disease prevention news

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Good News for Diabetes Prevention in Texas

Remarkable developments in recent years are giving a louder voice to what was once known as the "silent killer." Diabetes has been with us for centuries and threatens to reach epidemic proportions in the future. However, numerous medical and scientific advances, new state programs, and recently passed laws have brought much-needed attention to this ancient disease.

Texas Problems

An estimated 865,347 adults in Texas (6.5% of the population) have diagnosed diabetes. An equal number are estimated to have the disease but not know it. The estimated cost of diabetes in Texas is $4 billion annually.

Diabetes disproportionately affects minority populations. According to estimates derived from 1995 TDH Behavioral Risk Factor Surveillance System data, 11.4% of African Americans and 9.3% of Hispanics in Texas have diabetes, as compared with 5.8% of the Anglo population.

Type 2 diabetes, formerly known as non–insulin-dependent diabetes, accounts for about 90% of all cases of diabetes. It usually develops among middle-aged or older persons as a result of a number of factors including obesity and lack of exercise. Type 2 diabetes—which can be managed through diet, exercise, and oral medications—may eventually require insulin use. Type 1 diabetes (formerly known as insulin-dependent) is most common in children and young adults. Persons with Type 1 diabetes must inject insulin since they produce little or none on their own.

In Texas and nationwide, the incidence of complications associated with diabetes continues to increase because of delays in diagnosis; poor patient compliance; a communication gap between health care providers and patients; and a general lack of knowledge about the disease, its complications, and available treatments.

Texas Solutions

In 1993 the National Institute of Diabetes and Digestive and Kidney Disease released the results of the Diabetes Control and Complications Trial (DCCT). This study provided conclusive evidence that tight control of blood glucose levels can prevent or delay the development of complications associated with diabetes. Scientific validation of what many diabetes professionals already believed set the stage for several other advances in prevention and treatment. Among them was the identification of genes that cause certain types of diabetes and the development of new medications that improve the body's ability to use insulin.

The Texas Diabetes Council has worked for over a decade to expand funding for diabetes programs in the state. Since 1983, it has increased funding for diabetes prevention in Texas from zero to more than $3.75 million state and federal dollars. These funds have been used to create community-based diabetes education and awareness programs throughout the state, develop diabetes public awareness campaigns, provide annual eye exams to low-income patients at risk for eye disease, and create core projects for the Texas Diabetes Institute in San Antonio.

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Also in this issue:

Currently under construction, the Texas Diabetes Institute will open its 153,000-square-foot diabetes treatment facility in Spring 1998. The Institute will provide medical treatment services to residents of San Antonio and South Texas, a population hard hit by diabetes. Research conducted by the Institute will be translated statewide into improved methods for patient and professional education.

The Texas Diabetes Council established the Managed Care Work Group to insure a consistent level of quality in diabetes treatment. The purpose of this group is to implement minimum standards for diabetes care through the systems currently in place for diabetes treatment and education under the state's managed care organizations. Collaborating with representatives of Texas' managed care organizations, the American Diabetes Association, state agencies, benefits managers, and employer groups, the Managed Care Work Group published its initial recommendations in its 1995 report, *Minimum Standards for Diabetes Care Under Managed Care in Texas*. This report included

- a patient flow sheet for use by physicians in tracking the diabetes management services each patient received, and
- a pharmacological algorithm for Type 2 diabetes for use as a general guide in prescribing diabetes medications.

Among the report's recommended examinations and tests for diabetes patients, two were emphasized:

- a glycosolated hemoglobin test every 6 months (minimum)
- annual testing for microalbuminuria (minimum)

A glycosolated hemoglobin test measures glucose adherance to part of the hemoglobin in red blood cells over a 3-month period. As a result, this test can show how well a patient's blood sugar levels have been controlled over a long period of time. A fasting plasma glucose (FPG) test, in contrast, indicates a person's blood sugar level at the moment a blood sample is taken.

Microalbuminuria, the presence of the protein albumin in the urine, is a marker for the early stages of kidney disease. A simple, inexpensive urine test can detect albumin, at which point physicians should work with their patients to bring their diabetes into better control, paying special attention to controlling blood pressure. With early detection, kidney disease often can be delayed or its severity decreased. Kidney disease detected at later stages often requires treatment with renal dialysis and/or a kidney transplant and results in a greatly reduced quality and length of life.

To remind health care professionals of these and other important tests and procedures, the Texas Diabetes Council sent both the report and the treatment algorithm to health professionals statewide. The Council also worked with managed care organizations to developed continuing medical education programs that promote adherence to the minimum standards.

In 1997 new guidelines were established for diagnosing diabetes. Formerly, a diagnosis of diabetes was confirmed with laboratory results indicating an FPG level of 140 mg/dL. A diagnosis is now made when 2 readings on 2 different days show an FPG level of 126 mg/dL. With this new diagnostic value, more diabetes cases will be diagnosed, and physicians must be ready to instruct their patients in proper diabetes management. The Managed Care Work Group is currently revising its treatment algorithm to reflect the new guidelines for diagnosis as well as new medications available for treatment.

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Legislation

During the 1997 Texas Legislative Session, two bills were passed which will make diabetes management easier for most patients who have standard health insurance coverage and for some who are covered by Medicaid.

Senate Bill 162 created the Texas Diabetes Care Pilot Program. Modeled after a similar study in Maryland, this program will expand existing Medicaid coverage for patients with diabetes to include preventive services such as out-patient diabetes education, nutrition education, and case management. One or more specific regions of the state will be selected for program implementation with a goal of decreasing diabetes-related costs to Medicaid and improving overall health among Medicaid patients participating in the program.

Senate Bill 163 mandates that health benefit plans provide coverage for diabetes equipment, supplies and self-management training programs to insured individuals with diagnosed diabetes. Among the covered supplies are blood glucose monitors and testing strips, syringes, prescriptive and non-prescriptive oral agents, insulin, visual reading strips, and urine test strips. This bill also requires that health benefits cover patient education in diabetes management, including nutritional counseling and proper use of equipment and supplies. The health educator must be a licensed, registered, or certified health professional.

National Efforts

At the national level, Medicare benefits have been expanded to make self-monitoring devices and outpatient education available to elderly Medicare patients with diabetes.

Texas is one of four states where the Centers for Disease Control and Prevention (CDC) is launching a campaign to encourage persons with diabetes to be vaccinated against influenza annually. (*See DPN Vol.57, No. 20, September 29, 1997.*) Compared with those who do not have diabetes, persons with diabetes are 6 times more likely to be hospitalized during influenza epidemics. Moreover, persons with diabetes are also more likely to die from complications of influenza or pneumonia.

For further information, call the Texas Diabetes Program/Council at (512) 458-7490.

Next Steps

As the American Diabetes Association, the Texas Diabetes Council, and diabetes prevention programs across the state recognize American Diabetes Month this November, there is growing evidence that Texas will be prepared to address this public health threat. The effects of this landmark year for diabetes control will be put to the test as the Texas population ages and minority populations continue to grow.

Prepared by Richard Kropp and Debra F. Owens, MS, RD/LD, Director, TDH Texas Diabetes Council.

Diabetes Patient and Provider Education

The Texas Diabetes Program/Council offers free, low-literacy diabetes patient education materials through the Texas Department of Health warehouse. A list of available education materials and copies of the Council's "Minimum Standards for Diabetes Care Under Managed Care in Texas" report are available to health professionals.

A continuing medical education program entitled "Improving Diabetes Care in Texas" is offered in various locations throughout the state each year to educate physicians about the latest developments in diabetes treatment.

Call (512) 458-7490 for further information about educational materials and programs.

Epilepsy in Texas

A public health goal this November, which is also National Epilepsy Month, is to raise awareness of a disease that affects an estimated 2,500,000 people nationwide–193,000 in Texas. Estimates for 1997 project that 8,570 new epilepsy cases will be diagnosed in Texas this year. This disease primarily affects children and young adults: 50% of patients develop epilepsy before age 25. Epilepsy is also increasing in the elderly population.

Epilepsy has no single cause, and, in about 70% of all cases, no cause can be identified. Of known causes, the most frequent are head injuries, birth injury, congenital infection, brain tumor, and stroke. Prompt detection and early medical intervention can greatly improve seizure control and quality of life for the patient. In about 85% of cases, full or partial control may be achieved. However, epilepsy still remains under diagnosed and under treated.

While surgery is becoming more common as a treatment option for epilepsy, antiepilepsy drugs (AED) remain the preferred initial treatment. Medication guidelines are included in this issue. Should medications fail to control seizures within 2 years, a referral to a comprehensive epilepsy center for a thorough evaluation is the suggested course of action.

For many people with epilepsy, public attitudes still present more of a problem than does the disease itself. Greater awareness and education are the keys to changing negative public attitudes toward epilepsy. Building partnerships with governmental, private, and other nonprofit epilepsy service providers is helping create an environment wherein persons with epilepsy can be seizure-free; can work, drive, and be productive citizens; and can seek assistance without stigma or discrimination.

Epilepsy Treatment Guidelines: Antiepileptic Drugs

Proper treatment, prognosis, and genetic counseling begin with the correct diagnosis of the type of epilepsy. It is also important for physicians to be aware that there is currently no scientific documentation that specifies which antiepilepsy drugs (AEDs) are best for most seizure types. Studies done to date have not been double-blind, crossover (or randomized) with sufficient numbers of patients followed long term. The following recommendations are based on clinical experience of Texas epileptologists.

General Guidelines

All other factors, such as efficacy, being equal, practitioners should try to use the least expensive AED. Newer drugs, such as Neurontin® and Lamictal®, are not necessarily better and are almost always more expensive. To improve compliance, it is advisable to use AEDs which can be taken once daily. Considerations regarding half-life or side-effects rarely require qid dosing (4 doses/day). See Figure 1 for a guide to adult dosing based predominantely on drug half-life.

To prevent anticonvulsant osteomalacia, administer 2 multiple vitamin pills (containing 800 international units of vitamin D) 4 times per day. Use bromides to treat epilepsy in porphyria.

Absence Epilepsy (petit mal). Ethosuximide (Zarontin®) is the AED of choice. Although valproate is equally effective, potentially fatal complications (rare) make it an unacceptable first choice. Use valproate for absence epilepsy plus myoclonic/clonic/tonic/atonic epilepsy.

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Partial Seizures. Phenobarbital, primidone, phenytoin, and carbamazepine are equally effective for complex partial seizures. Valproate and clorazepate are second line drugs for partial seizures.

Monotherapy

No scientific studies prove that monotherapy results in a better treatment outcome than does polypharmacy. Likewise, definitive research has not been done to prove that multiple AEDs are synergistic in the treatment of epilepsy. However, documented clinical experience has shown that polypharmacy is expensive, increases side effects, and increases the complexity of adjusting AEDs in the refractory patient.

It is preferable, therefore, to start with one AED and increase the dose to seizure control (short of clinical toxicity). Patients should never be given an arbitrary medication regimen of more than 3 AEDs. Combination drugs (eg, Dilantin® with phenobarbital) should not be used.

Monitoring

The recommended "therapeutic" range of blood levels for AEDs usually is a compromise between toxicity and efficacy. Although "therapeutic" is supposed to mean seizure control, total control of seizures rarely occurs. Blood levels should be considered only a **target range** when treatment is first instituted.

AED levels can never substitute for clinical judgment but can be used to assess

- Poor clinical control (compliance, metabolism)
- Dose-related side effects
- Drug or disease interaction
- "Routine" levels on controlled, nontoxic patients are not indicated.

Figure 1. Antiepileptic Drug (AED) Guide: Adult Dosing*

	Initial Dose	Usual Increment	Usual Maximum
Primary AED			
diphenylhydantoin (Dilantin®)	300 mg qd	50-100mg/1-2wks	400 mg
phenobarbital (Luminal®)	90 mg qd	30mg/2 wks	180 mg
carbamazepine (Tegretol®)	200 mg tid	200mg/3 days	1200 mg
primidone (Mysoline®)	250 mg tid	250mg/2 wks	1500 mg
Secondary AED			
valproate (Depakote®)	250 mg tid	250mg/3 days	1500 mg
clorazepate (Tranxene®)	7.5 mg tid	7.5mg/3 days	45 mg
methsuximide (Celontin®)	300 mg tid	300mg/week	1800 mg
clonazepam (Klonopin®)	0.5 mg tid	0.5 mg/3 days	3 mg
gabapentin (Neurontin®)	300 mg tid	300mg/3 days	3600 mg
lamotrigine (Lamictal®)	An epileptologist should determine dosage.		
topiramate (Topomax®)	An epileptologist should determine dosage.		

* dosages based predominantly on drug half-life.

The following guidelines for epilepsy treatment are provided by Richard Dasheiff, MD, Director of the Epilepsy Program at the Texas Tech Health Science Center in Lubbock. For advice on epilepsy treatment, contact Dr. Richard Dasheiff by email, ***dasheiff@ttu.edu****, or call (806) 743-2722. Dr. Dasheiff also maintains the following World Wide Web home page on epilepsy:* ***http://www.ttuhsc.edu/pages/neuro/ttep.htm.***

TDH Epilepsy Program

The 67th Texas Legislature authorized the Texas Department of Health (TDH) to establish the Epilepsy Program with an initial funding level of $250,000. The Epilepsy Program is administered by the Bureau of Kidney Health Care. Services are provided through contracts with nonprofit and governmental agencies to provide comprehensive outpatient care for persons with epilepsy or seizure-like symptoms. The program serves persons with epilepsy who are not eligible under Medicaid, Medicare, Chronically Ill and Disabled Children's Program, or any other public or privately funded programs. It also serves those who are uninsured or underinsured. Clients must meet income eligibility and be bona fide Texas residents. Service providers may charge the client a percentage of the cost of providing services based upon a percentage by which the client's income exceeds the extablished "poverty income guidelines." No one is refused services for inability to pay.

Services may include

- Diagnosis and treatment of the medical condition
- A case management system for continuity of care
- Integration of personal, social, and vocational support services
- Public awareness and educational services

Epilepsy Information Resources

Toll-Free Numbers

Epilepsy Foundation of America	(800) 332-1000
Chronically Ill and Disabled Children's Program	(800) 252-8023
Antiepileptic Drug Pregnancy Registry	(800) 223-2334
Epilepsy Foundation of Greater North Texas	(800) 447-0778
Medicaid-covered transportation	(800) 228-1705
Texas Rehabilitation Commission,Vocational Rehabilitaiton	(800) 628-5115

Service Providers

Amarillo: High Plains Epilepsy Association	(806) 372-3891
Dallas: Parkland Memorial Hospital	(214) 590-8842
El Paso: Katja Epilepsy Foundation	(915) 590-0924
Texas Tech University Health Science Center (TTUHSC)	(915) 545-6703
Houston: Epilepsy Assocation of Houston and the Gulf Coast	(713) 789-6295
Lubbock: Epilepsy Foundation for the South Plains	(806) 785-1171
TTUHSC Epilepsy Program	(806) 743-2722
Ft. Worth: Integrated Epilepsy Services (Easter Seal Society)	(817) 536-8693
San Antonio: Epilepsy Association of San Antonio and South Texas	(210) 308-9151

For Other Information Sources

Texas Department of Health Epilepsy Program	(512) 458-7796
Texas Department of Public Safety, Driver's License Application (or call the closest local office)	(512) 424-2000x3579

Internet Web Sites

http://www.efa.org
http://www.ninds.nih.gov
http://www.ttuhsc.edu/pages/neuro/ttep.htm
http://www.ttuhsc.edu/pages/neuro/neurol.htm

Bimonthly Statistical Summary of Selected Reportable Diseases

	HHSC Region											Selected Texas Counties								This Period		Cumulative(1)	
Selected Diseases/Conditions	1	2	3	4	5	6	7	8	9	10	11	Bexar	Dallas	El Paso	Harris	Hidalgo	Nueces	Tarrant	Travis	1996	1997	1996	1997
Sexually Transmitted Diseases(2)																							
Syphilis, primary and secondary	*1	*2	*20	*7	*7	*38	*7	*1	*0	*0	*3	*1	*16	*0	*31	*0	*1	*4	*1	121	*90	748	*552
Congenital Syphilis	*0	*0	*0	*0	*0	*10	*0	*1	*0	*0	*1	*0	*0	*0	*10	*0	*0	*0	*0	20	*12	145	*105
Resistant Neisseria gonorrhoeae	*0	*0	*0	*0	*0	*0	*0	*0	*0	*0	*0	*0	*0	*0	*0	*0	*0	*0	*0	0	*0	39	*7
Enteric Diseases																							
Salmonellosis	56	7	35	20	9	37	43	51	13	34	45	22	20	34	18	8	11	5	12	644	350	2452	1952
Shigellosis	55	3	30	10	7	25	76	104	8	32	18	48	5	32	20	6	3	13	27	667	368	2136	2053
Hepatitis A	33	1	56	13	22	49	36	52	7	20	157	42	23	20	37	76	6	14	23	664	446	2800	3386
Campylobacteriosis	13	1	5	1	0	4	19	13	1	5	4	10	1	5	2	2	2	1	13	185	66	784	745
Bacterial Infections																							
H. influenzae, invasive	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	2	6	5
Meningococcal, invasive	1	0	2	4	0	3	1	2	0	0	0	2	0	0	0	0	0	1	1	24	13	186	150
Lyme disease	0	0	5	0	0	0	0	0	0	0	0	0	1	0	0	0	0	4	0	6	5	82	34
Vibrio species	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	9	2	23	21
Other Conditions																							
AIDS(4)	3	8	197	26	14	362	87	83	8	25	41	34	137	24	295	9	8	36	14	919	705	4186	3868
Hepatitis B	2	2	8	6	6	4	6	11	3	0	23	8	3	0	1	2	6	3	3	206	71	1084	828
Adult elevated blood lead levels	1	0	18	2	0	0	0	6	0	0	0	5	9	0	0	0	0	0	0	77	27	328	220
Animal rabies - total	1	6	7	5	0	8	26	15	11	2	1	9	1	2	2	0	0	2	15	61	82	322	237
Animal rabies - dogs and cats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	23	11
Tuberculosis Disease(2)																							
Children (0-14 years)	3	1	4	0	0	10	1	1	1	1	5	0	3	1	10	2	2	1	1	17	27	118	120
Adults (>14 years)	2	9	72	9	5	119	17	25	2	14	52	14	46	14	93	17	10	22	9	342	326	1562	1484
Injuries(2)																							
Spinal Cord Injuries	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	19	8	254	59

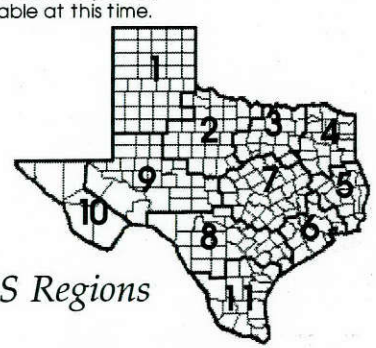
1. Cumulative to this month 2. Data for the STDs, tuberculosis, and spinal cord injuries are provided by date of report, rather than date of onset. 3. AIDS totals include reported cases from Texas Department of Corrections, which are not included in the regional and county totals. *Data incomplete **Region/county information unavailable at this time.

Call 1-800-705-8868 to report

1996 POPULATION ESTIMATES

HHSC REGIONS							
1	760,526	4	947,431	7	1,902,211	10	722,076
2	532,854	5	683,583	8	1,983,995	11	1,574,446
3	4,968,610	6	4,325,854	9	548,963		
STATEWIDE TOTAL 18,950,549							

SELECTED TEXAS COUNTIES			
Bexar	1,308,092	Hidalgo	475,917
Dallas	2,053,859	Nueces	313,907
El Paso	694,878	Tarrant	1,390,298
Harris	3,099,066	Travis	620,718



DHHS Regions

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Vaccine-Preventable Disease Update
Reported cases with onset from 9/1/97-10/31/97

Condition	County	Number of Cases	Date of Onset	Condition	County	Number of Cases	Date of Onset
Mumps	Bell	1	9/24	**Mumps**	Tarrant	1	10/26
	Bowie	1	9/2		Webb	1	10/3
		1	9/4				
		1	9/15	**Pertussis**	Bexar	1	10/16
	Brazoria	1	10/6			1	10/25
		1	10/9		Brazoria	1	9/1
	Dallas	1	9/8		Denton	1	9/3
	Hays	1	9/19		Travis	1	9/22
	Potter	1	9/21			1	10/8
	Tarrant	1	10/23				

YTD	Measles	Mumps	Pertussis	Rubella	Tetanus
	7	41	119	4	3