



Kansas
Diabetes
Prevention and Management Programs



KANSAS DIABETES REPORT 2022

A Report to the Kansas Legislative
Coordinating Council in Accordance
with K.S.A. 65-1,122

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Acknowledgements

Janet Stanek

Acting Secretary of Kansas Department of Health and Environment

Ashley Goss

Deputy Secretary of Public Health at Kansas Department of Health and Environment

Ryan Lester, MPH

Bureau Director, Health Promotion at Kansas Department of Health and Environment

Contributors

Kansas Department of Health and Environment

Farah S. Ahmed, MPH, PhD

Mende Barnett, MAOL

Steven Michael Corbett, PhD

Carol Cramer

Jana Farmer, MBA, CPC

Lainey Faulkner, CPTA

Lindsay Gray

Philip Harris, MA, CHES®

Shannon R. Metz, MPH

Thad Powell

Julie F. Sergeant, PhD

Meredith Slan

Amy D. Turcotte, MS

Ruth Werner, APRN, MN

American Diabetes Association

Charlene Wallace, MBA

Veronica De La Garza, JD

Haskell Indian Health Center-Wellness Center

Damon Jacobs, PhD

Kansas Community Health Worker Coalition

Alissa Rankin, MPH, CHES®

Kansas Pharmacists Association

Aaron Dunkel

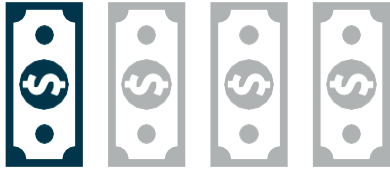
Medical Society of Sedgwick County

Justin Moore, MD, FACP

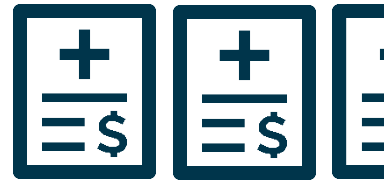
Matt Thibault, MEd

Executive Summary

Diabetes is Costly



One dollar out of every four in US health care costs is spent on caring for people with diabetes.¹



People with diagnosed diabetes, on average, have **medical expenditures about 2.3 times higher** than what expenditures would be in the absence of diabetes.²

\$2.4 billion annually

According to the American Diabetes Association, **diabetes costs Kansas** approximately **2.4 billion dollars** in direct medical expenses and indirect costs (loss of productivity due to diabetes) each year.²



\$46.9 million

State Employee Health Plan spent \$46.9 million total in 2019 on diabetes related claims, an **average \$10,592 per diabetes related claimant**, which represents a 4% increase from 2018.³



\$587 million

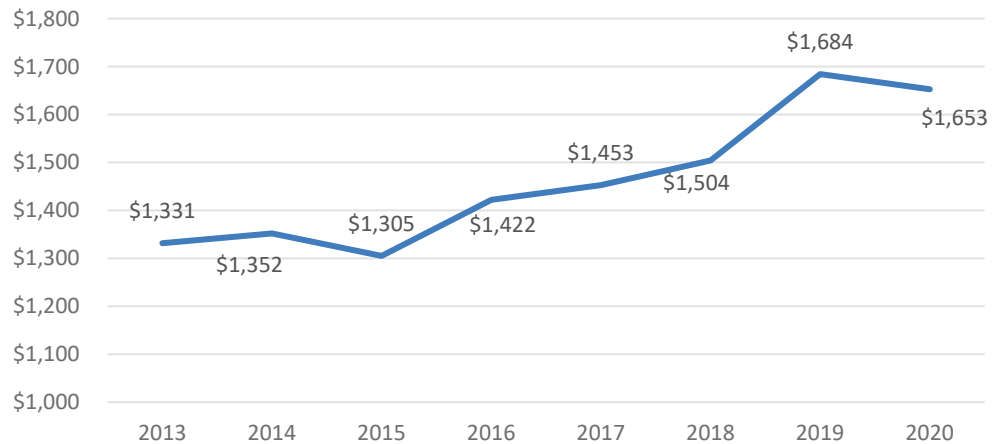
According to the KDHE Division of Health Care Finance, approximately **\$587 million** was spent on all **KanCare costs** associated with 24,703 patients with diabetes in 2020, which is more than **\$23,500 per patient per year**.⁴



4 days

Almost 64,000 Kansans with diabetes were discharged from hospital stays in 2020; with a **median stay of 4 days**.⁵

KanCare Paid Amount per Patient from Diabetes, 2013 - 2020



From 2013 to 2020, the amount paid by KanCare from diabetes has increased by over \$300 per patient. It is possible that the small decrease in 2020 is due to a reduction in individual claims as patients delayed or avoided receiving routine diabetes care during the COVID pandemic.

Source:

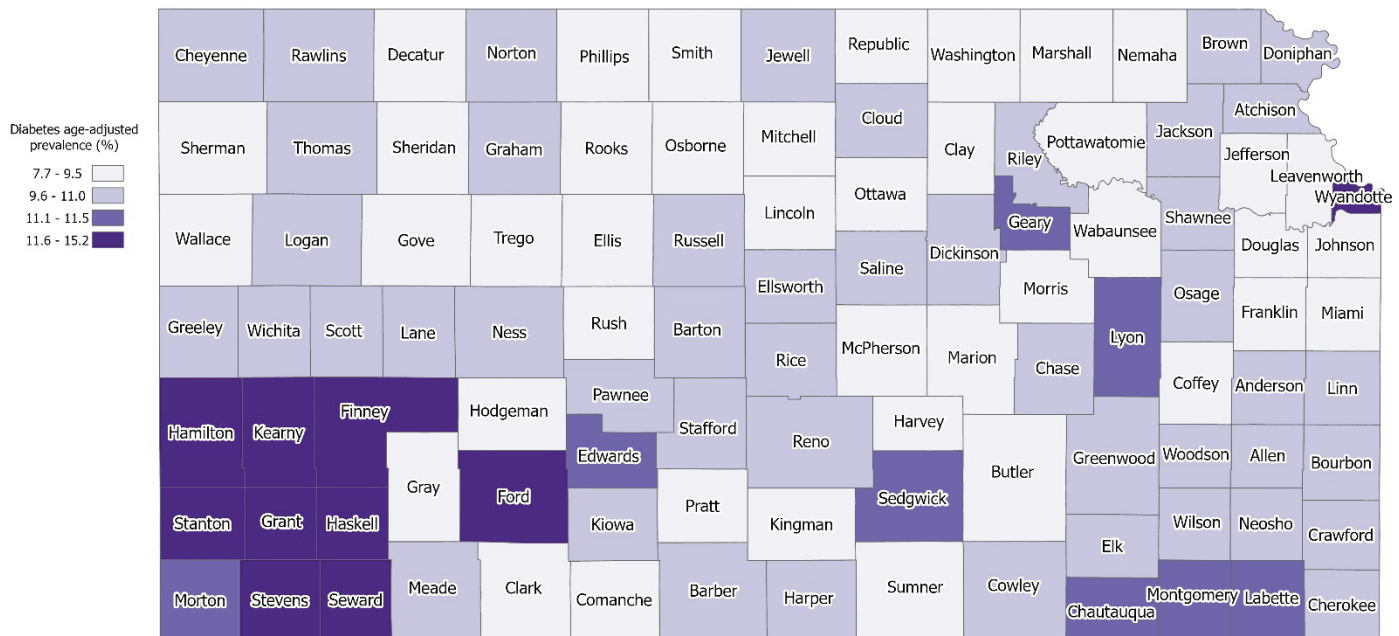
1. American Diabetes Association. Economic costs of diabetes in the US in 2017. Diabetes Care <https://care.diabetesjournals.org/content/early/2018/03/20/dci18-0007>
2. American Diabetes Association. Economic Costs of Diabetes in the U.S. in 2017. Diabetes Care. 2018;41(5):917-928. <https://care.diabetesjournals.org/content/41/5/917>. Accessed November 22, 2019.
3. Kansas Department of Health and Environment, Division of Healthcare Finance, 2019.
4. Kansas Department of Health and Environment, Division of Health Care Finance. All Costs Associated with Individuals with These Diagnoses. 2020.
5. Kansas Hospital Association. Prepared by Kansas Department of Health and Environment, Bureau of Epidemiology and Public Health Informatics.

Diabetes is Common

In 2020, approximately 1 in 9 (11.1%) Kansas adults reported ever being diagnosed with diabetes.¹ That's almost 245,000 Kansans.¹

1.5 million Americans are diagnosed with diabetes every year. In the last 20 years, the number of adults diagnosed with diabetes has more than doubled.²

Estimated Age-Adjusted Prevalence of Diabetes, by County, Kansas



Data sources: The model-based estimates were generated using BRFSS 2019 or 2018, Census 2010 population counts or census county population estimates of 2019 or 2018, and ACS 2015-2019 or ACS 2014-2018. Credit: Centers for Disease Control and Prevention, National Center for Chronic Disease and Health Promotion, Division of Population Health, Atlanta, GA

Based on the American Diabetes Association diabetes risk test, an additional 42.4% of Kansans aged 18 years and older without diabetes are at an increased risk of developing the disease.^{1,3}



Approximately 10.3% of live births in 2019 were to women who experienced gestational diabetes during pregnancy, affecting nearly 3,400 pregnancies that resulted in live births.¹ Both the mother² and infant³ may be at increased risk for developing type 2 diabetes later in life.

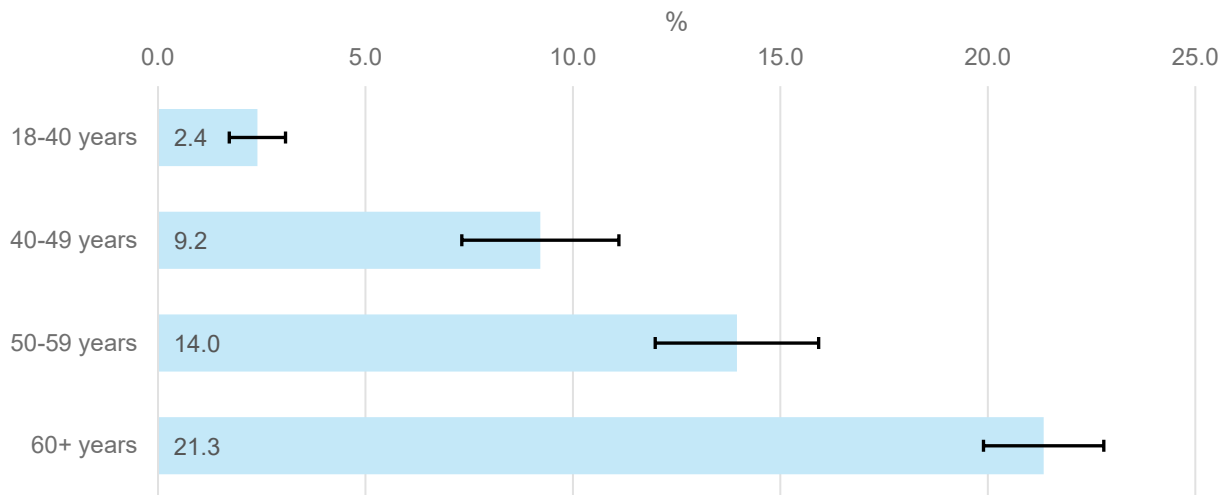
Source:

1. 2020 Kansas Behavioral Risk Factor Surveillance System. Kansas Department of Health and Environment, Bureau of Health Promotion.
2. American Diabetes Association. Statistics about Diabetes. <https://www.diabetes.org/resources/statistics/statistics-about-diabetes> Accessed August 16, 2021.
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Social Determinants of Health

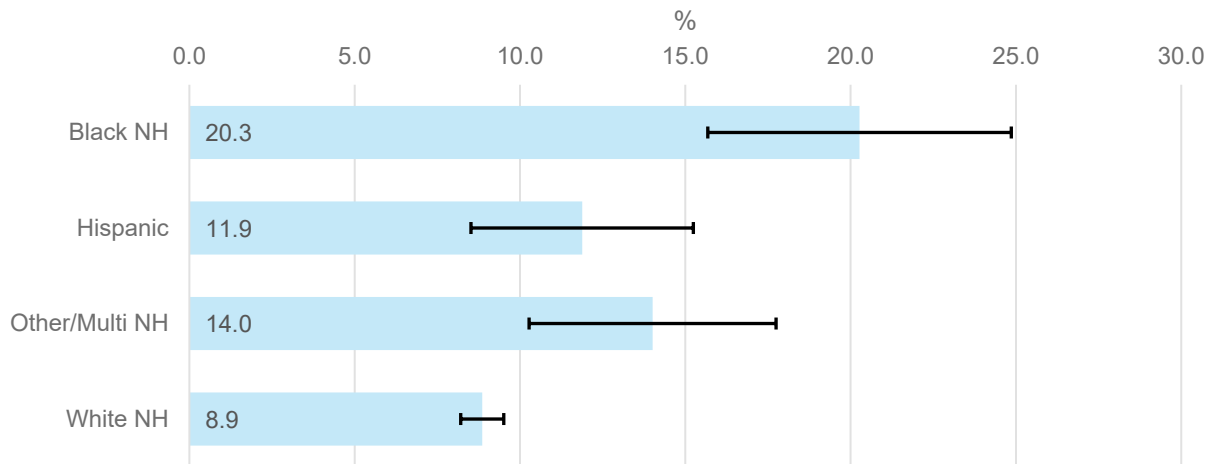
Social Determinants of Health (SDOH) are the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks. Resources that enhance quality of life can have a significant influence on population health outcomes. Examples of these resources include safe and affordable housing, access to education, public safety, availability of healthy foods, local emergency and health services, and environments free of life-threatening toxins. Differences in health are striking in communities with poor SDOH such as unstable housing, low income, unsafe neighborhoods, or substandard education.

Diabetes Prevalence by Age Group



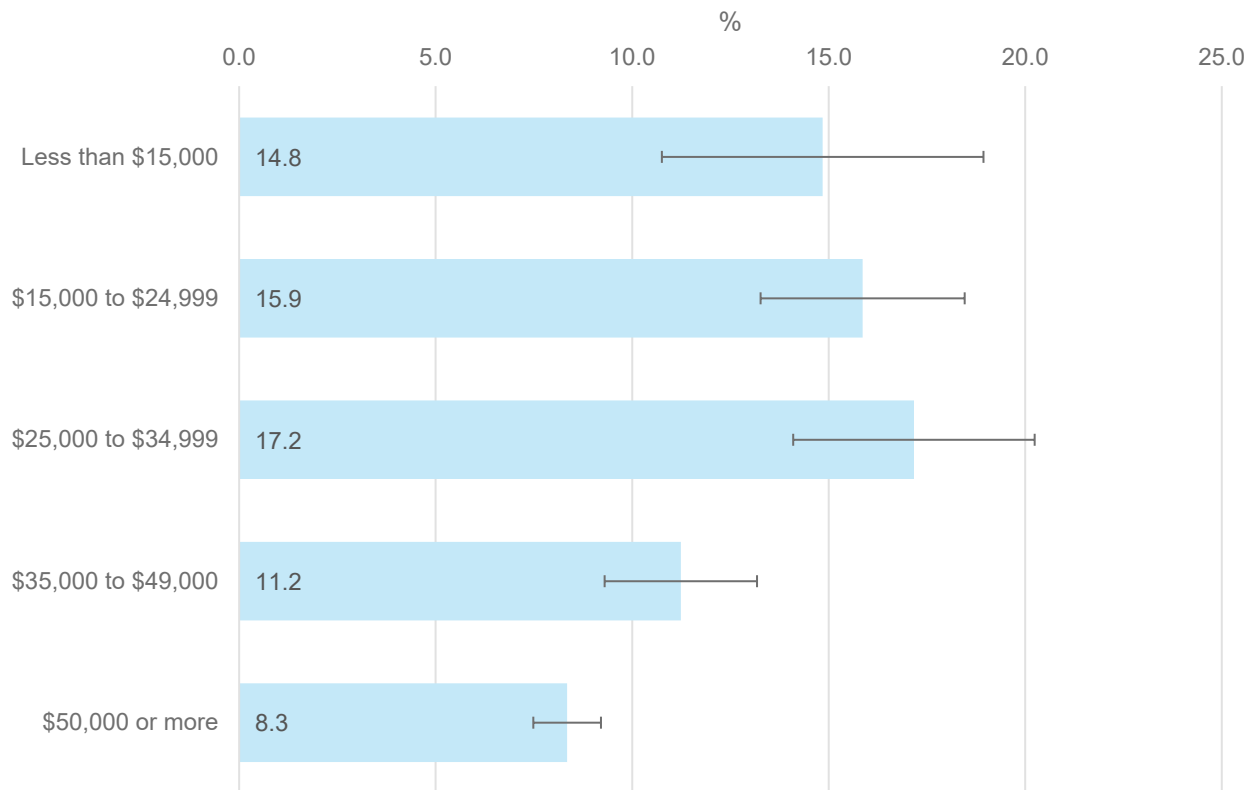
Adults aged 60 years and older are significantly more likely to have diagnosed diabetes than all other age groups.

Prevalence of Diabetes by Race/Ethnicity



Significantly more non-Hispanic black adults have diagnosed diabetes compared to Hispanic and non-Hispanic white adults.

Prevalence of Diabetes by Income Level



Significantly fewer adults with an annual household income of \$50,000 or more have diagnosed diabetes than any other income bracket.

Sources

1. 2017 Kansas Pregnancy Risk Assessment Monitoring System, Kansas Department of Health and Environment.
2. Bellamy L, Casas JP, Hingorani AD, Williams D. Type 2 Diabetes Mellitus After Gestational Diabetes: A Systematic Review and Meta-Analysis. *Lancet*. 2009;373(9677):1773-9.
3. Dabelea D, Mayer-Davis EJ, Lamichhane AP, et al. Association of intrauterine Exposure to Maternal Diabetes and Obesity With Type 2 Diabetes in Youth: The SEARCH Case-Control Study. *Diabetes Care*. 2008;31(7):1422-6.
4. 2020 Kansas Behavioral Risk Factor Surveillance System. Kansas Department of Health and Environment, Bureau of Health Promotion.
5. Centers for Disease Control and Prevention. About Social Determinants of Health. <https://www.cdc.gov/socialdeterminants/about.html>. Accessed December 2, 2021

Diabetes is Serious

Diabetes is the sixth leading cause of death in Kansas.³ People with diabetes are more likely to have serious complications from COVID-19. In general, people with diabetes are more likely to have more severe symptoms and complications when infected with any virus.⁴

2x more likely

Having diabetes increases the risk of all-cause mortality by nearly two-fold.²



In 2020, diabetes is listed as the contributing cause of death for 3,267 deaths in Kansas.¹



The age-adjusted diabetes mortality rate for diabetes as the contributing cause of death has increased significantly from 61.1 deaths per 100,000 people in 2010 to 89.7 deaths per 100,000 people in 2020.³

The five-year age-adjusted diabetes mortality rates (2016-2020), when diabetes listed as contributing cause of death¹:



1.6 times higher among men as compared to women.



Nearly twice as high among non-Hispanic African Americans as compared to non-Hispanic whites.

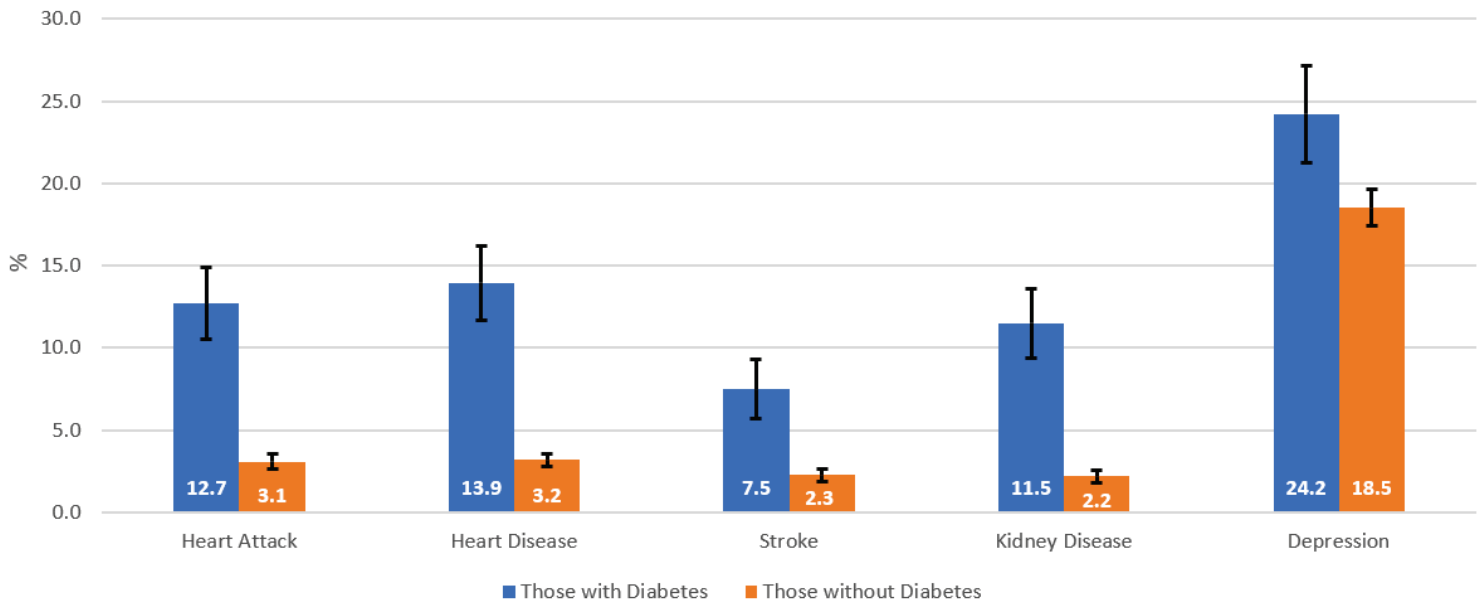


Significantly lower in urban counties (61.0) as compared to frontier (80.9), rural (80.5), densely-settled rural (79.3), and semi-urban counties (84.4).^{**}

*Diabetes mortality rates were age-adjusted to the U.S. 2000 standard population.

**Mortality rate per 100,000 population.

Prevalence of Adverse Health Conditions among Those with Diabetes and Those without Diabetes
in Kansas, 2020

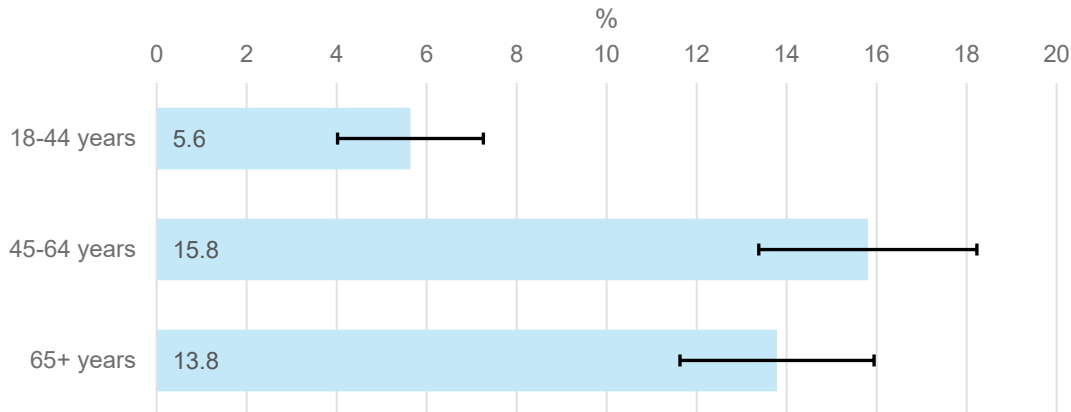


Significantly higher proportions of people with diabetes experience other serious and chronic health conditions than those without diabetes.¹

Prediabetes

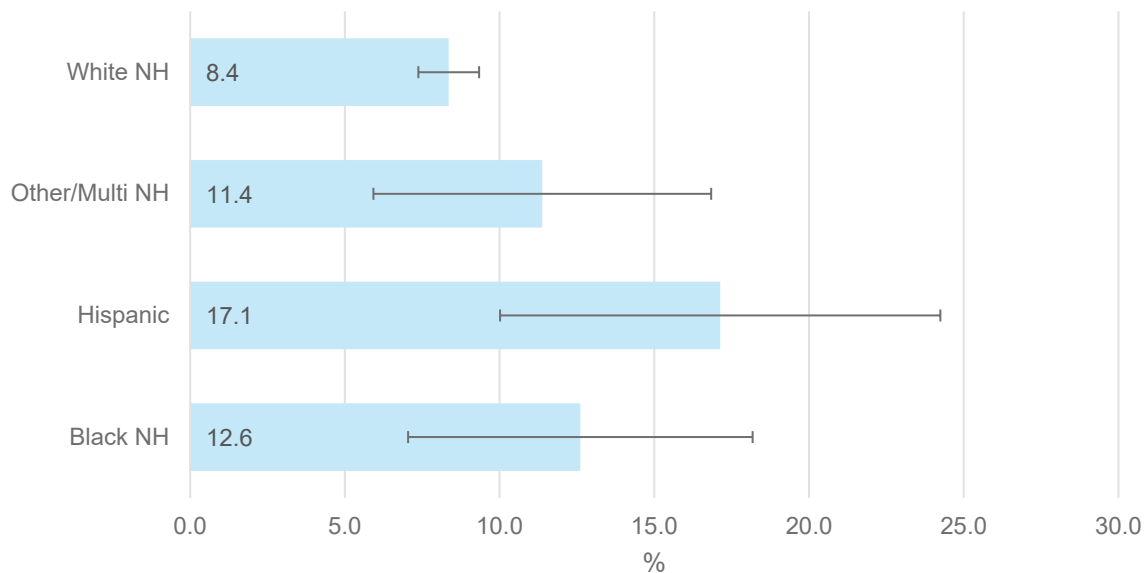
In 2020, 10.2% of Kansas adults aged 18 years and older have ever been diagnosed with prediabetes or borderline diabetes.¹

Prediabetes by Age Group



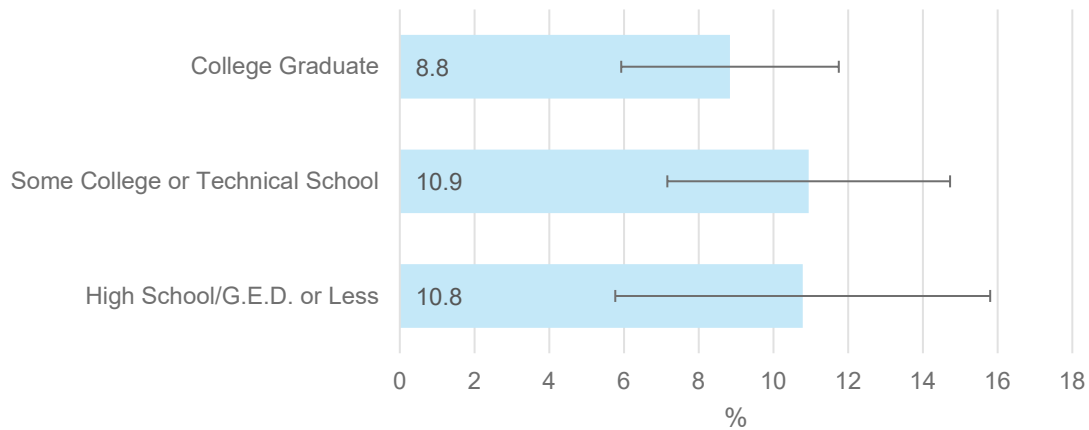
Significantly fewer adults aged 18-44 years have ever been diagnosed with prediabetes compared to older adults.¹

Age-Adjusted Prevalence of Prediabetes by Race/Ethnicity



Significantly more Hispanics have ever had prediabetes compared to non-Hispanic whites.¹

Prediabetes by Education Level



There is no significant difference in prediabetes prevalence by education level.¹

Sources

1. 2020 Kansas Behavioral Risk Factor Surveillance System. Kansas Department of Health and Environment, Bureau of Health Promotion.
2. Rao Kondapally Seshasai S, Kaptoge S, Thompson A, et al. Diabetes mellitus, fasting glucose, and risk of cause-specific death. *N Engl J Med*. 2011 Mar 3;364(9):829-841.
3. Kansas Vital Statistics, Bureau of Epidemiology and Public Health Informatics, Kansas Department of Health and Environment, 2020
4. American Diabetes Association. How COVID-19 Impacts People with Diabetes. <https://www.diabetes.org/coronavirus-covid-19/how-coronavirus-impacts-people-with-diabetes> Accessed December 6, 2021.

Introduction

As set forth by state Statute 65-1,122, the Kansas Department of Health and Environment (KDHE), Bureau of Health Promotion developed a Kansas Diabetes Report. Diabetes and prediabetes place a heavy burden on those with the chronic condition, as well as those who offer support. This 2022 Kansas Diabetes Report describes the burden of diabetes and associated costs, as well as diabetes prevention and control activities across the state. By implementing strategies and achieving goals around prevention and improved management, the public health burden related to diabetes and prediabetes can be reduced. KDHE provides the recommendations in this report with the aim to improve the lives of Kansans through prediabetes and diabetes prevention and management.

Diabetes

Diabetes is a chronic disease in which the body is unable to regulate the blood glucose (sugar) level properly. If diabetes is not managed properly, it can lead to complications including heart attack, stroke, vision loss, kidney disease and limb amputations. There are three types of diabetes: type 1, type 2 and gestational.¹ Although diabetes has no cure, you can take steps to manage it and stay healthy.

Type 1 Diabetes

Type 1 diabetes affects how your body turns food into energy. Insulin is a hormone that acts like a key to let blood sugar into your body's cells to use as energy. Type 1 diabetes is thought to be caused by an autoimmune reaction (the body attacks itself by mistake) that stops your body from making insulin. When there is not enough insulin, too much sugar stays in your blood. Over time, too much sugar in your blood can cause other serious health problems, such as heart disease, vision loss, and kidney disease.² Insulin is necessary for management of type 1 diabetes. For those who need it, lack of access to insulin can very quickly result in severe complications and even death.

Type 2 Diabetes

With type 2 diabetes, your body does not use insulin well and cannot keep blood sugar at normal levels. About 90 to 95% of people with diabetes have type 2.³ It develops over many years and is usually diagnosed in adults, but an increasing number is seen in children and adolescents. Type 2 diabetes can be prevented or delayed with healthy lifestyle changes, such as losing weight, eating healthy food, and being physically active.³

Gestational Diabetes

Gestational diabetes is a form of diabetes that develops during pregnancy. Gestational diabetes can lead to serious health complications for mother and baby, including preeclampsia, premature birth, cesarean delivery, and higher risk of birth injury. Gestational diabetes puts both mother and baby at a higher risk of developing type 2 diabetes later in life.⁴

Prediabetes

Prediabetes is a potentially reversible condition that is a significant risk factor for developing type 2 diabetes.⁵ Prediabetes is a serious health condition where blood sugar levels are higher than normal, but not high enough yet to be diagnosed as type 2 diabetes. In 2020, 10.2% of Kansas adults aged 18 years and older have ever been diagnosed with prediabetes or borderline diabetes.⁶

COVID-19 Impact on Diabetes:

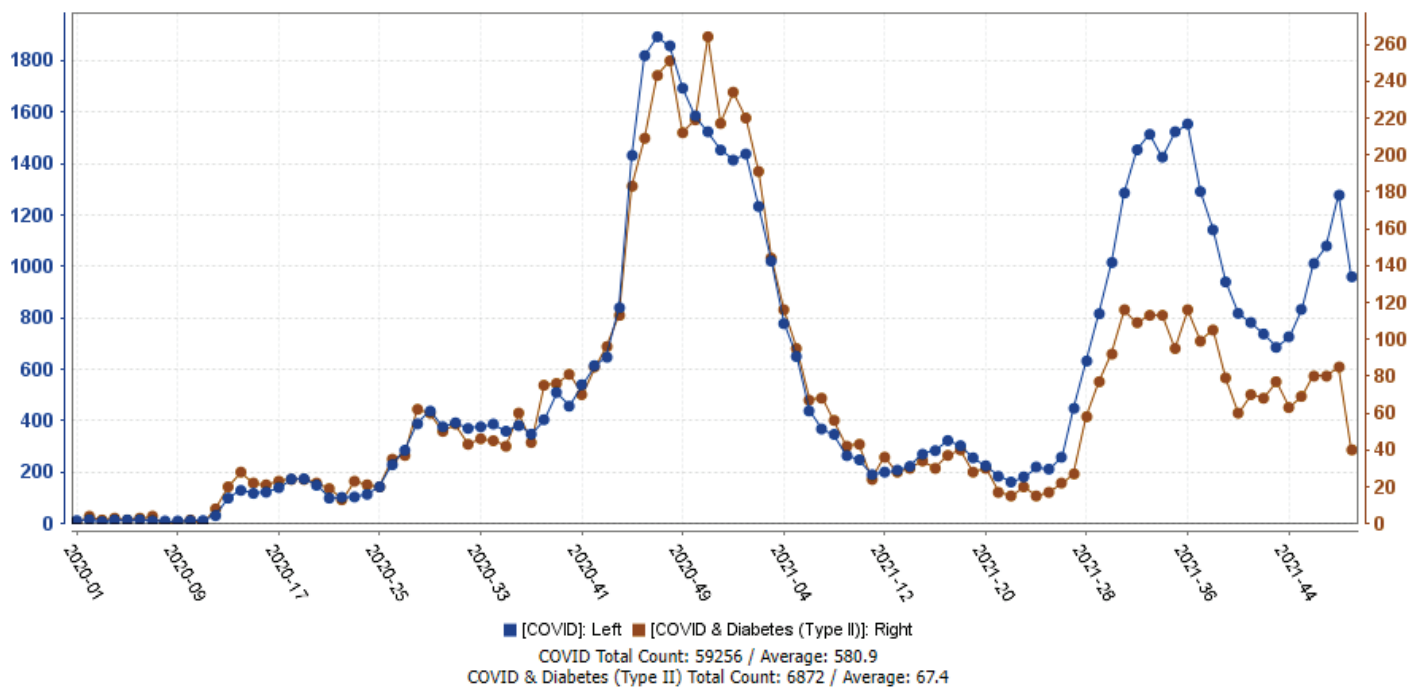
Early studies of COVID-19 have shown that people with diabetes are more likely to experience severe symptoms and complications when infected with the virus.⁷ There is not enough data to show whether people with diabetes are more likely to get COVID-19 than the general population.

The COVID-19 pandemic heightened the awareness that co-morbidities are associated with increased severity of infection.⁷ Like other viral infections, having heart disease or other complications in addition to diabetes could worsen the chance of getting seriously ill from COVID-19, because more than one condition makes it harder for your body to fight the infection.

Viral infections can also increase inflammation in people with diabetes. This can also be caused by above-target blood sugars, and that inflammation can contribute to more severe complications.⁷

Syndromic surveillance data suggests that COVID-related Emergency Department (ED) visits by those with diabetes tracked closely with overall COVID ED visits prior to the availability of vaccines. After the vaccines become available, those with diabetes are less likely to report to the ED for COVID-related issues. We speculate that this indicates that those with diabetes were more likely to get vaccinated than the general public.⁷

COVID & Diabetes (Type II) - Weekly ED Visits



Prevention and Management

Multiple programs for diabetes prevention and management in Kansas provide options for people with prediabetes and diabetes. Some of these initiatives focus on populations at higher risk for developing diabetes. These programs include the National Diabetes Prevention Program (National DPP), Diabetes Self-Management Education and Support (DSMES), Kansas Department of Health and Environment (KDHE) 1815 Initiative, American Diabetes Association (ADA) 1705 Initiative, Special Diabetes Program for Indians (SDPI), and the Chronic Disease Risk Reduction Community Grant Program.

National Diabetes Prevention Program

The National Diabetes Prevention Program (National DPP) was launched by the Centers for Disease Control and Prevention in 2012. The results of a 3-year research study concluded that millions of people in the United States with prediabetes can lower their risk of developing type 2 diabetes. The proven strategies include losing a modest amount of weight through decreased fat and calorie intake and engaging in moderate intensity physical activity at least 150 minutes each week.⁸

The National DPP is a year-long structured program delivered in two distinct phases: 16 weekly one-hour sessions in the first six months followed by a second six-month phase where participants meet at least once per month for the rest of the program. A lifestyle coach leads the program trained on the CDC-approved curriculum.

The National DPP is a partnership of public and private organizations across the nation working together to deliver and sustain this proven lifestyle change program. Over 1,300 organizations nationwide have registered with the CDC to deliver the National DPP in community-based organizations, work sites, health care facilities and places of worship.⁸ As of printing of this report, 21 organizations offer the National DPP in Kansas.⁹ Increasing the number of partners offering National DPP in our communities would benefit Kansans with diabetes and could help lower health care costs in the state.

Diabetes Self-Management Education and Support

Diabetes Self-Management Education and Support (DSMES) educates people diagnosed with diabetes on the management of their disease. The program teaches self-care behaviors such as medication management, active living and healthy eating patterns.¹⁰ DSMES has been shown to improve health outcomes. It has also been shown to be a cost-effective approach to reducing hospitalizations and diabetes-related health care costs. However, despite evidence that DSMES services are cost-effective and have a positive impact on diabetes-related outcomes, DSMES services are under-used.¹⁰

Kansas Department of Health and Environment 1815 Initiative

KDHE's Bureau of Health Promotion receives support through the Centers for Disease Control and Prevention (CDC) funding opportunity, Improving the Health of Americans through Prevention and Management of Diabetes and Heart Disease and Stroke (1815).¹¹ An annual total of \$987,105 is focused on diabetes, with five selected strategies which align to increase access, availability, and sustainability of proven programs and interventions.

These strategies aim to meet two long-term goals: 1) increased percentage of participants in losing 5-7% of beginning body weight; and 2) reduced proportion of people with diabetes with a hemoglobin A1c greater than 9%.¹¹

American Diabetes Association (ADA) 1705 Initiative

The ADA is working with the CDC to scale and sustain the National DPP lifestyle change program. This initiative is building the infrastructure in underserved areas to deliver the National DPP to priority populations. The aim is to close the enrollment gap so that more participants with prediabetes in underserved areas successfully complete the program, achieve 5-7% weight loss, and reduce their risk for type 2 diabetes.

Special Diabetes Program for Indians

The Special Diabetes Program for Indians (SDPI) is supported through the Department of Health and Human Services, Indian Health Service (IHS), Division of Diabetes Treatment and Prevention, and the Tribal Leaders Diabetes Committee.¹² The program was created to combat diabetes-related morbidity and mortality occurring in American Indian/Alaska Native (AI/AN) communities throughout the United States. The CDC reports that AI/AN's are twice as likely to have type 2 diabetes as white Americans.¹³ There are 301 SDPI sites in 35 states, with 5 SDPI sites in Kansas. One Kansas SDPI site is managed by the IHS and the other 4 are managed by the individual tribes with a joint total funding of \$938,000.¹⁴ The Haskell SDPI program consists of a Registered Nurse, a Registered Dietitian, a Fitness Instructor, Certified Diabetes Educators, and Lifestyle Coaches to provide treatment to individuals with untreated and uncontrolled diabetes.

In addition to diabetic care and education, the SDPI programs also administer the Prevent T2 lifestyle change programs for individuals at high-risk for developing type 2 diabetes. Nationally, the SDPI program has decreased the diabetes-related deaths by 37%, diabetic eye disease by 50%, diabetes-related kidney failures by 54%, and hospitalizations due to uncontrolled diabetes by 84%. AI/AN is the only racial/ethnic group trending downward in prevalence of diabetes.¹² The SDPI program is successfully increasing the quality of life for many AI/AN communities.

Chronic Disease Risk Reduction Community Grant Program

The KDHE Bureau of Health Promotion administers the Chronic Disease Risk Reduction (CDRR) Community Grant Program. CDRR provides funding, training, and technical assistance to communities to implement proven strategies that impact risk factors for diabetes such as tobacco use, physical activity, and nutrition. In State Fiscal Year 2022, 22 communities in 34 counties and 2,913,314 Kansans received these grants, covering 73.4 percent of the Kansas population. Funded communities implement the following public health strategies:

- Eliminate nonsmokers' exposure to secondhand smoke
- Prevent youth from using tobacco
- Promote quitting among adults and young people
- Increase physical activity
- Increase access to healthy food

KDHE's CDRR Program also provides limited support through the CDC 1803 Arthritis grant for implementation of the Chronic Disease Self-Management Program (CDSMP). CDSMP is a 6-week workshop for those with diabetes and other chronic diseases and their caregivers. Participants learn evidence-based strategies such as disease management, effective communication with providers and caregivers, and decision-making.¹⁵

HaltDiabetesKS

HALTdiabetesKS.com (Health and Lifestyle Training) is a comprehensive program that was created by combining decades of health care providers' practical experience with the latest research and technology. HaltDiabetesKS enables providers to deliver CDC approved curriculum and resources virtually. Through a flexible, user-friendly environment, HaltDiabetesKS teaches participants how to lower their risk of diabetes.

The year-long program includes sixteen weekly lessons followed by monthly lessons for the rest of the year. While HaltDiabetesKS usually delivered virtually, it can also supplement in-person classes.

HaltDiabetesKS participants pair up with a trained lifestyle coach and grouped into online communities where they give and receive help, support, and encouragement to peers. Participants may engage with the program through an online portal or a phone app where they can track exercise and nutrition, engage with their lifestyle coach and community and access program materials.

Recommendations

1. Increase access to and coverage for CDC recognized evidence-based lifestyle change programs as part of the National Diabetes Prevention Program.

Rationale: The structured, research-based lifestyle change program can help people with prediabetes or those at risk for type 2 diabetes make achievable and realistic lifestyle changes and cut their risk of developing diabetes by 58% overall, with those over 60 years of age reducing risk by 71%.¹ According to KDHE Division of Health Care Finance, approximately \$587 million was spent on KanCare costs associated with 24,703 patients with diabetes in 2020, which is more than \$23,500 per patient per year.¹⁶ The CDC estimates that the National DPP lifestyle change program costs \$500 per participant to complete the year-long diabetes prevention curriculum.¹⁷

Employers can help prevent type 2 diabetes; and it is typically much cheaper to prevent diabetes than to treat the consequences of the disease. In addition to making the program more accessible and affordable for employees or members, one study found that lifestyle change program participants who received coverage for the program through their employer's health insurance plan achieved slightly better outcomes in attendance and average weight loss than those who paid out of pocket or through a grant.¹⁸ According to the National Association of Chronic Disease Directors, as of July 2020, 27 states offer the National DPP as a covered benefit to their public employees.¹⁹

Kansas does not currently have widespread insurance coverage for National DPP lifestyle change programs. Without sustainable financing options, DPP programs are at risk of closure. To sustain these programs after current grant funding ends in 2023, it is necessary to build a sustainable reimbursement infrastructure through private and public health insurance coverage plans. It is also recommended that all employers offer the National DPP lifestyle change program as a covered benefit.

2. Increase access to and coverage of accredited Diabetes Self-Management Education and Support (DSMES) services for Kansans with diabetes.

Rationale: Diabetes Self-Management Education and Support (DSMES) is the foundation of care for those with diabetes and has been shown to reduce hospitalizations and other diabetes-related health care costs.²⁰ Nationally accredited programs may be eligible for private insurance reimbursement with a physician referral, per Kansas statute KS 40-2, 163.²¹ Medicare's model for DSMES reimbursement rates is based on 2020 Medicare Physician Fee Schedule for Kansas for codes G0108 and G0109. KanCare does not currently reimburse for DSMES services. Improved access to affordable chronic disease self-management, like DSMES, is vital to successful diabetes management. Providing access to these services could prevent or delay diabetes-related complications, potentially reducing emergency department use and hospital admissions and readmissions, while improving the quality of life for Kansans with diabetes.

3. Tobacco - Promote use and expansion of Kansas Tobacco Quitline services and increase support for public health approaches to reduce tobacco use among Kansas youth.

Rationale: Smoking increases the risk for developing type 2 diabetes with active smokers 30 – 40 percent more likely to develop type 2 diabetes than nonsmokers.²³ Smokers who have diabetes are more likely to have serious health problems, including heart and kidney failure, blindness, and nerve and blood vessel damage of the feet and legs. The state offers the Kansas Tobacco Quitline for tobacco users and provides resources for public health efforts to reduce tobacco use initiation among Kansas youth. Increased investment could maximize impact.²⁴ Per the Centers for Disease Control and Prevention, the minimum recommended funding level for cessation interventions in Kansas is \$7.5 million annually.²⁵ Smoking-related costs total more than \$2.2 billion in annual health care costs and smoking-related productivity losses in Kansas.²⁶

Funding would support health systems change, academic detailing and outreach to health care systems, and data collection and analysis around cessation interventions and outcomes. Support would also offer all tobacco users proactive cessation counseling calls, text messaging, web, and social media interventions to extend the reach and increase the impact of the Kansas Tobacco Quitline. In addition, nicotine replacement therapy would be offered to tobacco users.

4. Increase state-level funding to boost Kansans' healthy eating by improving access to affordable, healthy foods and beverages.

Rationale: Poor nutrition and unhealthy diet are risk factors for several chronic diseases, including diabetes.²⁷ Improvements in nutrition can help reduce the risk of chronic diseases and its complications and, thus, decrease health care costs. Communities can support healthy food systems and improved access to foods by forming a food policy council and advancing changes to the local food system.²⁸ A food policy council partners citizens and policymakers to examine how the local food system works and develop recommendations that will improve the food environment.

Farmers markets, or those markets with vendors selling goods directly to consumers at a specific location and time, also positively impact the healthy food environment by increasing community access and consumption of healthy foods. Farmers markets can supply access to fresh produce in communities defined as “food deserts.” Food deserts are places “where food sources are lacking or limited, particularly in low-income areas.”²⁸ Members of racial and ethnic minority communities, residents of low-income communities, and those living in rural areas, especially rural older adults, are more likely to be affected by a lack of access to supermarkets, grocery chains, and healthy foods. It is estimated that state-level funding of \$742,320 annually would support expansion of food councils in communities with food deserts and supply technical assistance for developing farmer’s markets in Kansas.

5. Increase state-level funding for the prevention of childhood obesity.

Rationale: Childhood obesity has become increasingly more prevalent in the United States. A 2011 Health and Human Services report indicates that the number of children (6-19 years of age) that are obese has tripled since 1980.²⁹ It is estimated that 18.5% of children ages 2-17 years old are overweight or obese.³⁰ This is a significant health concern due to the persistence of obesity from childhood into adulthood and the likelihood to develop diabetes. Several studies have shown that a lack of access to healthy, nutritious food and a lack of nutrition education contribute to this rise in childhood obesity. Conversely, children who were not subject to food insecurity were at a lower risk to develop obesity.²⁹

Although many factors contribute to the onset of obesity, one potential method to decrease the burden on our health systems is to prevent the onset of obesity at an early age by teaching healthy behaviors. The recommendation includes:

- 1) Increase funding for healthy school lunch programs.
 - a. Re-evaluate and revise current food quality standards.
 - b. Increase access to fresh fruits and vegetables.
 - i. Use local sources of fresh food by obtaining foods from farmer's markets or Community Supported Agriculture (CSA) sources.
 - ii. Regulate food quality provided by outside vendors in school cafeteria setting.
 1. Regulate food quality provided through vending machines in schools.
 - c. Add additional nutrition educational requirements.

It is also noteworthy that underrepresented and underserved populations appear to be disproportionately afflicted with type 2 diabetes, particularly with AI/AN's. The rate of childhood obesity is about 50 percent higher than the national average at 29.7 percent.³¹ By focusing efforts in underrepresented communities the impact of diabetes-related care on the health care system may be decreased.

6. Limit cost sharing for diabetes technologies and supplies to expand access to diabetes technologies.

Rationale: Technologies like insulin pumps and continuous glucose monitors (CGMs) have transformed the diabetes management landscape, making it easier to live and thrive with diabetes. However, for many who stand to benefit, these breakthroughs are financially out of reach. Black and Latino young adults living with type 1 diabetes, for example, are significantly less likely than white peers to be able to get diabetes management technologies.³²

Medicaid coverage for diabetes technology access should be increased to help low-income people with diabetes. ADA recommends limiting or cutting cost sharing on diabetes technologies and supplies for those with diabetes.

7. Allow Pharmacists to fill expired prescriptions for diabetes testing and self-care supplies.

Rationale: Effective diabetes management decreases healthcare costs and unnecessary hospitalizations. Access to supplies for testing blood glucose regularly is critical for patients with diabetes to avoid uncontrolled blood glucose levels. Allowing pharmacists to fill recently expired prescriptions for testing supplies can reduce unnecessary burdens on patients, pharmacies, providers, and hospital emergency departments. Pharmacists would be able to fill a recently expired prescription, report the filled prescription to the patient's prescribing provider, and direct the patient to obtain an appointment for an updated prescription.

It is recommended to authorize pharmacists to dispense the following diabetes supplies in quantities enough for adequate testing based upon patient history, including refills for up to 12 months: glucometer, glucometer testing strips, lancet devices, lancets, and control solutions for glucometer calibration. This dispensing increases a diabetic patient's ability to manage blood glucose effectively.

8. Maintain the ability to provide county and regional level data on diabetes, co-morbidities and health disparities in adult Kansans through the Kansas Behavioral Risk Factor Surveillance System (BRFSS).

Rationale: Data drives quality and consistency in care for those with diabetes, and is essential for achieving better health, better care and lower overall medical costs. Support for epidemiology and surveillance is necessary to show gaps in program delivery, develop effective interventions and evaluate progress towards achieving program goals at the state, regional and county levels.

Four Kansas foundations (Kansas Health Foundation, Sunflower Foundation, Health Forward Foundation, REACH Foundation) have committed over \$4,500,000 to supplement CDC funding for the Kansas BRFSS. This funding will expand data collection in 2021 and 2023, ensuring data are available to all regions and a greater number of counties. In 2021, six public health programs and partners are contributing approximately \$250,000 to sustain the ability to collect data specific to Kansas public health needs. However, this support is not sustainable. The request to support KDHE's BRFSS program to supply regional and county data on the health behaviors and health status of Kansans is \$1,250,772 annually. The State General Fund would be used only when all sources of federal and private funds for the program are exhausted. Currently, we expect enough funding until Kansas foundation funds start to decrease in FY24.

9. Address social determinants of health through culturally-appropriate education and advocacy by embedding Community Health Workers (CHWs) in the health care system.

Rationale: For many communities, staying healthy and getting the health care needed can be more complicated than just getting health insurance. Many people struggle with socially-determined barriers to accessing health care and being able to do what is needed to get and stay healthy. This is particularly common in underserved communities that have a history of serious health care disparities. The American Public Health Association defines a CHW as “a frontline public health worker who is a trusted member of and/or has an unusually close understanding of the community served.”³³ This definition encompasses a wide variety of job titles, such as Promotores de Salud in Latino communities or Community Health Representatives in American Indian/Alaska Native communities. CHWs have a unique understanding of the experience, language, culture, and social and economic issues affecting the communities that they serve. They apply this unique understanding to make a distinctive contribution to improving health outcomes. For example, in a randomized controlled trial of a CHW-led diabetes education and management program for uninsured Mexican Americans, the intervention group had significantly greater reduction in hemoglobin A1c than the control group over a 12-month period.³⁴

Despite CHWs’ proven effectiveness, there remains a general lack of understanding of their distinctive role and value. The absence of diverse and sustainable financing strategies to support them has prevented greater inclusion of CHWs within the health care system. Currently, CHWs are supported through vulnerable grant funding, with some directly employed through entities such as community-based organizations. There are several models for supporting CHWs that have shown positive return on investment, including a program in New Mexico that saved four dollars for each dollar invested in serving a Medicaid population with high health care needs.^{35,36} Increasing sustainability of the CHW workforce in Kansas would help address the social determinants of health, including those that impact chronic disease prevention and self-management.^{37,38} Establishment of a temporary committee to study certain issues related to the development of outreach and education programs for CHWs could advise KDHE, the Governor, and the legislature regarding its findings.



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Appendix A

Centers for Disease Control and Prevention & American Diabetes Association Prediabetes Risk Test

DO YOU HAVE PREDIABETES?

Prediabetes Risk Test



- 1** How old are you?
Less than 40 years (0 points)
40—49 years (1 point)
50—59 years (2 points)
60 years or older (3 points)
- 2** Are you a man or a woman?
Man (1 point) Woman (0 points)
- 3** If you are a woman, have you ever been diagnosed with gestational diabetes?
Yes (1 point) No (0 points)
- 4** Do you have a mother, father, sister, or brother with diabetes?
Yes (1 point) No (0 points)
- 5** Have you ever been diagnosed with high blood pressure?
Yes (1 point) No (0 points)
- 6** Are you physically active?
Yes (0 points) No (1 point)
- 7** What is your weight status?
(see chart at right)

Write your score in the box.

Height	Weight (lbs.)		
4' 10"	119-142	143-190	191+
4' 11"	124-147	148-197	198+
5' 0"	128-152	153-203	204+
5' 1"	132-157	158-210	211+
5' 2"	136-163	164-217	218+
5' 3"	141-168	169-224	225+
5' 4"	145-173	174-231	232+
5' 5"	150-179	180-239	240+
5' 6"	155-185	186-246	247+
5' 7"	159-190	191-254	255+
5' 8"	164-196	197-261	262+
5' 9"	169-202	203-269	270+
5' 10"	174-208	209-277	278+
5' 11"	179-214	215-285	286+
6' 0"	184-220	221-293	294+
6' 1"	189-226	227-301	302+
6' 2"	194-232	233-310	311+
6' 3"	200-239	240-318	319+
6' 4"	205-245	246-327	328+
	(1 Point)	(2 Points)	(3 Points)
You weigh less than the amount in the left column (0 points)			

If you scored 5 or higher:

You're likely to have prediabetes and are at high risk for type 2 diabetes. However, only your doctor can tell for sure if you do have type 2 diabetes or prediabetes (a condition that precedes type 2 diabetes in which blood glucose levels are higher than normal). Talk to your doctor to see if additional testing is needed.

Type 2 diabetes is more common in African Americans, Hispanic/Latinos, American Indians, Asian Americans and Pacific Islanders.

Higher body weights increase diabetes risk for everyone. Asian Americans are at increased diabetes risk at lower body weights than the rest of the general public (about 15 pounds lower).

Add up your score.



Adapted from Bang et al., Ann Intern Med 151:775-783, 2009.
Original algorithm was validated without gestational diabetes as part of the model.

LOWER YOUR RISK

Here's the good news: it is possible with small steps to reverse prediabetes - and these measures can help you live a longer and healthier life.

If you are at high risk, the best thing to do is contact your doctor to see if additional testing is needed.

Visit DoIHAVEPrediabetes.org for more information on how to make small lifestyle changes to help lower your risk.

For more information, visit us at

DoIHAVEPrediabetes.org



Appendix B

Recommendation Summary List

1. Increase access to and coverage for CDC recognized evidence-based lifestyle change programs as part of the National Diabetes Prevention Program.
2. Increase access to and coverage of accredited Diabetes Self-Management Education and Support (DSMES) services for Kansans with diabetes.
3. Tobacco - Promote use and expansion of Kansas Tobacco Quitline services and increase support for public health approaches to reduce tobacco use among Kansas youth.
4. Increase state-level funding to boost Kansans' healthy eating by improving access to affordable, healthy foods and beverages.
5. Increase state-level funding for the prevention of childhood obesity.
6. Limit cost sharing for diabetes technologies and supplies to expand access to diabetes technologies.
7. Allow Pharmacists to fill expired prescriptions for diabetes testing and self-care supplies.
8. Maintain the ability to provide county and regional level data on diabetes, co-morbidities and health disparities in adult Kansans through the Kansas Behavioral Risk Factor Surveillance System (BRFSS).
9. Address social determinants of health through culturally-appropriate education and advocacy by embedding Community Health Workers (CHWs) in the health care system.