South Dakota Diabetes State Plan
2018 - 2020

SOUTH DAKOTA DIABETES COALITION

SOUTH DAKOTA DEPARTMENT OF HEALTH

LIVE BETTER. LIVE LONGER.

January 2018

Dear South Dakotans,

The South Dakota Diabetes Coalition (SDDC), a non-profit organization in South Dakota comprised of organizations and individuals, is pleased to introduce the 2018 to 2020 Diabetes State Plan. The South Dakota Diabetes Coalition (SDDC) works to help those affected by, or at risk for, diabetes, in South Dakota, and has developed this plan to work with partners and collaborators from across the State and beyond, to assist in diabetes education, prevention, and awareness.

The 2018 to 2020 Diabetes State Plan for South Dakota focuses on four goals:

A. Prevent the Onset of Diabetes Through Evidence-Based Public Health Strategies.

B. Provide Appropriate Prediabetes Interventions in order to Reverse or Slow Down Disease Progression.

C. Empower South Dakotans with Diabetes to Successfully Manage Their Disease.

D. Advocate on behalf of South Dakota citizens with diabetes and their caregivers.

The SDDC is grateful to the South Dakota Department of Health, particularly its Diabetes Prevention and Control Program, for sustaining funding and facilitating outcomes on behalf of South Dakotans affected by diabetes.

Finally, the SDDC is grateful for the partners who participated in the Diabetes State Plan Task Force meetings and teleconferences. Their time and expertise have and will continue to touch the lives of South Dakotans at-risk for and with diabetes.

This plan provides a new opportunity for collaborations, teamwork, and a coordinated effort to make advancements in diabetes management, education, awareness, and prevention. We fully invite you to join us in fulfilling the SDDC's mission to help those affected by, or at risk for, diabetes, in South Dakota.

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SOUTH DAKOTA DEPARTMENT OF HEALTH

Office of the Secretary

Dear Fellow South Dakotans:

The South Dakota Department of Health and its partners are pleased to present the 2018-2020 South Dakota Diabetes State Plan. This three-year plan provides a framework to reduce the burden of diabetes in South Dakota. The plan is a collaborative effort of the department's Diabetes Prevention and Control Program, the South Dakota Diabetes Coalition and key stakeholders.

Diabetes and prediabetes continue to be public health issues in South Dakota and the nation. Nearly 8% of South Dakota adults have been diagnosed with diabetes in 2016, or about 54,000 cases of diabetes. Moreover, diabetes is the seventh leading cause of death in South Dakota. An additional 1 out of 3 American adults have prediabetes, a condition that goes largely undiagnosed yet increases the risk of developing Type 2 Diabetes. Prediabetes is largely preventable through increased screening/testing and lifestyle change. Diabetes and prediabetes have a significant negative impact on quality of life for many South Dakotans.

The department, the South Dakota Diabetes Coalition and other stakeholders are working together to reduce the devastating impact of diabetes and prediabetes, focusing on four overarching goal areas outlined in this plan – prevention, prediabetes, complication reduction, and advocacy. This plan aligns with the mission of the department, which is to *promote, protect, and improve the health of every South Dakotan*. And specifically within the Department of Health 2015-2020 Strategic Plan, Goal 2, Strategy C which is *to prevent and reduce the burden of chronic disease*.

This plan provides a framework for action and collaboration for public health professionals, healthcare professionals, and stakeholders involved in diabetes prevention and control. It includes evidence-based approaches to ensure measurable impact and sustainability. It is a roadmap for success and is intended to provide direction and focus to foster collaboration and synergy among those working to prevent and control diabetes.

Reducing the burden of diabetes in South Dakota will take dedication and collaboration, but working together we can decrease the impact this devastating disease and create a healthier South Dakota.

Sincerely,

Kim Malsam-Rysdon

Kim Malsam-Rysdon
Secretary of Health

ACKNOWLEDGEMENTS

This plan was developed in collaboration with the following individuals and organizations:

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EXECUTIVE SUMMARY

Globally, diabetes is a serious disease that affects individuals young and old, of all ethnic backgrounds, and nearly equally of both genders. Whether Type 1 Diabetes, Type 2 Diabetes, or Gestational Diabetes, the disease affects all parts of the body, especially if not successfully self-managed. Typically, Type 1 Diabetes comes on suddenly, while Type 2 Diabetes may take years to progress and for signs and/or symptoms to become apparent. Regardless of the age of the individual and type of diabetes, the result has a lifelong impact to the patient, family, and healthcare providers.

The South Dakota Diabetes Coalition (SDDC) is a nonprofit organization in South Dakota that works to help those affected by, or at risk for, diabetes, in South Dakota. The SDDC is comprised of volunteers from across the State who work on various projects related to diabetes education and prevention.

The South Dakota Diabetes Prevention and Control Program is part of the South Dakota Department of Health (SD DOH), Office of Chronic Disease Prevention and Health Promotion. The program receives funding from the U.S. Centers for Disease Control and Prevention to use towards prevention and population-based interventions aimed at South Dakotans at risk for and with diabetes.

Through the results of the three-year South Dakota State Diabetes Plan 2018 - 2020, partners will provide resources and education to those affected by, or at risk for, diabetes. Behavioral Risk Factor Surveillance System (BRFSS) 2016 shows 7.9% of South Dakotans 18 and older have been diagnosed with diabetes. A significant racial disparity exists as the prevalence of diagnosed diabetes in Native Americans is 16%, compared to 8% of Whites in South Dakota. Equally as important, the SDDC and SD DOH hopes to reach the estimated tens of thousands South Dakotans who have undiagnosed diabetes and the estimated 200,000+ of South Dakotans with prediabetes.

The 2018 - 2020 Diabetes State Plan for South Dakota focuses on four goal areas:

A. Prevention: Prevent the Onset of Diabetes Through Evidence-Based Public Health Strategies.
B. Prediabetes: Provide Appropriate Prediabetes Interventions in order to Reverse or Slow Down Disease Progression.
C. Complication Reduction: Empower South Dakotans with Diabetes to Successfully Manage Their Disease.
D. Advocacy: Advocate on Behalf of South Dakota Citizens with Diabetes and Their Caregivers.

The following are core tenets or beliefs in developing the goals and objectives of the South Dakota Diabetes State Plan.

- Commitment to evidence-based models and materials from the Centers for Disease Control and Prevention (CDC) and other valid sources.
- Utilization and promotion of the American Diabetes Association (ADA) Clinical Practice Recommendations.
- Collaboration with partners is imperative to furthering the goal of reducing diabetes in South Dakota.

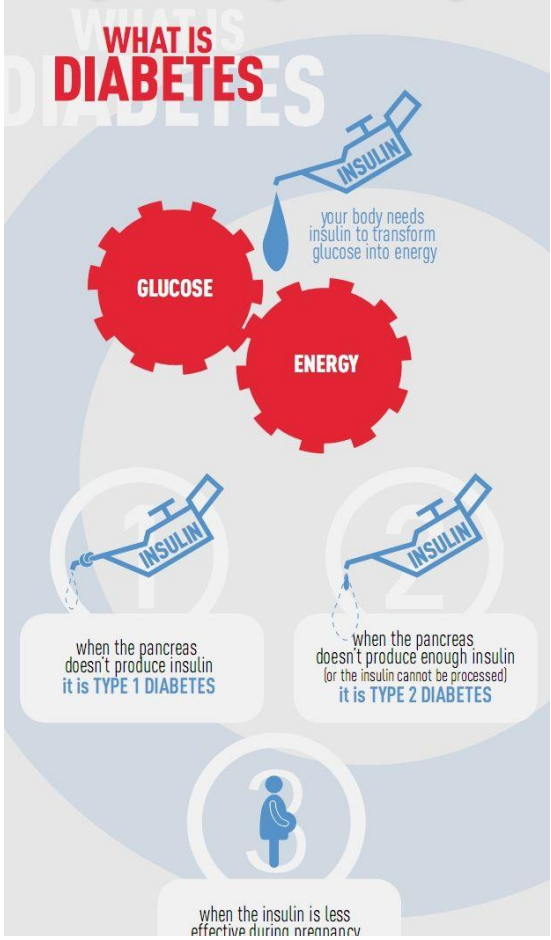
Please join us in making a difference in the lives of those affected by, or at risk for, diabetes, in South Dakota.

WHAT IS DIABETES?

OVERVIEW

Diabetes is a disorder of metabolism – the way the body uses digested food for growth and energy. Most of the food people eat is broken down into glucose, which is the form of sugar present in the blood. Glucose is the main source of fuel for the body. After digestion, glucose passes into the bloodstream, where it is used by cells for growth and energy. For glucose to get into cells, insulin must be present. Insulin is a hormone produced by the pancreas, a large gland behind the stomach.[1]

When people eat, the pancreas automatically produces the right amount of insulin to move glucose from blood into our cells. In people with diabetes, however, the pancreas either produces little or no insulin, or the cells do not respond appropriately to the insulin that is produced. Glucose builds up in the blood, overflows into the urine, and passes out of the body in the urine. Thus, the body loses its main source of fuel even though the blood contains large amounts of glucose.



International Diabetes Federation

TYPE I DIABETES

Type 1 Diabetes is an autoimmune disease. An autoimmune disease results when the body's system for fighting infection (the immune system) turns against a part of the body. In diabetes, the immune system attacks and destroys the insulin-producing beta cells in the pancreas. The pancreas then produces little or no insulin. Since their bodies cannot produce insulin, a person who has Type 1 Diabetes must take replacement insulin either through an injection or an insulin pump daily to survive. At present, scientists do not know exactly what causes the body's immune system to attack the beta cells, but they believe that autoimmune, genetic, and environmental factors, possibly viruses, are involved. Type 1 Diabetes accounts for about 5 to 10 percent of all diagnosed diabetes in the United States.[2]

Although Type 1 Diabetes is most apt to develop in children and young adults, it can appear in individuals at any age. Symptoms of Type 1 Diabetes usually develop over a short period, although beta cell destruction can begin years earlier. Symptoms may include increased thirst and urination, constant hunger, weight loss, blurred vision, and extreme fatigue. If not diagnosed and treated with insulin, a person with Type 1 Diabetes can lapse into a life-threatening diabetic coma, also known as diabetic ketoacidosis. Risk factors for Type 1 Diabetes may include autoimmune, genetic, and environmental factors, possibly viruses. As these risk factors are not easy to mitigate, primary prevention efforts at present are not effective. Research for a cure is ongoing.[3]

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[1] National Institute of Diabetes and Digestive and Kidney Diseases. *What is Diabetes?* November 2016. Accessed September 2017. https://www.niddk.nih.gov/health-information/diabetes/overview/what-is-diabetes.

[2] Centers for Disease Control and Prevention. *Type 1 Diabetes.* July 25, 2017. Accessed September 2017. https://www.cdc.gov/diabetes/basics/type1.html.

[3] US National Library of Medicine National Institute of Health. *Diagnosis and Classification of Diabetes Mellitus*. January 2009. Accessed September 2017. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2613584/

TYPE 2 DIABETES

Type 2 Diabetes results from insulin resistance (a condition in which the body fails to properly use insulin), usually combined with the body not producing enough insulin.[4] Type 2 Diabetes most often begins as insulin resistance, a disorder in which the pancreas produces enough insulin but for unknown reasons the body's cells are not using the insulin properly. After several years, as the need for insulin rises, the pancreas gradually loses its ability to produce insulin. Type 2 Diabetes accounts for 90 to 95 percent of all diagnosed diabetes cases in the United States.[4]

Native Americans, African Americans, Hispanic Americans, Asian Americans, and Pacific Islanders are at a higher risk for Type 2 Diabetes as compared to other ethnicities. Type 2 Diabetes is increasingly being diagnosed in children and adolescents and is most often linked to physical inactivity and obesity from an early age.

The onset of Type 2 Diabetes is typically gradual, with little or no symptoms initially. Symptoms may include fatigue, increased thirst and hunger, frequent urination, weight loss, blurred vision, and slow healing of wounds or sores.[4] Some people have no symptoms. The risk of developing Type 2 Diabetes may be reduced through healthy nutrition choices and physical activity to prevent obesity.

GESTATIONAL DIABETES

Gestational Diabetes is a form of glucose intolerance that is diagnosed in some women during pregnancy, even though they have had no known prior history of diabetes. Gestational Diabetes is caused by the hormones of pregnancy or a shortage of insulin. As with Type 2 Diabetes, Gestational Diabetes occurs more often in some ethnic groups, among women with a family history of diabetes, and women with obesity. If not controlled, Gestational Diabetes can cause the baby to grow extra-large and lead to problems with delivery for the mother and the baby.[5]

Gestational Diabetes often can be controlled through diet changes and regular physical activity, but some women with Gestational Diabetes also must take insulin shots. In general, Gestational Diabetes requires treatment only during pregnancy. Immediately after pregnancy, 5% to 10% of women with Gestational Diabetes are diagnosed with Type 2 Diabetes. Women who have had Gestational Diabetes have a 35% to 60% chance of developing diabetes in the next 10 to 20 years. The risk can be reduced by maintaining a healthy body weight.[5]

PREDIABETES

Prediabetes is a condition in which individuals have blood glucose levels higher than normal but not high enough to be classified as diabetes.[6] People with prediabetes have an increased risk of developing Type 2 Diabetes, heart disease, and stroke. Progression to diabetes among those with prediabetes is not inevitable. Studies have shown that people with prediabetes who lose weight and increase their physical activity can prevent or delay diabetes and return their blood glucose levels to normal. The National Diabetes Prevention Program (NDPP) shows that lifestyle intervention reduced developing diabetes by 58% during a 3-year period. The reduction was even greater, 71%, among adults aged 60 years or older.[7] Interventions to prevent or delay Type 2 Diabetes in individuals with prediabetes can be feasible and cost-effective. Research has found that lifestyle interventions are more cost-effective than medications.

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[4] Centers for Disease Control and Prevention. Type 2 Diabetes. July 25, 2017. Accessed September 2017. https://www.cdc.gov/diabetes/basics/type2.html.

[5] Centers for Disease Control and Prevention. Gestational Diabetes. July 25, 2017. Accessed September 2017. https://www.cdc.gov/diabetes/basics/gestational.html.

[6] American Diabetes Association. Diagnosis Diabetes and Learning About Prediabetes. November 21, 2016. Accessed September 2017. http://www.diabetes.org/diabetes-basics/diagnosis/.

[7] Centers for Disease Control and Prevention. *Research-based Prevention Program.* January 14, 2016. Accessed September 2017. https://www.cdc.gov/diabetes/prevention/prediabetes-type2/preventing.html.

SOUTH DAKOTA DEMOGRAPHICS[8]

South Dakota is one of the least densely populated states in the nation with 865,454 people living within its 75,811 square miles, for an average population density of 11.2 people per square mile. The average population density across the entire nation is 87.4 people per square mile, which in comparison to the density of the South Dakota population, speaks to the remoteness and rurality of the state. The state of South Dakota's racial/ethnic distribution is 85.2% White, 9.0% American Indian, 2.0% Black or African American, and 3.8% other races. The vast majority of South Dakotans speak English in their homes, while 6.5% speak a language other than English in their home. Only 3% of the total population in South Dakota were born in a foreign country. Adults aged 65 and older comprise 15.7 percent of the population, which is higher than the national average of 14.9 percent.

Additionally, transportation to access services is a challenge for patients in South Dakota. For some, this means traveling great distances (over 50 miles) to see a primary care provider and even further to see a specialist. Access to primary care physicians is limited in the state with access to comprehensive diabetes care teams is even more limited. South Dakota's rural geography greatly impacts access to health care services. Over 75% of the state is identified as a Health Professional Shortage Area (HPSA) for primary medical care. Similarly, over 75% of the state is identified as a Medically Underserved Area/Population (MUAP). In SD, there are 49 hospitals, with 38 hospitals being Critical Access Hospitals (hospitals designated as rural by the Centers for Medicare and Medicaid Services).[9]

In 2015, 13.5% of South Dakotans lived below 100% of the Federal Poverty Level (FPL), slightly less than the national average of 14.7%.[10] The five (5) poorest counties in South Dakota in 2015 were Corson, Ziebach, Oglala Lakota, Todd, and Buffalo, with poverty levels ranging from 36.8% to 47.4%.

[8] United States Census Bureau. *Quick Facts, South Dakota.* Census.gov. 2017. Accessed September 2017.
[9] South Dakota Department of Health. Healthcare Providers – South Dakota Hospitals. https://doh.sd.gov/providers/licensure/hospitals.aspx. 2012. Accessed September 2017.
[10] United States Census Bureau. *Small Area Income and Poverty Estimates, South Dakota.* 2015. Accessed September 2017.

PREVALENCE OF DIABETES[11]

According to the Centers for Disease Control and Prevention (CDC) in 2016, 29.1 million Americans were living with diabetes, and an additional 86 million were estimated to be living with prediabetes. The following data was obtained from the SD DOH statistics, specifically those captured in years 2011 through 2016 via the annual Behavioral Risk Factor Surveillance System (BRFSS). These points attest to the prevalence of diabetes in the State of South Dakota compared to nationwide. Overall, diabetes rates in South Dakota have decreased slightly from 9.5% in 2011 to 7.9% in 2016. Nationally, rates have increased slightly from 9.5% in 2011 to 10.5% in 2016. Both locally and nationally, diabetes prevalence has increased significantly since the 1980s.

BRFSS and its questions posed to individual respondents define the interest area as "respondents ever told by a doctor that they have diabetes, excluding women who were told this while they were pregnant."

Prevalence Overview

- Approximately 7.9% of the adult population (aged 18 and older) have been diagnosed with diabetes (2016), meaning 54,000 have been diagnosed with diabetes.
- A significant racial disparity exists as the prevalence of diagnosed diabetes in Native Americans is 16%, compared to 8% of whites in South Dakota.
- South Dakotans aged 65 years or older are more than twice as likely to have been diagnosed with diabetes as persons aged 45 to 54 years.
- Analysis by the CDC shows that 6% of adults aged 18 years or older have prediabetes or borderline diabetes; extrapolating this analysis to South Dakota indicates that over 40,000 adults have prediabetes.

RISK FACTORS[12]

The following risk factors increase one's chances of developing complications with Type 2 Diabetes:

- Being overweight or obese places individuals with diabetes at an increased risk for complications with their diabetes and other chronic diseases. South Dakotans with diabetes demonstrate higher than state average obesity. Among South Dakota adults with diabetes in 2016, 34.5% were overweight and 52.1% were obese.[11]
- Quality of life indicators among South Dakotans show people with diabetes are more likely to report poor physical and mental health as well as significant limitations to their usual activities.

PREVENTATIVE CARE AND DISEASE MANAGEMENT[11]

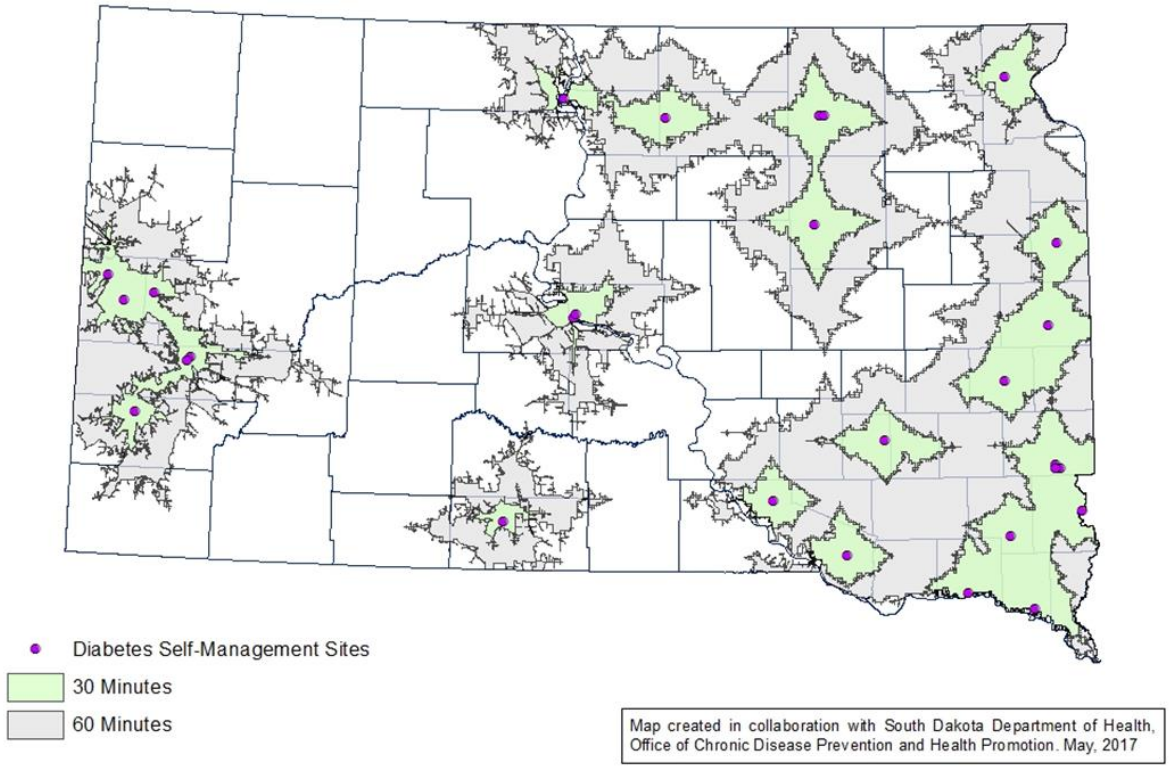
In 2016 (BRFSS), South Dakotans with diabetes demonstrated the following indicators relative to preventative care and management of their disease:

- 91.4% - Reported seeing a health professional within the last year for their diabetes
- 64.5% - Had taken a course to learn about diabetes self-care
- 93.0% - Reported their A1c had been checked 1+ times in the past 12 months by a doctor, nurse, or other health professional
- 71.1% - Reported that a health professional had checked their feet at least once in the past year
- 71.1% - Had a dilated eye exam in the past year
- 64.5% - Received a flu shot within the previous 12 months

[11] South Dakota Department of Health. *BRFSS.* http://doh.sd.gov/statistics/2016BRFSS/Diabetes.pdf. 2016. Accessed February 2018.
[12] Centers for Disease Control and Prevention. *Diagnosed Diabetes.* *https://gis.cdc.gov/grasp/diabetes/DiabetesAtlas.html*. 2017. Accessed May 2017.

Access to Preventative Care[13]

In South Dakota, 54% of South Dakotans are within a 30-minute drive to a Diabetes Self-Management Education/Training (DSME/T) program. Additionally, 22% of South Dakotans are more than a 30-minute drive from a DSME/T program, but less than a 60-minute drive. Consequently, 24% of South Dakotans, or 1 in 4 South Dakotans, are more than an hour's drive from a DSME/T site.



MORTALITY[14]

The following data relates to mortality rates and death rates due to diabetes in South Dakota:

- There were 253 deaths directly attributed to diabetes in 2016 compared to 219 in 2012. A total of 1,230 deaths amongst South Dakota residents were attributed to diabetes from 2012-2016.
- Native Americans with diabetes have a greater rate of years of potential life lost (YPLL) before the age of 75 than whites, 1,110 years and 115 years YPLL, respectively.
- The median age at death for South Dakota residents with diabetes as a leading cause of death is 77 years. Native Americans with diabetes have a lower median age at death than whites with diabetes; 65 versus 79 years of age, respectively.

[13] South Dakota Department of Health. *Office of Chronic Disease Prevention and Health Promotion.* May 2017.

[14] South Dakota Department of Health. *Vital Statistics Report.* http://doh.sd.gov/statistics/2016Vital/Mortality.pdf. 2016. Accessed Jan 2018.

PLAN PROCESS

The South Dakota Diabetes State Plan was facilitated jointly by the South Dakota Diabetes Coalition (SDDC) and the South Dakota Department of Health (SD DOH). This plan was supported by Cooperative Agreement number NU58DP004840, funded by the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention or the Department of Health and Human Services.

In preparation of the strategic plan, the South Dakota Diabetes Coalition (SDDC) facilitated a survey in early 2017 to gain feedback from agencies serving patients who have been diagnosed with diabetes and working to prevent diabetes. Refer to the Fall 2017 Report: Review of Public Health Data and Other Data Sources Related to Diabetes Care and Management in South Dakota.

The survey reported the following issues:

- Summary of Public Health Data
- Risk Factors
- Preventative Care and Disease Management
- Mortality
- Diabetes in South Dakota
- State Demographics
- Health Professional Shortage Areas
- Medically Underserved Areas/Populations
- Access to Diabetes Education
- Access to Diabetes Prevention Programs
- Prevalence of Diabetes and Diabetes Care and Prevention Measures
- Long-term Complications Admission Rates, Medicare Beneficiaries
- Death Rates Due to Diabetes
- Diabetes City Data

In June 2017, stakeholders representing private and public healthcare, SD DOH, patient education and advocacy agencies, insurance companies, and consumers came together to identify strategic priorities to address preventing diabetes, reducing complications of diabetes, and advocating for those diagnosed with diabetes and their caregivers. In July and August, small groups further refined the objectives and defined action plans for each objective. In September, the larger group provided final edits to the plan. SDDC and SD DOH further edited the plan in fourth quarter 2017.

The South Dakota Diabetes State Plan will launch in early 2018. Work groups will be formed around reach goal area to address each objective over the next three years. The plan will be evaluated on a semi-annual basis to adjust strategies.

2018 – 2020 SOUTH DAKOTA DIABETES STATE PLAN GOALS AND OBJECTIVES

Goal A: PREVENTION: Prevent the onset of diabetes through evidence-based public health strategies

OBJECTIVES:

1. Decrease the percentage of South Dakota adults that are overweight from 37.3% (2016 baseline) to 34.5% or obese from 29.6% (2016 baseline) to 23.0% by 2020. (Source: BRFSS)
2. Decrease the percentage of South Dakota children that are obese from 16.1% (obese 2016) to 14.0% by 2020. (Source: School Height and Weight Data)
3. Maintain the percentage of South Dakota adults that engage in leisure time physical activity at 81.1% (2016 baseline). (Source: BRFSS)
4. Increase the percentage of South Dakota adults who eat at least five servings of fruit or vegetables daily from 10.0% in (2015 baseline) to 25.0% by 2020. (Source: BRFSS)

STRATEGIES:

- **A.1.** Partner with communities around promotion of healthy nutrition and physical activity practices.
- **A.2.** Develop community-focused resources for promotion around diabetes awareness.
- **A.3** Provide education and/or educational resources to schools.

Goal B: PREDIABETES: Provide appropriate prediabetes interventions in order to reverse or slow down the disease progression

OBJECTIVES:

1. Increase the percentage of South Dakota adults appropriately diagnosed with prediabetes from 6.0% (2016 baseline) to 7.0% by 2020. (Source: BRFSS)
2. Increase the number of health plans in South Dakota offering coverage of the National Diabetes Prevention Program from 0 in 2017 to 1 by 2020. (Source: survey)
3. Increase the number of individuals with prediabetes who complete a National Diabetes Prevention Program from 89 in October 2017 to 100 by 2020. (DPRP quarterly report from CDC)

STRATEGIES:

- **B.1.** Partner with communities around promotion of prediabetes awareness.
- **B.2.** Research options to increase access to evidence-based prediabetes education.
- **B.3.** Develop a statewide campaign regarding prediabetes awareness, prediabetes diagnosis, and prediabetes education/prevention programs.
- **B.4.** Develop data collection activities for analyzing new data sources to monitor prediabetes.
- **B.5.** Support healthcare professionals and health systems to increase prediabetes screening and diagnostic testing rates.
- **B.6.** Partner with stakeholders to obtain health plan coverage of the National Diabetes Prevention Program.
- **B.7.** Support healthcare facilities who wish to provide prediabetes education.

Goal C: COMPLICATION REDUCTION: Empower South Dakotans with diabetes to successfully manage their disease

OBJECTIVES:

1. Increase the number of people with diabetes who had taken a course to learn about diabetes self-care from 64.5% (2016 baseline) to 66.3% by 2020. (Source: BRFSS)
2. Increase the number of adults who have had their A1c checked one or more times in the past year from 93% (2016 baseline) to 97% in 2020. (Source: BRFSS)
3. Increase the percentage of adults with diabetes who had their feet examined, at least once in the previous year, by a healthcare professional from 71.1% (2016 baseline) to 78.0% by 2020. (Source: BRFSS)
4. Increase the number of adults who received a dilated exam in the previous 12 months from 71.1% (2016 baseline) to 73.0% by 2020 (Source: BRFSS)
5. Increase the number of adults with diabetes who had a dental visit in the past year from 65% (2016 baseline) to 70% by 2020. (Source: BRFSS)
6. Increase the percentage of adults with diabetes who received a flu vaccine, within the previous 12 months, from 64.5% (2016 baseline) to 68.9% by 2020. (Source: BRFSS)
7. Increase the percentage of adults with diabetes who check their feet daily from 65.3% (2016 baseline) to 69.0% by 2020. (Source: BRFSS)
8. Decrease the number of South Dakotans with diabetes who smoke cigarettes from 19.4% (2016 baseline) to 18.1% by 2020. (Source: BRFSS).
9. Increase number of recognized DSME/T programs from 28 in 2017 to 30 in 2020. (Source: ADA and AADE site locator)

STRATEGIES:

C.1. Provide education opportunities to healthcare professionals.

C.2. Increase awareness of behavioral health on the impact/management of diabetes.

C.3. Increase the reach of virtual nursing.

C.4. Collect and analyze data to inform strategies.

C.5. Partner with healthcare professionals to increase the incidence of recommended preventive services for patients with diabetes.

C.6. Support healthcare organizations who wish to become recognized/accredited to deliver the DSME/T program.

Goal D: ADVOCACY: Advocate on behalf of South Dakota citizens with diabetes and their caregivers

OBJECTIVES:

1. Track number of South Dakota-specific diabetes materials ordered through the SD DOH website.
2. Develop a statewide network of Certified Diabetes Educators (CDEs) in South Dakota to better quantify the estimated number of CDEs.
3. Measure the number of SDDC and SD DOH Diabetes websites and Facebook pages views on an annual basis.

STRATEGIES:

D.1. Develop South Dakota specific resources for diabetes awareness and support to family, friends, and co-workers.

D.2. Partner with stakeholders to launch a statewide media campaign.

D.3. Collaborate with stakeholders to inform the development of diabetes resource "central hub".

D.4. Partner with healthcare professionals and organizations to support diabetes-related workforce development opportunities.

D.5. Communicate with national and state organizations on issues important to diabetes prevention and management.

Note: Objective targets were determined by a) tying to another State plan that has the same objective; and/or b) calculating the average of 2011 – 2016 data and then deducting or adding 5% improvement.

GLOSSARY

A1c: (Hemoglobin A1c or HbA1c) A blood test that measures a person's average blood glucose (sugar) level for the 2-3 month period before the test. Because it provides an indication of blood glucose management over time, this test is very valuable in determining overall diabetes management effectiveness.

Behavioral Risk Factor Surveillance System (BRFSS): The BRFSS is a cross-sectional random-digit dialed telephone survey of a sample of non-institutionalized adults (age 18 years and older) conducted annually in all 50 states, the District of Columbia, Puerto Rico, Guam, and the U.S. Virgin Islands, in collaboration with the Centers for Disease Control and Prevention (CDC). This ongoing data collection effort examines the health behaviors of adults and provides national and state data on trends on a wide variety of health-related topics, including diabetes, tobacco and alcohol use, physical activity, diet, weight control, health insurance, and the use of preventive and other health care services. More information is available online at doh.sd.gov/statistics/.

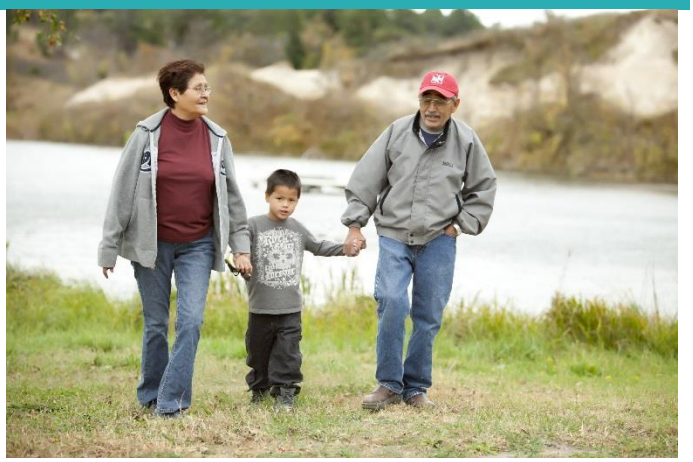
Benchmark: A point of reference or standard by which something can be measured, compared, or judged, as in "benchmarks of performance."

Blood Glucose: The main sugar that the body makes from food we eat. Glucose is carried through the bloodstream to provide energy to all of the body's living cells. The cells cannot use glucose without the help of insulin.

Blood Pressure: The force of the blood against the artery walls. Two levels of blood pressure are measured: the highest, or systolic, occurs when the heart pumps blood into the blood vessels, and the lowest, or diastolic, occurs when the heart rests.

Centers for Disease Control and Prevention, Division of Diabetes Translation: The Division is part of the National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, U.S. Department of Health and Human Services (DHHS). The mission of the Division of Diabetes Translation is to eliminate the preventable burden of diabetes through leadership, research, programs, and polices that translate science into practice.

Community: Defined in this document as a social unit usually encompassing a geographic area (such a town, neighborhood, or housing complex), shared characteristics (such as ethnicity, age, gender, occupation, culture, or history), or common interest (such as an activity or health condition) typically convened for the purpose of benefiting members while addressing a need or providing a service.



Complications: Conditions that can result from diabetes that is not controlled. Complications can also be considered secondary health problems. The most common are lower extremity amputations, kidney failure, blindness, premature death, stroke, heart disease, congenital malformations, perinatal death, and long- and short-term disability.

Diabetes: The short name for the disease called diabetes mellitus. Diabetes results when the body cannot use blood glucose as energy because of having too little insulin or being unable to use insulin properly.

Diabetes Self-Management Education: Instruction about nutrition, exercise, medications, blood glucose monitoring, and emotional adjustment to help people control their diabetes and make healthy lifestyle choices.

Gestational Diabetes: A form of glucose intolerance that is diagnosed in some women during pregnancy, even though they have had no known prior history of diabetes.

Healthcare Provider: Physicians, physician assistants, nurse practitioners, Certified Diabetes Educators, nurses, and other allied health professionals.

Healthcare System: A system comprised of the organizations, institutions, and resources that are devoted to producing a health action, whether in personal health care or in public health services, whose primary purpose is to improve the health of the general population or a specified and recognized segment of the general population. In South Dakota, the primary health care systems are Avera, Community Health Centers, Indian Health Service, Rapid City Regional, Sanford, and the Veteran's Health Administration.

Incidence: How often a disease occurs; the number of new cases of a disease among a certain group of people over a specific period of time (e.g., one year).

Insulin: A hormone produced by the pancreas that helps the body use glucose (sugar) for energy.

Morbidity: A descriptive measurement of sickness. Morbidity rates are generally given in one of two ways (see corresponding definitions): incidence or prevalence.

Mortality: A descriptive measurement of death. A mortality rate is the number of deaths per unit of population over a specified period of time.

Obesity: In Body Mass Index (BMI) measurements, obesity is defined as a BMI equal to or greater than 30.0 in adults and equal to or greater than 95th percentile in children and adolescents.

Overweight: In Body Mass Index (BMI) measurements, overweight is defined as a BMI between 25.0 and 29.9 in adults. For children two to twenty years, overweight is defined as BMI-forage equal to or greater than the 85th percentile and less than the 95th percentile.

Prevalence: The number of known cases at any given time. Diabetes prevalence is expressed as a percentage.

Prediabetes: A condition in which individuals have blood glucose levels higher than normal but not high enough to be classified as diabetes. People with prediabetes have an increased risk of developing Type 2 Diabetes, heart disease, and stroke. Progression to diabetes among those with prediabetes is not inevitable. The Diabetes Prevention Program and Diabetes Prevention Program Outcomes Study have shown that people with prediabetes who lose weight can prevent or delay diabetes.

Preventive Services: An intervention (activity) that prevents disease or injury or promotes health. In relation to diabetes, these include dilated eye exams, monofilament foot exams, flu and pneumonia shots, and others.

Risk Factor: Characteristic of individuals that increase the probability that they will experience disease or death compared to the rest of the population. Risk factors for developing diabetes include genetics, body mass index, physical activity practices, environmental exposures, and socio-cultural living conditions. Risk factors for complications of diabetes include the same factors as above and more importantly, uncontrolled blood glucose, blood lipid or blood pressure levels.

South Dakota Diabetes Prevention and Control Program: A unit of the South Dakota Department of Health located under the Office of Chronic Disease Prevention and Health Promotion. The Program receives the majority of its funding from the CDC. The program is dedicated to improving the health of people at risk for, or with, diabetes.

Years of Potential Life Lost (YPLL): A widely-used estimate of premature mortality, defined as the number of years of life lost among persons who die before age 75. YPLL is the sum of the differences between age 75 and the age at death for everyone who died before age 75.

CALL TO ACTION

The *South Dakota Diabetes State Plan 2018 – 2020* provides a framework for healthcare professionals and people with diabetes to address goals and objectives to prevent diabetes, reverse or slow prediabetes progression, prevent diabetes-related complications, and advocate for people with diabetes and their families. The South Dakota Diabetes Coalition, South Dakota Department of Health, and key stakeholders will positively affect people's health and quality of life through teamwork from individuals, organizations, and communities across the State of South Dakota. Here are some ways you can help:

1. Join the South Dakota Diabetes Coalition as a member to address diabetes strategic priorities.
2. Use the South Dakota Diabetes Coalition resources to guide actions in your organization or local community.
3. Communicate your programs and your successes with the South Dakota Diabetes Coalition so we may benefit from your progress and collaborate on initiatives.
4. Share data to enhance information about the burden of diabetes and diabetes prevention efforts in South Dakota and our progress in reducing the burden.
5. To learn about other ways to support the South Dakota Diabetes Coalition's efforts and support the implementation of the South Dakota Diabetes State Plan visit www.SDDiabetesCoalition.org.

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