

# **Health Behavior and Risk Factor Report**

**2007 Hamilton County**



Chattanooga-Hamilton County Health Department  
September, 2007

# Chattanooga-Hamilton County Health Department

## **Mission:**

To do all we can to assure a healthy community.

## **Vision:**

Healthy people in healthy communities.

## **Values:**

Compassion  
Integrity  
Diversity  
Excellence  
Respect

## **Core Functions:**

Prevention  
Education  
Promotion  
Policy Development  
Assurance

Outreach  
Protection  
Assessment and Planning  
Monitoring/Surveillance  
Regulatory Compliance

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Arrows compare 2007  
Hamilton Co. prevalence  
rates to TN prevalence rates.  
**Green:** better than State.  
**Red:** worse than State.

## At a Glance

- Hamilton County adults overall have better health care access than their peers in TN.
- Smoking rates have fallen from 27% in 1999 to 23% in Hamilton County.
- Overweight and Obesity has increased from 41% in 1999 to 61% in Hamilton County.
- Vigorous physical activity in Hamilton County is less than State and U.S. rates, but fruit and veggie consumption is up.

### Sources:

Centers for Disease Control and Prevention (CDC). *Behavioral Risk Factor Surveillance System Survey Data*. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 1999, 2004, 2007.

Tennessee Department of Health, Office of Policy, Planning and Assessment, Division of Health Statistics.

\*2006 BRFSS data

# Health Behaviors and Risks in Hamilton County

SEPTEMBER 2008

## BRFSS Summary Comparisons

	Hamilton County 1999	Hamilton County 2004	Hamilton County 2007		TN 2007	US 2007
<b>General Health Status</b>						
General Health Status (good or better health)	80.4%	83.2%	78.6%	↓	79.5%	85.1%
<b>Health Care Access</b>						
No current health care coverage	12.7%	8.1%	11.6%	↓	14.7%	14.2%
Have personal doctor or health care provider	n/a	82.3%	86.3%	↑	83.6%*	n/a
Unable to see doctor in the past year because of cost	11.8%	9.2%	12.2%	↓	14.8%*	n/a
Have not seen a doctor in the past year for a routine check-up	33.6%	23.7%	17.1%		n/a	n/a
<b>Chronic Disease</b>						
Diabetes	7.4%	9.6%	10.5%	↓	11.9%	8.0%
Hypertension	25.8%	30.3%	37.1%	↑	33.8%	27.8%
High Blood Cholesterol	29.5%	36.5%	29.8%	↓	34.2%	37.6%
Asthma (current)	n/a	8.0%	5.6%	↓	8.7%	8.4%
<b>Immunizations</b>						
Influenza vaccine- Adults over age 65 during past year	64.0%	68.0%	74.6%	↑	70.1%	72.0%
Pneumonia shot- Adults over age 65 - ever had	56.1%	57.7%	67.1%	↑	65.3%	67.3%
<b>Substance Use</b>						
Smoked at least 100 cigarettes in entire life	47.6%	45.2%	46.6%		n/a	n/a
Current smoker (every day and some/occasional days)	27.0%	20.8%	22.6%	↓	24.3%	19.8%
Smokers who tried to quit smoking for one day or longer in the past year	55.1%	53.8%	56.5%	↓	58.6%*	n/a
Binge drinkers (5 or more drinks on one occasion for males, 4 for females)	11.0%	12.8%	8.5%	↓	9.2%	15.8%
<b>Nutrition and Physical Activity</b>						
Overweight and Obesity	41.0%	58.8%	60.8%	↓	67.4%	62.9%
Overweight adults (BMI 25-29)	23.0%	36.6%	35.8%	↓	36.7%	36.6%
Obese adults (BMI 30 or greater)	18.0%	22.2%	27.8%	↓	30.7%	26.3%
Healthy weight adults (BMI 18.5-24)	45.8%	41.2%	34.0%	↑	32.6%	37.1%
Physical activity in the past month outside of work	n/a	80.1%	70.7%	↑	68.5%	77.4%
20+ mins of vigorous physical activity 3 or more days/ week	n/a	26.9%	17.0%	↓	18.5%	28.3%
5 or more fruits and vegetables per day	11.1%	21.0%	28.4%	↑	26.4%	24.4%

## Hamilton County BRFSS 2007 Summary

Hamilton Co.  
2007

<b>General Health Status</b>	
General Health Status (good or better health)	78.6%
Physical Health Days (more than 7 days in month physical health not good)	16.4%
Mental Health Days (more than 7 days in month mental health not good)	12.2%
Limited in activities because of physical, mental, or emotional problems	19.3%
Very satisfied or satisfied with life	95.3%
<b>Health Care Access</b>	
No current health care coverage	11.6%
No health care coverage ages 18-64 years	14.1%
Have personal doctor or health care provider	86.3%
Did not see doctor in the past year because of cost	12.2%
Have not seen a doctor in the past year for a routine check-up	17.1%
<b>Chronic Disease</b>	
Diabetes	10.5%
Hypertension	37.1%
High Blood Cholesterol	29.8%
*Arthritis	31.1%
Asthma (current)	5.6%
<b>Immunizations</b>	
Influenza Vaccine during past year	39.1%
Influenza vaccine- Adults over age 65 during past year	74.6%
*Influenza vaccine-FluMist	2.7%
Pneumonia shot- Adults over age 65 - ever had	67.1%
*Hepatitis B vaccine	38.0%
<b>Risky Behaviors</b>	
Smoked at least 100 cigarettes in life	46.6%
Current smoker (every day and some/occasional days)	22.6%
Smokers who tried to quit smoking for one day or longer in the past year	56.5%
Binge drinkers (5 or more drinks on one occasion for males, 4 for females)	8.5%
Heavy drinkers (men 2 or more drinks/day, women 1 or more drink/day)	4.0%
Ever tested for HIV	38.8%
Tested for HIV (adults 18-64 years)	39.0%
<b>Nutrition and Physical Activity</b>	
Overweight and Obesity	60.8%
Overweight adults (BMI 25-29)	35.8%
Obese adults (BMI 30 or greater)	27.8%
Healthy weight adults (BMI 18.5-24)	34.0%
*Gained weight since last year	21.9%
Physical activity in the past month outside of work	70.7%
Meets moderate or vigorous physical activity recommendations	35.2%
20+ mins of vigorous physical activity 3 or more days/week	17.0%
30+ mins of moderate physical activity 5 or more days/week	23.9%
5 or more fruits and vegetables per day	28.4%
<b>Women's Health</b>	
Mammogram within the past 2 years (40+ years)	84.5%
Breast exam within the past 2 years (40+ years)	87.3%
Pap test within the past 3 years (18+ years)	86.8%
<b>OTHER</b>	
*Diarrhea in the past 30 days	17.8%



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Tennessee Department of Health, Office of Policy, Planning and Assessment, Division of Health Statistics.

\*New questions for Hamilton County BRFSS

## Acknowledgements

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Becky Barnes, Administrator  
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The 2007 Hamilton County Behavioral Risk Factor Surveillance Survey (BRFSS) was a joint partnership between the Chattanooga-Hamilton County Health Department and the Tennessee Department of Health. We would like to thank Tennessee Department of Health BRFSS coordinator, David Ridings, for his assistance.

## Preface

The 2007 Hamilton County Health Behavior Risk Factors Report provides health information collected from the Tennessee Behavioral Risk Factor Surveillance System (BRFSS) survey.

This survey was conducted in Hamilton County from March-September 2007. Hamilton County BRFSS data collection is the result of a joint partnership between the Chattanooga-Hamilton County Health Department and the Tennessee Department of Health.

This survey shares information from Hamilton County adults on preventative health practices and risk behaviors that are linked to chronic diseases, injuries and preventable infectious diseases. Adults from randomly selected households were asked questions constructed to determine the behaviors of individuals that will affect their risk of developing chronic diseases that can lead to premature death or morbidity.

The objective of this report is to encourage change in risk-related health behaviors, discover high risk populations that can be targeted for interventions, and present the condition of Hamilton County's health in a way that can be compared to state and national trends. Other objectives of the BRFSS survey are as follows:

- Determine priority health issues associated with leading causes of premature death and identify populations at highest risk.
- Develop strategic plans and target prevention programs, interventions, and policies.
- Educate the public, health community, and policy makers about disease prevention and healthy lifestyles.
- Monitor behavioral risk factors over time and focus on factors that are not improving.
- Assess progress in meeting the national health objectives (*Healthy People 2010*) for health promotion and disease prevention.
- Assess the impact of public health policy on behavioral risks.

The Chattanooga-Hamilton County Health Department hopes that this information can be used to promote community involvement in the planning and implementation of public health interventions.

## A Guide for Reading this Report

In 2007, 700 adults in Hamilton County were randomly selected to participate in this survey. The overall sampling error (or "margin of error") for this survey (based on 95% confidence interval) is plus or minus 3.7%. When reading the prevalence data for Hamilton County, these values can be within this plus or minus 3.7% range 95% of the time.

*Healthy People 2010* objectives will be referenced throughout this report. *Healthy People 2010* is a comprehensive set of disease prevention and health promotion objectives for the nation to achieve over the first decade of the new century. Created by scientists both inside and outside of government, the objectives identify a wide range of public health priorities and specific, measurable objectives<sup>1</sup>.

# Survey Results

## Health Status and Health Care Access

### Health Status

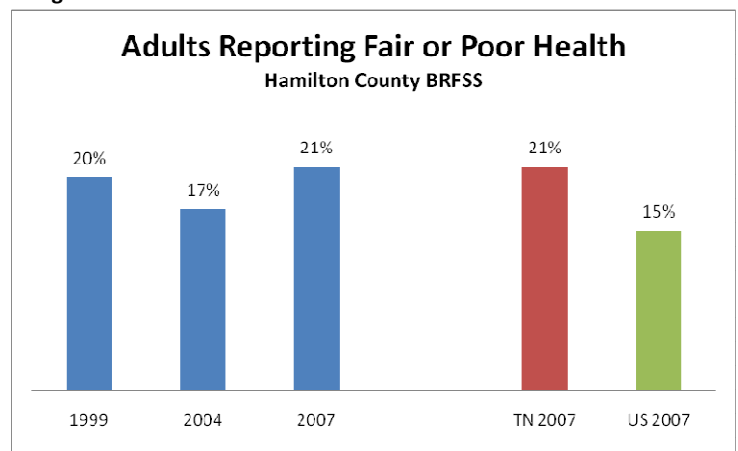
Health status is used to track health-related quality of life. Concerns of the aging population, the burden of chronic disease, health behavior trends, and health care access have led to interest in monitoring overall population health and wellness.

Tracking health-related quality of life is used to monitor progress towards the *Healthy People 2010* overall goals to: 1) increase the quality and years of healthy life and 2) eliminate health disparities.

In Hamilton County, 79% of adults reported “good or better health”, with 21% of adults reporting “fair or poor health” in 2007, compared to 21% for Tennessee and 15% for the U.S. (Figure A).

In Tennessee, older adults (ages 55+ years) were more likely to report “fair or poor health” than younger adults. In addition, almost half (45.5%) of adults in Tennessee with less than a high school education and 47.2% of adults with family incomes less than \$15,000 reported “fair or poor health”.

Figure A

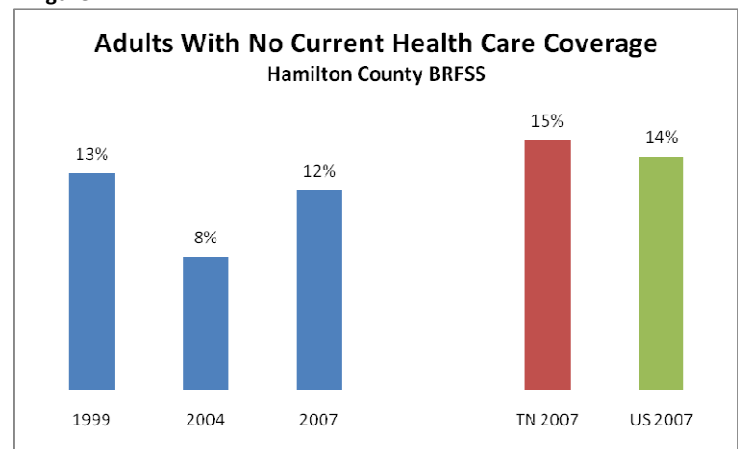


### Health Care Access

Access to health care coverage encourages individuals to seek and obtain continuous and preventative health care. Persons without health care coverage are less likely to seek timely medical care and are more likely to have hospitalizations and emergency department visits<sup>ii</sup>.

In 2007, approximately 12% of Hamilton County adults reported that they currently did not have any type of health care coverage. When surveying health care coverage of adults ages 18-64 years, that number rose to 14%.

Figure B



However, Hamilton County adults are more likely to have health care coverage compared to Tennessee (15% no coverage) and the U.S. (14% no coverage) (Figure B).

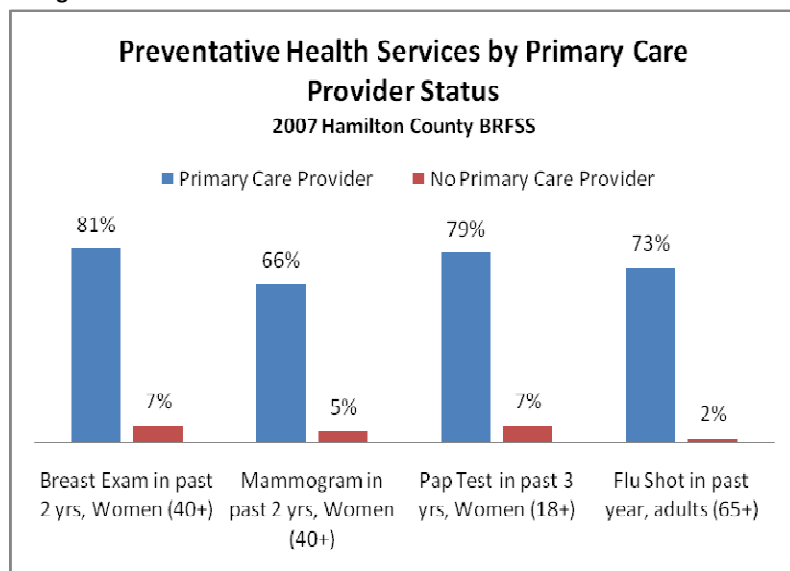


## Prevention and Screening

*Healthy People 2010* states that strong predictors of access to quality health care include having health insurance, a higher income level, and a regular primary care provider or other source of on-going health care.

The BRFSS continues to ask if adults have a personal doctor or health care provider, and if they have seen their doctor in the past year for a routine check-up, because individuals with a primary care provider (also known as a “medical home”) are more likely to obtain preventative health care services, to have access to continuous care, and to have lower rates of hospitalization. However, *Healthy People 2010* reports that more than 40 million Americans do not have a primary care provider or medical home where they can seek health care or health-related advice. According to *Healthy People 2010*, even privately insured persons often lack a medical home because of financial constraints or insurance problems.

Figure C



In Hamilton County, 86% of adults reported that they have a personal doctor or health care provider in 2007. Approximately 17% of adults reported that they have not seen a doctor in the past year for a routine check-up, and 12% reported that they have not seen a doctor in the past year because of cost.

Hamilton County adults who reported that they had one or more primary care providers were more likely to access recommended screenings and preventative health services, including the flu vaccine, mammograms, clinical breast exams and Pap tests (Figure C).

## Resources and Prevention: Health Status and Health Care Access

**Overall Health Status:** The Chattanooga-Hamilton County Health Department works collaboratively with public and private agencies to prevent avoidable illness, injury, disability and premature death and promote healthy lifestyles. Such collaborative partnerships have been developed through the Regional Health Council, Partnership In Prevention (PIP) Council, and the Partnership for Healthy Living. Specific Health Department programs are discussed in the context of other BRFSS measures such as tobacco use and obesity.

**Access to Health Care:** In addition to existing primary care resources in our community, such as our local hospitals and community health centers, the Chattanooga-Hamilton County Health Department provides a multitude of quality health services for thousands of Hamilton County residents each year. Programs range from traditional preventative health services, such as immunizations, maternal/child health care and communicable disease control, to specific assistance programs such as WIC, a supplemental food program, to more expanded medical services such as primary care, dental services, and homeless health.

Project Access makes health care more available to low-income, uninsured residents of Hamilton County. Project Access is coordinated by the Medical Society of Chattanooga & Hamilton County and the Medical Foundation. It brings together doctors, hospitals, medical schools, community clinics, the Hamilton County health department and many other partners all for a common goal. This goal is to improve the health and well-being of the people of Chattanooga and Hamilton County. For more information about Project Access, visit <http://www.chattmedsoc.org/> or call Project Access at (423) 826-0269.

Volunteers in Medicine, Chattanooga, Inc. (VIM Chattanooga) is a primary care medical clinic that provides medical services to financially eligible individuals and families of Hamilton County who otherwise have no access to health care. For more information, call (423) 855-8220 or visit <http://www.vim-chatt.org/>.

TennCare is Tennessee's Medicaid managed care program that provides health coverage for 1.2 million low-income children, pregnant women, and disabled Tennesseans with an annual budget of \$7 billion. More information about TennCare can be found at <http://www.state.tn.us/tenncare/index.html> or by calling the Family Assistance Service Center at 1-866-311-4287.

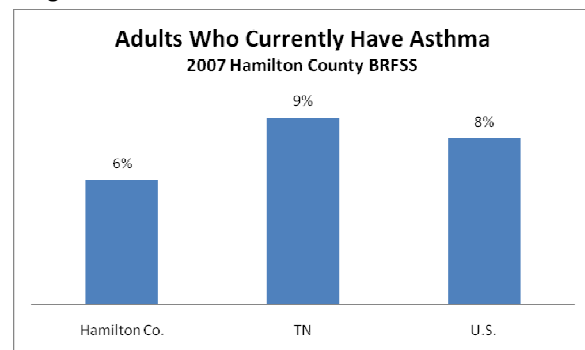
## Chronic Disease

### Asthma

Asthma is a chronic lung disease that affects an estimated 20 million Americans. The public health burden of asthma is seen in the number of emergency room visits, lost work days, hospitalizations and deaths. One of the *Healthy People 2010* goals is to promote respiratory health through better prevention, detection, treatment and education efforts. Asthma management includes regular visits to the visits, taking medications as prescribed and limiting exposure to triggers such as tobacco smoke, dust or perfumes.

In 2007, approximately 9% of Tennessee adults reported that they currently have asthma, compared to 8% in the U.S. Hamilton County has an asthma prevalence rate lower than the State and U.S. at 6% of adults reporting that they currently have asthma (Figure D).

Figure D



### Arthritis

Arthritis is a leading cause of disability among adults in the U.S, limiting the activities of over 19 million adults.<sup>iii</sup> By 2030, it is expected that one-quarter of the adult population will be affected by arthritis<sup>iv</sup>. Each year, arthritis results in 750,000 hospitalizations and 36 million outpatient visits. In Tennessee, \$3.2 billion dollars in medical costs were attributable to arthritis<sup>v</sup> The *Healthy People 2010* objective is to increase the proportion of adults who have seen a health care provider for their chronic joint symptoms.

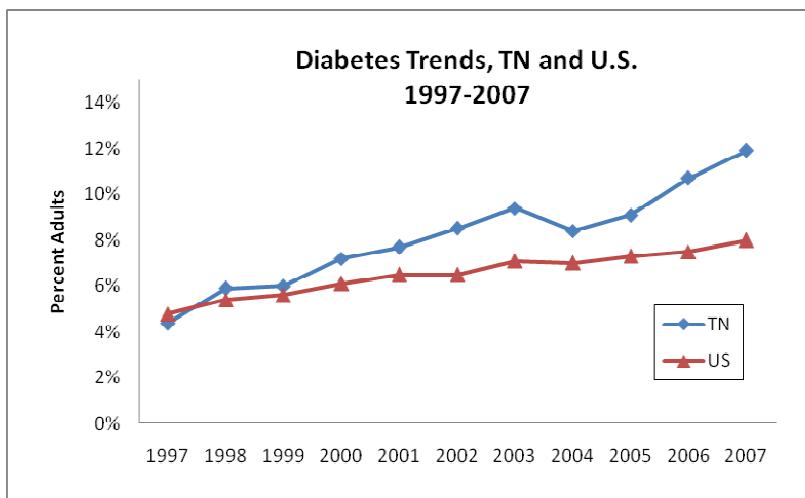
In 2007, 31% of adults in Hamilton County were told by a health care provider that they have some form of arthritis, rheumatoid arthritis, gout, lupus or fibromyalgia, with approximately 34% of adults in Tennessee and 28% in the U.S.

## Diabetes

Diabetes is a serious public health risk because diabetes increases the risk of heart disease and stroke and can cause serious complications such as kidney failure, blindness, amputations, nerve damage and premature death. Diabetes is one of the most costly of all chronic diseases, with more than one in every ten health care dollars, about \$92 billion a year, spent nationally on direct health care costs for people with diabetes<sup>vi</sup>. The *Healthy People 2010* objective for diabetes is to reduce the overall rate to 25 clinically diagnosed cases per 1,000 population.

Tennessee currently has the highest diabetes prevalence rate in the nation. In Tennessee, diabetes is a leading health problem with an estimated 542,000 adult residents 18 years and older currently living with the disease. Since 1997, the percent of adults with diabetes tripled in Tennessee, from 4% in 1997 to 12% in 2007 (Figure E).

Figure E



In Tennessee, the prevalence of diabetes is highest among African-Americans (15.5%). In addition, adults in Tennessee with household incomes less than \$25,000 per year were more likely to have diabetes (35.3%) as were adults with less than a high school education (17.2%).

In 2007, 11% of Hamilton County adults have been diagnosed with diabetes. Of those adults who have diabetes, approximately 84% were categorized as overweight or obese and 55% had not had any physical activity or exercise in the past month.

People living with diabetes can take steps to control the disease and lower risk of complications. Type 2 diabetes has been linked to lifestyle behaviors. In the Diabetes Prevention Program (DPP), a clinical trial of more than 3,000 adults at high-risk for type 2 diabetes demonstrated that moderate weight loss through physical activity and proper nutrition can delay or prevent this disease.

## Hypertension

Hypertension, often called high blood pressure, is the leading cause for heart disease and stroke. One in three adults in the U.S. has high blood pressure and nearly one-third of them do not know they have it<sup>vii</sup>. The *Healthy People 2010* objective is to reduce the proportion of adults ages 20 years and older with high blood pressure to 16%.

In Hamilton County, 37% of adults were told by a health care provider that their blood pressure was high, compared to 34% of adults in Tennessee and 28% of U.S. adults. In Hamilton County, the percentage of adults with high blood pressure has increased from 26% in 1999 to 37% in 2007.

### Hypertension

Defined as: Systolic blood pressure of 140mm Hg or higher, or a diastolic blood pressure of 90mm Hg or higher.

Although the cause of high blood pressure is often unknown, individuals with high blood pressure can make lifestyle choices to help prevent and control their blood pressure. Reducing risk factors such as obesity, sedentary lifestyle, high salt diet, heavy drinking, and stress, can help reduce and control high blood pressure.

## High Blood Cholesterol

### High Cholesterol

Defined as: 240 mg/dl or greater.

Borderline high cholesterol: 200-239 mg/dl

High levels of cholesterol and triglycerides increase the risk of heart disease, the leading cause of death in Hamilton County. The *Healthy People 2010* objective is to reduce the proportion of adults ages 20 years or older with high blood cholesterol to 17%.

In Tennessee, 34% of adults were told by a health care provider that they had high blood cholesterol, compared to 30% of Hamilton County adults and 38% of U.S. adults.

Cholesterol is found in animal products such as eggs, dairy products, meat and poultry. Eating a diet high in cholesterol is the largest contributor to high blood cholesterol. Physical activity can help lower the amount of LDL cholesterol and increase the amount of HDL cholesterol which removes the LDL cholesterol from the arteries.

## Resources and Prevention: Chronic Disease

Hypertension, Diabetes and Blood Cholesterol: The Chattanooga-Hamilton County Health Department encourages individuals to be more physically active, reducing their risk of developing arthritis, through the Mayor Claude Ramsey's Step ONE (Optimize with Nutrition and Exercise) Initiative. This program provides fitness and nutrition education and outreach, as well as networking for community partners interested in establishing initiatives for their target population. For more information about Step ONE, visit <http://hcstep1.org> or call (423) 209-8090.

Cardiovascular Health: The Health Department provides health promotion education and outreach in the areas of cardiovascular health. The goal of this program is to improve the cardiovascular health and quality of life for Hamilton County residents. This is accomplished through education/awareness activities, screening and referral of high-risk individuals, early identification of heart disease (hypertension, heart attack, and stroke) and prevention of recurrent cardiovascular events. More information about this program can be found by calling (423) 209-8242.

Diabetes: The Renal Disease Intervention Project at the Health Department identifies at-risk persons for developing End Stage Renal Disease as a result of chronic diabetes and/or hypertension. Through this program a nurse provides counseling, referral and education services, as well as diet, medications and healthy lifestyle education. A social worker and registered dietitian also work with individuals as needed. For more information about this program, call (423) 209-8175.

Asthma: Information on air quality, pollen counts and air pollution can be found by accessing the Chattanooga/Hamilton County Air Pollution Control Bureau. The Bureau administers local air pollution control laws that are intended to achieve and maintain levels of air quality that will protect human health and safety. The Bureau also provides education in the community about

pollution prevention to help “clear the air”. For more information, visit <http://www.apcb.org/> or call (423) 643-5970.

## Health Risk Behaviors

### Overweight and Obesity

#### Defining Obesity

**BMI=** Body Mass Index is a relationship between height and weight that is associated with body fat.

**Overweight=** BMI of 25 to 29.

**Obese=** BMI of 30 or more.

Having and maintaining a healthy weight is a goal in the effort to reduce the burden of chronic illness and loss of quality of life. Overweight and obesity substantially raise the risk for type 2 diabetes, high blood pressure, high cholesterol, heart disease, stroke and arthritis. One of the national health objectives from *Healthy People 2010* is to reduce the prevalence of overweight and obesity among adults to less than 15%.

The prevalence of overweight and obesity continues to increase across the United States. In 1990, most states in the U.S. had approximately 10-14% obese adults in their population. Today, the majority of states report 25-29% (Figure F).

In 2007, Tennessee was ranked 4<sup>th</sup> highest in overweight and obesity combined in the nation, with more than 2 out of every three adults either overweight or obese (67%). Tennessee is ranked 3<sup>rd</sup> in the nation in obesity.

Looking separately at overweight and obesity, the trend of overweight adults in Tennessee has remained relatively constant; however, the percentage of obese adults has increased steadily, from 19% in 1998 to 27% in 2005 (Figure G).

In Tennessee, overweight and obesity is most prevalent among males (75%) versus females (60%), and more prevalent among African-Americans (79%) compared to whites (66%).

Overall, adults in Hamilton County are less likely to be overweight or obese than adults in Tennessee or the U.S. In 2007, 61% of Hamilton County adults surveyed were overweight or obese, compared to 67% in

Figure F

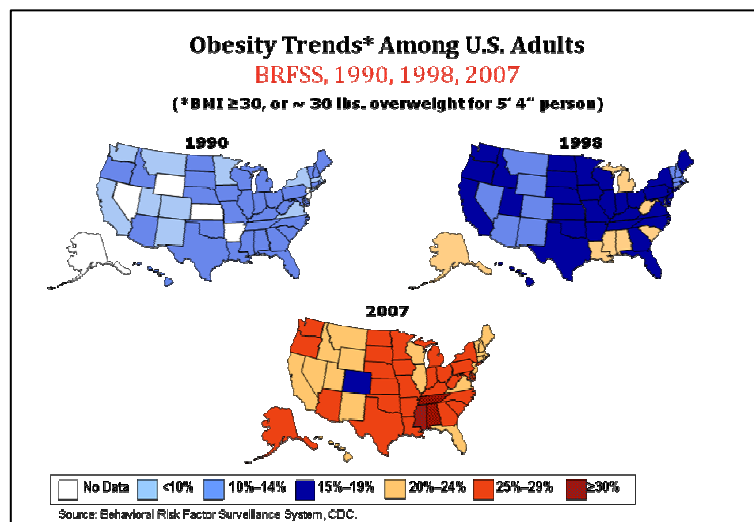
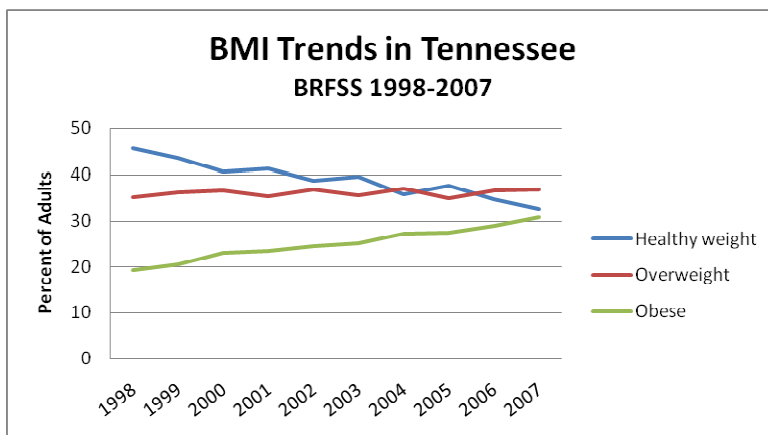


Figure G

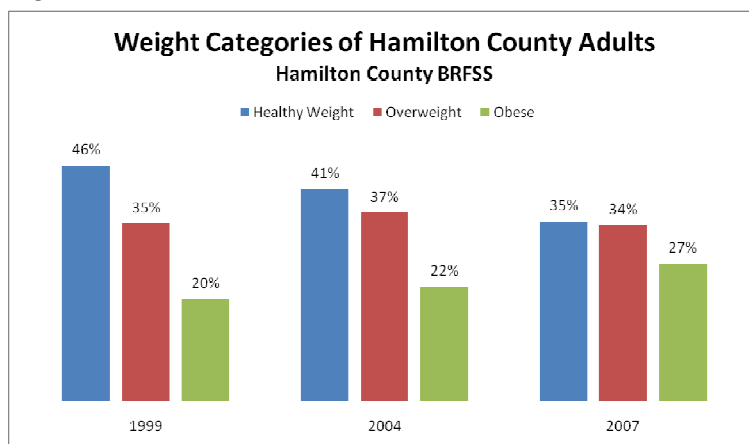


Tennessee and 63% in the U.S.

Although the prevalence of overweight and obesity in Hamilton County is lower than state and national rates, the trend of obesity is steadily increasing in Hamilton County. In 1999, 20% of Hamilton County adults were obese, rising to 27% in 2007 (Figure H).

Healthy lifestyle, which includes maintenance of a healthy weight, is the best defense against developing chronic illness and having a poor quality of life.

Figure H



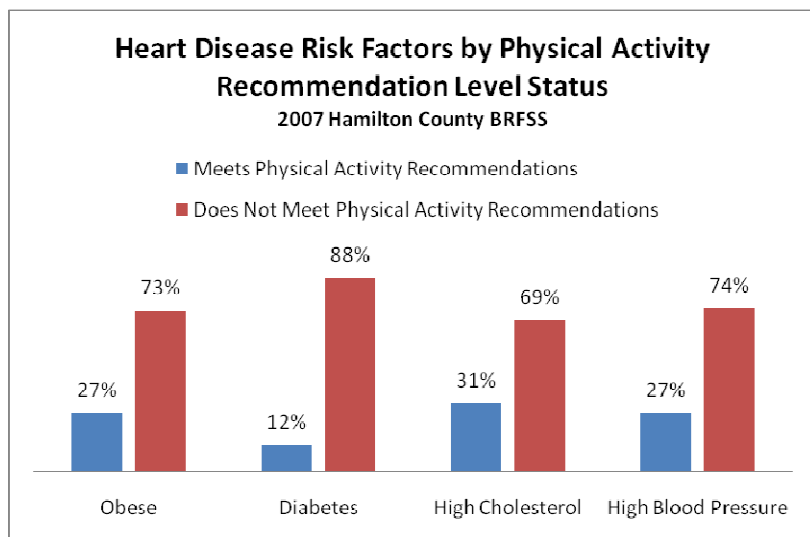
### Physical Activity and Exercise

Regular physical activity and exercise can help reduce the risk of cardiovascular disease, type 2 diabetes, colon and breast cancers and osteoporosis. The Centers for Disease Control and Prevention (CDC) recommends adults achieve either a minimum of 30 minutes of moderate physical activity at least 5 days a week or a minimum of 20 minutes of vigorous physical activity (such as jogging or running) at least 3 days a week. The CDC also recommends that adults incorporate resistance, strength-building and weight bearing activities 2 days a week. Despite the proven benefits of physical activity, the CDC reports that more than 50% of American adults do not get enough physical activity to provide health benefits, and almost one-quarter of adults are not active at all in their leisure time.

In Hamilton County, approximately 30% of adults are not active in their leisure time, compared to 32% of adults in Tennessee and 22% of adults in the U.S.

The *Healthy People 2010* objective is to increase the proportion of adults who engage regularly, preferably daily, in moderate physical activity for at least 30 minutes per day to 50%.

Figure I



In Hamilton County, 24% of adults meet the moderate physical activity recommendations of 30 minutes a day at least 5 days a week, and 17% of adults meet the vigorous physical activity recommendations of 20 minutes a day at least 3 days a week.

Overall, more than 1 in 3 (35%) adults surveyed in Hamilton County met either the moderate or vigorous physical activity recommendations. Adults in Hamilton County who have high cholesterol, diabetes, high blood pressure and were obese were less likely to meet the moderate or vigorous physical activity recommendations (Figure I).



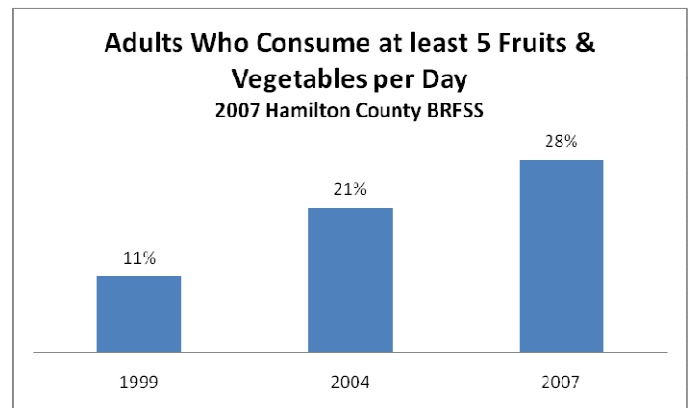
## Fruit and Vegetable Consumption

The Dietary Guidelines for Americans (2005) recommends individuals eat 5-13 servings of fruits and vegetables each day for better health. Persons who eat generous amounts of fruits and vegetables as part of a healthful diet are likely to have reduced risk for chronic diseases, type 2 diabetes, stroke, and certain cancers<sup>viii</sup>.

The *Healthy People 2010* objectives are to increase the proportion of persons ages 2 years and older who consume at least two daily servings of fruit to 75%, and increase the proportion of persons who consume at least three daily servings of vegetables (with at least one-third being dark green or orange vegetables) to 50%.

In Hamilton County, the percentage of adults who eat 5 or more fruits and vegetables per day has steadily increased from 11% in 1999 to 28% in 2007 (Figure J).

Figure J



In 2007, 26% of Tennessee adults reported eating 5 or more fruits and vegetables per day, compared to 24% of adults in the U.S.

## Alcohol Use

Over one-half of adults in the U.S. report having at least one drink of alcohol within the past 30 days. Although light to moderate alcohol drinking may have beneficial health effects on the heart, heavy or excessive alcohol drinking can lead to increased risk of unintentional injuries or health problems such as liver disease, high blood pressure or certain forms of cancer<sup>vi</sup>. Excessive alcohol use is the 3<sup>rd</sup> leading lifestyle-related cause of death in the U.S. In 2001-2005, there were approximately 79,000 deaths annually as a result of excessive alcohol use<sup>ix</sup>.

Two *Healthy People 2010* objectives are to decrease the proportion of adults engaging in binge drinking of alcoholic beverages to 6%, and to reduce the proportion of adults who exceed guidelines for low-risk drinking to 50%.

Binge drinking is defined as consuming 5 or more alcoholic beverages on one occasion for males and 4 or more drinks for females. In Hamilton County and Tennessee, approximately 9% of adults reported binge drinking, substantially lower than the national rate of 16%.

Heavy drinking is defined by drinking 2 or more drinks per day for men and 1 or more drinks per day for women. In 2007, approximately 4% of Hamilton County adults were assessed as heavy drinkers, compared to 3% for adults in Tennessee and 5% for adults in the U.S.

## Tobacco Use

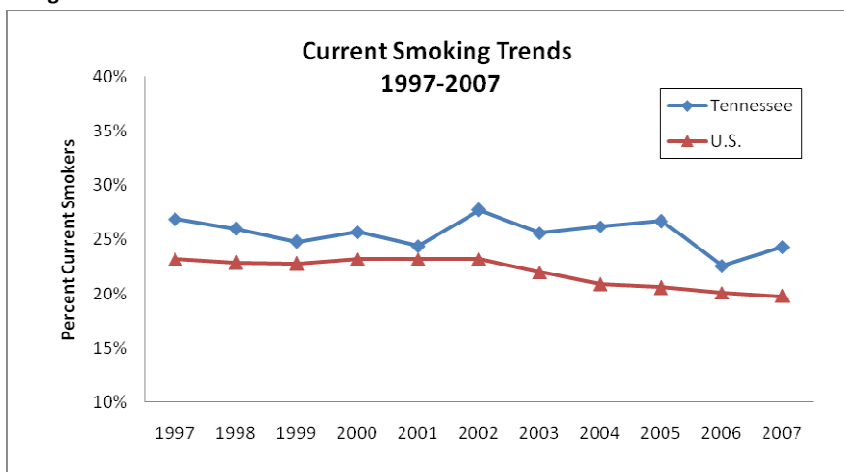
Tobacco use is the most preventable cause of premature mortality and morbidity in the United States and Tennessee. The adverse health effects from cigarette smoking account for approximately 438,000 deaths, nearly 1 in 5 deaths, each year in the U.S.<sup>x</sup>.

Smoking is a major risk factor for lung cancer, stroke, and heart disease, while smoke-less tobacco can increase the risk of oral and esophageal cancers.

Second-hand smoke is associated with increased risk of lung cancer and heart disease in nonsmoking adults. In Tennessee, approximately 1,200 premature deaths occur each year because of second-hand smoke.

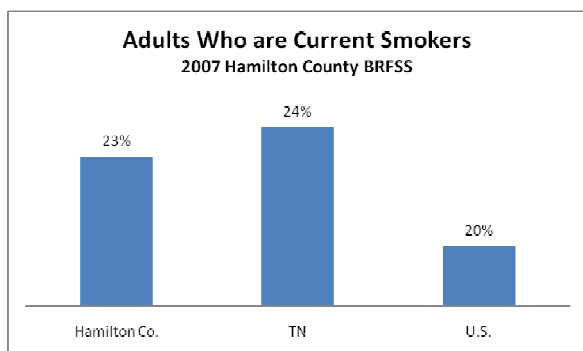
The *Healthy People 2010* objective is to reduce cigarette smoking by adults to 12%. Reaching this goal and quitting all forms of tobacco, have significant and immediate health benefits for people of all ages.

Figure K



The prevalence of current smokers in the U.S. has slowly fallen since 1997, from 23% to 20% in 2007. In Tennessee, there has not been a substantial decrease in smoking since 1997 (Figure K).

Figure L



The 2007 Hamilton County BRFSS survey was conducted prior to enforcement of the Tennessee Non-Smoker's Protection Act (October 1, 2007), which prohibits smoking in all enclosed public places, including restaurants, workplaces, hotels/motels, malls, health care and education facilities, and childcare facilities.

In 2007, approximately 23% of Hamilton County adults were current smokers, compared to 24% in Tennessee and 20% in the U.S. (Figure L).

Of Hamilton County current smokers, 57% have tried to quit smoking one day or longer in the past year.

## Resources and Prevention: Health Risk Behaviors and Healthy Lifestyles

**Physical Activity and Nutrition:** The Hamilton County Step ONE (Optimize with Nutrition and Exercise) Initiative is a county-wide effort to address the problem of obesity in our community and promote physical fitness and healthy lifestyles. Step ONE is a resource to the community for building partnerships for obesity prevention, providing nutrition and exercise education, providing information for families, businesses, and organizations to live healthier lifestyles, and working to promote healthier environments through policy change. For more information about Step ONE or the Partnership for Healthy Living, call: (423) 209-8090 or visit <http://hcstep1.org>.

The Activate Chattanooga partnership promotes community interest in the concepts of Active Living. Coordinated, community-wide active living efforts can encourage residents to choose healthy lifestyle practices. Government policies and priorities can help make it more easy and



practical for the public to be physically active as a part of daily routines. For interest in joining the coalition or for more information, call the Regional Planning Agency at (423) 757-5216 or visit <http://www.bikechattanooga.org/ActivateChattanooga.html>.

GetFitTN is a statewide awareness program developed by Governor Phil Bredesen to address the rising epidemic of Type 2 diabetes and risk factors that lead to diabetes, like obesity. This initiative is aimed at educating both adults and children that Type 2 diabetes can be delayed or even prevented with modest lifestyle changes like increasing physical activity and a healthier diet. For more information about GetFitTN, visit [www.getfittn.com](http://www.getfittn.com).

Tobacco Use: The Tobacco Education Program at the Chattanooga-Hamilton County Health Department works to prevent tobacco use among youth, promote quitting among adults, decrease secondhand smoke exposure, and facilitate policy change. A local volunteer coalition, Smoke Free Chattanooga, actively seeks these same goals. For information about the Smoke Free Chattanooga or about other local resources for quitting support, call (423)-209-8008.

Provided by the Tennessee Department of Health, the QuitLine offers free, personalized support to stop the use of tobacco products, including cigarettes and chewing tobacco. The program can be reached toll-free at 1-800-QUIT-NOW (1-800-784-8669). When smokers call the toll-free line, they are matched to a quit coach who works with the individual over the phone to develop a personalized quit plan. Callers also receive a free information kit on how to deal with cravings and other challenges.

In 2007, the Tennessee Non-Smoker's Protection Act was established. This historical act prohibits smoking in all enclosed public places including restaurants, workplaces, hotels/motels, malls, health care and education facilities, and childcare facilities. For more information about the Non-Smoker's Protection Act, visit <http://health.state.tn.us/smokefreetennessee/>.

Alcohol Use: The drinking and driving prevention program at the Health Department seeks to reduce the number of alcohol-related injuries and fatalities through education, enforcement and legislation. For information on driving under the influence prevention, please call (423) 209-8242.

The Advisory Council on Traffic Safety (ACTS) was formed in 1984 to coordinate traffic safety issues and traffic crash prevention programs with all the governmental agencies in Hamilton County. The DUI Taskforce of the ACTS council coordinates simulated crashes at local high schools in Hamilton County. For more information about the ACTS council, call (423) 209-8200.

## Summary

Promoting healthy lifestyles to prevent premature death and morbidity is a challenge for health officials in Hamilton County, Tennessee, and the nation. Health promotion strategies can play an important role in influencing personal choices for good health habits and preventative lifestyles. Prevention intervention programs to promote physical activity and fitness, good nutrition, and early cancer detection, along with programs to educate the population about the risks of diabetes, tobacco, alcohol and drugs, and a sedentary lifestyle are important tools toward increasing years of healthy life.

Overall, the health of Hamilton County is improving; however, it is the challenge of this community to continue to strive toward and achieve the ambitious vision of the *Healthy People 2010* goals.

# Technical Notes

## Background

The Behavioral Risk Factor Surveillance System (BRFSS)<sup>xi</sup> is an on-going data collection system administered by the Centers for Disease Control and Prevention (CDC). The CDC annually conducts the survey in all 50 states and several U.S. Territories, permitting state and regional comparisons as well as trend analyses.

The objective of the BRFSS is to collect uniform, state-specific data on preventative health practices and risk behaviors that are linked to chronic diseases, injuries, and preventable infectious diseases in the adult population. Factors assessed by the BRFSS include tobacco use, health care coverage, physical activity, fruit and vegetable consumption, and HIV/AIDS knowledge and prevention. Data are collected from a random sample of adults ages 18 and older (one per household) through a telephone survey.

Survey questions consist of a core component, optional modules, and state-added questions. The core component is a standard set of questions asked by all states each year.

## Sampling Methodology

The 2007 Hamilton County BRFSS was administered by the Tennessee Department of Health, Office of Policy Planning and Assessment, using a simple random sampling method of household telephone numbers. A total of 700 adult respondents were interviewed in Hamilton County from March-September 2007, with the following race break downs: white (82.6%), black or African-American (14.9%), other race (2.1%), and missing/unknown (0.4%).

## Sampling Error

Sampling error (often called “margin of error”) refers to random variation that occurs because only a subset of the entire population is sampled and used to estimate the finding for the entire population. In this report, sampling error has been expressed as *confidence interval bounds*.

The 95% confidence interval (calculated as 1.96 times the standard error of a statistic) indicates the range of values within which the statistic would fall 95% of the time if the researcher were to calculate the statistic (e.g., a percentage) from an infinite number of samples of the same size drawn from the same base population. For the 2007 Hamilton County BRFSS survey, the overall sampling error was plus or minus 3.7%.

## Data Analysis

Weighting data is a process in which the survey data are adjusted by a formula to account for unequal selection probability and response bias and to more accurately represent the total Hamilton County population. A weighting formula created by the Tennessee Department of Health was applied to this data to account for geographic location, high density areas, number of telephones in a household and demographic distribution of the random sample, to reflect population estimates for Hamilton County.

Percentage estimates were calculated using SPSS data analysis software. Missing values (e.g. “Don’t sure/Don’t know” and “Refused to answer” categories) were excluded from the denominator before the percentages were calculated.

## References

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