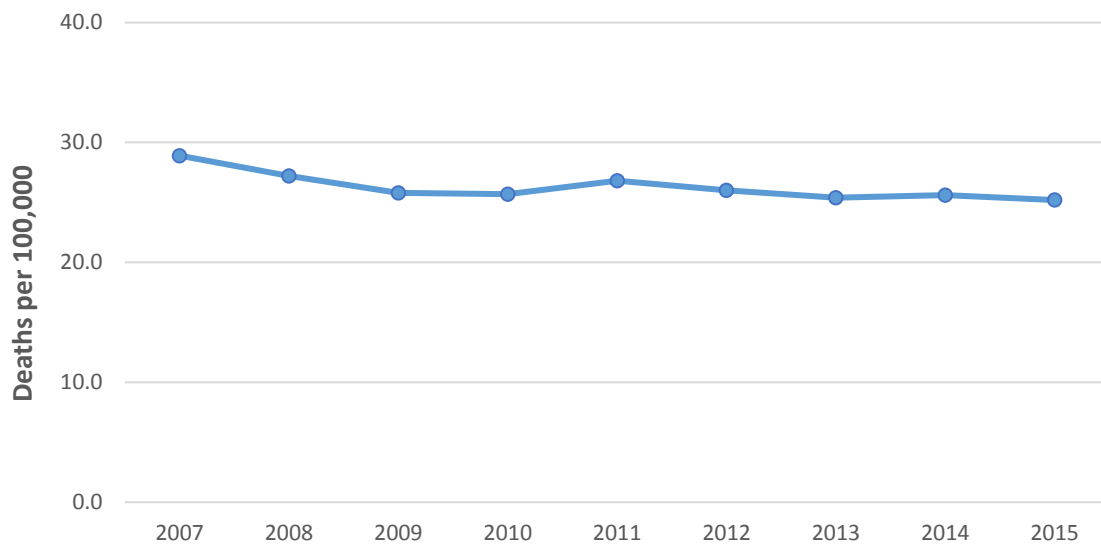
*Estimates for Hispanic and other, non-Hispanic races do not meet the reliability criteria for reporting set by the CDC.

**Data prior to 2011 cannot be compared with data for 2011 and after due to changes in weighting methodology.

- The estimated prevalence of prediabetes among white, non-Hispanics was relatively stable from 2011 to 2015.
- The estimated prevalence of prediabetes among black, non-Hispanics increased from 2011 to 2015; however, this increase is not statistically significant.

Trends

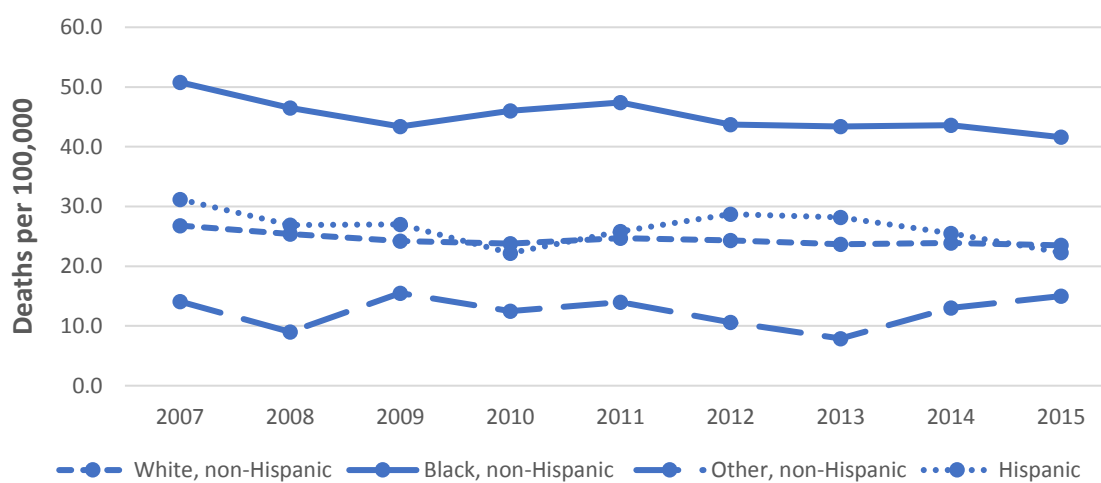
Figure 38. Diabetes Death Rate per 100,000, Ohio, 2007-2015



Source: Bureau of Vital Statistics, Ohio Department of Health, 2017.

- The diabetes death rate has declined slightly over time, from 28.9 per 100,000 in 2007 to 25.2 per 100,000 in 2015.

Figure 39. Diabetes Death Rate per 100,000 by Race/Ethnicity, Ohio, 2007-2015



Source: Bureau of Vital Statistics, Ohio Department of Health, 2017.

- The diabetes death rate has declined slightly for white, non-Hispanics, black, non-Hispanics and Hispanics since 2007.
- From 2007 to 2015, the disparity in diabetes death rates between white, non-Hispanics and black, non-Hispanics decreased.

Hospitalizations/Financial Impact

Table 1. Diabetes-Related Hospital Admissions and Emergency Department Visits among Medicaid Beneficiaries and Ohio Med PPO Members, Ohio, 2015*

	Medicaid Beneficiaries	Ohio Med PPO Members
Diabetes Admissions		
Number	12,482	131
Average Length of Stay (days)	N/A	3.89
Total Charges (\$)	\$71,856,527	\$2,928,851
Diabetes Emergency Department Visits		
Number	237,444	223
Total Charges (\$)	\$3,987,020	\$772,611

Source: 2015 Medicaid Claims Data; Office of Health Innovation and Quality, Ohio Department of Medicaid; Quality Decision Support System – May 2017. SFY 2016 State of Ohio Med PPO Plan aggregate, Ohio Department of Administrative Services, 2017.

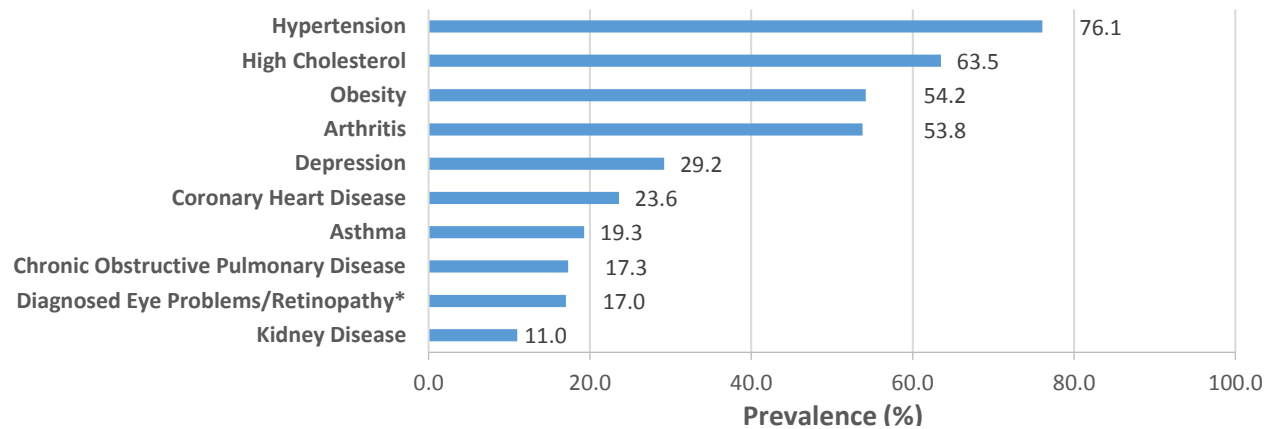
*Ohio Med PPO Plan data are for SFY 2016.

N/A = Not Available.

- In 2015, there were 12,482 diabetes-related hospital admissions among Medicaid beneficiaries.
- Diabetes-related hospital admissions among Medicaid beneficiaries cost nearly \$72 million in 2015 and nearly \$3 million among Ohio Med PPO members in SFY 2016.
- Diabetes-related emergency department visits cost an additional \$4.8 million among Medicaid beneficiaries and Ohio Med PPO members during this same time period.

Comorbid Conditions

Figure 40. Estimated Prevalence of Comorbid Conditions among Adults (Age 18+) with Diabetes, Ohio, 2015

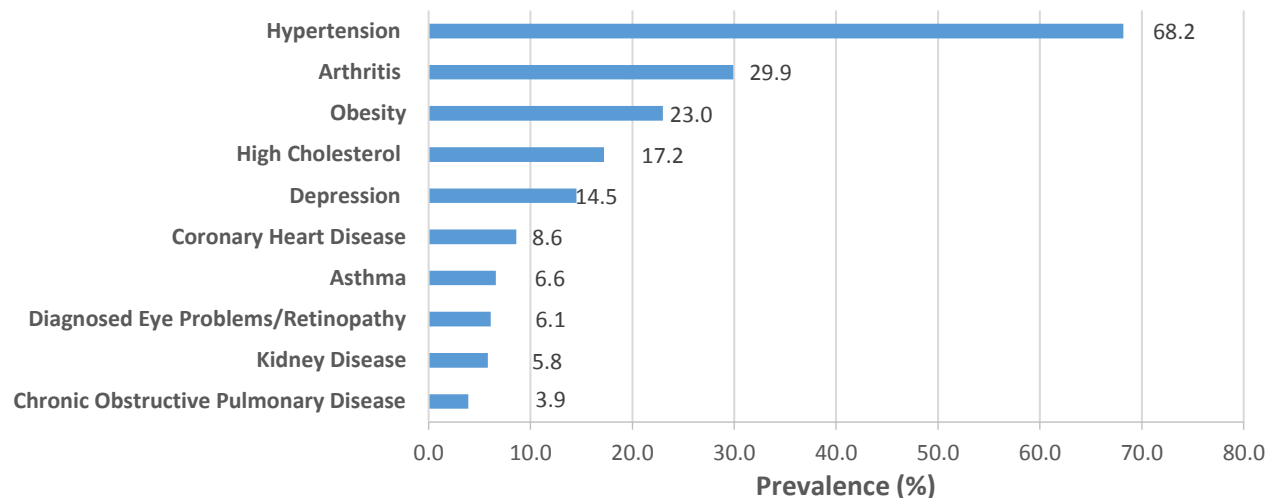


Source: 2015 Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health, 2017.

*Diagnosed Eye Problems/Retinopathy data were most recently collected in 2014.

- The most common comorbid conditions among adults with diabetes are hypertension (76.1 percent), high cholesterol (63.5 percent), obesity (54.2 percent) and arthritis (53.8 percent).

Figure 41. Prevalence of Comorbid Conditions among Ohio Med PPO Members, Ohio, State Fiscal Year 2016

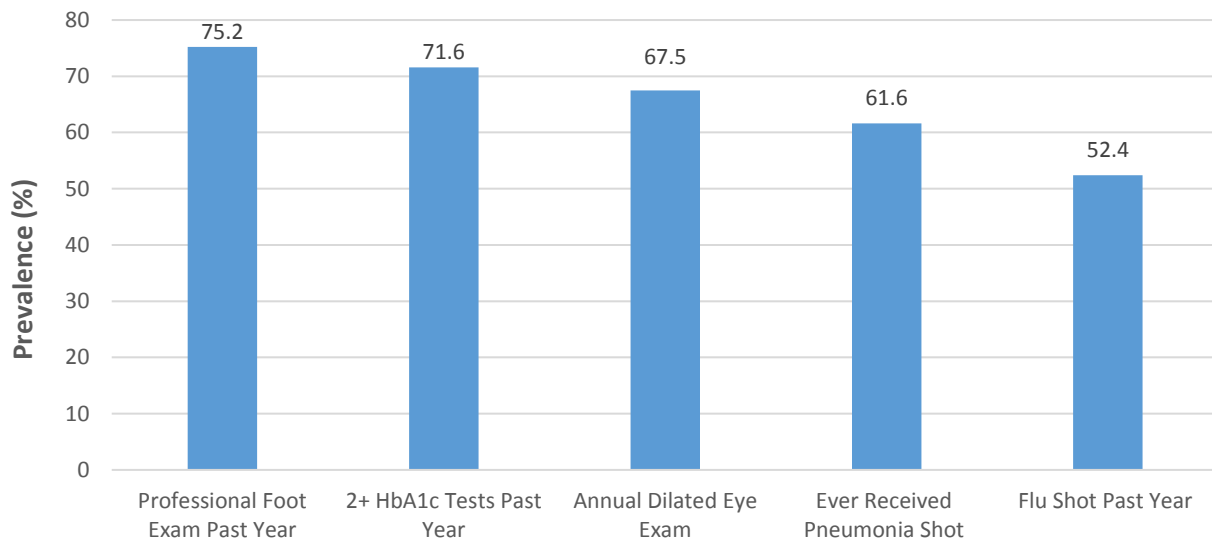


Source: SFY 2016 State of Ohio Med PPO Plan aggregate, Ohio Department of Administrative Services, 2017.

- The most common comorbid conditions among Ohio Med PPO members with diabetes are hypertension (68.2 percent), arthritis (29.9 percent) and obesity (23.0 percent).

Care/Quality Measures

Figure 42. Estimated Prevalence of Professional Diabetes Care Measures, Ohio, 2014

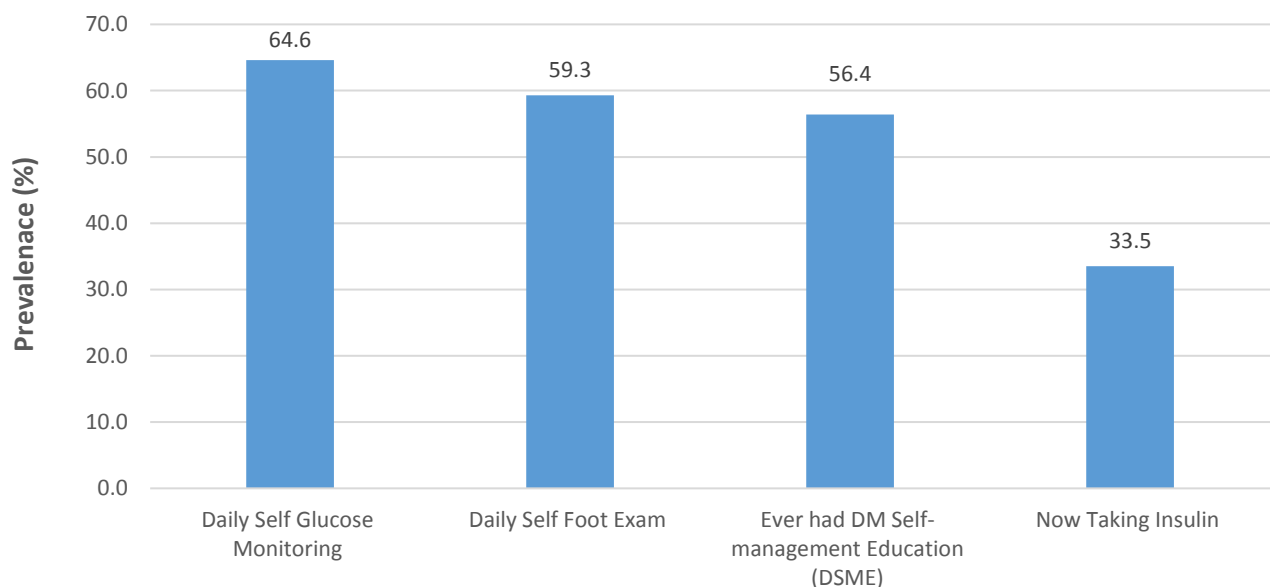


Source: 2014 Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health, 2017.

*Diabetes care measures were not collected in 2015.

- 75.2 percent of adults with diabetes reported having a professional foot exam in the past year, while only 52.4 percent of adults with diabetes reported having a flu shot in the past year.

Figure 43. Estimated Prevalence of Self Diabetes Care Measures, Ohio, 2014*



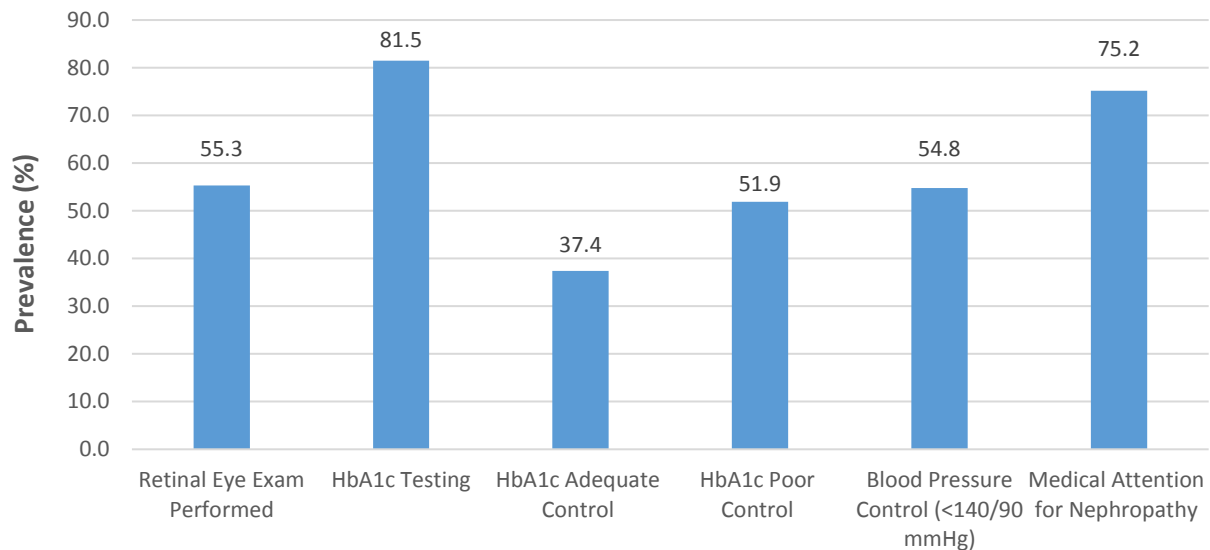
Source: 2014 Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health, 2017.

*Diabetes care measures were not collected in 2015.

- 64.6 percent of adults with diabetes reported monitoring their blood glucose daily, and nearly 60 percent of adults with diabetes perform a daily foot exam and/or have taken diabetes self-management education.

Care/Quality Measures

Figure 44. Prevalence of HEDIS* Diabetes Care Measures among Medicaid Managed Care Plan Beneficiaries, Ohio, 2015

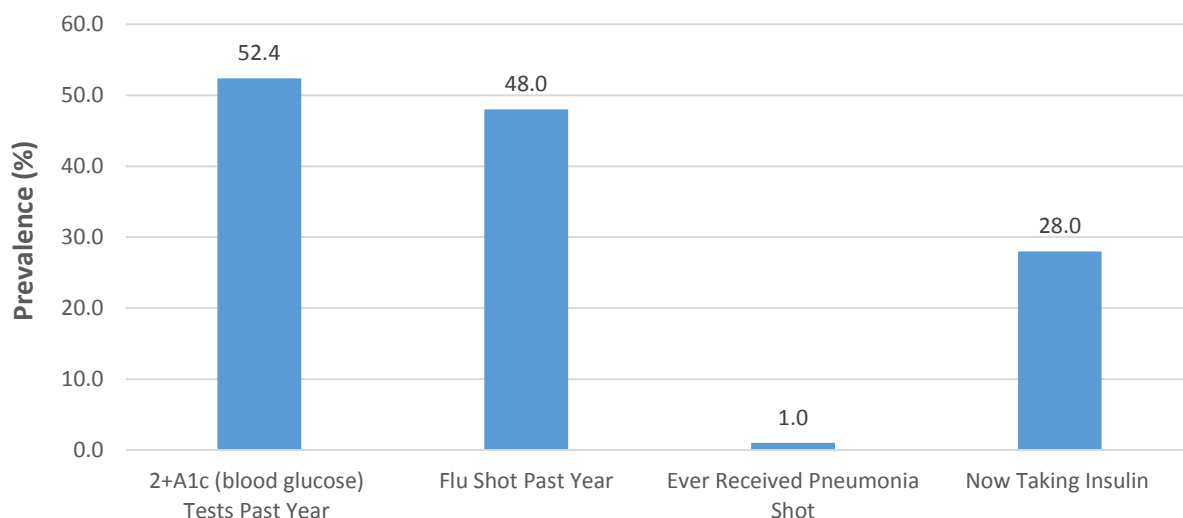


Source: Ohio Medicaid Managed Care Plan Self-Reported HEDIS State Averages, 2015.

*HEDIS = Healthcare Effectiveness Data and Information Set.

- 81.5 percent of Medicaid Managed Care Plan beneficiaries with diabetes reported having HbA1c testing, while only 37.4 percent reported having adequate control of their HbA1c.

Figure 45. Prevalence of Diabetes Care Measures among Ohio Med PPO Members, Ohio, State Fiscal Year 2016



Source: SFY 2016 State of Ohio Med PPO Plan aggregate, Ohio Department of Administrative Services, 2017.

- 52.4 percent of Ohio Med PPO members with diabetes had two or more HbA1c tests in the past year and 28.0 percent are currently taking insulin.

Social Determinants of Health and Diabetes Disparities in Ohio

As demonstrated in Section 1, the burden of diabetes in Ohio is not equally distributed among various populations. The diabetes prevalence among Ohio adults is highest among blacks and those with the lowest income and education. In addition, the diabetes mortality rate in Ohio is approximately two times higher among blacks compared to whites. According to the Health Policy Institute of Ohio's 2017 Health Value Dashboard, diabetes with long-term complications is one of the top 10 metrics with the largest disparities, with blacks experiencing the worst outcomes. It is important to identify and address disparities, or gaps in outcomes between different populations, to improve the health of all Ohioans.

Diabetes disparities result from the intersection of many social issues, which are referred to as social determinants of health. These include, but are not limited to, inadequate access to quality health care, poverty, insufficient access to evidence-based interventions, institutionalized racism, unequal economic opportunity, educational attainment and food insecurity. Disparities most often occur among populations that are marginalized because of sex, race/ethnicity, age, socioeconomic status, geographic location, religion, disability, sexual orientation and/or other characteristics associated with discrimination.

Based on the U.S. Department of Health and Human Services Action Plan to Reduce Racial and Ethnic Health Disparities, the ability of disparate populations to attain the best health possible, or achieve health equity, remains elusive due to social, economic and environmental disadvantages where individuals live, learn, work and play. These populations often live in substandard housing or in low-income neighborhoods with plentiful fast-food restaurants but lacking in grocery stores that carry healthy foods, resulting in higher rates of overweight and obesity. According to The Alliance to Reduce Disparities in Diabetes, urban neighborhoods, a lack of sidewalks and crime-ridden parks also may discourage the daily physical activity needed to maintain a healthy lifestyle.

However, even when these populations do have access to good food and physical activity, many continue to receive a lower quality of care. Since 2002, the Agency for Healthcare Research and Quality has documented the status of healthcare disparities and quality of care received by racial, ethnic and socioeconomic groups in the National Health Disparities Report. The 2016 report documented that people at or below 100 percent of the Federal Poverty Level, blacks and Hispanics have worse access to care with respect to having health insurance, having a usual source of care and encountering difficulties when seeking care. Healthcare interventions that target patients, providers and the healthcare environment (e.g., payers, health organizations) have the potential to play a significant role in reducing racial disparities in diabetes outcomes.

There is a growing body of research that demonstrates the impact of racism as a social determinant of health disparities. While racial disparities for diabetes mortality rates are evident,

the ability to address the causal factors constitutes major challenges for communities, practitioners and institutions working to address this problem. The work of noted researchers and institutions such as Dr. Camara Jones, Robert Smedley and the Kirwan Institute for the Study of Race and Ethnicity at The Ohio State University provide useful concepts to understand the impact of racism.


In an article published in the American Journal of Public Health titled *Levels of Racism: A Theoretic Framework and a Gardner's Tale*, Dr. Jones established a theoretic framework for understanding three levels of racism: institutionalized, personally mediated and internalized. The article addresses the basis of race-associated differences in health outcomes, as well as for designing effective interventions to eliminate those differences.

In 1999, Congress requested an Institute of Medicine (IOM) study to assess the extent of disparities in the types and quality of health services received by U.S. racial and ethnic minorities and non-minorities. The study was to explore factors that may have contributed to inequities in care as well as to recommend policies and practices to eliminate these inequities.

In direct response to the IOM's request from Congress, Dr. Smedley, et al.'s ground-breaking work, *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*, documented the impact of racial and ethnic disparities in health care, access to care and other issues that arose from differing socioeconomic conditions. An increasing body of evidence showed that "even after such differences are accounted for, race and ethnicity remain significant predictors of the quality of health care received." Within this publication, a panel of experts documented evidence and explored how minorities experience the healthcare environment. Furthermore, the book examined how disparities in treatment arose in healthcare systems and looked at aspects of the clinical encounter that may have contributed to such disparities. *Unequal Treatment* ultimately offered recommendations for improvements in medical care financing, allocation of care, availability of language translation and community-based care. The book also offered recommendations for data collection and research initiatives.

In the Kirwan Institute's 2016 edition of *State of Science*, implicit bias was thoroughly reviewed. As indicated by the authors, a detailed review of the latest scholarly literature and public discourse on implicit bias was completed. This specific edition of the *State of the Science* provided a snapshot of the implicit bias field in terms of its current status and evolution, as well as the context of its relevant precursors. As is customary for each, the publication highlighted academic literature through the lenses of five main domain areas: criminal justice, health and health care, employment, education and housing. Along with the five content areas is "...a discussion of the latest research-based strategies for mitigating the influence of implicit biases, as well as a recognition of major contributions that expand beyond these domain-specific boundaries."

When strategically applied, these concepts can promote systemic change in addressing the issue of racism and help to improve disparities in obesity and diabetes. To reverse these trends will require coordinated strategies across state departments and health systems to impact the health of our state, reduce health disparities and associated costs, and achieve health equity.



There is extensive research to document health disparities and the importance of social determinants of health. Initiatives to overcome diabetes disparities must contain a robust set of strategies to address the related social determinants of health.

Diabetes Prevention and Management Efforts in Ohio

PROVEN APPROACHES TO DIABETES PREVENTION AND MANAGEMENT

Diabetes can affect many parts of the body and can lead to serious complications such as blindness, kidney damage and lower-limb amputation if left undiagnosed or unmanaged. Working together, people with diabetes, their support network and their healthcare team can reduce the occurrence of these and other diabetes complications by controlling levels of blood glucose, blood pressure and blood lipids in addition to receiving preventive care in a timely manner.

Managing diabetes is a complicated endeavor. The disease spectrum is best managed by a combination of clinical care through a team-based approach, combined with lifestyle changes by the individual to prevent or better manage the disease. Team-based clinical care relies on healthcare professionals to follow specific medical guidelines for prevention and disease management. Some examples based on the 2017 American Diabetes Association Standards of Medical Care in Diabetes include:

- Timely screening and testing for the diabetes spectrum (type 1, prediabetes, type 2 and gestational diabetes)
- Assessing and managing comorbidities (e.g., depression, anxiety, obesity, hypertension, etc.)
- Assessing appropriate blood glucose targets based on individual patients' needs
- Recommending pharmaceutical interventions as appropriate

In conjunction with a team-based approach it is up to the individual to also take responsibility for the disease by:

- Managing food choices based on healthcare provider recommendations
- Developing a consistent pattern of physical activity
- Maintaining pharmaceutical interventions when appropriate
- Scheduling and attending medical appointments in a timely manner

Even though team-based clinical care and the individual have their own specific duties when it comes to disease prevention and management, it is essential for both to work together to improve health outcomes. A fundamental aspect of diabetes prevention and management includes utilizing culturally and linguistically appropriate evidence-based programming provided by community organizations. By incorporating referrals to community organizations, healthcare providers are extending clinical education to the patient via evidence-based programs, in a setting that facilitates group learning, engagement and peer support. The following programs are evidence-

based and available in Ohio to assist the healthcare provider and patient/individual in better diabetes prevention and management.

National Diabetes Prevention Program

The National Diabetes Prevention Program (also known as the DPP) was started out of a growing threat of prediabetes in the United States. Congress authorized the Centers for Disease Control and Prevention to establish the National Diabetes Prevention Program as a public-private partnership to offer evidence-based, low-cost interventions in communities across the United States to prevent type 2 diabetes. Once developed, the program underwent multiple research studies, published in the *New England Journal of Medicine*, proving that when people with prediabetes take part in a structural lifestyle change program, that they can cut their risk of developing type 2 diabetes by 58 percent (71 percent for individuals over 60 years old). Reducing type 2 diabetes risk is the result of the Diabetes Prevention Program helping individuals lose 5-7 percent of their total body weight through healthier eating and adding 150 minutes of physical activity a week.

The Centers for Disease Control and Prevention considers the evidence-based Diabetes Prevention Program to be the gold standard treatment for prediabetes in order to prevent or delay the onset of type 2 diabetes. As the program currently stands, it is either an in-person or online program, developed specifically to prevent type 2 diabetes. It is designed for people who have prediabetes, a past history of gestational diabetes or are at risk for type 2 diabetes, but who do not already have diabetes. A trained lifestyle coach leads the program to help individuals make changes to certain aspects of their lifestyle such as eating healthier, reducing stress and increasing physical activity. To ensure that the Diabetes Prevention Program is culturally appropriate, lifestyle coaches can adapt the sessions to match a group's background, interests and needs (e.g., show participants how to prepare healthy versions of popular local or ethnic foods, provide tips for eating healthy during cultural holidays or events, etc.). The year-long program also includes group support from others who may share an individual's goals and struggles.

While health insurance coverage for Diabetes Prevention Programs is limited in the state, it is a covered health benefit through specific UnitedHealthcare private health plans, in addition to the Ohio Public Employees Retirement System, The Ohio State University Health Plan and other self-funded organizations.

As of December 2017, Ohio currently has 44 recognized Diabetes Prevention Programs which operate an additional 62 satellite sites around the state (see the Diabetes Prevention Program map in Appendix D), operated by YMCAs, local health departments, non-profit organizations and health systems. Based on Diabetes Prevention Program and satellite site placement, 65.4 percent of Ohioans live within a 15-minute drive time of a program. An additional 21 percent live within a 16 to 30-minute drive. The current infrastructure of Diabetes Prevention Program providers covers 86.4 percent of Ohioans, leaving more than 1.5 million people without access to these services. Unfortunately, the two regions with the highest diabetes prevalence, based on 2015 data, are also in rural Appalachia where program access is significantly lacking.

Diabetes Self-Management Program

The Diabetes Self-Management Program (also known as DSMP) was developed by the Stanford Patient Education Research Center at Stanford University to help individuals with type 2 diabetes gain confidence in their ability to better manage and control their disease. The current program (in English) was developed based on an existing Spanish diabetes management program. A study on the outcomes of the Diabetes Self-Management Program concluded that participants had significant improvements in depression, symptoms of low blood glucose, communication with physicians, healthy eating and reading food labels after participating in the program. They also had significant improvements in patient activation and self-efficacy. At 12 months following the program, participants continued to demonstrate improvements in depression, communication with physicians, healthy eating, patient activation and self-efficacy.

Similar to the Diabetes Prevention Program, the Diabetes Self-Management Program also takes place in community settings such as Summa Health System, City of Cincinnati Health Department and within the Ohio Department of Aging's 12 regional Area Agencies on Aging throughout the state. The program involves attending six workshops over the course of six weeks, for 2.5 hours a week. While participating in this program, individuals learn techniques to deal with their diabetes, high and low blood sugar, stress and emotional problems, along with exercise techniques, healthy eating, medication use and working with their healthcare provider to better manage their diabetes.

Health insurance coverage for Diabetes Self-Management Programs is limited, but that may be a result of most organizations in Ohio offering the program free of charge to reduce diabetes prevalence in the state. In 2017, 41 Diabetes Self-Management Program workshops were conducted with 444 participants.

Diabetes Self-Management Education

Diabetes Self-Management Education (also known as DSME) is the collaborative process through which people with type 2 diabetes gain the knowledge, skills and abilities necessary to modify their behavior and successfully manage the disease and its related conditions. Through group sessions, Diabetes Self-Management Education incorporates the needs, goals and life experiences of the person with diabetes and is guided by evidence-based standards. The overall objectives are to support the person's informed decision-making, self-care behaviors, problem-solving and active collaboration with the healthcare team and to improve clinical outcomes, health status and quality of life.

Diabetes Self-Management Education sessions are also held in community settings, and in Ohio are typically run within a health system or community organization. Like Diabetes Self-Management Programs, the group structure of the sessions has been shown to be an effective strategy for improving blood sugar control, health outcomes and overall well-being.

Diabetes Self-Management Education is a covered medical benefit for all Ohio Medicaid beneficiaries, therefore enrolling/participating in the program would require nominal or no out of pocket cost.

Based on 2016 data, 47,009 individuals in Ohio had at least one encounter with Diabetes Self-Management Education. While that number is fairly low, Ohioans do have access to more than 150 program locations statewide. Ohio currently has 147 Diabetes Self-Management Education/Programs around the state. Based on Diabetes Self-Management Education/Program placement, 73.7 percent of Ohioans live within a 15-minute drive of a program location. An additional 22.8 percent live within a 16 to 30-minute drive. The current infrastructure of Diabetes Self-Management Education/Program providers covers 96.5 percent of Ohioans, leaving nearly 400,000 people without ready access to these services.

STATE AGENCY DIABETES PLANS

The Ohio Department of Health, Ohio Department of Medicaid, Ohio Department of Administrative Services and Ohio Commission on Minority Health all implement strategies and activities to prevent diabetes, improve diabetes care, and control complications associated with diabetes among the populations of concern to each agency. A summary of these efforts, by agency, is provided below.

OHIO DEPARTMENT OF HEALTH

Ohio Department of Health initiatives are led by staff from both the Office of Health Improvement and Wellness and the Bureau of Maternal, Child and Family Health, as described below.

OFFICE OF HEALTH IMPROVEMENT AND WELLNESS

Diabetes Goal

The Ohio Department of Health's goal is to reduce death and disability due to diabetes and reduce health disparities among adults by improving the prevention and management of diabetes. This goal aligns with desired outcomes for diabetes in the *Ohio 2017-2019 State Health Improvement Plan* that will be described later in this section.

Diabetes Activities

The Coordinated Chronic Disease Program and the Creating Healthy Communities Program in the Office of Health Improvement and Wellness supports activities to prevent and control diabetes and four of the major modifiable risk factors associated with it—physical inactivity, poor nutrition, obesity and tobacco use. Evidence-based strategies focus on the general population via statewide initiatives and priority populations at high risk for developing type 2 diabetes through local grants called Communities Preventing Chronic Disease in Athens, Lorain, Montgomery, Richland, Summit and Washington Counties and the Creating Healthy Communities Program which funds 23 counties to improve access to and affordability for healthy food, increase opportunities for physical activity and ensure tobacco-free living where Ohioans live, work and play. These strategies build support for and promote lifestyle improvements, health system interventions, linkages between clinical care and community resources, and use of data for decision making and evaluation. These efforts are funded by three federal grants from the Centers for Disease Control and Prevention, and focus on the following strategies:

- Increasing opportunities for physical activity and access to healthy foods
- Promoting awareness of prediabetes among people at high risk for type 2 diabetes
- Promoting screening and testing for prediabetes
- Increasing referrals to, use of and/or reimbursement for Centers for Disease Control and Prevention recognized lifestyle change programs for the prevention of type 2 diabetes, e.g., Diabetes Prevention Program
- Promoting reporting of HbA1c measures
- Increasing engagement of non-physician team members (i.e., nurses, pharmacists and patient navigators) in diabetes management in healthcare systems
- Increasing access, referrals and reimbursement for American Association of Diabetes Educators-accredited, American Diabetes Association-recognized, state-accredited/certified or Stanford Diabetes Self-Management Education/Programs
- Increasing engagement of community health workers in the provision of self-management programs and lifestyle change programs and on-going support for adults with diabetes and prediabetes
- Increasing engagement of community pharmacists in the provision of medication/self-management for adults with diabetes
- Improving medication adherence for adults with diabetes

Stakeholder Collaboration

To accomplish its diabetes prevention and management work, the Coordinated Chronic Disease Program and Creating Healthy Communities Program engage key stakeholders and partners in state and local activities. Below is a summary of these projects:

Ohio Department of Aging – Through an inter-agency agreement, the Ohio Department of Aging is working to expand the reach of the Diabetes Self-Management Program in high-need communities through Ohio's 12 Area Agencies on Aging, while striving to increase enrollment into the program. Through this work, Ohioans will have increased access to Diabetes Self-Management Programs to better manage their type 2 diabetes and potentially reduce any costly future side effects of the disease caused by uncontrolled blood sugar. Furthermore, by expanding the reach of programs throughout each Area Agency on Aging region, more Ohioans will now have access to the program. In addition to increasing reach and enrollment, the Ohio Department of Aging is also responsible for conducting a comprehensive survey of both current and former program participants, as well as program staff, to determine facilitators and barriers of the program. As an outcome of the comprehensive survey, an action plan will be created, as well as implementation of a program pilot to determine if the action plan is successful.

National Association of Chronic Disease Directors & Centers for Disease Control and Prevention – The Ohio Department of Health sponsored an Ohio Diabetes Prevention Summit on July 18-19, 2017, with support from the National Association of Chronic Disease Directors, the

Centers for Disease Control and Prevention, the American Medical Association and Leavitt Partners. The summit brought together 107 key stakeholders (e.g., health systems, employers, insurers, community-based organizations, and state and local public health) to increase awareness of prediabetes and strengthen support and sustainability for the National Diabetes Prevention Program. On Day 1 of the summit, national, state and local speakers updated participants on the “national landscape” of this work and described efforts currently taking place in Ohio to support diabetes prevention. On Day 2, a smaller subset of participants was guided through a series of small group exercises led by staff from the National Association of Chronic Disease Directors to begin the development of a state Diabetes Prevention Action Plan that addresses the following pillars which are important for scaling and sustaining the National Diabetes Prevention Program:

- Increase awareness of prediabetes and enrollment in a Diabetes Prevention Program
- Increase screening and testing of people with prediabetes and referrals to a Diabetes Prevention Program
- Increase public (Medicaid, Ohio Department of Administrative Services) and private coverage for the Diabetes Prevention Program
- Increase support for and availability of Diabetes Prevention Programs in Ohio

Ohio Association of Community Health Centers – The Ohio Department of Health has contracted with the Ohio Association of Community Health Centers for two projects:

- Prediabetes Project – Part of this pilot project is designed to identify adult patients with prediabetes in select federally qualified health centers/community health centers. Four federally qualified health centers were selected based on capacity and previous performance (high and low), geographic areas of high disease prevalence and proximity to a Diabetes Prevention Program. This project focuses on implementing the following activities related to prediabetes: calculating and monitoring clinical quality measures, and implementing screening for prediabetes (e.g., patient risk assessment on paper and/or incorporated within the electronic health record, retrospective prediabetes identification algorithm). The Ohio Association of Community Health Centers will also provide training and technical assistance for physicians and federally qualified health center staff for these efforts and reward centers for high performance and improvement of patient outcomes based on clinical quality measures. The prediabetes focus areas of the project (identifying patients with undiagnosed prediabetes) will serve to reduce the prevalence of diabetes in Ohio, especially by addressing a population of highest need and chronic disease burden—clients of federally qualified health centers.
- Medication Therapy Management Project – The work performed under this contract addresses diabetes and supports medication therapy management programs in federally qualified health centers to assist high-need patients to better manage their diabetes in consultation with pharmacists and promote team-based care. The Ohio Association of Community Health Centers provides expert consultation and technical assistance to the Ohio Department of Health and a statewide Medication Therapy Management Collaborative on implementation and evaluation of this project in federally qualified health centers; provides stipends, training and technical assistance to medication therapy

management teams from the participating health centers; and promotes and supports the project via the association's website, electronic communications, webinars, medical grand rounds and in-person statewide meetings with federally qualified health center clinical and administrative staff.

Ohio Academy of Family Physicians – The Ohio Department of Health contracted with the Ohio Academy of Family Physicians to develop a Diabetes Module for the association's Learning Management System. The Learning Management System is an online system for more than 4,000 family physicians across the state to use for quality improvement processes and practices, and can help reduce disparities through better identification and management of chronic diseases. The Diabetes Module will help physicians and their practice teams to systematically assess their health delivery systems, select a practice improvement change to implement, collect baseline and secondary patient data, and analyze the effectiveness of the interventions and processes they implemented. Resource materials associated with the Diabetes Module help promote physician referrals to Diabetes Prevention Programs and Diabetes Self-Management Education/Programs. The Ohio Department of Health also supports an annual Ohio Academy of Family Physicians Quality Improvement Summit where primary care physicians and their practice teams are trained on how to conduct an office-based quality improvement initiative to improve patient health outcomes and strengthen practice efficiencies and team-based care. One of the four clinical tracks is diabetes, and participants utilize the Learning Management System Diabetes Module to measure team engagement, benchmark patient data, select a pathway for care delivery intervention and gather post-summit outcome data after a six-month change period.

Ohio Health Information Partnership/CliniSync – The Ohio Department of Health has a contract with the Ohio Health Information Partnership/CliniSync to provide hands-on technical assistance to healthcare systems and practices on how to optimize the use and functionality of their electronic health record systems to improve management of their patients with prediabetes, diabetes and hypertension. CliniSync has also developed a series of electronic health record vendor-specific webinars that show the steps needed to ensure practices are gathering data correctly when running reports. In addition, CliniSync conducts webinars to provide practices with practical advice on how to manage their patients with chronic conditions, and has produced corresponding articles. CliniSync also provides state-level data for chronic disease grant-related performance measures.

Diabetes Prevention Programs – With much of the Ohio Department of Health's diabetes prevention work focused on the Diabetes Prevention Program, the Ohio Department of Health maintains communication with all Ohio Diabetes Prevention Programs across the state, and relays updates, modifications and changes that might impact their programs. In addition, the Ohio Department of Health convenes in-person meetings and conducts conference calls to allow Diabetes Prevention Programs to share resources and best practices, e.g., marketing/promotion. As the prevalence of prediabetes continues to rise, the demand for Diabetes Prevention Programs will also increase. The Ohio Department of Health is working with Diabetes Prevention Programs as well as other community-based organizations to expand program reach throughout the state by offering satellite programming to stand up new Diabetes Prevention Program locations.

Organizations are working with the Ohio Department of Health to determine feasibility, staff capacity and financial responsibility of offering a Diabetes Prevention Program, in addition to offering programs in areas of highest need (e.g., rural Appalachia). Connecting Diabetes Prevention Programs with healthcare systems and providers also assists with program sustainability as referrals are essential in maintaining program recognition.

Wholesome Wave – Public Health-Dayton & Montgomery County and the Akron Area YMCA have been selected by the Ohio Department of Health and the Statewide Nutrition Incentive Program contractor, Wholesome Wave, to participate in a fruit and vegetable prescription (also known as FVRx) pilot with Diabetes Prevention Programs. The pilot provides Diabetes Prevention Program participants with vouchers to redeem for fresh fruits and vegetables in an effort to increase program retention rates, increase access and affordability of fruits and vegetables, and help achieve the program goal of 5-7 percent weight loss. This pilot began in July 2017 and will run through July 2018.

Wellness Ambassadors and Ohio Business Enterprise – Through strategic relationships developed with state agency “Wellness Ambassadors” and Ohio’s Business Enterprise Program, a Healthy Vending Pilot has been initiated with eight state agencies (Ohio Department of Health, Department of Administrative Services, Office of Budget and Management, Ohio Department of Job and Family Services, Ohio Department of Education, Ohio Department of Higher Education, Ohio Department of Mental Health & Addiction Services, and Ohio Department of Transportation), to provide employees with access to healthier food and beverage options at their worksite. Additionally, these state agencies are engaged in an initiative to increase physical activity opportunities for employees through infrastructure, education and policy changes that support active commuting (i.e., walking, biking and busing) to/from work.

Ohio Department of Transportation – Active Transportation—walking, biking and taking transit—has become a shared priority for both the Ohio Department of Health and the Ohio Department of Transportation. Increasing access to safe, active forms of transportation is critical to increasing physical activity in everyday life and is proven to reduce the risk for chronic diseases, including diabetes. Instead of working separately on active transportation projects and strategies, the agencies are working together through the development of a shared statewide plan, engaging communities through a statewide campaign and by increasing funding for this type of work particularly in vulnerable communities.

- The Ohio Department of Health and the Ohio Department of Transportation co-lead the Ohio Active Transportation Emphasis Area Plan, a plan which is housed within the Strategic Highway Safety Plan and that also integrates and reinforces strategies within the State Health Improvement Plan. Integrating this collaborative work into both plans has led to more cross-sector collaboration with nontraditional partners both in the transportation and public health sectors.
- The statewide safety and education campaign, Your Move Ohio, is a good example of how collaboration helped to leverage more funding and increase impact across the state. The campaign embodies the two major goals of improving safety of active transportation, and

encouraging more Ohioans to choose active forms of transportation. This campaign has been utilized by both local transportation agencies and local health departments to get out the messaging to “Think Outside Your Car: Walk, Bike, Bus.”

- The collaboration has also helped to address active transportation through a comprehensive approach—educating engineers, spearheading a public campaign, improving data collection, and providing technical assistance and support for adoption of Complete Streets policies and active transportation plans.

Centers for Disease Control and Prevention and Ad Council – To raise awareness about prediabetes, the American Diabetes Association, the American Medical Association and the Centers for Disease Control and Prevention partnered with the Ad Council to launch the first National Prediabetes Awareness Campaign in 2016. The purpose of the campaign is to inform and educate people about the risk of not knowing whether they have prediabetes and how to prevent type 2 diabetes. The Ohio Department of Health has worked to amplify the national campaign at both the state and local levels in Ohio. To promote the campaign in Ohio, the Ohio Department of Health contracted with media buyer Singleton & Partners to: (1) negotiate with local media directors to donate time for TV/cable and radio PSAs; (2) promote campaign web banners, and print and ship campaign materials (e.g., risk assessments, posters, postcards) upon request to partners and stakeholders (e.g., Diabetes Prevention Programs, local health departments, state agencies (i.e., Ohio Department of Public Safety and Ohio Department of Transportation)) and Ohio Department of Health programs (i.e., Creating Healthy Communities, Communities Preventing Chronic Disease, Women, Infants and Children, Rural Health, Gestational Diabetes Mellitus Collaborative, etc.) to help spread the campaign’s message; (3) negotiate donated newspaper/magazine space for campaign ads, and (4) coordinate out of home advertising print orders (e.g., billboards, bus shelter ads, bus ads) and distribution between Circle Graphics and local vendors. Phase 2 of the campaign was launched in July 2017, with a new series of TV ads.

National Association of Chronic Disease Directors and CBS HealthWatch – Through a partnership with the National Association of Chronic Disease Directors and CBS HealthWatch, prediabetes messaging will be displayed via video loop within healthcare provider waiting rooms. The CBS HealthWatch video will feature Dr. Ann Albright, Director of the Centers for Disease Control and Prevention Division of Diabetes Translation or Joan London, Diabetes Media Spokesperson for the National Association of Chronic Disease Directors. Videos will include information on prediabetes and diabetes risk, and messaging to empower patients to take action with their health. This video loop will be made available to all healthcare providers who have a Diabetes Prevention Program within their county and subscribe to the National CBS HealthWatch service. Coinciding with the CBS HealthWatch video, the Ohio Department of Health will also provide physician education on screening, diagnosing and connecting patients to available community resources like Diabetes Prevention Programs.

Reach

The priority populations for the Ohio Department of Health diabetes initiatives are people at high risk for type 2 diabetes, including those with prediabetes or those who have type 2 diabetes, and who experience racial/ethnic or socioeconomic disparities, including access to care, poor quality

of care or low income. The priority populations for local Communities Preventing Chronic Disease diabetes prevention efforts include communities with a high percentage of black/Hispanic populations, high proportion of food deserts/areas of food insecurity, and/or high percentage of uninsured/underinsured.

Funding

Amount*	Funding Source	Funding Period
Prevention and Public Health Fund (PPHF): \$1,758,559/year	Centers for Disease Control and Prevention State and Local Public Health Actions to Prevent Obesity, Diabetes, and Heart Disease and Stroke (1422)	September 30, 2014 – September 29, 2018
NON-PPHF: \$190,857/year PPHF: \$256,280/year	Centers for Disease Control and Prevention State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity, and Associated Risk Factors and Promote School Health (1305)	June 30, 2013 – June 29, 2018

*In addition to Centers for Disease Control and Prevention 1305 and 1422 funding, the Ohio Department of Health Office of Health Improvement and Wellness also spends \$3.8 million per year (October 1, 2017 – September 30, 2018) for the Creating Healthy Communities Program and an Early Childhood Obesity Prevention Program. Both programs, which are funded by the Centers for Disease Control and Prevention Preventive Health and Health Services Block Grant, contribute to the prevention of chronic diseases, including diabetes.

BUREAU OF MATERNAL, CHILD AND FAMILY HEALTH

Diabetes Goal

The Gestational Diabetes Mellitus Collaborative has the over-arching goal to prevent, delay or diagnose earlier, the onset of type 2 diabetes in women who have a history of gestational diabetes. Up to 12.5 percent of women with a history of gestational diabetes will be diagnosed with type 2 diabetes within one year of delivery, with rates as high as 60 percent within 10 years of delivery. In fact, gestational diabetes is the strongest known predictor of type 2 diabetes.

Diabetes Activities

The Gestational Diabetes Mellitus Collaborative is a unique collaboration between the Ohio Department of Health's Coordinated Chronic Disease Program and Bureau of Maternal, Child and Family Health, and the Ohio Department of Medicaid. The team formed in 2010 and has since worked to improve preventive healthcare provision in Ohio in accordance with national guidelines; increase the public's knowledge about gestational diabetes; reduce type 2 diabetes risk; and increase access to preventive care. In addition, it has worked to improve the understanding of the epidemiology of gestational diabetes in Ohio by increasing the availability, use and dissemination of public health data. Key activities of the Gestational Diabetes Mellitus Collaborative have been publication of data books on gestational diabetes in Ohio, surveying Ohio healthcare providers related to gestational diabetes knowledge and practices, directing a

statewide Quality Improvement Initiative, and developing a website of resources for providers and consumers (www.ohiogdm.com). The preponderance of recent efforts has supported the launch and spread of the Gestational Diabetes Postpartum Care Learning Collaborative, described below.

Stakeholder Collaboration

The Ohio Department of Health funds the Government Resource Center at The Ohio State University to administer the Gestational Diabetes Postpartum Care Learning Collaborative, a quality assurance initiative with the following goals:

- Identify best practices for improving diabetes screening and postpartum patient care
- Implement practitioner and patient-focused toolkits with resources on clinical guidelines and best practices
- Provide support to clinical teams to implement diabetes screening, identification, education and treatment

To meet these goals, strategies are employed to enhance prenatal education related to gestational diabetes and type 2 diabetes, increase compliance with postpartum visits and oral glucose tolerance test screening guidelines, and improve care coordination between prenatal and postpartum care providers—maternity care provider sites that serve a high volume of Medicaid clientele. Sites received patient and provider toolkits; access to clinical experts; monthly coaching calls, and rapid cycle data feedback. Sites were instructed to implement treatment protocols and processes with clients diagnosed with gestational diabetes or at risk for developing it. They were encouraged to utilize similar services for clients who entered pregnancy with type 1 or type 2 diabetes. All materials and instructions are in line with guidelines from the American Diabetes Association and the American College of Obstetricians and Gynecologists.

Reach

Since 2014, nearly 30 maternity care provider sites representing more than 200 individual providers (i.e., physicians, nurse practitioners and nurse midwives) that serve Medicaid-insured women have been engaged in the quality assurance initiative. Medicaid-insured women are prioritized due to their greater risk of diabetes and barriers to healthcare access and adopting preventive behaviors. Evaluation results show improvements in provision of prenatal education as well as postpartum visit attendance. Work that begins in fall of 2018 will link primary care practice sites with participating maternity care provider sites.

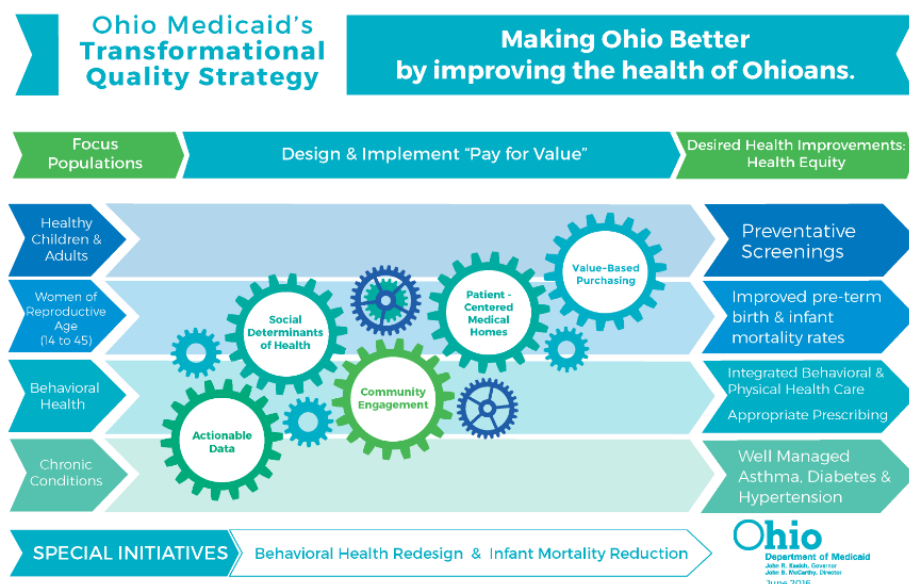
Funding

Amount	Funding Source	Funding Period
\$186,106/year	State General Revenue Funds	SFY 18
\$189,565/year		SFY 19

OHIO DEPARTMENT OF MEDICAID

Diabetes Goal

Ohio Department of Medicaid's Transformational Quality Strategy (shown below) is designed to improve the health of Ohioans by focusing on specific populations, designing and implementing pay-for-value care, and targeting desired health outcomes.



Diabetes fits within the Ohio Medicaid Quality Strategy under the Chronic Conditions Population Stream. Through quality reporting by Medicaid managed care plans, the Ohio Department of Medicaid ensures national quality standards regarding best practices and disease management are being met. The Office of Health Innovation and Quality within the Ohio Department of Medicaid aims to track individuals with diabetes, focusing on disease management, comorbidities of individuals with diabetes (both chronic and behavioral health comorbidities), cardiovascular disease and obesity — especially among children.

Diabetes Activities

The Ohio Department of Medicaid serves low income individuals of all ages in addition to residents over the age of 65 or living with a disability. Over 3 million Ohioans are insured through Medicaid. The majority of Medicaid recipients are enrolled in a managed care plan for healthcare services. Individuals who receive dual Medicaid and Medicare benefits, and who reside in one of the 29 demonstration counties, are eligible for the MyCare program. These individuals receive healthcare services through one of five MyCare health plans. Medicaid managed care plans work with hospitals, physicians, clinicians and other healthcare professionals to provide person-centered health care to their Medicaid members. The Ohio Department of Medicaid contracts with six managed care plans including Buckeye, Paramount, CareSource, UnitedHealthcare, Molina and Aetna.

The Ohio Department of Medicaid has joined with the Governor's Office of Health Transformation to engage partners in designing a new healthcare delivery payment system that rewards the value

of healthcare services. This type of payment innovation focuses on episode-based payments, which reduce the incentive to overuse unnecessary services, and gives healthcare providers increased flexibility. In Wave 3 of the episode-based payment implementation, there is a diabetic ketoacidosis/hyperosmolar hyperglycemic state episode. This episode is valid for patients ages 0-64 and tracks various quality metrics including a 30-day follow-up visit, readmission rate, intensive care unit utilization rate, emergency department visit rate, imaging rate and diabetes medication rate.

In Appendix M of the Ohio Medicaid Managed Care Provider Agreement (link provided in Section 7 – Resources), the Ohio Department of Medicaid has established certain quality measures and standards to evaluate the performance of Medicaid managed care plans in key program areas related to access, consumer satisfaction and clinical quality. These measures are calculated in accordance with national specifications (e.g., Healthcare Effectiveness Data and Information Set methodology), and are used to evaluate managed care plan performance to include determining compliance with minimum performance standards and qualifications for potential payments awarded to incentivize improved performance. Clinical quality measures related to diabetes include measures of HbA1c testing, HbA1c levels (indicating adequate or poor control), eye exams to screen for diabetic retinal disease, blood pressure control, medical attention for diabetic nephropathy and diabetes related lower-extremity amputations. Medicaid managed care plans are expected to maintain a focus on continuous quality improvement in their provision of care and services. In calendar year 2017, per Appendix O of the Ohio Medicaid Managed Care Provider Agreement, if a standard is not met for a measure used to determine qualification for a potential incentive payment (which includes diabetes-related clinical performance measures), managed care plans are required to complete a quality improvement project related to the applicable measure.

In addition to the Medicaid managed care plans, the Ohio Department of Medicaid evaluates Quality Measures and Standards for MyCare Ohio Plans which assist in managing the full continuum of Medicare and Medicaid benefits for dual benefits members. The quality measures specific to diabetes required to be reported by MyCare Ohio Plans fall under the Chronic Conditions Population Stream and include HbA1c control and Part D Medication Adherence for Diabetes Medications. The Ohio Department of Medicaid works with both Medicaid managed care plans and MyCare Ohio Plans to facilitate quality improvement and access to care for consumers with diabetes.

In Appendix K of the Ohio Medicaid managed Care Provider Agreement, each managed care plan is required to assign a member to: (1) a single population stream, including women of reproductive age, behavioral health, chronic conditions, healthy children and healthy adults; (2) a risk stratification level for the purpose of targeting interventions and allocating resources based on the member's needs using a risk stratification framework comprised of five levels (i.e., from lowest to highest: monitoring, low, medium, high and intensive), and (3) assign a care management status to each member. Care management is a critical component of population health management. It brings together well-managed clinician-managed care plan partnerships, patient self-management, preventive and acute care services, medication, etc., in an effort to improve the

health of a population. The managed care plan must ensure that members are able to access care management services when needed. There must be a clear delineation of roles and responsibilities between the managed care plan and other entities (patient-centered medical homes, Comprehensive Primary Care practices, primary care providers, community partners, etc.) that are responsible for, or are contributing to, care management in order to ensure no duplication of, or gaps in, services.

Managed care plans have additional benefits by region in the form of health and wellness programs available for Medicaid enrollees. These programs target certain population streams and incentivize members to proactively manage their conditions. Examples include disease management for diabetes with payment incentives for receiving diabetic screenings and comprehensive diabetes care. Managed care plans also offer programs for their members living with diabetes. Services may include:

- Diabetes education by type
- Diabetes self-care (meal planning, exercise tips, diabetes medicines)
- How to work with your primary care provider
- How to work with other members of your healthcare team to keep diabetes under good control
- Educational materials, newsletters and care tips
- Transportation and appointment scheduling assistance
- Referrals to community-based organizations

Stakeholder Collaboration

The Ohio Department of Medicaid contracts with five Medicaid managed care plans and one MyCare Ohio Plan to provide the best quality of care for its members.

Reach

The Ohio Department of Medicaid aims to reach all eligible consumers on the diabetes spectrum; however, the Ohio Department of Medicaid can narrow the population scope based on the type of outcome(s) or group being targeted. The Ohio Department of Medicaid has an enhanced maternal care package for high-risk pregnancies, which would reach women with gestational diabetes. The Ohio Department of Medicaid has the functionality to map where individuals with diabetes are located in order to drill down to a more granular level and pinpoint geographic areas based on the clinical outcome, i.e., areas where diabetes is being poorly managed based on national measurement standards, areas with high comorbidities—both chronic and/or behavioral health-related, or areas with managed diabetes. The Ohio Department of Medicaid tracks additional diabetes-related measures where diabetes is a comorbid condition with other diseases such as schizophrenia. The Ohio Department of Medicaid is in the process of shifting a considerable share of its provider payments into value-based purchasing, which includes enrolling covered lives in Comprehensive Primary Care practices. Comprehensive Primary Care practices and their primary care physicians are receiving quarterly files that identify, at a patient and practice level, which patients have diabetes, which patients are meeting the criteria for specific diabetes-related measures and whether the practice is meeting quality thresholds for measures. It is the Ohio

Department of Medicaid's objective that Comprehensive Primary Care practices use this information to improve patient care for diabetics at both an individual and a practice level. Practices are incentivized to improve and maintain patient care quality using per-member per-month payments and shared savings if mutual objectives are achieved.

Funding

The Ohio Department of Medicaid pays for services rendered related to diabetes (e.g., procedures, pharmaceuticals) through fee-for-service payments or through capitated rates paid to Medicaid managed care plans. These capitations would include payment for rendered services, quality improvement projects administered by managed care plans and/or episodes of care. Fee schedules can be found on Ohio Medicaid's website:

<http://www.medicaid.ohio.gov/PROVIDERS/FeeScheduleandRates/SchedulesandRates.aspx>.

OHIO DEPARTMENT OF ADMINISTRATIVE SERVICES

Diabetes Goal

The State of Ohio wellness program—*Take Charge! Live Well!*—seeks to create an environment that empowers State of Ohio Employees and their families to maintain optimal health, wellness and productivity by taking responsibility for their own health and use of the healthcare system.

Diabetes Activities

The Ohio Med Preferred Provider Organizations (PPO) Plan is self-funded and available to permanent full-time and part-time employees, as well as eligible spouses and dependents. Per the Affordable Care Act, the State of Ohio is required to offer medical coverage to part-time employees who average at least 30 hours of service per week over a 12-month measuring period. Employees hired with the reasonable expectation of averaging 30 hours or more per week for an entire 12-month period are eligible to enroll for medical coverage upon hire. The medical plan is funded by contributions from both employees and state agencies, and includes medical, prescription drug, behavioral health and wellness program benefits. The plan is administered to approximately 115,000 employees, spouses and dependents. The Ohio Med PPO plan runs on a fiscal calendar year beginning July 1 through June 30. This plan allows employees and any eligible dependents access to both network and non-network providers. In SFY 2015 and 2016, the State of Ohio contracted with UnitedHealthcare and Medical Mutual of Ohio to serve as the third-party administrators for the Ohio Med PPO. UnitedHealthcare and Medical Mutual of Ohio each served specific regions of the state based upon the first three digits of the employees' home zip code. The plan did not contain exclusions for pre-existing conditions; therefore, coverage was available to employees and eligible dependents regardless of current health or health history.

The Ohio Med PPO Plan currently includes a Diabetes Management Program in which members are eligible to receive diabetic medication, supplies and durable medical equipment at no copay or deductible if an HbA1c test is on file within the past 12 months. Approximately 5,300 eligible members with diabetes (83 percent) utilized this benefit in SFY 2016. This addresses the goal of providing an incentive for existing members to better manage and remain compliant with their

medication and treatment regimen. Doing this may help keep medical costs down by potentially reducing the number of emergency room visits.

Preventive care services are also offered with no deductible, copayment of coinsurance for network providers. Examples of these services include, but are not limited to, glucose and HbA1c testing, hematocrits, complete blood counts, urinalysis, lipid profiles, influenza and pneumococcal immunizations, and well-person examinations. Preventive services are offered to enrolled employees and dependents once per plan year.

The State of Ohio offers a robust and comprehensive health and wellness program called *Take Charge! LiveWell!* The Ohio Med PPO's wellness vendor is Healthways. This program provides tools, guidance and resources for members to be healthier, happier and more productive, while reducing healthcare costs. Employees and spouses who are enrolled in the Ohio Med PPO Plan can earn up to \$350 in incentive rewards by taking steps to improve their health (i.e., counting steps, tracking water consumption, participating in weight loss challenges, etc.). Eligible members are encouraged to participate in health risk assessments, on-site biometric screenings and health coaching, and receive support services for chronic disease management. Other areas of the *Take Charge! Live Well!* program include a monthly wellness focus (diabetes was highlighted in October 2017), a 24/7 Nurse Advice Line, on-site flu vaccination clinics, a website with program information and resources, weight-loss, fitness and wellness challenges, financial well-being and tobacco cessation programs.

Customized predictive modeling through claims data is used by Healthways to identify members with avoidable gaps in care who are at highest risk for avoidable inpatient admissions and emergency room visits. Identifying members at highest risk, including those with diabetes, helps minimize the avoidable cost of chronic conditions. Outreach efforts are made by Healthways to engage members in this high-risk category in telephonic intervention health coaching with a specially trained clinician. The clinicians seek to identify gaps in care, address appointment and medication compliance, provide education, develop a plan and monitor the member's progress.

Healthways also offers health risk coaching utilizing health risk assessment results and any available biometric data to identify members with modifiable behaviors. These health coaching interventions include assessment of lifestyle risks, key drivers, development of a well-being plan which is then used to track and discuss progress, motivational interviewing to personalize the desired behavior change, and education and promotion of healthy behaviors.

In SFY 2012, Diabetes Prevention Program coverage was made available to Ohio Med PPO members when the State of Ohio contracted with UnitedHealthcare to become one of the first state governments to offer program coverage for state employees. This coverage continued for some Ohio Med PPO members through SFY 2015-2016, when the State of Ohio contracted with both UnitedHealthcare and Medical Mutual of Ohio to serve as the third-party administrators for the Ohio Med PPO Plan. The chart below depicts the number of Ohio Med PPO members who successfully completed the Diabetes Prevention Program and percentage of weight lost from inception through SFY 2016.

Diabetes Prevention Program Participants Completed				
Incurred Fiscal Year	SFY 2013	SFY 2014	SFY 2015	SFY 2016
Participants	474	459	445	401

Diabetes Prevention Program Participants 5-9% Weight Loss				
Incurred Fiscal Year	SFY 2013	SFY 2014	SFY 2015	SFY 2016
Participants	124	121	120	114

Diabetes Prevention Program Participants > 9% Weight Loss				
Incurred Fiscal Year	SFY 2013	SFY 2014	SFY 2015	SFY 2016
Participants	35	33	33	29

Stakeholder Collaboration

The State's medical third-party administrators, pharmacy and wellness vendors coordinate efforts through claims data and regularly scheduled meetings. In addition, the State utilizes its network of Wellness Ambassadors who are located throughout the state at over 100 agency locations. Wellness Ambassadors help lead their agency's wellness initiatives by promoting events such as biometric health screenings, challenges, flu shot clinics and other *Take Charge! Live Well!* programs. They support their agency's wellness vision, strategy, goals and direction by working with leadership to turn ideas into initiatives. Through enthusiasm and support, Wellness Ambassadors build goodwill in the workplace for the State's wellness program. This grass-roots method fosters camaraderie which translates into positive acceptance of wellness initiatives and provides information and resources directly to employees. Wellness Ambassadors work with the Ohio Department of Administrative Services to play a vital role in informing employees about the value of the wellness program and the health benefits that can be gained by participating in the program. Wellness Ambassadors are charged with effectively communicating program changes and monthly health topics, and empowering employees to make behavioral changes that will improve their lives. It is through collaboration with Wellness Ambassadors that wellness initiatives are possible throughout all state agencies.

Reach

The Ohio Med PPO Plan has roughly 115,000 covered lives with approximately 7 percent of the population having received treatment for diabetes. In addition to those who already have a diabetes diagnosis, the state endeavors to increase the overall health and wellness of its population while reducing healthcare costs.

Funding

The current diabetes programs and initiatives are incorporated in the Ohio Med PPO Plan, which is participant- and employer-funded. Premium contributions from employees and agencies are used to support claim costs and administration of the Ohio Med PPO Plan.

OHIO COMMISSION ON MINORITY HEALTH

Diabetes Goal

The Ohio Commission on Minority Health's goal is for diabetes prevention program participants to remain diabetes free, or to have their health improve to the extent participants no longer have prediabetes. To this end, none of the Ohio Commission on Minority Health's grantee program participants have diabetes. They are either at risk for developing diabetes due to family history (e.g., race/ethnicity) or through their lifestyle (e.g., poor diet, lack of physical activity), or have been told by their primary care provider that they have prediabetes.

Diabetes Activities

The Ohio Commission on Minority Health was established in 1987 through legislation passed by the Ohio General Assembly. The Ohio Commission on Minority Health is dedicated to eliminating disparities in minority health through innovative strategies and financial opportunities, public health promotion, legislative action, public policy and systems change. As per the Ohio Revised Code, the target minority populations served by the Ohio Commission on Minority Health are blacks, Hispanics, Native American Indians and Asians.

The Ohio Commission on Minority Health provides grants for health promotion and prevention of disease targeting minority Ohioans who are economically disadvantaged. These grants fall under the Demonstration Grant Program Series, which can focus on diabetes, cancer, cardiovascular disease, infant mortality, substance abuse or violence.

The Ohio Commission on Minority Health currently provides funding for three innovative and culturally-specific demonstration grants. This limited line of funding presently focuses on diabetes and infant mortality. Funded projects must address a specific community with a methodology yielding measurable outcomes for behavior change. They must be preventive in nature and promote behavior change by tapping into the attitudes, values and beliefs of the target populations. Programs must outline goals, objectives and activities, with the projected number of participants to be served, that are clearly defined and measurable in process and client behavior outcomes.

Regarding evaluation, grantees are required to target clinical measures that are identified by national Healthy People 2020 goals established by a national collaborative managed by the Office of Disease Prevention and Health Promotion within the U.S. Department of Health and Human Services. It is required that projects select indicators that document a change in the required clinical measurement such as HbA1c reduction, body weight reduction, blood pressure reduction, cholesterol-level reduction or other relevant clinical health measurements. In addition, all funded projects must measure change in increased physical activity as well as knowledge, skills and

awareness. Funded programs are responsible for contracting the quarterly collection of clinical health measures directly or through partnerships. It is the hope that once rigorously evaluated, a demonstration grant can be proven effective, and potentially replicated as an evidence-based program.

At present, the Ohio Commission on Minority Health funds three diabetes prevention programs. Their projects abstracts are below:

Grantee Agency: Hospital Council of Northwest Ohio

Project Title: Care Connections: Reducing the Burden of Chronic Disease

“Care Connections: Reducing the Burden of Chronic Disease” collaborates with “Healthy Lucas County-Good Health for All,” a recent awardee of the Centers for Disease Control and Prevention Partnerships in Community Health grant, to decrease disparities in chronic disease including diabetes in six targeted zip codes in Toledo. Each year of the grant, 100 men and/or women with two or more risk factors for developing diabetes or another chronic condition, will be enrolled in the program.

Utilizing the Pathways HUB Model, the Hospital Council Community HUB serves as the center of a community-wide network of care coordination agencies that employ community health workers to connect clients to culturally relevant health and social services.

The four community agencies and/or health systems selected will hire community health workers with the goal of removing client’s barriers to care (i.e., housing, food, transportation, etc.) so that they are able to access proper care. “Care Connections” will demonstrate to the community and Medicaid managed care the success of utilizing the Pathways HUB Model to reduce the burden of chronic disease. By the end of this two-year demonstration project, Pathways HUB staff will present data collected through this project to Medicaid managed care, with the goal of securing contracts to sustain the services beyond this demonstration grant.

Grantee Agency: Health Care Access Now

Project Title: D4Prevention

D4Prevention is a multi-level, culturally relevant program that integrates prevention and lifestyle modification services into two community-based primary care practices in Cincinnati and supports lifestyle changes through community support linkages. D4Prevention combines four evidence-based, culturally relevant prevention practices—screening, Pathways Model, Health Empowerment Lifestyle Program and Diabetes Prevention Program—to improve health status and outcomes among economically disadvantaged blacks with type 2 diabetes. Community health workers will implement D4Prevention to provide continuity across prevention components, serving as bridges between their ethnic, cultural and geographic communities and healthcare providers, and engaging patients to prevent diabetes through education, lifestyle change, self-management and social support. D4Prevention goals are to: (1) increase access to diabetes prevention information and activities, (2) reduce diabetes risk factors, and (3) prevent diabetes diagnoses. D4Prevention will serve 200 patients over the two-year grant period—200 will receive care coordination services via the Pathways Model, and based on risk stratification, 100 will participate in the Health Empowerment Lifestyle Program and 100 in Diabetes Prevention

Programs. D4Prevention's evaluation will include process and outcome components to monitor implementation, improve effectiveness, document outcomes and promote replicability. The process evaluation will monitor implementation and fidelity, document service participation and assess program experiences.

A pre-/post-test design will monitor change between baseline and quarterly performance measures, including all required outcome indicators for diabetes education/behavior change: demographics, height and weight, body mass index, HbA1c, diabetes knowledge, nutrition, physical activity and tobacco use. D4Prevention will integrate diabetes prevention into healthcare settings, increasing access to these critical prevention services for persons at risk for developing diabetes. Participation in D4Prevention will address preventable risk factors that lead to diabetes and will specifically increase knowledge about the disease, improve nutrition, increase physical activity, and reduce body mass index and tobacco use. These behavioral changes will improve patient health and reduce diabetes diagnoses among a population disproportionately impacted by this disease.

Grantee Agency: Murtis Taylor Human Services System

Project Title: Diabetes Intervention Program

The Diabetes Intervention Program is a type 2 diabetes demonstration program based on the evidence-based National Diabetes Prevention Program that targets adults, ages 55 years and older at risk for type 2 diabetes. A secondary population target is adults already diagnosed with prediabetes. The target population will be 100 low- and fixed-income adults ages 55 years and older who live in the Mt. Pleasant neighborhood in Cleveland. The majority (90 percent) of participants are expected to be black.

Program goals are to: (1) improve nutritional choices (change/improve eating behaviors); (2) increase physical activity levels, and (3) enhance long-term weight management among all participants. Multiple objectives are: (1) 50 percent of participants will increase daily servings of fruits and vegetables by 60 percent; (2) 25 percent of participants will increase daily activity levels to a minimum of 150 minutes of brisk physical activity each week; (3) 25 percent of participants will reduce their body mass index by 5-7 percent; (4) 60 percent of participants will increase daily water intake by 50 percent, and (5) 25 percent of participants will achieve weight loss of 5-10 percent.

Primary prevention activities will include administration of the American Diabetes Association Prediabetes Risk Assessment, which is an assessment to identify lifestyle factors and family history that can make an individual at higher risk for diabetes. There will be weekly interactive nutrition education and awareness sessions, opportunities for physical activity, referrals to medical assessments if needed, and referrals to social and supportive services. Participants will also be linked to web-based tools and resources and community resources such as fresh food markets and the City of Cleveland Neighborhood Recreation Centers.

The modality for implementation is case management in the form of lifestyle coaching. Lifestyle Coaches will assist and empower participants to learn and practice strategies for incorporating physical activity into daily life and making healthy food choices. Lifestyle Coaches will work one-

on-one and in group sessions with participants to identify emotions and situations that can sabotage success and share strategies for dealing with challenging situations. Strategies will include a focus on self-monitoring of diet and physical activity, building of self-efficacy and social support for maintaining lifestyle changes, and problem-solving strategies for overcoming common challenges to sustaining weight loss.

Stakeholder Collaboration

To ensure the Ohio Commission on Minority Health grants are properly evaluated, the commission funded the Research and Evaluation Enhancement Program at Wright State University to bring together Ohio evaluation experts who have experience evaluating culturally diverse health research projects. Its purposes are to:

- Promote health disparity research
- Facilitate community/academic health research partnerships
- Improve the evaluation of ethnic/cultural health promotion projects
- Build the capacity of community organizations that provide health services to minority communities

The evaluation expert panel's role is to create a uniform, culturally competent and scientifically sound evaluation system for the state's minority health projects. A team of six evaluators who have expertise working with minorities developed and implemented an evaluation model for projects serving minority populations. This model helps guide projects towards intended outcomes as well as streamline the data collection, data analysis and reporting of evaluation results for the projects serving minority populations in the state of Ohio.

The Research and Evaluation Enhancement Program is overseen by a steering committee composed of community representatives and faculty from other universities in Ohio who assist in carrying out the program's mission.

Reach

The Ohio Commission on Minority Health's target audience is the minority population in Ohio because they are disproportionately impacted by diabetes morbidity and mortality. No one is turned away from Ohio Commission on Minority Health programs due to race or ethnicity.

Funding

The Ohio Commission on Minority Health currently provides funding for innovative and culturally specific demonstration grants up to \$150,000, for a two-year period. This funding is limited to four demonstration grants per biennium; in SFY 2017, three of these grants targeted diabetes. These grants are funded by State General Revenue funds. Future funding may be subject to biennial budget cuts.

STATE AGENCY COORDINATED EFFORTS

Staff from the Ohio Department of Medicaid and the Ohio Department of Health strengthened their collaborative working relationship in May 2017 to impact chronic disease in Ohio. Discussions have taken place to learn about what each agency is doing to address chronic disease. The Ohio Department of Medicaid has a newly established Performance Improvement section under the Office of Health Innovation and Quality, and provided information to the Ohio Department of Health staff on the Ohio Department of Medicaid's relationship with Medicaid managed care plans. The Ohio Department of Health shared its current and future chronic disease priorities related to prediabetes/diabetes and hypertension. Further conversations are occurring to determine when and/or where chronic disease collaboration can occur.

The Ohio Department of Medicaid and the Ohio Department of Health are co-sponsoring a quality improvement project to reduce type 2 diabetes among Medicaid women previously diagnosed with gestational diabetes. The Ohio Department of Health and the Ohio Department of Medicaid provide general direction and oversight to contractors aiming to increase postpartum diabetes screenings and other preventative care by clinical providers for Medicaid recipients. The initial project was launched in 2014 by the Ohio Department of Health and has expanded in scope and reach each year. General project design and planning for the current work began in August 2017.

The Ohio Department of Health has engaged with the Ohio Department of Administrative Services to assist with chronic disease prevention for all State of Ohio employees. In 2015, type 2 diabetes prevention risk assessments were distributed during employee biometric screening events to employees who had above average blood sugar readings, and a presentation was provided to all state agency Wellness Ambassadors on the prevalence of prediabetes and the benefit of enrolling in a Diabetes Prevention Program.

To further address employee wellness as a state, two Ohio Department of Health chronic disease staff became certified trainers in the Centers for Disease Control and Prevention's Work@Health Program to better provide information on worksite wellness initiatives to state agencies and businesses/organizations around the state. Work@Health is a training program that promotes worksite wellness through employer education, training and technical assistance. The program partners with trade associations, business coalitions and health departments that support employer workplace health improvement. It was through becoming a certified Work@Health trainer that Ohio Department of Health staff was able to implement trainings to interested state agencies and businesses/organizations. So far to date, two trainings have been held, with both the Ohio Department of Medicaid and Healthways Wellness Ambassadors participating. Through participation, Wellness Ambassadors should now be able to improve their capacity for developing, expanding and sustaining workplace health programs, including those focused on diabetes, by providing tools and resources to support the programs, along with increasing awareness of the benefits to employers.

In addition, the Ohio Department of Health Director of Nursing participated on the Ohio Commission on Minority Health Medical Expert Panel on Obesity & Diabetes which developed a White Paper, *Achieving Equity and Eliminating Obesity and Diabetes Disparities within Racial and Ethnic Populations*, published September 16, 2016. The Ohio Department of Health Diabetes

Coordinator presented on prediabetes/diabetes to the Ohio Commission on Minority Health Medical Expert Panel to inform the development of the White Paper, and the Ohio Department of Health Chronic Disease Epidemiology and Evaluation Section provided prediabetes/diabetes data.

State Health Improvement Plan

The *Ohio 2017-2019 State Health Improvement Plan* is a comprehensive framework to “improve the health of Ohioans by implementing a strategic set of evidence-based population health activities at the scale needed to measurably improve population health outcomes and achieve health equity.” The State Health Improvement Plan was developed with input from several state and local stakeholders based on the 2016 State Health Assessment. Chronic disease is one of three key priority topics identified in the State Health Improvement Plan. The State Health Improvement Plan addresses priority outcomes through cross-cutting factors—social determinants of health; public health systems, prevention and health behaviors; and healthcare systems and access. Within chronic disease, one of the desired outcomes is to reduce diabetes by increasing the percent of adults who have been told by a healthcare professional that they have either prediabetes or diabetes. For diabetes, there are objectives for specific population groups to address equity, including: blacks, non-Hispanics, people with disabilities, low educational attainment and low-income, older adults (>65 years) and Appalachian counties.

The State Health Improvement Plan includes a set of evidence-based strategies that can be implemented at both the state and local levels to achieve measurable improvements in the health of Ohioans. For diabetes, these strategies include: prediabetes screening and referral to Diabetes Prevention Programs, and provider training and education to raise awareness of prediabetes screening, identification and referral through dissemination of the American Diabetes Association’s Diabetes Risk Assessment and the Prevent Diabetes STAT Toolkit. Additional strategies focused on active living and healthy eating are community-based efforts that can support individuals with prediabetes or diabetes who are trying to make lifestyle changes to improve their health.

To improve population health in Ohio, it’s important to improve the population health planning infrastructure. To work toward this result, the state issued guidance that encourages local health departments and tax-exempt hospitals to align priorities, metrics and strategies. When conducting community assessments and developing Community Health Improvement Plans or implementation strategies, local health departments and hospitals are encouraged to align with the State Health Assessment and the State Health Improvement Plan (e.g., outcome indicators, evidence-based strategies and framework). The guidance goes even further by encouraging local health departments and hospitals to select at least two priority topic areas from the State Health Improvement plan (mental health and addiction, chronic disease and/or maternal and infant health) along with at least one priority outcome indicator (e.g., diabetes prevalence) and one cross-cutting strategy (i.e., social determinants of health; public health system, prevention and health behaviors; healthcare system and access) and one related cross-cutting indicator. A toolkit with a menu of State Health Improvement Plan-aligned outcome indicators and evidence-based strategies is available for local health departments and hospitals to include in their local plans.

Proposed Recommendations to Address Diabetes in Ohio

This section includes recommendations agreed upon unanimously by all four state agencies—the Ohio Department of Health, Ohio Department of Medicaid, Ohio Department of Administrative Services and the Ohio Commission on Minority Health—to reduce the impact that the diabetes spectrum and its complications have on all Ohioans, with specific attention focused on populations that are disproportionally affected by the disease e.g., older adults, blacks, those with the lowest household income and education, and those living in southern and Appalachian communities. Feedback from key stakeholders was also considered and incorporated, where appropriate. Each recommendation includes action steps and proposed costs to implement the recommendation.

Recommendation 1 is a legislative policy recommendation which will require legislative action and approval by the Ohio General Assembly.

Recommendation 1: Designate an Ohio Diabetes Awareness Week during the month of November that focuses on prediabetes, type 1 and type 2 diabetes, and gestational diabetes.

Action Steps:

1. Introduce legislation in the General Assembly to establish an annual Ohio Diabetes Awareness Week.
2. Engage Ohio Diabetes Action Plan agencies and other state and local stakeholders to promote the week (e.g., social media, web content, available resources, press releases, etc.) and implement awareness activities (e.g., events, press conference, etc.).

Expected Outcomes of Action Steps: Increased awareness of prediabetes, type 1 and type 2 diabetes, and gestational diabetes, and the resources that are available for prevention and management of the diabetes spectrum.

Proposed Cost: \$0 – \$500,000/year (range is based on types of promotion and/or events)

Benchmarks for Achieving Expected Outcomes:

1. Ohio Revised Code that designates an annual Diabetes Awareness Week in November
2. Number of social media hits, likes, shares, etc., during Diabetes Awareness Week
3. Number of articles in newspapers/print
4. Number of resources accessed (Diabetes Prevention Program, Diabetes Self-Management Education/Program, other community resources, etc.)
5. Number of community-based organizations/stakeholders assisting in spreading the message to include targeting disparate communities.
6. Number American Diabetes Association Diabetes Risk Assessments distributed.

Recommendations 2–8 do not require legislation. However, they will serve as a guide for programmatic work conducted by relevant state agencies, as well as stakeholders and partners who want to address the spectrum of diabetes.

Recommendation 2: Explore the feasibility of educating Ohio-based employers on the value of evidence-based lifestyle change programs as a health benefit to their employees.

Action Steps:

1. Identify employers in the state and determine lifestyle change program (e.g., Diabetes Prevention Program, Diabetes Self-Management Education/Program) coverage status.
2. Engage partners/stakeholders to provide education to employers on the benefits and return on investment of lifestyle change program coverage for employees.
3. Explore the feasibility of adding evidence-based lifestyle change program coverage to all state employee health plans.
4. Encourage largest employers in the state to implement employee wellness programs that include fitness membership discounts, flexibility around work hours to accommodate a healthier lifestyle, support for active commuting, healthy vending, etc.

Proposed Cost: The average Diabetes Prevention Program enrollment cost is \$429. Based on Centers for Medicare and Medicaid Services modeling data, insurers have shown a three-year cumulative return on investment of 3:1 on Diabetes Prevention Programs when using a value-based payment approach. Also, additional program support is needed to assist with implementation of strategies and activities related to employer education on lifestyle change program coverage.

Recommendation 3: Improve diabetes-related population health outcomes by supporting and expanding the Comprehensive Primary Care model.

Action Steps:

1. Engage health plans to continue efforts to expand the network of Comprehensive Primary Care providers by negotiating and contracting with primary care providers.
2. Develop communications plan to better educate employers on the importance of value-based care.
3. Engage health plans to develop and send multicultural educational materials to members regarding the potential benefits of going to a Comprehensive Primary Care provider.
4. Support Comprehensive Primary Care practices to complete activity requirements and report/achieve goals in quality and efficiency metrics.
5. Analyze Comprehensive Primary Care outcomes and efficiencies to support payment reform.
6. Disseminate data and outcomes to appropriate stakeholders/partners.

Proposed Cost: To be determined

Recommendation 4: Coordinate efforts to decrease diabetes prevalence and improve diabetes healthcare outcomes in Ohio.

Action Steps:

1. Continue collaboration on the Ohio Diabetes Action Plan between the Ohio Department of Health, Ohio Department of Administrative Services, Ohio Department of Medicaid and the Ohio Commission on Minority Health as required in House Bill 216.
2. Collaborate with other state agencies, community-based organizations, and health insurance providers to better align diabetes initiatives and strategic plans (e.g., State Health Improvement Plan, Chronic Disease Plan, etc.) with a focus on reducing health disparities and achieving health equity.
3. Support community diabetes awareness and prevention efforts.
4. Support statewide quality improvement activities to build support for best practices.

Proposed Cost: Additional program support is needed to assist with statewide coordination. However, once support is available, there would not be an additional cost to Ohio, as coordination would become part of standard employee duties/roles.

Recommendation 5: Educate health insurance payers on the value of offering evidence-based lifestyle change programs (cultural and linguistically appropriate) as a health benefit.

Action Steps:

1. Identify health insurance payers that serve Ohioans, and determine lifestyle change program (e.g., Diabetes Prevention Program, Diabetes Self-Management Education/Program) coverage status.
2. Engage partners/stakeholders to provide education to health insurance payers on the benefits and return on investment of lifestyle change program coverage for members/beneficiaries.
3. Conduct outreach to health insurance payers that utilize multiple benefit providers (e.g., medical, pharmacy, wellness benefits, etc.) to promote increased collaboration around evidence-based lifestyle change program coverage and future educational diabetes programs for enrolled members/beneficiaries.

Proposed Cost: The average Diabetes Prevention Program enrollment cost is \$429. Based on Centers for Medicare and Medicaid Services modeling data, insurers have shown a three-year cumulative return on investment of 3:1 on Diabetes Prevention Programs when using a value-based payment approach. Also, additional program support is needed to assist with implementation of strategies and activities related to payer education on lifestyle change program coverage.

Recommendation 6: Improve health value and health equity in Ohio to decrease diabetes morbidity and mortality.

Action Steps:

1. Encourage the implementation of upstream strategies such as prevention activities (e.g., healthy eating and active living).
2. Use technology and social marketing techniques that are culturally and linguistically appropriate to promote interventions to address diabetes disparities, educate the community and provide resources to include, but not be limited to, the promotion of access to diabetes self-management programs.
3. Explore data about disparities between population groups across the diabetes spectrum, including data collected by other agencies and organizations.

Proposed Cost: Additional program support is needed to assist with implementation of strategies and activities to improve health value and health equity.

Recommendation 7: Support the implementation of systemic approaches in healthcare systems or practices to screen, test and refer patients across the diabetes spectrum as part of standard care practices, to ensure all Ohioans have the same quality of care.

Action Steps:

1. Work with healthcare provider organizations, health systems and other interested organizations (e.g., Ohio Academy of Family Physicians, Ohio State Medical Association, Ohio Hospital Association, Ohio Osteopathic Association, Ohio Pharmacists Association, Ohio Dental Association, Prevent Blindness Ohio, Ohio Nurses Association, Ohio Association of Community Health Centers, Rural Health Clinics, Ohio Podiatric Medical Association, etc.) to advocate for:
 - Universal screening of patients to identify risk factors for prediabetes, gestational diabetes and diabetes according to American Diabetes Association clinical guidelines.
 - Diagnose patients based on appropriate ICD-10 coding (e.g., Prediabetes: R73.03) and ensure that the diagnosis is included in the patient's electronic health record.
 - Inform patient of screening results and provide education about the disease process.
 - Expand access and refer patients to community-based organizations, including those in racial and ethnic communities to assist with disease prevention and management (e.g., Diabetes Prevention Program, Diabetes Self-Management Education/Program).

Proposed Cost: Additional program support is needed to assist with implementation of strategies and activities related to establishing systemic approaches for screening, testing and referring patients.

Recommendation 8: Disseminate data about disparities between population groups across the diabetes spectrum.

Action Steps:

1. Ensure all future diabetes work by Ohio Diabetes Action Plan agencies includes a focus on disparate populations.
2. Promote the use of culturally competent diabetes programming and resources to all partners and stakeholders.

Proposed Cost: Additional program support is needed to assist with implementation of strategies and activities to reduce disparities across the diabetes spectrum.

Next Steps

MONITORING GOALS AND REPORTING PROGRESS

The Ohio Diabetes Action Plan Committee will:

- Meet at least quarterly to provide agency updates, discuss progress and status of the recommendations in the 2018 Ohio Diabetes Action Plan, and identify collaborative efforts to reduce the burden of diabetes in Ohio.
- Develop benchmarks to measure progress toward achieving report outcomes, and establish a system to monitor progress.
- Report on benchmarks towards achieving outcomes in the 2018 Ohio Diabetes Action Plan.

FUTURE CONSIDERATIONS

- Continue to align diabetes prevention and management activities with other federal, state and local priorities, e.g., Centers for Disease Control and Prevention-funded programs, State Health Improvement Plan, Ohio Diabetes Prevention Action Plan, Community Health Improvement Plans and Hospital Community Benefit Plans.
- Consider adding obesity, healthy eating and active living data and recommendations in the 2020 Ohio Diabetes Report to emphasize the needed focus on implementing primary prevention activities to prevent diabetes.
- Identify and collaborate with other state agencies and stakeholders (e.g., community-based organizations, health insurance providers, healthcare providers, etc.) on diabetes prevention and management initiatives.
- Collect, analyze and disseminate data that describes the scope of diabetes in Ohio and identifies high-risk and disparate populations.
- Encourage implementation of the recommendations and explore resources to implement action steps.

References

- American Diabetes Association. (2013). Economic Costs of Diabetes in the U.S. in 2012. *Diabetes Care*, 36:1033–1046. Retrieved from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3661824/>
- American Diabetes Association (ADA). (2017). Standards of Medical Care in Diabetes. *Diabetes Care*, 39(1). Retrieved from: https://professional.diabetes.org/sites/professional.diabetes.org/files/media/dc_40_s1_final.pdf
- American Diabetes Association. (2016). The Burden of Diabetes in Ohio. Retrieved from: <http://main.diabetes.org/dorg/PDFs/Advocacy/burden-of-diabetes/ohio.pdf>
- Agency for Healthcare Research and Quality (AHRQ). (2008). National healthcare disparities report. *Rockville, MD*.
- Alliance to Reduce Disparities in Diabetes. (2007). Disparities in Diabetes Prevention and Care. Retrieved from: <https://www.merck.com/corporate-responsibility/docs/access/DisparitiesFACTSHEET.pdf>
- Centers for Disease Control and Prevention. (2013). CDC Health Disparities & Inequalities Report (CHDIR). Retrieved from: <https://www.cdc.gov/minorityhealth/chdireport.html>
- Centers for Disease Control and Prevention. (2016). Data and Statistics. Retrieved from: <https://www.cdc.gov/diabetes/data/index.html>
- Centers for Disease Control and Prevention. (2017). Diabetes Prevention IMPACT Toolkit. Retrieved from: https://www.cdc.gov/diabetes/prevention/employers-insurers/manage_costs.html
- Centers for Disease Control and Prevention. (2014). *Diabetes Report Card*, 2014. Atlanta, GA: U.S. Department of Health and Human Services; 2014. Retrieved from: <https://www.cdc.gov/diabetes/pdfs/library/DiabetesReportCard2014.pdf>
- Centers for Disease Control and Prevention. (2016). Diabetes State Burden Toolkit. Retrieved from: <https://nccd.cdc.gov/Toolkit/DiabetesBurden/TotalCost>
- Healthy People 2020. (2017). Diabetes. Retrieved from: <https://www.healthypeople.gov/2020/topics-objectives/topic/diabetes/objectives>
- Health Policy Institute of Ohio. (2017). 2017 Health Value Dashboard. Retrieved from: <http://www.healthpolicyohio.org/2017-health-value-dashboard/>

- Institute of Medicine - Committee on Understanding and Eliminating Racial and Ethnic Disparities in Health Care. (2003). *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*. Washington, DC: National Academies Press.
DOI: 10.17226/12875.
- Jones, C. (2000). Level of Racism: A Theoretic Framework and a Gardner's Tale? *American Journal of Public Health*, vol. 90 (8), pp. 1212-1215.
- Larson, N., & Story, M. (2008). *Food and beverage marketing to children and adolescents: What changes are needed to promote healthy eating habits?* Princeton, NJ: Robert Wood Johnson Foundation.
- Ohio Commission on Minority Health. (2016). Medical Expert Panel on Obesity & Diabetes: White Paper Achieving Equity and Eliminating Obesity and Diabetes Disparities within Racial and Ethnic Populations. Retrieved from:
<http://mih.ohio.gov/Portals/0/Medical%20Expert%20Panel/Diabetes%20White%20Paper%20Version%202.2.pdf>
- Ohio Department of Health (2015). *The Impact of Chronic Disease in Ohio: 2015*. Chronic Disease Epidemiology and Evaluation Section, Bureau of Health Promotion, Ohio Department of Health, 2015.
- Ohio Department of Medicaid. (2017). *Quality Decision Support System (QDSS) 2015 Incurred Medicaid Claims Data*. Office of Health Innovation and Quality, Ohio Department of Medicaid.
- Staats, C., Capatosto, K., Wright, R., Jackson, V. (2016). *State of the Science: Implicit Bias Review*. Retrieved from: <http://kirwaninstitute.osu.edu/researchandstrategicinitiatives/implicit-bias-review/>
- U.S. Health and Human Services. (2015). *Action Plan to Reduce Racial and Ethnic Health Disparities: Implementation Progress Report 2011-2014*. Retrieved from:
<https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=2&lvlid=10>
- World Health Organization (WHO) Diabetes Report 2014 [Fact Sheet]. Retrieved from: <http://www.who.int/mediacentre/factsheets/fs312/en/>

Resources

American Association of Diabetes Educators

- Find a Diabetes Self-Management Education Class Location
Diabetes Self-Management Education classes are available throughout the state. To find a program, access the American Association of Diabetes Educators Diabetes Self-Management Education site to locate the nearest class offering.
Source: <https://nf01.diabeteseducator.org/eweb/DynamicPage.aspx?Site=aade&WebCode=DEAPFindApprovedProgram>

American Diabetes Association

- Find a Diabetes Self-Management Education Class Location
Diabetes Self-Management Education classes are available throughout the state. To find a program, access the American Diabetes Association Diabetes Self-Management Education site to locate the nearest class offering.
Source: https://professional.diabetes.org/erp_list.zip

American Medical Association

- Prevent Diabetes STAT Toolkit
This toolkit can be used to assist in: (1) screening for and identifying patients with prediabetes; (2) referring patients to Diabetes Prevention Programs, and (3) creating a feedback loop to link the patient's progress in the Diabetes Prevention Program back to the provider/practice.
Source: <https://preventdiabetesstat.org/toolkit.html>

Centers for Disease Control and Prevention

- A Practitioner's Guide for Advancing Health Equity: Community Strategies for Preventing Chronic Disease.
This guide provides lessons learned and innovative ideas on how to maximize the effects of policy, systems and environmental improvement strategies—all with the goal of reducing health disparities and advancing health equity.
Source: <https://www.cdc.gov/nccddphp/dch/pdf/HealthEquityGuide.pdf>
- Diabetes Prevention Program: Find a Class Location
Diabetes Prevention Programs are available throughout the state. To find a program, access the Centers for Disease Control and Prevention Diabetes Prevention Program map to locate the nearest class offering.
Source: https://nccd.cdc.gov/DDT_DPRP/Programs.aspx
- Diabetes Prevention Program: Recognition Program Standards and Operating Procedures
The Centers for Disease Control and Prevention established the Diabetes Prevention Recognition Program as part of the National Diabetes Prevention Program. The purpose of the Diabetes Prevention Recognition Program is to recognize organizations that have demonstrated their ability to effectively deliver a proven type 2 diabetes prevention lifestyle intervention. The program standards and

operating procedures describe in detail the Diabetes Prevention Recognition Program standards for type 2 diabetes prevention lifestyle interventions and explains how an organization may apply for, earn and maintain recognition.

Source: <https://www.cdc.gov/diabetes/prevention/pdf/dprp-standards.pdf>

- **Diabetes State Burden Toolkit**

This Centers for Disease Control and Prevention toolkit can be used to report the health, economic and mortality burden of diabetes in Ohio.

Source: <https://nccd.cdc.gov/Toolkit/DiabetesBurden/Home/>

- **National Prediabetes Awareness Campaign**

The American Diabetes Association, the American Medical Association and the Centers for Disease Control and Prevention, in conjunction with the Ad Council, partnered to launch a new creative awareness effort aimed at reducing the incidence of type 2 diabetes. The public service announcements include various media components from TV to print to social media.

Source: <http://prediabetes.adcouncilkit.org/>

- **Obesity Prevalence Maps**

The Obesity Maps depict self-reported obesity prevalence among U.S. adults. This section offers obesity data maps by state and territory.

Source: <https://www.cdc.gov/obesity/data/prevalence-maps.html>

- **Working Together to Manage Diabetes: A Toolkit for Pharmacy, Podiatry, Optometry and Dentistry**

The toolkit shows pharmacy, podiatry, optometry and dentistry practitioners how they can work with each other, as well as with all other members of the healthcare team, such as primary healthcare providers, physician assistants, nurse educators and community health workers, to promote better outcomes for people with diabetes.

Source: <https://www.cdc.gov/diabetes/ndep/pdfs/ppod-guide.pdf>

County Health Rankings and Roadmaps

- **2017 State Report – Ohio**

The County Health Rankings help counties understand what influences the health of residents and how long they will live. The Rankings also have the ability to measure the current overall health of every county in Ohio along with looking at a variety of measures that affect the future health of communities, such as access to healthy foods, obesity and rates of smoking.

Source: http://www.countyhealthrankings.org/sites/default/files/state/downloads/CHR2017_OH.pdf

Health Policy Institute of Ohio

- **Beyond Medical Care Fact Sheet: Preventing Type 2 Diabetes**

Although genes and aging play strong roles in the development of type 2 diabetes, environmental conditions and health behaviors also contribute. Many cases of type 2 diabetes, therefore, can be prevented, and this fact sheet covers how Ohio can improve health value and health equity around the disease.

Source: <http://www.healthpolicyohio.org/wp-content/uploads/2015/09/Beyond-DiabetesFactSheet-Final.pdf>

- Health Value Dashboard – 2017

The Health Value Dashboard is a tool to track Ohio's progress towards health value—a composite measure of Ohio's performance on population health outcomes and healthcare spending. The Dashboard examines Ohio's performance relative to other states, tracks change over time and examines Ohio's greatest health disparities and inequities.

Source: <http://www.healthpolicyohio.org/2017-health-value-dashboard/>

National Association of Chronic Disease Directors

- National Diabetes Prevention Program Coverage Toolkit

The National Diabetes Prevention Program Coverage Toolkit contains resources and information on topics such as contracting, delivery, billing and coding, and data and reporting that are designed to support health insurance plans, employers and state Medicaid agencies in making the decision to cover the National Diabetes Prevention Program.

Source: <http://www.nationaldppcoveragetoolkit.org/>

National Diabetes Education Program

- Guiding Principles for the Care of People with or At-Risk for Diabetes

These guiding principles aim to identify and synthesize areas of general agreement among existing guidelines to help guide primary care providers and healthcare teams to deliver quality care to adults with or at risk for diabetes. No evidence-based guidelines have been developed for this resource.

Source: <https://www.niddk.nih.gov/health-information/communication-programs/ndep/health-professionals/guiding-principles-care-people-risk-diabetes>

National Partnership for Action

- National Stakeholder Strategy for Achieving Health Equity

This strategy provides a common set of goals and objectives for public and private sector initiatives and partnerships to help racial and ethnic minorities, and other underserved groups, reach their full potential.

Source: <https://minorityhealth.hhs.gov/npa/templates/content.aspx?lvl=1&lvlid=33&ID=286>

Ohio Commission on Minority Health

- Medical Expert Panel on Obesity and Diabetes White Paper: Achieving Equity and Eliminating Obesity and Diabetes Disparities within Racial and Ethnic Populations

The Ohio Commission on Minority Health's White Paper offers insights and recommendations to address diabetes and obesity in Ohio with the goal of achieving health equity. The Ohio Commission on Minority Health Medical Expert Panel on Obesity and Diabetes sought to influence the thinking, actions and policies which function to transcend the status quo of unacceptable high incidence and prevalence rates of these diseases.

Source: <http://www.mih.ohio.gov/Portals/0/Medical%20Expert%20Panel/Diabetes%20White%20Paper%20Version%202.2.pdf>

Ohio Department of Health

- Gestational Diabetes

This Ohio Department of Health website includes information on gestational diabetes, data and statistics about gestational diabetes in Ohio, and descriptions about current efforts to combat the burden of gestational diabetes in Ohio.

Source: <http://www.odh.ohio.gov/health/diabetes/gdm/gestational.aspx>

- Ohio Gestational Diabetes Postpartum Care Learning Collaborative

The Ohio Gestational Diabetes Mellitus Collaborative is a resource for consumers (pregnant women or women who have previously had gestational diabetes) and clinical providers. For providers, it includes clinical tools, patient education resources, office resources and links to presentations and reports. For consumers, it includes information and resources regarding management of gestational diabetes and prevention of type 2 diabetes. Consumer information is provided in both English and Spanish at a 4th grade reading level.

Source: <http://www.OhioGDM.com>

- Ohio's Plan to Prevent and Reduce Chronic Disease: 2014-2018

The Chronic Disease Plan is a five-year, priority driven guide to prevent and reduce chronic disease in Ohio. It includes cross-cutting objectives to impact the policies, systems and environments influential to chronic disease outcomes and behavior change.

Source: <http://www.healthy.ohio.gov/-/media/ODH/ASSETS/Files/health/Chronic-Disease-Plan/State-Plan.pdf?la=en>

- State Health Improvement Plan

The State Health Improvement Plan takes a comprehensive approach to improving Ohio's greatest health challenges by identifying cross-cutting factors that impact multiple outcomes, including prediabetes. This approach is built upon the understanding that access to quality health care is necessary, but not sufficient, for good health. The State Health Improvement Plan is designed to implement strategies that address the social determinants of health and health behaviors, as well as approaches that strengthen the connections between healthcare systems, public health, community-based organizations and sectors beyond health.

Source: http://www.odh.ohio.gov/-/media/ODH/ASSETS/Files/chss/ship/SHIP_02072017.pdf?la=en

Ohio Department of Medicaid

- Managed Care Provider Agreement

Ohio Medicaid contracts with Managed Care Plans to provide quality health care to many Ohio Medicaid consumers. The following is the Ohio Medicaid Managed Care Provider Agreement. In Appendices M and O in particular, various performance measures are outlined, specifically measures related to diabetes.

Source: <http://www.medicaid.ohio.gov/PROVIDERS/ManagedCare/ProgramResourceLibrary/CombinedProviderAgreement.aspx>

- Quality Strategy and Measures

The Quality Strategy is grounded on three primary pillars: delivering better care, contributing to healthy people and healthy communities, and practicing best-evidence medicine across the care continuum. This resource outlines various Ohio Department of Medicaid initiatives that are helping Ohio Medicaid to achieve its goals and continue to reform the healthcare landscape across Ohio.

Source: <http://www.medicaid.ohio.gov/MEDICAID101/QualityStrategyandMeasures.aspx>

The Endocrine Society

- Hypoglycemia Quality Collaborative Strategic Blueprint

This blueprint is a resource to increase awareness of hypoglycemia and promote activities to reduce its incidence.

Source: http://endocrinenews.endocrine.org/wp-content/uploads/HQC_Strategic_Blueprint_VIEW.pdf

The State of Obesity

- Diabetes in the United States (2016)

These data raise awareness about the seriousness of the diabetes epidemic.

Source: <https://stateofobesity.org/diabetes>

U.S. Department of Health and Human Services Office of Minority Health

- The National Standards for Culturally and Linguistically Appropriate Services

The National Standards for Culturally and Linguistically Appropriate Services aim to improve healthcare quality and advance health equity by establishing a framework for organizations to serve the nation's increasingly diverse communities.

Source: <https://www.thinkculturalhealth.hhs.gov/assets/pdfs/EnhancedNationalCLASStandards.pdf>

U.S. Preventive Services Task Force

- Abnormal Blood Glucose and Type 2 Diabetes Mellitus: Screening

The U.S. Preventive Services Task Force makes recommendations about the effectiveness of specific clinical preventive services for patients without related signs or symptoms. It bases its recommendations on screening type 2 diabetes on the evidence of both the benefits and harms of the service and an assessment of the balance.

Source: <https://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/screening-for-abnormal-blood-glucose-and-type-2-diabetes>

Appendices

Appendix A: ACRONYM LIST

Acronym List	
AAA	Area Agencies on Aging
AADE	American Association of Diabetes Educators
ACA	Affordable Care Act
ADA	American Diabetes Association
AMA	American Medical Association
AT Plan	Ohio Active Transportation Emphasis Area Plan
BRFSS	Behavioral Risk Factor Surveillance System
BMI	Body Mass Index
CDC	Centers for Disease Control and Prevention
CHC	Creating Healthy Communities
CHIP	Community Health Improvement Plan
CHW	Community Health Worker
CI	Confidence Interval
CMS	Centers for Medicare and Medicaid Services
CPC	Comprehensive Primary Care
CPCD	Communities Preventing Chronic Disease
CQM	Clinical Quality Measures
DAP	Diabetes Action Plan
DAS	Department of Administrative Services
DIP	Diabetes Intervention Program
DPP	National Diabetes Prevention Program
DSME	Diabetes Self-Management Education
DSMP	Diabetes Self-Management Program
EMR/EHR	Electronic Medical Record/Electronic Health Record
FQHC	Federally Qualified Health Center
FVRx	Fruit and Vegetable Prescription
GDM	Gestational Diabetes Mellitus
HbA1c	Hemoglobin A1c
HEDIS	Healthcare Effectiveness Data and Information Set
HELP	Health Empowerment Lifestyle Program
HLC - GHA	Healthy Lucas County – Good Health For All
ICD	International Classification of Diseases
ICU	Intensive Care Unit
IOM	Institute of Medicine
IS	Implementation Strategies
LHD	Local Health Department

LMS	Learning Management System
MCOP	MyCare Ohio Plan
MCP	Managed Care Plan
MMO	Medical Mutual of Ohio
MTHSS	Murtis Taylor Human Services System
MTM	Medication Therapy Management
NACDD	National Association of Chronic Disease Directors
NCQA	National Center for Quality Assurance
NHDR	National Health Disparities Report
OACHC	Ohio Association of Community Health Centers
OAFP	Ohio Academy of Family Physicians
OCMH	Ohio Commission on Minority Health
ODA	Ohio Department of Aging
ODH	Ohio Department of Health
ODM	Ohio Department of Medicaid
ODOT	Ohio Department of Transportation
OHIP	Ohio Health Information Partner
OHIW	Office of Health Improvement and Wellness
OPERS	Ohio Public Employees Retirement System
PCMH	Patient-Centered Medical Home
PICH	Partnership in Community Health
PPHF	Prevention and Public Health Fund
PPO	Preferred Provider Organization
PSA	Public Service Announcement
QDSS	Quality Decision Support System
QI	Quality Improvement
QIP	Quality Improvement Project
REEP	Research and Evaluation Enhancement Program
ROI	Return on Investment
SFY	State Fiscal Year
SHA	State Health Assessment
SHIP	State Health Improvement Plan
TPA	Third Party Administrator
UHC	United Health Care
WIC	Women, Infants and Children

APPENDIX B: DIABETES ACTION PLAN COMMITTEE REPRESENTATIVES

The following individuals participated in the preparation of this report:

Ohio Department of Health

Mary Kate Francis, MD, Assistant Medical Director
Shancie Jenkins, MBA, Chief, Office of Health Improvement and Wellness
Ann Weidenbenner, MS, RDN, LD, Primary Prevention and Chronic Disease Manager
Michele Shough, Chronic Disease Director
Holly Sobotka, MS, Chronic Disease Epidemiology and Evaluation Manager
Liz Curry, MS, RD, LD, Diabetes Coordinator
Beth Conrey, PhD, RD, State MCH Epidemiologist, CDC Senior Epidemiology Assignee
Nicole Smith, MPH, CHES, Program Consultant, Communities Preventing Chronic Disease
Meredith Baker, BSN, RN, CHC, Public Health Nurse Specialist
Carrie Hornbeck Fox, MPH, Epidemiology Investigator
Ryan Frick, MPH, Epidemiology Investigator
Justina Moore, MPH, Ohio Behavioral Risk Factor Surveillance System Coordinator
Lori Deacon, Family Health Services Administrator
Jessica Crews, Director of Government Affairs
Sydney King, Stakeholder Liaison, Government Affairs

Ohio Department of Medicaid

Donald Wharton, MD, Assistant Medical Director
Adriana Pust, MSSA, CPM, CQIA, Supervisor, Performance Improvement
Kristen Kleman, MPH, Health Research and Quality Manager
Windy Richlen, MA, Performance Improvement Manager
Bryan Stout, Legislative Liaison

Ohio Department of Administrative Services

Tony Bonofiglio, Deputy Director of Benefits Administration Services
Jamie Nedved, Benefits Management Analyst
Greg Pawlack, Benefits Manager
Zach Prouty, Director of Legislative Affairs

Ohio Commission on Minority Health

Angela Dawson, Executive Director
Reina Sims, MSA, Program Manager
Amy Kaufholz Elbaor, MPA, Program Specialist

APPENDIX C: DIABETES ACTION PLAN STAKEHOLDERS

The following organizations/individuals provided feedback on strategies to improve diabetes in Ohio during an external Diabetes Action Plan stakeholder meeting held November 29, 2017:

American Academy of Pediatrics – Ohio

Renee Dickman

American Association of Diabetes Educators

Leslie Andrews

American Diabetes Association

Gary Dougherty

AstraZeneca Pharmaceuticals

Richard Bitonte

Rachael Jones

Central Ohio Diabetes Association

Cathy Paessun

Central Ohio YMCA

Caroline Rankin

National Diabetes Volunteer Leadership Council

Larry Smith

Stewart Perry

Novo Nordisk, Inc.

Anne Berry

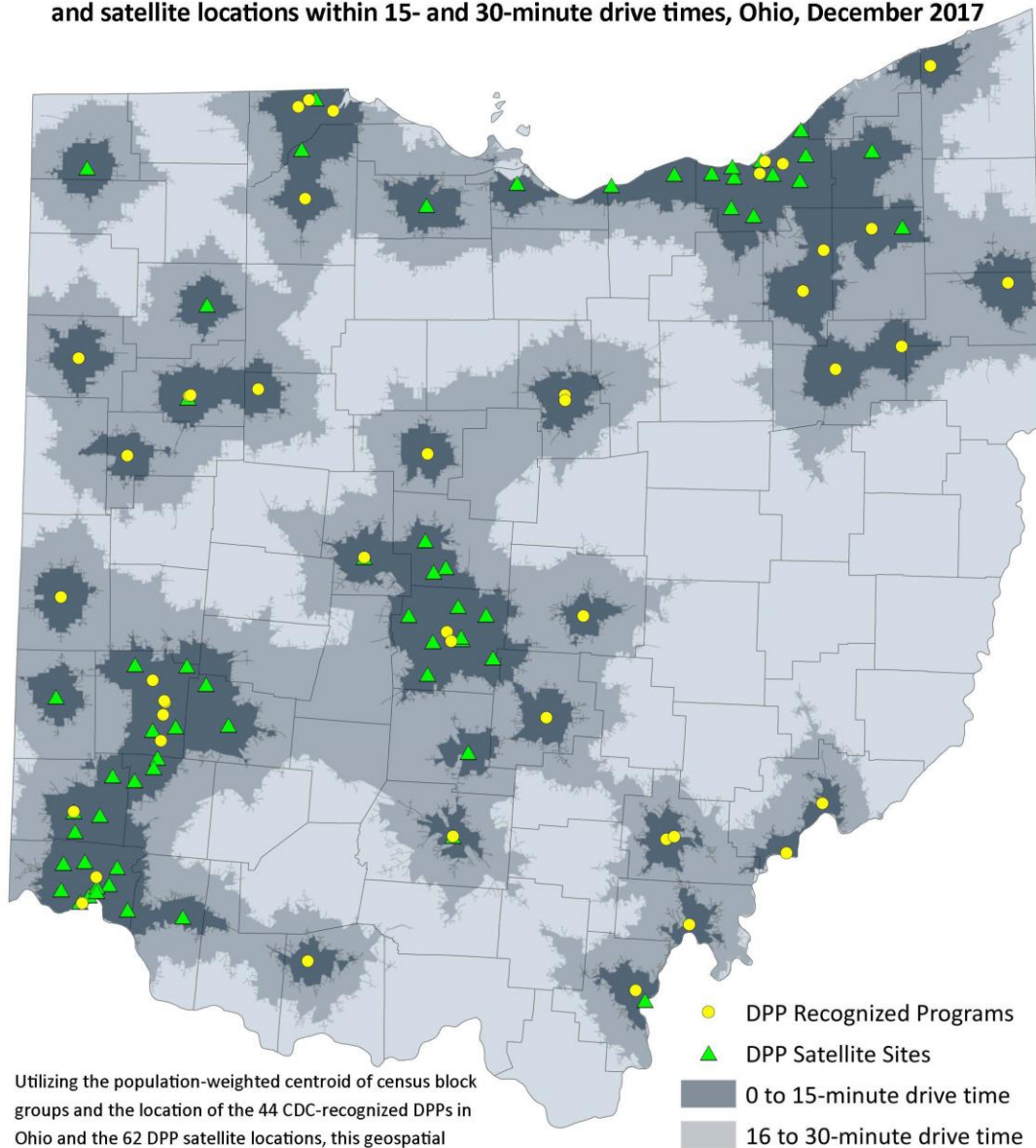
Sara Snow

Ohio Foot and Ankle Medical Association

Jimelle Rumberg

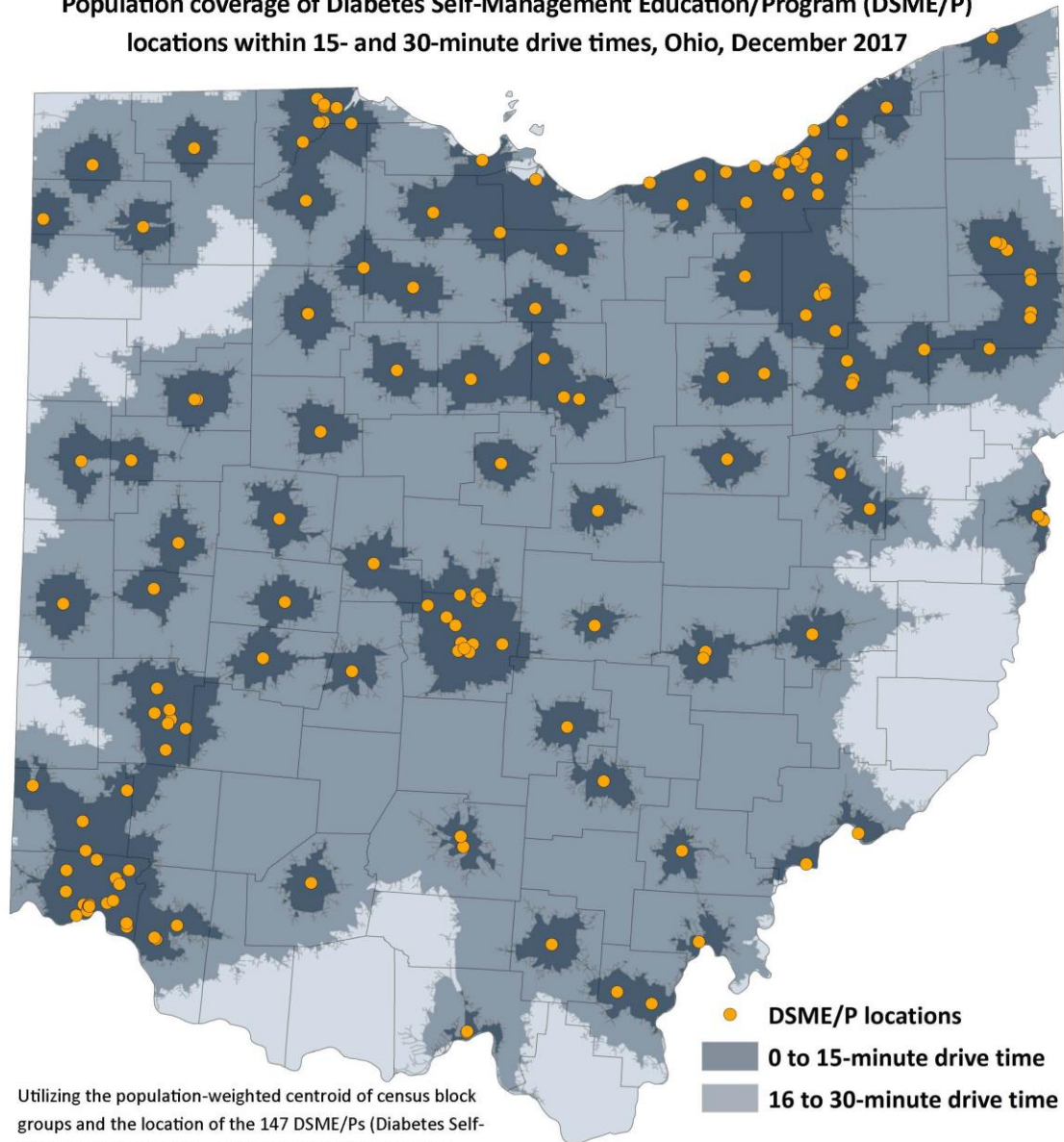
APPENDIX D: DIABETES PREVENTION PROGRAM SITE LOCATIONS BY DRIVE TIME

Population coverage of CDC-recognized Diabetes Prevention Programs (DPP) and satellite locations within 15- and 30-minute drive times, Ohio, December 2017



APPENDIX E: DIABETES SELF-MANAGEMENT EDUCATION/PROGRAM LOCATIONS BY DRIVE TIME

**Population coverage of Diabetes Self-Management Education/Program (DSME/P)
locations within 15- and 30-minute drive times, Ohio, December 2017**



Utilizing the population-weighted centroid of census block groups and the location of the 147 DSME/Ps (Diabetes Self-Management Education or Diabetes Self-Management Program) in Ohio, this geospatial analysis shows that 73.7 percent of Ohioans live within a 15-minute drive of an Ohio DSME/P location. An additional 22.8 percent live within a 16 to 30-minute drive. The current infrastructure of DSME/P providers covers 96.5 percent of Ohioans, leaving nearly 400,000 people without ready access to these services.



Source: American Diabetes Association, American Association of Diabetes Educators and Ohio Department of Health Stanford DSMP providers as of December 2017; Office of Health Improvement and Wellness, Ohio Department of Health, 2017.

APPENDIX F: OHIO MEDICAID DIABETES CODES

Diabetes Codes (ICD-9, ICD-10 and Therapeutic Drug Class) for Medicaid Fee for Service and Managed Care Claims

ICD-9 Codes	Description
249	Secondary Diabetes Mellitus (DM)
250	DM
790.2	Abnormal Glucose
V5867	Long-Term Insulin Use (current)
64800 - 64804	DM of Mother Complicating Pregnancy
64880 - 64884	Abnormal Glucose of Mother Complicating Pregnancy
7750 - 7751	Neonatal DM
3620	Diabetic Retinopathy
366.41	Diabetic Cataract
357.2	Polyneuropathy in DM
ICD-10 Codes	Description
E08	DM Due to Underlying Condition
E09	Drug or Chemical Induced DM
E10	Type 1 DM
E11	Type 2 DM
E13	Other Specified DM
Z794	Long-Term Insulin Use (current)
R73.0	Abnormal Glucose
R73.9	Hyperglycemia
O240 - O2433	Pre-existing DM During Pregnancy
O244 - O24439	Gestational DM
O248 - O2483	Other Pre-existing DM in Pregnancy/Childbirth
O249 - O2493	Unspecified DM in Pregnancy
P700 - P702	Neonatal DM
O99810 - O99815	Abnormal Glucose Complicating Pregnancy, Childbirth, etc.
Therapeutic Drug Class Codes	Description
C4A - C4X	Diabetes Treatment Codes

APPENDIX G: ADDITIONAL COUNTY-LEVEL DATA

Table A1. Average Annual Number of Diabetes Deaths and Rates per 100,000 by County, Ohio, 2015

County	Average Deaths per Year	Rate
Adams	20	27.1
Allen	82	31.7
Ashland	38	25.9
Ashtabula	79	29.3
Athens	27	22.8
Auglaize	32	25.4
Belmont	79	39.8
Brown	21	17.6
Butler	219	27.2
Carroll	24	29.1
Champaign	26	25.6
Clark	115	31.1
Clermont	110	24.1
Clinton	30	32.4
Columbiana	95	33.2
Coshocton	18	17.8
Crawford	49	40.1
Cuyahoga	768	22.9
Darke	25	17.0
Defiance	24	23.9
Delaware	37	9.8
Erie	63	28.9
Fairfield	89	25.6
Fayette	21	29.4
Franklin	596	26.1
Fulton	33	28.9
Gallia	27	34.6
Geauga	42	15.2
Greene	92	23.0
Guernsey	32	31.4
Hamilton	483	25.8
Hancock	47	24.4
Hardin	16	21.1
Harrison	16	35.3
Henry	22	28.0
Highland	30	26.4
Hocking	15	19.2
Holmes	16	18.4
Huron	51	35.5
Jackson	39	49.2
Jefferson	71	35.5
Knox	36	22.2
Lake	117	18.0
Lawrence	61	37.4

County	Average Deaths per Year	Rate
Licking	134	32.0
Logan	35	32.0
Lorain	181	22.4
Lucas	271	26.3
Madison	40	41.2
Mahoning	163	23.0
Marion	71	43.2
Medina	83	19.7
Meigs	28	43.8
Mercer	32	29.0
Miami	58	21.9
Monroe	20	43.7
Montgomery	363	26.0
Morgan	15	37.4
Morrow	12	14.6
Muskingum	52	23.4
Noble	11	19.5
Ottawa	17	14.3
Paulding	15	30.1
Perry	17	21.0
Pickaway	32	24.6
Pike	13	17.3
Portage	91	24.8
Preble	23	20.2
Putnam	16	18.9
Richland	91	27.5
Ross	62	33.9
Sandusky	49	31.7
Scioto	55	26.5
Seneca	35	24.9
Shelby	30	24.9
Stark	270	25.8
Summit	362	25.8
Trumbull	140	23.2
Tuscarawas	76	28.8
Union	23	21.6
Van Wert	26	34.1
Vinton	12	39.4
Warren	58	12.5
Washington	52	29.0
Wayne	91	32.3
Williams	44	42.3
Wood	61	20.6
Wyandot	16	25.6

Source: Bureau of Vital Statistics, Ohio Department of Health, 2017.

Table A2. Diabetes Cases, Prevalence, Inpatient Hospital Admissions and Emergency Department Visits among Medicaid Beneficiaries, Ohio, 2015

County	Cases	Prevalence	Inpatient Hospital Admissions	Emergency Department Visits
Adams	1,628	13.1%	244	542
Allen	3,170	9.8%	700	2,185
Ashland	1,195	9.8%	170	589
Ashtabula	3,659	10.5%	543	1,473
Athens	2,147	12.0%	295	1,289
Auglaize	802	8.7%	95	396
Belmont	2,202	11.1%	417	917
Brown	1,548	9.7%	238	851
Butler	9,449	9.4%	2,498	6,534
Carroll	719	9.5%	88	286
Champaign	1,004	9.6%	180	693
Clark	4,786	9.4%	1,389	3,955
Clermont	4,164	8.9%	1,119	2,019
Clinton	1,339	9.6%	339	1,030
Columbiana	3,674	10.9%	972	2,008
Coshocton	1,217	9.5%	144	992
Crawford	1,394	9.4%	219	447
Cuyahoga	47,613	10.4%	13,105	30,802
Darke	1,179	9.6%	160	875
Defiance	1,037	10.0%	166	665
Delaware	1,627	8.2%	348	1,203
Erie	2,082	9.6%	372	2,662
Fairfield	3,474	8.6%	519	1,909
Fayette	1,311	11.4%	201	655
Franklin	35,857	9.0%	10,382	29,944
Fulton	865	9.2%	192	433
Gallia	1,475	12.1%	283	1,230
Geauga	899	8.3%	183	314
Greene	3,258	9.6%	818	2,825
Guernsey	1,502	10.2%	240	978
Hamilton	25,010	9.6%	7,024	17,937
Hancock	1,794	10.3%	289	922
Hardin	836	9.6%	169	527
Harrison	548	11.0%	56	211
Henry	505	8.1%	90	255
Highland	1,749	10.4%	246	1,018
Hocking	1,292	11.6%	158	425
Holmes	531	9.5%	88	413
Huron	1,506	8.4%	217	1,145
Jackson	1,732	12.6%	223	1,031
Jefferson	2,594	10.9%	546	2,097
Knox	1,414	8.3%	204	703
Lake	4,030	8.6%	876	2,284
Lawrence	3,102	12.6%	513	2,516

Source: Ohio Department of Medicaid; Quality Decision Support System – May 2017.

Table A2, continued. Diabetes Cases, Prevalence, Inpatient Hospital Admissions and Emergency Department Visits among Medicaid Beneficiaries, Ohio, 2015

County	Cases	Prevalence	Inpatient Hospital Admissions	Emergency Department Visits
Licking	3,776	8.2%	667	2,356
Logan	1,096	8.8%	200	495
Lorain	7,983	9.6%	2,126	5,849
Lucas	17,353	10.7%	5,717	12,925
Madison	970	9.8%	268	844
Mahoning	9,656	11.8%	2,100	5,380
Marion	2,336	9.8%	378	2,223
Medina	2,090	7.9%	507	1,449
Meigs	1,268	12.6%	152	858
Mercer	630	9.0%	95	378
Miami	2,446	10.6%	412	1,205
Monroe	436	9.9%	54	187
Montgomery	18,801	10.2%	5,009	12,622
Morgan	623	11.3%	96	329
Morrow	927	9.1%	152	628
Muskingum	3,377	9.8%	501	2,717
Noble	320	9.2%	39	176
Ottawa	851	9.9%	210	519
Paulding	540	10.8%	60	340
Perry	1,404	10.2%	167	607
Pickaway	1,432	9.1%	281	1,489
Pike	1,782	13.4%	237	952
Portage	3,071	8.9%	698	1,804
Preble	1,053	9.2%	138	502
Putnam	558	10.0%	85	340
Richland	3,848	9.4%	673	2,918
Ross	3,202	11.0%	442	1,931
Sandusky	1,536	9.1%	238	872
Scioto	4,636	13.6%	739	1,465
Seneca	1,570	10.1%	248	1,110
Shelby	951	8.2%	139	466
Stark	10,403	9.5%	2,269	7,611
Summit	14,595	9.2%	3,971	12,844
Trumbull	7,212	10.9%	1,778	3,989
Tuscarawas	2,478	10.0%	296	2,127
Union	766	8.5%	137	568
Van Wert	687	9.6%	121	502
Vinton	740	12.2%	105	366
Warren	2,969	9.0%	664	1,986
Washington	2,328	13.2%	381	2,055
Wayne	2,394	9.2%	486	1,899
Williams	968	9.5%	151	579
Wood	2,253	9.8%	521	1,223
Wyandot	528	10.5%	52	214

Source: Ohio Department of Medicaid; Quality Decision Support System – May 2017.

