

Overview of Selected Cancers in Texas

Cancer is the second leading cause of death, accounting for 30,989 (23%) of all deaths in Texas during 1993. To assess the impact of cancer on the Texas population, patterns in incidence and mortality are discussed for five cancers that have generated much public health interest. Primary sites for these cancers include the lung, breast, colon, prostate, and cervix. These five cancer sites account for between 46% and 56% of all cancers in each racial/ethnic group. Behavioral risk factors and health practices also are presented.

The Texas Cancer Registry (TCR) of the Texas Department of Health (TDH) is responsible for the collection of cancer incidence data for the state. All facilities involved with either cancer diagnosis or treatment - such as hospitals, pathology labs, and radiation treatment centers - are required by law to report all cancer cases to TCR. The Registry maintains a database of all reported cases and conducts quality control and data consolidation procedures as well as data analyses. Prior to 1995, TCR had complete coverage (defined as at least 95% case ascertainment) in 5 of the 11 public health regions in Texas. Beginning in 1995, the area covered by TCR was extended to include complete coverage in eight public health regions. However, the TCR goal continues to be to collect cancer incidence data for the entire state.

The Behavioral Risk Factor Surveillance System (BRFSS), a monthly telephone survey conducted by the TDH Bureau of Chronic Disease Prevention and Control, monitors various risk factors for chronic diseases as well as trends in early detection efforts. In addition, the data are used to monitor Texas' progress toward meeting many of the US Department of Health and Human Services health status objectives for the Year 2000.¹

Methods

An incident case of cancer is defined as a report of a primary malignant neoplasm as recognized in International Classification of Diseases for Oncology.² Cancer incidence data from 1985 through 1991 for Public Health Regions 1, 5, 8, 10, and 11 were reviewed to determine primary cancer sites and consolidated to eliminate inclusion of multiple reports for a single case. In 1990, the five regions represented in this report had a combined population of 5.1 million, of which 49% were male and 51% were female. The racial and ethnic makeup included 46% white (non-Hispanic), 48% Hispanic, and 6% African American. Although African Americans constitute only a small percentage of the population in the five regions represented in the incidence data, the patterns of incidence and mortality observed for this group are comparable to national statistics.

Along with incidence data, cancer mortality data for the period 1989 through 1993 are included in the analysis. Data on all cancer deaths reported among Texans for that time period were derived from computerized data files provided by the TDH Bureau of Vital Statistics.

BRFSS randomly selected persons aged 18 years or older to survey them about their health habits. The 1993 survey used a special type of probability cluster sampling: a multi-stage-cluster-design procedure based on the

Continued ☞

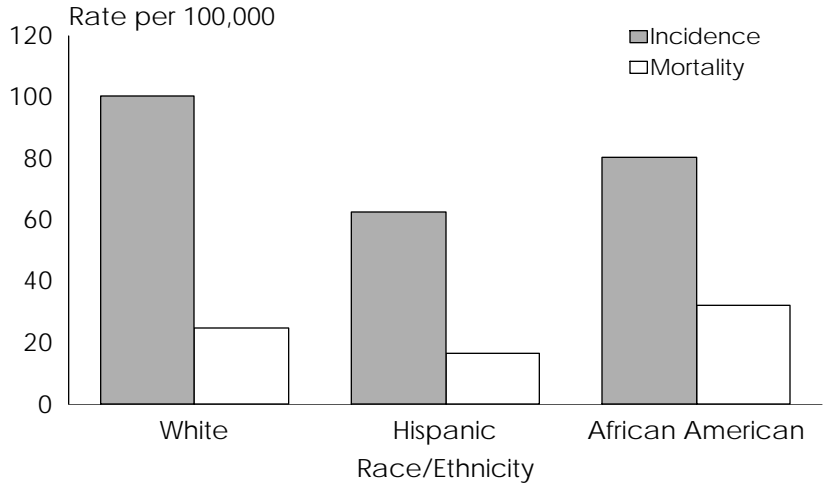
Also in this issue:
 Should Physicians Promote Healthy Lifestyles?
 Perspectives in Public Health Conference
 Conference Registration Form

Mitofsky-Waksberg method for random digit dialing.³ The 1994 survey used a list-assisted stratified random sample. Data were weighted to reflect the age, sex, and race distribution in Texas, as well as the probability of being drawn into the sample. Unless otherwise specified, BRFSS data presented in this report are from the 1994 survey.

Results

Lung Cancer. Lung cancer is the leading cause of cancer death among both men and women and is one of the most commonly diagnosed cancers among both sexes. During the study period, the lung cancer incidence rate in males was consistently higher than in females (Table 1). African American males had the highest incidence rate (114.7/100,000), followed by white males (87.0). Hispanic females had lower rates of both incidence (14.7) and mortality (12.4) than any sex or racial/ethnic group. Incidence and mortality rates were of similar magnitude in each sex and racial/ethnic group.

Figure 1. Age-Adjusted Incidence (1985-1991) and Mortality (1989-1993) Rates for Female Breast Cancer*



*Rates are age-adjusted to the 1970 US population

Cigarette smoking has been identified as a risk factor for developing lung cancer and is the most preventable cause of death in our society. Healthy People 2000 Objective 3.4 aims to “reduce cigarette smoking to a prevalence of no more than 15 percent among people aged 20 and older.” For people aged 20 and older, 21.1% now smoke. Of all people aged 18 and older, the percent of people who smoke has decreased from 23.6% in 1988 to 20.9% in 1993. This smoking prevention objective of 15% will not be met by the year 2000 if the current trend continues.

Breast Cancer. Breast cancer is the most commonly diagnosed cancer among females and the second leading cause of cancer death for that group. White females had the highest breast cancer

incidence rate: 25% greater than the rate for African American females and 60% greater than that for Hispanic females (Figure 1).

Table 1. Age-Adjusted Incidence (1985-1991) and Mortality (1989-1993) Rates Per 100,000 Population for Lung Cancer*

Sex	White		Hispanic		African American	
	Incidence	Mortality	Incidence	Mortality	Incidence	Mortality
Males	87.0	81.6	47.4	39.4	114.7	118.0
Females	39.1	36.1	14.7	12.4	34.1	32.2

*Rates are age-adjusted to the 1970 US population

Table 2. Age-Adjusted Incidence (1985-1991) and Mortality (1989-1993) Rates Per 100,000 Population for Colon Cancer*

Sex	White		Hispanic		African American	
	Incidence	Mortality	Incidence	Mortality	Incidence	Mortality
Males	37.0	18.3	23.0	11.4	41.2	27.6
Females	26.2	12.7	14.3	6.5	32.5	20.5

*Rates are age-adjusted to the 1970 US population

Despite having the highest incidence rate, white females had a lower mortality rate than did African American females (24.9 vs. 32.4, respectively). Hispanic women had the lowest mortality rate (16.6).

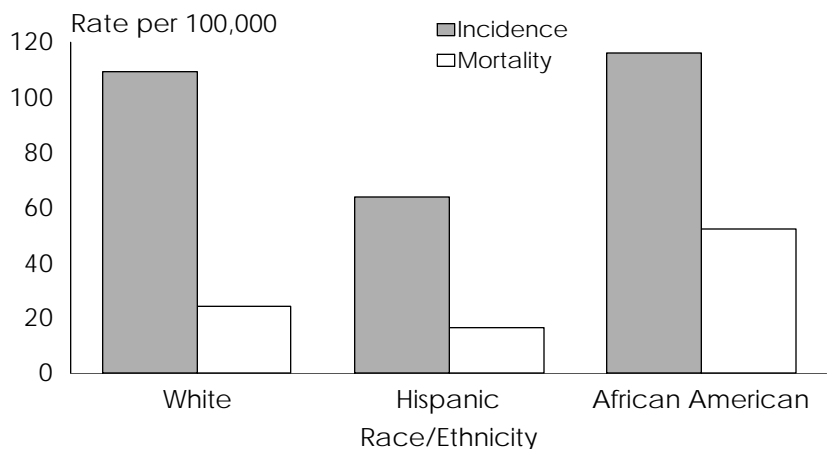
Early detection and treatment of breast cancer can reduce mortality by 30%.⁴ Healthy People 2000 Objective 16.11 has set a goal to “increase to at least 80 percent the proportion of women aged 40 and older who have ever received a clinical breast examination and a mammogram, and to at least 60 percent those aged 50 and older who have received them within the preceding 1 to 2 years.” Of those aged 40 and older, 70.6% reported having a mammogram and breast exam at some point in their lives. Whites reported 75.5% while non-whites reported 53.2%. Fifty-five percent of women aged 50 and older reported having a mammogram and breast exam within the past two years. Whites reported 59.7%, while non-whites reported 31.9%. Twenty-seven percent reported never having had one. Texas has already met the objective for women aged 50 and older and will easily meet the objective for women aged 40 and older if the current trend continues.

Colon Cancer. Colon cancer is among the top three diagnosed cancers and causes of cancer death. Females had lower colon cancer incidence and mortality rates than did males (Table 2). African Ameri-

can and white males had the highest colon cancer rates (41.2 and 37.0, respectively). Hispanics of both sexes had the lowest rates for both incidence and mortality.

Some research has suggested that screening for colon cancer with proctosigmoidoscopy may be effective in reducing the incidence and mortality of the disease.⁵ For people aged 50 and older, Healthy People 2000 Objective 16.13 states “increase...to at least 40 percent those who have ever received proctosigmoidoscopy.” The 1993 BRFSS survey asked, “Have you ever had a proctoscopic exam?” Of all persons aged 50 and older, 39.8% reported having a proctoscopic exam. This percentage increased with age. Texas has essentially met this objective already.

Figure 2. Age-Adjusted Incidence (1985-1991) and Mortality (1989-1993) Rates for Prostate Cancer*



*Rates are age-adjusted to the 1970 US population

Prostate Cancer. Prostate cancer is the most commonly diagnosed cancer in men and the second leading cause of cancer death within this group. As seen in Figure 2, African American males experienced a slightly higher rate of prostate cancer (116.2) than white males (109.0) did, and both groups had higher rates than that of Hispanic males (64.1). Despite having a relatively high incidence rate, white males had a mortality rate only slightly greater than that for Hispanic males (24.0 versus 16.4). African American males had the highest mortality rate. Although mortality rates were low in comparison with incidence rates, reflecting the relatively high survival rate for prostate cancer, African Americans experienced greater mortality than did whites and Hispanics.

Cervical Cancer. The incidence of invasive cervical cancer has decreased in recent years, largely due to organized early detection programs. However, national data indicate that racial/ethnic differences in risk continue to exist.⁶ As seen in Figure 3, Hispanic women had 1.9 times the rate (17.1) of cervical cancer of white women (9.0) and 1.4 times the rate of African American women (12.7). Although African American women had an incidence rate approximately midway between that of white and Hispanic women, this group had the

highest mortality rate (7.0) and the poorest estimated survival. TCR data for Texas indicate that a diagnosis of cervical cancer at the invasive stage is more likely for African American and Hispanic women than for white women. Prognosis is much poorer for invasive than *in situ* cervical cancer.

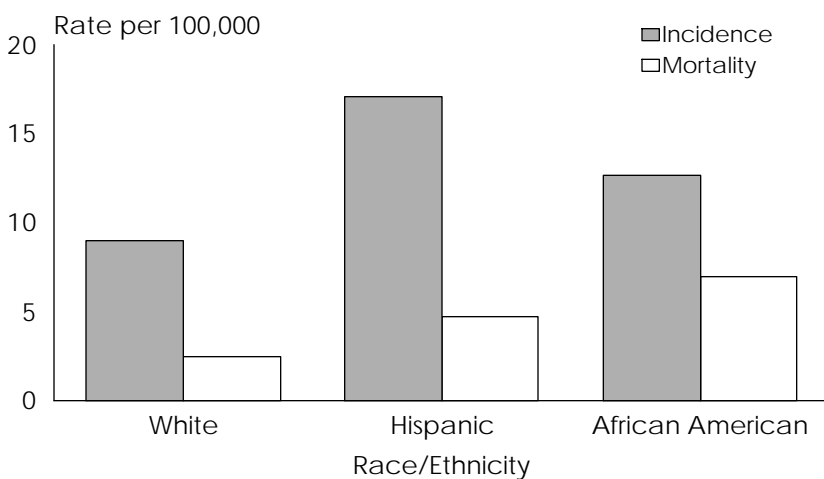
Studies in the United States and abroad have consistently shown dramatic reductions in the incidence of invasive cervical cancer following the implementation of cervical screening programs.⁷ Healthy People 2000 Objective 16.12 states "increase to at least 95 percent the proportion of women aged 18 and older with uterine cervix who have ever received a Pap test, and to at least 85 percent those who received a Pap test within the preceding 1 to 3 years." Of women aged 18 and older, 93.6% reported ever having a Pap test. Eighty-five percent of women reported having a Pap test within the last 3 years. Whites reported 88.9%, while non-whites reported 72.3%. Texas will meet this objective if the current trend continues.

References

1. Healthy People 2000, National Health Promotion and Disease Prevention Objectives. US Department of Health and Human Services, Sept 1990; DHHS Publication No. (PHS) 91-50212.
2. Percy C, Van Holten V, Muir C, editors. International Classification of Diseases for Oncology. 2nd ed. Geneva: World Health Organization, 1990.
3. Waksberg J. Sampling Methods for Random Digit Dialing. J Am Stat Assoc 1978;74:40-46.
4. Greenwalk P, Sondike EJ. Cancer Control Objectives for the Nation: 1985-2000. National Cancer Institute Monograph 1986;2:3.
5. Gilbertson VA. Proctosigmoidoscopy and polypectomy in reducing the incidence of rectal cancer. Cancer 1974; 34:936-939.
6. Ries LAG, et al, editors. SEER Cancer Statistics Review, 1973-1991. National Cancer Institute. NIH Pub. No. 94-2789. Bethesda (MD), 1994.
7. Miller AB, et al. Report of a National Work Shop on Screening for Cancer of the Cervix. Can Med Assoc J 1991;145(10).



Figure 3. Age-Adjusted Incidence (1985-1991) and Mortality (1989-1993) Rates for Cervical Cancer*



*Rates are age-adjusted to the 1970 US population

Prepared by Susan E. Carozza, MSPH, Kenneth Condon, and Christina Stovall, MSPH, Bureau of Chronic Disease Prevention and Control

Should Physicians Promote Healthy Lifestyles?

Research continues to show that physician advice is a critical determinant in patients' lifestyle behavior. Despite the apparent "deaf ear" on which the words often seem to fall, studies confirm that patients trust and often follow their physicians' advice.

There are three major reasons for physicians to continue, and even strengthen, their present health promotion efforts.

First, it is the right thing to do. Physicians recognize the benefits of good health for their patients' general well-being and prevention of disease. Studies have shown that diseases causing up to 75% of all deaths are preventable by modification of lifestyle factors such as diet, exercise, and smoking.¹ The more recent epidemics of acquired immunodeficiency syndrome (AIDS) and family violence also are heavily influenced by lifestyle behavior.

Second, physicians should promote healthy lifestyle choices because many patients will follow their physicians' advice. Results of a meta-analysis of 39 controlled trials demonstrated that face-to-face smoking cessation advice by physicians and other health care providers was the most important factor in determining patients' long term abstinence from tobacco use.²

Analysis of the cost-effectiveness of brief physician counseling during routine office visits found that smoking cessation advice cost about \$705 to \$988 per year of life saved in men and \$1,204 to \$2,058 per year of life saved in women.³ The cost of treating moderate to severe hypertension (diastolic blood pressure greater than 110 millimeters of mercury) is \$11,300 per year of life saved.³

Research demonstrates that educating and encouraging patients in appropriate cancer screening can result in cancer detection at earlier, more potentially curable stages,^{4,5} and that physician advice regarding such screening is essential. For

instance, several studies indicate that physician support is an important factor in a woman's use of mammography^{6,7,8} and performance of breast self-exam.^{9,10}

Several studies also have shown that physician counseling is effective in modifying patient behavior relative to diet, exercise, firearm violence prevention, and smoke-detector use.^{11,12,13}

Finally, physicians should provide counsel in lifestyle behaviors because their patients want them to. Patients are increasingly aware of the importance of lifestyle behaviors in preventing disease, yet the information they receive from friends, family, and the popular media is often erroneous or incomplete. Patients trust their physicians to provide correct information and feel that they receive better care from physicians who are actively involved in wellness counseling.¹⁴

Health Behavior Change - Barriers and Bridges

Lifelong behaviors such as diet, exercise, and tobacco use can be very difficult to modify. Since individuals may already have experienced numerous failures, they have an even greater need for accurate health information and support from their physicians. Physicians can increase their influence on their patients' health behaviors by understanding some fundamentals of behavior theory.

Before making decisions to change lifestyle behaviors, individuals consciously or subconsciously engage in a risk:benefit analysis that includes perceived susceptibility, severity, benefits, and barriers. Attempts to change health behaviors proceed from the individual's

- ◆ desire to avoid illness (value)
- ◆ belief that a specific action will prevent illness (expectancy)
- ◆ belief in personal ability to make the necessary change (self-efficacy)¹⁵⁻¹⁸

Patients trust their physicians to provide correct information....

Physicians can be very influential at every stage of behavior change.

A recently developed clinical model describes the following stages of behavioral change:

Precontemplation Stage: no intention of instituting a change

Contemplation Stage: awareness of the need for change but no plan for action

Action Stage: successful alteration of behavior lasting 1 day to 6 months

Maintenance Stage: continuing work to maintain new behavior¹⁹

Physicians can be very influential at every stage of behavior change. Advice at the first stage can move a patient into the contemplation stage. At this stage additional information can help the patient form a plan for action. Through follow-up visits that provide feedback and additional advice and support, maintenance of healthful behavior can be encouraged.

The first step in disease prevention is to ask about risk factors. A survey of patients at public and private clinics showed that 78% favored routine inquiry about the possibility of abuse but only 7% had ever been asked.²⁰ All risk factors should then be examined together and prioritized. For example, victims of family or neighborhood violence may not be in a position to address other lifestyle issues until their safety is secured.

The National Cancer Institute has proposed a smoking cessation model that is useful for all lifestyle behaviors: **Ask** every patient, **Advise**, **Assist** (eg, provide referrals, quit dates, therapy), and **Arrange** for follow-up visits to check on patient progress.¹

Adapted from Murphy EV. Why Should Physicians Promote Healthy Lifestyles? Why Don't Patients Change Their Lifestyles? 1996 Prevention Bulletin; 10(1)s: 1,2,4.

References

1. Doll R. The Lessons of Life: Keynote Address to the Nutrition and Cancer Conference. *Cancer Res* 1992;52:2024-2029.
2. Kottke TE, et al. Attributes of Successful Smoking Cessation Interventions in Medical Practice. *JAMA* 1988;259:2883-2889.
3. Cummings SR, et al. The Cost-effectiveness of Counseling Smokers to Quit. *JAMA* 1989;26: 75-79.
4. Hill D, et al. Self Examination of the Breast: Is It Beneficial? A Meta-analysis.... *BMJ* 1988; 297 (6643):271-5.
5. Cassileth BR, et al. Reasons for Poor Prognosis in British Patients with Malignant Cutaneous Melanoma. *BMJ* 1986; 292(6526)987-9.
6. Rimer BK, et al. Why Do Some Women Get Regular Mammograms? *Am J Prev Med* 1991; 7(2):69-75.
7. Fox SA, et al. The Impact of Physician Compliance on Screening Mammography for Older Women. *Arch Int Med* 1991; 51:50-6.
8. Grady KE, et al. The Importance of Physician Encouragement in Breast Cancer Screening of Older Women. *Prev Med* 1992; 21:766-80.
9. Amsel Z, et al. Frequency of Breast Self-examination Practice as a Function of Physician Reinforcement. *Patient Educ Counseling* 1985;7:127-35.
10. Lewis P, et al. Who Influences Women to Practice Breast Self-examination? *Health Educ Res* 1988;3(2):191-5.
11. Hunt JR, et al. Physician Recommendations for Dietary Change: Their Prevalence and Impact in a Population-based Sample. *Am J Public Health* 1995;85:722-6.
12. May JP, et al. A Role for the Primary Care Physician in Counseling Young African American Men about Homicide Prevention. *J Gen Intern Med* 1993;8(7):380-2.
13. Miller RE, et al. Pediatric Counseling and Subsequent Use of Smoke Detectors. *Am J Public Health* 1982;72:392-3.
14. Brody DS, et al. The Relationship between Patient Satisfaction with Their Physicians and Perceptions about Interventions They Desired and Received. *Med Care* 1989; 21(11):1027-35.
15. Hochbaum GM. Public Participation in Medical Screening: A Sociopsychological Study, *Public Health Service Publication #572,1958.*
16. Rosenstock IM, et al. What Research in Motivation Suggests for Public Health. *Am J Public Health* 1960;50:295-301.
17. Rosenstock, IM, et al. The Health Belief Model and HIV Risk Behavior Change, *Preventing AIDS: Theories and Methods of Behavioral Interventions.* New York: Plenum Press, 1994.
18. Bandura A, et al. Self-Efficacy: Toward a Unifying Theory of Behavioral Change. *Psych Rev* 1977;84:191-215.
19. Prochaska, JO, et al. In Search of How People Change, *Am Psychol* 1992;47(9):1102-14.
20. Friedman LS, et al. A Survey of Patient Preferences and Physician Practices. *Arch Intern Med* 1992;152(6):1186-90.

All risk factors should be examined together and prioritized.

*Ask
Advise
Assist
Arrange*

Perspectives in Public Health Texas Department of Health (TDH) Quarterly CME Conference

On June 21, 1996, from 8:30 AM to 4:00 PM, the Texas Department of Health (TDH) will present its Quarterly CME Conference. Designed for public health and primary care physicians, the conference will be held at the TDH Headquarters in Austin, Texas. The program will consist of lectures supplemented by audiovisual slide presentations.

After attending this conference, the participants will be able to

- ◆ prevent, detect at an early stage, treat, control, or take remedial action against specific medical conditions that may adversely affect the health of individuals and populations in Texas;
- ◆ identify policies, processes, and products that promote and protect the health of people and preserve environmental quality; and
- ◆ establish relationships with other physicians concerned with public health and preventive medicine issues through dialogue with presenters and other participants.

Topics covered at the upcoming conference include

- ◆ Putting Prevention into Practice: Overview of the TDH "Put Prevention Into Practice" Program
Philip Huang, MD, MPH, Chief, TDH Bureau of Chronic Disease Prevention & Control, Austin, Texas
- ◆ Herbs of Dubious Salubrity
Samuel W. Page, PhD, Director, Division of Natural Products, Center for Food Safety & Applied Nutrition, US Food & Drug Administration, Washington, DC
- ◆ From Pasteur to Pasture: Rabies in Texas
Michael Kelley, MD, MPH, Chief, TDH Bureau of Communicable Disease Control, Austin, Texas; Keith Allen Clark, DVM, PhD, Director, TDH Zoonosis Control Division, Austin, Texas
- ◆ Medical Newsdesk
Richard Proctor, MD, MPH & TM, Director, TDH Public Health Regions 6 & 5 South, Houston, Texas
- ◆ Clinical Update on Breastfeeding
Julie Graves Moy, MD, MPH, Consultant, TDH Breastfeeding Promotion Program, Austin, Texas
- ◆ Commissioner's Hour: Violence: Science, Statistics, and Politics
David R. Smith, MD, Commissioner of Health, Texas Department of Health, Austin, Texas

The Texas Department of Health designates this continuing medical education activity as meeting the criteria for 6 credit hours in Category 1 of the Physician's Recognition Award of the American Medical Association.

The Texas Department of Health is accredited by the Texas Medical Association to sponsor continuing education for physicians.

For further information call: Public Health Professional Education - (800) 252-8239, press 4, or (512) 458-7677. To register, complete and return the registration form located on the back page of this issue.



Disease Prevention News (ISSN 1068-7920) is a free, biweekly publication of the Texas Department of Health, Public Health Professional Education, 1100 West 49th Street, Austin, TX 78756-3199, (512) 458-7677. Second-class postage paid at Austin, TX. <http://www.tdh.state.tx.us/dpnhome.htm>
 TDH Healthy Texans BBS: (800) 858-5833

POSTMASTER: Send address changes to *Disease Prevention News*, 1100 West 49th Street, Austin, TX 78756-3199.

Walter D. Wilkerson, Jr., MD
 Chair, Texas Board of Health

David R. Smith, MD
 Commissioner of Health

Diane Simpson, PhD, MD
 State Epidemiologist, Associate Commissioner for Disease Control and Prevention

Michael Kelley, MD, MPH
 Chief, Bureau of Communicable Disease Control

Kate Hendricks, MD, MPH&TM
 Medical Editor

Mark Gregg, MA
 Director, Public Health Professional Education

Susan Hammack, MEd
 Managing Editor

Susan Hurst
 Production Assistant

Disease Prevention News
 Texas Department of Health
 1100 West 49th Street
 Austin, TX 78756-3199

Second Class Postage
 Paid at Austin, TX

Return Postage Guaranteed

To register for the Texas Department of Health Quarterly CME Conference, complete and return the registration form below to Texas Health Foundation-Professional Education, P.O. Box 650257, Austin, Texas 78765-0257, or contact the Texas Department of Health's Public Health Professional Education Program at (512) 458-7677 or (800) 252-8239, press 4.


Registration Form

DPN

Perspectives in Public Health

Texas Department of Health Quarterly CME Conference
 Friday, June 21, 1996 8:30 AM - 4:00 PM

Lunch is included with all registration fees

- Enclosed is my \$40 registration fee
- Enclosed is my \$20 registration fee and with verification letter from Training Program (for Residents/Fellows)
- Please call me regarding special needs 

Name _____ SS # _____ TDH Employee Y N

Address _____ Office Phone () _____

City _____ State _____ Zip _____ County _____

Specialty _____ Discipline: MD DO PA Resident RN Other _____

For information call: Public Health Professional Education - (800) 252-8239, press 4, or (512) 458-7677
Space Is Limited - Reservations Must Be Received By June 14, 1996

Please make check payable to "Texas Health Foundation-Professional Education" and mail to:
 Texas Health Foundation-Professional Education
 P.O. Box 650257
 Austin, Texas 78765-0257

PHPE Use Only	
Check # _____	_____
Amount _____	_____
Rec'd _____	_____