



Diabetes Prevention and Control: **ILLINOIS DIABETES** Action Plan | 2018 – 2020

Using a Collaborative Process to Build a Strategic Framework
for Diabetes Prevention and Control in Illinois

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Illinois Diabetes Action Plan Executive Summary

The U.S. Centers for Disease Control and Prevention (CDC) estimates **two out of five people will develop diabetes in their lifetime.**ⁱ Diabetes can cause serious health complications and has significant social and economic impacts. An estimated 33.9% of U.S. adults aged 18 years or older (84.1 million people) had prediabetes in 2015; nearly half of those (48.3%) are aged 65 years or older.ⁱⁱ Nationally, the prevalence of diabetes is projected to increase by 54% to more than 54.9 million between 2015 and 2030; with estimated annual health care and lost productivity costs climbing to \$622 billion.ⁱⁱⁱ

The toll of diabetes on Illinoisans is staggering. Approximately 1.34 million (12.8%) adults have diabetes and 3.6 million (37.5%) have prediabetes. Prediabetes and Diabetes cost Illinois an estimated \$12.2 billion each year. **Diabetes affects some communities more than others. For example, African American, Latino, and American Indian/Alaska Native people are two to three times more likely to have diabetes.**^{iv} According to the 2015 Illinois Behavioral Risk Factor Surveillance System (BRFSS), among Illinoisans with Diabetes, about:

- 4 in 5 reported being overweight;
- 2 in 3 reported high cholesterol;
- 3 in 4 reported high blood pressure;
- 1 in 2 reported smoking cigarettes; and
- 2 in 5 reported no physical activity within the last 30 days.

Unfortunately, prediabetes and diabetes has continually increased in the U.S. and in Illinois. Although overall management and control of diabetes has seen tremendous progress, there are still numerous gaps in care and awareness among individuals at risk.

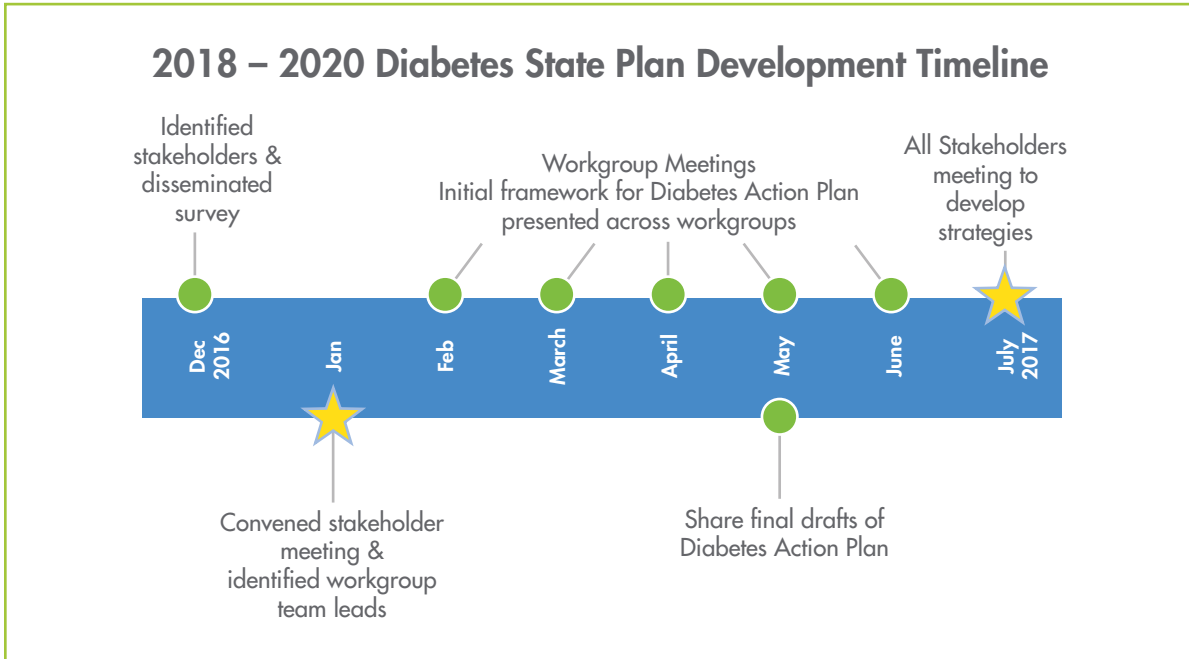
Vision: Illinoisans will lead healthier lives with reduced diabetes burdens and disparities.

The Illinois Diabetes Action Plan is the result of a comprehensive, collaborative effort to prioritize diabetes prevention and control in the state of Illinois.

The plan focuses on efforts in three strategic priority areas with five overarching goals and seven strategies. The priority areas are:

1. **Data and Health Information Technology (IT)**, which includes leveraging existing and new statewide systems to support data, health IT, and quality improvement;
2. **Finance and Reimbursement**, which includes finance and reimbursement for accredited diabetes programs to increase access and reduce barriers (cultural, economic, social, physical, etc.); and
3. **Community – Clinical Linkages**, which includes strengthening care coordination mechanisms and integrating screening tools and referral mechanisms that incorporate health equity in clinical and community settings.

In an effort to reduce the social and economic impacts of diabetes in Illinois, the Illinois Department of Public Health (IDPH) convened both private and public sector partners from all areas of Illinois, between December 2016 and July 2017 to collaborate, share ideas, and create buy-in for the development and future implementation of a statewide diabetes plan.



IDPH’s process of developing the diabetes action plan using a large stakeholder engagement approach is unprecedented in Illinois. Over a six-month period, more than 80 stakeholder groups were engaged in developing goals, Specific, Measureable, Achievable, Realistic, and Time-based (SMART) – objectives, and associated strategies for the three priority areas. The feedback received from this group was instrumental in the development of this plan and has guided the overarching framework for impacting diabetes treatment and control in Illinois.

IDPH will oversee the implementation of the Diabetes Action Plan by providing technical assistance, leadership, and expertise. IDPH staff will work with all diabetes stakeholders throughout the state to:

- Share data, resources, best practices, and lessons learned;
- Evaluate progress toward achieving the plan’s goals and strategies and adjust or modify accordingly;
- Continue to seek funding opportunities to complete the implementation of the plan;
- Encourage stakeholder participation and collaboration; and
- Provide guidance and support for planned pilot projects.

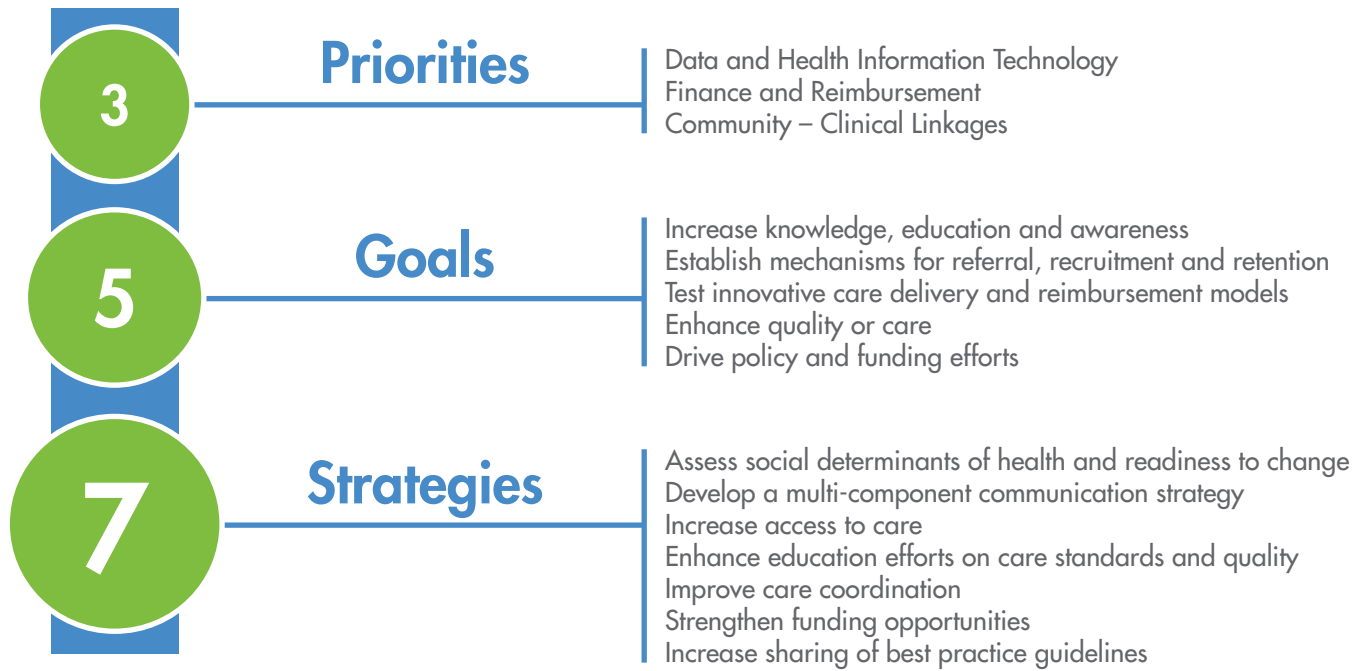
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iii Rowley, W. R., Bezold, C., Arikan, Y., Byrne, E., & Krohe, S. (2017). Diabetes 2030: Insights from yesterday, today, and future trends. *Population Health Management*, 20(1), 6-12. doi:10.1089/pop.2015.0181.

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Illinois Diabetes Action Plan 3 – 5 – 7 Strategic Framework



Vision: Illinoisans will lead healthier lives with reduced diabetes burdens and disparities

Increase Knowledge, Education and Awareness	Establish Mechanisms for Referral, Recruitment and Retention	Test Effectiveness of Innovative Care Delivery and Reimbursement Models	Enhance Care Coordination and Quality	Drive Policy and Funding Efforts
<p>1. Develop a multi-component communication strategy across various stakeholder groups to increase awareness of the burden of prediabetes and diabetes on vulnerable and underserved populations.</p>	<p>1. Develop and pilot a process to assess SDOH and readiness/barriers to change for people with diabetes/prediabetes that would benefit from access to community resources (transportation, financial, childcare, etc., as well as diabetes management and prevention programs).</p> <p>2. Improve point of care service and follow-up through distribution and sharing of best practice guidelines on workflow/patient screening, testing, referral, and reimbursement models.</p>	<p>1. Increase access to community based diabetes prevention and treatment programs through traditional and non-traditional delivery models.</p>	<p>1. Improve care coordination through the development of data sharing or practice agreements, diabetes program/resource database and public-private partnerships.</p> <p>2. Educate health systems and providers on the importance of developing and/or implementing policies, processes, and tools that support alignment with diabetes standards of care and improved quality.</p>	<p>1. Strengthen funding opportunities: Drive policy to fund and sustain diabetes efforts by advocating for reimbursement by all payers and promoting employer and insurer-based incentives to participate in diabetes prevention and self-management programs.</p>

Core Support Functions: Partnerships and Collaboration, Routine Surveillance/Monitoring, and Stakeholder Engagement

Introduction

In December 2016, the Illinois Department of Public Health (IDPH) set out to develop a Diabetes Action Plan to cover the period of 2018 through 2020. The process was funded by a grant from the Association of State and Territorial Health Officials (ASTHO) and facilitated by the consulting firm Leading Healthy Futures (LHF). The project brought together diverse stakeholders from various sectors and from across Illinois (the complete participant list is provided in Appendix A).

Stakeholders were invited to a kickoff meeting held in Bloomington, Illinois on January 31, 2017; more than 70 stakeholders attended. At the meeting, IDPH delivered introductory presentations to orient participants to the project, discuss existing diabetes prevention and self-management program information, and describe the burden of diabetes in Illinois. Subsequently, attendees were split into three workgroups to identify and prioritize goal areas around three strategies:

- 1) Data/Health IT
- 2) Finance/Reimbursement
- 3) Community-Clinical Linkages



The three workgroups met monthly during February, March, and April 2017. During these meetings, the workgroups confirmed, refined, and combined the goals identified at the January 31 meeting, and developed SMART objectives for each of the goals. In May 2017, IDPH convened an all-stakeholder virtual meeting to allow the co-chairs of each workgroup to present the working draft of their goals and objectives to the full stakeholder group and solicit feedback. Following the all-stakeholder session in May, each workgroup held one more virtual meeting in June 2017 during which they developed context around each goal, and developed strategies under each objective. Finally, on July 20, 2017, all stakeholders returned for another in-person meeting in Bloomington, Illinois, where the group finalized goals, objectives, and strategies, and provided structured opportunities for feedback across the workgroups. The resulting Diabetes Action Plan was finalized by IDPH leadership in August 2017, for planned implementation from 2018 through 2020.

The Importance of Diabetes Prevention and Control

Diabetes is a disease in which blood glucose levels are above normal. When someone has diabetes, the body either does not make enough insulin or is unable to use its own insulin as well as it should. This causes the glucose levels to rise higher than normal in the blood.^{1,2}

The U.S. Centers for Disease Control and Prevention (CDC) estimates two out of five people will develop diabetes in their lifetime.³ Diabetes can cause serious health complications and have social and economic impacts.

Prediabetes

A person with prediabetes has a blood sugar level higher than normal, but not high enough for a diagnosis of diabetes. People with prediabetes are at higher risk for developing Type 2 diabetes and other serious health problems, including heart disease and stroke.¹

ILLINOIS Diabetes Action Plan | 2018 – 2020

An estimated 33.9% of U.S. adults aged 18 years or older (84.1 million people) had prediabetes in 2015, based on their fasting glucose or A1c level. Nearly half (48.3%) of adults aged 65 years or older had prediabetes. Almost 90% of people with prediabetes are unaware of it.⁵

A person with certain risk factors is more likely to develop prediabetes and type 2 diabetes. These risk factors include:

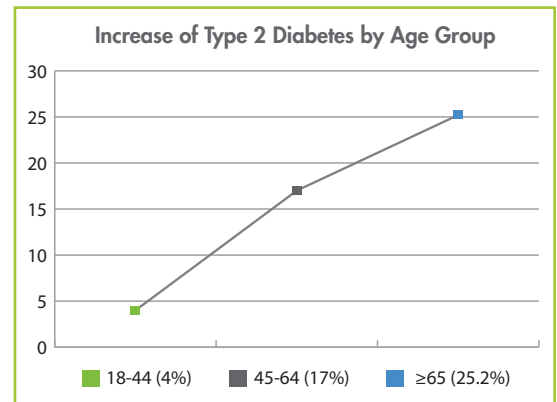
- age, especially after 45 years of age;
- being overweight or obese;
- a family history of diabetes;
- having an African American, Hispanic/Latino, American Indian, Asian American, or Pacific Islander racial or ethnic background;
- a history of diabetes while pregnant (gestational diabetes) or having given birth to a baby weighing nine pounds or more;
- having high blood pressure; and being physically active less than three times per week.^{1,4}

Type 2 Diabetes

Type 2 diabetes, which was previously called non-insulin-dependent diabetes mellitus (NIDDM) or adult-onset diabetes, is the most common type of diabetes accounting for 90% to 95% of all diagnosed cases of diabetes. In Type 2 diabetes, the body does not sufficiently produce insulin, use insulin, or both. Type 2 diabetes can develop at any age, even during childhood. This type of diabetes occurs most often in people over 40 years of age.^{1,2,5}

An estimated 30.3 million people of all ages—or 9.4% of the U.S. population—had diabetes in 2015. This total included 30.2 million adults aged 18 years or older (12.2% of all U.S. adults), of which 23.8% (7.2 million) were not aware of or did not report having diabetes. The percentage of adults with diabetes increased with age, reaching a high of 25.2% among those aged 65 years or older.⁵

Risk factors for Type 2 diabetes include: being 45 years of age or older, family history of diabetes, overweight/obesity, physical inactivity, certain ethnic groups, personal history of prediabetes or gestational diabetes, and certain health problems such as high blood pressure.^{1,4}



Type 1 Diabetes

Type 1 diabetes, which was previously called insulin-dependent diabetes mellitus (IDDM) or juvenile-onset diabetes, may account for about 5% of all diagnosed cases of diabetes. The causes of Type 1 diabetes appear to be much different than those for Type 2 diabetes, though the exact mechanisms for developing both diseases remains unknown. The appearance of Type 1 diabetes is suspected to follow exposure to an "environmental trigger," such as an unidentified virus, stimulating an immune attack against the beta cells of the pancreas (that produce insulin) in some genetically predisposed people. People with Type 1 diabetes need to take insulin every day to stay alive. Type 1 diabetes is usually diagnosed in children and young adults, although it can appear at any age.^{1,2,4}

Gestational Diabetes

Gestational diabetes is a type of diabetes that develops only during pregnancy.

Managing gestational diabetes is very important in order to protect the baby. Babies born to mothers with uncontrolled gestational diabetes can be overly large at birth (greater than 9 pounds), making delivery more dangerous. These babies can also have breathing problems. Children exposed to diabetes in utero are more likely to become obese during childhood and adolescence, and develop Type 2 diabetes later in life.^{1,2,4}

Usually, gestational diabetes goes away after the birth of the baby. However, women who have had gestational diabetes are at higher risk for developing Type 2 diabetes later in life. Healthy eating, physical activity, and weight maintenance are important steps to prevention of Type 2 diabetes in this population.^{1,2,4}

Complications

People with diabetes have an increased risk of developing a number of serious health problems. Consistently high blood glucose levels can lead to serious diseases affecting the heart and blood vessels, eyes, kidneys, nerves, and teeth. In addition, people with diabetes also have a higher risk of developing infections. In the U.S., diabetes is a leading cause of cardiovascular disease, blindness, kidney failure, and lower limb amputation. People living with diabetes have a higher prevalence of depression and anxiety. Diabetes is the seventh leading cause of death in the U.S.^{1,2,4,5,6}

Treatment and Prevention

For most people with diabetes, a combination of diabetes self-management and preventive care can prevent or delay complications. For people with Type 1 diabetes, near-constant self-management (or management by a parent or caregiver) of glucose levels is essential to prevent life-threatening short-term complications.⁴

The American Diabetes Association's, Standards of Medical Care in Diabetes- 2017, provides the evidence base to recommend assessment, provision, and adjustment of Diabetes Self-Management Education/Support (DSME/S), nutrition education, and emotional health needs at four critical times: at diagnosis, annually, when new complicating factors influence self-management, and during transitions of care.^{7,8}

DSME/S has been shown effective in improving health outcomes in people living with diabetes. DSME/S programs are designed to address the health beliefs, cultural needs, current knowledge, physical limitations, emotional concerns, family support, financial status, medical history, health literacy, numeracy, and other factors that influence each person's ability to meet the challenges of self-management. The overall objectives of DSME/S are to support informed decision making, self-care behaviors, problem solving, and active collaboration with the health care team and to improve clinical outcomes, health status, and quality of life.^{7,8}

People with diabetes require regular preventive treatment to delay the natural progression of the disease. Much of the treatment, such as routine blood sugar monitoring, must be self-managed by the patient or a caregiver. In Type 1 diabetes, daily insulin is required. Type 2 diabetes can often be controlled through lifestyle change, oral medications, and/or insulin. People with all forms of diabetes need annual eye, foot, kidney function, and dental exams, among other treatments. Evaluations of blood pressure and feet for sores are recommended at each medical visit.⁴

Many cases of Type 2 diabetes can be prevented or delayed. Regular screening for prediabetes and Type 2 diabetes through an informal assessment of risk factors or with an assessment tool, such as the ADA risk test, is recommended to guide whether performing a diagnostic test for prediabetes and previously undiagnosed Type 2

diabetes is appropriate. Those determined to be at high risk for Type 2 diabetes, including people with A1c 5.7–6.4%, impaired glucose tolerance, or impaired fasting glucose, are ideal candidates for diabetes prevention efforts.^{4,9}

At a minimum, annual monitoring for the development of diabetes in those with prediabetes is suggested. For people who have been diagnosed with prediabetes, Type 2 diabetes can be prevented or delayed by adopting a lifestyle different from their current norm – one that includes at least 150 minutes of physical activity per week, eating a balanced diet, and, if the patient is overweight or obese, losing 5-10 % of their body weight. Evidence-based lifestyle change programs, such as the Diabetes Prevention Program (DPP), provide support and education to people with prediabetes wanting to make these changes. Healthy eating and regular physical activity are crucial to successfully managing prediabetes and diabetes.^{4,9}

Diabetes Burden in Illinois

In Illinois, the number of adults diagnosed with diabetes has more than doubled in the past 15 years, reaching approximately 1,002,134 in 2015 (9.9 % of the adult population) and it was the seventh leading cause of death in Illinois in 2014.^{11,12} Approximately 3.7 million adults in Illinois have prediabetes.. Without intervention, 15% - 30% of people with prediabetes will develop Type 2 diabetes within 5 years.⁵ CDC and the Institute for Alternative Futures (IAF) have estimated that nationally diabetes will rise by 64 % from 2010 to 2025.¹³

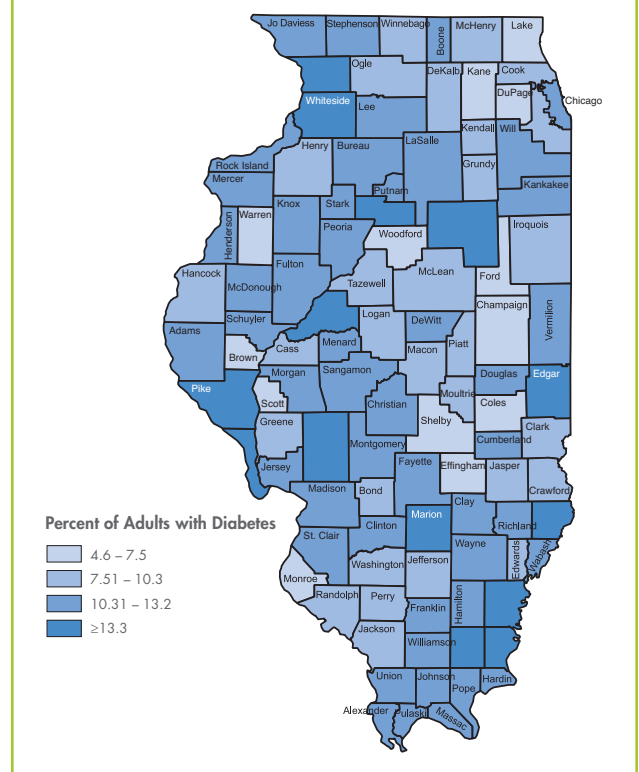
Diabetes, by Demographics

Diabetes prevalence varies significantly by demographic characteristics to include age, race, ethnicity, and gender. Research has shown the risk of diabetes increases significantly with age and in Illinois, adults 65-74 and 75+ had the highest percentage at 13.3 and 10.0, respectively. In addition, research has also demonstrated differences in gender. In Illinois, the percentage of adult males with diabetes was 10.3 and females was 8.1. However, research has shown that women experience higher comorbidities and mortality rates attributed to the disease.¹⁵ Further, racial and ethnic minorities have a higher prevalence of Type 2 diabetes and different studies have found that African Americans are from 1.4 to 2.2 times more likely to have diabetes than Caucasian persons.¹⁶ In Illinois, the percentage for African Americans (14.8%) was higher than it was for Caucasian (9.4%) and other races (8.5%). Nationally, percentages among ethnic groups were highest among Cuban (10.8%) and Mexican/Mexican American (10.2%) followed by Hispanic (8.8%) and Puerto Rican (7.4%).

Socioeconomic and Geographic Variation

The prevalence of diabetes has been associated with level of income and education. As education and income levels increase, the prevalence of diabetes decreases, indicating that people with the lowest socioeconomic status have the highest prevalence of diabetes. According to the 2015 BRFSS, the prevalence of diabetes is twice as high among adults with a household income of less than \$15,000 (14.8%) compared to the greater

Figure 1: Percent of Adults with Diabetes, by County (BRFSS)



than \$50,000 income bracket (7.3%). In addition, when looking at education level, adults with college degrees have a significantly lower percentage of diabetes (6.0) when compared to high school graduates (13.0).

Furthermore, the geographic variation of diabetes in Illinois is significant. In some counties percentages are less than 8.0 and in other areas, it is more than 13.4 (see Figure 1). Additionally, when we look at percentage of adults with diabetes in areas with high concentrated disadvantageⁱ, there is a startling contrast; percentages are as high as 37.0 in some areas.

Diabetes Costs

Chronic diseases are costly and people with diabetes have medical expenses approximately 2.3 times higher than those who do not have diabetes.¹⁷ Emergency Department (ED) visits and hospitalizations due to diabetes are particularly expensive for the Illinois health care system. In 2015, the average length of stay for a diabetes hospitalization was 4.4 days and the median cost was \$23,707. Length of time and expense is greater for males who are hospitalized than females and for adults aged 35 years and older compared to those younger than age 35. By 2012 the total cost of diabetes had increased to \$245 billion, meaning that the disease's toll on the economy has increased by more than 40 percent since 2007.¹⁷

According to the Chronic Disease Costs Calculator, a tool that estimates the financial burden of chronic disease, in 2010 the average cost of treating a person with diabetes was \$6,490, or \$5 billion for all persons with diabetes in Illinois.¹⁸ The average employed person with diabetes in Illinois missed two days of work due to diabetes, totaling 753,000 days of work and \$183 million in lost productivity and wages annually. The Chronic Disease Cost Calculator estimates a 60.3% increase in medical costs, excluding absenteeism, from 2010 to 2020. The projections do not account for inflation, assume no changes in policy or technology, and exclude changes due to the Affordable Care Act.

Current Programs

IDPH's Division of Chronic Disease has increased the number of opportunities to provide diabetes prevention and control education by building upon partnerships with internal and external stakeholders. In Fiscal Year 17 (FY17), IDPH offered several diabetes-focused webinars on: recruitment and retention for diabetes education programs, diabetes referral mechanisms, and reimbursement for diabetes services, including medical nutrition therapy, nutrition counseling, and diabetes self-management programs. Further, IDPH offered the National DPP Training – a research-based lifestyle change program for preventing Type 2 diabetes - by the American Association of Diabetes Educators (AADE) to more than 30 health care professionals from across the state, at no charge, and is currently evaluating its efficacy and reach. In June 2017, the second annual Diabetes Symposium was held in Naperville, Illinois and simulcast to two other locations (central and southern Illinois). Nearly 100 healthcare professionals attended presentations from several partner organizations, including the ADA, the American Medical Association (AMA), the Illinois Public Health Institute (IPHI), the YMCA, and AgeOptions (Stanford Program). The symposium agenda also included a 90-minute session on the mechanics of reimbursement. Throughout the Fall of 2017, Stanford DSMP Training was offered at four locations in the state at no charge to participants. IDPH is completing targeted outreach to encourage participation in those areas of the state with a high burden of diabetes. Funding for these activities was made available through the DP1305-Chronic Disease and School Health Grant (CDASH).

ⁱ Concentrated disadvantage provides a broad, community-level look at the impact of poverty and its associated conditions. It is often used when discussing educational attainment and safety, and it is used to evaluate measures of population health such as diabetes and other chronic diseases. It is a calculation of the percentage of households located in census tracts with a high level of concentrated disadvantage, calculated using five census variables (percentage below poverty line, receiving public assistance, female-headed households, unemployed, less than aged 18 years).

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Mission

To work collectively with key stakeholders to identify, implement and coordinate systems, policies, and practice approaches to improve diabetes prevention, management, and associated outcomes to reduce the burden of Type 2 diabetes in Illinois.

Target Populations

Illinoisans at greatest risk for developing Type 2 diabetes, which includes populations with the highest burden of Type 2 diabetes, populations with the greatest health disparities, and populations with the greatest concentration of low-income residents.

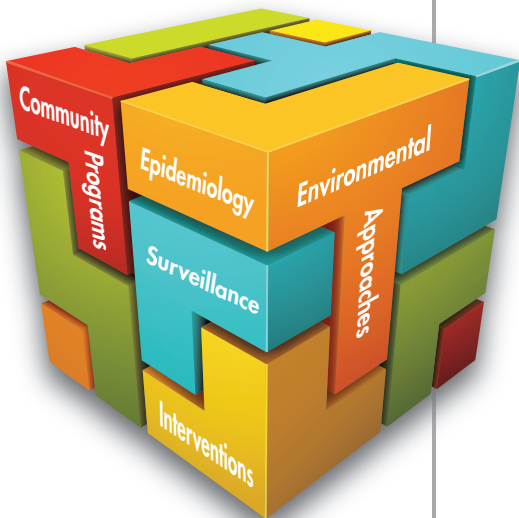
ILLINOIS DIABETES ACTION PLAN

The **Illinois Diabetes Action Plan, 2018-2020** provides a guide for the IDPH Diabetes Prevention and Control Program (ILDPCP) and its partners to support and sustain diabetes education and prevention programs; cost-effective, evidence – based lifestyle change programs for preventing and managing Type 2 diabetes. Specifically, this plan provides a roadmap that Illinois diabetes stakeholders can use to accomplish five goals:

1. Increase knowledge, education and awareness;
2. Establish mechanisms for referral, recruitment and retention;
3. Test effectiveness of innovative care delivery and reimbursement models;
4. Enhance care coordination and quality; and
5. Drive policy and funding efforts.

These goals align with the **CDC's Four Domains of Chronic Disease Prevention – Working Toward Healthy People in Healthy Communities:**

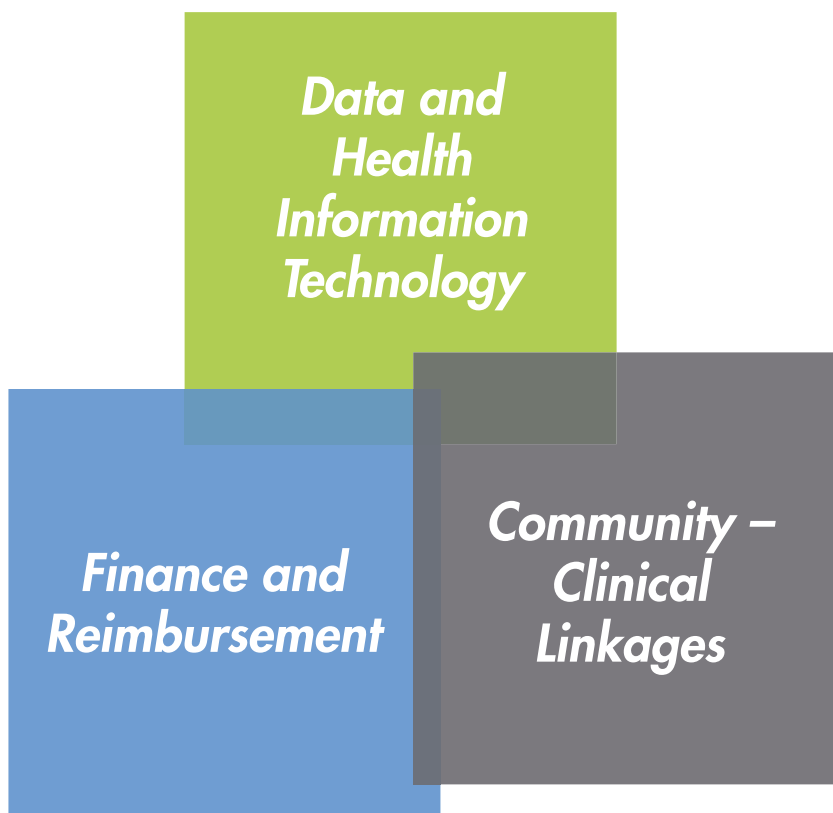
- **Epidemiology and surveillance** – Provide data and conduct research to guide, prioritize, deliver, and monitor programs and population health.
- **Environmental approaches** – Make healthy behaviors easier and more convenient for more people
- **Health care system interventions** – Improve delivery and use of quality clinical services to prevent disease, detect diseases early, and manage risk factors
- **Community programs linked to clinical services** – Ensure that people with or at high risk of chronic diseases have access to quality community resources to best manage their conditions.



Strategic Areas of Focus

Beginning with this fundamental framework, Illinois Diabetes stakeholders worked together to identify priorities and recommendations that would help drive diabetes prevention and control forward in the state.

1. **Data and Health Information Technology (IT)**, which includes leveraging existing and new statewide systems to support data, health IT, and quality improvement;
2. **Finance and Reimbursement**, which includes finance and reimbursement for accredited diabetes programs to increase access and reduce barriers (cultural, economic, social, physical, etc.); and
3. **Community – Clinical Linkages**, which includes strengthening care coordination mechanisms and integrating screening tools and referral mechanisms that incorporate health equity in clinical and community settings.



Collaboration is Key

IDPH has collaborated with the Center for Medicare & Medicaid Services (CMS) Diabetes Affinity Group to improve diabetes prevention and control in Illinois. The group's activities represented a range of experience in improving access to and quality of preventive services, in both managed care and fee-for-service environments. Staff have also partnered with the IPHI to assist with activities related to their Managed Care Organization (MCO) Diabetes Project. A pilot project to develop MCO reimbursement for DPP programs is planned for later in 2017 with two managed care organizations participating. Both the Illinois Health and Hospital Association (IHA) and the Illinois Primary Healthcare Association (IPHCA) have assisted IDPH in developing and promoting diabetes educational programs for healthcare professionals throughout the state. Internally, IDPH's Division of Chronic Disease has partnered with the IDPH School Health Program to provide school nurses with information on the care of students with diabetes, and the Division of Minority Health and the Chicago Hispanic Health Coalition to encourage and support efforts involving community health workers (CHWs) and the social determinants of health (SDOH). More recent collaborations have occurred with the Office of Women's Health, WISEWOMAN program, to cross-promote programs and to integrate strategies toward more vulnerable or at-risk populations across Illinois.

Guiding Principles for Plan Implementation

1. All diabetes stakeholders—including insurers, healthcare providers, community-based organizations, health care systems, local health departments, and persons with diabetes—will work in concert to effectively and efficiently address the prediabetes/diabetes epidemic in Illinois.
2. Stakeholder engagement in all focus areas and from all sectors is vital to increasing knowledge, education, and awareness; improving referral, recruitment, and retention, as well as attaining reimbursement for DSMP; enhancing the quality of care; and driving policy and funding efforts.
3. Strategy implementation for data and health information technology, finance and reimbursement, and clinical-community linkages will be comprehensive, with an appropriate focus on the needs of local communities, regions, and the state as a whole, depending upon the audience and the desired outcome.
4. Implementation of the plan will focus on reaching populations with the greatest health disparities.



GOAL 1: INCREASE KNOWLEDGE, EDUCATION AND AWARENESS

Strategy 1: Develop a multi-component communication strategy across various stakeholder groups to increase awareness of the burden of diabetes and prediabetes on vulnerable and underserved populations.

Objective #1	By 2018, plan and implement a statewide public awareness and resource-specific campaign around diabetes, diabetes risk factors, and diabetes prevention using a targeted approach (e.g. demographics, geographic regions).
Action Steps	#1. Bring awareness of diabetes to the public and other diabetes stakeholders by promoting World Diabetes Day and Diabetes Awareness Month (November), developing provider – based tools, and mapping diabetes burden and resources.
	#2. Tailor messaging to five distinct regions based on SDOH and other risk factors. Focus on diabetes awareness and prevention, diagnosis, complications, treatment, and health outcomes.
Objective #2	By December 31, 2018, establish a snapshot of diabetes among high-risk populations, using standardized methods and multiple data sources.
Action Steps	#1. Define populations at risk or adversely affected by diabetes using standardized criteria (e.g. diagnosed DM, obesity, demographics, and SDOH).
	#2. Identify key data sources specific to high risk populations.
	#3. Perform a gap analysis to identify missing data and the need for additional data collection methods or modeling.
	#4. Develop methods or recommendations (e.g. predictive analysis, infographics, and GIS - mapping) that can contribute to a diabetes snapshot among high risk populations.
Objective #3	By December 31, 2020, create and disseminate a state-wide summary report that highlights changes/trends comparing the burden of diabetes over time.
Action Steps	#1. Develop a communication strategy for diabetes awareness (recommendations for data informed policies and programs) using the diabetes snapshot as the foundation.
	#2. Target communication to a broad group of stakeholders (e.g. health systems, provider groups, legislators, and high risk populations).
	#3. Monitor data trends, at least annually, to update snapshot and toolkit communication strategy.
Objective #4	By 2020, identify and share evidence-based approaches for diabetes prevention education among youth and adolescents in non-traditional settings using alternative delivery models.
Action Steps	#1. Review outcomes from existing pilot programs that are geared towards youth and adolescents.
	#2. Highlight and disseminate best practices from evidence-based programs.
	#3. Provide education to participants of the program as well as their family units and communities.

GOAL 2: ESTABLISH MECHANISMS FOR REFERRAL, RECRUITMENT AND RETENTION

Strategy 1: Develop and pilot a process to assess SDOH and readiness/barriers to change for people with prediabetes / diabetes that would benefit from access to community resources (i.e. transportation, financial, childcare, diabetes management and prevention programs, etc.).

Objective #1	By December 2018, identify existing data sources (e.g electronic health records) and tools on individual SDOH that affect program referral, recruitment, retention, and completion.
Action Steps	Collaborate with partners to: #1. Identify barriers to recruitment and retention using multiple modalities (e.g. literature search, surveys, focus groups, key informants, and existing pilot programs).
	#2. Establish a standard data set to be collected, to address SDOH (e.g. education, zip code) and identify barriers.
	#3. Test the feasibility of data sharing across various organizations.
	#4. Establish a data use agreement template to delineate which data will be shared and how that data will be used and protected.
Objective #2	By December 2019, identify evidence-based tools and processes that categorize readiness/ barriers to change; implement a pilot in at least three community and/or clinical settings.
Action Steps	#1. Explore which evidence-based tools/models are already being used by stakeholders and other chronic disease programs that assess health risk, readiness and barriers to change.
	#2. Identify three or more settings (e.g. hospitals, clinics, urgent care centers, pharmacies) to pilot evidence-based tools/models.
	#3. Expand implementation of tools/models based on effectiveness of use across different settings.
Objective #3	By December 2020, develop recommendations for use of processes and tools that support identification of SDOH and readiness/barriers to change among patients with prediabetes/diabetes.
Action Steps	#1. Convene a group of stakeholders to review data and develop recommendations that take funding, feasibility, efficacy, and sustainability into account.
	#2. Establish health equity governance to validate and disseminate the recommendations.

Strategy 2: Improve point of care service and follow-up through distribution and sharing of best practice guidelines on workflow/patient screening, testing referral, and reimbursement models.

Objective #1	By December 2018, develop and disseminate a business case to employers and insurers on the benefits of incentivizing evidence-based diabetes prevention and self-management programs.
Action Steps	#1. Convene an advisory group of business/human resource professionals and insurers to identify organizations that are already incentivizing in Illinois and other states.
	#2. Develop and disseminate a business case, across stakeholder groups which includes a cost benefit analysis and a description of the IL marketplace.
	#3. Develop a recognition program for employers and insurers who participate in an incentive program.
Objective #2	By December 2019, convene a minimum of five employers or insurers to pilot evidence-based diabetes prevention and self-management incentive programs for their members.
Action Steps	#1. Identify funding source(s) and establish participation criteria for the pilots (e.g. size, region, organization type, or sector).
	#2. Identify, recruit, and educate employers/insurers on the value of participation.
	#3. Implement and monitor the pilot projects.
	#4. Evaluate results and modify the incentive program as appropriate (e.g., adjust # of participants, completion rate, and weight loss).
Objective #3	By December 2020, implement an incentive pilot program that measures participation and completion of diabetes prevention programs and diabetes self – management and education programs for Medicaid recipients.
Action Steps	#1. Using the modified business case and with input from the advisory group, review CMS policy on incentive programs for Medicaid recipients.
	#2. Following evidence base from above, implement pilot program, evaluate results, and modify as appropriate.
	#3. Disseminate Medicaid business case and expand to large Medicaid population.
Objective #4	By 2019, recommend a set of systems, processes, and tools for diabetes referral (e.g. patient engagement, provider reminders, and program navigation).
Action Steps	#1. Assess existing referral systems, processes, and tools and identify gaps and best practices.
	#2. Educate both providers and patients on the recommended referral systems, processes, and tools.
	#3. Gather data on real or perceived barriers regarding implementation of recommendations.
Objective #5	By 2020, develop a referral system framework and pilot the framework within at least one region.
Action Steps	#1. Outline different referral models that are adaptable to the system type and ensure alignment with industry standards and legal requirements.
	#2. Test referral model(s) with various stakeholders and modify framework (as appropriate).
	#3. Using the results of the pilot project, develop and distribute a standardized framework that can be utilized across different setting types.

GOAL 3: TEST EFFECTIVENESS OF INNOVATIVE CARE DELIVERY AND REIMBURSEMENT MODELS

Strategy 1: Increase access to community-based diabetes prevention and treatment programs through traditional and non-traditional delivery models.

Objective #1	By 2018, identify evidence-based models and practices that show improved reach, participation, outcomes, access to care and reduction in health disparities.
Action Steps	#1. Identify existing diabetes care delivery models (e.g. CHWs), and best practices.
	#2. Conduct environmental scans to identify the need for non-traditional delivery models.
	#3. Increase physician and mid-level provider knowledge of diabetes prevention and self-management programs.
	#4. Identify funding sources to implement pilot programs.
Objective #2	By 2019, conduct a pilot program that will test various delivery and reimbursement models for diabetes prevention and self-management.
Action Steps	#1. Assess effectiveness of innovative delivery and reimbursement models in other states or systems.
	#2. Define number, type, and location to test delivery and reimbursement models.
	#3. Evaluate and communicate results from pilot(s); align measures with ADA/AADE and CMS standards.

GOAL 4: ENHANCE CARE COORDINATION AND QUALITY

Strategy 1: Improve care coordination through the development of data sharing or practice agreements, diabetes program/resource database, and public-private partnerships.

Objective #1	By December 31, 2018, engage at least five multi-sector partners to establish a comprehensive data sharing framework that meets industry standards and legal requirements.
Action Steps	#1. Review existing frameworks by conducting an environmental scan of existing data sharing agreements.
	#2. Determine initial data elements, share with employers and insurers, and modify based on identified need(s).
	#3. Develop a comprehensive framework for data sharing including, but not be limited to, standard data elements, infrastructure, governance, and management.
Objective #2	By December 31, 2019, conduct a pilot project and disseminate results across sectors.
Action Steps	#1. Select at least two partners to support the pilot project with a focus on expansion and sustainability.
	#2. Develop a business case and communicate findings to public/private health care organizations and other stakeholders.

STRATEGY 2: Educate health systems and providers on the importance of developing and/or implementing policies, processes, and tools that support alignment with diabetes standards of care and improved quality.

Objective #1	By December 31, 2018, identify diabetes quality measures, tools, and processes used to meet national reporting requirements in at least five multi-sector organizations.
Action Steps	#2. Establish a quality workgroup inclusive of multi-sector stakeholders (e.g. payers, hospitals and provider groups, diabetes educators, and professional organizations).
	#1. Identify existing quality standards and develop an evaluation tool to support quality measure selection.
Objective #2	By 2019, improve diabetes quality of care by utilizing and promoting ADA/AADE standards of care to clinical providers and health care teams.
Action Steps	#1. Engage provider stakeholder organizations (professional organizations, AMA, etc.), identify champions, and utilize existing evidence-based diabetes resources.
	#2. Develop a provider-focused diabetes education toolkit.
	#3. Educate providers on the ADA/AADE standards of care.
Objective #3	By December 31, 2019, develop and communicate recommendations for diabetes quality standards, tools and processes to stakeholders.
Action Steps	#1. Use a quality measure evaluation tool to identify priority measures and ensure alignment with national quality measures (e.g. National Committee for Quality Assurance, (NCQA), Healthcare effectiveness Data and Information Set (HEDIS), National Quality Forum (NQF)).
	#2. Select priority measures to submit to external reviewers for approval.
	#3. Communicate quality measure recommendations to stakeholders.
Objective #4	By December 31, 2020, complete a feasibility assessment for a state-wide diabetes quality collaborative.
Action Steps	#1. Convene a workgroup to assess the feasibility of establishing a state-wide quality collaborative.
	#2. Develop a proposal that includes priority measures, and identifies conveners, data stewards, and data workflows.
	#3. Share the proposal with potential funders and stakeholders.

GOAL 5: DRIVE POLICY AND FUNDING EFFORTS

STRATEGY 1: Strengthen funding opportunities: Drive policy to fund and sustain diabetes efforts by advocating for reimbursement by all payers and promoting employer and insurer-based incentives to participate in diabetes prevention and self-management programs.

Objective #1	By December 31, 2018, create and disseminate to payers a business case, tools, evidence, and resources for reimbursement of diabetes prevention and self-management programs.
Action Steps	#1. Convene an expert stakeholder advisory group to help IDPH create the business case.
	A. Review existing evidence, best practices, existing business cases, and conduct a cost benefit analysis.
	B. Share business case with payers.
	#2. Develop and implement a comprehensive plan that includes the business case, tools, and resources and distribute to payers and employers.
Objective #2	By December 31, 2020, establish a policy for reimbursement of diabetes prevention and self-management programs among all Illinois Medicaid programs and at least five private insurers.
Action Steps	#1. Identify and work with commercial insurers and self-insured employers to identify facilitators and barriers to implementation (e.g. billing, sustainability, and quality measures).
	#2. Expand MCO (DSME) pilot program to include coverage in Medicaid Fee For Service (FFS) and establish coverage for DPP.
	#3. Support legislative initiatives to include diabetes prevention and self-management as Medicaid/MCO covered benefits.
Objective #3	By December 2019, annually assess public and private funding opportunities available to clinical and community providers that focus on reducing the burden of diabetes.
Action Steps	#1. Determine who is currently funded either by public or private funds, and share information with stakeholders.
	#2. Assess funding opportunities available through public/private organizations for implementing diabetes interventions.
Objective #4	By December 2019, educate policymakers on evidence-based approaches to reduce the burden of diabetes in Illinois and the need to provide sustainable funding for those efforts.
Action Steps	#1. Support advocacy efforts and policies that address diabetes prevention and control.
	#2. Pursue sustainable funding for evidence-based diabetes education programs serving adults, youth, and children.
	#3. Develop data maps/reports on the burden of diabetes, and the locations of DSME/DPPs in Illinois, and disseminate to key stakeholders and policymakers.
	#4. Continuously evaluate mechanisms to sustain funding for diabetes prevention and control.

GOAL 5: STRATEGY 1: – *continued*

Objective #5	By December 2020, identify and share funding sources for evidence-based approaches to educate youth on skills that ensure a healthy lifestyle and reduce the burden of disease.
Action Steps	#1. Identify and promote evidence-based approaches to diabetes prevention (including obesity) for youth or other at-risk populations.
	#2. Assess availability of funding for diabetes prevention education for youth.
	#3. Share funding best practices to promote and ensure interventions and access to programs and resources are consistent across geographic areas.



Appendix A: State Plan Contributors

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Appendix B: Glossary of Terms and Acronyms

A1c	Common blood test used to diagnose type 1 and type 2 diabetes, and gauge how well they are managed
AADE	American Association of Diabetes Educators
ADA	American Diabetes Association
AMA	American Medical Association
ASTHO	Association of State and Territorial Officials
BRFSS	(Illinois) Behavioral Risk Factor Surveillance System
CDASH	Chronic Disease and School Health
CDC	Centers for Disease Control and Prevention
CMS	Centers for Medicare & Medicaid Services
CHW	Community Health Workers
DPP	Diabetes Prevention Program
DPRP	Diabetes Prevention Recognition Program
DSME/S	Diabetes Self-Management Education/Support
DSMP	Diabetes Self-Management Program
ED	Emergency Department
EHR	Electronic Health records
FFS	Fee For Service
GIS	Geographical Information System
HDL	High Density Lipoprotein
HEDIS	Healthcare Effectiveness Data Information Set
HFS	Healthcare and Family Services
HR	Human Resources
IAF	Institute for Alternative Futures
IDDM	Insulin Dependent Diabetes Mellitus
IDPH	Illinois Department of Public Health
IHA	Illinois Health and Hospital Association
IPHCA	Illinois Primary Healthcare Association
IPHI	Illinois Public Health Institute
IT	Information Technology
LHD	Local Health Department
LHF	Leading Health Futures
MCO	Managed Care Organization
NCQA	National Committee for Quality Assurance
NIDDM	Non-Insulin Dependent Diabetes Mellitus
QI	Quality Improvement
RTI	Independent, nonprofit research institute dedicated to improving the human condition
SDOH	Social Determinants of Health
SMART Objectives	Specific, Measurable, Achievable (Attainable), realistic (Relevant), Time Based
SSB	Sugar-Sweetened Beverages
YMCA	Young Men's Christian Association

Appendix C: Diabetes in Illinois Infographic

Diabetes in Illinois



1,342,070

The number of adults in Illinois who have diabetes. Over 3.5 million adults may have prediabetes.



12.2 billion

The cost of diabetes in Illinois each year due to health care costs and reduced productivity.

People with diabetes are 2 to 4 times more likely to have heart disease or a stroke.

Diabetes affects some communities more than others.

Certain risk factors can worsen diabetes and diabetes-related complications, and contribute to the development of other chronic diseases including heart disease and stroke.

Adults with less than a high school education are:

African American, Latino, American Indian, and Alaska Native people are:

Among Illinoisans with diabetes, about

- 4 in 5 reported being overweight.
- 2 in 3 reported high cholesterol.
- 3 in 4 reported high blood pressure.
- 1 in 2 reported smoking cigarettes.
- 2 in 5 reported no physical activity

2x
More likely to have diabetes.

2 to 3x
More likely to have diabetes.



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