Diabetes: A Comprehensive Approach
A Plan to Prevent and Control Diabetes in Texas 2010-2011

"Whether your focus is patient care, research, public policy, healthy living, or living daily with diabetes — all Texans have a role in diabetes prevention and control."

-Victor Gonzalez, MD, Chair

The Texas Diabetes Council’s newly updated and released Plan to Prevent and Control Diabetes in Texas endorses a comprehensive approach to diabetes over the upcoming biennium (2010-2011) and beyond. In preparing its latest plan, the TDC reviewed state projections of diabetes prevalence and burden for the next forty years. Diabetes systems dynamics modeling tools developed by the Centers for Disease Control and Prevention provided new insight into how clinical, lifestyle, and health policy interventions can offer a cumulative effect in reducing the health and economic burden of diabetes in Texas.

Diabetes: A Comprehensive Approach demonstrates how consistent progress on a number of intervention fronts — patient care, obesity prevention and access to health care — are required to reduce diabetes prevalence and burden from current levels by 2050.

Within this comprehensive framework, the TDC’s Strategic Plan for 2010-2011 includes five priority areas:

1. Advancing Public Policy Affecting Diabetes
2. Evaluating the Impact of Diabetes in Texas
3. Promoting Comprehensive Programs for the Prevention of Diabetes
4. Increasing Public Awareness, Promoting Community Outreach and Diabetes Education
5. Improving Diabetes Care and Prevention of Complications by Health Care Professionals

The TDC submits its plan to the Texas Department of State Health Services (DSHS), with copies provided to the Texas Legislature, prior to each legislative session so that data and recommendations may inform proposed legislation or appropriations affecting persons with diabetes. The 2008 Texas Diabetes Fact Sheet updates health policy planners on estimated diabetes prevalence and mortality in Texas as well as current statistics on complications and direct and indirect costs.

State agencies affected by the plan are required to report on implementation of the plan to the TDC, the Legislative Budget Board, and the Governor’s Office of Budget and Planning. Reports received by the TDC, including activities of the DSHS Diabetes Program, are presented in the Activities and Services Update section of the plan. State agencies including DSHS, the Texas Department of Assistive and Rehabilitative Services, and Texas Medicaid provided new data on numbers of clients with diabetes served and costs.

In addition to reports required by state legislation passed during the 80th session, a summary of diabetes-related legislation from 1983 to 2007 is included in the appendices. A copy of the plan can be downloaded from the TDC web site: www.texasdiabetescouncil.org.

Elements of A Comprehensive Approach to Diabetes

- Community/Worksite Environmental Policy Change
- School – Comprehensive School Health
- Clinical – Improving Provision of Primary, Secondary, and Tertiary Prevention
- Media
- Efforts Targeted to Diverse/Special Populations
- Surveillance/Evaluation
### Family-Focused Diabetes Projects Share Community Prevention Models

In December, the Texas Diabetes Program recognized the accomplishments of three community-based organizations completing three-year projects that address diabetes prevention and management among high-risk individuals and families with limited access to health care.

- **The City of San Antonio Metropolitan Health District** initiated *Families Preventing Diabetes / Familia Preveniendo la Diabetes*, a collaborative project in San Antonio that partners the Texas Diabetes Institute with two faith-based, non-profit organizations - Antioch Community Transformation Network, and the House of Neighborly Service. Promotoras/community health workers trained in diabetes outreach offer culturally relevant classes that encourage family participation. *Salsa Caliente* physical activity classes are co-sponsored by the Texas Diabetes Institute and diabetes management skills are taught by the program manager or promotoras using the *Diabetes Education and Empowerment Program* (DEEP).

- **Corpus Christi Nueces County Public Health District’s Coastal Bend Diabetes Initiative** works through the Texas A&M University Health Science Center - Coastal Bend Health Education Center to enhance diabetes services for those in need. Diabetes survival skills classes have been taught to almost 1,000 participants, and a healthy living series targets chronic disease prevention in schools, worksites and churches. The initiative includes a *Diabetes Management of School Children* workshop taught through the local Education Service Center four times per year.

- **Jefferson County and Texas A&M University AgriLife Extension** provides facilities and administrative support for the *Jefferson County Family-Focused Diabetes Project* and integrates teachings of six diabetes workshops into family and church life. The project has trained 30 representative from 15 local churches to offer *Project POWER*, and incorporates AgriLife Extension’s *Do Well Be Well* curriculum in diabetes management skills classes.

### Focused Diabetes Prevention and Control Program

*Project POWER*, a faith-based program for African-Americans developed by the American Diabetes Association, integrates teachings of six diabetes workshops into family and church life. The project has trained 30 representative from 15 local churches to offer *Project POWER*, and incorporates AgriLife Extension’s *Do Well Be Well* curriculum in diabetes management skills classes.

### Community Health Center of Lubbock, Inc., Receives Golden Lantern Award

Based in southeast Michigan and the Lower Rio Grande Valley of South Texas, Migrant Health Promotion works with farmworkers and their rural communities to improve health, increase access to care and create migrant labor camps and communities that support health. At the 2008 Midwest Stream Farmworker Health Forum held in New Orleans last November, *Community Health Center of Lubbock, Inc.*, (CHCL) received Migrant Health Promotion’s *Golden Lantern Promotor(a) Program Award*. The award reflects the ability of promotores(as) to “show the way” to good health and health care for their communities.

In 2002, CHCL added the The Primer Paso II Promotor(a) Program to its existing diabetes outreach model for the underserved population of Lubbock. In addition to diabetes management classes conducted by promotores (as), the program started three walking clubs with participants logging a combined total of 2,568 miles walked in a one-year period.
TDC Co-Hosts Dallas Diabetes Health Disparities Roundtable in Irving

November 20, 2008 - The Texas Diabetes Council, American Diabetes Association, HHSC Office for the Elimination of Health Disparities and Texas Health Institute hosted the Dallas Diabetes Health Disparities Roundtable at Baylor Medical Center in Irving. The event brought together more than fifty stakeholders from the Dallas/Fort-Worth area to:

- highlight innovative ways that providers and community organizations are addressing diabetes and health disparities in the region,
- identify ways existing projects can be expanded and sustained, and
- develop new collaborations and partnerships across all stakeholder groups.

Speakers at the event included:
Victor H. Gonzalez, MD, Chair, Texas Diabetes Council;
Donna Rice, MBA, RN, BSN, CDE, Baylor Health Care System;
Klaus K. Madsen, MPH, Vice President, Texas Health Institute;
Florentina Velasco Fortner, Chief Executive Officer, Dallas Concilio of Hispanic Service Organizations;
Noel Santini, MD, Medical Director, COPC, Parkland Health and Hospital System;
Liz Trevino Dawson, DrPH, Manager, Health Equity, Baylor Health Care System;
Tuala Williams, General Manager, The Dallas Examiner;
Charles Bell, MD, Deputy Executive Commissioner, Texas Health and Human Services Commission.

During the final session of the meeting, participants broke into three groups to develop model community projects addressing diabetes. Texas Health Institute will compile these into a report to stakeholders. In 2009, THI will conduct conference calls with roundtable participants to identify ways to implement these or other projects.

The roundtable event was sponsored by Novo Nordisk and Methodist Health Ministries of South Texas, and hosted by Baylor Health Care System.

Presentations from the event can be found on the Texas Health Institute web site at http://www.texashealthinstitute.org/library.php.

Memorial Health System of East Texas Implements Children’s Lifestyle Intervention Program

Legislation passed during the 80th legislative session authorized the Department of State Health Services and the Texas Diabetes Council to assist in establishing a diabetes pilot program at Memorial Health System of East Texas that would provide a comprehensive approach to promoting the prevention and treatment of diabetes and acanthosis nigricans (AN).

The pilot program would:
- focus on an epidemiological approach to disease surveillance;
- identify the prevalence of AN and diabetes in Memorial Health System's service area;
- provide health and wellness information to people positively screened for diabetes and AN;
- improve access to care for people diagnosed with diabetes and AN; and
- study the cost savings of early detection and treatment of diabetes and AN.

In 2007, Memorial Health System assembled a local team of physicians and diabetes educators to develop and implement the program. Focusing on children, the team devised the Children’s Lifestyle Intervention Program (CLIP), a nine-week educational program for sixth grade students that attempted to answer the basic question: Does a community-based lifestyle education program improve healthcare status in a group of children at increased risk for diabetes?

Two local schools, Lufkin Middle School and Livingston Junior High School participated in the study. Sixth graders at Livingston served as the control group for the program, while Lufkin sixth-graders received the lifestyle intervention program (CLIP) which incorporated “The Power of Prevention” curriculum, produced by the American Association of Clinical Endocrinologists (AACE) and elements of “The Power of Choice, Helping Youth Make Healthy Eating and Fitness Decisions,” developed by the USDA Food and Nutrition Service and the US Department of Health and Human Services FDA.

CLIP included a kick-off media event, physical activity tracking by students, a survey to assess program impact on parental knowledge of healthy eating and activity, and health screening of students prior to and following program implementation. Based on health screening, a subset of students from each school was determined to be at increased risk for diabetes.

At the end of the program, comparison of health screenings of students at both schools demonstrated that:
- Waist size decreased by 2 centimeters in the experimental group.
- Fasting glucose decreased by 16 points in the experimental group.
- Insulin levels decreased 7 points in the experimental group.
- Triglycerides decreased 25 points in the experimental group.
- HDL cholesterol increased by 8 points in the experimental group.
- LDL cholesterol showed no change.
- Total cholesterol increased by 5 points in the experimental group.
- There was no statistically significant difference demonstrated in BMI or blood pressures.

The CLIP study brought together the local expertise and resources of public schools, the medical community, private interests and the healthcare industry in an effort to benefit the children of this East Texas community. To this end, the study was deemed a community success.

Memorial Health System submitted its final report describing the pilot program and recommendations to the Texas Diabetes Council. The full report can be online at www.dshs.state.tx.us/diabetes/PDF/CLIPFinalReport091708.pdf.
The Texas Behavioral Risk Factor Surveillance System (BRFSS) estimates prevalence of diabetes in Texas using a statewide phone survey of Texas households. Until 2007, data was only collected on adults, aged eighteen and older. For the first time, the 2007 BRFSS questionnaire asked survey participants whether a child (under 18 years of age) in the household has diabetes, and if so, what type of diabetes the child has.

Based on survey response, the 2007 estimated childhood diabetes prevalence (any type) for Texas is 0.4%. When asked if the child with diabetes had type 1 or type 2, the majority of initial responses were “Don’t Know / Not Sure.” As a result, response to this question was deemed inadequate to provide an estimate of prevalence by type.

This first year of BRFSS questions related to childhood diabetes serves as a field test of how well questions are understood and answered. As with any new data, responses over multiple years may provide a better picture of diabetes prevalence among Texas’ youth.

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Note: All reported rates are weighted for Texas demographics and the probability of selection.

Prepared by: Community Assessment Team, Center for Health Statistics, Texas Department of State Health Services, October 15, 2008

Self-Reported Pre-Diabetes and Risk-Reduction Activities — United States, 2006

The November issue of Morbidity and Mortality Weekly Report featured the first nationally representative estimates of the prevalence of self-reported pre-diabetes in the U.S. adult population and the first estimates of the prevalence of risk-reduction activities among adults who had been told they had pre-diabetes. Results from the 2006 National Health Interview Survey indicate that, in 2006, only 4% of U.S. adults were aware they had pre-diabetes or a condition indicative of pre-diabetes. In addition, 24% of U.S. adults with pre-diabetes did not participate in any of three recommended risk-reduction activities.

The low prevalence of self-reported pre-diabetes described in this report likely indicates a low level of awareness among persons who have pre-diabetes. In contrast, 26% of U.S. adults aged >20 years were estimated to have impaired fasting glucose based on laboratory test results in the 2003-2006 National Health and Nutrition Examination Survey (NHANES). Other NHANES data, from 1988-1994, indicate an even higher prevalence of pre-diabetes among persons aged 40-74 years. During that period, NHANES conducted oral glucose tolerance tests of persons in that age group and estimated that 40% of adults aged 40-74 years had impaired fasting glucose, impaired glucose tolerance, or both.

Centers for Disease Control and Prevention. MMWR 2008;57: 1203-1205

http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5744a3.htm
TDC Medical Advisory Members Publish Articles in U.S. Endocrinology

Craig Spellman, PhD, DO, TDC Health Care Professionals Advisory Committee Chair, and Priscilla Hollander, MD, PhD, TDC Medical Professionals Advisory Subcommittee Chair, authored articles in U.S. Endocrinology, a bi-annual journal that enables time-pressed physicians to stay abreast of key advances and opinion in endocrine practice in the U.S.

Spellman co-authored the article "Advancing Insulin Therapy – An Insulin Pump or Basal-Prandial Insulin Regimen?" with Ramachandra Rahul V Chemitiganti, MD. Hollander authored "A Review of Type 2 Diabetes Drug Classes." Both articles can be accessed online at http://www.dhs.state.tx.us/diabetes/hcstand.shtm.

2008 Physical Activity Guidelines for Americans

New guidelines to promote physical activity were released in October by the U.S. Department of Health and Human Services. The Physical Activity Guidelines summarize the latest knowledge about activity and health, targeting specific population subgroups such as seniors and children.

The Physical Activity Guidelines for Americans are the most comprehensive of their kind. They are based on the first thorough review of scientific research about physical activity and health in more than a decade. A 13-member advisory committee appointed in April 2007 by Secretary Michael Leavitt reviewed research and produced an extensive report. Key guidelines are available for the following groups:

- Children and Adolescents
- Adults
- Older adults
- Women during pregnancy
- Adults with disabilities
- People with chronic medical conditions

To read more about the Guidelines, visit http://www.health.gov/PAGuidelines/.
Low Birth Weight and Type 2 Diabetes

In the September Issue of Epidemiology, data from the “Screening Across the Lifespan Twin Study,” conducted by phone with twins included in the Swedish Twin Registry, was used by researchers to show that decreasing birth weight was associated with increasing risk of type 2 diabetes. Study of dizygotic twin pairs and monozygotic twin pairs demonstrated that genetic factors contributed to the association between low birth weight and risk of type 2 diabetes later in life. The researchers note that the study is the first study large enough to address and support a previously proposed hypothesis that low birth weight and type 2 diabetes may have a common genetic etiology.


Texas Diabetes Council Members

Council members are appointed by the Governor and confirmed by the Senate. Membership includes a licensed physician, a registered nurse, a registered and licensed dietitian, a person with experience in public health policy, three consumer members, four members from the general public with expertise or commitment to diabetes issues, and five state agency representatives who are non-voting members.

For information on the Texas Diabetes Council/Program, contact:

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