

TAKING TENNESSEE'S PULSE: PRESCRIPTION FOR A HEALTHIER FUTURE

There are two common denominators among the major health problems in Tennessee: obesity and tobacco use.

The quality and length of life for Tennesseans are directly related to the prevalence of “diseases of choice,” labeled as such because certain behavior and lifestyle choices increase the risk of acquiring these diseases.

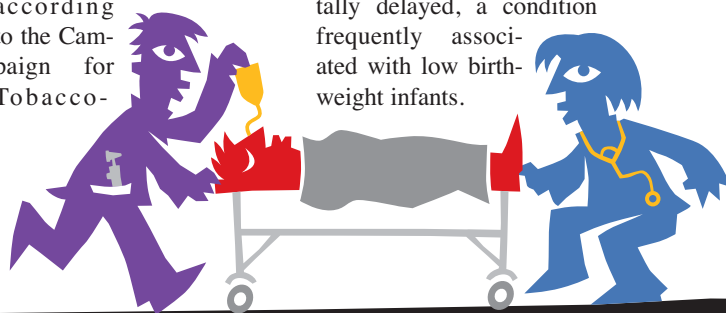
The major health problems in Tennessee are not unlike those throughout the United States, and behavioral and lifestyle choices play a role in the development of a considerable percentage of these. Cancer and heart disease accounted for half of all deaths in Tennessee in 2002. According to statistics compiled by the Arthritis Foundation, one in three adults in Tennessee suffers from arthritis and chronic joint pain, slightly higher than the national average. The number of Tennesseans who have diabetes is soaring, and stroke accounts for 7 percent of the state’s deaths. Several related conditions, such as high blood pressure, high cholesterol, and certain cancers, are often seen in persons with these diseases. Whatever other relationships they might have, there are two common denominators among the major health problems in Tennessee: tobacco use and obesity.

Tobacco use extracts a terrible toll from life, health, and economics in the state. Nearly 1.2 million adult Tennesseans smoke (27.8 percent), ranking the state fourth highest in the nation in that category according to the 2003 Behavioral Risk Factor Survey/Surveillance System (BRFSS). Future use of tobacco products is not expected to decline without intervention, since 27 percent of Tennessee high school students smoke compared with 22 percent of the students throughout the U.S., according to the Youth Risk Behavior Surveillance—Tennessee, 2003; Youth Risk Behavior Surveillance—United States, 2003. Twenty-one percent of male high school students use smokeless tobacco, according to the Campaign for Tobacco-

Free Kids, Toll of Tobacco in Tennessee 2005. Cigarette smoking causes 87 percent of lung cancer deaths and is responsible for most cancers of the larynx, oral cavity, pharynx, esophagus, and bladder, based on National Cancer Institute data. According to the American Cancer Society, smoking causes 32 percent of all fatal cancers. Estimated new cases of breast, lung, and prostate cancer are high in Tennessee, but only lung cancer kills such a large proportion. Tennessee ranks fourth in the U.S. for lung and bronchus cancer mortality as well as fourth in smoking prevalence (BRFSS 2003). For tobacco-related cancers, each year new cases almost equal deaths. Only 14 percent of all lung cancer patients, regardless of stage, will be alive five or more years after their diagnosis. In 2002, approximately 12,600 people died of cancer in Tennessee, and the overall costs of cancer in the state were \$3.9 billion. The American Cancer Society reports that approximately one-third of cancer cases can be prevented.

Smoking is the single most important modifiable cause of poor pregnancy outcome in the U.S. Smoking during pregnancy has been shown to cause miscarriage, placental abruption and separation, low birth weight, and increased perinatal mortality. It accounts for 20 percent of low birth-weight deliveries, 8 percent of preterm births, and 5 percent of all perinatal deaths. Economic estimates indicate the direct medical costs of a complicated birth for a smoker are 66 percent higher than for a nonsmoker. This does not include the costs associated with educating through elementary school those children who are developmentally delayed, a condition frequently associated with low birth-weight infants.

by Martha Jo Edwards



In Tennessee, an average of 26 percent of all pregnant patients in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) smoked, and in some regions, smoking rates as high as 37 percent were reported in WIC patients, according to the 2003 Tennessee Department of Health Neonatal Summary Report. This rate is estimated to be highest for pregnant women who are socially disadvantaged, including women covered by Medicaid and

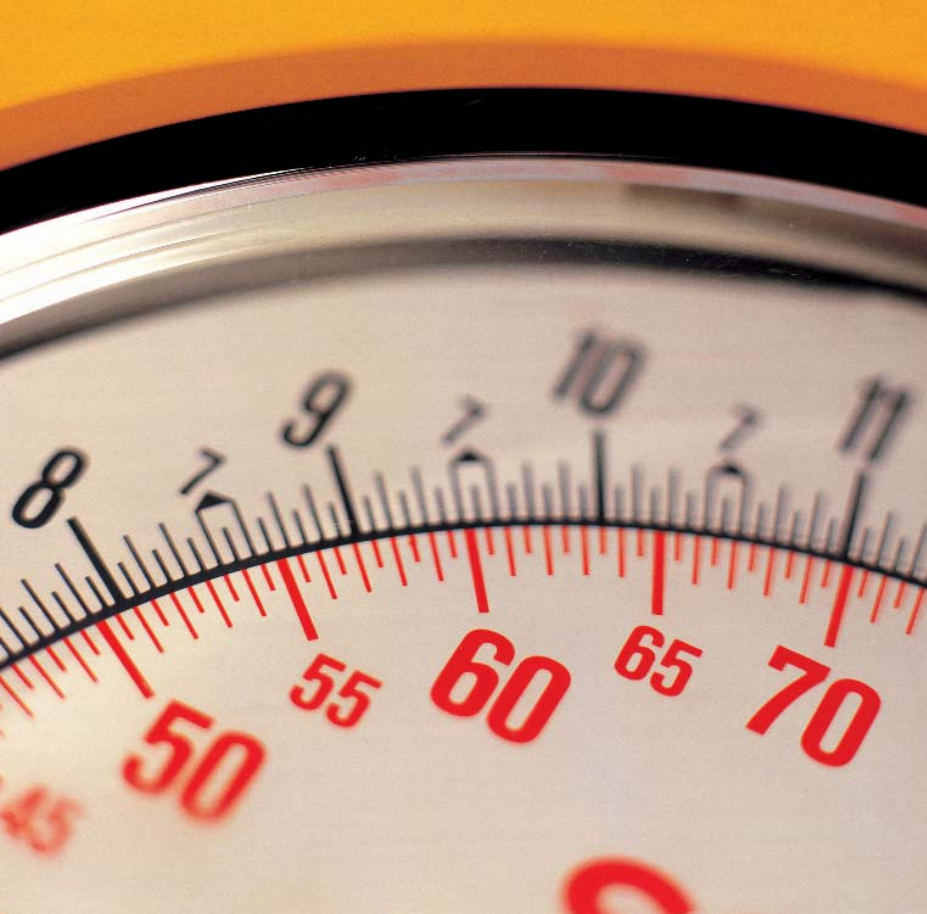
those who are unmarried or unemployed or have less than a high school education.

In addition to increasing the risk of cancer and poor pregnancy outcomes, smoking is a major risk factor for cardiovascular disease. Cardiovascular disease is the leading cause of death in Tennessee, accounting for 28 percent of all deaths. Stroke is the third leading cause of death, accounting for approximately 7 percent of all deaths. Risk for heart disease in our state is 21 percent above the national average and

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earns Tennessee the ranking of 48th in this category (third worst), with death ratios for black Tennesseans ranging up to 1.5 times higher than for white Tennesseans.

Risk factors for all of these diseases include untreated hypertension (high blood pressure), overweight and obesity, high cholesterol, lack of regular physical activity (exercise), diets high in fats, and smoking.

While smoking remains the state's biggest health concern, obesity rates are soaring. One-third of all cancers are caused by tobacco smoking, but one-third of cancers are also related to poor nutrition, physical inactivity, and obesity.

Tennessee has the ninth highest level of adult obesity in the nation at 25 percent and the second highest overweight high school student level at 15.2 percent. Many overweight adults report they were not obese as children or adolescents, a fact of great concern in the health community as experts note the growing number of overweight children in our state. The state spent an estimated \$315 per person in 2003 on medical costs related to obesity, the sixth highest amount in the nation. While tobacco is still the single largest cause of premature death, it is expected to be passed by obesity.

The current level of obesity is a risk factor for development of high blood pressure. The

overweight high school student may not have high blood pressure yet, but the potential to develop it grows over time. Along with diabetes, high cholesterol, high blood pressure, tobacco use, and a lack of exercise, being overweight or obese is a major risk factor for heart disease.

Obesity is directly related to diabetes. In 40 states and the District of Columbia, 6 percent or more of adults have diabetes, far exceeding the national goal of 2.5 percent by the year 2010. Tennessee ranks third highest at 9.4 percent. Type 2 diabetes tends to strike the overweight and those who suffer from high blood pressure. According to the Partnership to Promote Healthy Eating and Active Living, nine out of 10 persons with newly diagnosed type 2 diabetes are overweight.

Quality, not just length, of life is affected by these risk factors. Risks for arthritis and chronic joint pain are linked to levels of obesity, age, and gender (women are more likely to suffer than men). Obese adults are twice as likely to be diagnosed with these ailments, making it harder than ever to get the exercise they need.

Poor nutrition, lack of physical activity, and tobacco use can be blamed for many of the state's health woes. Making healthier lifestyle choices can prevent many health problems. A federal study determined about 50 percent of all premature deaths are caused by poor behavioral choices like smoking while genetic factors, in stark contrast, accounted for just 20 percent.

Poverty directly contributes to premature mortality by limiting access to more nutritious foods and restricting access to healthcare in some instances. A recent study on poverty and nutrition indicates that children in socioeconomically limited households are disadvantaged for weight maintenance strategies such as gym memberships and home exercise equipment, often too expensive for the impoverished to afford or not seen as a priority. However, obesity is not exclusive to any socioeconomic status; it is pervasive.

Physical activity is directly related to many of the health issues in Tennessee. Even modest levels of physical exercise can cut a person's chances of getting type 2 diabetes by 60 percent, according to the Centers for Disease Control and Prevention (CDC), the nation's health protection agency. Regular exercise may even thwart some cases of rheumatoid arthritis. A study reported in the *Annals of Internal Medicine* states that losing as few as 11 pounds can cut the risk of developing degenerative joint disease in half, especially in the knees and hips. Along with weight control, exercise can directly impact hypertension and other risk factors associated with cardiovascular disease.

Tennessee ranks 48th according to a report, "Your State's Health," by the United Health

Foundation, the American Public Health Association, and Partnership for Prevention. For 15 years these groups have performed a state-by-state analysis. This review assesses the overall health of our nation and the opportunities for optimizing the health of individuals, families, and communities. The 2004 15th edition of *America's Health: State Health Rankings* ranks Tennessee 48th, down from 46th in 2003.

Our state's strengths include a low rate of uninsured population (13.2 percent) and moderate access to prenatal care (77.1 percent of pregnant women receive adequate prenatal care). Challenges include a high infant mortality rate (9.2 deaths per 1,000 live births) and a low high school graduation rate (56.7 percent of incoming ninth graders graduate within four years).

The state ranks in the bottom 10 states on seven of the other individual measures, including high rates of smoking, obesity, violent crime, deaths from cardiovascular disease, cancer deaths, total mortality, and premature death. Tennessee is 44th for the combined measures of risk factors and 46th for the combined measures of outcomes, suggesting that the state's health is likely to remain at the same relative level in the near future. Health disparity is present within the state, as illustrated by differences in premature death rates between black non-Hispanic individuals (14,538 years of potential life lost before age 75 per 100,000 population) and white non-Hispanic individuals (8,395 years lost).

Simply documenting shortfalls is not enough. Committed action will need to be taken if we are to do better. A call to action is supported by the 2004 report *America's Health: State Health Ranking*, which includes an important statement from Dr. Julie Gerberding, director of the CDC. The call to action includes using actionable and science-based resources as the foundation for informed action. CDC supports the call to action to improve the health of communities by providing tools and resources that are evidence-based, cross-cutting, and user-friendly. CDC's Web site, www.cdc.gov, is one such tool that provides useful information on topics such as emerging biomedical and infectious disease threats, child health promotion, and obesity prevention and control. Another online tool is the Guide to Community Preventive Services found at www.thecommunityguide.org. The focus is on encouraging individuals to make responsible choices, such as avoiding tobacco and the abuse of other substances, eating properly, and exercising regularly. Community leaders and public officials are encouraged to formulate and implement health policies and programs that result in environments conducive to optimal health promotion and disease prevention.



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The Tennessee Department of Health is responding by working with each community health council on a major health initiative (Better Health: It's About Time!) to combat the crisis. The goal is to raise public awareness about the importance of a healthy lifestyle, to encourage individuals to take personal responsibility for their health and well-being, and to give newborn babies a better start in life. It pairs health experts with local employers and schools to convince Tennesseans to make crucial lifestyle changes. The Web site can be accessed at www.tennessee.gov/health/itsabouttime/index.htm.

This health initiative targets individuals, daycare centers, schools, work sites, and hospitals. Initiatives to increase physical activity in daycare centers and provide books on nutrition are being implemented. In local high schools, reduced-calorie lunches and walking after lunch are being encouraged. Legislation promoting better food choices in schools and physical education is being drafted.

Although progress is being made in some areas, implementing strategies that continue this progress needs to be a priority in Tennessee. ■

Martha Jo Edwards holds the Adams Chair of Excellence in Health Care Services at MTSU.

Top 10 Causes of Death in Tennessee, 2002

1. Diseases of heart
2. Cancers
3. Cerebrovascular diseases (stroke)
4. Chronic lower respiratory disease
5. Accidents
6. Diabetes
7. Influenza, pneumonia
8. Alzheimer's disease
9. Suicide
10. Chronic liver disease, cirrhosis

Source: Statistical profiling of Tennessee

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