Statewide Assessment of Existing Programs for the Prevention and Treatment of Diabetes

As Required By
Section 103.0131
Texas Health and Safety Code

TEXAS DIABETES
COUNCIL

Texas Diabetes Council
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TABLE OF CONTENTS

Executive Summary: Diabetes in Texas - A Call to Action 2

Introduction: Issues Related to the Assessment of Existing Programs for the Prevention and Treatment of Diabetes 8

Access to Health Outcomes Information for Program Evaluation and Planning 8

Prevention of Type 2 Diabetes 9

Diabetes Self-Management Education 11

Professional Preparation and Continuing Education 14

Background: Required Assessment and Method 15

Programs for the Prevention and Treatment of Diabetes 19

Texas Department of Aging and Disability Services (DADS) 19

Program Name: Texas Healthy Lifestyles Program 19

Texas Department of Assistive and Rehabilitative Services (DARS) 22

Program Name: Independent Living Services to Texans with Disabilities Impacted by Diabetes 22

Program Name: Vocational Rehabilitation Services to Texans with Disabilities Impacted by Diabetes 24

Texas Department of State Health Services (DSHS) 26

Program Name: Children with Special Health Care Needs (CSHCN) Services Program . 26

Program Name: Kidney Health Care Program (KHC) 28

Program Name: Diabetes Prevention and Control Program (DPCP) Community Diabetes Projects (CDPs) 30

Program Name: Prevent Type 2 Diabetes Campaign / Marketing support of the TDC's Diabetes Tool Kit 34

Program Name: Primary Health Care (PHC) Program 37

Texas Health and Human Services Commission (HHSC) 39

Program Name: Medicaid 39

Program Name: Children's Health Insurance Program (CHIP) 42

Appendix 1− Texas Health Care Transformation and Quality Improvement Program (1115 Waiver) Projects Addressing Diabetes Care 44

Appendix 2− Texas HHSC Maps of Diabetes Clients Access to Selected Provider Types 74

Appendix 3 –Texas Diabetes Council Recommendations for Diabetes Disease Management and Diabetes Self-Management Education (DSME) Provided by Texas Medicaid 81

Appendix 4 – Diabetes Facts and Figures 87

Appendix 5 − Links to Additional Reports 96

Executive Summary:
Diabetes in Texas - A Call to Action

Diabetes Continues to Challenge the Physical and Fiscal Health of Texas

The prevalence of diabetes in Texas has increased by 57 percent over the past decade[1] and the projected future increase is dramatic.

- Today, the data shows that more than 2.1 million (10.6 percent) adult Texans have diabetes, and another 1.2 million (6.2 percent) have prediabetes.[2]
- For pregnant women, the numbers are even higher, with the latest data showing that an estimated 11.5 percent of pregnant women in Texas develop gestational diabetes compared to 1.9 percent who had pre-existing diabetes before the pregnancy.[3]
- Many more Texans are likely to have prediabetes, but aren't diagnosed. Results of national studies indicate that as many as 35 percent of U.S. adults have prediabetes (diagnosed and undiagnosed), a condition that makes them more likely to develop type 2 diabetes within the next ten years, and more likely to have a heart attack or stroke.[4]
- The State Demographer projects a quadrupling of the number of adult Texans with diabetes to almost 8 million by 2040.[5]

In 2012, diabetes cost an estimated $18.5 billion in Texas, including $12.3 billion in direct medical costs and $6.2 billion in indirect costs. The cost to Texas will increase substantially as the number of Texans with diabetes quadruples over the next 25 years.[6]

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[1] Texas Department of State Health Services. *The Burden of Diabetes in Texas. A Report Prepared by the Office of Surveillance, Evaluation, and Research; Health Promotion and Chronic Disease Prevention Section*. April 1, 2013. Updated November 6, 2013.

[2] 2012 Behavioral Risk Factor Surveillance System, Statewide BRFSS Survey, for persons eighteen years of age and older. Data include both type 1 and type 2 diabetes. Persons with diabetes include those who report that they have been told by a doctor or other healthcare professional that they have diabetes. Persons with prediabetes include those who have been told by a doctor or other healthcare professional that they have prediabetes or borderline diabetes. Women and girls who report diabetes or prediabetes only during pregnancy are not included in prevalence.

[3] Texas Department of State Health Services Diabetes Prevention and Control Branch. *Texas Pregnancy Risk Assessment Monitoring System (PRAMS) Estimate of Pre-existing and Gestational Diabetes, 2004-2009*. Texas Diabetes, the Newsletter of the Texas Diabetes Council, Spring 2011. Publication No. 45-11004. http://www.dshs.state.tx.us/diabetes/PDF/newsletter/spring11.pdf

[4] Centers for Disease Control and Prevention. National diabetes fact sheet: national estimates and general information on diabetes and prediabetes in the United States, 2011. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2011.

[5] Texas, Office of the State Demographer, Texas State Data Center. *Summary Report on Diabetes Projections in Texas, 2007 to 2040*. http://txsdc.utsa.edu/reports/Summary_Report_Diabetes.pdf.

[6] Texas Health and Human Services Commission. *Report on Direct and Indirect Costs of Diabetes in Texas As Required By S.B. 796, 82nd Legislature, Regular Session, 2011*. December 2012

http://www.hhsc.state.tx.us/reports/2012/direct-indirect-costs-diabetes-texas.pdf.

- Based on assessments of state agency programs and services in 2011-12, almost 400,000 Texans with diabetes received diabetes-related services through state Health and Human Services Commission programs, with identified costs reaching almost $312 million.[7]
- Almost 27,000 health care providers treated diabetes patients under state agency programs.[8]
- According to analysis of United Healthcare plan members, the average total annual cost for an adult plan member with employer coverage and diagnosed diabetes who interacted with the health care system in 2009 was approximately $11,700, compared to $4,400 for an adult with employer coverage not known to have diabetes. The average yearly total costs for a person with diabetes who developed complications were $20,700 – almost three times the average cost of $7,800 for diabetes patients without complications.[9]
- People with diabetes who do not have health insurance have 79 percent fewer physician office visits and are prescribed 68 percent fewer medications than people with insurance coverage—but they also have 55 percent more emergency department visits than people who have insurance.[10]
- Total costs of hospitalization for all diabetes in pregnancy was over $1.4 billion, or 7.8 percent of all maternal hospitalization costs in 2010.[11]
- Complications of diabetes include heart disease and stroke, blindness, amputations, and kidney disease. The largest components of medical expenditures for diabetes are:
    - Hospital inpatient care (43 percent of the total medical cost),
    - Prescription medications to treat complications of diabetes (18 percent),
    - Anti-diabetic agents and diabetes supplies (12 percent),
    - Physician office visits (9 percent), and
    - Nursing/residential facility stays (8 percent).[12]

Texas Diabetes Council Accomplishments

Established to address the growing prevalence of diabetes in Texas, and accompanying cost, the Texas Diabetes Council (TDC) consists of Governor-appointed volunteers including health care provider and consumer members with expertise in diabetes issues. Accomplishments of the TDC include:

- Increasing patient education opportunities in Texas through funding for community-based diabetes education programs;

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[7] Texas Department of State Health Services Diabetes Prevention and Control Branch. *Statewide Assessment of Existing Programs for the Prevention and Treatment of Diabetes as Required by Section 103.0131, Health and Safety Code*, 2013.

[8] Ibid.

[9] Deneen Vojta, Jeanne De Sa, Ted Prospect and Simon Stevens, *Effective Interventions For Stemming The Growing Crisis Of Diabetes And Prediabetes: A National Payer's Perspective*, Health Affairs, 31, no. 1 (2012): 20-26.

[10] American Diabetes Association. *Economic Costs of Diabetes in the U.S. in 2012*. Diabetes Care. 2013 Apr; 36 (4):1033-46. Epub 2013 Mar 6. http://www.diabetes.org/advocacy/news-events/cost-of-diabetes.html

[11] Wier, L.M., Witt, E., Burgess, J., and Elixhauser, A. *Hospitalizations Related to Diabetes in Pregnancy, 2008*. HCUP Statistical Brief #102. December 2010. Agency for Healthcare Research and Quality, Rockville, MD. http://www.hcup-us.ahrq.gov/reports/statbriefs/sb102.pdf

[12] American Diabetes Association. op. cit. p. 1033

- Collaborating with the Legislature on legislation that protects children with diabetes while at school;
- Development of a diabetes "Center of Excellence" for patient treatment and professional training in the state (Texas Diabetes Institute, San Antonio);
- Publication and promotion of treatment guidelines for health care professionals and health plans; and
- Development of state policy that ensures insurance coverage and services for Texans with or at risk for diabetes.

Action Plan for Texas

The TDC has identified four significant opportunities as a call to action that builds upon past accomplishments, and takes full advantage of national, state and local efforts already underway to improve diabetes education, management and care in Texas. Our 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.

1) The **Texas Medicaid Transformation Waiver** (1115 waiver) has resulted in 111 projects across the state focusing on diabetes-related outcomes. This unprecedented opportunity to evaluate our approaches to diabetes prevention and control in Texas should lead to identification and dissemination of lessons learned and best practices.

Priorities for Texas Diabetes Council

- Evaluate whether waiver projects show quantifiable improvements relating to quality of care, population health, and cost of care for patients with diabetes.
- Work with the HHSC Center for Strategic Decision Support to explore opportunity for 50 percent federal match funding for this effort.

2) The **National Diabetes Prevention Program** (NDPP) is a public-private partnership of community organizations, private insurers, health care 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 program costs less than $325 per participant[13], as compared to an average of $7,900 per year for the treatment of diabetes for one individual.[14] The *Texas State Healthcare Innovation Plan* recommends reimbursement for this one-year lifestyle change program by Medicaid and state employee health plans in order to achieve a projected reduction in risk for type 2 diabetes of 58 percent among individuals with prediabetes served by these health plans.

[13] 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.

[14] American Diabetes Association. op. cit. p. 1033

Priorities for Texas

- Using cost effectiveness data from United Healthcare and others, demonstrate value of establishing the NDPP as a covered benefit under Texas Medicaid and the Employment Retirement System of Texas (ERS).
- Working with the Texas Medical Association and others, promote health care provider referral to NDPP in Texas and educate providers about the need to screen and diagnose patients with prediabetes.

3) **Diabetes Self-Management Education (DSME) in Community Diabetes Projects** DSME improves clinical outcome measures related to blood sugar (A1c), blood pressure, cholesterol, and smoking status. Managed care organizations (MCO) currently under contract with Texas Medicaid are required to provide disease management and education services; however, information needed to assess the reach and effectiveness of these services is not currently available. Initial surveys of Medicaid MCOs indicate that fewer than half of the contracted MCOs automatically enroll patients with diabetes in self-management education. There is also a need for more DSME accredited sites recognized by the American Diabetes Association (ADA) or American Association of Diabetes Educators (AADE) to ensure that standards for demonstrating outcomes are met. The same standards, information and reporting should be required of DSME Medicaid Managed Care contracts.

Priorities for Texas Diabetes Council

- Work with HHSC to ensure Medicaid patients with diabetes are automatically enrolled in a DSME program and that HHSC is analyzing outcomes data demonstrating health and economic impact.
- Work with state agencies to ensure state reporting systems beyond Medicaid are evaluating DSME outcomes to demonstrate effectiveness in improving health.
- Increase access, referral, and reimbursement for AADE-accredited or ADA-recognized DSME programs that help prevent diabetes complications.
- Increase engagement of community health workers to promote linkages between health systems and community resources for adults with type 2 diabetes.

4) **Gestational Diabetes** 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 35-60 percent chance of developing diabetes in the next 10-20 years.[15] In Texas, Medicaid pays for over 50 percent of all births statewide.[16] A recent study by the Health and Human Services Commission and Texas Diabetes Council concludes that 9 percent of pregnant women participating in any Texas Medicaid program developed Gestational Diabetes

[15] Centers for Disease Control and Prevention: National diabetes fact sheet: general information and national estimates on diabetes in the United States, 2011. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2011.

[16] 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. http://www.hhsc.state.tx.us/reports/2014/SB1-Gestaional-Diabetes.pdf

Mellitus (GDM) prior to delivery in 2012.[17] The study also concludes 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.
Currently, only between 40 to 50 percent of Texas women participating in the Medicaid or CHIP Perinatal program are screened for gestational diabetes.[18] Some screening may occur before these women participate in state programs; however, this percentage indicates that improvement can be made in screening rates. All women should be screened for gestational diabetes at 24 weeks of pregnancy, even if they have no symptoms, according to the latest national guidelines set by the American Association of Clinical Endocrinologists, the American Diabetes Association (ADA), the American College of Obstetricians and Gynecologists (ACOG), and the United States Preventive Services Task Force.

Furthermore, women who were diagnosed with gestational diabetes should, upon delivery of their baby, be referred to lifestyle change programs following the guidelines developed by the National Diabetes Prevention Program.[19] These programs focus on weight loss that can reduce risk for developing type 2 diabetes and future high-risk pregnancies. As a woman's pre-pregnancy weight increases, Medicaid expenditures also increase. This trend is more pronounced among women entering into a pregnancy with diabetes and is exacerbated among overweight and obese women. Obese women, regardless of diabetes status, tend to have the costliest maternal care and post-natal expenses (5 to 10 percent higher among non-diabetic obese mothers than normal weight non-diabetic mothers.)

Priorities for Texas Diabetes Council

- In collaboration with HHSC work to ensure Medicaid managed care plans screen all pregnant women they serve for gestational diabetes, and if diagnosed, receive appropriate management (medical nutrition therapy, self-management education, and supplies) and care to prevent complications, hospitalizations and potential neonatal intensive care unit costs for the newborn
- Work with HHSC to identify solutions to decrease poor birth outcomes experienced by infants born to mothers with gestational diabetes due to lack of adequate diabetes management.
- Work with HHSC to ensure that, upon delivering the baby, women in Medicaid and CHIP Perinatal Program who were diagnosed with gestational diabetes are referred to a local evidence-based lifestyle change program, such as the National Diabetes Prevention Program, to help prevent or delay the onset of type 2 diabetes.

[17] Ibid

[18] Ibid.

[19] http://www.cdc.gov/diabetes/prevention/resources.htm

Conclusion

The Texas Diabetes Council is strongly committed to identifying ways to simultaneously reduce overall expenditures while improving the delivery of evidence-based, cost effective prevention and health services that improve population health.

Given the 57 percent increase in diabetes prevalence in Texas over the past decade, and the projected quadrupling by 2040, the TDC is concerned that escalating healthcare costs resulting from complications of poorly controlled diabetes will continue to inhibit our ability to afford and sustain the health care delivery system. This poses a simultaneous threat at multiple levels: fiscally for the Legislature and Texas taxpayers, but also a threat to the health and quality of life of all Texans.

Introduction: Issues Related to the Assessment of Existing Programs for the Prevention and Treatment of Diabetes

Access to Health Outcomes Information for Program Evaluation and Planning

The majority of the information about state agency programs and services contained in this assessment report relates to numbers of Texans served and overall costs for programs and services. A critical element that the TDC finds lacking across most state agency programs is accessible health outcomes information based on clinical performance measures.
Over the 2012-13 biennium, the TDC developed guidance for disease management and diabetes self-management education under Medicaid Managed Care in Texas. These recommendations were presented to medical directors of health plans currently under contract with the HHSC. However, in order to assess the efficacy of these recommendations and demonstrate quality of care, the TDC and policymakers need access to de-identified, aggregated data about the results of diabetes self-management education services, hemoglobin A1c tests, blood pressure screening, cholesterol screening, eye exams, foot exams, and nephropathy screening of patients receiving treatment under Medicaid. Outcomes of these important tests and services have a direct impact on quality of life for these patients and their ability to avoid serious complications such as blindness, amputations, cardiovascular disease, and kidney disease.

Texas Medicaid maintains a quality dashboard that addresses hospitalization of persons with diabetes and whether or not testing services are provided but contains little information about the effectiveness of the services in maintaining quality of life.[20] More data are needed to identify areas for quality improvement.

It is important to note that the information already exists in health-care systems across the state. Regional health information exchanges have started the work of presenting this information in a way that is useful for assessment, quality improvement, and policy development. While progress varies across the state, the TDC found one area of the state excels in its ability to use health system data to illustrate the burden of diabetes and areas for improvement. The Dallas Fort Worth Hospital Council Foundation (DFWHCF) conducted a Community Health Needs Assessment to provide an analysis of the health-care needs of the North Texas community (Regional Health Partnership 9) for the Medicaid 1115 waiver. The assessment showed that the most common health conditions by volume that result in hospital admission from an emergency department encounter are stroke, diabetes, congestive heart failure, weak/failing kidneys, chronic bronchitis, and heart attack. Because DFWHCF can rank these conditions by payer, we know that diabetes showed the highest volume for adult inpatient emergency department encounters among the uninsured and Medicaid patients.

[20] Texas Health and Human Services Commission Uniform Managed Care Manual. Chapter 10.1.7 Performance Indicator Dashboard for Quality Measures. Accessed online at http://www.hhsc.state.tx.us/medicaid/managed-care/umcm/Chp10/10_1_7.pdf

DFWHC Foundation Data Warehouse: 2010Q3 -2011Q3: Highest Volume for Adult Inpatient Emergency Department Encounters[21]

Highest Volume	**1**	**2**	**3**	**4**	**5**
All	Stroke	Congestive Heart Failure	Weak/Failing Kidneys	Chronic Bronchitis	**Diabetes**
Insured	Stroke	Weak/Failing Kidneys	Congestive Heart Failure	Heart Attack	**Diabetes**
Medicaid	**Diabetes**	Congestive Heart Failure	Weak/Failing Kidneys	Stroke	Chronic Bronchitis
Medicare	Congestive Heart Failure	Stroke	Weak/Failing Kidneys	Chronic Bronchitis	Heart Attack
Uninsured	**Diabetes**	Stroke	Weak/Failing Kidneys	Congestive Heart Failure	Heart Attack

Furthermore, DFWHCF was able to assess the top diagnoses with the underlying condition of diabetes. In patients seen throughout the regional health-care system that are residents of Dallas County, the top five primary diagnoses of patients with an underlying condition of diabetes were acute kidney failure (45 percent), septicemia (39 percent), urinary tract infection (35 percent), rehabilitation (31 percent), and pneumonia (29 percent).
At the state level, the Texas Medicaid Transformation Waiver (1115 waiver) offers an immediate opportunity to assess the effectiveness of a range of interventions focusing on patient education, clinical systems change, and workforce enhancement. Approximately 111 waiver projects are currently addressing measures recommended by the TDC. By categorizing these projects and reviewing their health outcomes in terms of effectiveness and efficiency, we can identify innovations in diabetes care and promote diabetes best practices in Texas.

Prevention of Type 2 Diabetes
The NDPP encourages collaboration among state government, community-based organizations, employers, insurers, health-care professionals, academia, and other stakeholders to prevent or delay the onset of type 2 diabetes among people with prediabetes.

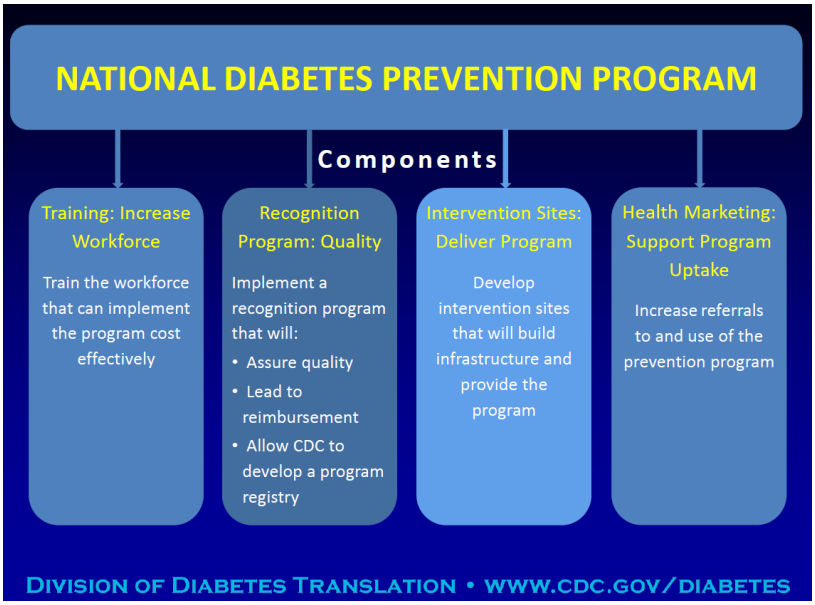
Led by the Centers for Disease Control and Prevention (CDC), the NDPP is an evidence-based lifestyle change program for preventing type 2 diabetes. It can help people at high risk of developing type 2 diabetes to cut their risk by more than half. Features of the NDPP lifestyle-change program include the following.

- The NDPP research study showed that making modest behavior changes helped participants lose five to seven percent of their body weight—that is 10 to 14 pounds for a 200-pound person.[22]

[21] Collins, S. Texas Healthcare Transformation and Quality Improvement Program Medicaid 1115 Waiver, Regional Health Partnership 9: Community Needs Assessment Report Draft. Dallas Fort Worth Hospital Council. 2012. http://www.parklandhospital.com/whoweare/section-1115/pdf/Final_1115_Needs_Assessment_Report_5.22.12.pdf

[22] Knowler WC, Barrett-Connor E, Fowler SE, et al. Reduction in the incidence of type 2 diabetes with lifestyle intervention or metformin. *N Engl J Med* 2001;346(6):393-403.

- These lifestyle changes reduced the risk of developing type 2 diabetes by 58 percent in people with prediabetes.[23]
- Participants work with a lifestyle coach in a group setting to receive a one-year lifestyle change program that includes 16 core sessions (usually one per week) and six post-core sessions (one per month).



The inaugural partners of the NDPP were the YMCA and UnitedHealth Group. Using health-plan data to identify patients with prediabetes who could benefit from the program, UnitedHealth enrolled patients in low-cost ($275-$325 per person) community-based lifestyle-change programs, reimbursing the YMCA for each patient served. These patients were able to achieve a level of weight loss that reduced their risk for type 2 diabetes by 58 percent.[24]

Research indicates that by treating 100 high risk adults (age 50) for 3 years, the following benefits of the NDPP lifestyle-change program can be achieved:

- Prevents 15 new cases of type 2 diabetes[25]
- Prevents 162 missed work days[26]
- Avoids the need for blood pressure and cholesterol pills in 11 people[27]
- Adds the equivalent of 20 years of health[28]
- Avoids $91,400 in healthcare costs.[29]

The CDC maintains a recognition program for sites offering the NDPP. The goal is to ensure that prevention programs are delivered in a manner that achieves results demonstrated by initial studies and pilot projects. Currently YMCAs in Austin, Dallas/Fort Worth, and Houston are offering the NDPP through contracts with employers and insurers. However, the program must

[23] Ibid.

[24] Ackerman et al. op. cit.

[25] DPP Research Group, *N Engl J Med*. 2002 Feb 7;346(6):393-403.

[26] DPP Research Group. *Diabetes Care* 2003 Sep;26(9):2693-4.

[27] Ratner, et al. 2005 *Diabetes Care* 28 (4), pp. 888-894.

[28] Herman, et al. 2005 *Ann Inter Med* 142 (5), pp. 323-32.

[29] Ackerman, et. Al. 2008 *Am J Prev Med* 35 (4), pp. 357.363; estimates scaled to 2008 $US.

be implemented on a much larger scale to be available to more than a third of the adult population estimated to have prediabetes.

Texas was one of 16 states that received Model Design funding from the Centers for Medicare and Medicaid Services (CMS) to produce a State Health-Care Innovation Plan. States will use these plans to apply for an anticipated second round of award funding for Model Testing. Scaling of the NDPP in Texas is discussed under Model IV: Community-Based Public Health Innovations in the Texas State Healthcare Innovation Plan released in February 2014. The plan proposes to encourage multi-payer (commercial and Medicare) interest in the NDPP by demonstrating cost-effectiveness of lifestyle change programs to be offered by Medicaid and state employee health plans. An NDPP pilot program in STAR+PLUS is proposed to test the program's efficacy and cost-effectiveness in the Medicaid population. Development of a multi-payer NDPP database is proposed to track key statistics on participation and spending, by payer, over the course of the project. Efforts would include developing protocols for matching clinical data outcomes with NDPP participation data to support potential multi-payer alignment on NDPP as a covered benefit.

Diabetes Self-Management Education

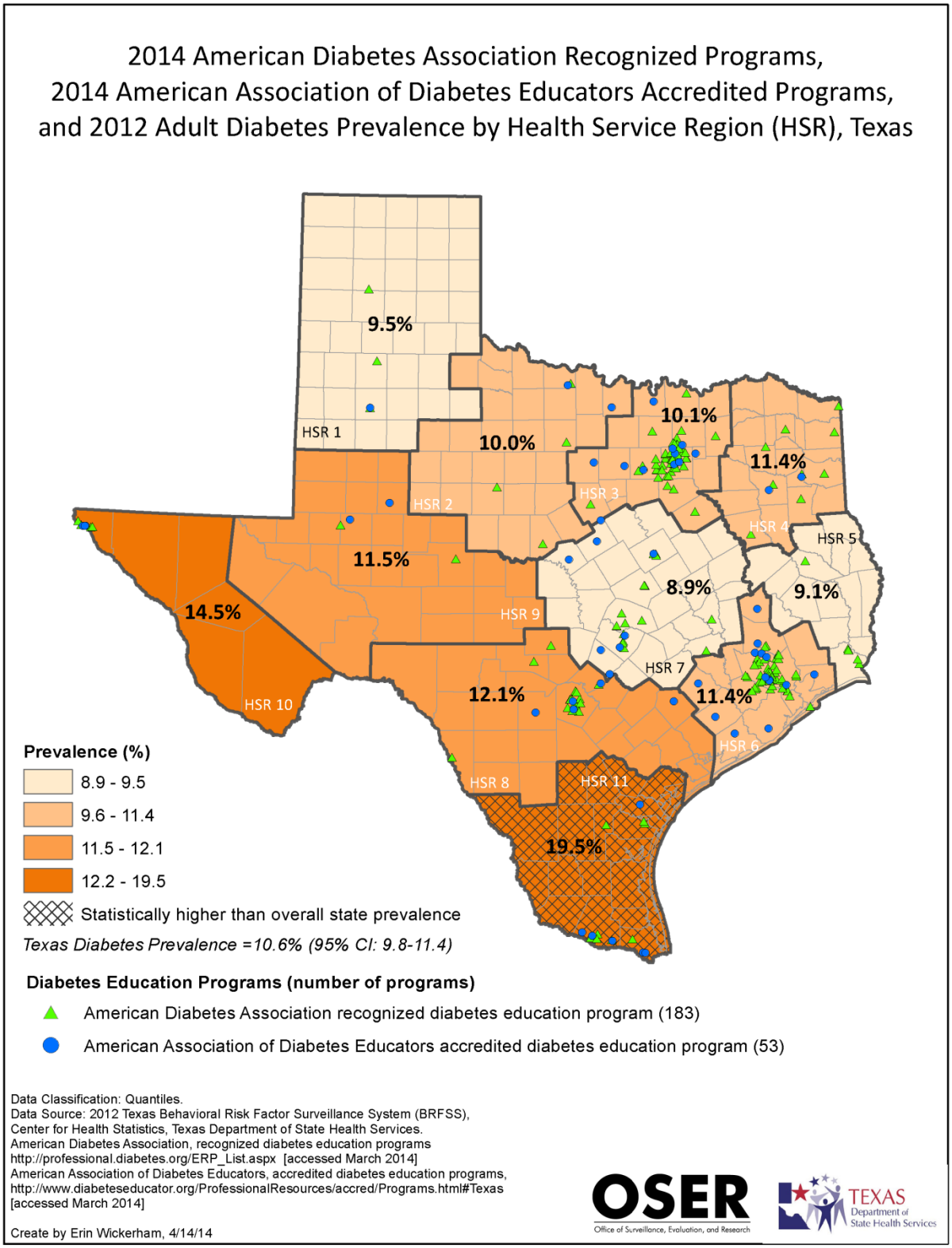
DSME is the ongoing process of facilitating the knowledge, skill, and ability necessary for diabetes self-care. This process incorporates the needs, goals, and life experiences of the person with diabetes and is guided by evidence-based standards. These standards are reviewed and revised approximately every five years by a task force of the ADA and published in *Diabetes Care* as "National Standards for Diabetes Self-Management Education."[30]

According to the national standards, DSME is effective for improving clinical outcomes and quality of life. Over time, DSME has evolved from didactic presentations to more interactive empowerment models, based on adult learning theory, that help patients overcome their personal obstacles to diabetes management, including economic, cultural, and literacy issues. There is no one "best" education program or approach, but programs incorporating behavioral and psycho-social strategies, culturally and age-appropriate content, and group education have proven effective. The standards emphasize ongoing support of patients and behavioral goal-setting.

The national standards address the need to initially document how a DSME program will operate within its organizational setting, develop an advisory group to maintain quality standards, and determine target audiences and educational needs. Education and experience of program staff are discussed, as well as elements needed for successful implementation and evaluation of the program based on patient outcomes.

The Balanced Budget Act of 1997 provides coverage of outpatient diabetes self-management training for Medicare beneficiaries with diabetes by entities deemed to meet quality standards. To uphold these standards, Medicare regulations stipulate that a DSME program must be accredited by a national accreditation organization in order to receive reimbursement. ADA and the AADE are currently recognized as national accreditation organizations.

[30] American Diabetes Association. National Standards for Diabetes Self-Management Education and Support. *Diabetes Care* January 2014 37:Supplement 1 S144-S153; doi:10.2337/dc14-S144 1935-5548.



In Texas, a Diabetes Self-Management Education Pilot Program required by the 81st Legislature attempted to demonstrate the effectiveness of DSME in the Texas Medicaid fee-for-service

population by requiring that a portion of this population be offered DSME that meets the same standards required by Medicare, including participation in an ADA-recognized or AADE-accredited program. A shortage of recognized and accredited sites in the Rio Grande Valley, where high rates of diabetes exist, was identified during the site recruitment phase. Sites that were formerly recognized or accredited noted they were unable to sustain the program due to low or no reimbursement for services. The Pilot Program was cut short by Texas Medicaid's shift from fee-for-service to Medicaid Managed Care. Managed care organizations (MCOs) currently under contract with Texas Medicaid are required to provide disease management and education services; however, outcomes data needed to assess the reach and effectiveness of these services is not currently available. Initial surveys of Medicaid MCOs indicate that fewer than half of the contracted MCOs automatically enroll patients with diabetes in self-management education. Rather, they inform patients of the availability of education and allow them to decide whether to participate or not.

In addition to ADA-recognized or AADE-accredited programs, community-based programs utilizing trained community health workers (CHWs) and *promotores* are a valuable resource for providing education and support of patients with or at risk for diabetes.

According to the AADE *Community Health Workers in Diabetes Management and Prevention Position Paper*, CHWs are uniquely positioned to collaborate with diabetes educators and other health-care providers to improve the quality of diabetes education and care, as well as prevention in local communities. CHWs that have completed specialized diabetes training are especially needed. CHWs are individuals who represent their ethnic, cultural, or geographic communities and provide a link between these communities and health-care providers. CHWs can assist in preventing diabetes and controlling the disease and its complications through education, lifestyle change, self-management, and social support. CHWs are well positioned to engage the people in their communities to prevent diabetes and its complications and are uniquely skilled to serve as bridges between community members and healthcare services because they:

- live in the communities in which they work,
- understand how to translate "medical talk" to community members,
- explain the community perspective to providers, and
- communicate in the language of the people in their communities.

Many community-based diabetes programs are not recognized or accredited by the ADA or AADE, and therefore not eligible for Medicare reimbursement.

Senate Bill 1051 (77th Legislature, Regular Session, 2001) required DSHS to establish and operate a training and certification program for persons who act as *promotores* or community health workers, instructors, and sponsoring institutions and training programs. Community health workers are currently used in DSHS-funded community diabetes projects focusing on lifestyle changes that prevent onset or improve management of diabetes in target populations. Federally qualified health centers, local health departments, and other non-profit organizations are contracted to provide series of classes on self-management, nutrition, or physical activity, or a combination of these series. DSME offered through existing DSHS-funded community diabetes projects (CDPs) reaches approximately 3,700 Texans with or at risk for diabetes. CDPs provide readily available models for expanding outreach to a much larger population in need of

education services when opportunities arise. Funding through the Centers for Medicare and Medicaid Services (CMS) for the TMF Health Quality Institute *Salud Por Vida* / Health for Life initiative expanded DSME interventions to reach an additional 11,607 persons with type 2 diabetes who previously had no access to DSME. Of these participants, 2,627 were Medicare beneficiaries, 5,338 were non-Medicare and 390 were dual-eligible, meaning their deductibles may be paid by Medicaid, but the majority of their care is covered by Medicare.

Professional Preparation and Continuing Education

Traditional health-care systems are designed to provide symptom-driven responses to acute illnesses, and are often poorly configured to meet the needs of the chronically ill.[31] Models that are focused on both outcomes and prevention have been developed and proposed as viable alternatives to the current care systems to address these problems. Successful chronic disease management has been challenging because of numerous factors, which include lack of information technology in outpatient settings; multiple sources of nonintegrated information; limited access to and use of diabetes specialists including education services; and time constraints. The Group Health Research Institute's Chronic Care Model was developed and organized around elements that have been shown to improve outcomes: decision support, clinical information systems, self-management education, and delivery system design.[32]

Most persons with diabetes receive care from a primary care physician, and much discussion has taken place regarding the need to strengthen primary care in light of changing systems of health-care delivery and rapidly emerging advances in diabetes treatment. The Patient-Centered Medical Home model has been proposed as a practical solution to access and quality issues surrounding primary care. The Patient-Centered Medical Home can be regarded as a vehicle to adopt the Chronic Care Model, as it combines elements of Chronic Care with a quality-based payment/reimbursement system and coordination of a health-care team that serves patient treatment and education needs.[33] Practice change is essential to provide the type of evidence-based care recommended by these models to effectively manage diabetes, prevent its serious complications, and delay or prevent type 2 diabetes.

The TDC has supported these models through development of minimum standards for diabetes care and a number of treatment algorithms and tools that guide evidence-based decisions regarding treatment of diabetes in Texas. These educational tools for health-care professionals are found online at www.tdctoolkit.org.

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[31] Wagner EH, Austin BT, Von KorffM: Improving outcomes in chronic illness. *Manag Care Q* 4:12-25, 1996.

[32] Siminerio L, Zgibor J, Solano F: Implementing the Chronic Care Model for Improvements in Diabetes Practice and Outcomes in Primary Care: The University of Pittsburgh Medical Center Experience. *Clinical Diabetes*, Volume 22, Number 2, 2004.

[33] Bojadzievski T, Gabbay R. Patient Centered Medical Home and Diabetes. *Diabetes Care*. Apr 2011; 34(4): 1047–1053.

Background: Required Assessment and Method

Section 103.0131 of the Health and Safety Code states that, in conjunction with developing each state plan to prevent and control diabetes, the TDC shall conduct a statewide assessment of existing programs for the prevention of diabetes and treatment of individuals with diabetes that are administered by the Health and Human Services Commission (HHSC) or a health and human services agency, as defined by Section 531.001, Government Code. As part of the assessment, the council shall collect data regarding:

(1) the number of individuals served by the programs;

(2) the areas where services to prevent diabetes and treat individuals with diabetes are unavailable; and

(3) the number of health-care providers treating individuals with diabetes under the programs.

Not later than November 1 of each odd-numbered year, the TDC shall submit to the governor, the lieutenant governor, and the legislature a written report containing the findings of the assessment.

Method

In April 2012, the TDC updated its Plan to Prevent and Control of Diabetes in Texas for 2014-15. In conjunction with this planning process, the Diabetes Prevention and Control Program at DSHS initiated routine collection of data from state agencies regarding numbers of Texans served by each agency who can be identified as having diabetes, and the cost associated with providing those services. In addition to this ongoing, biennial assessment of state diabetes services, Senate Bill (SB) 796 (82R) established additional requirements for data collection, including information related to areas of the state where diabetes services are not available, and the number of providers involved in the delivery of services.

State agency services for persons with diabetes include direct medical care as well as education and skills development that allow persons who have or are at risk for diabetes to prevent or manage the disease, or adjust to living with diabetic complications such as blindness, amputations, and kidney disease. While direct medical care is provided through licensed medical practitioners, other services may be delivered by counselors, community health workers, educators, program specialists, and other professional groups. Some agency programs offer services statewide, while others are centered in areas of the state that are disproportionately affected by diabetes.

To facilitate data collection required by SB 796, a template was developed that allowed program administrators and data analysts of HHSC agencies to define “health-care provider” in the manner that applies to the services they offer, as well as describe the geographic location of service providers. This template was sent to the following HHSC agency programs identified as providing services for persons with diabetes in May 2012:

Texas Department of Aging and Disability Services (DADS)

- Texas Healthy Lifestyles Program

Texas Department of Assistive and Rehabilitative Services (DARS)

- Independent Living Services to Texans with Disabilities Impacted by Diabetes
- Vocational Rehabilitation Services to Texans with Disabilities Impacted by Diabetes

Texas Department of State Health Services (DSHS)

- Children with Special Health Care Needs (CSHCN) Services Program
- Kidney Health Care Program (KHC)
- Diabetes Prevention and Control Program (DPCP)
    - Community-based Diabetes Projects
    - Prevent Type 2 Diabetes Campaign
- Primary Health Care (PHC) Program

Texas Health and Human Services Commission (HHSC)

- Texas Medicaid
- Children's Health Insurance Program (CHIP)

TDC non-voting state agency members were asked to identify programs within their respective agencies that provide services for persons with diabetes and coordinate data collection with appropriate staff. In order to provide the most up-to-date description of services possible, most programs found it necessary to submit their data after August 31, 2012, when final data for state fiscal year (SFY) 2012 became available. Information required by SB 796 is summarized in Table 2.

Because this report was originally due November 1, 2013, data from SFY 2012 was requested because SFY 2013 data would not have been final in time for publication. The TDC received an extension on submission of the report; however, health and human services agencies were not asked to submit new data.

The following table summarizes specific requirements of Section 103.0131 of the Texas Health and Safety Code related to state agency diabetes services. Refer to individual program descriptions that follow for methods used to calculate numbers served and related expenditures.

Table 1. Texas State Agency Diabetes Programs

Agency and Program Name	Fiscal Year	Number of Individuals with Diabetes Served	Diabetes-Related Expenditures	Number of Health-Care Providers Treating Individuals with Diabetes	Areas Where Diabetes Services are Available/Unavailable
DADS Texas Healthy Lifestyles Program	FY 2010-11	903	Not available specifically for individuals with diabetes	102 lay leaders trained in 2010-11	Available through five of the 28 Area Agencies on Aging in Texas
DARS Independent Living Services	FY 2012	1,292	$1,552,163	Not available. Contracts as needed with medical providers. A Diabetes Field Specialist recruits and trains diabetes educators in blind services.	Division for Rehabilitation Services has 115 offices across Texas. Division for Blind Services has 24 state offices.
DARS Vocational Rehabilitation Services	FY 2012	4,913	$10,271,253	Not available. Contracts as needed with medical providers. A Diabetes Field Specialist recruits and trains diabetes educators in blind services.	Division for Rehabilitation Services has 115 offices across Texas. Division for Blind Services has 24 state offices.
DSHS Children with Special Health Care Needs Services	FY 2012	78	$409,132	15,419 providers that may potentially treat diabetes	Services available statewide.

Agency and Program Name	Fiscal Year	Number of Individuals with Diabetes Served	Diabetes-Related Expenditures	Number of Health-Care Providers Treating Individuals with Diabetes	Areas Where Diabetes Services are Available/Unavailable
DSHS Kidney Health Care Program	FY2012	9,769	$8,638,946	Not available	Services available statewide.
DSHS Community Diabetes Projects	FY2012	Nutrition Education 1,183 Physical Activity 1,282 Self-Mgmt. Classes 1,254	$1,247,029	36 Community Health Workers	Sixteen communities in Texas implement classes that assist residents in managing or preventing diabetes.
DSHS Prevent Type 2 Diabetes Campaign / Diabetes Tool Kit for Health Care Professionals	FY 2013	Not applicable	$164,469	Not applicable	Implemented in the following markets: Corpus Christi, El Paso, Houston, Laredo, San Antonio, Lower Rio Grande Valley, and Lubbock
DSHS Primary Health Care Program	FY 2012	Unknown	Unknown	59 contractors in 2012 (currently 54)	Contracted providers are available in each of the Health Service Regions.
HHSC Medicaid	SFY 2012	345,234	$281 million*	See maps in Appendix 1	Statewide
HHSC Children's Health Insurance Program	SFY 2012	14,752	$8.3 million**	See maps in Appendix 1	Statewide

Notes:

**designation of an individual with type 1, type 2, or gestational diabetes based on primary diagnoses. An additional $584 million was paid for services to individuals with diabetes listed as a non-primary diagnoses. These services are not necessarily directly related to diabetes.*
***designation of an individual with type 1, type 2, or gestational diabetes based on primary diagnoses. An additional $6.3 million was paid for services to individuals with diabetes listed as a non-primary diagnoses. These services are not necessarily directly related to diabetes.*

Programs for the Prevention and Treatment of Diabetes

Texas Department of Aging and Disability Services (DADS)

Program Name: *Texas Healthy Lifestyles Program*

Total Program Expenditures: $753,819 (FY 2011)
This amount includes both federal grant funds expended ($526,714) and the estimated amount of matching funds contributed by partner agencies in the fiscal year ($227,105). The matching fund amount includes in-kind services. The matching fund amount is estimated based on reports submitted by partner agencies.

Individuals Served:

Total	With Diabetes
2,136	903

Notes: *All data are for FY 10-11. Total includes individuals who participated in either the Chronic Disease Self-Management program or Diabetes Self-Management Program. Number with diabetes includes only those participating in the Diabetes Self-Management Program. The number includes individuals with prediabetes.*

Diabetes-Related Expenditures: Not applicable
This is a grant-funded program that supports both chronic disease and diabetes self-management. Costs cannot be broken out between these two activities.

Source of Funds:

Federal	***State***	***Other***
70 percent		*30 percent*

Notes: *State expenditures were not tracked. Partner agencies contributed matching funds, which are listed as "Other."*

Eligibility/Population Served:
Persons eligible for the Texas Healthy Lifestyle Program are age 60 and older. The target population includes minorities, persons living below the poverty level, and those who have one or more chronic health conditions. Several of the geographic areas target specific sub-populations:

- Alamo/Bexar County: Hispanic/Spanish Speakers
- East Texas: Alabama-Coushatta Reservation; State Prison Population
- Rio Grande: Hispanic/Spanish Speakers/Colonia residents and Ysleta Pueblo del Sur tribe

Services/Activities:
A Diabetes Self-Management workshop is held for two and a half hours, once a week, for six weeks, in community settings such as churches, community centers, libraries, and hospitals. People with type 2 diabetes attend the program in groups of 12-16. Workshops are facilitated

from a highly detailed manual by two trained leaders, one or both of whom are peer leaders with diabetes themselves. Classes are offered in English and Spanish.

Subjects covered include: 1) techniques to deal with the symptoms of diabetes: fatigue, pain, hyper/hypoglycemia, stress, and emotional problems such as depression, anger, fear, and frustration; 2) appropriate exercise for maintaining and improving strength and endurance; 3) healthy eating; 4) appropriate use of medication; and 5) working more effectively with health-care providers. Participants make weekly action plans, share experiences, and help each other solve problems they encounter in creating and carrying out their self-management program. Physicians and other health professionals, both at Stanford University and in the community, have reviewed all materials in the course.

Each participant in the workshop receives a copy of the companion book, *Living a Healthy Life with Chronic Conditions*, an audio relaxation tape, and an audio exercise tape.

Texas A&M School of Rural Public Health conducts the evaluation for this program. The primary evaluation tasks include developing a standardized data collection protocol for tracking program participants and conducting fidelity checks on key elements of program delivery.

Areas of the state where services to prevent diabetes and treat individuals with diabetes are available:

The Texas Healthy Lifestyle Program is offered through the following Area Agencies on Aging (AAAs).

1. **Alamo and Bexar Area Agencies on Aging**
   Atacosa, Bandera, Bexar, Comal, Frio, Gillespie, Guadalupe, Karnes, Kendall, Kerr, Medina, and Wilson Counties. Bexar County focuses on the 10 zip codes with the highest incidence of diabetes.

   - **Funds available:** $160,018 (two-year grant)
   - **Gaps in services**: The incidence of diabetes in Bexar County is 14 percent - twice the national average.

2. **Central Texas Area Agency on Aging – Aging & Disability Resource Center**
   Bell, Coryell, Hamilton, Lampasas, Milam, Mills, and San Saba Counties

   - **Funds available:** $149,867 (two-year grant)
   - **Gaps in services:** The 2009 epidemiological profile for Bell County (most populous county in the region) indicates it has a significantly higher rate of diabetes than the rest of the state (approximately 13 percent of adults in Bell County compared to 10 percent of adults in Texas).

3. **East Texas Area Agency on Aging**
   Anderson, Angelina, Bowie, Brazos, Burleson, Camp, Cass, Cherokee, Delta, Franklin, Gregg, Grimes, Hardin, Harrison, Henderson, Hopkins, Houston, Jasper, Jefferson, Lamar,

Leon, Madison, Marion, Morris, Nacogdoches, Newton, Orange, Panola, Polk, Rains, Red River, Robertson, Rusk, Sabine, San Augustine, San Jacinto, Shelby, Smith, Titus, Trinity, Tyler, Upshur, Van Zandt, Washington, and Wood Counties

- **Funds available:** $172,888 (two-year grant)
- **Gaps in services:** A survey conducted by the Brazos Valley Health Partnership found that 16 percent of older adults in the region were diagnosed with diabetes.

4. **Rio Grande Area Agency on Aging**
   El Paso County and Hudspeth County

- **Funds available:** $159,818 (two-year grant)
- **Gaps in services:** This region includes areas known as colonias, which are extremely low-income and lack basic infrastructure such as water, sewer, and electricity, making it difficult for residents to maintain basic hygiene and follow doctor's orders for disease management.

5. **Tarrant County Area Agency on Aging**
   Tarrant County

- **Funds available:** $142,908 (two-year grant).
- **Gaps in service:** According to the 2004 Behavioral Risk Factor Surveillance System report, 5.9 percent of Tarrant County residents are diagnosed with diabetes. Among persons age 65+, the rate is 18.9 percent.

Number of health-care providers treating individuals with diabetes under the program: The number of health-care providers participating in the program was not collected. This program utilizes lay leaders–persons from the local community–to lead classes. A total of 102 lay leaders were trained to administer the Diabetes Self-Management Program during fiscal years 2010-11.

Texas Department of Assistive and Rehabilitative Services (DARS)

Program Name: *Independent Living Services to Texans with Disabilities Impacted by Diabetes*

Total Program Expenditures*: FY 2011: **$10,119,054** and FY 2012: **$9,991,585**
Individuals Served:

	Total*	With Diabetes**
FY 2011	4,809	1,248
FY 2012	4,868	1,292

Diabetes-Related Expenditures:**

FY 2011	$1,430,279
FY 2012	$1,552,163

Notes:
**Total individuals served and payments from each fiscal year's funds for Independent Living Services*

- *Division for Rehabilitation Services cases in phase codes 10,14,22,26,28,30,32,34 in the state fiscal year*
- *Division for Blind Services cases in phase codes 06,10,12,14,22,26,28,30,32,34 in the state fiscal year*
- *FY 2011 figures are actual and FY 2012 are estimated expenses*

***Individuals served and payment from that fiscal year's funds for Independent Living Services for consumers with a cause code of Diabetes:*

- *Division for Rehabilitation Services cases with primary or secondary disability cause code 16*
- *Division for Blind Services cases with primary disability cause code 48 or secondary/tertiary cause code 16*

Source of Funds:

Federal	***State***	***Other***
90 percent	*10 percent*	

Notes: *Federal and state portions apply to the entire body of program expenditures over a year in roughly these ratios.*

Eligibility/Population Served:
DARS Independent Living Services are geared toward adults with significant disabilities with the goal of improving independence at home and in the community. DARS provides specialized services to help consumers avoid institutionalization. The consumer must have a significant disability that results in a substantial impediment to his or her ability to function independently in the family and/or in the community, and there must be a reasonable expectation that Independent Living Services assistance will result in the ability to function more independently.

Services/Activities:
DARS provides services for Texans impacted by the complications of diabetes including heart disease, stroke, amputations, blindness, and kidney disease. DARS Independent Living Services promote self-sufficiency despite significant disability−providing people with disabilities with improved mobility, communication, personal adjustment, and self-direction. Services include counseling and guidance, home modification, assistive devices and equipment, communication technology, mobility training, and other services. The DARS counselor also utilizes counseling

and referral to community resources to promote responsible diabetes self-management by consumers to slow the progression of complications and further disability.

Areas of the state where services to prevent diabetes and treat individuals with diabetes are available/unavailable:
DARS has two divisions that administer services across the state. The Division for Rehabilitation Services has 115 offices across Texas to serve Texans with heart disease, stroke, amputations, and kidney disease, as well as other disabilities. The Division for Blind Services has 24 offices across the state. Texans with disabilities can contact their local DARS office to initiate services. Experienced diabetes educators and programs are difficult to find in the rural areas of the state including Del Rio and surrounding counties, Odessa and surrounding counties, and the Panhandle outside of Amarillo and Lubbock.

Number of health-care providers treating individuals with diabetes under the program:
DARS does not have health-care providers or diabetes educators on staff, but contracts for medical services as needed from providers in the community. DARS also contracts with registered nurses, registered dieticians, or certified diabetes educators who specialize in diabetes education and have knowledge of adaptations for people with disabilities, especially blindness that present a unique challenge to the consumer's ability to self-manage his or her diabetes. These diabetes educators provide assessment, self-management education, and follow-up services to DARS consumers. DARS Division for Blind Services employs a Diabetes Field Specialist based in Austin who is responsible for recruiting and training diabetes educators in blind services and for addressing the concerns identified by DARS caseworkers for adaptive equipment and accommodations that may be needed by the consumer.

Texas Department of Assistive and Rehabilitative Services (DARS)

Program Name: *Vocational Rehabilitation Services to Texans with Disabilities Impacted by Diabetes*

Total Program Expenditures*: FY 2011: $264,663,482 and **FY 2012:** $273,536,962
Individuals Served:

	Total*	**With Diabetes****
FY 2011	83,762	4,764
FY 2012	81,474	4,913

Diabetes-Related Expenditures:**

FY 2011	$10,502,861
FY 2012	$10,271,253

Notes:
**Total individuals served and payments from each fiscal year's funds for Vocational Rehabilitation Services*

- *Division for Rehabilitation Services cases in phase codes 10,14,22,26,28,30,32,34 in the state fiscal year*
- *Division for Blind Services cases in phase codes 06,10,12,14,22,26,28,30,32,34 in the state fiscal year*
- *FY 2011 figures are actual and FY 2012 are estimated expenses*

***Individuals served and payment from that fiscal year's funds for Vocational Rehabilitation Services for consumers with a cause code of Diabetes:*

- *Division for Rehabilitation Services cases with primary or secondary disability cause code 16*
- *Division for Blind Services cases with primary disability cause code 48 or secondary/tertiary cause code 16.*

Source of Funds:

Federal	***State***	***Other***
80 percent	*20 percent*	

Notes:
Federal and state portions apply to the entire body of program expenditures over a year in roughly these ratios.

Eligibility/Population Served:
The Vocational Rehabilitation (VR) program at DARS helps Texans with disabilities prepare for, find, and keep employment. The eligibility criteria for this program is: 1) the presence of a physical, mental, or cognitive impairment; 2) the impairment results in a substantial impediment to employment; 3) the individual (consumer) requires vocational rehabilitation services to be employable; and 4) the individual (consumer) is presumed to be capable of employment.

Services/Activities:
DARS provides vocational rehabilitation services for Texans impacted by the complications of diabetes including heart disease, stroke, amputations, blindness, and kidney disease. Through

the vocational rehabilitation program, DARS provides work-related services that are individualized and may include counseling and guidance, training, physical restoration, prostheses and orthoses, assistive devices and equipment, job placement assistance, and other services.

Employment enhances a person's sense of well-being and economic self-sufficiency, allowing a person to contribute to the growth and development of his or her community. Unemployment results in a lower standard of living, lack of financial control, and limited access to comprehensive quality health-care and healthy living resources.

This report identifies DARS consumers with a primary or secondary disability of diabetes mellitus. DARS not only provides services to remove the person's impediment to employment, but also attempts to promote responsible diabetes self-management through counseling and referral to community resources to slow the progression of complications and further disability. In addition, DARS works closely with employers who hire DARS consumers to address any questions they may have about the consumer's work productivity.

Areas of the state where services to prevent diabetes and treat individuals with diabetes are available/unavailable:
DARS has two divisions that administer employment services across the state. The Division for Rehabilitation Services has 115 offices across Texas to assist persons with disabilities with employment. Within this program, DARS does not specifically address Texans with heart disease, stroke, amputations, and kidney disease, as well as other disabilities unless it presents as an impediment to employment as determined by a qualified Vocational Rehabilitation Counselor. The Division for Blind Services has 24 offices across the state. Texans with disabilities can contact the local DARS office to initiate services.

Experienced diabetes educators and programs are difficult to find in the rural areas of the state including Del Rio, and surrounding counties, Odessa and surrounding counties, and the Panhandle outside of Amarillo and Lubbock.

Number of health-care providers treating individuals with diabetes under the program:
DARS does not have healthcare providers or diabetes educators on staff, but contracts for medical services as needed from providers in the community. DARS also contracts with registered nurses, registered dieticians, or certified diabetes educators who specialize in diabetes education and have knowledge of adaptations for people with disabilities, especially blindness that presents a unique challenge to the consumer's ability to self-manage his or her diabetes. These diabetes educators provide assessment, self-management education, and follow-up services to DARS consumers. DARS Division for Blind Services employs a Diabetes Field Specialist who is responsible for recruiting and training diabetes educators in blind services and for addressing the concerns identified by DARS counselors for adaptive equipment and accommodations that may be needed by the consumer.

Texas Department of State Health Services (DSHS)

Program Name: *Children with Special Health Care Needs (CSHCN) Services Program*

Total Program Expenditures: $25,032,734 (FY 2012)
Individuals Served:

	Total	With Diabetes
FY 2012	1,906	78

Diabetes-Related Expenditures:

FY 2012	$409,132

Notes:
The program can provide overall expenditure data for diabetes clients, but is not able to give specific expenditures pertaining to diabetes treatment. The program provides comprehensive coverage that includes services such as inpatient, drugs, dental, immunization, and well check-ups, and durable medical equipment (DME) that may not necessarily be related to diabetes treatment.

Source of Funds:

Federal	***State***	***Other***
46 percent	*54 percent*	

Notes:
Federal and state portions apply to the entire body of program expenditures over a year in roughly these ratios.

Eligibility/Population Served:
The CSHCN program is available to anyone who

1. lives in Texas
2. is under 21 years old (or any age with cystic fibrosis)
3. has a certain level of family income
4. has a medical problem that
   - is expected to last at least 12 months
   - will limit one or more major life activities
   - needs more health care than what children usually need
   - has physical symptoms (This means that the program does not cover clients with only a mental, behavioral, or emotional condition, or a delay in development.)

According to the 2009-2010 National Survey of Children with Special Health Care Needs (NS-CSHCN), 13.4 percent of children and youth in Texas under age 18 (919,876 children and youth) have special health-care needs.

When compared to the national average, Texas has a higher percentage of CSHCN under age 18 living in poverty. According to the 2009-2010 NS-CSHCN, almost 46.6 percent of Texas

CSHCN under age 18 live in households below 200 percent of the Federal Poverty Level (FPL), as compared to the national average of 44.3 percent.

Services/Activities:
The CSHCN Program helps children with special health-care needs and people of any age with cystic fibrosis. The program covers health-care benefits for children with extraordinary medical needs, disabilities, and chronic health conditions. Health-care benefits include a broad array of medical care and related services. The program helps clients with their medical, dental, and mental health-care, drugs, special therapies, case management, family support services (e.g., home modifications, van lifts), travel to health-care visits, insurance premiums, and transportation of deceased clients.

Areas of the state where services to prevent diabetes and treat individuals with diabetes are unavailable:
Services are available statewide.

Number of health-care providers treating individuals with diabetes under the program:
There are 15,419 providers who may potentially treat CSHCN clients with diabetes.

Texas Department of State Health Services (DSHS)

Program Name: *Kidney Health Care Program (KHC)*

Total Program Expenditures: $17,300,000 (FY 2012)
Individuals Served:

	Total	With Diabetes
FY 2012	19,563	9,769

Diabetes-Related Expenditures:

FY 2012	$8,638,946

Source of Funds:

Federal	*State*	*Other*
	100 percent	

Eligibility/Population Served:
The program is available to anyone who

1. lives in Texas
2. has an income of less than $60,000 per year
3. has a diagnosis of end-stage renal disease (ESRD) from a licensed physician
4. meets Medicare's definition of ESRD
5. gets regular dialysis treatments OR has received a kidney transplant
6. is not eligible for Medicaid medical, drug, or travel benefits

Demographics of the active client population of the KHC Program demonstrate an over-representation of certain characteristics in relation to the overall state population. (An active client is defined as anyone who was eligible for KHC benefits as of August 31, 2012.) Clients ages 45-74 years account for more than 73 percent of all active clients, but less than 30 percent of the total Texas population. More than 44 percent of all active clients are Hispanic. No racial/ethnic group, however, is more highly represented in the active client population than African-Americans. The proportion of active participants in this group is nearly triple the proportion of African-Americans in the Texas population (29.1 percent versus 11.4 percent, respectively). Males in the active client category comprise 58.8 percent of this group; females comprise 41.2 percent of this group. In relation to gross annual income, data show that 61.8 percent of active clients have a gross annual income below $20,000.[34]

Services/Activities:
The KHC Program helps people with end-stage renal disease (ESRD) get some of their health-care services. It helps clients receive dialysis treatments, access surgery, purchase drugs, travel to health-care visits, and pay Medicare premiums. ESRD is usually the result of years of chronic kidney disease caused by inherited conditions, medical conditions such as diabetes and/or hypertension, or an injury to the kidneys.

[34] DSHS *Kidney Health Care Program FY 2012 Annual Report*

Areas of the state where services to prevent diabetes and treat individuals with diabetes are unavailable:
Services are available statewide.

Number of health-care providers treating individuals with diabetes under the program:
Data not available.

Texas Department of State Health Services (DSHS)

Program Name: *Diabetes Prevention and Control Program (DPCP) Community Diabetes Projects (CDPs)*

Total Program Expenditures: **$**1,247,029 (FY 2012)
Individuals Served:

	Intervention Type	With Diabetes or Prediabetes
FY 2012	Nutrition Education	1,183
FY 2012	Physical Activity	1,282
FY 2012	Self-Management Class	1,254

The number of persons with diabetes or prediabetes represents unique/unduplicated individuals served by each intervention type. A total is not presented for all intervention types because individuals can participate in one or more of the interventions. For example, an individual can be enrolled in a cooking class, an exercise class, and a self-management class, and will be represented in each category/intervention type.

Diabetes-Related Expenditures:

FY 2012	$1,247,029

Source of Funds:

Federal	***State***	***Other***
29 percent	*71 percent*	

Eligibility/Population Served:
The DPCP contracts with local health departments, community health centers, and grassroots organizations to establish programs for promoting wellness, physical activity, weight and blood pressure control, and smoking cessation for people with or at risk for diabetes. Community Diabetes Projects (CDPs) target Texans who are disproportionately affected by diabetes, and have limited access to health services.
The goals of CDPs are to:

- Increase opportunities for implementing positive behavior and lifestyle changes in people with diabetes and those at risk of developing diabetes;
- Increase community, environmental, and systems changes in community sectors that will increase physical activity and healthy eating among the general population, especially those with diabetes and prediabetes;
- Institute project strategies or community policy and environmental changes conducive to risk reduction;

- Increase public and provider knowledge of the symptoms, risk factors and target goals for diabetes, prediabetes and gestational diabetes, and the importance of physical activity and healthy eating in preventing, delaying, or managing diabetes and its complications; and
- Increase health-care providers', payers', and patients' knowledge and use of the TDC's *Minimum Standards for Diabetes Care in Texas* and treatment algorithms.

Based on self-report data collected from 1,118 participants between October 3, 2010, and May 22, 2013, individuals served by CDPs are predominately middle-aged (average 54 years of age), female, Hispanic, obese, and have a self-reported history of diabetes. However, anyone with diabetes or at risk for diabetes in the communities where CDPs are located may participate in program activities.

Services/Activities:
In 2012, twelve CDPs in Texas collected data related to the outcome indicators below from participants attending the following interventions:

- DSME classes are conducted for persons with diabetes and their families. A minimum of two series of DSME classes are conducted annually and held at least once a week for four weeks.
- Nutrition series are conducted separately and include a minimum of three classes that meet for at least 30 minutes, once per week.
- Physical activity interventions are ongoing and no less than 30 minutes, once per week, for a minimum of eight weeks.

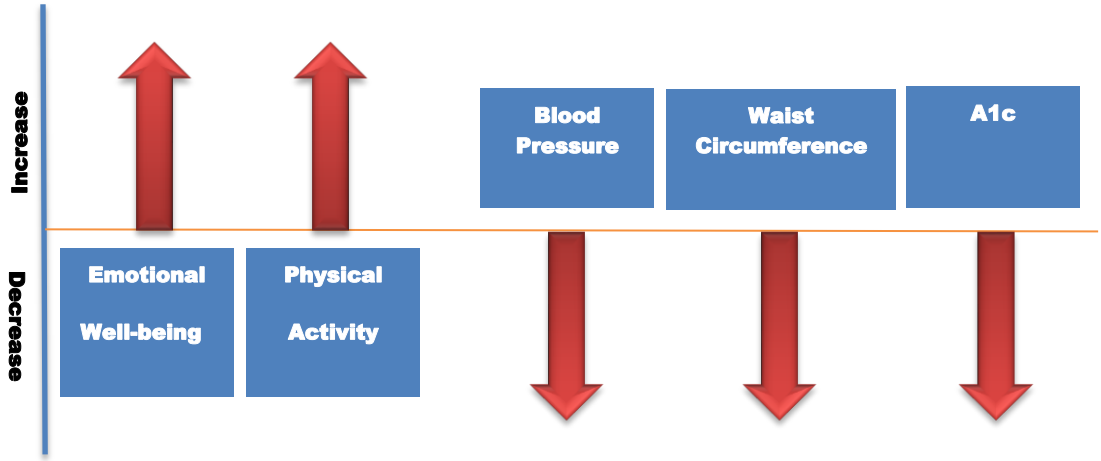
Outcome Indicators:

CDPs are required to collect data to show:	**CDPs are encouraged to show:**
• Decrease in average waist circumference • Decrease in average body mass index (BMI) • Decrease in average blood pressure • Number of participants identified as tobacco users referred to cessation activities/services	• Decrease in average A1c • Decrease in average fasting blood glucose • Decrease in average cholesterol • Decrease in average triglycerides • Percent of participants receiving recommended exams (foot, eye, dental) and immunizations

CDP participants complete participant information forms at various points during their participation in CDP interventions (DSME, nutrition, physical activity). Preliminary findings based on about 1,600 records collected in 2012 indicate favorable changes among participants.

- Indicators of emotional well-being increased.
- Physical activity increased among all participants. Persons with diabetes experienced the greatest increase.
- Diastolic blood pressure decreased among persons with diagnosed diabetes. This represents the pressure in blood vessels when the heart rests between beats.
- Waist circumference decreased among both persons with diagnosed diabetes and those without diabetes. Persons with diabetes experienced the greatest decrease.
- A1c decreased slightly among persons diagnosed with diabetes. The A1c is a lab test that measures your average blood glucose level over the last two to three months. A person with an A1c value of 6.5 percent or greater has diabetes. The average A1c of CDP participants who were not diagnosed with diabetes was 6.7 percent, indicating that some participants who had diabetes had not yet been diagnosed.

Results:



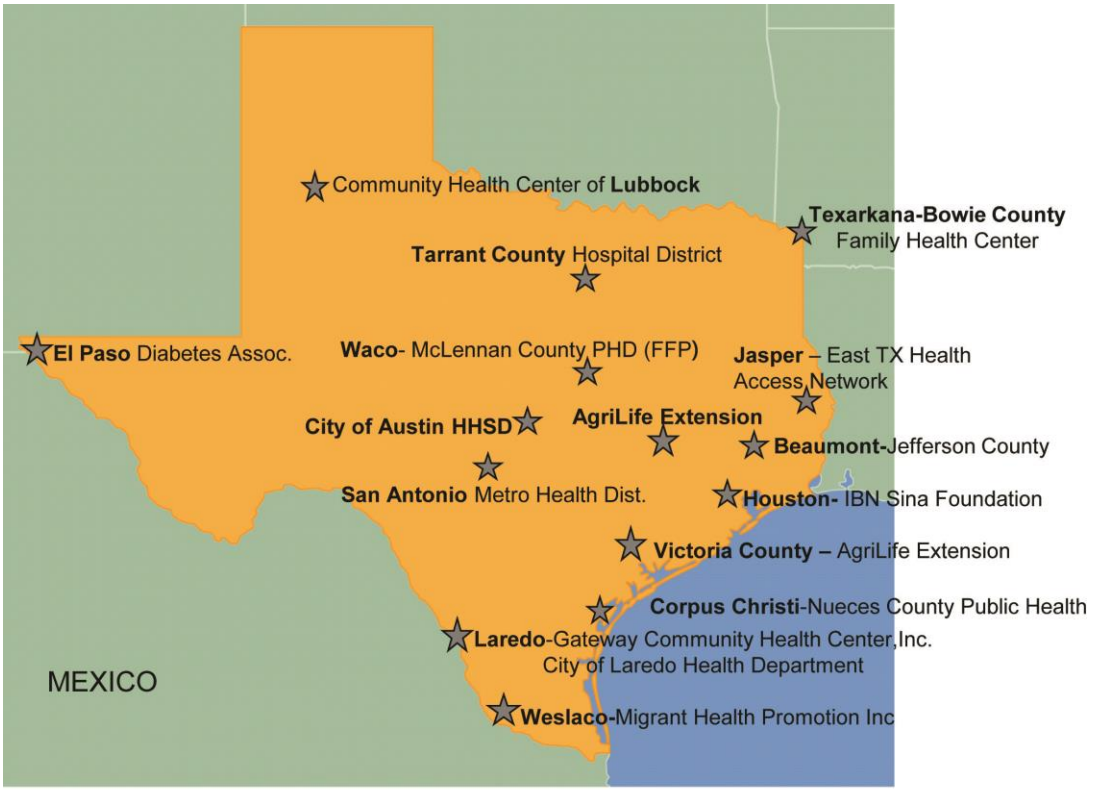
Areas of the state where services to prevent diabetes and treat individuals with diabetes are available/unavailable:

During 2012, DSHS contracted with the following organizations to offer community diabetes project interventions:

- City of Austin Health and Human Services Department
- Jefferson County Family Focused Diabetes Project
- Corpus Christi-Nueces County Public Health District
- El Paso Diabetes Association
- Tarrant County Hospital District
- Iba Sina Foundation – Houston

- Gateway Community Health Center, Inc. – Laredo
- City of Laredo Health Department
- Texarkana-Bowie County Family Health Center
- East Texas Health Access Network – Jasper
- Community Health Center of Lubbock
- Migrant Health Promotions, Inc. – Weslaco
- San Antonio Metropolitan Health District
- Waco-McLennan County Public Health District
- Texas AgriLife Extension Service*

**Serving Victoria County and other Texas counties through the Do Well, Be Well with Diabetes education program: http://fcs.tamu.edu/health/type_2_diabetes/diabetes_classes.php.*



Number of health-care providers treating individuals with diabetes under the program: Eight of the CDPs reported using certified CHWs to deliver diabetes self-management classes. There are a total of 36 (21.2 full time equivalents) CHWs employed by CDPs. The Texas DPCP continues to offer CHW training opportunities, and some CDPs are planning to expand the number of CHWs they employ through 1115 waiver projects described under services provided by HHSC/Texas Medicaid. CDPs who do not employ CHWs enlist area partners and health professionals to deliver diabetes self-management courses.

Texas Department of State Health Services (DSHS)

Program Name: *Prevent Type 2 Diabetes Campaign / Marketing support of the TDC's Diabetes Tool Kit*

Total Program Expenditures: $164,469 (FY 2013 purchase order for social marketing/advertising services)
Individuals Served:

FY 2013	Online Impressions	Website visits
Prevent Type 2 Campaign for March 2013	**44,072,286** (encountered online advertising)	**21,809*** preventtype2.org prevenirtipo2.org
Health-Care Professional Education (tdctoolkit.org)	NA	**6,397** tdctoolkit.org

Notes: *Only includes visits during March 2013 resulting from online advertising which directed visitors to the site.

Diabetes-Related Expenditures:

FY 2013	$164,469

Source of Funds:

Federal	***State***	***Other***
100 percent		

Population Served: Hispanics at risk for type 2 diabetes, ages 18-60. Health-care professionals statewide.

Services/Activities:
In addition to community-based diabetes programs, the DSHS DPCP used funding from the CDC Division of Diabetes Translation to promote National Diabetes Education Program (NDEP) messages and campaigns that focus on prevention of type 2 diabetes and diabetes management. Strategic goals include early identification (screening) of persons with diabetes or those at risk, and empowerment of the general public to reduce their risk for type 2 diabetes and control all types of diabetes.

The majority of persons with diagnosed diabetes are currently white, while diabetes rates are higher for African Americans and Hispanics. Those most likely to have diabetes, the older population and the Hispanic population, are the fastest growing populations in the state.

In 2010, the CDC Division of Diabetes Translation announced a National Diabetes Prevention Program (NDPP) to bring the results of the landmark Diabetes Prevention Program (DPP) study - a 58 percent reduction in type 2 diabetes among persons at risk - to the more than 79 million persons in the U.S. estimated to have prediabetes. A critical first component of this and other interventions is increased awareness among persons who have prediabetes of their risk for developing type 2 diabetes and ways to reduce their risk.

Market research was conducted during summer 2010 in Corpus Christi, McAllen, and Houston using focus groups that included Hispanics with prediabetes and separate groups consisting of those with multiple risk factors for diabetes. Marketing platforms for a type 2 diabetes prevention campaign were presented to each group, and based on discussion, strengths and weaknesses of each were identified. The public service announcement platform chosen for campaign implementation was titled "Prevent Diabetes before Serious Consequences," and included a graphic of a man who had experienced an amputation, presumably as a complication of diabetes. Strengths of this platform discussed by focus group members were summarized as follows:

- Shows the reality of the consequences. "The picture says it all."
- Emotionally compelling, shock-value. Jars them into internalizing the severity of consequences. They don't want this result.
- Strongly communicates proactive prevention—you need to take steps before this happens to you.
- Steps clearly communicated as solution to potential problem.
- Personalized experience: "I had an uncle, grandmother, aunt that lost a toe, leg, etc."

In 2010, DSHS and the TDC featured a diabetes-related complication—lower extremity amputation—in a television spot that urged Hispanics to get tested for prediabetes or diabetes. The television spot, supported by online advertising, was aired in the top four Hispanic markets (Houston, Corpus Christi, Rio Grande Valley, and Laredo) for two weeks leading up to Diabetes Alert Day in March, a national observance that encourages persons to determine their risk for type 2 diabetes and take action to prevent the disease and its complications.

The *Prevent Type 2 Diabetes* campaign promoted English and Spanish websites, www.preventtype2.org / www.prevenirtipo2.org, featuring the TV spot and educational video content developed by the National Diabetes Education Program and American Diabetes Association, among others. Visitors to these sites received referral to www.211texas.org for local diabetes screening resources, information about prediabetes and risk for diabetes, and state and national resources for preventing type 2 diabetes. A campaign goal is to increase awareness and screening for prediabetes and encourage persons at risk for diabetes to seek out programs that reduce their risk for diabetes through lifestyle changes.

Areas of the state where services to prevent diabetes and treat individuals with diabetes are available:

In 2013, DSHS continued the campaign through radio news/traffic sponsorship on Spanish-language and English crossover stations for three weeks targeting Hispanics ages 18-60 with a "Get Tested Today" message. The sponsorship broadcasted from March 11 through March 31, 2013, in Corpus Christi, El Paso, Houston, Laredo, San Antonio, and the Rio Grande Valley. Four animated banners in English, four animated banners in Spanish, four static banners in English, and four static banners in Spanish promoting type 2 diabetes prevention were placed on paid media interactive sites during the month of March 2013. Ads were placed on Google paid search from March 1 through March 31, 2013, generating 535 clicks and 127,032 impressions. Video pre-roll ads and additional companion banners were placed on Univision between March 4 and March 31, 2013. Pre-roll ads featured the existing 30-second TV spot in Spanish, generating 1,457 clicks and 334,858 impressions. Companion banners generated 1,040 clicks and 1,178,507 impressions. Ads placed on Millennial Mobile generated 23,981 clicks and 2,648,029 impressions, making this the most successful ad placement for the campaign run, and confirming research that a Hispanic audience is more likely to receive online messaging/advertising via mobile phones. Two new Facebook ads directed at Hispanics in Spanish and English were developed, promoting the "Diabetes Runs in Families" and "You Could Have Diabetes" messages. English ads placed on Facebook generated 5,991 clicks and 22,149,255 impressions. Spanish ads placed on Facebook generated 4,439 clicks and 17,634,605 impressions. During the month of March 2013, radio and online advertising was responsible for 17,155 visits to prevenirtipo2.org (11,087 unique visits) and 4,654 visits to preventtype2.org (4,275 unique visits)

Number of health-care providers treating individuals with diabetes under the program:
Since 1995, the TDC has developed and continuously reviewed minimum standards of care for patients with diabetes. These standards are used to define diabetes benefits required of health plans regulated by the Texas Department of Insurance. Appointed by the TDC chair, the TDC Medical Professionals Advisory Subcommittee brings together a multidisciplinary team of diabetes experts from across the state to review the latest research and treatment recommendations and update TDC standards of care, including 17 treatment algorithms, A1c target recommendations, and a Diabetes Tool Kit to assist in applying standards to practice. All professional materials developed by the subcommittee, as well as patient education materials and other resources, are available free of charge at the TDC's online address for health professionals, tdctoolkit.org. The TDC's Health Care Professional Advisory Committee works to increase awareness of TDC standards of care among managed care companies, health plans, physicians, and employer groups throughout Texas, and a subcommittee on outcomes examines data that can be used to evaluate the extent to which recommended care is delivered. In 2013, TDC advisory committee members developed recommendations for disease management and diabetes self-management education provided by Texas Medicaid managed care organizations. The recommendations are available to assist HHSC in assessing quality of care provided to persons with diabetes under managed care contracts. DSHS maintains the TDC website for professionals and recorded 6,397 unique visitors to the site in FY 2013.

Texas Department of State Health Services (DSHS)

Program Name: *Primary Health Care (PHC) Program*

Total Program Expenditures: **$**11,752,486 (FY 2012)
Individuals Served:

	Total	With Diabetes
FY 2012	70,902	Total unknown*

Notes:
** During the 83rd Legislative Session, the Legislature allocated $100,000,000 over the biennium for expanded primary health care (EPHC), with an emphasis on women's health. These providers will also provide chronic disease management for eligible clients, including diabetes care.*

With the launch of the EPHC, the PHC program will adopt more extensive reporting requirements. This will provide more details regarding the use of program services (both PHC and EPHC) by Texans with diabetes.

Diabetes-Related Expenditures:

FY 2012	unknown

Source of Funds:

Federal	***State***	***Other***
	100 percent	

Population Served:
Eligibility is limited to Texas residents whose gross family income is at or below 150 percent of the FPL and who do not qualify for any other program or benefit that provides the same services, such as Medicaid.
Beginning September 1, 2013, this program will serve residents at or below 200 percent FPL.

Services/Activities:
The PHC program, administered by the Division for Family and Community Health Services at the DSHS, began in 1987 in accordance with House Bill (HB) 1844, the Primary Health Care Services Act. PHC provides health care, including preventive health services and education, to Texas residents who could not otherwise receive such care. Services are provided through contracts with local health departments, community action programs, private nonprofit organizations, Federally Qualified Health Centers (FQHCs), hospitals, and hospital districts.
In FY 2012, 59 contracted providers expended $11,752,486 in state-allocated PHC funds. Of this total, contractors reported $9,680,244 expended for direct medical care services and $2,072,242 to provide non-medical services such as transportation, case management, and administration. Approximately 70,902 unduplicated patients in 166 counties received primary health-care services ranging from classes on improving health status to direct-care services for a one-time problem or a chronic condition.

At this time, contractors are not required to report clients by diagnosis. This prevents reporting the amount of funds dedicated to diabetes services.
The six priority services of the PHC program are:

- diagnosis and treatment
- family planning
- health education
- emergency services
- preventive services and immunizations
- laboratory services and x-ray

Additional optional services may also be provided. Optional services include:

- nutrition services
- home health care
- transportation
- environmental health
- social services
- health screening
- dental care
- prescription drugs, devices, and durable supplies
- podiatry services

Areas of the state where services to prevent diabetes and treat individuals with diabetes are available and number health-care providers treating individuals with diabetes under the program:
The Primary Health Care Services Program currently contracts with providers in each of the Health Service Regions. A map of providers is available online:
http://batchgeo.com/map/phctexascliniclocator

Number of health-care providers treating individuals with diabetes under the program:
There were 59 contractors providing primary care services under this program across the state in FY 2012.

Texas Health and Human Services Commission (HHSC)

Program Name: Medicaid

Total Program Expenditures: Approximately $52.5 billion (SFY 2012)
Individuals Served:

	Total	With Diabetes**
SFY 2012	4.2 million*	345,234

Notes:
** estimated unduplicated yearly served*
***designation of an individual with type 1, type 2, or gestational diabetes based on any diagnoses*

Diabetes-Related* Expenditures:

SFY 2012	$281 million

Notes:
**designation of an individual with type 1, type 2, or gestational diabetes based on primary diagnoses. An additional $584 million was paid for services to individuals with diabetes listed as a non-primary diagnosis. These services are not necessarily directly related to diabetes.*

Source of Funds:

Federal	***State***	***Other***
58.52 percent	*41.58 percent*	

Population Served:

- 4.2 million served out of 5.2 million enrolled acute care clients
- low-income families, children, related caretakers of dependent children, pregnant women, people age 65 and older, and adults and children with disabilities
- ~ 84 percent of all enrolled are provided Medicaid services

Individuals with incomes above predefined limits are ineligible for Medicaid. The Texas Medicaid program covers a limited number of optional groups, which are eligibility categories that states are allowed, but not required, to cover under their Medicaid programs. For example, Texas chooses to extend Medicaid eligibility to pregnant women and infants up to 185 percent of the FPL. The federal requirement for pregnant women and infants is 133 percent of the FPL. Another optional group Texas covers is known as the “medically needy” group. This group consists of children and pregnant women whose income exceeds Medicaid eligibility limits, but who do not have the resources required to meet their medical expenses. A “spend down” amount is calculated for these individuals by subtracting their incomes from the medically needy income limit for their household sizes. If their medical expenses exceed the “spend down” amount, they become Medicaid eligible. Medicaid then pays for those unpaid medical expenses and any Medicaid services provided after they are determined to be medically needy.

Children with family incomes above Medicaid thresholds may be eligible for the Texas CHIP program.

Services/Activities:
Medicaid is a jointly funded state-federal health-care program administered by HHSC. Texas covers certain population groups (mandatory eligibility groups) and has the flexibility to cover other population groups (optional eligibility groups). Medicaid is an entitlement program, which cannot limit the number of eligible people who can enroll, and Medicaid must pay for any services covered under the program. About one in seven Texans relies on Medicaid for health insurance or long-term services and supports.

Medicaid pays for acute health care (physician, inpatient, outpatient, pharmacy, lab, and x-ray services), and long-term services and supports (home- and community-based services, nursing facility services, and services provided in Intermediate Care Facilities for Individuals with an Intellectual Disability or Related Conditions (ICFs/IID)) for people age 65 and older and those with disabilities.

Guidance regarding coverage of equipment and supplies (insulin pumps, syringes, testing strips, etc.) for persons with diabetes is found in the Texas Medicaid Provider Procedures Manual at http://www.tmhp.com/Pages/Medicaid/Medicaid_Publications_Provider_manual.aspx.

On March 1, 2012, most Medicaid clients and all Children's Health Insurance Program (CHIP) clients began obtaining their prescription drug benefits through a managed care plan. Outpatient prescription drugs will be a benefit of each Medicaid managed care program. CHIP is also a managed care program for which outpatient drugs are a benefit. Across the state, 19 MCOs have contracted with a total of seven different pharmacy benefits managers (PBM) – some PBMs are contracted with multiple MCOs. The Texas Medicaid/CHIP Vendor Drug Program website includes information on diabetes medications covered by Medicaid and PBMs serving Medicaid MCOs: http://www.txvendordrug.com/claims/managed-care.shtml.

Texas Medicaid Managed Care Quality Strategy: 2012 – 2016
The Texas Legislature, through the 2012-2013 General Appropriations Act and Senate Bill 7, instructed HHSC to expand its use of risk-based Medicaid managed care to achieve program savings, while also preserving locally funded supplemental payments to hospitals. Under the Special Terms and Conditions of the Medicaid Transformation and Quality Improvement (1115) waiver, HHSC is required to develop a comprehensive quality strategy that reflects all managed care plans operating under the programs proposed through the waiver and submit to the Centers for Medicare & Medicaid Services (CMS) for approval. A draft of the Medicaid Managed Care Quality Strategy can be viewed at http://www.hhsc.state.tx.us/medicaid/quality-review/Health-Plan-Hospital-Performance.shtml.

Areas of the state where services to prevent diabetes and treat individuals with diabetes are available/unavailable:
Services are available statewide. Primary-care provider and specialist access maps are provided in Appendix 1, indicating the availability of key services to Medicaid eligible Texans with diabetes.

Number of health-care providers treating individuals with diabetes under the program: There are no data readily available to estimate this number. Providers from a variety of health-service and allied health fields provide services to the Medicaid eligible population. Primary-care provider and specialist access maps are provided in Appendix 1, including the number of providers available to treat HHSC-served individuals with diabetes.

Texas Health and Human Services Commission (HHSC)

Program Name: *Children's Health Insurance Program (CHIP)*

Total Program Expenditures: $618.9 million (SFY 2012)
Individuals Served:

	Total	With Diabetes**
SFY 2012	674,064*	14,752

Notes:
** estimated unduplicated yearly served*
***designation of an individual with type 1, type 2, or gestational diabetes based on any diagnoses*

Diabetes-Related* Expenditures:

SFY 2012	$8.3 million

Notes:
** Designation of an individual with type 1, type 2, or gestational diabetes based on primary diagnoses. An additional $6.3 million was paid for services to individuals with diabetes listed as a non-primary diagnoses. These services are not necessarily directly related to diabetes.*

Source of Funds:

Federal	*State*	*Other*
70.89 percent	*29.11 percent*	

Population Served:

674,064 individuals out of 999,629 CHIP−enrolled received acute-care services.
To qualify for CHIP, a child must be:

- A U.S. citizen or legal permanent resident,
- A Texas resident,
- Under age 19,
- Uninsured for at least 90 days,
- Living in a family whose income is at or below 200 percent of federal poverty level, and
- Living in a family that passes an asset test if family income is above 150 percent of the federal poverty level.

CHIP covers children in families who have too much income or too many assets to qualify for Medicaid, but cannot afford to buy private insurance. Most families in CHIP pay an annual enrollment fee to cover all children in the family. CHIP families also pay co-payments for doctor visits, prescription drugs, inpatient hospital care, and non-emergent care provided in an emergency room setting. CHIP annual enrollment fee amounts and co-payments vary based on family income. In addition, the total amount that a family is required to contribute out-of-pocket toward the cost of health-care services is capped based on family income.
Services/Activities:
The following services are covered under CHIP in Texas:

- Inpatient general acute and inpatient rehabilitation hospital services,
- Surgical services,
- Transplants,
- Skilled nursing facilities (including rehabilitation hospitals),
- Outpatient hospital, comprehensive outpatient rehabilitation hospital, clinic (including health center), and ambulatory health-care center services,
- Physician and physician extender professional services (including well-child exams and preventive health services such as immunizations),
- Laboratory and radiological services,
- Durable medical equipment, prosthetic devices, and disposable medical supplies,
- Home and community-based health services,
- Nursing care services,
- Inpatient mental health services,
- Outpatient mental health services,
- Inpatient and residential substance abuse treatment services,
- Outpatient substance abuse treatment services,
- Rehabilitation and Habilitation services (including physical, occupational, and speech therapy, and developmental assessments),
- Hospice care services,
- Emergency services (including emergency hospitals, physicians, and ambulance services),
- Emergency medical transportation (ground, air, or water),
- Care coordination,
- Case management,
- Prescription drugs,
- Dental services,
- Vision,
- Chiropractic services, and
- Tobacco cessation.

Areas of the state where services to prevent diabetes and treat individuals with diabetes are available/unavailable:
Services are available statewide. Primary-care provider and specialist access maps are provided in Appendix 1, indicating the availability of key services to CHIP eligible Texans with diabetes.

Number of health-care providers treating individuals with diabetes under the program:
There are no data readily available to estimate this number. Providers from a variety of health-service and allied health fields provide services to the CHIP eligible population. Primary-care provider and specialist access maps are provided in Appendix 1, including the number of providers available to treat HHSC-served individuals with diabetes.

Appendix 1− Texas Health Care Transformation and Quality Improvement Program (1115 Waiver) Projects Addressing Diabetes Care

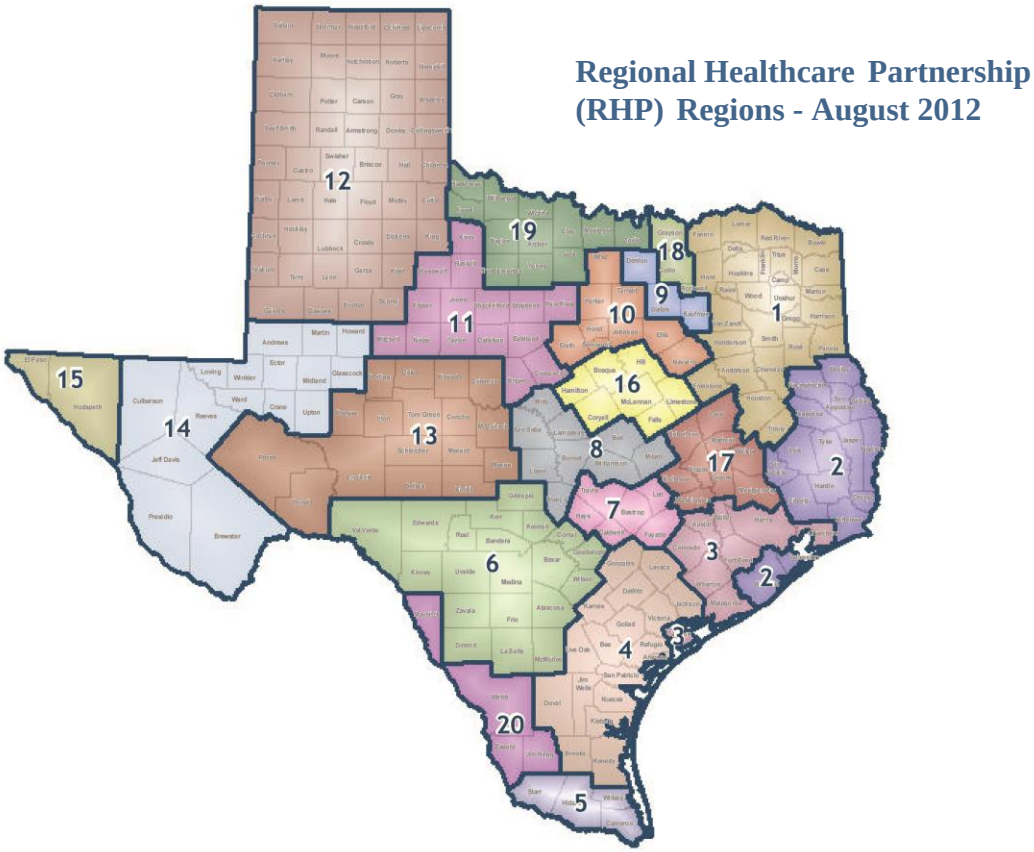
Overview

In 2011, HHSC established a waiver under section 1115 of the Social Security Act that allows the Centers for Medicare & Medicaid Services (CMS) and the states more flexibility in designing programs to ensure delivery of Medicaid services to eligible recipients. Section 1115 waiver authority will allow HHSC to expand managed care throughout the state while maintaining historic supplemental Medicaid funding to hospital providers.

The 1115 waiver provides HHSC the authority to make two types of payments to hospitals: payments for uncompensated care to Medicaid eligible patients and uninsured patients and incentive payments for health-care delivery system reforms. Both types of payments will require the hospital to be a Medicaid-enrolled provider and to have an intergovernmental transfer (IGT) of public funds submitted to the state, by the provider or on its behalf, to serve as the non-federal share of the payment.

Uncompensated care payments will be made to providers that submit a waiver application documenting unmet costs of providing hospital and non-hospital services to Medicaid patients and uninsured patients. The non-hospital service costs include physician costs, other non-physician professional costs, clinic costs, and outpatient drug costs. The addition of these non-hospital costs differentiates the uncompensated care payment under this waiver from a payment under the established Disproportionate Share Hospital (DSH) program.

Incentive payments will be made to providers that participate in health-care quality and delivery system reforms – this is referred to as the Delivery System Reform Incentive Payment (DSRIP) program. Providers participated in developing a plan for their region that is a result of collaboration through a Regional Healthcare Partnership (RHP – see map on next page). After the plan is approved and in place, the regional partnership will measure and report the outcomes of the region's reform initiatives as the basis for DSRIP payment to qualifying hospitals.



Regional Healthcare Partnership Plans

Plans developed by RHPs are organized to address four categories:

- Category 1: Infrastructure Development
- Category 2: Program Innovation and Redesign
- Category 3: Quality Improvements
- Category 4: Population-Focused Improvements (Hospitals Only)

A regional health-care planning protocol provided a menu of project options approved by HHSC and CMS that contribute to delivery transformation and quality improvement. The only projects eligible for payments from the DSRIP pool are those contained in this menu that are implemented as outlined in an RHP Plan approved by HHSC and CMS, with corresponding measures, milestones and performance improvement targets.

In order to achieve meaningful change by the end of the demonstration, every performing provider must link each of its Category 1 and 2 projects to a related Category 3 outcome. The outcomes shall assess the results of care experienced by patients, including patients' clinical events, patients' recovery and health status, patients' experiences in the health system, and efficiency/cost.

Diabetes-Related Outcomes

In 2012, the TDC formed a committee, with guidance by the Population Health Institute of Texas (PHIT), to identify and recommend appropriate outcome measures for diabetes for inclusion in the DSRIP menu of outcome measures (Category 3). The following National Quality Form (NQF) measures were recommended to HHSC:

1. Hemoglobin A1c (NQF 0059)
2. Blood Pressure (NQF 0061)
3. Low-Density Lipoprotein Cholesterol (NQF 0064)
4. Retinal or dilated eye exam (NQF 0055)
5. Foot exam (NQF 0056)
6. Nephropathy screening (NQF 0062)

The rationale for selection of these measures is that (1) they are established by CMS through the 2012 Physician Quality Reporting Measures Groups Specifications Manual and Release Notes and (2) they are already collected by physicians through electronic health records or other means, and reported to CMS on Medicare Part B claims and by most commercial health plans.

As of August 2013, the RHP Planning Protocol for Category 3 includes the following measures of diabetes care. The rationale or evidence supporting each measure is as follows:

> **Rationale/Evidence:** Diabetes is one of the most costly and highly prevalent chronic diseases in the United States. Approximately 20.8 million Americans have diabetes, and half these cases are undiagnosed. Complications from the disease cost the country nearly $100 billion annually. In addition, diabetes accounts for nearly 20 percent of all deaths in people over 25 years of age. Many complications, such as amputation, blindness, and kidney failure, can be prevented if detected and addressed in the early stages. Although many people live with diabetes years after diagnosis, it is a costly condition that leads to serious and potentially fatal health complications. Diabetes control can improve the quality of life for millions of Americans and save billions of health-care dollars.

IT-1.10 Diabetes care: *HbA1c poor control (>9.0 percent)*[233]*- NQF 0059 (Standalone measure)*

a. Numerator: Percentage of patients 18-75 years of age with diabetes (type 1 or type 2) who had hemoglobin A1c (HbA1c) control > 9.0 percent.
b. Denominator: Members 18 to 75 years of age as of December 31 of the measurement year with diabetes (type 1 and type 2)
c. Data Source: EHR, Registry, Claims, Administrative clinical data

IT-1.11 Diabetes care: *BP control (<140/90 mm Hg)*[234]*– NQF* 0061 *(Standalone measure)*

a. Numerator: Use automated data to identify the most recent blood pressure (BP) reading during the measurement year. The member is numerator compliant if the BP is less than 140/90 mm Hg.
b. Denominator: Members 18 to 75 years of age as of December 31 of the measurement year with diabetes (type 1 and type 2)
c. Data Source: EHR, Registry, Claims, Administrative clinical data

IT-1.12 Diabetes care: *Retinal eye exam*[235]*—NQF 0055 (Non- standalone measure)*

a. Numerator: An eye screening for diabetic retinal disease as identified by administrative data. This includes diabetics who had one of the following:
    - A retinal or dilated eye exam by an eye care professional (optometrist or ophthalmologist) in the measurement year, or
    - A negative retinal exam (no evidence of retinopathy) by an eye care professional in the year prior to the measurement year
b. Denominator: Members 18 to 75 years of age as of December 31 of the measurement year with diabetes (type 1 and type 2)
c. Data Source: EHR, Registry, Claims, Administrative clinical data

IT-1.13 Diabetes care *Foot exam- NQF 0056 (Non- standalone measure)*

a. Numerator: Percentage of patients 18-75 years of age with diabetes (type 1 or type 2) who received a foot exam (visual inspection, sensory exam with monofilament, or pulse exam) during the measurement year.
b. Denominator: Patients 18-75 years of age as of December 31 of the measurement year who had a diagnosis of diabetes (type 1 or type 2).
c. Data Source: EHR, Registry, Claims, Administrative clinical data.

IT-1.14 Diabetes care: *Microalbumin/Nephropathy- NQF 0062 (Non- standalone measure)*

a. Numerator: Percentage of patients 18-75 years of age with diabetes (type 1 or type 2) who had a nephropathy screening test or evidence of nephropathy.
b. Denominator: Patients 18-75 years of age as of December 31 of the measurement year who had a diagnosis of diabetes (type 1 or type 2).
c. Data Source: EHR, Registry, Claims, Administrative clinical data.

IT-2.7 Diabetes Short Term Complication Admission Rate- PQI 1[243] ***(Standalone measure)***

a. Numerator: All non-maternal/non-neonatal discharges of age 18 years and older with a principal diagnosis code for short-term complications (ketoacidosis, hyperosmolarity, coma)
b. Denominator: Population in Metro Area or county, age 18 years and older.
c. Data Source: EHR, Claims

IT-2.8 Diabetes Long Term Complications Admission Rate- PQI 3[244] ***(Standalone measure)***

a. Numerator: Discharges age 18 years and older with a principal diagnosis code for long-term complications (renal, eye, neurological, circulatory, or complications not otherwise specified).
b. Denominator: Population in Metro Area or county, age 18 years and older.
c. Data Source: EHR, Claims

IT-2.9 Uncontrolled Diabetes Admissions Rate- PQI 14245 *(Standalone measure)*

a. Numerator: All non-maternal discharges of age 18 years and older with a principal diagnosis code for uncontrolled diabetes, without mention of a short-term or long-term complication.
b. Denominator: Population in Metro Area or county, age 18 years and older.
c. Data Source: EHR, Claims

IT-3.3 Diabetes 30 day readmission rate *(Standalone measure)*

a. Numerator: The number of readmissions (for patients 18 years and older), for any cause, within 30 days of discharge from the index diabetes admission. If an index admission has more than 1 readmission, only first is counted as a readmission.
b. Denominator: The number of admissions (for patients 18 years and older), for patients discharged from the hospital with a principal diagnosis of diabetes and with a complete claims history for the 12 months prior to admission.

Complete RHP Planning Protocols can be viewed at http://www.hhsc.state.tx.us/1115-Waiver-Guideline.shtml

Identification of RHP Projects Utilizing Diabetes Measures
Using the RHP Plan data spreadsheets found on the HHSC website, (http://www.hhsc.state.tx.us/1115-RHP-Plans.shtml), proposed quality improvement projects were sorted based on Category 3 measures utilized. Projects including the diabetes measures listed above among their Category 3 outcome measures were extracted (Table 3, next page), totaling 156 projects. A full description of each project can be obtained by using the Project ID to search the corresponding RHP Plan document (also found at http://www.hhsc.state.tx.us/1115-RHP-Plans.shtml).
The project option column refers to Category 1 and Category 2 activities described in the RHP Planning Protocols to which Category 3 measures correspond. In determining a project valuation, regions determined the maximum amount of DSRIP funding that can be received for achieving project-related milestone(s), providing any rationale that was considered in assigning the value, i.e. relative effort, starting point, patient/community need, and potential avoided costs.

This analysis was completed using information published in December 2013, and reflects RHP projects that were in place or proposed at that time.

Table 3: Texas Health-Care Transformation and Quality Improvement Program (1115 Waiver) Projects Utilizing Diabetes Measures

RHP #	Unique Project ID	Project Option	Provider Name	Project Description	Target Population	Approved Value for Years 2-3*
1	020812601.1.1	1.9.2	East Texas Medical Center	Increase access to specialty healthcare by recruiting a full-time endocrinologist to establish a specialty clinic location and improve access to diabetes management.	Residents of service area in Northeast Texas that currently do not have sufficient access to diabetes or endocrinology care	$1,944,725.91
1	127278302.1.9	1.9.2	University Physician Associates (UPA)	Confirm gaps in specialty care related to diabetes (endocrinology, ophthalmology, podiatry, and nephrology) and develop/implement a plan to address those gaps.	Patients with diabetes in 3 counties where project clinics are located	$4,418,193.00
1	137921608.2.1	2.15.1	Community Healthcore	Collaborate with Good Shepherd Medical Center and the local FQHC in the Longview area to integrate primary and behavioral healthcare services to result in an integrated approach to health care that is "More Than Co-Location."	Adults with serious mental illness and diagnosed co-occurring primary care diseases of hypertension or diabetes that live in the Longview area	$260,605.00
1	138913209.1.2	1.9.2	Titus Regional Medical Center	Recruit an endocrinologist to increase the number of patients seen by the Diabetes Self-Management Education Program Team	Patients who are high risk for the complications of diabetes	$280,923.00
1	177870603.2.4	2.6.2	Red River Regional Hospital	Develop and implement an evidence-based diabetes management program and increase the percentage of diabetic clinic patients receiving the innovative intervention	Service area residents that currently do not have sufficient access to chronic disease management	$411,533.31

RHP #	Unique Project ID	Project Option	Provider Name	Project Description	Target Population	Approved Value for Years 2-3*
2	094092602.1.5	1.3.1	University of Texas Medical Branch Hospital	Implement and utilize chronic disease registries within the EMR, which will improve patient outcomes by tracking information within diabetes, CHF, asthma, hypertension, and COPD registries. UTMB's EHR dash boarding tool, RADAR, will also be utilized to improve chronic disease management by allowing providers to create patient specific interventions.	Patients diagnosed with chronic diseases, with a focus on diabetes, that primarily receive services in Galveston County.	$1,957,591.16
2	094092602.2.3	2.9.1	University of Texas Medical Branch Hospital	Provide care management and disease management services in Galveston and Brazoria counties to adult Medicaid, dual eligible (Medicare/Medicaid) and uninsured patients who have chronic disease (i.e. diabetes, hypertension, heart disease, COPD).	High risk patients need assistance navigating the healthcare system.	$1,295,205.94
2	112671602.2.1	2.2.2	Brazosport Regional Health System (BRHS): Lake Jackson Family Medicine Center (LJFMC)	Expand current diabetes self-management program, as well as the current Diabetes Outpatient Training Site (DOTS) program by increasing referrals for diabetes management and increasing course offerings through DOTS.	Current LJFMC diabetic patients and diabetic patients looking for a new primary care provider with a focus on diabetes management.	$1,810,000.00
2	131030203.1.3	1.3.1	Nacogdoches Memorial Hospital	Implement a functional chronic disease management registry to improve primary and preventative care to Medicaid and underserved populations of Nacogdoches County	Medicaid and uninsured patients in Nacogdoches and surrounding counties with diabetes, pre-diabetes or related risk factors.	$370,950.00
2	136381405.1.1	1.1.2	Tyler County Hospital District	Expand access to primary care by adding staff and expanding hours at Rural Health Clinic.	Patients served by the performing provider, especially those receiving services in urgent and emergency care settings, with a focus on medically underserved patients in need of diabetes care.	$484,914.00

RHP #	Unique Project ID	Project Option	Provider Name	Project Description	Target Population	Approved Value for Years 2-3*
2	138296208.2.1	2.2.2	CHRISTUS Hospital - St. Elizabeth	Establish team-based clinics to address complex chronic diseases such as congestive heart failure, diabetes, COPD and asthma. These clinics will offer intensive care management to optimize health and healthcare utilization, thus decreasing the cost and impact of these chronic diseases.	Residents of the CHRISTUS catchment area who suffer from congestive heart failure, diabetes, COPD or asthma.	$2,226,982.00
3	093774008.2.5	2.6.2	City of Houston Department of Health and Human Services	Establish self-management programs and wellness using evidence-based designs.	Individuals with diabetes or at risk for diabetes residing in an underserved area (Third Ward) of Houston	$4,735,666.07
3	111810101.1.5	1.6.2	The University of Texas Health Science Center - Houston	Expand access to medical advice and guidance to the appropriate level of care in order to reduce emergency dept use for non-emergent conditions by implementing a nurse-line medical triage call center that will be staffed 24/7/365.	Current and prospective clients of UT Health / UT Physicians especially chronic disease patients (ex. COPD, heart failure, diabetes). Expect to provide 400,000 visits/year by DY5.	$8,512,209.50
3	111810101.2.2	2.2.1	The University of Texas Health Science Center - Houston	The outpatient delivery system of UT Physicians will be redesigned to coordinate care for patients with chronic diseases (asthma, CHF, COPD, diabetes and hypertension), based on Wagner's chronic care model.	People in the service area with diabetes, hypertension, asthma, COPD, or CHF	$5,502,931.00
3	111810101.2.5	2.11.1	The University of Texas Health Science Center - Houston	Implement a technologically driven patient-centered medication therapy management program. Allscripts analytics tool will enable staff to identify patients at high risk for developing complications and co-morbidities, and patients that have not refilled their medications	Patients in the service area with diabetes, hypertension, asthma, COPD, or CHF	$3,464,808.00

RHP #	Unique Project ID	Project Option	Provider Name	Project Description	Target Population	Approved Value for Years 2-3*
3	11181010 1.2.6	2.12.2	The University of Texas Health Science Center - Houston	Implement a comprehensive transitions of care program which will ensure that patients have an appointment for follow-up with an appropriate physician prior to leaving the hospital, understand their discharge medications and other instructions and are followed up post discharge.	Cancer surgery patients, indigent patients with type 1 diabetes, and children/adolescents with type 1 diabetes who are graduating to adult diabetes management	$5,706,742.00
3	12730390 3.2.2	2.9.1	OakBend Medical Center	Patient Navigators will help and support these patients to navigate through the continuum of health-care services. Navigators will ensure that patients receive coordinated, timely and site-appropriate health-care services.	Patients with CHF, Diabetes, and COPD	$1,517,319.91
3	13335510 4.1.7 updated to 13335510 4.2.9	2.8.8	Harris County Hospital District Ben Taub General Hospital	Address the inefficiency of specialty clinics (focusing primarily on diabetes and rheumatology clinics) by making possible ordering best practices diagnostic algorithmic workups and eliminating the current practice of sequential ordering of individual tests.	All patients within the system may benefit from this project, with a focus on those referred to diabetes and rheumatologic clinics	$12,980,410.00
3	13913510 9.1.8	1.9.2	Texas Children's Hospital	Increase outpatient access for Harris County and the surrounding communities to care for pediatric patients with conditions affecting the endocrine system.	Patients seeking the full spectrum of services for metabolic syndrome, type I and type II diabetes. In particular, the focus is on patients who are at risk for diabetic retinopathy	$4,492,911.00
3	21206020 1.2.3	2.6.2	Rice Medical Center	Develop a Certified Diabetes Teaching Center to educate and assist patients with managing their chronic disease.	Patients Rice currently treats in its hospital and local clinics diagnosed with Type I or Type II diabetes. The secondary target population is patients in the community who are at risk or pre-diabetic	$77,610.00

RHP #	Unique Project ID	Project Option	Provider Name	Project Description	Target Population	Approved Value for Years 2-3*
4	020811801.1.1	1.3.1	CHRISTUS Spohn Hospital Beeville	Implement a chronic disease registry to assist Spohn in tracking and managing patient with chronic conditions, with an initial focus on CHF and diabetes.	Charity, Medicaid and self-pay patients with CHF and/or diabetes who are enrolled in the Care Transitions or Care Partners programs	$450,127.54
4	020811801.2.4	2.12.2	CHRISTUS Spohn Hospital Beeville	Expand Care Transitions program to focus on preventing readmissions for CHF and diabetes patients.	CHF and diabetes patients treated as inpatients at Beeville campus who are Medicaid/ self-pay/ charity	$482,279.50
4	094222902.1.2	1.3.1	CHRISTUS Spohn Hospital Alice	Implement a Chronic Disease registry to assist Spohn in tracking and managing patients with chronic conditions.	Charity, Medicaid and self-pay patients with CHF and/or diabetes who are not currently enrolled in Care Transitions or Care Partners programs	$543,711.95
4	094222902.2.4	2.19.1	CHRISTUS Spohn Hospital Alice	Implement a screening and treatment protocol to identify patients with medical (CHF and diabetes) and behavioral health dual diagnoses and assign a case manager to coordinate their care.	Patients at Spohn Alice hospital and Spohn's clinics with CHF or diabetes and a behavioral health diagnosis	$621,384.50
4	094222902.2.5	2.12.2	CHRISTUS Spohn Hospital Alice	Expand care transitions program to focus on preventing readmissions for CHF and diabetes.	CHF and diabetes patients treated as inpatients at Alice campus who are Medicaid/ self-pay/ charity	$582,548.52
4	121775403.1.2	1.3.1	CHRISTUS Spohn Hospital Corpus Christi	Implement a Chronic Disease registry to assist Spohn in tracking and managing patients with chronic conditions which will initially focus on patients with CHF and diabetes.	Charity, Medicaid and self-pay patients with CHF and/or diabetes who are enrolled in our Care Transitions or Care Partners programs. Patients are identified by case managers in the acute care setting and referrals submitted to the Community Outreach department for program enrollment	$3,255,212.80

RHP #	Unique Project ID	Project Option	Provider Name	Project Description	Target Population	Approved Value for Years 2-3*
4	121775403.2.1	2.6.1	CHRISTUS Spohn Hospital Corpus Christi	Adapt and disseminate AT&T's mobile application that offers instant feedback via text messaging, coaching, and patient/provider web portals as a patient self-management tool to reduce HbA1c in patients with Type 2 diabetes. Patients using the application will receive quarterly biometric screenings at the clinics (their medical home) as part of the program.	Patients with Type 1 or type 2 diabetics seen at Spohn's family health clinic sites and the Hector P Garcia Clinic (where Spohn physician residents provide care)	$3,720,243.20
4	121775403.2.10	2.12.2	CHRISTUS Spohn Hospital Corpus Christi	Expand care transitions program to focus on preventing readmissions for CHF and diabetes.	CHF and diabetes patients treated as inpatients at Spohn's Memorial, South, and Shoreline campuses who are Medicaid, self-pay, charity eligible	$3,487,728.00
4	121775403.2.5	2.19.1	CHRISTUS Spohn Hospital Corpus Christi	Implement a screening and treatment protocol in EDs and Family Health Centers to identify patients with dual diagnoses (medical and behavioral health) and assign a case manager to coordinate their care.	All patients presenting to Spohn's Corpus Christi hospital facilities with a CHF, diabetes, or a BH/SA diagnosis	$3,022,697.60
4	136436606.1.1	1.3.1	CHRISTUS Spohn Hospital Kleberg	Implement a Chronic Disease registry to assist in tracking and managing patients with CHF and diabetes	Charity, Medicaid and self-pay patients with CHF and/or diabetes who are enrolled in Care Transitions or Care Partners programs	$471,360.29
4	136436606.2.4	2.12.2	CHRISTUS Spohn Hospital Kleberg	Expand care transitions program to focus on preventing readmissions for CHF and diabetes.	CHF and diabetes patients treated as inpatients at Spohn's Kleberg campus who are Medicaid, self-pay, charity eligible	$505,028.88
4	136436606.2.5	2.19.1	CHRISTUS Spohn Hospital Kleberg	Implement a screening and treatment protocol in EDs and Family Health Centers to identify patients with dual diagnoses (medical and behavioral health)and assign a case manager to coordinate their care.	All patients presenting to Spohn's Kleberg hospital facilities with a CHF, diabetes, or a BH/SA diagnosis	$505,028.88

RHP #	Unique Project ID	Project Option	Provider Name	Project Description	Target Population	Approved Value for Years 2-3*
4	17460005857016.1.2 130958505.1.2	1.3.1	Corpus Christi-Nueces County Public Health District	With Diabetes Community Coalition of the Coastal Bend, implement a comprehensive system to include electronic medical records (EMR), an HIE and coordinated care record (CCR) in key community based health clinics and diabetes self-management education and support programs, creating a disease management registry for Nueces County.	Underinsured and uninsured patient population accessing services within the community and public health clinics and diabetes self-management programs in Nueces County	$1,998,139.00
4	17460005857016.2.1 130958505.2.1	2.6.3	Corpus Christi-Nueces County Public Health District	Create Diabetes Care Teams consisting of both Certified Diabetes Educators (CDEs) and Community Health Workers (CHWs) working through community Diabetes Self-Management Education/Support programs	Diabetes patients who are uninsured or underinsured and not covered by the Nueces County indigent health plan (Nueces Aid) who receive their health care from the Community Health Centers, Public Health Clinics, and hospital emergency departments	$1,209,042.00
5	121989102.2.1	2.15.1	Border Region Behavioral Health Center	Initiate integrated primary & behavioral health services for behavioral health clients diagnosed with co-morbid physical disorder of diabetes, hypertension, obesity or COPD offering Behavioral Health Services, Primary care services, Health behavior education and training programs, Case Management services, and Health screening.	Behavioral health clients diagnosed with co-morbid physical disorders of diabetes, hypertension, obesity or COPD may qualify for the patient panel in this program.	$545,680.18
5	136332705.1.1	1.1.2	Starr County Memorial Hospital	Obtain family practice physician with an OB background to provide services in the Rural Health Clinic as well as complete rounds at SCMH and integrate diabetes education in a group setting and optional one-on-one for diabetic, pregnant women, in an effort to promote a healthy pregnancy and decrease complications.	Indigent care & Medicaid population that seek services at rural health clinic or ER at SCMH with a focus on OB and diabetic populations	$698,160.00

RHP #	Unique Project ID	Project Option	Provider Name	Project Description	Target Population	Approved Value for Years 2-3*
6	085144601.1.2	1.3.1	University of Texas Health Science Center at San Antonio	Develop longitudinal clinical registries to improve quality of care at collaborating primary care practices that train medical students and residents in medicine and implement patient navigation to address health risks in patients who are not meeting their disease management goals	Low income patients with Medicaid, CareLink (county-funded financial assistance) who are not meeting health maintenance goals or are requiring narcotics for pain, targeting persons with uncontrolled diabetes or hypertension, persons who have chronic non-cancer pain and are treated with narcotics long-term, and HIV-infected persons who are overweight or obese and still gaining significant weight	$3,840,827.00
6	085144601.2.4	2.2.1	University of Texas Health Science Center at San Antonio	Implement specific Chronic Care Model activities within the practice, including a comprehensive care management plan, adopting evidence-based protocols, implementing patient self-management plans for chronic conditions, nurse-care management and medical group visits.	Vulnerable patient population with high burdens of chronic disease and socioeconomic disadvantage. More specifically, patients with clinical parameters for hypertension and diabetes that are above recommended therapeutic goals, as well as patients with poor follow-up histories	$2,987,310.00
6	085144601.2.5	2.9.2	University of Texas Health Science Center at San Antonio	Implement a patient navigator program linked to a primary care safety net clinic to improve diabetes outcomes. Community health workers will engage high-risk patients, identified by glycosylated hemoglobin values greater than 9%, through home and community-based interventions to address barriers to successful interaction with the health system and self-management	Diabetes prevalence in the patient panel is 30%, with 1 in 4 of those having glycosylated hemoglobin values greater than 9%	$853,517.00

RHP #	Unique Project ID	Project Option	Provider Name	Project Description	Target Population	Approved Value for Years 2-3*
6	091308902.2.3	2.6.2	San Antonio Metropolitan Health District	Implement the Community Diabetes Project, which will expand access to the Stanford Chronic Disease Self-Management and Diabetes Self-Management Programs for individuals living with diabetes and their family members/caregivers as well as those that are at risk for developing diabetes.	The Community Diabetes Project will be provided throughout the city of San Antonio, with an emphasis on neighborhoods within the central urban core which has a high burden of diabetes and prediabetes within geographic disparity areas. These areas correspond with those sectors of the city with higher percentages of minorities (Hispanic and African American), low educational attainment and household income, along with high rates of uninsured or underinsured.	$5,135,153.00
6	133257904.2.1	2.7.1	Texas Center for Infectious Disease	1) Increase targeted testing for latent tuberculosis infection (LTBI) in high-risk populations; 2) Provide routine testing for LTBI with interferon gamma release assays (IGRAs) instead of tuberculin skin testing to minimize false positive tests in BCG-vaccinated patients and avoid unnecessary LTBI therapy; 3) Provide routine treatment of LTBI through a 12-dose, 12-week regimen administered by DOT to improve patient adherence and completion of LTBI therapy; 4) Facilitate hospitalization for TB care for those few patients who cannot be successfully treated as outpatients.	Individuals with the highest risk of contracting TB and developing active TB, specifically individuals who live in congregate settings, such as homeless shelters and drug rehabilitation centers, as well as individuals with HIV and/or diabetes.	$5,977,008.00
6	136141205.2.10	2.2.1	University Hospital	Implement Chronic Care Model (CCM) activities at two primary care sites within the University Health System network for patients with diabetes.	Patients diagnosed with diabetes	$6,152,080.00
6	136491104.1.1	1.9.2	Southwest General Hospital	Develop and implement a Gestational Diabetes program to educate and monitor patients throughout their pregnancy, therefore improving fetal outcomes.	Pregnant teens and women at risk for or diagnosed with gestational diabetes	$887,030.00

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6	138411709.1.1	1.1.2	Guadalupe Regional Medical Center	Move a long standing indigent clinic (that would potentially close soon due to unsafe conditions) to the hospital campus, improving access and security. Increase the volume and scope of services to improve continuity, access and effectiveness of chronic disease care in the community.	Indigent and uninsured patients with chronic a disease such as diabetes, hypertension, CHF and COPD	$2,295,949.00
7	133340307.2.1	2.15.1	Hill Country MHMR Center (dba Hill Country MHDD Centers)	Integrate primary care into the Hays County Mental Health Clinic so as to provide both primary and behavioral health care for individuals with Severe and Persistent Mental Illness	Individuals in Hays county who have a psychiatric diagnosis and receive mental health treatment at the clinic who have risk factors associated with diabetes and hypertension	$1,532,410.00
7	137265806.2.5	2.12.1	University Medical Center at Brackenridge (UMCB)	Create a multi-disciplinary team that monitors and coordinates the care of patients with chronic disease immediately following discharge from hospital to home, and from home to primary care.	Adult patients being discharged from UMCB with one or more illnesses such as Diabetes, Congestive Heart Failure, Asthma and COPD (target conditions) who also have a history of frequent hospital admissions and ED visits.	$7,648,122.00
7	137265806.2.9	2.8.4	University Medical Center at Brackenridge (UMCB)	Current Adult Inpatient Diabetes Team only provides inpatients with referrals to outpatient care, with no opportunity for communicating the discharge regimen or HbA1c test results to the follow-up care provider. This project prepares and communicates discharge plans to the follow-up healthcare provider for helping to manage the disease post-discharge and provides education to inpatients at a time when they are most likely to be receptive	Adult inpatients at UMCB and two other Seton-operated hospitals in Travis County who are either at risk for diabetes, or diagnosed with diabetes and who are at risk for readmission.	$5,604,023.00

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7	17669250 1.1.1	1.9.2	St. Mark's Medical Center	Expand access to OB-GYN physician services by recruiting an additional OB-GYN physician. Additionally, this project will assess the viability of and develop/implement a plan to expand access to specialty care/wound care services related to cardiovascular disease and diabetes through the expansion of clinical facilities and recruitment of additional specialty physicians.	Patients that require specialty OB-GYN services or other specialty care/wound care services related to cardiovascular diseases and diabetes that reside in Fayette County and Lee County.	$147,420.00
7	20132030 2.2.2	2.6.2	City of Austin - Health & Human Services Department	Increase community health workers and/or community-based organizations in the Hispanic and African-American communities that provide culturally appropriate diabetes self-management education	African Americans and Hispanics with diabetes.	$730,000.00
7	30745930 1.1.1	1.3.1	Community Care Collaborative (CCC)	Implement and use chronic disease management registry (DMR) functionalities to alert and inform care teams when patients with two or more chronic diseases require intervention and follow up.	Patients at or below 200% of FPL with multiple chronic conditions, including heart failure, chronic kidney disease, behavioral health issues, COPD, hypertension, malignant neoplasms, and diabetes	$10,568,256.00
7	30745930 1.2.3	2.19.1	Community Care Collaborative (CCC)	Develop a care management approach specific to individuals dually diagnosed with diabetes and clinical depression	CCC patients dually diagnosed with clinical depression and diabetes.	$5,263,250.00
9	02090820 1.2.2	2.6.2	Texas Health Presbyterian Hospital Dallas	Partner with faith communities in the service area to design self-management wellness programs using evidence-based practices.	Individuals in the community who may not have access to primary care, are unlikely to seek primary care, and suffer from high blood pressure or diabetes that is unmanaged.	$1,232,911.56

RHP #	Unique Project ID	Project Option	Provider Name	Project Description	Target Population	Approved Value for Years 2-3*
9	020967801.2.2	2.2.1	Texas Health Presbyterian Hospital Denton	Provide chronic diabetes patients education and management to help them understand their daily regimen and need for monitoring their disease process.	Chronic diabetes patients in need of education and disease management services with A1C>9, history of DKA, and more than one admission in the last 12 months.	$269,044.81
9	094140302.2.2	2.2.1	Texas Health Presbyterian Hospital Kaufman	Provide chronic diabetes patients education and management to help them understand their daily regimen and need for monitoring their disease process. Need for the project: A model to coordinate and prescribe care. A Certified Diabetes Educator, pharmacist, physicians, nurses, nutritionist, and a case manager will help coach and navigate patients.	High risk diabetic patients with A1c > 9, history of DKA, and more than one admission in prior 12 months.	$77,702.77
9	094194002.2.2	2.12.1	Doctor's Hospital at White Rock Lake	Develop a standardized care transition process for case managers to utilize in discharging patients, increase partnership with community-based providers to ensure that patients receive appropriate post-acute care services in an appropriate setting. To accomplish this, Doctors Hospital at White Rock Lake will hire an additional ED case manager, engage with community organizations, perform follow-up calls to ensure proper adherence to care instructions, and determine whether the patient requires additional community placement for ongoing primary or preventative care	Patients discharged from Doctors Hospital at White Rock Lake with one of the following primary diagnoses: COPD (DRGs 190-192), Pneumonia (193-195), Acute MI (280-282), Heart failure (291-293), and Diabetes (637-639).	$290,800.00

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9	121776204.2.1	2.2.2	Baylor Medical Center at Irving	Provide focused education and point of care testing for underserved patients who have diabetes, CVD and/or Respiratory disease that are in need of education, clinical management and training within a primary care setting. We will co-locate primary care and chronic disease management services to improve clinical outcomes. This project is new because it will provide CHF and Asthma education and point of care testing, all which have not been done before. We have had some Diabetes education in our Clinics but not a formal and focused program for the Medicaid/Uninsured population.	Patients with diabetes, cardiovascular diseases and respiratory diseases.	$647,937.00
9	121790303.2.1	2.2.2	Baylor Medical Center at Garland	Provide focused education and point of care testing for underserved patients who have diabetes, CVD and/or Respiratory disease that are in need of education, clinical management and training within a primary care setting. We will co-locate primary care and chronic disease management services to improve clinical outcomes.	Patients with chronic diseases in need of disease management education.	$832,715.00
9	126679303.2.1	2.2.2	Methodist Charlton Medical Center	Develop and implement a chronic disease management intervention. The target population is our patients that need education on managing diabetes and have high risk needs associated with diabetes.	ED patients who have either a principal or secondary diagnosis of diabetes and need education on managing diabetes and have high risk needs associated with diabetes based on clinical protocols of HbA1c >9.0%, at least one ED visit in the past 12 months and/or have not received diabetes education within the past five years.	$2,375,593.00

RHP #	Unique Project ID	Project Option	Provider Name	Project Description	Target Population	Approved Value for Years 2-3*
9	127295703.1.3	1.3.1	Parkland Memorial Hospital	Design/ develop/ implement a patient registry that will provide support to providers in managing health care of those enrolled in Parkland's medical homes as well as those patients with chronic care conditions.	Patients with specific conditions will be enrolled into the registry. Initially, patients with diabetes will be targeted. Patients with other conditions will be enrolled as appropriate.	$14,329,840.00
9	127295703.1.5	1.9.2	Parkland Memorial Hospital	Increase access to specialty care by: 1) recruiting mid-level providers in the following specialties: cardiology, diabetes, neurology, smoking cessation, ophthalmology, and general surgery; and 2) adding support staff as appropriate.	Parkland patients in need of services in the following specialties: cardiology, diabetes, neurology, smoking cessation, ophthalmology, and general surgery	$12,175,681.00
9	127295703.2.4	2.2.1	Parkland Memorial Hospital	Incorporate into its care delivery system a chronic care model based on the Wagner Chronic Care Model, modified, as appropriate, for Parkland's low income patient population.	Parkland's low-income population with an initial focus on patients with Diabetes and Congestive Heart Failure (CHF). In subsequent years, patients with other conditions – Chronic Kidney Disease (CKD), COPD, Hypertension, pediatric asthma, pediatric obesity – will be enrolled into the chronic disease management model.	$16,296,680.00
9	135032405.2.2	2.2.2	Methodist Dallas Medical Center	Develop and implement a chronic disease management intervention geared toward improving effective management of chronic conditions (the focus will be diabetes).	ED patients who have either a principal or secondary diagnosis of diabetes and need education on managing diabetes and have high risk needs associated with diabetes based on clinical protocols of HbA1c >9.0%, at least on ED visit in the past 12 months and/or have not received diabetes education within the past five years.	$3,744,024.38

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9	136360803.2.1	2.2.1	Denton County Health and Human Services	Implement a chronic disease registry to track Medicaid and low income diabetic patients. This will facilitate a comprehensive listing of Medicaid and low income diabetes patients in Denton County. In addition, diabetes care will be provided incorporating the Chronic Care Model developed by Wagner.	Persons with diabetes who are low income or Medicaid recipients.	$2,099,469.00
9	138910807.2.2	2.6.1	Children's Medical Center of Dallas	Work with agencies and organizations in Dallas County to align and coordinate community-based prevention and wellness activities in the focused areas of asthma and diabetes to improve the health and self-management of children and their families. We will establish self-management programs and wellness programs using evidence-based designs. We will engage community health workers, both promoters and Grand Aides.	Children in Dallas County with an initial focus on those with asthma.	$6,828,278.00
9	139485012.2.1	2.2.2	Baylor University Medical Center	Provide focused education and point of care testing for underserved patients who have diabetes, CVD and/or Respiratory disease that are in need of education, clinical management and training within a primary care setting. We will co-locate primary care and chronic disease management services to improve clinical outcomes.	Patients with Diabetes, Cardiovascular Diseases (CVD) and Respiratory Diseases (Asthma/Chronic Obstructive Pulmonary Disease).	$3,916,572.00
9	195018001.2.1	2.2.2	TRINITY MEDICAL CENTER	Provide focused education and point of care testing for underserved patients who have diabetes, CVD and/or Respiratory disease that are in need of education, clinical management and training within a primary care setting. We will co-locate primary care and chronic disease management services to improve clinical outcomes	Patients in need of chronic disease education and management services.	$228,613.00

RHP #	Unique Project ID	Project Option	Provider Name	Project Description	Target Population	Approved Value for Years 2-3*
9	209345201.2.2	2.2.1	Methodist Richardson Medical Center	Develop and implement a chronic disease management intervention.	Patients who need education on managing diabetes and have high risk needs associated with diabetes based on clinical protocols of HbA1c >9.0%, history of DKA, more than one admission in the past 12 months and/or have not received diabetes education within the past five years.	$1,050,953.00
10	022817305.2.4	2.6.2	Tarrant County/dba Tarrant County Public Health	Reduce the number of preventable admissions pertaining to hypertension by implementing the evidence-based Stanford Chronic Disease Self-Management Program in the offices of Medicaid providers within the Texas Health Resources system. Uses CHWs to educate patients.	Tarrant County low income residents from 14 selected zip codes who have been diagnosed with diabetes and/or hypertension.	$1,252,625.00
10	112677302.2.1	2.2.1	Texas Health Harris Methodist Hospital Fort Worth	Provide seamless care for low income and uninsured residents of Tarrant County living with diabetes to improve health outcomes and self-management competency, prevent unnecessarily reduced quality of life, and decrease inappropriately high reliance on acute and emergent care community resources. Linking diabetes patients that present to the ED or as inpatients to a primary care physician could significantly enhance the number of patients who have access to diabetes education and support.	Low income / uninsured community members with diabetes who are not currently being managed and are seen frequently in the ED and have multiple admissions.	$501,209.32
10	121794503.2.1	2.2.1	Texas Health Harris Methodist Hospital Stephenville	Identify patients who do not have medical home and others appropriate for diabetes education. They will be referred to diabetes outpatient education classes	Patients with type 1 or type 2 diabetes, prediabetes, or gestational diabetes.	$43,029.43

RHP #	Unique Project ID	Project Option	Provider Name	Project Description	Target Population	Approved Value for Years 2-3*
10	12667510 4.2.1	2.2.2	John Peter Smith Hospital	Improve diabetes clinical outcomes and self-management skills in a patient-centered medical home. This is a new intervention based on Wagner's chronic care model interwoven into a new medical home setting.	Low income individuals with diabetes.	$14,327,813.98
10	12667510 4.2.16	2.2.1	John Peter Smith Hospital	The multidisciplinary Wagner Chronic Care Model will be utilized to effectively approach the care and management of childhood and adolescent asthma and obesity/diabetes in our community with the goal of improving outcomes, preventing complications and reducing potentially preventable ED visits and inpatient readmissions. The target population is children and young adults with a diagnosis of asthma and/or obesity/diabetes who are currently accessing primary care services within our school based health centers as well as our community health centers.	Children and young adults with a diagnosis of asthma and/or obesity/diabetes who are currently accessing primary care services within our school based health centers as well as our community health centers.	$407,845.00
10	13061440 5.2.1	2.2.1	Texas Health Arlington Memorial Hospital	This project will help individuals with diabetes who are traditionally underserved and give them access to diabetes education and regular clinical care so they can take ownership and better manage their diabetes. This project intervention is an expansion of the current diabetes education program at THAM to include a nurse practitioner-run outpatient clinic for patients with diabetes.	Underserved diabetes patients with A1C (>9.0%), DKA history and greater than one hospital admission in last 12 months.	$238,791.16
10	13103690 3.1.1	1.1.2	Texas Health Harris Methodist Hospital Cleburne	The project will provide supplemental primary care providers and to expand primary care access to patients in region Primary Care through APRNs with prescriptive authority	People with diagnoses to include COPD, heart failure or diabetes who are uninsured without access to additional resources and who have a high frequency of inpatient admissions and ER visits within the last 6 months.	$451,060.04

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10	135036506.2.1	2.2.2	Baylor All Saints Medical Center at Fort Worth	This project will provide focused education and point of care testing for underserved patients with diabetes, CVD and Respiratory disease. Co-locate primary care and chronic disease management services	Patients with diabetes, CVD, and respiratory disease.	$1,282,945.66
10	136326908.2.1	2.2.1	Texas Health Harris Methodist Hospital Hurst-Euless-Bedford	This project provides seamless care for low income and uninsured with diabetes to improve health outcomes and self-management by linking them to a PCP.	Indigent or government-funded patients with a diagnosis of diabetes in the community who do not have access to receive care to manage their disease or those who need additional support in the management of their diabetes.	$119,573.56
10	186221101.2.2	2.2.2	Methodist Mansfield Medical Center	The project will develop and implement a chronic disease management intervention geared toward improving effective management of chronic conditions (primary or secondary diagnosis of diabetes).	ED patients with diabetes who need education on managing diabetes and have high risk needs associated with diabetes based on clinical protocols of HbA1c >9.0%, have at least one ED visit in the past 12 months.	$367,209.00
10	206106101.2.1	2.1.1	Wise Clinical Care Associates	Implement the patient-centered medical home model in 3 WCCA primary care clinics and hire 2 physicians.	All WCCA patients, with an emphasis on those with diabetes	$8,740,551.00
11	138644310.2.4	2.6.1	Hendrick Medical Center	Expand a diabetes education program by adding classes and distributing educational materials at additional locations/events.	Individuals in the Hendrick Medical Center catchment area with diabetes	$1,755,575.00
12	094121303.2.1	2.11.1	Memorial Hospital	Implement a process to track and reconcile patient medication and to educate patients regarding appropriate use, expected outcomes and interaction of medications.	Emergency room and acute care patients who are diagnosed with a chronic disease relating to high blood pressure, specifically including diabetes and chronic heart failure, who are taking multiple medications.	$101,007.15

RHP #	Unique Project ID	Project Option	Provider Name	Project Description	Target Population	Approved Value for Years 2-3*
12	137999206.1.1	1.3.1	University Medical Center	Select and implement a chronic disease registry. A patient population with specific chronic conditions (examples: diabetes, congestive heart failure,) will be selected and the trained staff will utilize the tools within the chronic disease registry for patient contacts and education, into which each patient's data will be entered.	Patients admitted to University Medical Center, diagnosed with a particular chronic disease.	$5,344,003.00
12	137999206.2.1	2.2.1	University Medical Center	Implement care teams at designated ambulatory clinics within University Medical Center Physician Network Services (PNS) or Texas Tech to care for patients with chronic conditions (focusing on patients with hypertension or diabetes).	Patients 18 through 75 years of age, seen/managed in designated ambulatory clinics within PNS or Texas Tech who have chronic conditions (with a focus on patients with hypertension or diabetes)	$5,076,803.00
13	091770005.2.2	2.6.2	Concho County Hospital	Implement a Health and Wellness Center to educate and understand patients with diabetes needs.	Patients 18-75 years of age with Type 1 or Type 2 diabetes	$409,360.00
13	130089906.2.2	2.2.2	Ballinger Memorial Hospital District	Implement diabetic management program care model in the rural health clinic.	At risk diabetes patients of Ballenger Memorial Hospital that need services from specialists.	$159,849.00
13	137226005.1.4	1.3.1	Shannon West Texas Memorial Hospital	Implement infrastructure that supports patient population health and coordination of care by expanding a chronic disease management registry to provide patient-center care for patients with diabetes.	All patients diagnosed with diabetes at Shannon Clinic.	$3,196,711.00
14	081939301.2.1	2.2.1	Texas Tech University Health Science Center-Permian Basin	Implement a Diabetes Medical Home based on Wagner's chronic care model in Odessa Family Medicine clinics.	Diabetic patients who don't have primary provider because they're uninsured or not able to find a Medicaid provider in the area.	$1,408,991.00

RHP #	Unique Project ID	Project Option	Provider Name	Project Description	Target Population	Approved Value for Years 2-3*
14	081939301.2.2	2.3.1	Texas Tech University Health Science Center-Permian Basin	Establish clinics focused on management of diabetes, blood pressure, and lipids. Includes Tier 1 and 2 Stations clinics and Diabetes Registry.	Ethnic groups at high risk for diabetes, hypertension and stroke.	$1,011,583.00
14	081939301.2.3	2.12.2	Texas Tech University Health Science Center-Permian Basin	With Medical Center Hospital, develop a transition program to provide appropriate and timely clinic care after hospital discharge for diabetic patients.	Ethnic groups at high risk for diabetes, hypertension and stroke.	$686,432.00
14	094172602.2.1	2.12.2	McCamey Hospital	Implement consulting for newly diagnosed and uncontrolled diabetes patients.	Patients with newly diagnosed diabetes or with uncontrolled diabetes.	$22,000.00
14	112684904.2.1	2.2.2	Reeves County Hospital	Implement a Certified Diabetes Education Program geared toward helping those patients diagnosed with diabetes to better manage their chronic condition.	Patients who utilize the Pecos Valley Rural Health Clinic and have been diagnosed with type 1 or 2 diabetes.	$483,661.42
14	112711003.1.4	1.9.2	Odessa Regional Medical Center	Improve access to gestational diabetes care through Perinatal Center	Women with Gestational Diabetes Mellitus (GDM) or Pre Gestational Diabetes Mellitus with a focus on the Hispanic population.	$2,067,153.28
14	112711003.2.2	2.2.2	Odessa Regional Medical Center	Develop and implement an inpatient and outpatient diabetes ctr.	Patients with diabetes and a need for diabetes management.	$1,679,562.04
14	135235306.2.5	2.7.1	Medical Center Hospital	Hire diabetes outreach coordinators who will be responsible for coordinating screening events, making referrals, and health promotion activities. Addition of bi-weekly diabetes education sessions.	Persons who are screened for diabetes and follow-up education and treatment.	$2,369,711.00

RHP #	Unique Project ID	Project Option	Provider Name	Project Description	Target Population	Approved Value for Years 2-3*
14	136143806.2.2	2.7.1	Midland Memorial Hospital	Diabetes screening for diagnosis with referrals for treatment and education impacting hospital admissions for short-term diabetic complications	Adults with undiagnosed or untreated diabetes due to lack of education or cost barriers.	$3,290,340.00
14	136145310.2.1	2.2.1	Martin County Hospital District	Comprehensive self-management education program for diabetes using care teams	Any patient considered "high risk" and those treated in the ED or admitted with diabetic complications.	$705,787.00
15	084597603.1.1	1.9.3	TEXAS TECH HS CTR FAMILY MED	Recruit 4 additional providers (two therapeutic optometrists and two ophthalmologists) and the required staff and technicians, and facilitate access through the development of an electronic referral system from our primary care clinics to ophthalmology.	Region's ocular patients. Specifically, those with diabetes-related ocular conditions in the low-income, indigent, Hispanic and Medicaid population.	$3,587,790.00
15	084597603.1.2	1.3.1	TEXAS TECH HS CTR FAMILY MED	The project will establish an enterprise wide disease management capability with the ability to support multiple diseases and conditions, available to all clinical departments in our organization. Establish registries for patients with Diabetes in the Departments of Family Medicine and Internal Medicine, and for patients with breast cancer in the Department of Internal Medicine.	Chronically ill patients in the region, specifically those with diabetes and cancer	$1,678,494.00
15	084597603.2.1	2.1.3	TEXAS TECH HS CTR FAMILY MED	This project will complete the infrastructure development, provider recruitment, system redesign and training required to allow the Kenworthy Family Medicine Clinic to achieve level 1 NCQA designation as a medical home.	Patients of Family Medicine Kenworthy Clinic at risk of or diagnosed with diabetes.	$1,932,465.00
15	094109802.1.3	1.3.1	Las Palmas Medical Center	This project will establish a diabetes Clinical Information System (registry) to structure, organize, and trend patient data for registries, performance measurements, and prevention services. This registry will help identify patients for inclusion and assist patients through the registry to track and manage their disease.	Persons with diabetes and prediabetes.	$3,304,277.01

RHP #	Unique Project ID	Project Option	Provider Name	Project Description	Target Population	Approved Value for Years 2-3*
15	138951211.2.3	2.9.1	University Medical Center of El Paso	Create specific case management positions to discharge our Medicaid and Unfunded patients with chronic conditions to appropriate medical homes for follow-up healthcare treatment utilizing other UMC projects that will provide for clinic growth and expansion, as well as appropriate home health-care services, and finally coordinating homeless and transient patients to our partner homeless residential facilities. The target population is our patients with Congestive Heart Failure, Renal Failure, Hypertension, Obesity, and Diabetes.	High-risk (diabetes, CHF, hypertension, obesity and renal disease) patients in need to self-management education and coordination of care.	$6,387,501.56
15	138951211.2.5	2.2.1	University Medical Center of El Paso	Diabetes Chronic Care - This project will redesign the outpatient delivery system to coordinate care for patients with chronic diseases and improve patient outcomes, with a focus on diabetic patients. We will coordinate an appointment for Diabetic patients within 4 days from discharge at UMC to UMC-NHC for patients without a PCP or NHC patients. Utilizing the Chronic Care Model and a team approach we will create a comprehensive medical home for Diabetic patients.	Patients with chronic conditions, primarily diabetes.	$3,903,473.18
16	084859002.2.3	2.18.1	Heart of Texas Region MHMR Center	This project will provide supportive services for individuals and families living with chronic behavioral health issues by utilizing trained peer support specialists who have made substantial progress in managing their own illness and who have recovered to the point where they are living successful lives in the community. The peer specialist would work with consumers to set achievable goals to prevent or self-manage chronic diseases such as diabetes or COPD	Medicaid and uninsured individuals.	$309,842.00
16	121792903.2.7	2.2.1	Hamilton General Hospital	Introduce a chronic disease management program to address major chronic health issues such as diabetes, respiratory disease, and obesity	Patients of Hamilton General Hospital with chronic disease including pneumonia, COPD, and diabetes	$2,948,311.00

RHP #	Unique Project ID	Project Option	Provider Name	Project Description	Target Population	Approved Value for Years 2-3*
16	140714001.2.1	2.2.1	Limestone Medical Center	This project will implement wound care which is a chronic disease process that causes hospitalization and ER utilization. The services will provide access to wound care intervention that currently requires traveling great distances for care.	Patients with potentially preventable hospitalizations, including diabetes, peripheral vascular disease, and other disease processes that cause skin breakdown ultimately resulting in chronic wounds with short and long term complications.	$884,466.90
17	189791001.2.1	2.2.2	Huntsville Memorial Hospital	Implement chronic disease management models to enable patients to better manage their health.	Patients with multiple admissions due to failure to appropriately manage their chronic diseases, with a focus on diabetes, as well as those who are admitted or are in observation at HMH for chronic conditions	$2,693,030.00
18	084434201.2.3	2.3.1	Texoma Community Center	Expand/enhance the integration of mental and primary health care by increasing efficiency and redesigning how the primary care clinic program is accessed. Includes quality improvement of patient-centered scheduling and other focused solutions to barriers to access and patient satisfaction, and expanding from a ½ day of blended service to a full 5-day, full access model for both primary and psychiatric care services.	Patients who have co-occurring psychiatric and physical health illnesses, especially chronic physical problems such as diabetes, heart problems, high blood pressure, etc. along with severe and persistent mental illness.	$1,785,938.00
18	169553801.1.1	1.1.2	Tenet Frisco, Ltd d/b/a Centennial Medical Center	With the Collin County Adult Clinic (CCAC), expand access to primary care through expanded primary care clinic hours/ staffing, enhanced diabetes and hypertension management and education, wellness check-ups and screening for women, and seamless referral for HIV/AIDS issues and testing.	Collin County Adult Clinic patients, who are primarily women and diabetic.	$278,388.00

RHP #	Unique Project ID	Project Option	Provider Name	Project Description	Target Population	Approved Value for Years 2-3*
19	127305405.2.2	2.2.1	Bowie Memorial Hospital	This project will provide resources to establish a chronic disease management program for patients with diabetes and coordinate transitions to continuing care when necessary for patient care. Approximately 53% of our patients are either Medicaid eligible, uninsured or county indigent, and we expect they will benefit from the availability of a chronic disease management program.	Patients with diabetes in need of chronic disease management in Montague County – RHP 19 .	$344,001.00
19	135034009.1.5	1.9.2	Electra Memorial Hospital	Recruit specialists including pediatricians, OB/Gyns, internists, a pulmonologist, and a urologist to Wichita Falls, with priority access being given to children and patients with diabetes, UTI, advanced pneumonia and COPD.	Residents of RHP 19 that need specialty care	$6,275,811.00
19	138353107.2.2	2.6.1	Seymour Hospital	Seymour Hospital plans to implement a Community Wellness Program. This program will be open to the general public with special emphasis on the underserved members of our community which include the elderly, indigent, and charity populations, as well as Medicare/Medicaid recipients, the uninsured/underinsured and those who face financial or geographical barriers to care.	Underserved members of community, including the elderly, indigent/charity populations, Medicaid/Medicare recipients, uninsured, and those with financial or geographic barriers to care who have diabetes, hypertension, are obese, smoke, and/or have a sedentary lifestyle.	$470,764.00

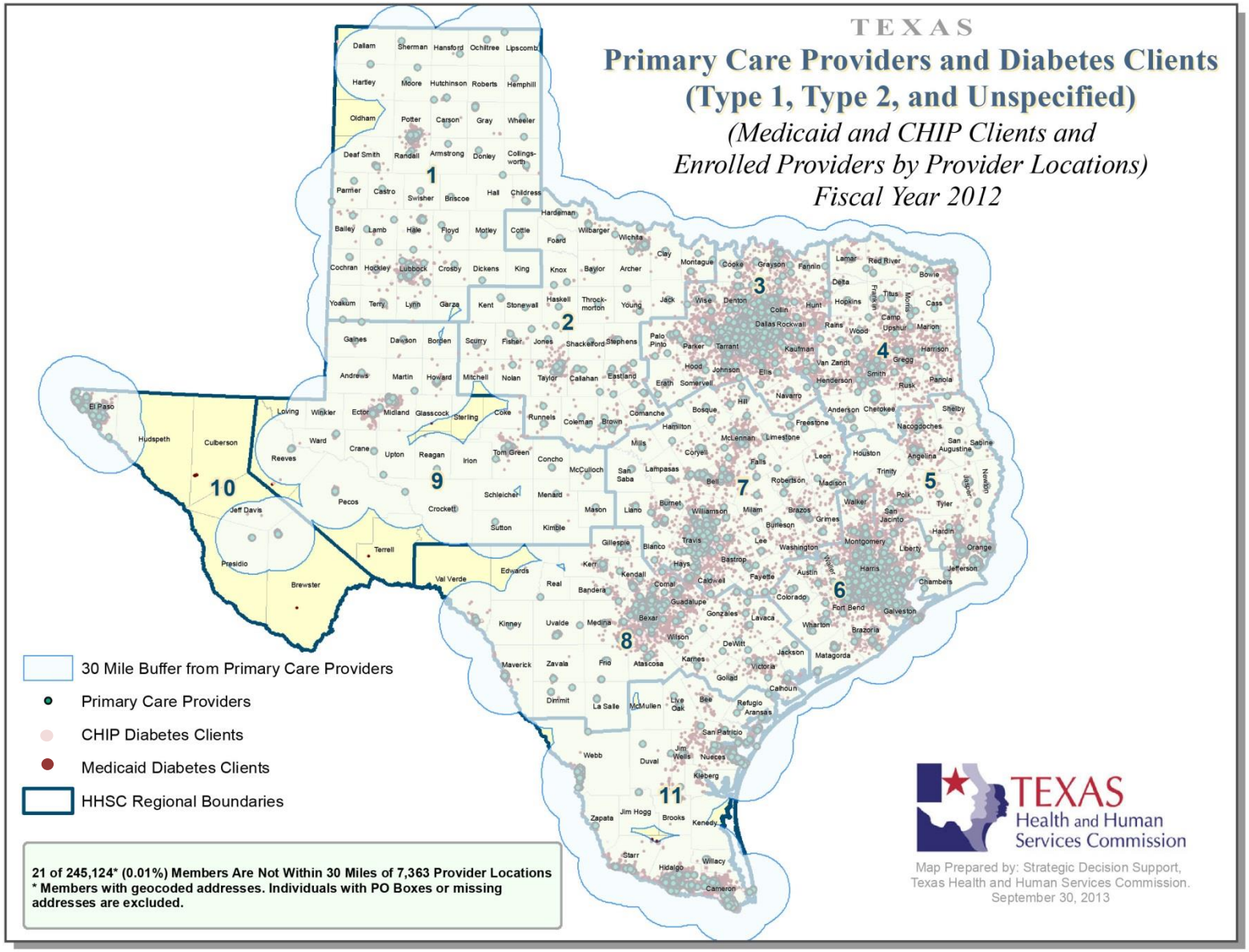
RHP #	Unique Project ID	Project Option	Provider Name	Project Description	Target Population	Approved Value for Years 2-3*
20	13791740 2.2.1	2.2.2	City of Laredo Health Department	Increase Disease Self- Management (DSM) interventions in primary care to address diabetes and obesity using the CLHD model HLVM (diabetes and hypertension self-management and education; hypertension and diabetes screening; physical activity, learning healthier food choices, cooking healthier; psychosocial case management, peer education in the clinical setting). As a new effort DSM HLVM will be integrated into primary care service	High risk individuals (and their families), Title V patients or uninsured indigent persons	$250,000.00
						$305,105,507.86

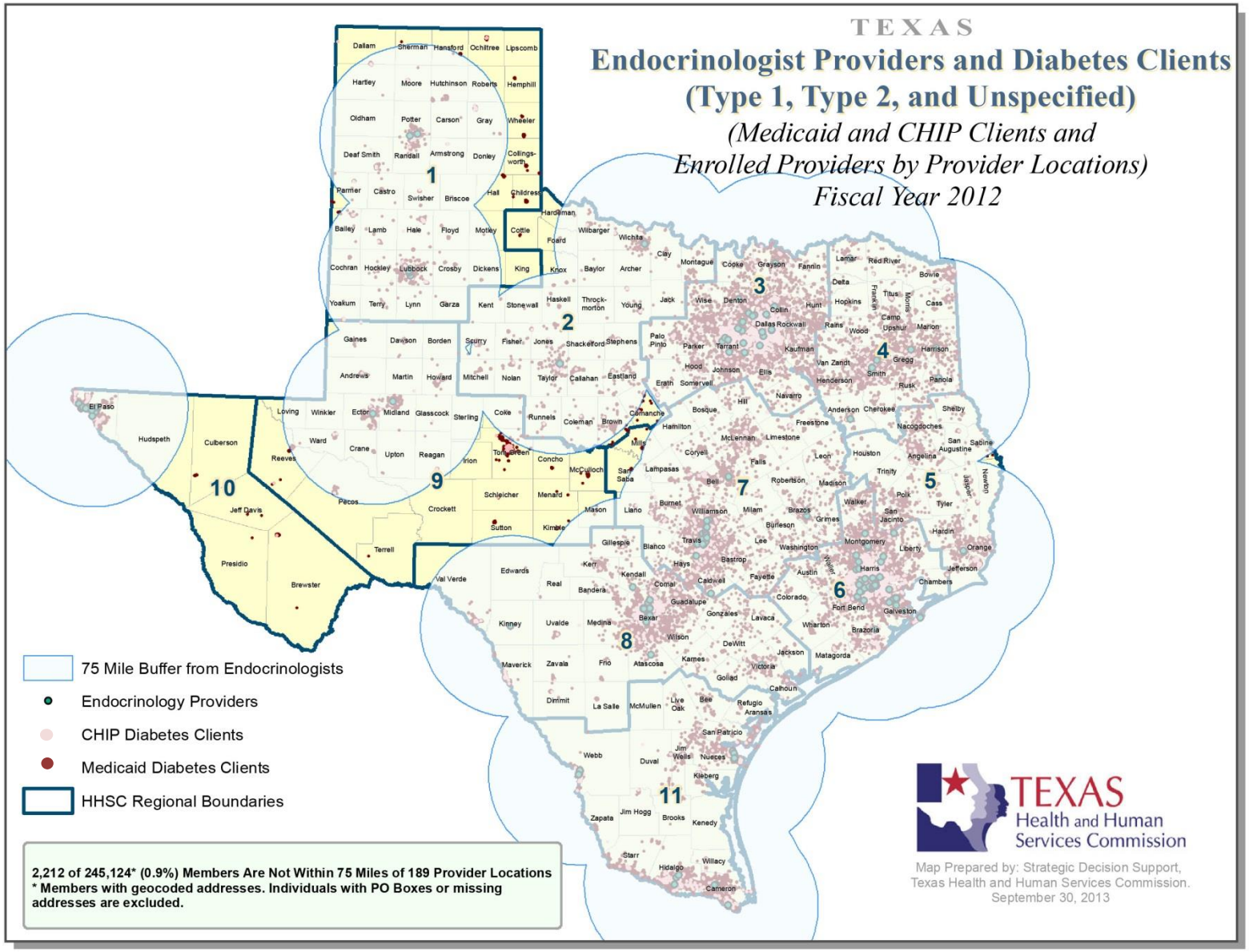
Average Diabetes Project Amount: **$2,748,698.27**

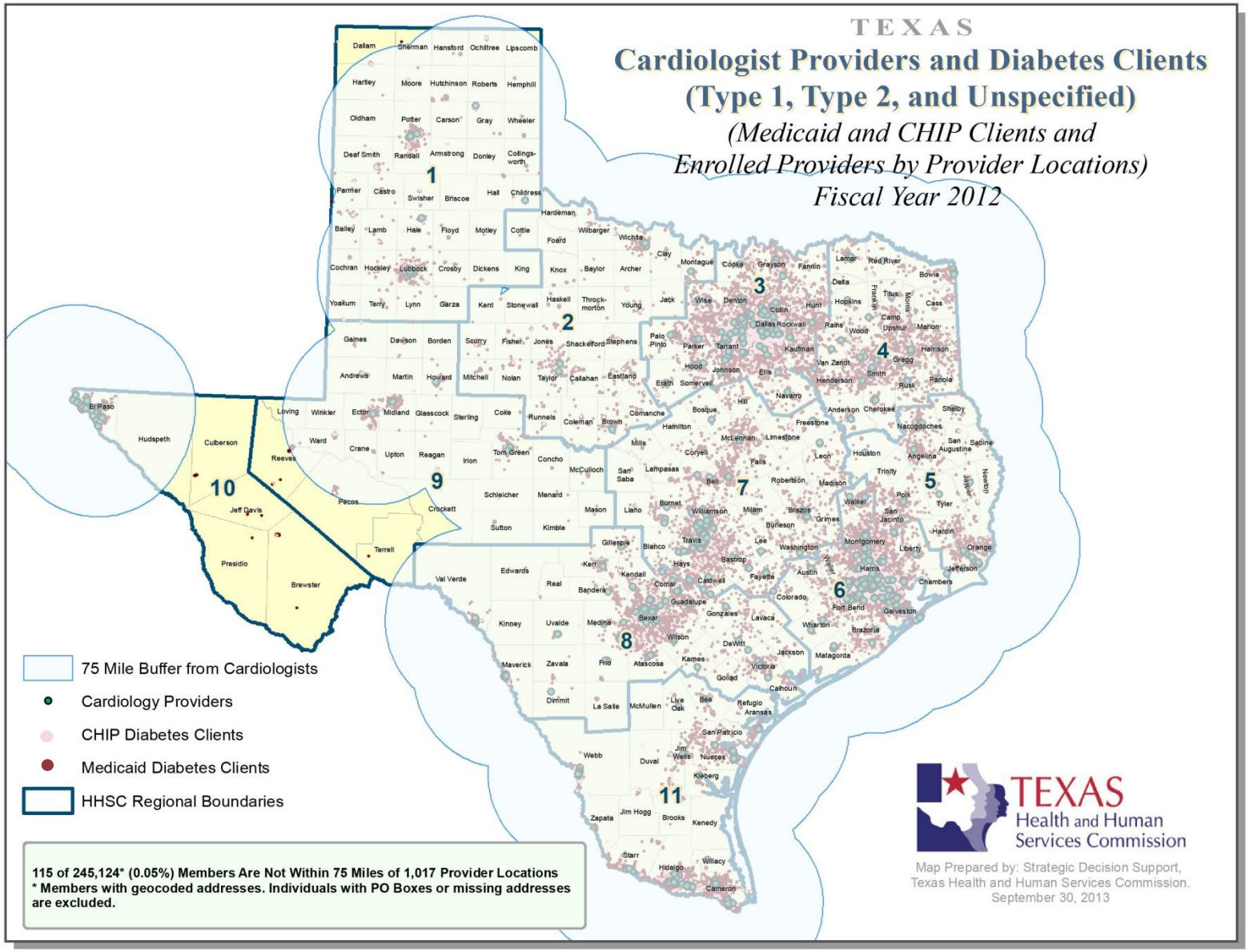
Appendix 2− Texas HHSC Maps of Diabetes Clients Access to Selected Provider Types

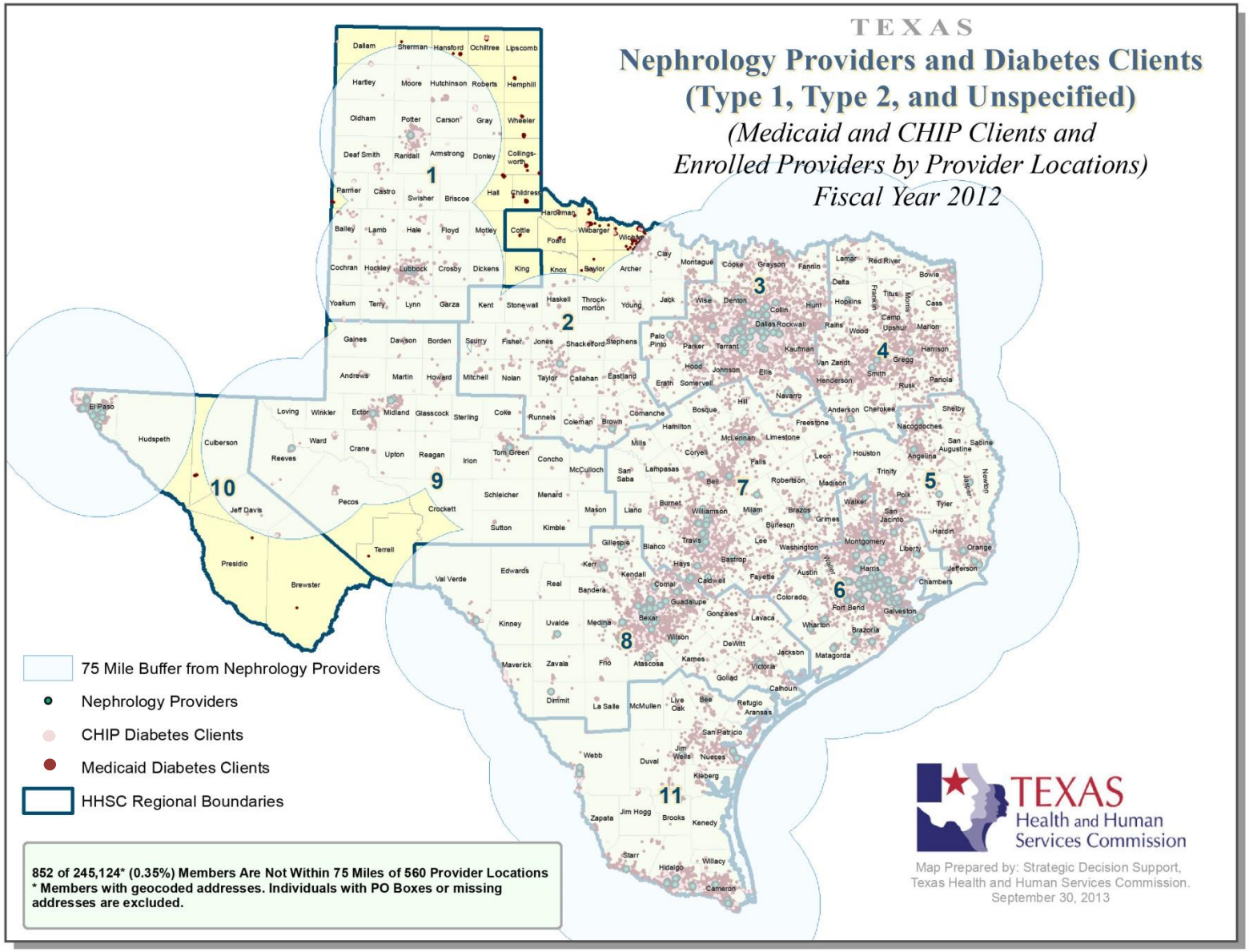
The following maps illustrate the location of HHSC clients in Texas who have diabetes in relation to the enrolled HHSC provider groups who typically treat patients with diabetes. In response to legislative requirements for this report, the number of providers is given, along with analysis of proximity of providers to patients with diabetes. These maps also indicate areas of the state where clients may have limited access to services. Maps include locations of the following medical providers:

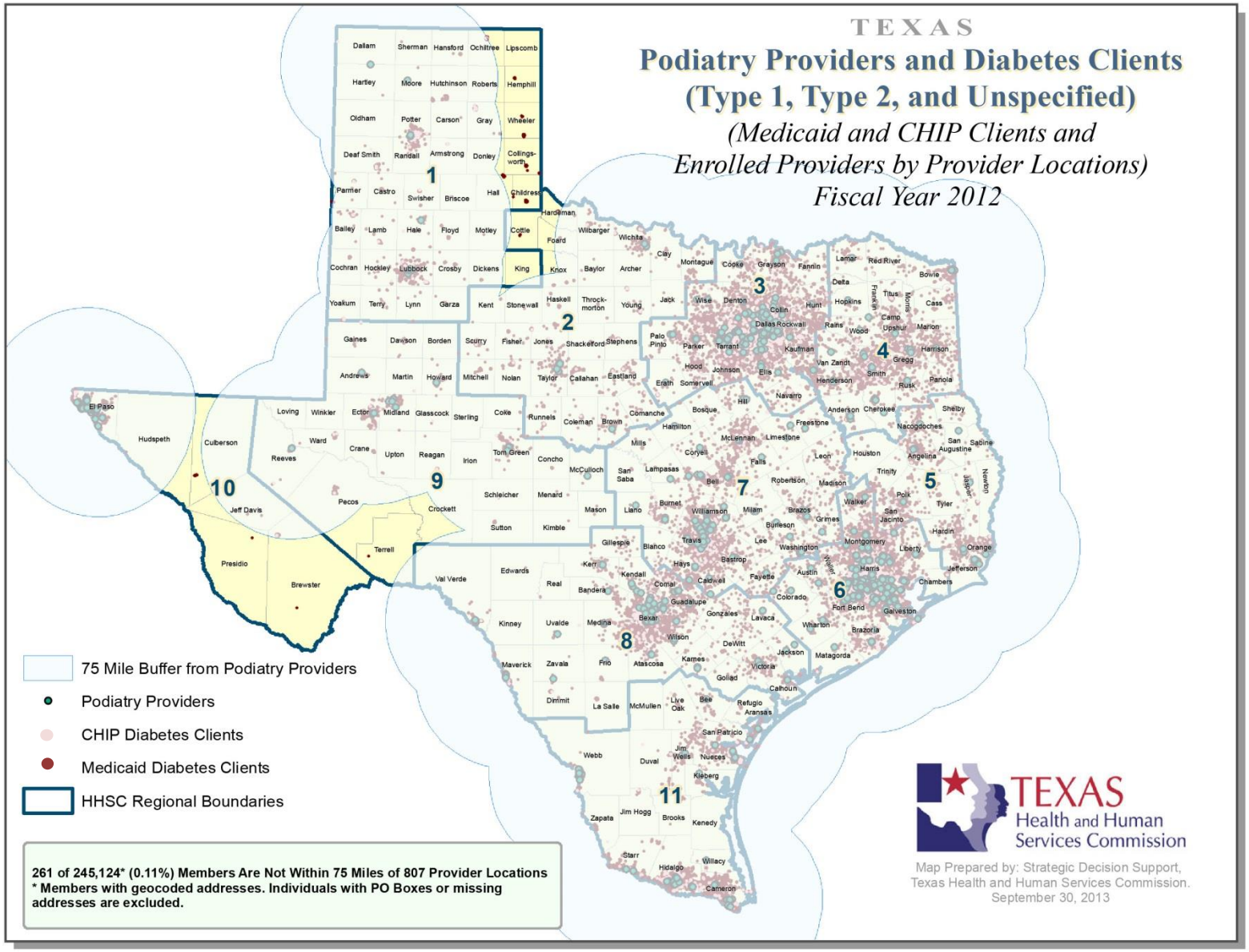
- Primary Care Providers
- Endocrinologists
- Cardiologists
- Nephrologists
- Podiatrists
- Obstetricians/Gynecologists (OB/GYN – in relation to clients who have gestational diabetes)

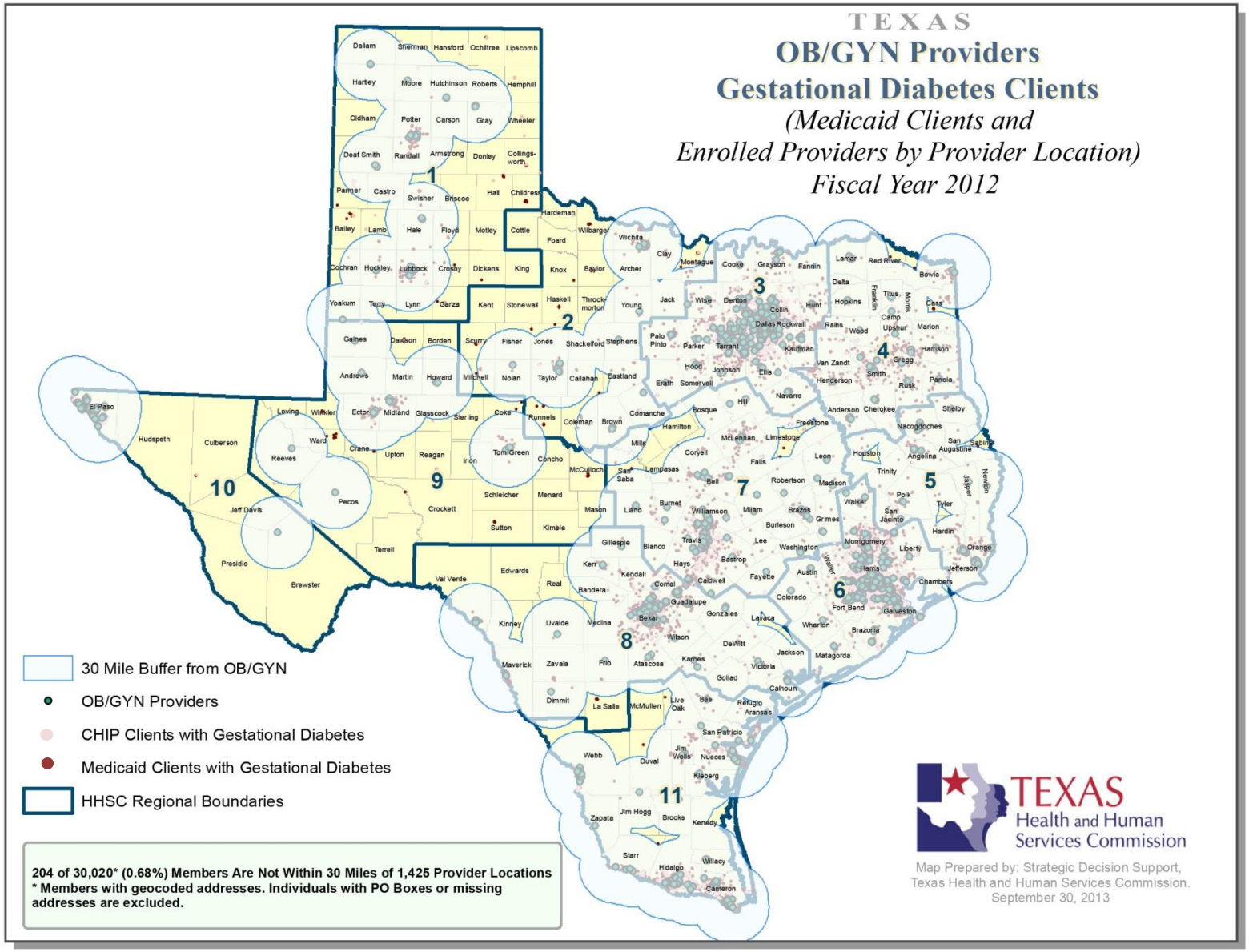

TEXAS
Primary Care Providers and Diabetes Clients
(Type 1, Type 2, and Unspecified)
(Medicaid and CHIP Clients and
Enrolled Providers by Provider Locations)
Fiscal Year 2012
30 Mile Buffer from Primary Care Providers
Primary Care Providers
CHIP Diabetes Clients
Medicaid Diabetes Clients
HHSC Regional Boundaries
21 of 245,124* (0.01%) Members Are Not Within 30 Miles of 7,363 Provider Locations
* Members with geocoded addresses. Individuals with PO Boxes or missing addresses are excluded.
TEXAS
Health and Human
Services Commission
Map Prepared by: Strategic Decision Support,
Texas Health and Human Services Commission.
September 30, 2013


TEXAS
Endocrinologist Providers and Diabetes Clients
(Type 1, Type 2, and Unspecified)
(Medicaid and CHIP Clients and
Enrolled Providers by Provider Locations)
Fiscal Year 2012
75 Mile Buffer from Endocrinologists
Endocrinology Providers
CHIP Diabetes Clients
Medicaid Diabetes Clients
HHSC Regional Boundaries
2,212 of 245,124* (0.9%) Members Are Not Within 75 Miles of 189 Provider Locations
* Members with geocoded addresses. Individuals with PO Boxes or missing addresses are excluded.
TEXAS
Health and Human
Services Commission
Map Prepared by: Strategic Decision Support,
Texas Health and Human Services Commission.
September 30, 2013


TEXAS
Cardiologist Providers and Diabetes Clients
(Type 1, Type 2, and Unspecified)
(Medicaid and CHIP Clients and
Enrolled Providers by Provider Locations)
Fiscal Year 2012
75 Mile Buffer from Cardiologists
Cardiology Providers
CHIP Diabetes Clients
Medicaid Diabetes Clients
HHSC Regional Boundaries
115 of 245,124* (0.05%) Members Are Not Within 75 Miles of 1,017 Provider Locations
* Members with geocoded addresses. Individuals with PO Boxes or missing addresses are excluded.
TEXAS
Health and Human
Services Commission
Map Prepared by: Strategic Decision Support,
Texas Health and Human Services Commission.
September 30, 2013


TEXAS
Nephrology Providers and Diabetes Clients
(Type 1, Type 2, and Unspecified)
(Medicaid and CHIP Clients and
Enrolled Providers by Provider Locations)
Fiscal Year 2012
75 Mile Buffer from Nephrology Providers
Nephrology Providers
CHIP Diabetes Clients
Medicaid Diabetes Clients
HHSC Regional Boundaries
852 of 245,124* (0.35%) Members Are Not Within 75 Miles of 560 Provider Locations
* Members with geocoded addresses. Individuals with PO Boxes or missing addresses are excluded.
TEXAS
Health and Human
Services Commission
Map Prepared by: Strategic Decision Support,
Texas Health and Human Services Commission.
September 30, 2013


TEXAS
Podiatry Providers and Diabetes Clients
(Type 1, Type 2, and Unspecified)
(Medicaid and CHIP Clients and
Enrolled Providers by Provider Locations)
Fiscal Year 2012
75 Mile Buffer from Podiatry Providers
Podiatry Providers
CHIP Diabetes Clients
Medicaid Diabetes Clients
HHSC Regional Boundaries
261 of 245,124* (0.11%) Members Are Not Within 75 Miles of 807 Provider Locations
* Members with geocoded addresses. Individuals with PO Boxes or missing addresses are excluded.
TEXAS
Health and Human
Services Commission
Map Prepared by: Strategic Decision Support,
Texas Health and Human Services Commission.
September 30, 2013


TEXAS
OB/GYN Providers
Gestational Diabetes Clients
(Medicaid Clients and
Enrolled Providers by Provider Location)
Fiscal Year 2012
30 Mile Buffer from OB/GYN
OB/GYN Providers
CHIP Clients with Gestational Diabetes
Medicaid Clients with Gestational Diabetes
HHSC Regional Boundaries
204 of 30,020* (0.68%) Members Are Not Within 30 Miles of 1,425 Provider Locations
* Members with geocoded addresses. Individuals with PO Boxes or missing addresses are excluded.
TEXAS
Health and Human
Services Commission
Map Prepared by: Strategic Decision Support,
Texas Health and Human Services Commission.
September 30, 2013

Appendix 3 –Texas Diabetes Council Recommendations for Diabetes Disease Management and Diabetes Self-Management Education (DSME) Provided by Texas Medicaid

Background:
In August 2012, the Texas Diabetes Council (TDC) requested the opportunity to provide guidance regarding guidelines for disease management and diabetes self-management education (DSME) for Texas Medicaid managed care organizations (MCOs).

The Texas Health and Human Services Commission (HHSC) Office of the Medical Director has communicated that HHSC is open to reviewing guidelines for diabetes disease management and DSME for Medicaid MCOs to be drafted by the TDC. A document will be prepared containing the proposed guidelines. Once the guidelines have been reviewed and accepted by HHSC, a means of presenting them to the MCO will be discussed.

The following links to Texas Medicaid's Uniform Managed Care Manual were provided to the TDC for review:

Link to Chapter 9.1 "Disease Management"
http://www.hhsc.state.tx.us/medicaid/managed-care/umcm/Chp9/9_1.pdf

Link to the entire manual: http://www.hhsc.state.tx.us/medicaid/managed-care/umcm/

Link to the **Managed Care Contract** and what is currently required of a Medicaid MCO for Diabetes Disease Management:
http://www.hhsc.state.tx.us/medicaid/managed-care/UniformManagedCareContract.pdf

Page 80 of 392

7. Disease management requirements
The MCO must provide a comprehensive disease management program or coverage for Disease Management (DM) services for asthma, diabetes, and other chronic diseases identified by the MCO, based upon an evaluation of the prevalence of the diseases within the MCO's membership. Please refer to the **Uniform Managed Care Manual**, Chapter 9.1 "Disease Management," for additional DM requirements.

Page 234 of 392

8.1.14 Disease Management (DM)
The MCO must provide or arrange the provision of comprehensive disease management (DM) programs consistent with state and federal statutes and regulations. The program design of these DM programs must focus on the whole person, typically high-risk enrollees with complex chronic or co-morbid conditions rather than traditionally-designed programs with restricted diagnoses or disease silos. These programs must identify enrollees at highest risk of utilization of medical services, tailor interventions to better meet enrollees' needs, encourage provider input in care plan development, and apply clinical evidence-based practice protocols for individualized care.

Texas Diabetes Council Guidance Regarding Diabetes Self-Management Education (DSME):

Texas is one of 46 states that enacted statutes requiring state-regulated insurance and managed care plans to cover medication, supplies, equipment, and education related to diabetes management. In 1997, the Balanced Budget Act expanded coverage for diabetes supplies, equipment, and education within the Medicare program. However, consistent and reliable coverage for self-management training has not been provided to all Texans who are Medicaid and CHIP recipients across all Medicaid benefit plans (MCOs, Primary Care Case Management, Fee-for-Service).

Diagnosed Diabetes:

In recommending minimum requirements for DSME for persons who have diabetes, the TDC refers to Medicare benefits policy as the standard to which health plans should strive to adhere. Based on this policy, health plans should ensure that:

(1) an assessment of a recipient for the diabetes self-management training includes a review of the recipient's medical history, risk factors, health status, resource utilization, knowledge and skill level, and cultural barriers to effective diabetes self-management;

(2) a recipient receives a minimum of:
- (A) 10 hours of initial self-management training with a diabetes educator; and
- (B) three hours of initial nutrition education with a registered dietitian;

(3) after receipt of the initial self-management training, the recipient receives a minimum of two hours of training each year with a diabetes educator and two hours of training each year with a registered dietitian;

(4) if diabetes self-management training is provided in group sessions, the recipient has direct, face-to-face interaction with the educator and is offered a sufficient number of individual sessions to meet the recipient's cultural and educational needs; and

(5) the recipient may repeat all or part of the self-management training as necessary, regardless of whether the recipient is diagnosed with a new health condition or experiences a change in health status.

(6) the TDC supports the American Diabetes Association's National Standards for Diabetes Self-Management Education and the American Association of Diabetes Educator's National Standards for Diabetes Self-Management Education and Support as a guidance for development of DSME programs.

Prediabetes:

Prediabetes means a person has a blood glucose (blood sugar) level that is higher than normal but not high enough to be classified as diabetes. The CDC estimates that more than one third of adult Americans and half of all adults aged 65 years and older have prediabetes. People with prediabetes have an increased risk of developing type 2 diabetes that can lead to serious health problems such as vision loss, lower limb amputations, and kidney disease.

Studies have shown that people with prediabetes who lose a modest amount of weight (five to seven percent) and increase their physical activity to 150 minutes a week can prevent or delay the onset of type 2 diabetes. The National Diabetes Prevention Program is a 12-month program that has demonstrated effectiveness in improving the health of people with prediabetes. Participants meet in a group setting and learn about important changes that can help prevent type 2 diabetes, such as losing a modest amount of weight, being more physically active, and managing stress.

The TDC supports the following guidance regarding patients with prediabetes published in the American Diabetes Association Standards of Medical Care in Diabetes -2012:

- Patients with impaired glucose tolerance (IGT), impaired fasting glucose (IFG), or an A1C of 5.7–6.4 percent should be referred to an effective ongoing support program targeting weight loss of seven percent of body weight and increasing physical activity to at least 150 minutes per week of moderate activity such as walking.
- Follow-up counseling appears to be important for success.
- Based on the cost-effectiveness of diabetes prevention, such programs should be covered by third-party payers.
- Metformin therapy for prevention of type 2 diabetes may be considered in those with IGT, IFG, or an A1C of 5.7–6.4 percent, especially for those with BMI .35 kg/m2, age 60 years, and women with prior gestational diabetes.
- At least annual monitoring for the development of diabetes in those with prediabetes is suggested.

Disease Management:

Since 1995, the TDC has developed and continuously reviewed minimum standards of care for patients with diabetes. These standards are used to define diabetes benefits required of health plans regulated by the Texas Department of Insurance. Appointed by the TDC chair, the TDC Medical Professionals Advisory Subcommittee brings together a multidisciplinary team of diabetes experts from across the state to review the latest research and treatment recommendations and update TDC standards of care, including seventeen treatment algorithms, A1c target recommendations, and a Diabetes Tool Kit (www.tdctoolkit.org) to assist in applying standards to practice. The TDC's Health Care Professional Advisory Committee works to increase awareness of TDC standards of care among managed care organizations, health plans, physicians, and employer groups throughout Texas, and a subcommittee on outcomes examines data that can be used to evaluate the extent to which recommended care is delivered.

Disease management programs should strive for adherence to the following minimum standards of care, and develop performance indicators based on these standards. The TDC Medical Professionals Advisory Subcommittee is available to consult with managed care organizations regarding adoption of standards of care and efforts to evaluate disease management programs.

Diabetes Minimum Practice Recommendations for Children and Adults

TEXAS Department of State Health Services
Publication # 45-12085
TEXAS DIABETES COUNCIL
Revised 8/9/12

Name: _____ ID#: _____ D.O.B.: _____ Sex: M F

Exam/Test/Counseling Schedule

Suggested Result Codes: **O**=Ordered, **N**=Normal, **A**=Abnormal, **E**=Done Elsewhere, **R**=Referred

Complete History & Physical	Initial visit and at clinician's discretion (including risk factors, exercise & diet)	Date						
Family history	Annually	Date						
Education and Counseling								
Diabetes education[1]	Initial visit, annually and at clinician's discretion	Date						
Medical Nutrition Therapy	Initial visit, annually and at clinician's discretion	Date						
Exercise counseling	Initial visit and at clinician's discretion	Date						
Depression Screening[2]	Initial visit and at clinician's discretion	Date						
Sexual Function (male/female)	Initial visit and at clinician's discretion	Date						
Lifestyle/Behavior								
Smoking cessation	Initial visit and at clinician's discretion	Date						
Alcohol reduction	Initial visit and at clinician's discretion	Date						
Physical Examination								
Blood pressure Target: <130/80 mm Hg Target: <125/75 mm Hg if ≥1g proteinuria	Every visit	Date Result						
Weight/Height	Every visit (Height annually)	Date Result						
BMI Adult Overweight=BMI 25–29.9 Adult Obesity=BMI ≥ 30	Every visit	Date Result						
Foot Exam • Visual inspection for skin and nail lesions, calluses, infections, deformities • Monofilament / 128 Hz tuning fork • Pedal pulses	Every visit Annually or as needed Annually or as needed	Date Results						
Oral/Dental inspection Refer for dental care every 6 months	Every visit	Date Result						
Dilated Fundoscopic Eye Exam (ophthalmology or optometry)	Annually or as indicated by eye specialist	Date Result						
Laboratory Studies								
A1c[3]	Every 3-6 months	Date Result						
Kidney • BUN/Creatinine • eGFR • Urine MicroAlb:Cr ratio • iPTH[4]	Annually or every 3-6 months if abnormal Annually or every 3-6 months if abnormal Initial visit, then annually As indicated (if CKD stage 3+)	Date Result						
Liver • AST (SGOT) / ALT (SGPT)	Annually or every 3-6 months if abnormal	Date Result						
Lipid Profile • Triglycerides • HDL • LDL	Annually if at goal; otherwise every 3–6 months (> age 18)	Date Result						
TSH	Annually or as needed	Date/Result						
Vitamin D (25-OH-Vit D)	As indicated	Date/Result						
Testosterone / PSA	At clinician's discretion	Date/Result						
Other		Date/Result						
Cancer Screening								
Pap-pelvic[5]	When sexually active and every 1-5 yrs to age 65	Date/Result						
Mammogram	Age 40 and every 1-3 yrs	Date/Result						
DRE	Annual age 40-50 to age 75	Date/Result						
Colonoscopy	Age 50, repeat 10-20 yrs if no risk factors	Date/Result						
Immunizations[6]								
Influenza vaccine	Annually	Date						
Pneumococcal vaccine	Age <65; Repeat ≥ 65 (at least 5 yrs apart)	Date						
Tdap	Every 10 yrs	Date						
Shingles vaccine	One time at age 60	Date						
Hepatitis A	2 doses	Date						
Hepatitis B	3 doses	Date						
Child & Adolescent								
Immunizations	Refer to CDC Guidelines	Date						
Growth & Development[7]	Every visit	Date						

[1] Diabetes education should address self-care behaviors including healthy eating, being active, monitoring, taking medication, problem solving, reducing risks and healthy coping. (From the American Association of Diabetes Educators 7 Self-Care Behaviors™ framework found at http://www.diabeteseducator.org/ProfessionalResources/AADE7/)

[2] Patient Health Questionaire-2 (PHQ2, depression screen) and Patient Health Questionaire-9 (PHQ9, depression diagnosis)

[3] **Intensify management if:** Absent/stable cardiovascular disease, mild-moderate microvascular complications, intact hypoglycemia awareness, infrequent hypoglycemic episodes, recently diagnosed diabetes. **Less intensive management if:** Evidence of advanced or poorly controlled cardiovascular and/or microvascular complications, hypoglycemia unawareness, vulnerable patient (ie, impaired cognition, dementia, fall history).

[4] Consider Nephrology or Endocrinology evaluation if CKD stage 3, proteinuria, elevated iPTH

[5] Screening for Cervical Cancer: U.S. Preventive Services Task Force Recommendation Statement. *Ann Intern Med.* 2012;156:

[6] Refer to CDC guidelines at http://www.cdc.gov/vaccines/schedules/easy-to-read/index.html for updates

[7] Use WHO charts for years 0-2 and CDC charts for 2+ years age

See disclaimer at www.tdctoolkit.org/algorithms_and_guidelines.asp

Texas Diabetes Council A1c Goals

Approved 10/29/09

A1c Goals

Individualize goal based on patient risk factors

A1c < 6-7% **A1c < 7-8%**

Intensify management if:

- Absent/stable cardiovascular disease
- Mild-moderate microvascular complications
- Intact hypoglycemia awareness
- Infrequent hypoglycemic episodes
- Recently diagnosed diabetes

Less intensive management if:

- Evidence of advanced or poorly controlled cardiovascular and/or microvascular complications
- Hypoglycemia unawareness
- Vulnerable patient (ie, impaired cognition, dementia, fall history)

A1c is referenced to a non-diabetic range of 4-6% using a DCCT-based assay. ADA Clinical Practice Recommendations. *Diabetes Care* 2009;32(suppl 1):S19-20

References

1. The Action to Control Cardiovascular Risk in Diabetes Study Group. Effects of intensive glucose lowering in type 2 diabetes. N Engl J Med 2008;358:2545-2559.
2. The ADVANCE Collaborative Group. Intensive blood glucose control and vascular outcomes in patients with type 2 diabetes. N Engl J Med 2008;358:2560-2572.
3. The Diabetes Control and Complications Trial Research Group. The effect of intensive treatment of diabetes on the development and progression of long-term complications in insulin-dependent diabetes mellitus. N Engl J Med 1993;329:977-986.
4. The Diabetes Control and Complications Trial/Epidemiology of Diabetes Interventions and Complications (DCCT/EDIC) Study Research Group. Intensive diabetes treatment and cardiovascular disease in patients with type 1 diabetes. N Engl J Med 2005;353:2643-2653.
5. Gæde P, Vedel P, Larsen N, Jensen GVH, Parving H-H, Pedersen O. Multifactorial intervention and cardiovascular disease in patients with type 2 diabetes. N Engl J Med 2003;348:383-393.
6. Gæde P, Lund-Anderson H, Parving H-H, Pedersen O. Effect of a Multifactorial Intervention on Mortality in Type 2 Diabetes. N Engl J Med 2008;358:580-591.
7. Holman RR, Paul SK, Bethel MA, Matthews DR, Neil HAW. 10-Year follow-up of intensive glucose control in type 2 diabetes. N Engl J Med 2008;359:1577-1589.
8. Ohkubo Y, Kishikawa H, Araki E, et al. Intensive insulin therapy prevents the progression of diabetic microvascular complications in Japanese patients with non-insulin-dependent diabetes mellitus: a randomized prospective 6-year study. Diabetes Res Clin Pract 1995;28:103-117.
9. Reichard P, Bengt-Yngve N, Rosenqvist U. The effect of long-term intensified insulin treatment on the development of microvascular complications of diabetes mellitus. N Engl J Med 1993;329:304-309.
10. Shichiri M, Ohkubo Y, Kishikawa H, Wake N. Long term results of the Kumamoto Study on optimal diabetes control in type 2 diabetic patients. Diabetes Care 2000;23:Suppl 2:B21-B29.
11. UK Prospective Diabetes Study (UKPDS) Group. Intensive blood-glucose control with sulphonylureas or insulin compared with conventional treatment and risk of complications in patients with type 2 diabetes (UKPDS 33). Lancet 1998;352:837-853.
12. UK Prospective Diabetes Study (UKPDS) Group. Effect of intensive blood-glucose control with metformin on complications in overweight patients with type 2 diabetes (UKPDS 34). Lancet 1998;352:854-865.
13. The Veterans Affairs Diabetes Trial Investigators. Glucose Control and Vascular Complications in Veterans with Type 2 Diabetes. N Engl J Med 2009;360:129-139.

See disclaimer at www.tdctoolkit.org/algorithms_and_guidelines.asp

Gestational Diabetes

Equipment, supplies, and self-management training, and preconception counseling are recommended for those with pre-existing diabetes and expectant mothers with gestational diabetes in order to prevent harm to the child from premature birth, birth defects, and increased risk for obesity and diabetes later in life. The TDC supports the following guidance published in the American Diabetes Association Standards of Medical Care in Diabetes-2012:

- Screen for undiagnosed type 2 diabetes at the first prenatal visit in those with risk factors, using standard diagnostic criteria.
- In pregnant women not previously known to have diabetes, screen for GDM at 24–28 weeks' gestation, using a 75-g 2-h OGTT and the diagnostic cut points below.
- Screen women with GDM for persistent diabetes at 6–12 weeks' postpartum, using a test other than A1C.
- Women with a history of GDM should have lifelong screening for the development of diabetes or prediabetes at least every 3 years.
- Women with a history of GDM found to have prediabetes should receive lifestyle interventions or metformin to prevent diabetes.

<u>Screening for and diagnosis of GDM</u>
Perform a 75-g OGTT, with plasma glucose measurement fasting and at 1 and 2 h, at 24–28 weeks' gestation in women not previously diagnosed with overt diabetes.

The OGTT should be performed in the morning after an overnight fast of at least 8 h.

The diagnosis of GDM is made when any of the following plasma glucose values are exceeded:

- Fasting $\geq$92 mg/dL (5.1 mmol/L)
- 1 h $\geq$180 mg/dL (10.0 mmol/L)
- 2 h $\geq$153 mg/dL (8.5 mmol/L)

Appendix 4 – Diabetes Facts and Figures

Defining Diabetes

Diabetes is a disease in which levels of blood glucose, also called blood sugar, are above normal. People with diabetes have problems converting food to energy. Normally, after a meal, the body breaks food down into glucose, which the blood carries to cells throughout the body. Cells use insulin, a hormone made in the pancreas, to help them convert blood glucose into energy.

People develop diabetes because the pancreas does not make enough insulin or because the cells in the muscles, liver, and fat do not use insulin properly, or both. As a result, the amount of glucose in the blood increases while the cells are starved of energy. Over the years, high blood glucose, also called hyperglycemia, damages nerves and blood vessels, which can lead to complications such as heart disease, stroke, kidney disease, blindness, nerve problems, gum infections, and amputation.

Main Types of Diabetes

The two main types of diabetes are called type 1 and type 2. A third form of diabetes is called gestational diabetes.

- Type 1 diabetes, formerly called juvenile diabetes, is usually first diagnosed in children, teenagers, and young adults. In this form of diabetes, the pancreas no longer makes insulin because the body's immune system has attacked and destroyed the pancreatic cells specialized to make insulin. These insulin-producing cells are called beta cells.
- Type 2 diabetes, formerly called adult-onset diabetes, is the most common form. People can develop type 2 diabetes at any age, even during childhood. This form of diabetes usually begins with insulin resistance, a condition in which muscle, liver, and fat cells do not use insulin properly. As a result, the body needs more insulin to help glucose enter cells to be used for energy. At first, the pancreas keeps up with the added demand by producing more insulin. In time, however, the pancreas loses its ability to secrete enough insulin in response to meals.
- Gestational diabetes is diabetes that first occurs during pregnancy. When women are pregnant, their need for insulin appears to increase, and many can develop gestational diabetes during the late stages of pregnancy. Gestational diabetes affects three to seven percent of all pregnancies in the United States.[35] Equipment, supplies, and self-management training, and preconception counseling are recommended for those with pre-existing diabetes and expectant mothers with gestational diabetes in order to prevent harm to the child from premature birth, birth defects, and increased risk for obesity and diabetes later in life.
- Other types of diabetes result from specific genetic defects, diseases of the pancreas, excessive amounts of certain hormones, medications, infections, and rare autoimmune disorders.

[35] Greene, MF, Solomon CG. Gestational Diabetes Mellitus — Time to Treat. *N Engl J Med*. 352:2544-2546. 2005.

What is Prediabetes?

In prediabetes, blood glucose levels are higher than normal, but not high enough for a diagnosis of diabetes. Without lifestyle changes to improve their health, 15 to 30 percent of people with prediabetes will develop type 2 diabetes within five years.[36] Individuals with prediabetes also have an increased risk of heart disease and stroke.

Several research studies, including the U.S. Diabetes Prevention Program (National Institutes of Health) have demonstrated that a structured lifestyle program that results in a modest weight loss of five to seven percent while encouraging healthy eating and increasing physical activity, can reduce risk for type 2 diabetes by 58 percent in those at high risk for diabetes or who have prediabetes.[37]

The National Diabetes Education Program's *2008 Survey of the Public's Knowledge Attitudes, and Practices Related to Diabetes* revealed significant gaps between perceived and actual risks of having prediabetes. Only 29 percent of the people at high risk for diabetes understood their risk for the disease, and only about two-thirds of people told they have prediabetes understood that they were at risk for diabetes. NHANES data from 2005 – 2006 show that 30 percent of U.S. adults 20 years or older had prediabetes. Only 7 percent of those determined by the medical exam portion of this survey to have prediabetes reported that they had been told that they had the condition, and only 48 percent of adults with prediabetes reported having a test for diabetes or high blood sugar in the past three years.[38]

Diagnosing Diabetes (Type 1 and Type 2)

Diagnosis of diabetes is based on plasma glucose (blood sugar) testing, through either a fasting plasma glucose (FPG) test, or an oral glucose tolerance test (OGTT). The OGTT is most commonly used to check for gestational diabetes. The American Diabetes Association affirmed the recommendation of an expert committee regarding use of the hemoglobin A1C (A1C) test to diagnose diabetes. The A1C test provides an average of blood glucose control over the previous two to three months, and is more commonly used by clinicians to evaluate how well their patients with diabetes are managing the disease. Patient A1C goals vary, but an A1C of six percent is generally associated with excellent diabetes management, whereas higher percentages are associated with increasing risk for complications.

Table 3 shows lab values used to diagnose prediabetes and diabetes using these three tests (FPG, OGTT, and A1C). Diabetes can be diagnosed with

- an FPG greater than or equal to 126 mg/dl

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[36] Division of Diabetes Translation, National Center for Chronic Disease Prevention and Health Promotion. Prediabetes Facts. Accessed online at http://www.cdc.gov/diabetes/prevention/factsheet.htm, May 2014.

[37] Diabetes Prevention Program Research Group, Reduction in the Incidence of Type 2 Diabetes with Lifestyle Intervention or Metformin. *N Engl J Med* 346: 393-403. 2002.

[38] Testimony before the Subcommittee on Health, Committee on Energy and Commerce United States House of Representatives by Ann Albright, Ph.D., R.D, Director, Division of Diabetes Translation, Centers for Disease Control and Prevention, July 2010.

- a two-hour plasma glucose (PG) greater than or equal to 200 mg/dl (oral glucose tolerance test)
- an A1C greater than or equal to 6.5 percent*

Clinicians may repeat a test to confirm diagnosis.

Table 3. Diagnosis of Diabetes 2010[39]

NORMAL (non-diabetic)	PREDIABETES (IFG or IGT)**	DIABETES (type 1 and type 2)***
FPG < 100 mg/dL	FPG: 100-125 mg/dL	FPG ≥ 126 mg/dL
2-hour PG < 140 mg/dL	2-hour PG: 140 – 199 mg/dL	2-hour PG ≥ 200 mg/dL
A1C < 5.7 %	A1C 5.7 – 6.4 %	A1C ≥ 6.5%

Notes:
*The diagnostic test should be performed using a method certified by the National Glycohemoglobin Standardization Program (NGSP) and standardized or traceable to the Diabetes Control and Complications Trial (DCCT) reference assay.
****Impaired Fasting Glucose** (IFG) and **Impaired Glucose Tolerance** (IGT) are terms associated with prediabetes based on the type of test used to diagnose prediabetes. A person with IFG has prediabetes based on a fasting plasma glucose test, while a person with IGT has prediabetes based on an oral glucose tolerance test.
***Lab values for diagnosing gestational diabetes differ.

Adult Prediabetes Prevalence, 2012

In 2009, the Texas Behavioral Risk Factor Surveillance System (BRFSS) began collecting data on prediabetes prevalence in the state. Respondents to the annual BRFSS phone survey, which provides estimates of diabetes prevalence for the state and nation, are now asked the following question:
Have you ever been told by a doctor or other health professional that you have prediabetes or borderline diabetes?

According to the survey, about 1.2 million persons aged eighteen years and older in Texas (6.2 percent of this age group) have been diagnosed with prediabetes. These data are self-reported, requiring that respondents already be diagnosed by a physician to report that they have prediabetes.

The National Health and Nutrition Examination Survey (NHANES), combining interviews with clinical testing, reveals a much higher estimate of prediabetes prevalence in the U.S. Based on NHANES, in 2003 to 2006, 25.9 percent of U.S. adults aged 20 years or older had impaired fasting glucose (IFG)—35.4 percent of adults aged 60 years or older. Applying this percentage to the entire U.S. population in 2007 yields an estimated 57 million American adults aged 20 years or older with IFG, suggesting that at least 57 million American adults had prediabetes in 2007.

[39] American Diabetes Association. ADA Standards of Medical Care in Diabetes – 2010. *Diabetes Care*, Volume 33, Supplement 1, January 2010.

Diagnosed Prediabetes Prevalence by Sex, Texas Adults, BRFSS 2012

Male: 6.1%
Female: 6.2%

Diagnosed Prediabetes Prevalence by Race/Ethnicity, Texas Adults, BRFSS 2012

White, non-Hispanic: 6.4%
Black, non-Hispanic: 9.3%
Hispanic: 5.0%
Other: 5.2%

Diagnosed Prediabetes Prevalence by Age Group, Texas Adults, BRFSS 2012

18-29 Years: 1.3%
30-44 Years: 4.6%
45-64 Years: 9.1%
65+ Years: 9.4%

Diagnosed Prediabetes Prevalence by Educational Level in Persons 18 and Older, BRFSS 2012

No High School Diploma: 5.2%
High School Graduate: 5.6%
Some College: 7.1%
College +: 6.1%

Adult Diabetes Prevalence, 2012

According to 2012 BRFSS, an estimated 2.1 million persons aged eighteen years and older in Texas (10.6 percent of this age group) have been diagnosed with diabetes. Another estimated 440,468 persons aged eighteen years and older in Texas are believed to have undiagnosed diabetes (based on 2003-2006 NHANES age-adjusted prevalence estimate of 2.5 percent of persons twenty years of age and older).[40]

Diagnosed Diabetes Prevalence by Sex, Texas Adults, BRFSS 2012

Male: 11.0%
Female: 10.3%

Diagnosed Diabetes Prevalence by Race/Ethnicity, Texas Adults, BRFSS 2012

White, non-Hispanic: 9.4%
Black, non-Hispanic: 13.9%
Hispanic: 11.6%
Other: 8.0%

Diagnosed Diabetes Prevalence by Age Group, Texas Adults, BRFSS 2012

18-29 Years: 1.2%
30-44 Years: 5.4%

[40] Persons 20 years of age and older. Centers for Disease Control and Prevention. Prevalence of Diabetes and Impaired Fasting Glucose in Adults, Unites States, 1999-2000. MMWR. September 5, 2003; 52(35);833-837.

45-64 Years: 15.2%
65+: 24.9%

Diagnosed Diabetes Prevalence by Educational Level, Texas Adults, BRFSS 2012

No High School Diploma:	14.8%
High School Graduate:	11.0%
Some College:	9.8%
College +:	7.8%

Diabetes Prevalence Among Youth, (less than 18 years of age)

Diabetes among children and adolescents is mainly type 1. The SEARCH for Diabetes in Youth study funded by the Centers for Disease Control and Prevention and the National Institutes of Health indicated that 15,000 youth in the U.S. were newly diagnosed with type 1 diabetes annually, and about 3,200 youth were newly diagnosed with type 2 diabetes annually. The rate of new cases among youth was 19 per 100,000 each year for type 1 diabetes and 5.3 per 100,000 for type 2 diabetes.[41]

In 2007, the Texas BRFSS phone survey began including two questions regarding diabetes prevalence among youth. In households that include a child or adolescent, respondents are now asked if the child or adolescent has been diagnosed with diabetes, and if so, what type of diabetes they have (type 1 or type 2). While response to the question regarding type of diabetes has not been adequate to provide a reliable estimate of prevalence by type, the 2012 survey indicates that an estimated **21,352** Texas youth (**0.3 percent** of this age group) have been diagnosed with diabetes (type 1 and type 2).[1]

Diagnosed Diabetes Prevalence by Sex, Texas Youth, 2009, BRFSS 2012

Boy: 0.4%
Girl: 0.2%

Diagnosed Diabetes Prevalence by Race/Ethnicity, Texas Youth, 2009, BRFSS 2012

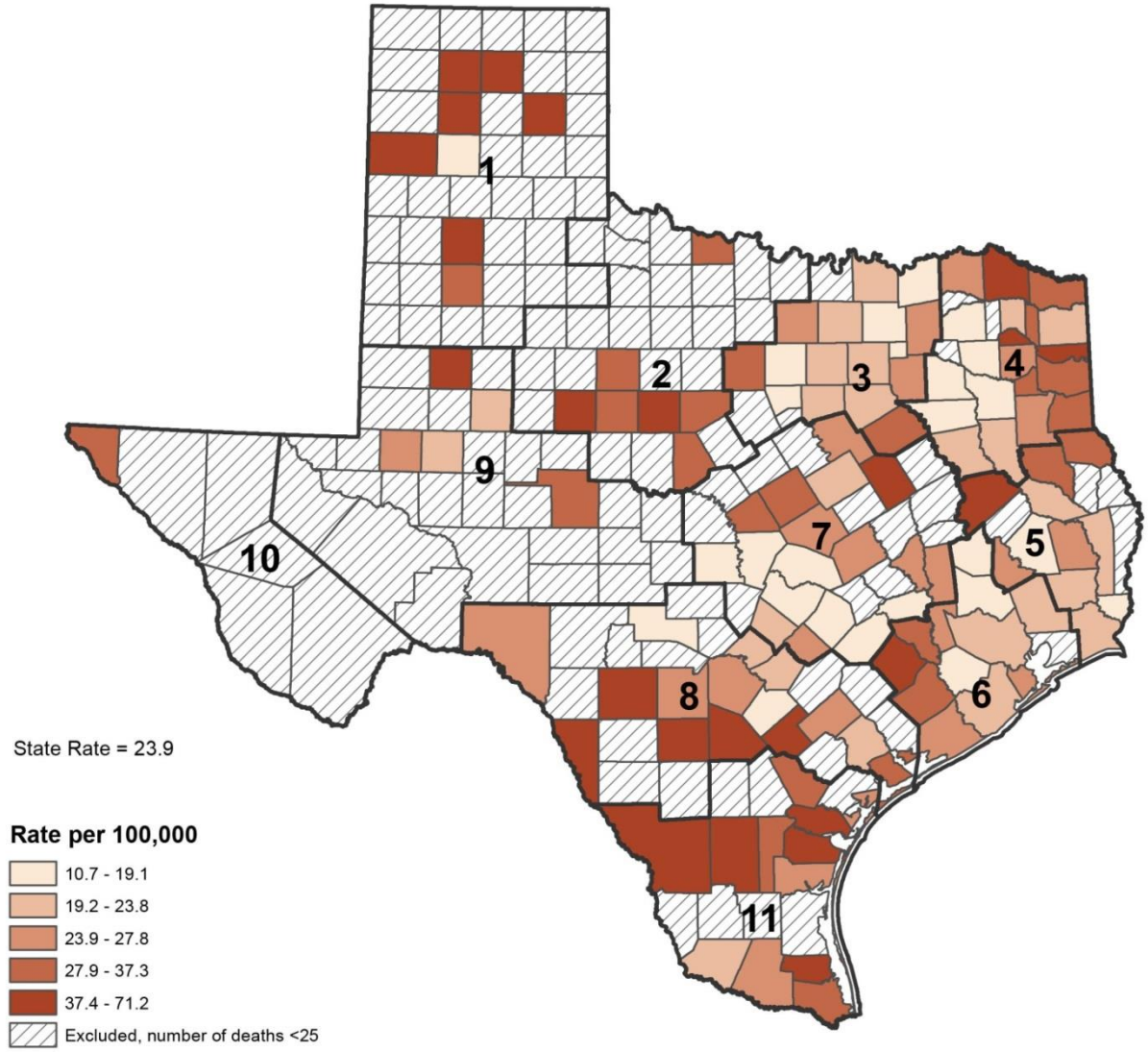
White, non-Hispanic:	0.3%
Black, non-Hispanic:	No data available
Hispanic:	0.4%

[41] SEARCH Study Group. SEARCH for Diabetes in Youth: a multicenter study of the prevalence, incidence and classification of diabetes mellitus in youth. *Control Clin Trials* 25(5): 458-471, 2004.

Diabetes Mortality

Diabetes was the seventh leading cause of death in Texas in 2010.[42] In 2010, about **4,738** deaths were directly attributed to diabetes.

Diabetes Age-Adjusted Mortality Rate by County, Texas, 2007-2010.
Diabetes as underlying cause of death



Texas Department of State Health Services, Texas Vital Statistics. ICD-10 codes for E10-E14.

The map above shows the age-adjusted mortality rates per 100,000 persons for Texas by county for the years 2007 through 2010, with diabetes as the underlying cause of death. The state rate for the four years is **21.7 per 100,000.** A number of counties in Health Service Regions 8 and 11 had significantly higher diabetes mortality rates than the state rate. Many counties along the

[42] Texas Department of State Health Services, Texas Center for Health Statistics. All ages are included in mortality data.

eastern part of our state had higher diabetes mortality rates than the state, but these rates were not significantly different than the rate for the state as a whole. Since 2008, the age-adjusted mortality rate for diabetes in Texas declined significantly from **25.5 per 100,000** to **21.7 per 100,000** population in 2010.

Diabetes Mortality Rate (Per 100,000) by Race/Ethnicity, Texas, 2010[43]

The 2010 diabetes mortality rate for Texas was 21.7 deaths per 100,000 persons. Mortality rates by race/ethnicity in 2010 were:

- 16.5 per 100,000 non-Hispanic whites
- 34.4 per 100,000 Hispanics
- 36.8 per 100,000 non-Hispanic blacks
- 14.4 per 100,000 persons who fall in the "Other" category

The 2010 mortality rates (per 100,000) for non-Hispanic blacks and Hispanics were more than double that of non-Hispanic whites.

Treatment of Diabetes

Diabetes can lead to serious complications, such as blindness, kidney damage, cardiovascular disease, and lower-limb amputations, but people with diabetes can lower the occurrence of these and other complications by controlling blood glucose, blood pressure, and blood lipids. Many people with type 2 diabetes can control their blood glucose by following a healthy meal plan and exercise program, losing excess weight, and taking oral medication. Some people with type 2 diabetes may also need insulin to control their blood glucose. To survive, people with type 1 diabetes must have insulin delivered by injection or a pump. Among adults with diagnosed diabetes (type 1 or type 2), 14 percent take insulin only, 13 percent take both insulin and oral medication, 57 percent take oral medication only, and 16 percent do not take either insulin or oral medication.[44] Medications for each individual with diabetes will often change during the course of the disease. Many people with diabetes also need to take medications to control their cholesterol and blood pressure. Self-management education or training is a key step in improving health outcomes and quality of life. It focuses on self-care behaviors, such as healthy eating, being active, and monitoring blood sugar. It is a collaborative process in which diabetes educators help people with or at risk for diabetes gain the knowledge and problem-solving and coping skills needed to successfully self-manage the disease and its related conditions.

Treatment of type 1 diabetes. Lack of insulin production by the pancreas makes type 1 diabetes particularly difficult to control. Treatment requires a strict regimen that typically includes a carefully calculated meal plan, planned physical activity, self-blood-glucose testing several times a day, and multiple daily insulin injections.

Treatment of type 2 diabetes. Treatment typically includes a balanced meal plan, daily physical activity, self-blood-glucose monitoring, and in many cases, oral medication and/or insulin.

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[43] Ibid.

[44] Centers for Disease Control and Prevention. National diabetes fact sheet: general information and national estimates on diabetes in the United States, 2007. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2007.

Complications of Diabetes

Heart disease and stroke. Heart disease is the leading cause of death among persons with diabetes in the United States. Heart disease and stroke account for about 65 percent of deaths in people with diabetes.[45]

- In 2004, heart disease was noted on 68 percent of diabetes-related death certificates among people aged 65 years or older.
- In 2004, stroke was noted on 16 percent of diabetes-related death certificates among people aged 65 years or older.
- Adults with diabetes have heart disease death rates about 2 to 4 times higher than adults without diabetes.
- The risk for stroke is two to four times higher among people with diabetes.

High blood pressure. In 2005–2008, of adults aged 20 years or older with self-reported diabetes, 67 percent had blood pressure greater than or equal to 140/90 millimeters of mercury (mmHg) or used prescription medications for hypertension.[46]

Blindness. Diabetes is the leading cause of new cases of blindness in adults 20 to 74 years old. Diabetic retinopathy causes from 12,000 to 24,000 new cases of blindness each year.[47]

Kidney disease. Diabetes is the leading cause of kidney failure, accounting for 44 percent of new cases in 2008. In 2008, 48,374 people with diabetes began treatment for end-stage kidney disease in the United States. In 2008, a total of 202,290 people with end-stage kidney disease due to diabetes were living on chronic dialysis or with a kidney transplant in the United States.[48]

Nervous system disease. About 60 to 70 percent of people with diabetes have mild to severe forms of nervous system damage. The results of such damage include impaired sensation or pain in the feet or hands, slowed digestion of food in the stomach, carpal tunnel syndrome, and other nerve problems. Almost 30 percent of people with diabetes aged 40 years or older have impaired sensation in the feet (i.e., at least one area that lacks feeling). Severe forms of diabetic nerve disease are a major contributing cause of lower-extremity amputations.[49]

Amputations. In the United States, more than 60 percent of nontraumatic lower-limb amputations occur in people with diabetes. In 2010, about 73,000 nontraumatic lower-limb amputations were performed in adults 20 years or older with diagnosed diabetes.[50] The Texas

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[45] Centers for Disease Control and Prevention: National diabetes fact sheet: general information and national estimates on diabetes in the United States, 2011. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2011.

[46] Ibid.

[47] Centers for Disease Control and Prevention: National diabetes fact sheet: general information and national estimates on diabetes in the United States, 2007.

[48] Centers for Disease Control and Prevention: National diabetes fact sheet: general information and national estimates on diabetes in the United States, 2011.

[49] Ibid.

[50] Centers for Disease Control and Prevention: National Diabetes Statistics Report, 2014

Health Care Information Collection reports that, in 2011, 3,608 hospitalizations for amputations occurred in persons with diabetes in Texas.[51]

Dental disease. Periodontal (gum) disease is more common in people with diabetes. Among young adults, those with diabetes have about twice the risk of those without diabetes. Persons with poorly controlled diabetes (A1c > 9 percent) were nearly three times more likely to have severe periodontitis than those without diabetes. Almost one-third of people with diabetes have severe periodontal disease with loss of attachment of the gums to the teeth measuring five millimeters or more.[52]

Other complications. Uncontrolled diabetes leads to biochemical imbalances that can cause acute life-threatening events, such as diabetic ketoacidosis and hyperosmolar (nonketotic) coma. People with diabetes are more susceptible to many other illnesses and, once they acquire these illnesses, often have worse prognoses. For example, they are more likely to die with pneumonia or influenza than people who do not have diabetes.[53]

Diabetes Costs

Diabetes contributes to a number of chronic complications and is associated with an increased utilization of health-care services. With an increasing prevalence of diabetes and an aging population, the burden of diabetes in the nation and Texas continues to grow. According to the American Diabetes Association and the Centers for Disease Control and Prevention, the direct and indirect costs of diabetes in the United States reached more than $245 billion in the United States in 2012. This estimate includes $176 billion in excess medical expenditures attributed to diabetes, as well as $69 billion in reduced national productivity. People with diagnosed diabetes, on average, have medical expenditures that are approximately 2.3 times higher than the expenditures would be in the absence of diabetes. Approximately one in five health-care dollars is attributed to diabetes.[54]

In 2012, diabetes cost an estimated $18.5 billion in Texas, including $12.3 billion in direct medical costs and $6.2 billion in indirect costs.[55]

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[51] Source: Texas Health Care Information Collection. Texas Hospital Inpatient Discharge Public Use Data File, 2011.

[52] Centers for Disease Control and Prevention: National diabetes fact sheet: general information and national estimates on diabetes in the United States, 2011.

[53] Ibid.

[54] American Diabetes Association. Economic Costs of Diabetes in the U.S. in 2012. *Diabetes Care*. 2013 Apr;36(4):1033-46. Epub 2013 Mar 6.

[55] Texas Health and Human Services Commission. Report on Direct and Indirect Costs of Diabetes in Texas As Required By S.B. 796 82nd Legislature, Regular Session, 2011. December 2012. http://www.hhsc.state.tx.us/reports/2012/direct-indirect-costs-diabetes-texas.pdf

Appendix 5 − Links to Additional Reports

In addition to this assessment of existing state programs for the prevention and treatment of diabetes, the following state agency reports also describe the burden of diabetes in Texas and state initiatives to improve diabetes treatment.

- Diabetes Self-Management Education Pilot Report
  http://www.hhsc.state.tx.us/reports/2012/diabetes-self-management-training-pilot.pdf

- Direct and Indirect Costs of Diabetes Report
  http://www.hhsc.state.tx.us/reports/2012/direct-indirect-costs-diabetes-texas.pdf

- Texas Medicaid Diabetes Prevention and Treatment Report (Medicaid Priorities for Diabetes)
  http://www.hhsc.state.tx.us/reports/2013/SB796-Diabetes-Priorities-Report.pdf

- The Burden of Diabetes in Texas (Updated April 2013)
  http://www.dshs.state.tx.us/diabetes/PDF/data/DiabetesBurdenReport2013.pdf

- Report on Telemonitoring in the Texas Medicaid Program
  http://www.hhsc.state.tx.us/reports/2013/Rider-55-Report-HB1.pdf