State Plan for Diabetes and Obesity Treatment

As Required by

Texas Health and Safety Code,

Section 103.013

Texas Diabetes Council

November 2019

Table of Contents

Executive Summary

Texas Health and Safety Code, Chapter 103, established the Texas Diabetes Council (TDC). Section 103.013 requires TDC to develop and implement a state plan for diabetes treatment, education, and training.

TDC also develops an assessment of existing state programs for the prevention and treatment of diabetes to complement the state plan, in accordance with Section 103.0131. The assessment included a review of state agency programs that provide diabetes-related services, and can be found at https://www.dshs.texas.gov/Legislative/Reports-2019.aspx.

This plan is based on reviews and discussions of diabetes prevention and self-management, cost-savings studies, and evidence-based diabetes research studies. TDC members' professional experiences span decades and includes expertise in the treatment of diabetes, diabetes education and training, nutrition education, and public health policy. TDC meetings serve as opportunities to review and discuss topics, which assist in the identification of these priorities as outlined in the Texas Diabetes Action Plan:

- Addressing the enrollment gap in Diabetes Self-Management Education and Support with the goal of reducing diabetes related hospital admissions and readmissions.
- Supporting evidence- and community-based prevention programs, such as the National Diabetes Prevention Program (NDPP), that can provide cost-saving potential for employers, insurers, and government agencies.
- Focusing on screening and follow-up for gestational diabetes and education as a prevention effort for pregnant women and their newborns.
- Enhancing provider ability to treat Medicaid/Children's Health Insurance Program (CHIP) patients with diabetes.
- Addressing obesity and prediabetes in our school aged children to help prevent the progression to diabetes.
- Requiring transparency in the pricing of insulin and other prescription medications for diabetes patient to ensure that insulin and other important medications are available and affordable.

1. Introduction

The Texas Diabetes Council (TDC) was established by the Legislature per Texas Health and Safety Code, Chapter 103. It is composed of 11 members appointed by the Governor, as well as nonvoting members from Health and Human Services (HHS) agencies, Texas Workforce Commission (TWC) Vocational Rehabilitation, Employee Retirement System of Texas (ERS), and Teacher Retirement System of Texas (TRS).

Texas Health and Safety Code, Section 103.013, requires TDC to develop and implement a state plan for diabetes treatment, education, and training. TDC submits the state plan to the state agency designated as the state health planning and development agency and does so no later than November 1 of each odd-numbered year.

Section 103.013 allows the state plan to ensure the following:

- Individual and family needs are assessed statewide and all available resources are coordinated to meet those needs; and
- Healthcare provider needs are assessed statewide and strategies are developed to meet those needs.

Senate Bill 2151, 86th Legislature, Regular Session, 2019, amended Health and Safety Code, Chapter 103, to allow the TDC to include in the state plan provisions to address obesity treatment, education, and training related to the following:

- Obesity-dependent diabetes; and
- The health impacts of obesity on a person with diabetes.

2. Background

The prevalence of diabetes in Texas has increased 40 percent over the past decade. Today, more than 2.5 million (11.9 percent) of adult Texans have been diagnosed with diabetes.[1] Another 1.7 million (9.5 percent) Texans have prediabetes, and 36.6 percent of 9-12th grade students are overweight or obese.[1] Millions of Texans are likely to have undiagnosed prediabetes.[2] These conditions make them more likely to develop type 2 diabetes and increase their risk for heart disease and stroke.[2] An estimated 10.8 percent of pregnant women in Texas develop gestational diabetes, compared to 3.9 percent who had diabetes before pregnancy.[3]

According to the Texas Demographic Center, the number of persons with diabetes is projected to quadruple to nearly 8 million people by 2040, while the prevalence may double to 23.8 percent.[4] The annual financial toll on Texas due to diabetes is $26 billion dollars, including $18.9 billion in direct medical costs and $6.7 billion in indirect costs.[5]

The price of insulin has skyrocketed to the point where one in four patients must ration insulin, which is a lifesaving drug. Insulin prices have tripled between 2002 and 2013, and the cost of important new medications for diabetes patients is out of

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[1] Texas Department of State Health Services, Diabetes Factsheet-Texas, 2019.

[2] Centers for Disease Control and Prevention. Diabetes and Prediabetes, 2019. https://www.cdc.gov/chronicdisease/resources/publications/factsheets/diabetes-prediabetes.htm.

[3] Texas Department of State Health Services Maternal and Child Health. Texas Pregnancy Risk Assessment Monitoring System (PRAMS) Prevalence Data, 2017.

[4] Texas Demographic Center. Summary Report on Diabetes Projections in Texas, 2007 to 2040. http://demographics.texas.gov/Resources/Publications/2008/2008_SummaryReportDiabetes.pdf

[5] American Diabetes Association (2018). The Burden of Diabetes in Texas. http://main.diabetes.org/dorg/assets/pdfs/advocacy/state-fact-sheets/Texas2018.pdf

reach for many patients.[6, 7] The Texas public has no knowledge of how much each intermediary (manufacturers, wholesalers, pharmacy benefit managers and pharmacies) in the supply chain benefits from the sale of insulin.

Although with new awareness of diabetes and growing treatment modalities, some complications of diabetes have been reduced since the publishing of the Diabetes Control and Complications Trial (DCCT). One notable exception is the incidence of lower extremity amputations which has been on the rise for working age adults since 2010.[8] Amputation rates in Texas among Medicare beneficiaries with diabetes was 417 per 100,000 patients at a state median charge per hospitalization of $47,179.50.[9] The 5-year survival rate for people with diabetic foot ulcers is around 55 percent.[10] These statistics have enormous impact on healthcare costs; lost productivity and workers for businesses; and physical, emotional, and financial impacts for the individual and their family.

TDC was established to address the growing prevalence and associated costs of diabetes in Texas. TDC is composed of 11 governor-appointed members from the public, including healthcare providers and consumers with expertise or demonstrated commitment to diabetes, and one representative each from Texas Department of State Health Services (DSHS), Texas Health and Human Services Commission (HHSC), Employees Retirement System of Texas (ERS), Teacher

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[6] Hua X., Carvalho N., Tew M., Huang E.S., Herman, W.H., Clarke P. (2016). Expenditures and prices of antihyperglycemic medications in the United States: 2002-2013. Journal of the American Medical Association, 315:1400–1402.

[7] Cefalu, W.T., Dawes, D.E., Gavlak, G., Goldman, D., Herman, W.H., Van Nuys, K., Powers, A.C., Taylor, S.I., and Yatvin, A.L. on behalf of the Insulin Access and Affordability Working Group. (2018). Insulin Access and Affordability Working Group: Conclusions and Recommendations. Diabetes Care, June; 41(6): 1299-1311.

[8] Gregg, E.W., Hora, I., and Benoit, S.R. (2019). Resurgence in diabetes-related complications. Journal of the American Medical Association. 321(19):1867–1868. doi:10.1001/jama.2019.3471

[9] Newhall, K., Stone, D., Svoboda, R., and Goodney, P. (2016). Possible consequences of regionally based bundled payments for diabetic amputations for safety net hospitals in Texas. Journal of Vascular Surgery. 64(6): 1756- 1762. https://doi.org/10.1016/j.jvs.2016.06.098.

[10] Lin, C.W., Hsu, B.R., Tsai, J.S., et al. (2017). Effect of limb preservation status and body mass index on the survival of patients with limb-threatening diabetic foot ulcers. Journal of Diabetes and Its Complications. 31 (01) 180-185.

Retirement System of Texas (TRS), and Texas Workforce Commission (TWC) Vocational Rehabilitation.

TRS and ERS members were added to the Texas Diabetes Council per requirements in Senate Bill 2151, 86th Legislature, Regular Session, 2019. The October 10, 2019 council meeting was the first time these two agencies were represented and will contribute to future TDC projects and recommendations.

In January 2017, TDC adopted a new position statement:

> *"Specific initiatives to improve outcomes and minimize barriers to impact diabetes care in Texas, communities for improved delivery of care through system reforms that lead to increased access and high quality, affordable, effective, and efficient care for people with diabetes and coordination of state services."*

This prompted TDC to reorganize its committees into workgroups in July 2017 to improve alignment with the new statement.

TDC appointed two workgroups: Healthcare Professionals and Outcomes Workgroup (HPOW) and Advocacy and Outreach Workgroup (AOW). The HPOW assembles leading Texas endocrinologists, nurses, dietitians, diabetes educators, and other diabetes experts to review the minimum practice standards data from state agency programs, health systems, and special studies that can be used to assess the effectiveness of diabetes management in Texas.

The AOW brings together diabetes stakeholders to develop recommendations for issues affecting persons with diabetes. Stakeholders include American Diabetes Association (ADA), American Association of Diabetes Educators (AADE), Juvenile Diabetes Research Foundation (JDRF), healthcare systems, health plans, and other interested parties. Both workgroups assist TDC members (Appendix A) in executing legislatively-required duties, developing the state plan for diabetes and obesity treatment and education, and supporting TDC initiatives.

Major recent TDC accomplishments include:

- State law regarding the care of students with diabetes in schools;
- Updates to state laws regarding coverage of persons with diabetes under the Americans with Disabilities Act;
- Legislation to enhance and coordinate state agency services for persons with diabetes, including Medicaid/CHIP; and

- Efforts to expand coverage of the National Diabetes Prevention Program for persons with prediabetes served by Texas Medicaid/CHIP and state Employee Retirement System (ERS) health benefits.

3. Texas Diabetes Action Plan

The Texas Diabetes Council (TDC) developed a Texas Diabetes Action Plan that consists of priorities for areas that build on past accomplishments and use current national, state, and local efforts to improve diabetes education and management in Texas. Work in the priority areas that follow is dependent on the Legislature's continued funding and support of the Diabetes Prevention and Control Program at the Texas Department of State Health Services.

The following priorities will be discussed in this state plan:

- Diabetes Self-Management Education and Support Enrollment;
- Evidence-Based Prevention Program Engagement;
- Gestational Diabetes Screening and Follow-up;
- Provider Ability to Treat people with Diabetes and Improve Outcomes;
- Address Obesity and Prediabetes in Our School Aged Children; and
- Transparency in Insulin and Drug Pricing for Diabetes Treatments.

Diabetes Self-Management Education and Support (DSMES) Enrollment

In 2017, diabetes cost Texas an estimated $26 billion in health care expenditures and lost productivity.[5] The Assessment to Texas State Agency Programs for the Prevention and Treatment of Diabetes includes diabetes-related expenditures for treating diabetes and its complications, as available.

DSMES is an evidence-based approach that improves clinical outcome measures related to blood glucose, blood pressure, cholesterol, and smoking status.[11] DSMES has shown to be cost-effective by reducing hospital admissions and readmissions, as well as estimated lifetime healthcare costs related to a lower risk for

[11] Powers, M.A., Bardsley, J., Cypress, C., et al. (2015) Diabetes Self-Management Education and Support in Type 2 Diabetes: A Joint Position Statement of the American Diabetes Association, the American Association of Diabetes Educators, and the Academy of Nutrition and Dietetics. Diabetes Care, 38, 1-11. doi:10.2337/dc15-0730

complications.[12] In a retrospective study examining the medical records of more than 33,000 patients, average annual healthcare costs were found to be 39 percent lower for patients who received any educational visits, compared to those who did not receive any educational visits ($6,244 vs. $10,258).[13] Another study evaluated three-year claims data and found lower healthcare costs for people with commercial insurance and Medicare who received diabetes education. Despite the value of DSMES, data on medical billing codes reflect very low utilization rates.[14, 15]

Less than seven percent of those with private insurance and only five percent of Medicare beneficiaries received diabetes education during the first year after diabetes diagnosis.[16]

Managed Care Organizations (MCOs) contracted with Texas Medicaid/CHIP are required to provide disease management. Among respondents of a TDC survey of Medicaid/CHIP MCOs, less than half of the respondents representing contracted MCOs reported they automatically enroll patients with diabetes in diabetes self-management education (DSME) programs. MCOs use a variety of DSME curricula, and several organizations created their own curriculum. The majority of the DSME services incorporated individualized care plans for patient support. MCOs reported having an average retention rate of 46 percent in DSME. The most significant barrier to implementing DSME is patient engagement. Further surveying and

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[12] American Diabetes Association (2019). The Cost of Diabetes. http://www.diabetes.org/advocacy/news-events/cost-of-diabetes.html

[13] Robbins, J.M., Thatcher, G.E., Webb, D.A., et. al. (2008). Nutritionist Visits, Diabetes Classes, and Hospitalization Rates and Charges. Diabetes Care 2008 Apr; 31(4): 655-660.

[14] Li R, Shrestha SS, Lipman R, et al. Diabetes self-management education and training among privately insured persons with newly diagnosed diabetes--United States, 2011-2012. Centers for Disease Control and Prevention (CDC). MMWR Morb Mortal Wkly Rep. 2014 Nov 21; 63(46):1045-9.

[15] Strawbridge LM, Lloyd JT, Meadow A, et al. Use of Medicare's Diabetes Self-Management Training Benefit. Health Education Behavior. 2015 Aug; 42(4):530-8.

[16] Powers, M., (2016) Healthcare and Education Presidential Address: If DSME Were a Pill, Would You Prescribe It? Diabetes Care, 10.2337/dc16-2085 Published 1 December 2016.

outreach should be done with other MCOs to better understand the nature of DSME services offered by MCOs throughout the state.[17]

To ensure DSMES national standards are met, there is a need for more DSMES sites to be recognized by the American Diabetes Association (ADA) or accredited by the American Association of Diabetes Educators (AADE). For consistency, the same standards, information, and reporting should be required of DSME services offered by Medicaid/CHIP Managed Care contracts.

Priorities for the Texas Diabetes Council

Based on the proven effectiveness of DSMES, TDC identified the following priorities to address the DSMES enrollment gap with the goal of reducing diabetes-related hospital admissions and readmissions.

- Work with Texas Health and Human Services Commission (HHSC) to ensure Medicaid/CHIP recipients with diabetes are automatically enrolled in DSMES and HHSC continues to require and analyze outcomes data demonstrating health and economic impacts.
- Continue TDC engagement in the Medicaid/CHIP learning collaborative organized during the 2019-2021 biennium.
  - The Centers for Medicare and Medicaid/CHIP Services Diabetes Prevention and Management Affinity Group provided resources to state Medicaid/CHIP programs, including Texas, to develop actionable approaches to diabetes prevention and control, including tools and strategies for working with MCOs and performance improvement project templates tailored to diabetes.
- Work with state agencies to ensure state reporting systems beyond Medicaid/CHIP are evaluating DSMES outcomes to demonstrate effectiveness in improving health.
- Increase access, referral, and reimbursement for AADE-accredited or ADA-recognized DSMES services that help prevent diabetes complications.
- Increase engagement of certified community health workers (CHWs) to promote linkages between health systems and community resources for adults with type 2 diabetes.

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[17] Texas Department of State Health Services, Texas Diabetes Council Survey of Managed Care Organizations in Texas on Diabetes Self-Management Education and Support Services, Spring 2019.

Evidence-Based Prevention Program Engagement

Evidence-based programs are built on rigorous study of the effects or outcomes of specific interventions or model programs. They demonstrate reliable and consistent positive changes in important health-related and functional measures.

The National Diabetes Prevention Program (NDPP) uses evidence-based strategies to improve outcomes. NDPP is an example of a public-private partnership of community-based organizations, private insurers, healthcare organizations, employers, and government agencies brought together to establish local evidence-based lifestyle change programs for people at high risk for type 2 diabetes. The community-based program costs less than $325 per participant, compared to an average of $9,600 per year for the treatment of diabetes for one person.[18,19] The Texas State Healthcare Innovation Plan recommends reimbursement for this one-year lifestyle change program by Medicaid/CHIP and state employee health plans to achieve a projected risk reduction for type 2 diabetes of 58 percent among persons with prediabetes served by these health plans. This reduction in risk can be achieved by weight loss of five to seven percent of body weight by program participants.

TDC collaborated with the Texas Employee Retirement System (ERS), per 2016-2017 General Appropriations Act, H.B. 1, 84th Legislature, Regular Session, 2015 (Article I, ERS, Rider 14), to assess the prevalence of prediabetes among the state employee population, develop an economic analysis related to providing an evidence-based prevention program, develop and implement a cost-effective type 2 diabetes prevention program for state employees, and report to the Legislature and governor. As a result, ERS provides coverage for online weight loss programs. Real Appeal and Naturally Slim are programs that assist participants with reducing risk factors for type 2 diabetes through nutrition and physical activity. Both programs are offered to current and retired state employees and dependents enrolled in

[18] Ackerman, R.T., Marrero, D.G., Adapting the Diabetes Prevention Program Lifestyle Intervention for Delivery in the Community: The YMCA Model, The Diabetes Educator 2007; 33;69.

[19] American Diabetes Association. Economic Costs of Diabetes in the U.S. in 2017. Diabetes Care 2018 Mar; dci180007.

HealthSelect but not Medicare.[20] As of 2018, 91 percent of participants enrolled in Real Appeal were categorized as medically at risk for diabetes and other chronic co-morbid conditions due to obesity and prediabetes; this data will be reported for Naturally Slim in 2020.[21] Real Appeal and Naturally Slim enrollees have lost more the 130,000 pounds since 2016, reducing their risk for obesity-related health conditions.[21]

ERS reports that about 13 percent (51,600) of HealthSelect participants are living with diabetes, while almost 358,000 participants do not have diabetes.[22] Spending on participants with diabetes represented 27 percent of all HealthSelect costs in FY18.[22]

See Appendix B: Annual Costs for Texas State Employees with and Without Diabetes.

Priorities for the Texas Diabetes Council

TDC identified the following priorities for evidence-based prevention program engagement to provide cost-saving potential for employers, insurers, and government agencies.

- Continue Real Appeal and Naturally Slim implementation to realize a return on investment from reduced claims for diabetes, obesity, and other chronic co-morbid conditions.
- Continue to support efforts of Texas Area Health Education Center East Greater Houston Region, the Cities Changing Diabetes Initiative, Houston Business Coalition on Health, Area Agencies on Aging, and DSHS to implement a strategic plan to scale and sustain the NDPP in the Houston Area. The following are objectives:

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[20] Blue Cross Blue Shield of Texas HealthSelect. Weight Management Programs. https://healthselect.bcbstx.com/content/health-and-wellness-incentives/weight-management-programs.

[21] Employees Retirement System of Texas (ERS). Blue Cross Blue Shield HealthSelect Combined Data through March 2019.

[22] Employee Retirement System of Texas. Texas Employees Group Benefits Program Annual Report FY18. https://ers.texas.gov/About-ERS/Reports-and-Studies/Reports-and-Studies-on-ERS-administered-Benefit-Programs/FY18-GBP-Annual-Report.pdf.

    - Increase insurance/employer coverage of the NDPP lifestyle change program;
    - Increase clinical screening, testing and referral to recognized lifestyle change programs; and
    - Increase the availability of, and enrollment in, programs.
- Work with the Texas Medicaid/CHIP, employer groups, and health systems to promote coverage of the NDPP by Medicaid/CHIP, Medicare and private insurance. Use tools developed by the CDC to demonstrate return on investment and provide technical assistance based on national pilot projects implementing the NDPP across all insurance types.
- Added two non-voting members to the TDC representing the Employee Retirement System of Texas (ERS) and Teacher Retirement System of Texas (TRS) per Senate Bill 2151, 86th Legislature, Regular Session, 2019.

Gestational Diabetes Screening and Follow-up

Gestational diabetes is a key challenge for Texas women. Women with gestational diabetes are at high risk for developing type 2 diabetes later in life, and the infant is at risk of becoming obese during childhood and developing type 2 diabetes as an adult. Women with gestational diabetes have a 50 percent chance of developing diabetes in the next 5-10 years postpartum.[23] In Texas, Medicaid/CHIP pays for over 50 percent of all births statewide.[24] A study of 2012 data by HHSC and TDC concluded nine percent of pregnant women participating in any Texas Medicaid/CHIP program developed gestational diabetes mellitus (GDM) prior to delivery.[24] The study also concluded that birth certificate and hospital discharge data available prior to the study may have underestimated the prevalence of gestational diabetes by as much as 50 percent.

Approximately 40 to 50 percent of Texas women participating in the Medicaid or CHIP Perinatal program are screened for gestational diabetes.[24] Some screening

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[23] Andrew Curry. Exploring Why Gestational Diabetes Leads to Type 2. Diabetes Forecast. January 2015.

[24] Texas Health and Human Services Commission. Gestational Diabetes in Medicaid: Prevalence, Outcomes, and Costs. As Required by Rider 75, Senate Bill 1 83rd Legislature Regular Session, 2013. https://hhs.texas.gov/sites/default/files//sb1-gestational-diabetes.pdf

may occur before these women participate in state programs, but there is still room for improvement to increase these screening rates.

National guidelines recommend that all pregnant women should be screened for gestational diabetes at 24 weeks gestation, even if they have no symptoms. These guidelines are supported and set by the American Association of Clinical Endocrinologists, ADA, the American College of Obstetricians and Gynecologists (ACOG), and the United States Preventive Services Task Force. Additionally, the NDPP recommends that women who have been diagnosed with gestational diabetes receive a referral to lifestyle change programs.[25] These programs focus on weight loss that can reduce risk for developing type 2 diabetes and future high-risk pregnancies. Post-gestational follow up has not been tracked to see if they return to normal glucose tolerance or persist with glucose intolerance or diabetes. There has been no coordinated effort to ensure these women get care to prevent complications of diabetes if their risk persists after delivery.

Priorities for Texas Diabetes Council

TDC identified the following priorities as ways to improve screening and follow-up for gestational diabetes and education as an important prevention effort for pregnant women and their newborns.

- Collaborate with HHSC to work to ensure that Medicaid/CHIP managed care plans screen all pregnant women they serve for gestational diabetes and, if diagnosed, receive appropriate management (e.g., medical nutrition therapy, self-management education, and supplies) and care to prevent complications, hospitalizations, and potential neonatal intensive care unit costs for the newborn.
- A workgroup will be formed that includes members of TDC; DSHS Maternal and Child Health; DSHS Health Promotion and Chronic Disease Prevention; and HHSC's Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) to review, identify, and update resources that could be utilized within WIC clinics related to gestational diabetes mellitus (GDM).
- The following opportunities have been identified to share information and resources:

[25] Centers for Disease Control and Prevention (2019). CDC-Recognized Lifestyle Change Program: Details About the Program. https://www.cdc.gov/diabetes/prevention/lifestyle-program/deliverers/index.html

- Analysis of WIC risk assessment code associated with GDM and providing data at an aggregate level;
- WIC Conference in August 2019 – TDC will have a table and a break-out session;
- TDC contributing to online educational resources and WIC newsletter;
- Remind women at WIC intake visit to see their provider to get a six-week post-delivery oral glucose tolerance test (OGTT) to see if their diabetes persists; and
- At the second visit or before their Medicaid benefits end, remind women to consider enrolling in Healthy Texas Women program, especially if they have no other medical insurance after Medicaid ends.

Provider Ability to Treat People with Diabetes, and Improve Outcomes

TDC will focus on enhancing providers' ability to treat Medicaid/CHIP patients with diabetes and adhere to minimum standards of care. Conversations with HHSC leadership regarding the lack of endocrinologists and other physicians that accept Texas Medicaid/CHIP patients have led to priorities to improve outcomes and minimize barriers to care. In 2014, Texas Medicaid spent $334 million treating 341,690 people with diabetes.[26] An estimated 9,610 people with insulin treated diabetes and impaired awareness to hypoglycemia cost $84 million annually in emergency medical services to Texas Medicaid.[27,28] If insulin-treated patients with impaired awareness to hypoglycemia used CGM it would result in the following savings:

- $6,315,004 total annual cost savings to Texas Medicaid program[27,28]; and

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[26] Texas Diabetes Council (2016). Statewide Assessment of Existing Programs for the Prevention and Treatment of Diabetes. www.dshs.texas.gov/ConsumerandExternalAffairs/legislative/2016Reports/AssessmentDiabetesDPCP42016.pdf

[27] Price, D. and Chaugule, S. (2017, October). Clinical and HECON Benefits of CGM. presented at the Texas Diabetes Council Quarterly Meeting, Austin, TX.

[28] Texas Diabetes Council. October 2017 Quarterly Meeting Minutes, Austin, TX.

- $1.54 cost savings per member per year (for every plan enrollee).[27,28]

Focus should be placed on the incidence of lower extremity amputations. Between 2010-2015, there was an increase in diabetes-related lower extremity amputations, despite more awareness about diabetes.[29]

Priorities for the Texas Diabetes Council

TDC identified the following priorities to increase providers' ability to treat diabetes patients, lessen barriers to care, and improve outcomes.

- The Title XIX Home Health Durable Medical Equipment (DME)/Medical Supplies Physician Order Form is an administrative obstacle for physicians and Medicaid/CHIP patients. Glucose meters and strips used in testing blood glucose are prescribed for patients and needed to monitor glucose levels and treatment outcomes.
- Streamline the preauthorization process to reduce approval time. Confusion over formularies remains a persistent issue for providers and patients. A consistent formulary and a pathway for physicians to appeal for an exception to cover medically necessary treatments for patients is needed. Currently, if the treatment is not on Medicaid/CHIP's approved formulary, therapy, or pre-authorization requirement lists, the therapy is not covered and there is no alternative option for the patient to receive treatment. Successful treatment of diabetes is dependent on the ability of the medical team to individualize treatment for patients. Despite standards of care treatment recommendations, approval for medications may be denied. A Medicaid/CHIP appeal process needs to be available.
- Reduce use of emergency room for patients with poorly managed diabetes. A significant way to lower healthcare costs for Medicaid/CHIP patients with diabetes is quality improvement projects that give patients better disease management options and eliminate obstacles to accessing routine care outside of the emergency room. Interventions pairing aging patients, persons with mental health challenges, or persons lacking transportation with patient navigators who conduct home visits have been shown to reduce emergency

[29] Gregg, E.W., Hora, I., and Benoit, S.R. (2019_. Resurgence in diabetes-related complications. Journal of the American Medical Association. 321(19):1867-1868. doi:10.1001/jama.2019.3471

room visits. TDC continues to support review of 1115 waiver projects that have shown results in this area to promote best practices.

- TDC supports continuous glucose monitoring (CGM) as a covered medical benefit under Medicaid, based on Centers for Medicare and Medicaid (CMS) standards. CGM has been shown to be effective in children and adults with type 1 and type 2 diabetes.[30] Because CGM promotes awareness of blood glucose, persons using these devices have decreased incidence of hypoglycemia, improved HbA1c[31], and increased time in target glucose ranges. Improvements in blood glucose control, because of CGM, improve overall diabetes management, which prevents costly emergency room visits and hospitalizations for complications such as blindness, kidney disease, amputations, heart attack, and stroke. Council members requested the Texas Vendor Drug 18-month approval process be accelerated for U.S. Food and Drug Administration (FDA) approved CGM systems.
- TDC supports a systematic review of the incidence of and risks for lower extremity amputations, including costs, impact on health systems, employers, and persons with diabetes. TDC will work with HHSC and Texas Workforce Commission (TWC) Vocational Rehabilitation to identify solutions to reduce the frequency of amputation, including prevention strategies, quality improvement projects, provision of diabetes self-management education and support, and evidence-based treatment recommendations.

Address Obesity and Prediabetes in our School Aged Children

Texas ranks 14th in the nation for obesity, as 33 percent of the population is obese.[32] Even more staggering is that Texas ranks 5th, at 36.6 percent, for the proportion of high school students experiencing overweight and obesity.[1, 32] According to the National Initiative for Children's Healthcare Quality, Texas ranks 37th in the nation for protective factors against childhood obesity; these factors

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[30] Diabetes Technology and Therapeutics. 2017 Jun 1; 19 (Suppl 3): S-25–S-37. Published online 2017 Jun1. doi: 10.1089/dia.2017.0035

[31] A laboratory value that identifies average plasma glucose concentration.

[32] Robert Wood Johnson Foundation. The State of Obesity–Better Policies for a Healthier America. State of Obesity https://www.stateofobesity.org. Accessed July 1, 2019

include breastfeeding, child physical activity, and fruit and vegetable consumption.[33]

There is a strong relationship between obesity and type 2 diabetes. Diabetes is the 7th leading cause of death in Texas.[34] Demographically, minority populations are more affected by prediabetes and diabetes: 13.1 percent of people with prediabetes and diabetes in Texas are Hispanic, while 15.6 percent are Black.[1] These issues are important to TDC, as the Council is tasked with the mission to effectively reduce the health and economic burdens of diabetes in Texas.

Kindergarten through 12th grade students in Texas public schools should have the opportunity to learn about diabetes and obesity, as well as their prevention, management, and complications. However, in the Health Education Texas Essential Knowledge and Skills (TEKS) for K-12, there is no reference to diabetes or obesity. Furthermore, there is no minimum physical education time requirement for elementary and middle school students. In addition, health education is not required for high school graduation.

Priorities for the Texas Diabetes Council

TDC identified the following priorities to address obesity issues in our Texas school-aged children to help decrease progression to prediabetes and diabetes in our state.

- Work to amend 19 Texas Administrative Code (TAC), Chapter 115, *Texas Essential Knowledge and Skills for Health Education* for grades K-12 to include a simplified health literacy section to clearly explain diabetes and obesity, as well as their prevention, management, and complications.
- Work to increase the physical education time requirement for elementary and middle school grades as part of 19 TAC, Chapter 116, *Texas Essential Knowledge and Skills for Physical Education*.
- Work to make health education a graduation requirement for Texas public high schools and include a component of food/nutrition education to health education.

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[33] Frontiers in Endocrinology (Lausanne). 2018; 9: 456. Published online 2018 Aug 21. doi: 10.3389/fendo.2018.00456

[34] Centers for Disease Control and Prevention. National Vital Statistics Reports, Vol. 67, No. 8, June 2017.

- Work with Texas Education Agency (TEA) to provide input on educational materials to distribute to students and parents in English and Spanish.

Transparency in Insulin and Drug Pricing for Diabetes Treatments

The increasing price of insulin has caused one in every four patients to ration the medication, which is a lifesaving drug. Insulin prices have tripled in last 10 years, and the cost of newer medications for diabetes is out of reach for many patients.[6, 35] The Texas public has no knowledge about how much manufacturers, wholesalers, pharmacy benefit managers and pharmacies in the supply chain benefit from the sale of insulin.

Priorities for the Texas Diabetes Council

TDC identified the following priorities to address insulin costs in Texas which lead to people with diabetes to ration medication, increasing the risk of complications.

- Work to cap insulin co-pays at $100 per month in Texas - a key step to ensuring insulin is more affordable for those who need it.
- Work with Texas Vendor Drug Program to understand 340B drug pricing and contracting, rebate, formulary, and prior authorization processes for covered patients.

[35] Gordon, S., High cost has many diabetics cutting back on insulin. CBS News Web site. https://www.cbsnews.com/news/high-cost-of-insulin-some-diabetics-cut-back. Published December 3, 2018. Accessed July 1, 2018.

4. Conclusion

Given the 40 percent increase in diabetes prevalence in Texas over the past decade, there is concern escalating healthcare costs resulting from complications of poorly controlled diabetes and drug costs will continue to inhibit affordability and sustainability of the healthcare delivery system. This poses a simultaneous threat at multiple levels: fiscally for the Legislature and Texas taxpayers, as well as to the health and quality of life for all Texans.

TDC is committed to identifying ways to simultaneously reduce overall expenditures while improving the delivery of evidence-based, cost effective, prevention and healthcare services that improve population health for Texans.

List of Acronyms

Acronym	Full Name
ACOG	American College of Obstetricians and Gynecologists
ADA	American Diabetes Association
AADE	American Association of Diabetes Educators
AOW	Advocacy and Outreach Workgroup
CGM	Continuous Glucose Monitoring
CMS	Centers for Medicare and Medicaid
CHIP	Medicaid/Children's Health Insurance Program
CHW	Community Health Worker
DCCT	Diabetes Control and Complications Trial
DME	Durable Medical Equipment
DSHS	Texas Department of State Health Services
DSME	Diabetes Self-Management Education
DSMES	Diabetes Self-Management Education and Support
ERS	Employee Retirement Systems of Texas
GDM	Gestational Diabetes Mellitus

FDA	United States Food and Drug Administration
HHS	Texas Health and Human Services
HHSC	Texas Health and Human Services Commission
HPOW	Healthcare Professionals and Outcomes Workgroup
JDRE	Juvenile Diabetes Research Foundation
MCO	Managed Care Organization
NDPP	National Diabetes Prevention Program
OGTT	Oral Glucose Tolerance Test
TAC	Texas Administrative Code
TDC	Texas Diabetes Council
TEA	Texas Education Agency
TEKS	Texas Essential Knowledge and Skills
TRS	Teacher Retirement System of Texas
TWC	Texas Workforce Commission
WIC	Special Supplemental Nutrition Program for Women, Infants, and Children

Appendix A. Texas Diabetes Council Membership

Member	Position Held	Expertise
Kathy LaCivita, M.D., F.A.C.P., F.A.C.E.	Chair, Physician Member	Licensed and Board Certified Endocrinologist
Curtis Triplett, Pharm.D., C.D.E.	Vice-Chair, Pharmacist Member	Pharmacist, Professor, Certified Diabetes Educator
Jason Michael Ryan, J.D.	Secretary, Consumer Member	Lawyer, Diabetes Advocate
Joan Colgin, R.N., B.S.N, C.D.E.	Registered Nurse Member	Texas Advocacy Chair for AADE, Certified Diabetes Educator
Ardis A. Reed, M.P.H, R.D., L.D., C.D.E.	Registered and Licensed Dietician Member	Registered and Licensed Dietician, Certified Diabetes Educator
John Griffin, Jr., J.D.	General Public Member	Lawyer, Diabetes Advocate
Carley Gomez-Meade, D.O.	Consumer Member	Pediatric Endocrinologist
Felicia Fruia-Edge	Consumer Member	Diabetes Advocate
Aida “Letty” Moreno-Brown, R.D., L.D.	General Public Member	Diabetes Advocate
Feyi Obamehinti, Ed.D.	General Public Member	Diabetes Advocate
William “David” Sanders	General Public Member	Diabetes Advocate
Manda Hall, M.D.	State Agency Rep. (non-voting member)	Texas Department of State Health Services
Lisa Golden, M.A. Ed.H.D., C.R.C.	State Agency Rep. (non-voting member)	Texas Workforce Commission Vocational Rehabilitation
Mitchel Abramsky, M.D., M.P.H.	State Agency Rep. (non-voting member)	Texas Health and Human Services Commission

Appendix B. Annual Cost for State of Texas Employees with and Without Diabetes

Table 1: Annual medical costs[i] for state employees with and without diabetes reported September 1, 2017, through August 31, 2018 (with two-month runout of claims paid through October 21, 2018).

	People Without Diabetes	People With Diabetes[ii]	Total Population	Added Costs for Members with Diabetes
Annual medical spend per Participant	$3,450	$8,453	$4,028	$5,003
Annual drug spend per participant	$994	$4,133	$1,358	$3,189
Total spend per participant	$4,444	$12,586	$5,386	$8,192
Total plan costs	$1,609,591,252	$599,852,887	$2,209,444,139	NA

[i] Plan spending only, does not include member cost share

[ii] A person with diabetes is defined as any enrolled participant with a diagnosis of diabetes since September 1, 2017