Tarrant County Public Health

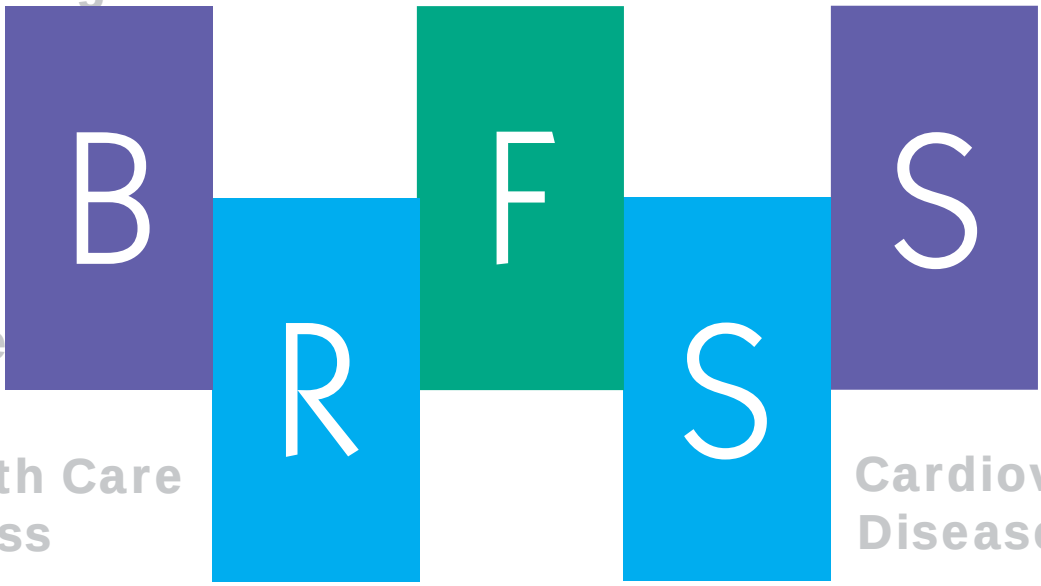
Adult Immunizations

Women's Health

Cancer Screening

Asthma

Health Status



Diabete

Health Care Access

Cardiovascular Disease

Physical Activity

Behavioral Risk Factor Surveillance System

Tobacco and Alcohol Use

Overweight and Obesity

2004

GIS Geographic Information System TARRANT CO. Public Health

BRFSS Turning Information Into Health

TARRANT COUNTY, TEXAS

Tarrant County
Behavioral Risk Factor Surveillance System
2004-2005

Tarrant County Public Health

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Forward

Dear Community Partners,

The 2004 BRFSS survey represents one of the most comprehensive health research projects undertaken by Tarrant County Public Health. Its assessment of risk factors gives us a glimpse into the future of our community's health status. Although this is the second BRFSS report produced, it is the first one that included a large enough sample size to drill down to the sub-county level. These sub-county results will facilitate more targeted, cost-effective program planning so that our limited prevention dollars reach those citizens most in need.

The BRFSS instrument, used by the Centers for Disease for Disease Control and Prevention enables us to compare our community's health status with Texas and the nation and in many instances to measure our progress toward meeting national Healthy People 2010 goals. These comparisons show us that we are on track in many instances with Texas and the nation, but that we share the same challenges with meeting our national health goals. The BRFSS confirms that our community must promote healthier lifestyles to address the ever increasing burden of chronic diseases and their associated risk factors.

Because the local public health system encompasses both government and private sectors, it is only through our strong partnerships that community based research can thrive. The BRFSS results in this report are available to the community in a variety of formats and venues and additional special studies have been planned.

We invite your feedback in the coming months about how the 2004 BRFSS has been useful to your organization in planning effective prevention and early intervention strategies. We are committed to producing public health data reports that are current, relevant and tailored to determine the health status our rapidly growing Tarrant County communities.

Lou K. Brewer, RN, MPH

Tarrant County Public Health Director

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Introduction

In 2004, Tarrant County Public Health conducted its second Behavioral Risk Factor Surveillance System (BRFSS) survey and for the first time reports results at a sub-county level. The BRFSS is a standardized instrument developed by the Centers for Disease Control and Prevention (CDC) for use nationwide. Using a standardized telephone survey methodology, the results provide baseline prevalence estimates of behaviors and conditions that place adults at risk for chronic disease, injury and preventable infectious diseases. The BRFSS is conducted annually by the CDC and by all 50 states and Guam and Puerto Rico. Texas has participated since 1987. Tarrant County Public Health, in addition to conducting an initial BRFSS in 1998, has relied upon Texas Department of State Health Services data collected at the county level. Because the Texas BRFSS is administered statewide, sample sizes for Tarrant County are not large enough to be able to draw meaningful conclusions, particularly below the county level. Therefore, the 2004 BRFSS project was developed specifically to assure a sufficient sample size and methodology that would enable a sub-county level analysis. This report provides the first-ever BRFSS results for five sub-county areas, as well as comparisons to Texas and the nation, and where relevant, to Healthy People 2010 objectives for the nation.

Methods

Questions for the Tarrant County BRFSS were derived from the CDC 2004 BRFSS questionnaire, the Texas Department of State Health Services (DSHS) 2004 BRFSS and one module from the 2003 BRFSS. The 2004 BRFSS taskforce, representing community partners who have a special interest in health-related data gathering, guided the selection of questions for the Tarrant County BRFSS and the implementation of the survey. Overall, the Tarrant County BRFSS questionnaire has 28 sections containing 105 questions. All interviews were conducted using a computer-assisted telephone interview (CATI) program. CATI programs use interactive computing systems for data collection. As questions are displayed, the interviewer reads them to the respondent and keys in the response. The CATI program automatically skips inappropriate questions and checks for the acceptability of responses, such as mammograms in males.

Respondents to the BRFSS were selected from five sections of Tarrant County using the disproportionate stratified random sampling method. This method stratifies blocks of telephone numbers into groups that are “likely” or “unlikely” to contain residential numbers based on information from previous surveys or telephone listings. Individual telephone numbers in the likely stratum are then sampled at a higher rate than numbers in the unlikely stratum. Individual respondents are randomly selected from all non-institutionalized adults, age 18 and older, living in a household. They are interviewed in accordance with BRFSS protocol until the target number of interviews is completed.

The quality of data collected is assured by several procedures. These include monitoring of interviewers through an unobtrusive telephone dial-in, conducting verification callbacks on a random sample of all interviews, and assessing other quality assurance indicators, such as interviewer statistics, frequency distribution of disposition, response rate and percentage of interviews completed on the first day.

The BRFSS adds weighting factors to each record to provide unbiased, representative prevalence estimates. Weighting compensates for over-representation or under-representation of specific groups in the study sample.

For 2004, the sample size goal of 2,000 completed interviews was exceeded by 431, for a total of 2,431 completed interviews. An additional 134 individuals partially completed interviews for a total of 2,565 total subjects.

Tarrant County BRFSS data was compared to that of the State of Texas, the United States and Healthy People 2010 objectives.

Results

Demographics

- **The demographic distribution of the sample population was similar to that of the general Tarrant County adult population**
- **Adults age 25 - 44 were over-represented**

Overall, 2,565 adults age 18 and older were interviewed for the Tarrant County BRFSS. The weighted percent distribution of the respondents was similar to that of the Tarrant County 2000 census population according to gender, education, annual income, race/ethnicity and employment. Adults age 25-44 were over-represented in the population sample. The gender distribution is similar to that of Texas and the average for the nation. The proportion of Hispanics (22.2%) in the survey population was lower than that of Texas (29.6%) but higher than in the nation (4.7%).

Health Status

- **Eighty-four percent of respondents reported their general health status to be "excellent", "very good" and "good"**
- **Fair to poor health status was significantly higher in central Tarrant County, individuals 55 years and older, Hispanics, and in persons out of work for more than one year**
- **Overall, approximately 19% of the respondents reported that their mental health was 'not good for 5 or more days during the past 30 days'**
- **Less than 10% of the respondents reported physical activity limitation for 5 or more days**

Overall, 84% of the respondents reported excellent to good general health status, 16% reported fair to poor general health status, 15.7% reported that their physical health was not good for 5 or more days during the past 30 days, 9.6% reported physical activity limitation and 18.7% reported that their mental health was not good for 5 or more days during the past 30 days.

Of those who reported fair to poor general health status, the prevalence was highest in central Tarrant County (34.3%), individuals 55 years and older (51.8%), Hispanics (26.5%), individuals with income less than $15,000 (38%) and in persons out of work for more than one year (27.4%). Fair to poor general health status decreased with increasing income. Of those who reported physical health not good for 5 or more days during the past 30 days, the prevalence was highest in central Tarrant County (23.9%), individuals 55 years and older (49.7%), females (18.3%), African Americans (19.3%), retirees (25.4%), those

unable to work (82.9%) and individuals with an income less than $15,000 (29.4%). Both fair to poor health (5.8%) and physical health not good responses (8.3%) were significantly lower in those with college degrees. Of people who reported mental health not good for 5 or more days during the past 30 days, the prevalence was highest in central Tarrant County (24.1%), individuals age 18 to 24 (27.0%), females (24.4%), those unable to work (66.4%), and other races/ethnicities (24.6%). Reporting "mental health not good" was significantly lower in respondents 65 and older (12.1%), those with a college degree (11.5%), and retired persons (11.9%). Physical health and mental health not good for 5 or more days in the past 30 days were significantly related to general health status.

Health Care Access

- **Approximately 24% of Tarrant County residents do not have any type of health insurance coverage**
- **Age, education, income, race/ethnicity and employment are significant determining factors for health insurance coverage**
- **Approximately 15% of Tarrant County residents could not see a doctor in the past 12 months because of cost**

Overall, 76% of Tarrant County residents have some type of health insurance, 23.8% have none and 14.7% could not see a doctor in the past 12 months because of cost. Of those with no health insurance, the highest prevalence was in central Tarrant County (44.1%), males (26.1%), adults age 18-24 (39.8%), individuals with less than a high school education (59.7%), individuals earning less than $25,000 (>50%), Hispanics (53.0%), those out of work for less than one year (58.2%). Of those who could not see a doctor because of cost, the highest prevalence was in central Tarrant County (22.7%), females (18.6%), those with less than high school education (29.8%), those earning less than $35,000 (>25%), African-American (22.8%) and those out of work for more than one year (34.6%).

The proportion of Tarrant County residents with no health insurance coverage was lower than state of Texas figures (26.6%), but higher than the average for the nation (14.5%). Among Tarrant County residents, having health insurance coverage was strongly associated with good health status and preventive health practices such as sigmoidoscopy, mammogram, clinical breast examination (CBE), Papanicolau test, prostate specific antigen (PSA) test, and having influenza and pneumococcal shots.

Overweight and Obesity

- **Sixty-four percent of adults in Tarrant County are overweight or obese**
- **Overweight and obese people are more likely to suffer from chronic conditions such as diabetes, hypertension and high blood cholesterol**
- **The prevalence of overweight and obesity in Tarrant County is higher than figures for Texas and the United States**

Overall, 64% of adults age 18 and older in Tarrant County were overweight or obese. Of these, 26.2% of respondents were obese, while 37.8% were overweight. Obesity was highest in central Tarrant County (32.3%), males (46.8%), adults age 34-54 (30.8%),

African-Americans (42.6%), people with less than a high school education (34.0%), and people unable to work (73.8%). Overweight or obese individuals were 2.3 times more likely to be diabetic, 2.3 times more likely to be hypertensive, 1.5 times more likely to be diagnosed with high blood cholesterol and 1.2 times more likely to live a sedentary lifestyle. The prevalence of overweight and obesity in Tarrant County is higher than that of Texas (61.5%) and the United States (59.5%). Tarrant County's obesity rate is 75% higher than the Healthy People 2010 objective.

Physical Activity

- **Forty-five (44.7%) percent of Tarrant County residents meet CDC's recommendation for physical activity**
- **Meeting the recommendation for physical activity was significantly related to higher levels of education, income and employment**
- **Physical inactivity is a risk factor for poor health status, hypertension, hypercholesterolemia, and overweight and obesity**

Overall, 76% of Tarrant County residents report participating in physical activities or exercise outside of their jobs during the past month and more than 60% report mostly sitting or standing during work hours. More than 45% of Tarrant County residents spend more than two hours watching television or videos or using a computer outside of work on a typical day. Only 44% of Tarrant County residents, however meet the CDC recommendation for regular physical activity, while 11% report no physical activity within the month prior to the survey. The prevalence of meeting recommendations for physical activity was highest in northeast Tarrant County (49.1%), males (46.1%), people age 25-34 (50.2%), people with college education (52.4%), people with an income above $50,000 (50.8%) and people who are self-employed (56.0%). Physically inactive Tarrant County residents are 3.42 times more likely to report poor health status, 1.33 times more likely to be hypertensive, 1.21 times more likely to have high blood cholesterol and 1.17 times more likely to be overweight or obese. Tarrant County residents still fall short of the Healthy People 2010 objective for moderate and vigorous physical activity combined (60%).

Consumption of Fruits and Vegetables

- **Only 25% of Tarrant County residents consume 5 or more servings of fruits and vegetables per day**
- **Inadequate fruit and vegetable consumption increases the risk for stroke**
- **The proportion of Tarrant County residents consuming 5 or more servings of fruits and vegetables per day falls short of the Healthy People 2010 objective**

Overall, about a quarter of Tarrant County residents meet the recommended daily consumption of 5 or more servings of vegetables and fruits per day. The proportion of Tarrant County residents who meet the recommendations for fruit and vegetable consumption was highest in northwest Tarrant County (28.1%), females (29.6%), individuals age 65 and older (31.1%), Whites (27.4%), individuals with a college degree (29.7%) and retired persons (32.6%). Tarrant County residents who ate less than 5 servings of fruits and vegetables per day were 2.6 times more likely to have a stroke and 1.3 times more likely to live a sedentary or inactive lifestyle. The proportion of Tarrant

County residents (25.9%) who met the recommended daily consumption of fruits and vegetables was slightly higher than that of Texas (22.6%) and the nation (22.5%). Tarrant County residents, however still fall short of the Healthy People 2010 national objectives for fruit (75%) and vegetable (50%) consumption.

Tobacco Use and Alcohol Consumption

- **Twenty-two percent of Tarrant County residents are current smokers and 4.3% are heavy drinkers**
- **More than 40% of current smokers did not receive advice to stop smoking in the past 12 months**
- **Over half (55%) of all current smokers have attempted to quit smoking in the past 12 months**

Overall, 43% of Tarrant County residents have smoked at least 100 cigarettes in their lifetime and 4.3% of all Tarrant County residents engage in heavy alcohol consumption. Of those who have smoked at least 100 cigarettes, over half are current smokers. About 22% of Tarrant County residents are current smokers. Current smoking was highest in northeast Tarrant County (26.0%), males (26.7%), people age 35-44 (26.1%), those with less than high school (31.7%), those with annual incomes of $25,000 to $35,000 (28.8%), Whites (23.2%), those unable to work (37.3%) and those out of employment for more than one year (37.1%). Of all the current smokers, over half (55%) have attempted to quit smoking in the past 12 months. Current smokers are 3.4 times more likely to suffer from coronary artery disease. Tarrant County residents are 63% over the Healthy People 2010 objective for current smokers.

The prevalence of heavy alcohol consumption is highest in northeast Tarrant County (7.7%), males (5.8%), teenagers and young adults (8.2%), individuals who finished high school or a GED (6.7%), Hispanics (5.3%) and students (12.0%).

Firearms

- **Approximately 9% of the Tarrant County population has a loaded firearm within their residence**
- **Approximately 5% of the Tarrant County population has a loaded and unlocked firearm within their residence**
- **Self-employed (9.6%) and retired persons (8.9%) reported the highest prevalence of loaded and unlocked firearms within their residence**

Overall, about 8.7% of Tarrant County residents have a loaded firearm within their residence and the prevalence of living at home with a loaded and unlocked firearm in Tarrant County is 4.8%. The prevalence of having loaded and unlocked firearms was highest for males (6.3%), those age 55 to 64 (8.9%), those with income over $34,999 (13.4%), Whites (6.8%) and self-employed individuals (18.5%).

Women's Health

- **About three-fourths of women age 40 and older have had a mammogram within the past two years**
- **About 84% of women with an intact cervix have had a Pap test within the past three years**
- **Having a clinical breast examination (CBE), a mammogram within the past two years and a Pap test within the past three years were associated with increasing age, education and income**

Overall, 89.5% of Tarrant County women have ever had a CBE, 74% of women age 40 and older had a mammogram within the past two years and 84% of all women with an intact cervix have had a Pap test within the past three years. The prevalence of having had a CBE was highest in southwest Tarrant County (93.4%), women age 45-54 (96.0%), women with a college degree (95.3%), women with an income of $50,000 and over (97.5%), Whites (95.4%) and women who were retired (95.5%). The prevalence of women who have had a mammogram within the past two years was highest in northwest Tarrant County (76.6%), age 65 and older (82.6%), women with a college education (81.9%), women with an annual income of $50,000 and over (81.1%), Whites (74.6%) and women who were retired (83.7%). The prevalence of having a Pap test within the past three years was highest in central Tarrant County (86.2%), women age 25-34 (89.2%), women with a college education (91.6%), women with an annual income of $35,000 and over (93.9%), White women (87.0%) and women who are currently employed (88.3%).

The prevalence of Tarrant County women who have ever had a CBE, had a mammogram within the past two years and had a Pap test within the past three years were higher than that of Texas. The prevalence of CBE, however was lower than the average for the United States and the Pap test was higher than the average for the United States. Tarrant County meets and exceeds the Healthy People 2010 objective for having a mammogram within the past two years (70.0%) but falls short of the objective for having a Pap test within the past three years (90.0%).

Cancer Screening

- **About 47% of male Tarrant County residents age 40 and older had prostate specific antigen (PSA) tests within the past two years**
- **About 70% of male Tarrant County residents age 40 and older have ever had a digital rectal exam (DRE)**
- **About 30% of all Tarrant County residents age 50 and older had a blood stool test within the past two years**
- **About 50% of all Tarrant County residents age 50 and older have ever had sigmoidoscopy or colonoscopy**

Overall, 46.9% percent of male Tarrant County residents age 40 and older had a PSA test within the past two years, 69.3% have ever had a Digital Rectal Examination (DRE). Among

Tarrant County residents age 50 and older, 29.6% reported having blood stool tests within the past two years and 50.4% have ever had a sigmoidoscopy or colonoscopy. The prevalence of PSA was highest for southwest Tarrant County (51.8%), age 65 and older (78.5%), men with college education (53.2%), men with annual income of $35,000 and over (55.7%), African-American males (55.6%) and retired individuals (77.9%). The prevalence of DRE was highest for southwest Tarrant County (73.4%) and northeast Tarrant County (73.9%), for males age 65 and older (92.4%), those with a college degree (81.2%), those with income $50,000 and over (82.1%), Whites (78.7%) and retirees (92.9%). The prevalence of having blood stool tests within the past two years was highest for northeast (33.8%), females (32.6%), respondents age 65 and older (34.7%), those with a college degree (32.5%), Whites (31.8%), those with an income of $50,000 and over (33.1%) and retirees (37.5%). The prevalence of people who ever had a sigmoidoscopy or colonoscopy was highest for southwest Tarrant County (57.8%), females (52.1%), age 65 and older (61.6%), those with less than high school (53.6%), those with an income of $50,000 and over (54.4%), Whites (52.5%) and for retirees (62.7%).

The prevalence of having a blood stool test within the past two years or having ever had a sigmoidoscopy or colonoscopy in Tarrant County are higher than those for Texas, but comparable to the nation. Tarrant County residents meet the Healthy People 2010 objective for sigmoidoscopy or colonoscopy, but fall 40% short of the Healthy People 2010 objective for blood stool test.

Adult Immunizations

- **Fifty-eight percent of adults 65 and older in Tarrant County had a flu shot in the past 12 months**
- **Sixty-six percent or respondents have ever had a pneumococcal vaccine**
- **More people with chronic diseases are getting flu and pneumoccocal vaccinations**

Overall, 58% of the respondents age 65 and over received an influenza shot in the past 12 months while the prevalence of persons who had ever received pnuemococcal shots was 66%. The prevalence of influenza shot in the past 12 months was highest for southwest Tarrant County (66.9%), males (60.6%), those with a college degree (76.3%), those with an income of $50,000 and over (66.5%), other races/ethnicities (82.8%) and homemakers (70.7%). The prevalence of ever receiving a pneumococcal vaccine was highest for northeast Tarrant County (75.0%), females (68.5%), those with high school or GED (64.2%), those with incomes $25,000 to $35,000 (89.6%) and Whites (68.5%).

The influenza vaccination status among persons 65 and over in Tarrant County (58.2%) was lower than that of Texas (67.7%) and the United States (69.9%). Pneumococcal vaccination status among older Tarrant County residents was slightly higher than that of the state (62.0%) and the nation (64.5%). Both influenza and pneumococcal vaccinations were substantially below the Healthy People 2010 objectives of 90%.

Cardiovascular Health

- **About 6% of Tarrant County's population has been diagnosed with heart disease**

- **About 23% of Tarrant County's population has been diagnosed with high blood pressure**
- **Persons with high blood pressure are 8.8 times more likely to have heart disease**
- **Persons with high blood cholesterol are 5.1 times more likely to have heart disease**
- **Prevalence of high blood pressure in African-Americans and Whites is significantly higher than in Hispanics and other races/ethnicities**

Overall, 5.5% of Tarrant County residents have been diagnosed by a physician with heart disease and 23% have been diagnosed with high blood pressure (hypertension). The prevalence of heart disease was highest in central Tarrant County (7.9%), individuals age 65 and older (24.6%), those who earn less than $15,000 per year (9.4%), those with less than high school (6.4%), Whites and African-Americans (6.5%) and those unable to work (29.9%). The prevalence of hypertension was highest for central Tarrant County (28.5%), individuals age 65 and older (60.0%), those who earn less than $15,000 per year (31.0%), those with high school or GED (27.2%), Whites (32.2%) and those unable to work (65.2%). Age was also a significant risk factor for myocardial infarction, coronary heart disease and stroke. Persons over the age of 65 reported the highest prevalence of myocardial infarction (11.6%), coronary heart disease (11.8%) and stroke (7.3%). Hispanics consistently reported the lowest prevalence of cardiovascular disease such as heart disease (1.4%), myocardial infarction (0.4%) and stroke (0.2%). Three out of four Tarrant County residents diagnosed with hypertension are currently taking medication to control their blood pressure.

The prevalence of heart disease in Tarrant County residents (5.5%) did not differ significantly from the prevalence reported in Texas (7.6%). The prevalence of high blood pressure in Tarrant County residents (23.1%) is lower than that reported in Texas (24.6%) and the nation (24.8%), but falls short of the Health People 2010 objective of 16.0%. Tarrant County residents who are diabetic, hypertensive or have high blood cholesterol were significantly more likely to suffer from heart disease, myocardial infarction, coronary heart disease, and stroke. Persons that reported that they have never smoked were significantly less likely to have doctor-diagnosed heart disease, heart attacks, coronary heart disease, and stroke.

Diabetes

- **5.9% of the Tarrant County population has been diagnosed with diabetes**
- **One out of four diabetics are insulin dependent**
- **Diabetes was highest among African-Americans**
- **Diabetics tend to have a poor health status and are more likely to be overweight or obese**

Overall, about 6% of Tarrant County residents have been diagnosed by a physician with diabetes. The prevalence of diabetes was highest for central Tarrant County (10.4%), females (6.2%), those age 65 and older (18.9%), those who earn less than $25,000 per

year (10.4%), African-Americans (9.2%), those unable to work (18.7%). The prevalence of diabetes in Tarrant County (5.9%) is lower than both the state (7.0%) and national rates (7.2%) [Table 1.2].

Compared to Tarrant County non-diabetics, those with diabetes are 6.3 times more likely to have suffered from myocardial infarction, 6.2 times more likely to have suffered a stroke, 2.4 times more likely to be hypertensive, 6.3 times more likely to have high blood cholesterol and 2.4 times more likely to be overweight or obese.

Asthma

- **Over 8% of adults in Tarrant County are currently asthmatic**
- **More females than males are asthmatic**
- **Asthma is higher in teenagers and young adults age 18-24 than in adults**
- **Asthma prevalence was highest among those earning less than $15,000 and lowest among those earning $50,000 or more**

Overall, 13.4% of Tarrant County residents have been told that they have asthma by a health professional. The prevalence of current asthma in Tarrant County adults is 8.5%. The prevalence was highest in southeast Tarrant County (9.4%), females (10.8%), adults age 18-24 (16.7%), those with less than a high school education (11.3%), those with income less than $15,000 (12.7%), African-Americans (10.0%) and those unable to work (29.0%). The proportion of those who reported that they currently have asthma in Tarrant County (8.5%) was higher that that of Texas (6.9%) and the United States (7.5%). Those who report current asthma are 1.8 times more likely to report poor health status and 1.5 times more likely to be smokers.

Risk Factors with Significant Geographic Differences

Health Status

- Fair and poor health status in was higher central Tarrant County (34.3%) than northeast (10.8%), southeast (14.4%), southwest (15.3%) and northwest (15.6%).
- Physical health not good for five or more days during the past 30 days was higher in central Tarrant County (23.9%) than northeast (13.1%), southeast (12.4%) and northwest (15.3%).
- Activities limited by health impairment was higher in central Tarrant County (14.4%) than northeast (6.1%).

Health Care Access

- Central Tarrant County had a higher proportion of respondents with no health insurance (44.1%) than northeast (16.5%), southeast (23.8%), southwest (21.6%) and northwest (23.0%).
- Respondents who could not see a doctor because of cost was higher in central Tarrant County (22.7%) than northeast (13.7%), southeast (13.9%), southwest (14.9%) and northwest (13.6%).

Overweight and Obesity

- Obesity was higher in central Tarrant County (32.2%) than northeast (20.5%) and southwest (22.2%).

Physical Activity

- Central Tarrant County had a higher proportion of respondents with no physical activity in the past 30 days (19.2%) than northeast (10.1%) and southeast (8.5).

Women's Health

- Those who ever had a clinical breast exam was lower in central Tarrant County (79.1%) than southwest (93.4%) and northwest (91.0%).

Cancer Screening

- Digital rectal exam in males age 40 and older was lower in central Tarrant County (54.1%) than northeast (73.9%) and southwest (73.4%).
- Ever had sigmoidoscopy or colonoscopy was lower in central Tarrant County (40.6%) than Southwest (57.8%).

Cardiovascular Health

- High blood pressure in central Tarrant County (28.5%) was higher than northeast (19.0%).

Diabetes

- Diabetes was higher in central Tarrant County (10.4%) than northeast (5.5%), southeast (4.5%) and northwest (5.2%).

Risk Factors with Significant Gender Differences

Health Care Access

- Females (18.6%) were more likely to report that they could not see a doctor in the past 12 months because of cost than males (10.7%).

Overweight and Obesity

- Males (46.8%) were more likely to be overweight than females (28.7%).

Fruits and Vegetables

- Females (29.6%) were more likely to report consumption of five or more servings of fruit and vegetables per day than males (22.0%).

Tobacco and Alcohol Use

- Tobacco use was higher in males (26.7%) than females (18.0%).

Cardiovascular Health

- Among those diagnosed with high blood pressure, females (83.5%) were more likely to report taking medication than males (68.9%).

Asthma

- Current asthma was higher in females (10.8%) than males (6.1%).

Risk Factors with Significant Age Differences

Health and Mental Health Status

- Fair or poor health status in age 65 and older (27.7%) and 55-64 (24.4%) was higher than 18-24 (10.7%) and 25-34 (9.6%).
- Physical health not good for 5 or more days during the past 30 days was higher in persons age 65 and older (28.3%) than in those 18-24 (13.5%), 25-34 (10.7%), 35-44 (14.3%) and 45-54 (14.8%).
- Activities limited by health impairment was higher in persons age 65 and older (14.7%) than those age 25-34 (6.7%).
- Mental health not good for five or more days during the past 30 days in 18-24 (27.0%) was higher than age 65 and older (12.1%).

Health Care Access

- Respondents with no health insurance in age 65 and older (3.2%), age 55-64 (17.5%) and age 45-54 (17.5%) were lower than age 35-44 (29.5%) age 25-24 (28.4%) and age 18-24 (39.8%).
- Respondents who could not see a doctor because of cost in age 65 and older (6.0%) were lower than age 55-64 (13.0%), 45-54 (13.0%) 35-44 (17.6%) age 25-34 (16.9%) and age 18-24 (16.2%).

Overweight and Obesity

- Obesity was less prevalent in age 18-24 (12.7%) than age 25-34 (25.8%), 35-44 (30.5%), 45-54 (30.8%), 55-64 (28.8%), and 65 and older (21.3%).

Physical Activity

- Meeting recommendation for physical activity was higher in age 25-34 (50.2%) than age 55-64 (35.5%) and 65 and older (38.2%).
- Respondents with no physical activity in the past 30 days in age 65 and older (18.2%) was higher than age 45-54 (9.1%), 25-34 (9.4%) and 18-24 (6.4%).

Tobacco Use

- Current smokers in age 65 and older (9.9%) was lower than age 55-64 (25.5%), 45-54 (22.3%), 35-44 (26.5%), 25-34 (22.8%) and 18-24 (22.5%).

Firearms

- Living in a home with a loaded firearm was higher in age 55-65 (15.5%) than age 45-54 (9.1%), 35-44 (8.0%), 25-34 (6.9%) and 18-24 (4.3%).

Women's Health

- Those who ever had a clinical breast exam was lower in age 18-24 (74.8%) than age 35-44 (90.5%), 45-54 (96.0%), 55-64 (93.0%) and 65 and older (94.4%).

Cancer Screening

- Those who had a prostate specific antigen test within the past two years was higher in 65 and older (78.5%) and 55-64 (67.6%) than 45-54 (39.4%).

Cardiovascular Health

- Heart disease was higher in 65 and older (24.6%) than age 55-64 (9.0%), 45-54 (4.0%), 35-44 (3.9%), 25-34 (0.8%) and 18-24 (0.4%).
- Myocardial infarction was higher in persons 65 and older (11.6%) than in those age 55-64 (3.9%), 45-54 (0.7%), 35-44 (1.3%), 25-34 (0.2%) and 18-24 (0.0%).
- Coronary heart disease was higher in persons 65 and older (11.8%) than in those age 55-64 (3.7%), 45-54 (2.2%), 35-44 (2.0%), 25-34 (0.3%) and 18-24 (0.2%).
- Stroke was higher in persons 65 and older (7.3%) than in those age 55-64 (3.6%), 45-54 (1.5%), 35-44 (0.9%), 25-34 (0.4%) and 18-24 (0.1%).
- High blood pressure was higher in persons 65 and older (60.0%) than in those age 55-64 (43.6%), 45-54 (29.2%), 35-44 (17.5%), 25-34 (8.8%) and 18-24 (1.4%).
- Among those diagnosed with high blood pressure, taking medication was higher in persons age 65 and older (95.8%) than in those age 55-64 (86.6%), 45-54 (74.9%), 35-44 (60.7%), 25-34 (31.2%) and 18-24 (15.1%).

Diabetes

- Diabetes was higher in persons age 65 and older (18.9%) than in those age 45-54 (7.5%), 35-44 (3.0%), 25-34 (1.3%) and 18-24 (0.0%).

Asthma

- Current asthma was higher in persons age 18-24 (16.7%) than in those age 25-34 (5.7%).

Risk Factors with Significant Racial/Ethnic Differences

Health Status

- Fair or poor health status was higher in Hispanics (26.5%) than Whites (12.2%) and other races/ethnicities (9.1%).
- Physical health not good for 5 or more days during the past 30 days was higher in African-Americans (19.3%) and Whites (16.0%) than other races/ethnicities (5.6%).
- Activities limited by health impairment was higher in Whites (10.6%) and African-Americans (10.1%) than other races/ethnicities (2.1%).

Health Care Access

- Respondents with no health insurance was higher among Hispanics (53.0%) than Whites (13.2%), African-Americans (26.3%) and other races/ethnicities (19.0%).
- Respondents who could not see a doctor because of cost were more frequent in Hispanics (22.8%) and African-Americans (21.1%) than among Whites (11.1%).

Overweight and Obesity

- Obesity was higher in African-Americans (42.6%) than Whites (23.5%), Hispanics (27.7%) and other races/ethnicities (15.8%).

Physical Activity

- Respondents with no physical activity in the past 30 days were less frequent among Whites (7.9%) than Hispanic (19.1%).

Tobacco and Alcohol Use

- Heavy alcohol consumption was higher in Whites (4.9%) than African-Americans (1.0%) and other races/ethnicities (0.0%).

Firearms

- Living in a home with a loaded firearm was higher in Whites (11.8%) than Hispanics (2.5%).

Women's Health

- Those who had ever had a clinical breast exam was higher in Whites (95.4%) than African-Americans (85.0%), Hispanics (77.9%) and other races/ethnicities (68.4%).
- Pap test within the past three years in women with an intact cervix was higher in Whites (87.0%) than other races/ethnicities (58.4%).

Cancer Screening

- Having a prostate specific antigen test within the past 2 years was higher in Whites (52.5%) than Hispanics (32.4%) and other races/ethnicities (19.8%).
- Having a digital rectal exam was higher in Whites (78.7%) than African-Americans (58.4%) and Hispanics (39.7%).
- Having a blood stool test was higher in Whites (31.8%) than Hispanics (12.8%).

Adult Immunizations

- Influenza vaccination was higher in Whites (60.0%) than African-Americans (38.4%).

Cardiovascular Health

- Myocardial infarction was higher in Whites (2.3%) and African-Americans (2.6%) than Hispanics (0.4%).
- Coronary heart disease was higher in Whites (3.4%) and African-Americans (3.2%) than Hispanics (0.9%).
- Stroke was higher in Whites (2.2%) and African-Americans (2.3%) than Hispanics (0.2%).
- High blood pressure was more prevalent in Whites (25.8%) and African-Americans (32.2%) than Hispanics (12.5%).

Risk Factors with Significant Annual Income Differences

Health and Mental Health Status

- Fair or poor health status was higher in individuals with income less than $15,000 (38.0%) than those with incomes of $25,000-$34,999 (18.5%), $35,000-$49,999 (9.7%) and $50,000 and over (5.7%).
- Respondents who answered physical health not good for 5 or more days during the past 30 days was higher in individuals with income less than $15,000 (29.4%) than those with incomes of $35,000-$49,999 (17.9%) and $50,000 and over (8.8%).
- Activities limited by health impairment was higher in individuals with income less than $15,000 (22.5%) than those with incomes of $35,000-$49,999 (8.8%) and $50,000 and over (4.8%).
- Respondents who answered mental health not good for 5 or more days during the past 30 days was higher in individuals with income less than $15,000 (29.7%) than those with incomes of $35,000-$49,999 (16.1%) and $50,000 and over (13.9%).

Health Care Access

- Having no health insurance was higher among individuals with income less than $15,000 (50.7%) and $15,000-$24,999 (52.5%) than among those with incomes of $25,000-$34,999 (29.8%), $35,000-$49,999 (14.8%) and $50,000 and over (5.1%).
- Respondents who could not see a doctor because of cost were more frequent among individuals with an income less than $15,000 (29.2%), $15,000-$24,999 (27.9%) and $25,000-$34,999 (25.6%) than those with income of $35,000-$49,999 (12.2%) and $50,000 and over (3.6%).

Physical Activity

- Meeting recommendations for physical activity was lower in individuals earning less than $15,000 (30.8%) than those with incomes of $35,000-$49,999 (47.6%) and $50,000 and over (50.8%).
- Respondents with no physical activity in the past 30 days was higher in individuals with an income less than $15,000 (30.9%) than those with incomes of $15,000-$24,999 (15.1%), $25,000-$34,999 (11.9%), $35,000-$49,999 (9.2%) and $50,000 and over (4.2%).

Firearms

- Living in a home with a loaded firearm was higher in individuals with an income of $50,000 and over (12.1%) and $35,000-$49,999 (12.7%) than in individuals with incomes $25,000-$34,999 (4.8%), $15,000-$24,999 (2.7%), and less than $15,000 (4.8%).

Women's Health

- Those who had ever had a clinical breast exam was higher in individuals with incomes of $50,000 and over (95.4%) than in individuals with incomes $35,000-$49,999 (95.3%), $25,000-$34,999 (84.3%), $15,000-$24,999 (87.2%), and less than $15,000 (79.7%).
- Having a mammogram in the past two years was higher in individuals with income $50,000 and over (81.1%) than individuals with income less than $15,000 (57.6%).
- Pap test within the past three years in women with an intact cervix was higher in individuals with incomes of $50,000 and over (92.9%) and $35,000-$49,999 (93.5%) than individuals with incomes $25,000-$34,999 (72.8%), $15,000-$24,999 (76.7%), and less than $15,000 (72.4%).

Cancer Screening

- Having a digital rectal exam was higher in individuals with an income of $50,000 and over (82.1%) than in individuals with incomes of $25,000-$34,999 (51.6%), $15,000-$24,999 (50.4%), and less than $15,000 (52.2%).
- Blood stool test was higher in individuals with an income of $50,000 and over (33.1%) than in individuals with incomes of $15,000-$24,999 (18.9%).

Cardiovascular Health

- Heart disease was lower in individuals with an income of $50,000 and over (3.9%) than those with incomes of 35,000-$49,999 (4.9%), $25,000-$34,999 (7.9%), $15,000-$24,999 (7.0%), and less than $15,000 (9.4%).
- Myocardial infarction was lower in individuals with an income of $50,000 and over (1.3%) and $35,000-$49,999 (0.4%) than in those with incomes less than $15,000 (5.6%).
- High blood pressure was higher in individuals with an income of $50,000 and over (20.9) than in those with an income less than $15,000 (31.0%).

Diabetes

- Diabetes was higher in individuals with an income of less than $15,000 (10.0%) and $15,000-$24,999 (10.4%) than in individuals with incomes of $50,000 and over (3.3%) and $35,000-$49,999 (3.9%).

Asthma

- Current asthma was higher in individuals with an income of less than $15,000 (12.7%) than in individuals with incomes of $50,000 and over (5.9%).

Risk Factors with Significant Education Status Differences

Health and Mental Health Status

- Fair and poor health status was higher in individuals with less than a high school education (34.6%) than individuals who finished high school or a GED (20.0%), technical school/some college (13.4%) and a college degree (5.8%).
- Physical health not good for 5 or more days during the past 30 days was lower in individuals with a college degree (8.3%) than technical school/some college (18.1%), finished high school or a GED (19.0%) and less than a high school education (21.1%).
- Activities limited by health impairment was lower in individuals with a college degree (5.3%) than technical school/some college (10.9%), finished high school or a GED (11.5%) and less than a high school education (13.6%).
- Mental health not good for 5 or more days during the past 30 days was lower in individuals with a college degree (11.5%) than technical school/some college (21.6%), finished high school or a GED (22.4%) and less than a high school education (22.7%).

Health Care Access

- Reporting no health insurance was higher in individuals with less than a high school education (59.7%) than individuals who finished high school or a GED (29.0%), technical school/some college (15.5%) and a college degree (8.7%).
- Respondents who could not see a doctor because of cost was higher among individuals with less than a high school education (25.8%) than individuals who finished high school or a GED (15.7%), technical school/some college (16.7%) and a college degree (6.6%).

Overweight and Obesity

- Obesity was higher in individuals with less than a high school education (34.0%) than individuals who finished high school or a GED (22.1%) and a college degree (22.0%).

Physical Activity

- Meeting recommendations for physical activity was lower in individuals with less than a high school education (35.5%) than individuals who finished high school or a GED (40.5%), technical school/some college (44.8%) and a college degree (52.4%).
- Respondents with no physical activity in the past 30 days was higher in individuals with less than a high school education (24.5%) than individuals who finished high school or a GED (10.6%), technical school/some college (8.3%) and a college degree (7.2%).

Fruits and Vegetables

- Consumption of 5 or more servings of fruits and vegetables per day was higher in individuals with a college degree (29.7%) and technical school/some college (28.0%) than in individuals with less than a high school education (17.3%).

Tobacco and Alcohol Use

- Current smoking was lower in individuals with a college degree (13.7%) than those with technical school/some college (22.7%), finished high school or a GED (27.0%), and less than a high school education (31.7%).
- Heavy alcohol consumption was lower in individuals with a college degree (2.7%) than in those who finished high school or a GED (6.7%).

Firearms

- Living in a home with a loaded firearm was higher in individuals with a college degree (10.9%), technical school/some college (11.1%) and high school or GED (7.7%) than individuals with less than a high school education (2.2%).

Women's Health

- Clinical breast examination was higher in individuals with a college degree (95.3%), technical school/some college (90.7%) and finished high school or a GED (87.8%) than individuals with less than a high school education (77.5%).
- Having a mammogram in the past two years was higher in individuals with a college degree (81.9%) than individuals with less than a high school education (59.2%).
- Having a Pap test was higher in individuals with a college degree (91.6%) than technical school/some college (77.9%) and less than a high school education (77.2%).

Cancer Screening

- Having a digital rectal exam was higher in individuals with a college degree (81.2%), technical school/some college (68.5%) and high school or GED (67.3%) than individuals with less than a high school education (42.0%).

Risk Factors That Show Significant Difference Between Tarrant County and Texas

Health Status

- Fair or poor health status was lower in Tarrant County (16.0%) than in Texas (20.4%).

Fruits and Vegetables

- Consumption of 5 or more servings of fruits and vegetables per day was higher in Tarrant County (25.9%) than in Texas (22.5%).

Women's Health

- Mammogram within the past two years in females age 40 and older was higher in Tarrant County (74.0%) than in Texas (67.8%).

Cancer Screening

- Blood stool test within the past two years in adults age 50 and older was higher in Tarrant County (29.6%) than in Texas (23.4%).

Adult Immunizations

- Influenza vaccination in adults age 65 and older during the past 12 months was lower in Tarrant County (58.2%) than in Texas (67.1%).

Risk Factors That Meet the Healthy People 2010 Objectives

Women's Health

- Tarrant County (74.0%) exceeded the Healthy People 2010 objective (70%) for mammogram within the past two years in females age 40 and older.

Cancer Screening

- Tarrant County (50.4%) met the Healthy People 2010 objective (50%) for sigmoidoscopy or colonoscopy in adults age 50 and older.

Results

Table 1 Summary of Risk Factors at Sub-County Level

Risk Factors	North-east	South-east	Central	North-west	South-west	Tarrant County
Demographics						
Sample Size	512	442	610	507	494	2565
Health and Mental Health Status						
Fair or Poor Health Status	10.8%	14.4%	34.3%	15.3%	15.6%	16.0%
Physical Health Not Good	13.1%	12.4%	23.9%	19.6%	15.3%	15.7%
Activities Limited by Health Impairment	6.1%	8.8%	14.4%	10.4%	10.5%	9.6%
Mental Health Not Good	15.9%	18.9%	24.1%	19.3%	17.8%	18.7%
Health Care Access						
No Health Insurance	16.5%	23.8%	44.1%	21.6%	23.0%	23.8%
Could Not See a Doctor Because of Cost	13.7%	13.9%	22.7%	14.9%	13.6%	14.7%
Overweight and Obesity						
BMI 25.0 - 29.9	42.0%	36.6%	38.9%	33.3%	40.0%	37.8%
BMI 30.0 - 99.9	20.5%	27.5%	32.2%	22.2%	29.3%	26.2%
Physical Activity						
Meets Recommendations for Physical Activity	49.1%	45.1%	42.5%	46.3%	41.1%	44.7%
No Physical Activity Within Past 30 Days	10.1%	8.5%	19.2%	12.5%	11.2%	11.1%
Fruits and Vegetables						
Consume 5 or More Servings Per Day	26.3%	24.0%	26.4%	24.1%	28.1%	25.9%
Tobacco and Alcohol Use						
Current Smokers	26.0%	21.7%	19.9%	19.5%	23.7%	22.2%
Heavy Alcohol Consumers	7.7%	3.8%	1.9%	3.6%	4.2%	4.3%
Firearms						
Living in a Home With a Loaded Firearm	7.9%	8.2%	5.5%	9.4%	10.1%	8.7%
Living in a Home With a Loaded and Unlocked Firearm	4.2%	5.0%	3.3%	5.0%	5.4%	4.8%
Women's Health						
Clinical Breast Exam in Women Age 18 and Older	88.8%	88.8%	79.1%	93.4%	91.0%	89.0%
Mammogram Within the Past 2 Years in Women Age 40 and Older	69.4%	74.9%	69.8%	74.3%	76.6%	74.0%
Pap Test Within the Past 3 Years in Women Age 18 and Older With Intact Cervix	84.7%	81.5%	86.2%	85.7%	83.1%	83.7%
Cancer Screening						
Prostate-Specific Antigen Test Within The Past 2 Years in Males Age 40 and Older	51.4%	49.4%	37.9%	51.8%	41.0%	46.9%
Digital Rectal Exam in Males Age 40 and Older	73.9%	71.1%	54.1%	73.4%	66.6%	69.3%
Blood Stool Test Within the Past 2 Years in Adults Age 50 and Older	33.8%	32.9%	26.0%	32.8%	22.8%	29.6%
Sigmoidoscopy or Colonoscopy in Adults Age 50 and Older	50.7%	50.4%	40.6%	57.8%	47.3%	50.4%
Adult Immunizations						
Flu Vaccination Within the Past 12 Months in Age 65 and Older	52.2%	60.8%	51.5%	66.9%	52.1%	58.2%
Pneumococcal Vaccination in Age 65 and older	75.0%	67.0%	56.5%	66.3%	62.8%	66.0%
Cardiovascular Health						
Doctor-Diagnosed Heart Disease	4.8%	5.6%	7.9%	6.2%	4.5%	5.5%
Myocardial Infarction	2.0%	1.4%	3.7%	2.6%	2.3%	2.2%
Coronary Heart Disease	1.7%	3.0%	3.1%	3.2%	2.1%	2.6%
Stroke	1.9%	1.7%	2.4%	1.7%	1.7%	1.8%
Diagnosed With High Blood Pressure	19.0%	22.7%	28.5%	22.7%	24.3%	23.1%
Diabetes						
Diagnosed With Diabetes	5.5%	4.5%	10.4%	7.3%	5.2%	5.9%
Asthma						
Current Asthma	8.5%	9.4%	8.2%	7.5%	8.2%	8.5%

Table 2 Summary of Risk Factors by Gender

Risk Factors	Males	Females
Demographics		
Sample Size	988	1574
Health and Mental Health Status		
Fair or Poor Health Status	15.4%	16.6%
Physical Health Not Good	12.9%	18.3%
Activities Limited by Health Impairment	7.9%	11.4%
Mental Health Not Good	12.8%	24.4%
Health Care Access		
No Health Insurance	26.1%	21.6%
Could Not See a Doctor Because of Cost	10.7%	18.6%
Overweight and Obesity		
BMI 25.0 - 29.9	46.8%	28.7%
BMI 30.0 - 99.9	26.9%	25.5%
Physical Activity		
Meets Recommendations for Physical Activity	46.1%	43.4%
No Physical Activity Within Past 30 Days	9.7%	12.4%
Fruits and Vegetables		
Consume 5 or More Servings Per Day	22.0%	29.6%
Tobacco and Alcohol Use		
Current Smokers	26.7%	18.0%
Heavy Alcohol Consumers	5.8%	2.9%
Firearms		
Living in a Home With a Loaded Firearm	11.0%	6.4%
Living in a Home With a Loaded and Unlocked Firearm	6.3%	3.5%
Women's Health		
Clinical Breast Exam in Women Age 18 and Older	NA	89.5%
Mammogram Within the Past 2 Years in Women Age 40 and Older	NA	74.0%
Pap Test Within the Past 3 Years in Women Age 18 and Older With Intact Cervix	NA	83.7%
Cancer Screening		
Prostate-Specific Antigen Test Within the Past 2 Years in Males Age 40 and Older	46.9%	NA
Digital Rectal Exam in Males Age 40 and Older	69.3%	NA
Blood Stool Test Within the Past 2 Years in Adults Age 50 and Older	26.0%	32.6%
Sigmoidoscopy or Colonoscopy in Adults Age 50 and Older	48.4%	52.1%
Adult Immunizations		
Flu Vaccination Within the Past 12 Months in Age 65 and Older	60.6%	56.6%
Pneumococcal Vaccination in Age 65 and older	62.0%	68.5%
Cardiovascular Health		
Doctor-Diagnosed Heart Disease	5.8%	5.3%
Myocardial Infarction	2.4%	1.9%
Coronary Heart Disease	2.7%	2.6%
Stroke	1.7%	1.9%
Diagnosed With High Blood Pressure	23.1%	23.0%
Diabetes		
Diagnosed With Diabetes	6.2%	5.6%
Asthma		
Current Asthma	6.1%	10.8%

Table 3 Summary of Risk Factors By Race/Ethnicity

Risk Factors	White	African-American	Hispanic	Other Races/ Ethnicities
Demographics				
Sample Size	1578	433	459	76
Health and Mental Health Status				
Fair or Poor Health Status	12.2%	19.7%	26.5%	9.1%
Physical Health Not Good	16.0%	19.3%	15.1%	5.6%
Activities Limited by Health Impairment	10.6%	10.1%	8.2%	2.1%
Mental Health Not Good	17.6%	23.1%	18.6%	24.6%
Health Care Access				
No Health Insurance	13.2%	26.3%	53.0%	19.0%
Could Not See a Doctor Because of Cost	11.1%	21.1%	22.8%	8.0%
Overweight and Obesity				
BMI 25.0 - 29.9	37.4%	33.9%	42.9%	29.3%
BMI 30.0 - 99.9	23.5%	42.6%	27.7%	15.8%
Physical Activity				
Meets Recommendations for Physical Activity	46.6%	46.2%	38.8%	43.5%
No Physical Activity Within Past 30 Days	7.9%	12.2%	19.1%	14.4%
Fruits and Vegetables				
Consume 5 or More Servings Per Day	27.2%	26.9%	21.4%	27.3%
Tobacco and Alcohol Use				
Current Smokers	23.2%	19.6%	20.7%	22.7%
Heavy Alcohol Consumers	4.9%	1.0%	5.3%	0.0%
Firearms				
Living in a Home With a Loaded Firearm	11.8%	5.8%	2.5%	6.0%
Living in a Home With a Loaded and Unlocked Firearm	6.8%	3.6%	1.0%	1.0%
Women's Health				
Clinical Breast Exam in Women Age 18 and Older	95.4%	85.0%	77.9%	68.4%
Mammogram Within the Past 2 Years in Women Age 40 and Older	74.6%	71.3%	74.1%	66.1%
Pap Test Within the Past 3 Years in Women Age 18 and Older With Intact Cervix	87.0%	82.4%	80.1%	58.4%
Cancer Screening				
Prostate-Specific Antigen Test Within the Past 2 Years in Males Age 40 and Older	52.5%	55.6%	32.4%	19.8%
Digital Rectal Exam in Males Age 40 and Older	78.7%	58.4%	39.7%	61.9%
Blood Stool Test Within the Past 2 Years in Adults Age 50 and Older	31.8%	29.4%	12.8%	28.7%
Sigmoidoscopy or Colonoscopy in Adults Age 50 and Older	52.5%	49.0%	46.3%	23.7%
Adult Immunizations				
Flu Vaccination Within the Past 12 Months in Age 65 and Older	60.0%	38.4%	55.4%	82.8%
Pneumococcal Vaccination in Age 65 and older	68.5%	51.0%	60.0%	48.0%
Cardiovascular Health				
Doctor-Diagnosed Heart Disease	6.5%	6.6%	1.4%	9.1%
Myocardial Infarction	2.3%	2.6%	0.4%	6.7%
Coronary Heart Disease	3.4%	3.2%	0.9%	0.0%
Stroke	2.2%	2.3%	0.2%	3.4%
Diagnosed With High Blood Pressure	25.8%	32.2%	12.5%	14.6%
Diabetes				
Diagnosed With Diabetes	5.8%	9.2%	5.2%	1.5%
Asthma				
Current Asthma	9.4%	10.0%	5.2%	9.2%

Table 4 Comparison of Tarrant County, Texas, the United States and Healthy People 2010 Objectives

Risk Factors	Tarrant County	Texas	United States	HP 2010 Objectives
Demographics				
Sample Size	2565[1]			
Health and Mental Health Status				
Fair or Poor Health Status	16.0%	20.4%	15.1%	NA
Physical Health Not Good	15.7%	NA	NA	NA
Activities Limited by Health Impairment	9.6%	NA	NA	NA
Mental Health Not Good	18.7%	NA	NA	NA
Health Care Access				
No Health Insurance	23.8%	26.8%	14.9%	NA
Could Not See a Doctor Because of Cost	14.7%	NA	NA	NA
Overweight and Obesity				
BMI 25.0 - 29.9	37.8%	37.2%	36.9%	NA
BMI 30.0 - 99.9	26.2%	25.8%	23.2%	15.0%
Physical Activity				
Meets Recommendations for Physical Activity	44.7%	44.7%	47.2%	60.0%
No Physical Activity Within Past 30 Days	11.1%	NA	NA	NA
Fruits and Vegetables				
Consume 5 or More Servings Per Day	25.9%	22.5%	22.6%	75%/50%
Tobacco and Alcohol Use				
Current Smokers	22.2%	20.5%	20.8%	12.0%
Heavy Alcohol Consumers	4.3%	5.2%	4.8%	NA
Firearms				
Living in a Home With a Loaded Firearm	8.7%	NA	NA	NA
Living in a Home With a Loaded and Unlocked Firearm	4.8%	NA	NA	NA
Women's Health				
Clinical Breast Exam in Women Age 18 and Older	89.5%	86.6%	91.0%	NA
Mammogram Within the Past 2 Years in Women Age 40 and Older	74.0%	67.8%	74.6%	70.0%
Pap Test Within the Past 3 Years in Women Age 18 and Older With Intact Cervix	83.7%	82.2%	85.9%	90.0%
Cancer Screening				
Prostate-Specific Antigen Test Within the Past 2 Years in Males Age 40 and Older	46.9%	NA	NA	NA
Digital Rectal Exam in Males Age 40 and Older	69.3%	NA	NA	NA
Blood Stool Test Within the Past 2 Years in Adults Age 50 and Older	29.6%	23.4%	26.5%	50.0%
Sigmoidoscopy or Colonoscopy in Adults Age 50 and Older	50.4%	48.4%	53.0%	50.0%
Adult Immunizations				
Flu Vaccination Within the Past 12 Months in Age 65 and Older	58.2%	67.1%	67.9%	90.0%
Pneumococcal Vaccination in Age 65 and older	66.0%	61.4%	64.6%	90.0%
Cardiovascular Health				
Doctor-Diagnosed Heart Disease	5.5%	7.6%	NA	NA
Myocardial Infarction	2.2%	NA	NA	NA
Coronary Heart Disease	2.6%	NA	NA	NA
Stroke	1.8%	NA	NA	NA
Diagnosed With High Blood Pressure	23.1%	24.6%	24.8%	16.0%
Diabetes				
Diagnosed With Diabetes	5.9%	7.7%	7.9%	NA
Asthma				
Current Asthma	8.5%	7.1%	8.3%	NA

1. Total number of completed interviews for 2004 Tarrant County BRFSS was 2,431. An additional 134 individuals had partially completed interviews, and so the sample size for some variables was 2,565.

Introduction

The BRFSS is an ongoing annual telephone survey conducted for the purpose of collecting data using a standardized method. It examines behaviors and conditions that place adults at increased risk for developing chronic diseases and conditions, injuries and preventable infectious diseases.

In the United States, a large proportion of morbidity and mortality among adults is related to issues of lifestyle and personal behavior. Nine of the ten leading causes of premature death in the United States can be linked to one or more of six behaviors: cigarette smoking, alcohol misuse, lack of physical exercise, failure to wear seat belts, overeating, and failure to adequately control hypertension. These factors work synergistically with one another and with hereditary and environmental factors to increase the risk of disease to the individual.

Despite the importance of these known health-related risk factors, it was only recently that the public health sector developed a systematic means of collecting population-based prevalence data on these risk factors that is comparable between jurisdictions. An important function of public health is to assess the health status of the population. The value of such an assessment is enhanced when compared to a relevant benchmark, such as other similar populations or national norms. In 1981, the Centers for Disease Control and Prevention (CDC) began to provide technical assistance to state health departments to enable them to use standard methodology to conduct telephone surveys. The use of comparable survey methodology and questionnaire design allows for state-to-state and state-to-national comparisons. Data from these surveys would lead to baseline prevalence estimates for behavioral risk factors. These factors focus on specific behaviors and practices that place a person at increased risk for known diseases, or injury. This endeavor became the Behavioral Risk Factor Surveillance System (BRFSS). In 1987, Texas began participating in the BRFSS. In 1998, Tarrant County Public Health conducted the first county-wide survey using the BRFSS. This report, using 2004 data, is the second county-wide BRFSS survey conducted in Tarrant County.

Many of the data derived from the BRFSS are linked to objectives in the Healthy People 2010 initiative. Healthy People 2010 is a collection of national health promotion and disease prevention objectives developed by the U.S. Department of Health and Human Services with a diverse team of national experts. Healthy People 2010 objectives are being used nationally as gold standards for assessing trends in health-related conditions in different communities. Comparing key indicators over time to the state and national benchmarks is important to effectively assessing a community's health status. Table 1.1 compares selected health risk factors in Tarrant County, Texas and the United States and with the relevant Healthy People 2010 objectives.

Table 1.1 Comparisons Between Tarrant County, Texas, the United States and Healthy People 2010 Objectives

	Tarrant County	Texas*	United States*	Healthy People 2010 Objective
	% (95%CI)	% (95%CI)	Median %	%
Fair or Poor Health Status	16.0 (14.3 - 17.9)	20.4 (19.2 - 21.7)	15.1	*NA*
No Health Insurance	23.8 (21.6 - 26.2)	26.8 (25.3 - 28.3)	14.9	*NA*
Overweight	37.8 (35.3 - 40.4)	36.9 (35.4-38.4)	36.7	*NA*
Obese	26.2 (23.8 - 28.7)	24.6 (23.3 - 25.9)	22.8	15
Meets Recommended Physical Activity	44.7 (42.1 - 47.4)	44.7 (43.1 - 46.2)	47.2	60
Consumes 5 or More Servings of Fruits and Vegetables per Day	25.9 (23.7 - 28.2)	22.5 (21.3 - 23.7)	22.6	75 (fruits) 50 (vegetables)
Tobacco Use	22.2 (20.2 - 24.4)	20.5 (19.2 - 21.8)	20.8	12
Heavy Alcohol Consumption	4.3 (3.2 - 5.7)	5.2 (4.5 - 6.0)	4.8	*NA*
Ever Had Clinical Breast Exam in Females Age 18 and Older	89.5 (87.1 - 91.5)	86.6 (85.2 - 87.9)	91.0	*NA*
Mammogram Within the Past 2 Years in Females Age 40 and Older	74.0 (70.3 - 77.4)	67.8 (65.5 - 70.0)	74.6	70
Pap Test Within the Past 3 Years in Females Age 18 and Older	83.7 (80.3 - 86.5)	82.2 (80.4 - 83.9)	85.9	90
Sigmoidoscopy or Colonoscopy in Adults Age 50 and Older	50.4 (46.6 - 54.3)	48.4 (46.1 - 50.7)	53.0	50
Blood Stool Test Within the Past 2 Years in Adults Age 50 and Older	29.6 (26.1 - 33.4)	23.4 (21.5 - 25.3)	26.5	50
PSA Test Within the Past 2 Years in Males Age 40 and Older	46.9 (41.8 - 52.1)	49.4 (46.3 - 52.5)	52.1	*NA*
Pneumococcal Vaccination in Adults 65 and Older	66.0 (60.3 - 71.2)	61.4 (58.0 - 64.7)	64.6	90
Influenza Vaccination in Adults 65 and Older	58.2 (52.7 - 63.6)	67.1 (63.8 - 70.3)	67.9	90
Diagnosed with Diabetes	5.9 (5.0 - 7.0)	7.7 (6.9 - 8.4)	7.9	*NA*

*Source: Division of Adult and Community Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System Online Prevalence Data, 2004

Data collected from the BRFSS:

1. Increases awareness and understanding of important relationships between health behavior and disease status
2. Provides sound statistical evidence that influences programmatic decisions
3. Supports health policy statements and positions

Sampling Methodology

Interviewing everyone in a population is logistically and economically impractical. Therefore, researchers often use sampling, a method for scientifically selecting individuals to be included in the survey. The information obtained from a well-designed sample can be used to make generalizations about a larger population from only a small percentage of individuals. To accomplish this, a method of random sampling was utilized, in which each member of the population has a known, non-zero probability of being chosen. Several types of sampling designs will yield a probability sample; however for sampling efficiency, some form of cluster sampling is frequently used. Cluster sampling of households reduces the amount of telephone numbers that must be called to complete the survey. Cluster sampling is easier and less expensive, but often results in increased variation in measurement. For the 2004 BRFSS, a disproportionate stratified random sampling method, a type of cluster sampling, was used.

The random-digit-dialing disproportionate stratification method pre-selects or "stratifies" blocks of telephone numbers into groups that are "likely" or "unlikely" to contain residential numbers based on information from previous surveys or telephone listings. This method uses a sampling frame that includes all telephone numbers serving households in targeted geographical areas. Then individual respondents are randomly selected from all non-institutionalized adults, age 18 and older living in a household.

A key project objective was to provide results in five selected sub-county regions. Whereas the 1998 BRFSS sample was limited to county wide data, the 2004 BRFSS with a larger sample size allowed for sub-county level analyses and comparisons. These sub-county areas were defined by the Tarrant County BRFSS Advisory Committee. Each area was based upon data from individual census blocks to include individuals from under-represented ethic and socioeconomic groups. It is important to recognize that these sub-county areas were defined for comparison purposes, and these areas are composed of many ZIP codes that represent the larger more complex county.

Each individual is then interviewed in accordance with BRFSS protocol until the target number of interviews is completed. Respondent participation is voluntary and non-compensated. Personal identifiers such as name and address are not used, and other individual level data are pooled to provide information about the health practices of residents. Before any chosen telephone number is discarded at each stage, calls are repeated for a maximum of 15 times (3 times on each of 5 calling occasions over weekends, weekdays and weeknights). For 2004, the sample size goal of 2000 completed interviews was exceed by 431, for a total of 2,431 completed interviews. An additional 134 individuals had partially completed interviews for a total of 2,565 total subjects.

Components of the Questionnaire

The BRFSS questionnaire consists of four parts: the core component, optional modules, state-added and county-added questions. The core component consists of questions asked by all BRFSS researchers across the country each year. The CDC rotates optional modules every other year. These optional components are subsets of questions that state and local

researchers may choose to include in their questionnaire. In this study, state-added and county-added questions refer to questions used by the state of Texas and by Tarrant County. The optional BRFSS modules were chosen in collaboration with community partners, including Dallas County's Parkland Hospital District to allow for the compilation of comparative data between the two counties. The questionnaire consisted of all questions from the core component and questions from eight of the optional modules, four state-added and one county-added question. Topics covered per module and the number of questions for each can be found in the tables below [Tables 1.2 – 1.4]. Overall, the Tarrant County BRFSS questionnaire has 28 sections containing 109 questions. The interview was designed so that it could be completed in 25 minutes or less.

Table 1.2 Core Modules and the Number of Questions

Core Modules Covered By the BRFSS	
Topic	**Number of Questions**
Health Status	1
Health-Related Quality of Life	3
Health Care Access	3
Physical Activity	1
Tobacco Use	3
Alcohol Consumption	4
Asthma	2
Diabetes	1
Immunization	3
Demographics	16
Women's Health	7
Prostate Cancer Screening	5
Colorectal Cancer Screening	4
Disability	2
Firearms	3
Total	**58**

Table 1.3 Optional Modules and the Number of Questions

Optional Modules Covered By the BRFSS	
Topic	**Number of Questions**
Diabetes	12
Hypertension Awareness	2
Cholesterol Awareness	3
Influenza	1
Adult Asthma History	9
Childhood Asthma History	2
Smoking Cessation	5
Cardiovascular Disease	17
Total	**51**

Table 1.4 State and County Added Modules and the Number of Questions

State and County Added Modules Covered By the BRFSS	
Topic	**Number of Questions**
State-Added[1]	
Diabetes "A1C"	1
Physical Activity	7
TV Viewing	1
ZIP Code	1
County Added[2]	
Fruits and Vegetables Consumption	6
Total	**16**

1. Questions included in the Texas BRFSS which were not asked on the CDC national survey in 2004
2. Questions selected for Tarrant County not asked in Texas or the nation in 2004

Data Collection

All interviews were conducted by Clearwater Research, Inc. using a computer-assisted telephone interview (CATI) program. CATI programs use interactive computing systems for data collection. As questions are displayed, the interviewer reads them to the respondent and keys in the response. The CATI program automatically skips inappropriate questions and checks for the acceptability of responses (such as mammograms in males).

The quality of data collected is assured by several procedures. These include monitoring of interviewers through an unobtrusive telephone dial-in, conducting verification callback on a 5% random sample of all interviews, and assessing other quality assurance indicators, such as interviewer statistics, frequency distribution of disposition, response rate and percentage of interviews completed on the first day.

Population Weighting

BRFSS adds weighting factors to each record to provide, unbiased, representative prevalence estimates. Weighting compensates for unequal selection probabilities and non-response differences, i.e., over-representation or under-representation in the study sample. The BRFSS adjusts for several factors:

- Number of telephone lines per household
- Number of adults per household
- Number of interviews completed per cluster
- Post-stratification by population distribution

The first three factors address the problem of unequal selection probability, which could result in a biased sample, i.e., one that does not accurately represent the population. For example, a respondent in a four-adult household has only one-quarter the chance of being selected for an interview as does a respondent in a one-adult household; a household with two telephone numbers has twice the chance of being selected as a household with one telephone number. Over-representation or under-representation of any single record is addressed through post-stratification. This method adjusts the distribution of the sample data so that it reflects the total population of the sampled area by computing the ratio of the age, race and sex distribution of the population divided by the sample. Weighting of the sample adjusts not only for variation in selection and sampling probability, but also for differing demographic characteristics so that projections can be made from the sample to the general population.

Utilization of Telephone Survey Data and Uses of the BRFSS Data

Telephone interviews are a proven methodology of collecting prevalence data in community-wide surveys. They are easy to administer and monitor. All calls can be made from one location and interviews are entered directly into a data file by using computer-assisted methods. A supervisor can monitor interviews in progress more easily and in a shorter period of time than can be performed in face-to-face interviews. This enhances quality control efforts.

Telephone interviews are cost-effective and efficient. An experienced interviewer can handle multiple situations, such as busy lines, unanswered calls or refusals, and still complete one or more interviews per hour; whereas face-to-face interviewers often travel many miles in a day without completing any interviews. Telephone interviews are shorter than in-person interviews, and each telephone-conducted interview for the Tarrant County BRFSS averaged 17 and a half minutes. Data is collected uniformly by trained interviewers following protocols. This ensures comparability of data from one point in time to another, over a period of time and comparability across selected populations and geographic areas.

There are limitations in the use of telephone interviews. Primarily, data from persons in households without telephones are not captured. The 2000 U.S. Census indicated that more than 2.4 % of households in the United States and 2.2% of households in Tarrant County do not have phone service. One of the functions of weighting is to compensate for this potential bias. Other limitations include the inability to verify the actual responses provided by the respondents. Further, some responses can vary according to seasonal influences such as for obesity and eating habits.

BRFSS data are also subject to errors common to all surveys. People may not remember essential information, a question may not mean the same thing to different respondents,

and some individuals may chose not to respond at all. It is not always possible to measure the magnitude of these errors and their impact on the results. Consequently, the user must draw his or her own conclusions from the data. Overall, estimates generally have relatively small sampling errors; but estimates for certain population sub-groups may be based on small numbers and have relatively large sampling errors. When the number is small and the probability of such an event is likewise small, considerable caution must be observed in interpreting estimates and/or differences between groups and areas. Using trained interviewers helps minimize these types of error.

There are limitations to the geographic presentation of data in the maps. Due to the sampling structure, individuals were selected based on generalized geographic areas defined as "Sub-County Areas" and not at the ZIP code level. ZIP code information collected as part of the survey was used in map creation. Data was suppressed when individual cell count size per ZIP code fell below 20 respondents. As a result, no inference of risk can be made from the spatial representation of responses at the ZIP code level.

Overall, the 2004 Tarrant County BRFSS report provides constructive insight into specific behaviors associated with common and prevalent health conditions. This data can be used to increase awareness and understanding of key relationships between health behavior and disease status for the residents of Tarrant County. The findings provide sound statistical evidence for influencing programmatic decisions on the design and implementation of prevention programs and strategies to improve health.

Individuals, groups, and organizations are encouraged to integrate BRFSS data into current programs, special events, publications, and meetings. Health care providers can encourage their patients to pursue healthier lifestyles and to participate in community-based programs. By comparing county-level data to state and national data and to national objectives, such as Healthy People 2010, individuals and organizations can build an agenda for community health improvement and can monitor results over time.

Introduction

A total of 2,565 interviews were completed for non-institutionalized adults age 18 and older living in households within Tarrant County. Table 2.1 summarizes the demographic distribution of respondents in the survey.

Methods

A total of 16 questions designed to capture various demographic information were included in the questionnaire module. The results of the demographic characteristics are summarized in Table 2.1.

Results

Key Findings

- **The demographic distribution of the sample population was similar to that of the general Tarrant County adult population**
- **Although central Tarrant County residents were over-represented in the sample, the overall proportion of respondents was the lowest**
- **Adults age 25 - 44 were over-represented**

Overall, the demographic characteristics of the sample were similar to that of the 2000 US Census data for Tarrant County [1]. To compensate for over-representation and under-representation in the sample, BRFSS adds weighting factors so that it reflects the demographic characteristics of the total population. A total of 988 (48.9%) respondents were male and 1574 (51.1%) were female. This sample is almost indistinguishable from the census derived population estimates of 49.0% male and 51.0% female. Respondents' age ranges were between 18 and 65 and older, with a peak at age group 25-44 years [Table 2.1].

The race/ethnicity distribution of respondents was 62.0% White Non-Hispanic (White), 11.4% African-American Non-Hispanic (African-American), 22.2% Hispanic and 4.4% other. This is comparable to the ethno-racial population distribution of Tarrant County according to estimates from the 2000 U.S. Census [1]. The primary components of the "other" race category were Asian (2.6%), Native Hawaiian or Other Pacific Islander (0.3%) and American Indian (1.4%). Of all respondents, 65.4% were employed for wages or self-employed, and 5.6% were unemployed. Of those unemployed, 44.3% have been unemployed for more than one year.

The median reported household income fell in the range between $35,000 and $50,000. Approximately 45 percent (45.1%) of respondents reported household incomes over $50,000 whereas 10.4% reported household income of less than $15,000 in a year. Overall, 83.9% of all respondents reported completing educational levels equivalent to high school or beyond, 31.8% completed 4 years of college or more, 27.3% completed 1-

3 years of college and 24.8% completed grade 12 or GED. The average educational levels and incomes of respondents were slightly higher than that for the general county population in 2000 [1].

63.8% of respondents were married compared to 54.4% in the 2000 census. More than two-thirds of households interviewed had at least two adult residents and about one-third had a single adult living in the household. Nineteen percent of respondents reported having one child less than 18 years of age in the household, 31.9% reported having two or more, and 49.1% reported having no children under 18 years of age in the household.

The equivalent statewide and national proportions for the select demographic BRFSS data are summarized in Tables 2.2 - 2.3 and in Figure 2.1.

Table 2.1 Demographic Characteristics of Adults Age 18 and Older in Tarrant County

Total	Demographic Characteristics				
	n	N	Weighted Percentage*	Census Population[1]	95% Confidence Interval
Sub-County Area					
Northeast	512		14.8	NA	14.0-15.8
Southeast	442		30.9	NA	29.4-32.4
Central	610		8.5	NA	8.1-9.0
Southwest	507		20.4	NA	19.5-21.4
Northwest	494		25.3	NA	24.2-26.4
Total		2565			
Gender					
Male	988		48.9	49.0	46.3-51.5
Female	1574		51.1	51.0	48.5-53.7
Total		2562‡			
Age					
18-24	180		10.9	13.0	9.1-12.9
25-34	505		26.0	22.0	23.6-28.5
35-44	557		24.1	22.0	22.0-26.4
45-54	479		17.1	19.0	15.4-19.1
55-65	380		10.2	12.0	9.0-11.5
>65	432		11.7	12.0	10.5-13.0
Total		2533‡			
Education					
<High school	396		16.1	18.7	14.2-18.2
High school or GED	679		24.8	23.5	22.7-27.1
Tech/some college	687		27.3	31.1	25.1-29.7
College degree	790		31.8	26.8	29.5-34.1
Total		2552‡			
Annual Income					
<$15,000	313		10.4	12.2	8.9-12.0
$15,000 - $24,999	446		17.6	11.6	15.7-19.7
$25,000 - $34,999	252		12.0	12.9	10.3-13.9
$35,000 - $49,999	326		14.9	17.3	13.0-17.0
>$50,000	873		45.1	46.2	42.4-47.8
Total		2210‡			
Race/Ethnicity					
White	1578		62.0	61.9	59.4-64.5
African-American	433		11.4	12.3	10.0-13.0
Hispanic	459		22.2	19.7	20.0-24.6
Other	76		4.4	6.1	3.4-5.8
Total		2546‡			
Employment					
Employed	1317		57.2	NA	54.7-59.7
Self-employed	206		8.2	NA	6.9-9.8
Out of work >1yr	66		2.1	NA	1.5-3.0
Out of work <1yr	83		3.5	NA	2.7-4.6
Homemaker	274		10.4	NA	9.0-11.9
Student	73		4.3	NA	3.3-5.7
Retired	409		11.0	NA	9.8-12.3
Unable to work	120		3.2	NA	2.5-4.1
Total		2548‡			

n represents the number of respondents in each category
N represents the number of respondents to each question
* Percentages are weighted to population characteristics
1 Source: U.S. Census Bureau, Census 2000 Summary File 3, Matrices P18, P19, P21, P22, P24, P36, P37, P39, P42, PCT8, PCT16, PCT17, and PCT19
‡Not all respondents answered all of the questions

Table 2.1 Demographic Characteristics of Adults Age 18 and Older in Tarrant County (cont.)

Total	Demographic Characteristics			
	n	N	Weighted Percentage*	95% Confidence Interval
Marital Status				
Married	1406		63.8	61.3-66.2
Divorced	367		9.2	8.1-10.5
Widowed	249		5.0	4.3-5.8
Separated	91		2.6	2.0-3.4
Never married	350		15.2	13.2-17.4
Member of an unmarried couple	87		4.2	3.2-5.5
Total		2550‡		
Number of Children Under 18 Years in the Household				
None	1443		49.1	46.6-51.7
One	414		19.0	17.0-21.1
≥ Two	704		31.9	29.5-34.4
Total		2561‡		

n represents the number of respondents in each category
N represents the number of respondents to each question
*Percentages are weighted to population characteristics
‡Not all respondents answered all of the questions

Table 2.2 Gender Comparisons for Tarrant County, Texas, and United States[1]

Geographic Area	Population by Gender	
	Males	Females
Tarrant County	48.9% (46.3 - 51.5)	51.1% (48. – 53.7)
Texas	49.3% (47.7 - 50.8)	50.7% (49.2 - 52.3)
United States†	48.4%	51.6%

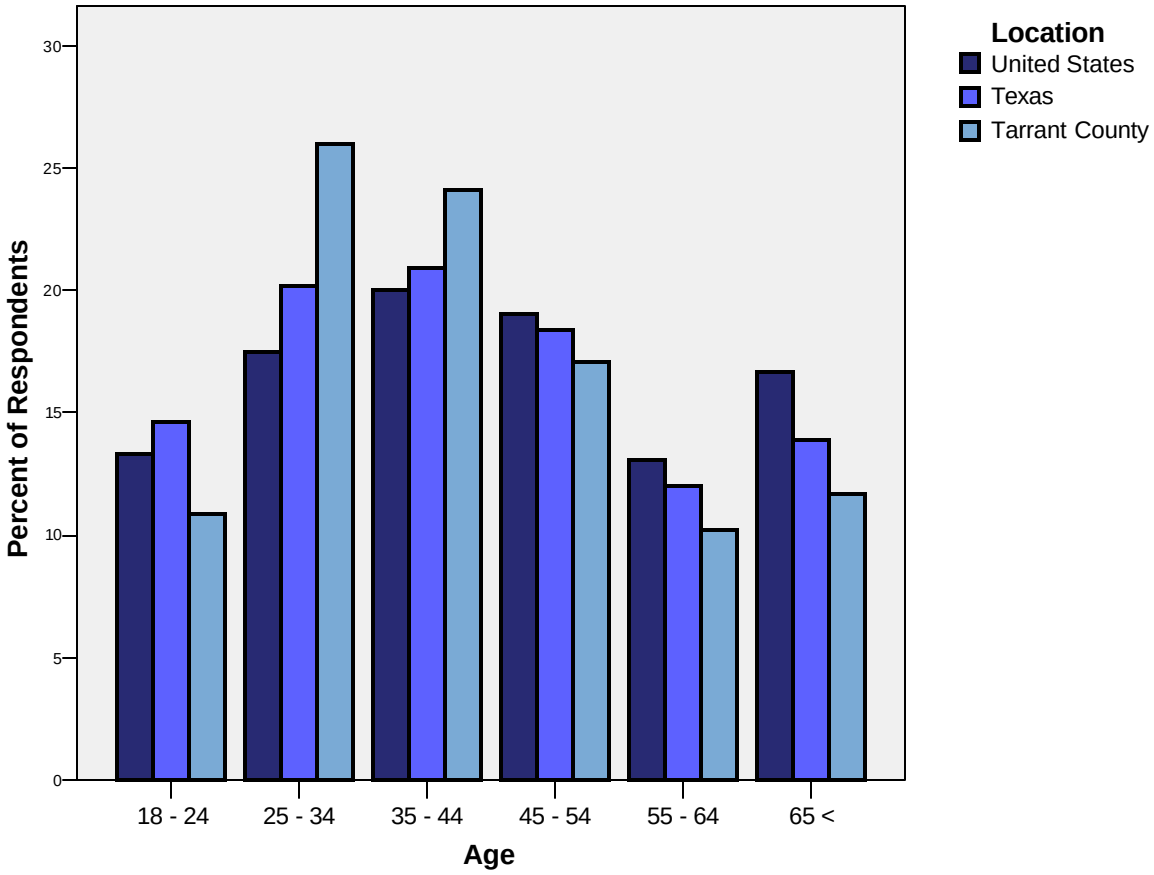
1 Source: Division of Adult and Community Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System Online Prevalence Data, 2004
(95% Confidence Interval)
† Values are reported as the median

Table 2.3 Demographic Comparisons for Tarrant County, Texas, and United States[1]

Geographic Area	Population by Race/Ethnicity				
	Whites	African-Americans	Hispanics	Others	Multi-racial
Tarrant County	61.9% (59.4 – 64.5)	11.4% (10.0 – 13.0)	22.2% (20.0 – 24.6)	4.4% (3.4-5.8)	NA
Texas	55.9% (54.3-57.4)	8.4% (7.6-9.2)	31.1% (29.6-32.6)	3.3% (2.7-3.9)	1.3% (1.0-1.6)
United States†	80.7%	5.1%	4.6%	3.3%	1.1%

1 Source: Division of Adult and Community Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System Online Prevalence Data, 2004
(95% Confidence Interval)
†Values are reported as the median
NA = not available

Figure 2.1 Age Distribution for BRFSS Respondents in Tarrant County, the State of Texas, and the United States[1]



1. Source: Division of Adult and Community Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System Online Prevalence Data, 2004

References

1. U.S. Census Bureau. State and County QuickFacts. Data derived from Population Estimates, 2000 Census of Population and Housing. Available at: http://quickfacts.census.gov/qfd/states/48/48439.html . Last accessed June 21, 2005.

Introduction

Health has been defined by the World Health Organization as "a state of complete physical, mental and social well-being and not just the absence of disease or infirmity" (1). This broad definition is very similar to that of quality-of-life, which is generally defined as total well-being characterized by physical and psychosocial determinants. The term health-related quality-of-life (HRQL), which is often used when examining the impact of disease on quality-of-life, has become increasingly recognized as an outcome measure in clinical trials, effectiveness research, and research on quality of care (2–5). There is much debate in the literature and very little consensus as to what constitutes HRQL because non-medical aspects of life, which include economic, educational, and environmental factors, have a significant impact on the health of an individual.

Clinicians and policymakers are now recognizing the importance of measuring health-related quality of life to make informed patient management and policy decisions. Measures of health status, functional abilities, and quality-of-life are being used increasingly to evaluate health care practice, and to measure outcomes from the patient's perspective. And because of geographic differences in health, demographic, and socioeconomic conditions, it is imperative that state and local public health programs have local data to evaluate and guide their prevention efforts.

Methods

General health status was one of the core components of the 2004 BRFSS questionnaire. It was assessed by asking the respondents to rate their general health status on a 5-point Likert scale [Table 3.5]. The five response options ranged from 'excellent' to 'poor'. The response options 'Excellent', 'Very Good', and 'Good' were categorized into 'Good Health' and the response options 'Fair', and 'Poor' were categorized into 'Poor Health'.

The health-related quality of life (HRQL) was another core component of the 2004 BRFSS questionnaire. The respondents were asked three questions pertaining to their physical health, mental health and physical activity limitation to assess their HRQL. The self-reported general health status, the self reported physical health status, the self-reported mental health status, and the self-reported physical activity limitation were further analyzed relative to demographic characteristics. Furthermore, the self reported general health status of 'Fair' to 'Poor', and the self-reported mental health status of 'Not Good for 5 or more days during the past 30 days' were also analyzed by ZIP Code.

Results

Key Findings

- **Eighty-four percent of respondents reported their general health status to be "excellent", "very good" and "good"**
- **Fair to poor health status was significantly higher in central Tarrant County, individuals 55 years and older, Hispanics, and in persons out of work for more than one year**
- **With increasing income level, a lower proportion of people reported fair to poor general health status**
- **Overall, approximately 19% of the respondents report that their mental health was "not good for five or more days during the past 30 days"**
- **Less than 10% of the respondents reported physical activity limitation for five or more days**

Overall, 84% of the respondents reported excellent to good general health status and 16% reported fair to poor general health status [Table 3.6]. A significantly higher proportion of respondents in the central sub-county area (34.3%) reported poor general health status. Individuals 55 years and older (51.8%), Hispanics (26.5%), and those who reported being out of work for more than a year (27.4%), reported the highest prevalence of 'fair' to 'poor' health [Table 3.1]. Reporting of 'fair to poor' health did not differ according to gender (male vs. female 15.4% vs. 16.6%) [Table 3.1]. With increasing income, significantly lower proportions of persons reported having 'fair to poor' general health status. Among the five income categories, the highest proportion of respondents reporting 'fair' to 'poor' health had incomes of less than $15,000 (38%), and lowest proportion of respondents had incomes of $50,000 and more. The difference between the lowest and highest income categories was statistically significant.

Physical health 'not good for 5 or more days during the past 30 days' was reported by 15.7% of Tarrant County residents [Table 3.2]. Once again, significantly higher proportions of respondents from the central sub-county area (23.9%), and approximately 50% of persons in the older age groups (55 years and older) reported having physical health 'not good for 5 or more days during the past 30 days' [Table 3.2]. Significantly higher proportions of females (18.3%), African Americans (19.3%), and retirees (25.4%) reported having physical health 'not good for 5 or more days during the past 30 days' and the highest proportion was seen in respondents who reported that they were unable to work (82.9%). Respondents with a college degree constituted the lowest proportion (8.3%) reporting having physical health 'not good for 5 or more days during the past 30 days'. Respondents with an income of $50,000+ had the lowest proportion (8.8%) reporting having physical health 'not good for 5 or more days in the past 30 days' and those with an income of less than $15,000 had the highest proportion of respondents (29.4%) [Table 3.2].

Overall, 9.6% of respondents reported a physical activity limitation (poor physical or mental health for 5 or more days limiting usual activities, such as self-care, work, or recreation) [Table 3.3]. Among the five sub-county areas sampled in Tarrant County, the significantly highest proportion of respondents reporting physical activity limitations were from the central sub-county area. Also, a significantly higher proportion of respondents reporting a physical activity limitation were females (11.4%), adults 65 years and older (14.7%), people with annual income less than $15,000 (22.5%), and persons reporting they were 'unable to work' (70.8%). A slightly higher proportion of Whites (10.6%) reported physical activity limitations compared to African-Americans (10.1%). Significantly lower proportions of physical activity limitations were reported by respondents from the northeast sub-county area (6.1%), males (7.9%), respondents in the 25 to 34 age group (6.7%), respondents with a college degree (5.3%), in the highest income category ($50,000 and over) (4.8%), self-employed (4.8%), and in students (6%).

Among the 18.7% of respondents who reported having mental health 'not good for 5 or more days during the past 30 days', significantly higher proportions were from the central sub-county area of Tarrant County (24.1%), females (24.4%), persons in the age group 18 to 24 (27%), persons who reported 'unable to work' (66.4%) and respondents belonging to the 'other' race/ethnicity group (24.6%) [Table 3.4]. The 65 and older age group, respondents with a college degree, and retired persons had significantly lower proportions of respondents reporting their mental health 'not being good for 5 or more days during the past 30 days' (12.1%, 11.5%, and 11.9% respectively) [Table 3.4].

Mental health and physical health are strongly related to one another and have a considerable impact on overall health and well-being. Not surprisingly, those reporting 5 or more days of poor mental health in the past month were 4.7 times more likely to have 5 or more days of poor physical health in the past month than those reporting 5 or less days of poor mental health [Table 3.5]. Moreover, mental health significantly contributes to overall general health status. Respondents with 5 or more days of poor mental health in the past month were 65% more likely to report poor general health than those reporting 5 or less days of poor mental health [Table 3.5].

Table 3.1 Self-Reported Fair or Poor Health in Tarrant County Adults Age 18 and Older

	Fair or Poor Health			
	n	Weighted Percentage*	N	95% Confidence Interval
Total	498	16.0	2561	14.3 – 17.9
Sub-County Area				
Northeast	57	10.8	512	7.9-14.6
Southeast	73	14.4	441	11.0-18.6
Central	208	34.3	609	30.1-38.9
Southwest	82	15.3	505	12.0-19.3
Northwest	78	15.6	494	12.2-19.7
Gender				
Male	173	15.4	984	12.8-18.5
Female	324	16.6	1574	14.5-19.0
Age				
18-24	23	10.7	180	6.5-17.2
25-34	66	9.6	504	6.9-13.1
35-44	92	16.2	557	12.6-20.6
45-54	79	15.9	479	11.9-20.9
55-65	94	24.4	379	19.1-30.5
65+	137	27.4	430	22.9-32.5
Race/Ethnicity				
White	240	12.2	1577	10.4-14.2
African-American	116	19.7	431	15.4-25.0
Hispanic	130	26.5	458	21.6-32.0
Other	8	9.1	76	4.2-18.6
Education				
≤ High school	166	34.6	394	28.6-41.1
High school or GED	160	20.0	678	16.4-24.2
Tech/some college	108	13.4	687	10.5-17.1
College degree	60	5.8	789	4.2-7.8
Annual Income				
<$15,000	139	38.0	312	30.9-45.7
$15,000 - $24,999	130	26.0	445	21.1-31.6
$25,000 - $34,999	48	18.5	251	13.1-25.4
$35,000 - $49,999	42	9.7	326	6.7-13.8
>$50,000	45	5.7	873	4.0-7.8
Employment				
Employed	179	12.9	1317	10.7-15.5
Self-employed	17	6.6	206	3.6-11.7
Out of work for >1yr	22	27.4	66	15.7-43.3
Out of work for <1yr	9	7.5	83	3.0-17.3
Homemaker	54	17.9	274	13.0-24.0
Student	5	5.4	73	1.6-16.2
Retired	119	25.6	406	21.1-30.7
Unable to work	90	77.0	119	65.2-85.7

n represents the number of respondents who are overweight
N represents the number of respondents to each question
* Percentages are weighted to population characteristics

Table 3.2 Self-Reported Physical Health Status in Tarrant County Adults Age 18 and Older

	Physical Health Not Good in Past 30 Days†			
	n	Weighted Percentage*	N	95% Confidence Interval
Total	465	15.7	2495	14.0 – 17.5
Sub-County Area				
Northeast	78	13.1	500	10.0-17.0
Southeast	61	12.4	431	9.1-16.7
Central	147	23.9	582	20.2-28.0
Southwest	98	19.6	498	15.8-23.9
Northwest	81	15.3	484	12.1-19.1
Gender				
Male	141	12.9	965	10.6-15.7
Female	324	18.3	1528	16.0-21.0
Age				
18-24	24	13.5	177	7.7-22.5
25-34	61	10.7	497	7.8-14.4
35-44	79	14.3	547	10.9-18.4
45-54	81	14.8	475	11.3-19.1
55-65	90	21.4	369	16.8-26.8
65+	124	28.3	402	23.5-33.5
Race/Ethnicity				
White	280	16.0	1541	13.8-18.4
African-American	100	19.3	413	14.7-24.8
Hispanic	76	15.1	449	11.5-19.7
Other	6	5.6	76	2.2-13.7
Education				
≤ High school	103	21.1	374	16.2-26.9
High school or GED	138	19.0	658	15.2-23.5
Tech/some college	140	18.1	673	14.9-21.9
College degree	81	8.3	777	6.4-10.8
Annual Income				
<$15,000	113	29.4	298	23.1-36.5
$15,000 - $24,999	90	17.9	438	13.8-22.8
$25,000 - $34,999	54	22.4	249	16.4-29.8
$35,000 - $49,999	54	16.7	320	11.5-23.6
>$50,000	83	8.8	861	6.8-11.4
Employment				
Employed	164	11.7	1295	9.6-14.3
Self-employed	22	9.9	204	6.1-15.8
Out of work for >1yr	14	17.1	62	9.2-29.6
Out of work for <1yr	14	14.9	82	7.5-27.4
Homemaker	39	15.5	263	10.8-21.7
Student	10	8.3	72	3.2-19.6
Retired	111	25.4	390	20.9-30.5
Unable to work	90	82.9	113	72.5-89.9

n represents the number of respondents who are overweight
N represents the number of respondents to each question
* Percentages are weighted to population characteristics
† Physical health not good for 5 or more days during the past 30 days

Table 3.3 Self-Reported Physical Activity Limitation in Tarrant County Adults Age 18 and Older

	Activities Limited by Health Impairment†			
	n	Weighted Percentage*	N	95% CI
Total	276	9.6	2534	8.2 – 11.3
Sub-County Area				
Northeast	40	6.1	507	4.3-8.7
Southeast	39	8.8	440	6.0-12.8
Central	91	14.4	597	11.5-17.9
Southwest	52	10.4	500	7.6-14.0
Northwest	54	10.5	490	7.8-14.1
Gender				
Male	83	7.9	977	6.0-10.2
Female	193	11.4	1554	9.4-13.7
Age				
18-24	19	11.3	180	5.9-20.7
25-34	38	6.7	503	4.5-9.8
35-44	51	8.9	555	6.4-12.3
45-54	52	9.4	478	6.6-13.2
55-65	52	12.0	376	8.4-16.8
65+	60	14.7	411	11.1-19.2
Education				
≤ High school	69	13.6	387	9.9-18.5
High school or GED	74	11.5	668	8.2-15.9
Tech/some college	83	10.9	681	8.3-14.0
College degree	49	5.3	785	3.8-7.4
Annual Income				
<$15,000	85	22.5	303	17.1-29.0
$15,000 - $24,999	53	13.4	440	9.5-18.5
$25,000 - $34,999	34	15.3	251	10.2-22.4
$35,000 - $49,999	25	8.8	324	4.7-15.8
>$50,000	44	4.8	873	3.4-6.9
Race/Ethnicity				
White	173	10.6	1559	8.7-12.9
African-American	57	10.1	425	7.1-14.1
Hispanic	40	8.2	458	5.6-12.0
Other	4	2.1	76	0.7-6.6
Employment				
Employed	76	6.5	1314	4.8-8.7
Self-employed	11	4.8	206	2.3-9.8
Out of work for >1yr	15	19.4	65	10.4-33.3
Out of work for <1yr	11	10.5	83	4.6-22.4
Homemaker	23	6.7	272	4.2-10.5
Student	6	6.0	73	1.7-18.6
Retired	58	15.6	394	11.8-20.3
Unable to work	76	70.8	112	58.6-80.5

n represents the number of respondents who are overweight
N represents the number of respondents to each question
* Percentages are weighted to population characteristics
† Poor physical or mental health for 5 or more days limiting usual activities, such as self-care, work, or recreation

Table 3.4 Self-Reported Mental Health Status in Tarrant County Adults Age 18 and Older

	Mental Health Not Good†			
	n	Weighted Percentage*	N	95% Confidence Interval
Total	504	18.7	2516	16.8 – 20.8
Sub-County Area				
Northeast	88	15.9	505	12.4-20.3
Southeast	77	18.9	434	14.8-23.7
Central	146	24.1	595	20.3-28.4
Southwest	94	19.3	499	15.7-23.7
Northwest	99	17.8	483	14.4-21.8
Gender				
Male	126	12.8	968	10.3-15.8
Female	377	24.4	1545	21.7-27.3
Age				
18-24	51	27.0	178	19.5-36.1
25-34	110	19.7	498	15.7-24.4
35-44	114	18.8	551	15.1-23.1
45-54	104	17.4	473	13.8-21.7
55-65	70	17.8	369	13.3-23.3
65+	52	12.1	416	8.9-16.4
Education				
≤ High school	100	22.7	376	17.7-28.6
High school or GED	151	22.4	667	18.3-27.0
Tech/some college	147	21.6	677	17.8-26.0
College degree	104	11.5	783	9.1-14.3
Annual Income				
<$15,000	103	29.7	304	23.2-37.1
$15,000 - $24,999	99	22.6	437	17.9-28.2
$25,000 - $34,999	61	27.1	250	20.1-35.4
$35,000 - $49,999	60	16.1	323	12.0-21.3
>$50,000	124	13.9	868	11.3-17.0
Race/Ethnicity				
White	173	10.6	1559	8.7-12.9
African-American	57	10.1	425	7.1-14.1
Hispanic	40	8.2	458	5.6-12.0
Other	4	2.1	76	0.7-6.6
Employment				
Employed	229	15.5	1293	13.2-18.1
Self-employed	26	13.3	204	7.8-21.8
Out of work for >1yr	22	26.9	66	16.0-41.6
Out of work for <1yr	30	36.8	82	24.3-51.2
Homemaker	54	19.1	270	14.1-25.5
Student	22	34.5	72	21.8-49.8
Retired	48	11.9	397	8.6-16.2
Unable to work	70	66.4	116	54.5-76.6

n represents the number of respondents who are overweight
N represents the number of respondents to each question
* Percentages are weighted to population characteristics
† Mental health not good for 5 or more days during the past 30 days

Table 3.5 Risk Associations Between Mental Health and Health Status, Physical Health, and Health Care Coverage

	Health Status[2]		Number of Day Physical Health "Not Good"		Do you have health care coverage?	
	Poor	Good	5 or more days	Less than 5 days	No	Yes
Number of Days Mental Health "Not Good"						
5 or more days	117	60	202	255	129	373
Less than 5 days	616	456	284	1,721	426	1,579
Relative Risk[1]	1.65*		4.65*		1.18	
95% Confidence Interval	1.08 – 2.54		3.45 – 6.27		0.87 - 1.61	

1. Adjusted to complex sampling population weights

‡ The response to the question: "Would you say that in general your health is excellent, very good, fair or poor? were collapsed into two categories; 'excellent', 'very good', and 'good' = "Good" and 'fair' and 'poor' = "Poor"

* Statistically significant at alpha = 0.05 level

Note: table orientation reports health outcomes in the rows and risk factor in the columns

Figure 3.1 Respondents Reporting Fair to Poor Health Status by ZIP Code in Tarrant County, Texas

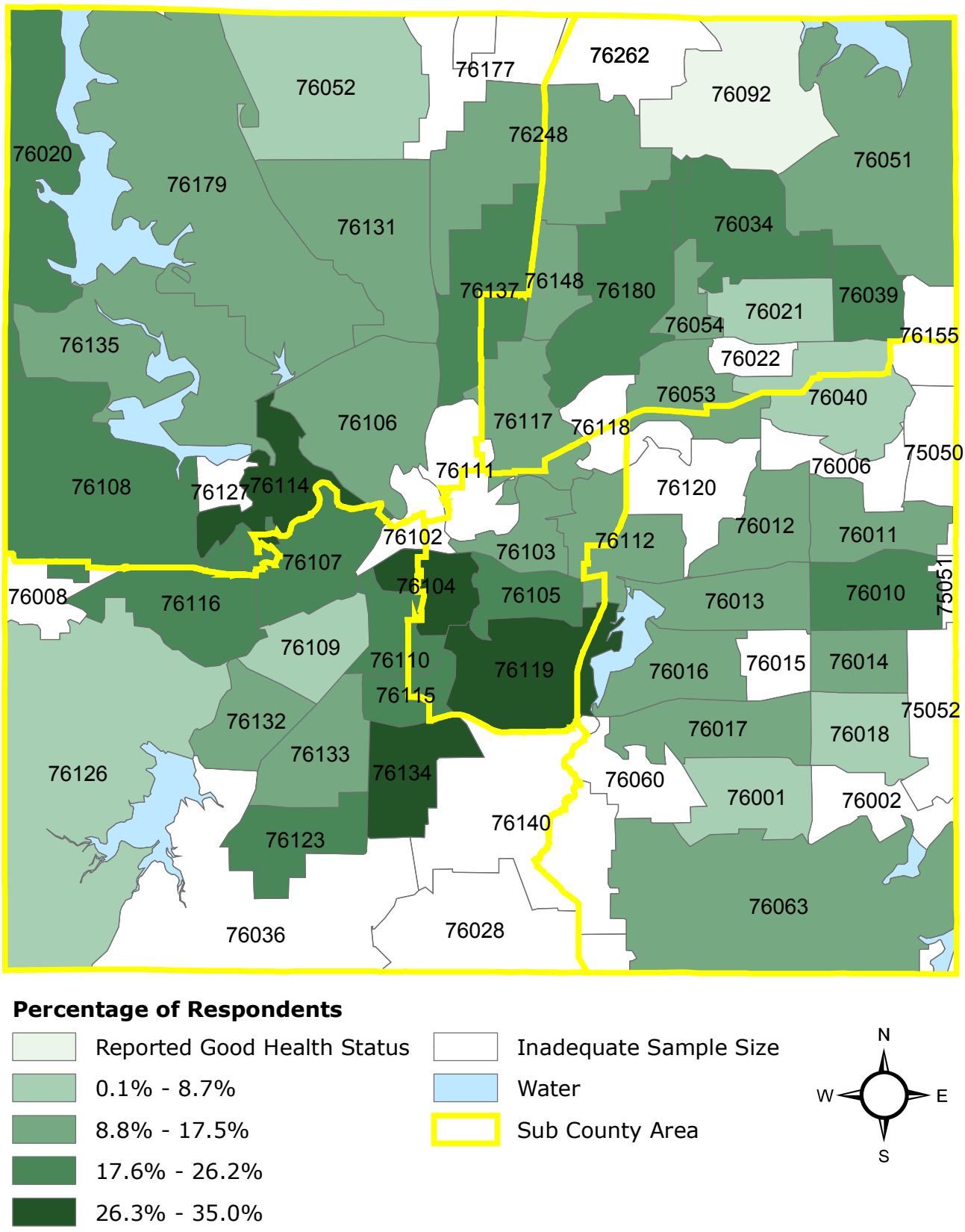
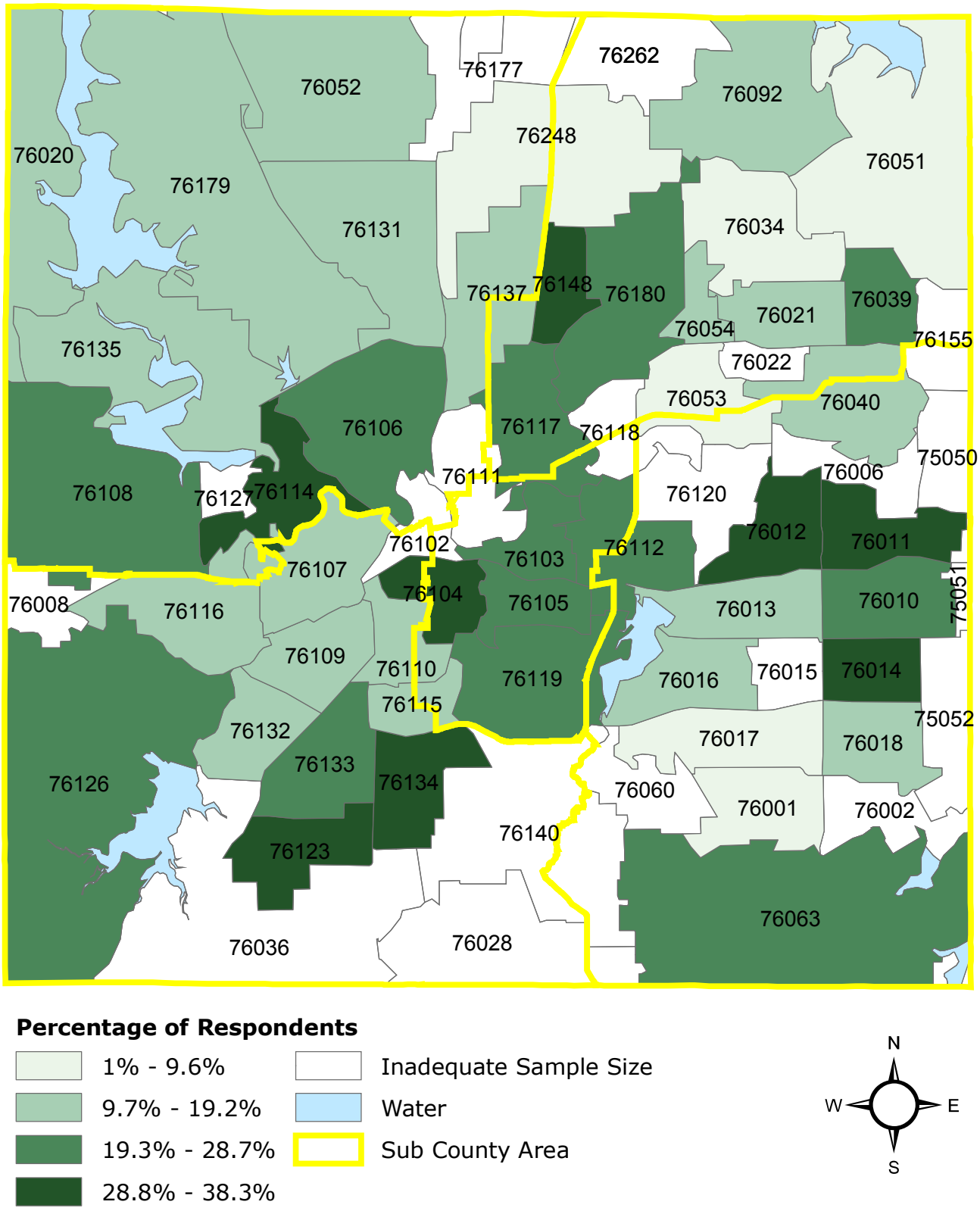


Figure 3.2 Respondents Reporting Mental Health Status Not Good by ZIP Code in Tarrant County, Texas



Percentage of Respondents

- 1% - 9.6%
- 9.7% - 19.2%
- 19.3% - 28.7%
- 28.8% - 38.3%
- Inadequate Sample Size
- Water
- Sub County Area

N
W E
S

Table 3.6 Questions Asked on Health Status, Mental Health and Physical Health in Tarrant County Adults Age 18 and Older

Questions	Respondents n	Respondents %[1]
1. Would you say that in general your health is excellent, very good, good, fair, or poor?		
Excellent	523	21.9
Very good	744	30.5
Good	796	31.6
Fair	373	12.8
Poor	125	3.2
2. Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?		
None	1598	67.2
1-5 days	521	20.6
6-25 days	192	6.5
25-30 days	184	5.8
3. Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?		
None	1636	65.2
1-5 days	479	20.5
6-25 days	265	9.9
25-30 days	136	4.5
4. During the past 30 days, for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation?		
None	852	65.5
1-5 days	260	18.6
6-25 days	144	10.2
25-30 days	90	5.7
5. Are you limited in any way in any activities because of physical, mental, or emotional problems?		
Yes	454	14.8
No	2070	85.2
6. Do you now have any health problem that requires you to use special equipment, such as a cane, a wheelchair, a special bed, or a special telephone?		
Yes	174	5.0
No	2352	95.0

1. Percentages weighted to population characteristics

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Introduction

Health care access is a broad and often vaguely defined concept that incorporates various dimensions of health care providers, health insurance coverage and problems individuals encounter in getting care. Access to health services, including preventive care, primary care, and tertiary care, often depends on whether a person has health insurance (1, 2, 3). Uninsured people are less than half as likely as people with health insurance to have a primary care provider, to have received appropriate preventive care such as recent mammograms or Papanicolau tests (Pap Smear), Prostate Antigen Test (PSA) or to have had any recent medical visits. Lack of insurance also affects access to care for relatively serious medical conditions. One study showed that, among those without insurance, chronically ill persons are even less likely than those with acute conditions to get the health care services they need (4).

Methods

The BRFSS respondents were asked three questions about health care access including having insurance coverage, having a personal health care provider and having cost as a barrier. These questions and responses to each question can be found in Table 4.5. The responses of people with no insurance coverage and those who have had cost as a barrier to receiving health services were analyzed according to demographic characteristics and other health-related consequences.

Results

Key Findings

- **Approximately 24% of Tarrant County residents do not have any type of health insurance coverage**
- **No health insurance coverage was highest in central Tarrant County**
- **Age, education, income, race/ethnicity and employment are significant determining factors for health insurance coverage**
- **Approximately 15% of Tarrant County residents could not see a doctor in the past 12 months because of cost**
- **The proportion of Tarrant County residents who could not see a doctor in the past 12 months because of cost was lower than the average in Texas, but higher than the average for the nation**
- **Among Tarrant County residents, having health insurance coverage was strongly associated with good health status and preventive health practices**

Overall, 23.8% of Tarrant County adults do not have some type of health insurance coverage and 14.7% could not see a doctor when they needed to see one in the past 12 months because of cost Of the 24% who did not have health insurance coverage, the highest prevalence was in central Tarrant County (44.1%), followed by southeast (23.8%) and northwest (23.0%). Central Tarrant County was significantly higher than other areas in prevalence of no health insurance. Males (26.1%) tended to have a higher prevalence of no health insurance coverage than females (21.6%). Age, education, income, race/ethnicity and employment are significant determinants of the prevalence of not having health insurance. Adults age 18-24 (39.8%) had the highest prevalence of no health insurance, followed by age 25-34 (29.5%) and age 35-44 (29.5%). There is a significant difference in prevalence of no health insurance between age 18-24 and age 45-54 (17.3%) and between age 55-64 (17.5%) and 65 and older (3.2%). There was a decrease in prevalence of no health insurance with increasing levels of education. Tarrant County residents with less than a high school education (59.7%) had a significantly higher prevalence of no health insurance than those with a high school education or GED (29.0%), technical or some college (15.5%) and college (8.7%). Prevalence of no health insurance also is associated with income. Respondents with annual incomes less than $25,000 (>50%) were significantly different from the next income bracket $25,000 - $34,999 (29.8%) which was significantly different from the next one $35,000 – $49,999 (14.8%) which also was significantly different from the top income bracket of over $50,000 (5.1%). Among the races/ethnic groups, Hispanics (53.0%) had a significantly higher prevalence of no insurance than African-Americans (26.3%), Whites (13.2%) and other groups (19.0%). The prevalence in African-Americans was also significantly higher than Whites. The prevalence of no health insurance was significantly higher among those out of work (58.2% & 49.0%), followed by homemakers (39.9%) and then those who are employed (20.8% & 31.3%). [Table 4.1]

The prevalence of not being able to see a doctor because of cost in the past 12 months was highest for central Tarrant County (22.7%) and was significantly different from all other sub-areas. It was higher in females (18.6%) than males (10.7%) and was significantly less in those age 65 and older (6.0%) than those under 65 (13.0% – 17.6%). Not being able to see a doctor in the past 12 months also was related to education, annual income, race/ethnicity and employment. Those with incomes between $35,000 and $49,000 reported problems seeing a doctor due to cost only half as frequently (12.2%) as those with incomes below $35,000 and only 3.6% of those with incomes above $50,000 reported not being able to see a doctor in the past year due to cost. [Table 4.2]

The prevalence of no health insurance is lower in Tarrant County (23.8%) than the state of Texas (26.8%) but higher than the national average (14.9%). There are no comparable Healthy People 2010 objectives for health insurance coverage. [Table 4.3]

Those reporting having health insurance were strongly associated with having good general health status and preventive practices. Tarrant County residents who report health care coverage were 2.18 times more likely to report good health status, 2.29 times more likely to have had a sigmoidoscopy at age 50 and older, 5.02 times more likely to have had a mammogram, if female age 40 or older, and 5.09 times more likely to have had a clinical breast exam, 3.54 times more likely to have had a Pap test, 6.23 times more likely to have had a PSA in males 40 and older, and 2.45 times more likely have had a flu shot in the past 12 months. [Table 4.4]

Table 4.1 No Health Insurance in Tarrant County Adults Age 18 and Older

	No Health Insurance			
	n	Weighted Percentage*	N	95% Confidence Interval
Total	570	23.8	2556	21.6-26.2
Sub-County Area				
Northeast	63	16.5	509	12.3-21.7
Southeast	82	23.8	441	19.0-29.3
Central	233	44.1	606	39.5-48.9
Southwest	97	21.6	507	17.7-26.2
Northwest	95	23.0	493	18.7-27.9
Gender				
Male	234	26.1	982	22.5-30.1
Female	336	21.6	1572	19.1-24.4
Age				
18-24	70	39.8	178	30.9-49.3
25-34	167	28.4	503	23.5-33.8
35-44	154	29.5	557	24.8-34.8
45-54	93	17.3	477	13.6-21.9
55-65	66	17.5	379	12.8-23.3
>65	17	3.2	431	1.8-5.5
Education				
<High school	207	59.7	395	52.8-66.1
High school or GED	179	29.0	677	24.3-34.2
Tech/some college	112	15.5	685	12.3-19.3
College degree	69	8.7	786	6.5-11.5
Annual Income				
<$15,000	131	50.7	312	42.7-58.6
$15,000 - $24,999	208	52.5	446	46.4-58.6
$25,000 - $34,999	68	29.8	251	22.9-37.7
$35,000 - $49,999	41	14.8	324	10.0-21.4
$>50,000	41	5.1	872	3.5-7.5
Race/Ethnicity				
White	198	13.2	1572	11.1-15.6
African-American	112	26.3	431	20.3-33.2
Hispanic	243	53.0	458	47.0-58.9
Other	12	19.0	76	10.2-32.4
Employment				
Employed	252	20.8	1315	17.8-24.1
Self employed	61	31.3	204	23.2-40.8
Out of work >1yr	31	49.0	66	32.7-65.6
Out of work <1yr	47	58.2	82	43.9-71.3
Homemaker	109	39.9	273	33.1-47.2
Student	22	23.0	71	13.2-37.0
Retired	22	5.1	408	3.2-8.2
Unable to work	21	17.8	120	10.3-28.9

n represents the number of respondents who have no health insurance
N represents the number of respondents to each question
* Percentages are weighted to population characteristics

Table 4.2 Could Not See a Doctor in the Past 12 Months in Tarrant County Adults Age 18 and Older

	Could Not See a Doctor Because of Cost			
	n	Weighted Percentage*	N	95% Confidence Interval
Total	399	14.7	2557	13.1-16.6
Sub-County Area				
Northeast	63	13.7	511	10.3-18.1
Southeast	62	13.9	442	10.5-18.1
Central	132	22.7	607	19.0-26.8
Southwest	77	14.9	506	11.8-18.7
Northwest	65	13.6	491	10.4-17.5
Gender				
Male	115	10.7	984	8.5-13.4
Female	284	18.6	1570	16.3-21.2
Age				
18-24	41	16.2	180	11.1-23.0
25-34	98	16.9	504	13.2-21.3
35-44	107	17.6	557	14.0-22.0
45-54	77	13.5	479	10.3-17.4
55-65	48	13.0	378	9.0-18.4
>65	25	6.0	428	3.8-9.4
Education				
<High school	95	25.8	393	20.4-31.9
High school or GED	127	15.7	677	12.6-19.5
Tech/some college	111	16.7	687	13.2-20.8
College degree	63	6.6	789	4.9-8.9
Annual Income				
<$15,000	101	29.2	312	22.8-36.5
$15,000 - $24,999	117	27.9	445	22.7-33.7
$25,000 - $34,999	58	25.6	252	19.2-33.3
$35,000 - $49,999	43	12.2	325	8.7-16.9
$>50,000	32	3.6	871	2.2-5.7
Race/Ethnicity				
White	191	11.1	1571	9.4-13.1
African-American	90	21.1	433	15.6-27.9
Hispanic	109	22.8	458	18.4-27.9
Other	6	8.0	76	2.9-20.3
Employment				
Employed	194	13.3	1315	11.3-15.7
Self employed	26	12.8	204	7.1-21.9
Out of work >1yr	26	34.6	66	20.7-51.7
Out of work <1yr	29	32.8	83	21.3-46.7
Homemaker	47	19.9	274	14.526.7
Student	11	7.8	73	3.6-6.1
Retired	26	6.3	406	4.0-9.7
Unable to work	37	34.0	119	23.3-46.5

n represents the number of respondents who could not see a doctor in the past 12 months because of cost
N represents the number of respondents to each question
* Percentages are weighted to population characteristics

Table 4.3 Comparison of Tarrant County, Texas, and United States for Uninsured and Lack of Access Due to Cost

Geographic Area	No Health Insurance	Could Not See a Doctor Because of Cost
Tarrant County	23.8% (21.6-26.2)	14.7% (13.1-16.6)
Texas*	26.8% (25.3-28.3)	*NA*
United States*	14.9%	*NA*

*Source: Division of Adult and Community Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System Online Prevalence Data, 2004

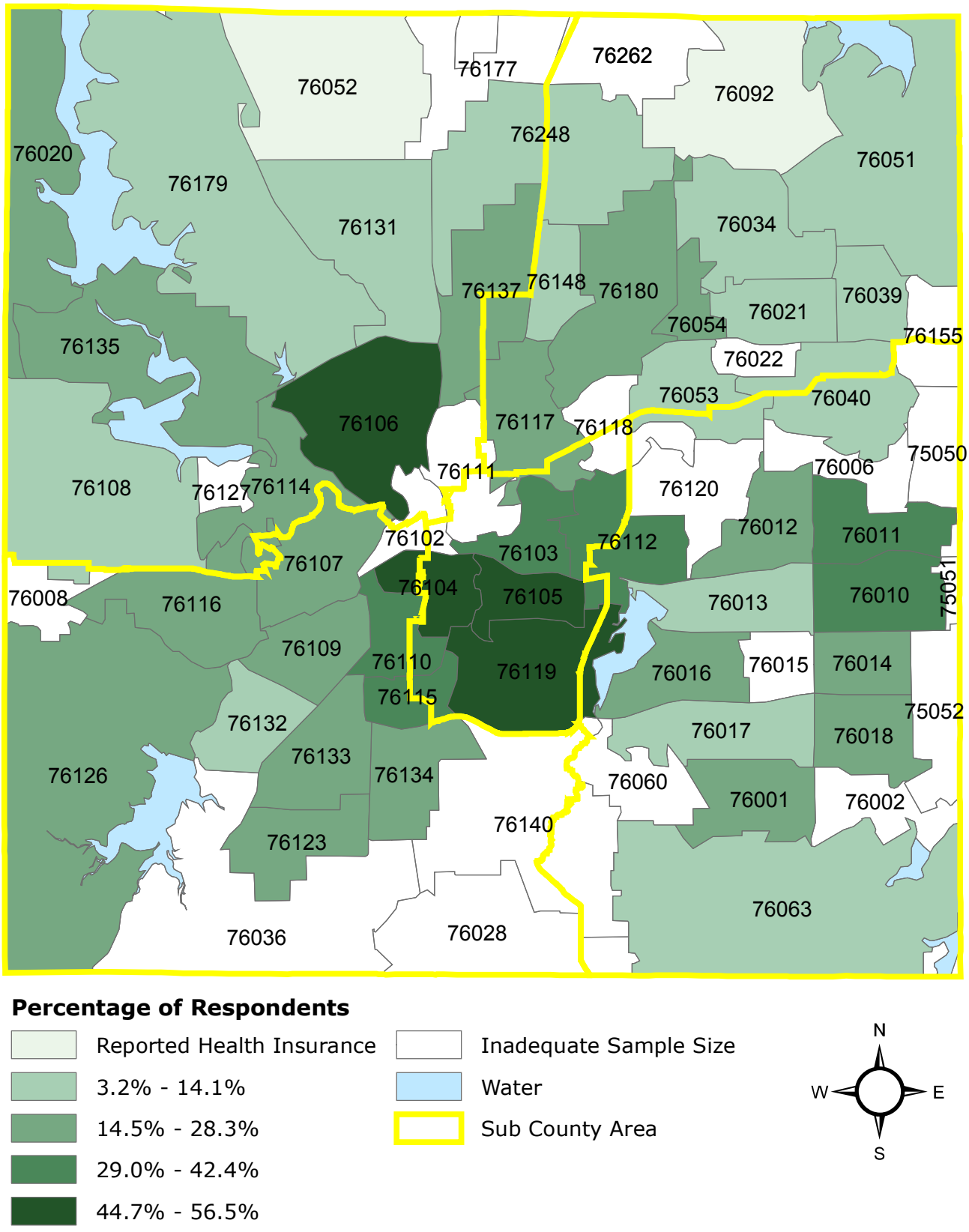
Table 4.4 Risk Associations Between Health Insurance and Other Health-Related Conditions

	Health Status[2]		Sigmoidoscopy in Adults Age 50 and Older		Mammogram Women Age 40 and Older		Clinical Breast Exam	
	Good	Poor	Yes	No	Yes	No	Yes	No
Health Insurance								
Yes	1649	335	480	433	624	167	1148	74
No	405	163	39	82	68	78	262	72
Relative Risk[1]	2.18		2.29 *		5.02*		5.09*	
95% Confidence Interval	1.63 – 2.93		1.34 – 3.91		3.16 – 7.97		3.15 – 8.21	

	Papanicolau (Pap) Test		Prostrate Antigen Test in Males 40 and Older		Flu Shot in the Past 12 Months		Pneumonia Shot Age 65 and Older	
	Yes	No	Yes	No	Yes	No	Yes	No
Health Insurance								
Yes	696	88	279	197	664	1303	217	129
No	192	66	17	87	83	487	7	10
Relative Risk[1]	3.54		6.23*		2.45*		1.94	
95% Confidence Interval	2.21 – 5.68		2.98 – 13.03		1.77 – 3.41		0.61 – 6.21	

1. Adjusted to complex sampling population weights
‡ The response to the question: "Would you say that in general your health is excellent, very good, fair or poor? were collapsed into two categories; 'excellent', 'very good', and 'good' = "Good" and 'fair' and 'poor' = "Poor"
* Statistically significant at alpha = 0.05 level
Note: table orientation reports health outcomes in the rows and risk factors in the columns

Figure 4.1 Respondents with No Health Insurance by ZIP Code in Tarrant County, Texas



Percentage of Respondents

- Reported Health Insurance
- 3.2% - 14.1%
- 14.5% - 28.3%
- 29.0% - 42.4%
- 44.7% - 56.5%
- Inadequate Sample Size
- Water
- Sub County Area

N W E S

Table 4.5 Questions Asked on Health Care Access in Tarrant County Adults Age 18 and Older

Questions	Respondents n	Respondents %[1]
1. Do you have any kind of health care coverage?		
Yes	1986	76.2
No	570	23.8
2. Do you have one person you think of as your personal doctor or health care provider?		
Yes, only one	1803	67.9
More than one	203	7.2
No	554	24.9
3. Was there a time in the past 12 months when you needed to see a doctor but could not because of the cost?		
Yes	399	14.7
No	2158	85.3

1. Percentages are weighted to population characteristics
n represents the number of respondents in each category

Introduction

Currently, more than half of adult Americans are either overweight or obese. The prevalence of overweight and obesity in the United States has increased by 12% and 70%, respectively, over the last ten years (1). Overweight and obesity are major contributors to many preventable causes of death including diabetes, cardiovascular disease, and several types of cancer (2, 3). In addition, being overweight also exacerbates many chronic diseases such as hypertension and osteoarthritis (2). Each year an estimated 300,000 adults die of causes related to obesity (4). Obesity also substantially increases morbidity and impairs quality of life (5). Overall, the direct costs of obesity and physical inactivity account for approximately 9.4% of U.S. health care expenditures (6). The excess medical expenditures that result from treating obesity-related diseases are significantly higher (36%) than costs associated with treating those of normal weight (7).

Methods

Overweight and obesity were determined by calculating the body mass index (BMI). BMI uses a mathematical formula based on a person's height and weight. BMI equals weight in kilograms divided by height in meters squared (BMI = kg/m^2) (8).

The international standard for BMI grouping is: underweight when BMI<18.5, acceptable weight when BMI is between 18.5 and 24.9, overweight when BMI is between 25 and 29.9, obese when BMI =30 (9) [Table 5.1].

Table 5.1 Health Risk Classification According to Body Mass Index (BMI) Adults Age 18 and Older

Classification	BMI Category (kg/m^2)	Risk of Developing Health Problems
Underweight	<18.5	Increased
Normal Weight	18.5 - 24.9	Low
Overweight	25.0 - 29.9	Increased
Obese Class I	30.0 - 34.9	High
Obese Class II	35.0 - 39.9	Very high
Obese Class III	≥40.0	Extremely high

Note: For persons 65 years and older the 'normal' range may begin slightly above BMI 18.5 and extend into the 'overweight' range. Not for use with pregnant and lactating women

There are some caveats to the use of BMI in determining overweight and obesity in individuals. A high BMI does not necessarily mean that a person is overweight. BMI overestimates body fat in people who are muscular or athletic (10). Other measures of overweight and obesity have not been standardized for wide use and are generally more complicated, more expensive, and less accurate.

In the Tarrant County BRFSS, people were asked the following questions:

1. About how much do you weigh without shoes?
2. About how tall are you without shoes?

Results

Key Findings

- **Sixty-four percent of adults in Tarrant County are overweight or obese**
- **The prevalence of obesity is highest in African-Americans**
- **The prevalence of obesity is highest in people with less than a high school education**
- **Overweight and obese people are more likely to suffer from chronic conditions such as diabetes, hypertension and high blood cholesterol**
- **The prevalence of overweight and obesity in Tarrant County is higher than Texas and the United States**
- **Tarrant County's obesity rate is 75% higher than the Healthy People 2010 objective**

Overall, 64% of adults age 18 and older in Tarrant County were overweight or obese in 2004 [Table 5.4]. This estimate is higher than those reported for Texas (61.5%) and the United States (59.5%) in 2003 [Table 5.5]. A little over 26.2% of respondents were obese, while 37.8% were overweight [Table 5.3]. Obesity was highest in central Tarrant County (32.3%) followed by northwest Tarrant County (29.3%) and southeast (27.5%) and lowest in northeast Tarrant County (20.5%) [Table 5.3]. The difference in the prevalence of obesity between central Tarrant County and northeast and southwest Tarrant County was significant.

A significantly higher percentage of males (46.8%) than females (28.7%) were overweight, but the figures for obesity among both genders were comparable (26.9% vs. 25.5%) [Table 5.3]. The high number of overweight males may be due to muscle mass rather than excess fat. Overweight did not vary significantly with age, but obesity was highest for age 33-44 and 45-54 (30.5% & 30.8%) and lowest for 18-24 (12.7%) [Table 5.3], a significant difference. Among the races/ethnicities, there was no significant difference in overweight, but obesity in African-Americans (42.6%) was significantly higher than Hispanics (27.7%), Whites (23.5%) and other races/ethnic groups (12.8%) [Table 5.3].

Obesity was highest for people with less than a high school education (34.0%) followed by those who have a technical degree or some college (30.6%) and was lowest in people with a college degree (22.0%), and comparable to those with a high school diploma or GED (22.1%) [Table 5.3]. Overweight and obesity separately showed no significance association with the income level of respondents but when combined was highest for the middle-income earners ($25,000-$35,000), followed by those earning $35,000 to $50,000 [Table 5.4]. The differences in overweight and obesity combined between the middle income and low income groups (<$15,000) was significant. Overweight and obesity combined was highest in people unable to work (73.8%), followed by people out of work

for more than one year (70.6%) and people employed for pay (66.3%) [Table 5.4]. Homemakers were at the lowest risk for overweight and obesity (52.6%) and they differ significantly from those unable to work and those who are employed.

It is well documented in the literature that body size has a significant impact on the development of many chronic diseases (2.) We found that people living in Tarrant County who are overweight or obese were 2.3 times more likely to be diabetic, 2.3 times more likely to be hypertensive, 1.5 times more likely to be diagnosed with high blood cholesterol and 1.2 times more likely to live a sedentary lifestyle. Risk association between overweight or obesity and myocardial infarction and coronary heart disease were identified but were not statistically significant [Table 5.6].

Table 5.2 Overweight (BMI 25.0 – 29.9) in Tarrant County Adults Age 18 and Older

	Overweight (BMI 25.0 - 29.9)			
	n	Weighted Percentage*	N	95% Confidence Interval
Total	879	37.8	2371	35.3 - 40.4
Sub-County Area				
Northeast	188	42.0	485	36.6-47.5
Southeast	148	36.6	412	31.2-42.3
Central	199	38.9	534	34.2-43.9
Southwest	159	33.0	481	28.5-37.9
Northwest	185	40.4	459	35.5-45.6
Gender				
Male	461	46.8	959	42.7-50.9
Female	418	28.7	1410	25.8-31.7
Age				
18-24	54	35.9	159	27.1-45.8
25-34	170	34.9	452	29.7-40.4
35-44	184	35.9	527	30.9-41.3
45-54	181	45.7	448	39.8-51.8
55-65	142	41.9	361	35.7-48.3
65+	145	35.1	407	29.9-40.7
Education				
≤ High school	138	38.5	339	31.8-45.7
High school or GED	240	41.9	624	36.7-47.3
Tech/some college	233	38.7	642	33.9-43.7
College degree	265	33.7	757	29.7-37.8
Annual Income				
<$15,000	86	31.2	279	24.0-39.5
$15,000 - $25,000	146	35.2	402	29.6-41.3
$25,000 - $35,000	107	43.1	244	35.3-51.4
$35,000 - $49,999	119	41.0	306	33.9-48.4
$50,000+	317	38.8	847	34.8-43.0
Race/Ethnicity				
White	548	37.4	1499	34.4-40.5
African-American	129	33.9	399	27.3-41.2
Hispanic	172	42.9	389	36.7-49.3
Other	24	29.3	70	18.4-43.2
Employment				
Employed	459	38.1	1221	34.7-41.7
Self-employed	88	41.9	201	33.2-51.1
Out of work for >1yr	20	28.2	60	15.8-45.1
Out of work for <1yr	25	37.4	75	24.2-52.8
Homemaker	72	31.7	226	24.9-39.3
Student	32	46.7	70	32.7-61.3
Retired	145	36.3	390	31.0-42.0
Unable to work	33	35.7	114	24.3-49.1

n represents the number of respondents who are overweight
N represents the number of respondents to each question
* Percentages are weighted to population characteristics

Table 5.3 Obesity (BMI >30.0) in Tarrant County Adults Age 18 and Older

	Obese (BMI 30.0 - 99.8)			
	n	Weighted Percentage*	N	95% Confidence Interval
Total	626	26.2	2371	23.8 – 28.7
Sub-County Area				
Northeast	97	20.5	485	16.3 - 25.4
Southeast	111	27.5	412	22.3 - 33.4
Central	176	32.2	534	27.8 - 36.9
Southwest	119	22.2	481	18.4 - 26.5
Northwest	123	29.3	459	24.6 - 34.5
Gender				
Male	236	26.9	959	23.1 - 31.0
Female	390	25.5	1410	22.8 - 28.4
Age				
18-24	28	12.7	159	7.9 - 20.0
25-34	103	25.8	452	20.4 - 32.0
35-44	156	30.5	527	25.6 - 35.8
45-54	142	30.8	448	25.5 - 36.6
55-65	106	28.8	361	23.2 - 35.1
65+	88	21.3	407	17.1 - 26.3
Education				
≤ High school	106	34.0	339	26.9 - 41.9
High school or GED	162	22.1	624	18.1 - 26.7
Tech/some college	206	30.6	642	26.2 - 35.4
College degree	151	22.0	757	18.2 - 26.3
Annual Income				
<$15,000	90	28.1	279	21.1 - 36.4
$15,000 - $25,000	119	28.7	402	23.1 - 35.0
$25,000 - $35,000	73	29.8	244	22.8 - 37.9
$35,000 - $49,999	82	24.5	306	19.1 - 30.9
$50,000+	204	25.1	847	21.5 - 29.1
Race/Ethnicity				
White	342	23.5	1499	20.8 - 26.5
African-American	167	42.6	399	35.6 - 50.0
Hispanic	106	27.7	389	21.9 - 34.3
Other	9	15.8	70	7.2 - 31.1
Employment				
Employed	334	28.1	1221	24.8 - 31.8
Self-employed	42	22.8	201	15.7 - 31.8
Out of work for >1yr	21	42.5	60	26.3 - 60.4
Out of work for <1yr	23	12.7	75	12.4 - 35.3
Homemaker	53	21.0	226	15.4 - 27.8
Student	10	12.8	70	6.0 - 25.5
Retired	94	24.3	390	19.7 - 29.6
Unable to work	46	38.0	114	26.4 - 51.2

n represents the number of respondents who are obese
N represents the number of respondents to each question
* Percentages are weighted to population characteristics

Table 5.4 Overweight and Obesity in Tarrant County Adults Age 18 and Older

	Overweight and Obese (BMI 25.0 – 99.8)			
	n	Weighted Percentage*	N	95% Confidence Interval
Total	1505	64.0	2371	61.5 – 66.5
Sub-County Area				
Northeast	285	62.4	485	57.1 – 67.4
Southeast	259	64.1	412	58.3 – 69.5
Central	375	71.1	534	66.4 – 75.4
Southwest	278	55.2	481	50.1 – 60.2
Northwest	308	69.8	459	65.0 – 74.2
Gender				
Male	697	73.6	959	70.0 – 77.0
Female	808	54.2	1410	50.8 – 57.5
Age				
18-24	82	48.7	159	38.9 – 58.5
25-34	273	60.6	452	54.9 – 66.1
35-44	340	66.4	527	61.3 – 71.1
45-54	323	76.5	448	71.5 – 80.9
55-65	248	70.7	361	64.8 – 75.9
65+	233	56.5	407	50.8 – 62.0
Education				
≤ High school	244	72.5	339	65.5 – 78.5
High school or GED	402	64.0	624	58.6 – 69.1
Tech/some college	439	69.3	642	64.6 – 73.7
College degree	416	55.6	757	51.3 – 59.9
Race/Ethnicity				
White	890	60.9	1499	57.8 – 64.0
African-American	296	76.5	399	69.9 – 82.1
Hispanic	278	70.6	389	64.5 – 76.0
Other	33	45.1	70	31.3 – 59.6
Annual Income				
<$15,000	176	59.3	279	50.7 – 67.4
$15,000 - $25,000	265	63.9	402	57.6 – 69.8
$25,000 - $35,000	180	72.9	244	65.0 – 79.6
$35,000 - $49,999	201	65.5	306	58.0 – 72.3
$50,000+	521	63.9	847	60.0 – 67.8
Employment				
Employed	793	66.3	1221	62.8 – 69.6
Self-employed	130	64.5	201	55.5 – 72.8
Out of work for >1yr	41	70.6	60	54.2 – 83.0
Out of work for <1yr	48	59.1	75	44.2 – 72.6
Homemaker	125	52.6	226	44.9 – 60.3
Student	42	59.6	70	44.6 – 72.9
Retired	239	60.6	390	54.9 – 66.1
Unable to work	79	73.8	114	62.6 – 82.5

n represents the number of respondents who are obese or overweight
N represents the number of respondents to each question
* Percentages are weighted to population characteristics

Table 5.5 Comparison of Tarrant County, Texas, the United States and Healthy People 2010 Objectives for Adults Who Are Overweight and Obese

Geographic Area	Overweight	Obese	Total Overweight and Obese
Tarrant County	37.8% (35.3 - 40.4)	26.2% (23.8 – 28.7)	64.0% (61.5 – 66.5)
Texas*	37.2% (35.4-38.4)	25.8% (23.3-25.9)	63.0% NA
United States*	36.9%	23.2%	60.1%
HP 2010 Objective	NA	15%	NA

*Source: Division of Adult and Community Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System Online Prevalence Data, 2004

Table 5.6 Risk Associations Between Overweight and Obese with Other Health-Related Conditions

	Health Status[2]		Diabetes Mellitus		Myocardial Infarction	
	Poor	Good	Yes	No	Yes	No
Overweight and Obese						
Yes	77	1425	165	1339	52	1408
No	828	37	31	835	22	817
Relative Risk[1]	1.41		2.25*		1.27	
95% Confidence Interval	0.85 – 2.36		1.35 – 3.76		0.69 – 2.34	

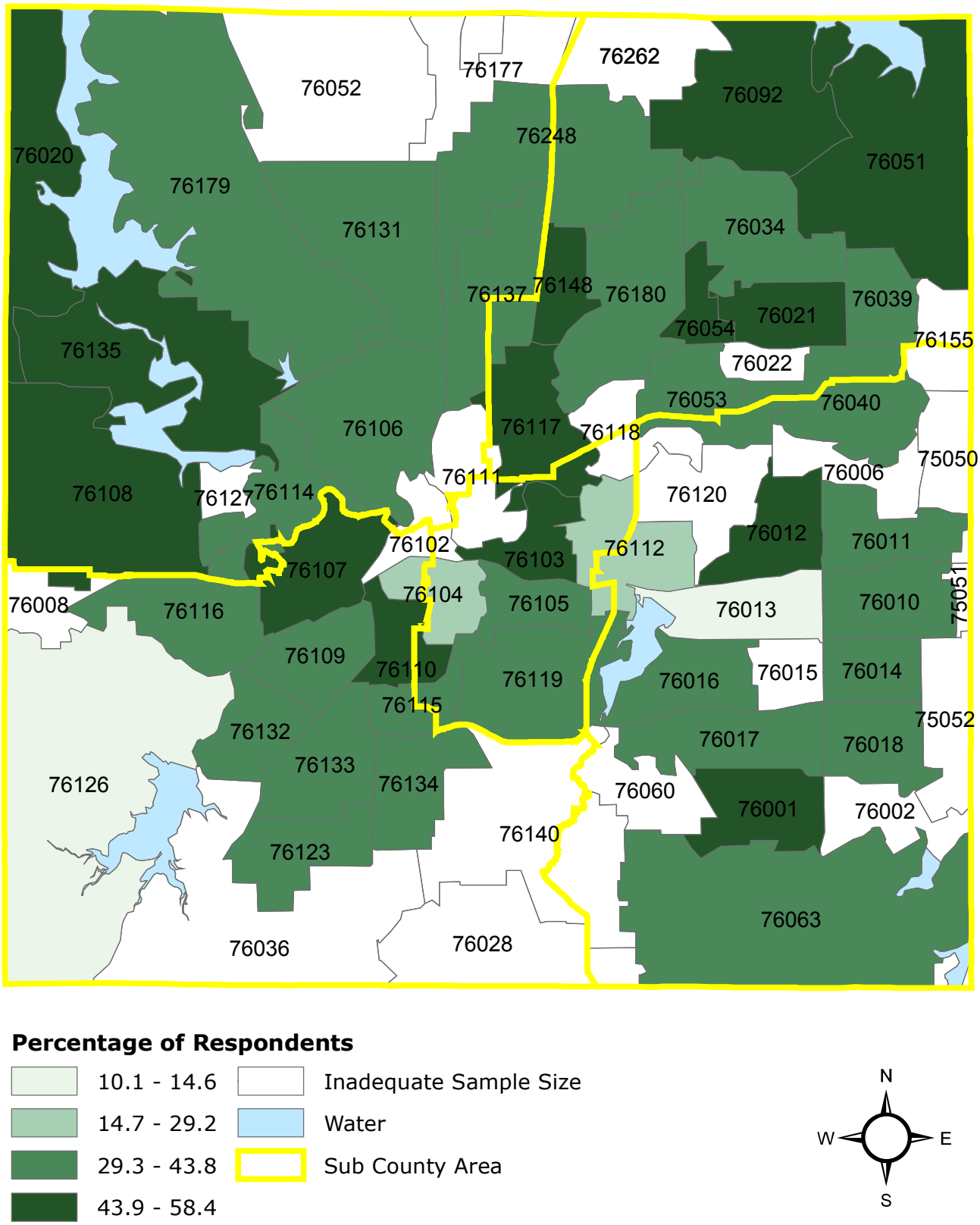
	Stroke		Hypertension		Sedentary Lifestyle[3]	
	Yes	No	Yes	No	Yes	No
Overweight and Obese						
Yes	35	1429	510	964	812	581
No	22	819	151	698	408	380
Relative Risk[1]	0.84		2.29*		1.17*	
95% Confidence Interval	0.43 – 1.63		1.85 – 2.83		1.05 – 1.31	

	High Blood Cholesterol		Coronary Artery Disease	
	Yes	No	Yes	No
Overweight and Obese				
Yes	511	658	53	1398
No	195	449	24	815
Relative Risk[1]	1.53*		1.55	
95% Confidence Interval	1.28 – 1.83		0.88 – 2.72	

1. Adjusted to complex sampling population weights
2. The response to the question: "Would you say that in general your health is excellent, very good, fair or poor? were collapsed into two categories; 'excellent', 'very good', and 'good' = 'Good' and 'fair' and 'poor' = 'Poor'
3. Respondents who did not meet current requirements of 30 or more minutes per day of moderate physical activity for five or more days per week

* Statistically significant at alpha = 0.05 level

Figure 5.1 Respondents Who Are Overweight by ZIP Code in Tarrant County, Texas

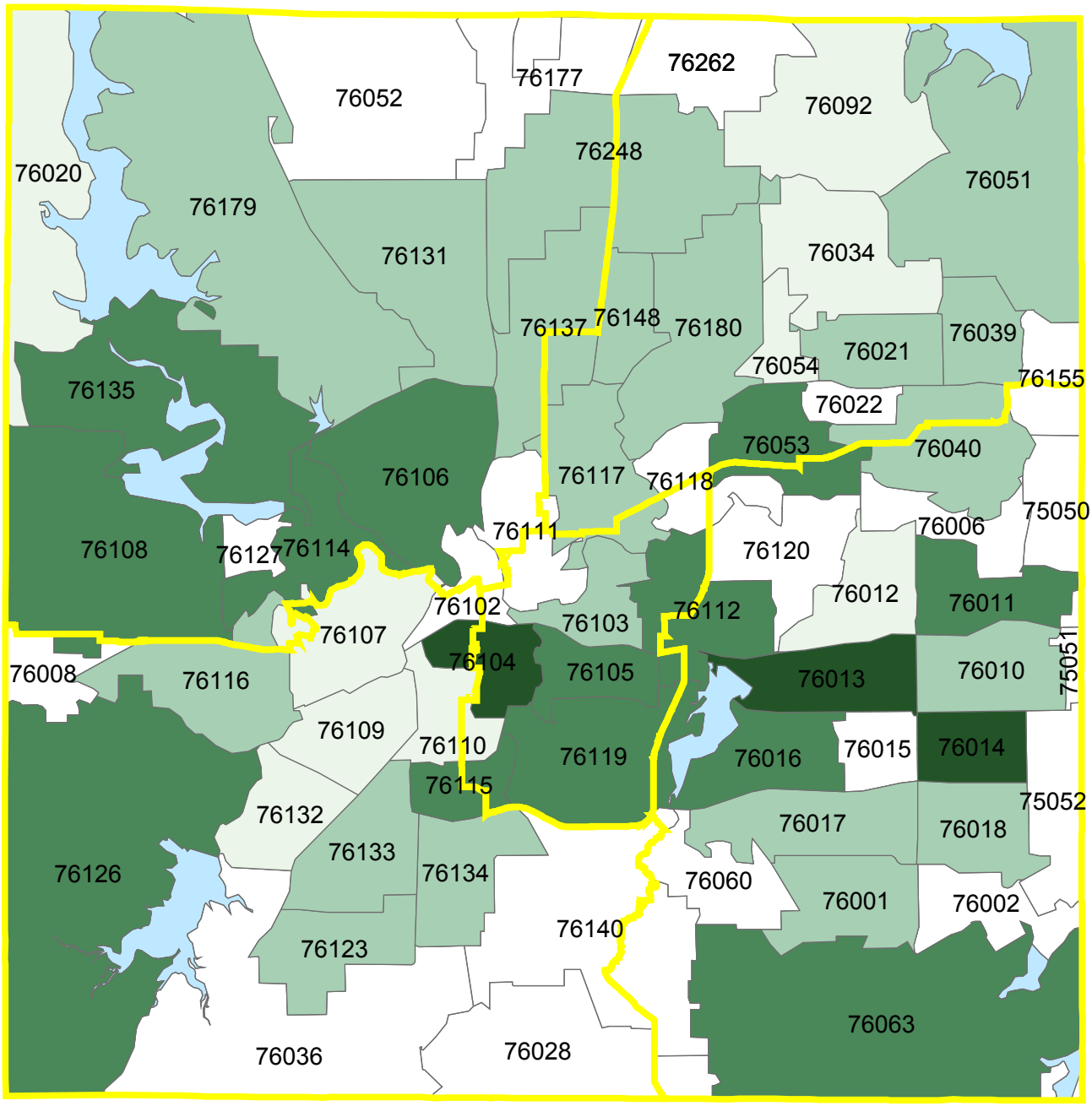


Percentage of Respondents

10.1 - 14.6	Inadequate Sample Size
14.7 - 29.2	Water
29.3 - 43.8	Sub County Area
43.9 - 58.4	

N
W E
S

Figure 5.2 Respondents Who Are Obese by ZIP Code in Tarrant County, Texas



Percentage of Respondents

- 3.5% - 14.6%
- 14.7% - 29.3%
- 29.4% - 43.9%
- 44.0% - 58.6%
- Inadequate Sample Size
- Water
- Sub County Area

N
W E
S

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Introduction

Regular physical activity throughout life is important for maintaining a healthy body, enhancing psychological well-being, and preventing premature death. Participation in regular physical activity, defined as at least 30 minutes of moderate activity on at least five days per week or 20 minutes of vigorous physical activity at least three times per week, is critical to sustaining good health. Regular physical activity that is performed on most days of the week reduces the risk of developing or dying from some of the leading causes of illness and death in the United States. Regular physical activity improves health in the following ways (1):

- Reduces the risk of dying prematurely
- Reduces the risk of dying from heart disease
- Reduces the risk of developing diabetes
- Reduces the risk of developing high blood pressure
- Helps reduce blood pressure in people who already have high blood pressure
- Reduces the risk of developing colon cancer
- Reduces feelings of depression and anxiety
- Helps control weight
- Helps build and maintain healthy bones, muscles and joints
- Helps older adults become stronger and better able to move about without falling
- Promotes psychological well-being

Methods

Table 6.5 presents the responses of Tarrant County residents to the BRFSS questions about exercise and physical activity.

Physical activity was measured as an aggregate variable using responses to questions about moderate and vigorous activity for at least 10 minutes at a time. Respondents meet the recommendations if they report at least 30 minutes of moderate physical activities per day for 5 or more days per week or at least 20 minutes of vigorous physical activity per day for three or more days per week. The aggregate variable was then analyzed by demographic characteristics and compared to the averages of the state of Texas, the United States and Healthy People 2010 objectives.

Table 6.6 presents the amount of time Tarrant County residents spend viewing television and videos and using a computer outside of work.

Results

Key Findings

- **Forty-five (44.7%) percent of Tarrant County residents meet CDC's recommendation for physical activity**
- **Meeting the recommendation for physical activity was significantly related to higher levels of education, income and employment**
- **Physical inactivity is a risk factor for poor health status, hypertension, hypercholesterolemia, and overweight and obesity**

Overall, 76% of Tarrant County residents report participating in some physical activities or exercise outside of their jobs during the past month. More than 60% report that they spend the majority of time sitting or standing during work hours [Table 6.5]. Over 45% of Tarrant County residents spend more than 2 hours watching television or videos or using a computer outside of work on a typical day [Table 6.6]. However, only 44% of Tarrant County residents meet the CDC recommendation for regular physical activity [Table 6.1], while 11% percent report no physical activity within the month prior to the survey [Table 6.2]. Of those who meet recommendations for physical activity, the highest proportion was in northeast Tarrant County (49.1%), followed by southwest (46.3%) and southeast (45.1%) [Table 6.1]. Males (46.1%) tended to meet recommendations for physical activity more than females (43.4%) [Table 6.1]. People below age 55 (18-24--48.1%; 25-34--50.2%; 35-44--45.9%; 45-54--42.1%) tended to be more active than those age 55 and older (55-65--35.2%; 65+--38.2%) [Table 6.1]. Tarrant County residents who meet the criteria for physical activity differ according to education, income and employment status [Table 6.1]. People with college education (52.4%) are more physically active than those with less than a high school education (35.5%) and high school or GED (40.5%). People with income above $50,000 (50.8%) and $35,000 to less than $50,000 (47.6%) report more physical activity than those with income below $15,000 (30.8%) [Table 6.1]. People who were employed (44.9%) and self-employed (56.0%) were more physically active than those unable to work (23.8%) [Table 6.1].

The proportion of Tarrant County residents who meet recommendations for physical activity did not differ from that of Texas or the nation [Table 6.3]. Tarrant County residents still fall short of the Healthy People 2010 objectives for combined moderate and vigorous physical activity (60%) [Table 6.3].

Physical inactivity in Tarrant County residents is a risk factor for poor health status, hypertension, hypercholesterolemia and overweight and obesity [Table 6.4]. Physically inactive Tarrant County residents are 3.42 times more likely to report poor health status, 1.33 times more likely to be hypertensive, 1.21 times more likely to have high blood cholesterol and 1.17 times more likely to be overweight or obese.

Table 6.1 Meet Recommendations for Physical Activity in Tarrant County Adults Age 18 and Older

	Meet Recommendations for Physical Activity‡			
	n	Weighted Percentage*	N	95% Confidence Interval
Total	1009	44.7	2337	42.1-47.4
Sub-County Area				
Northeast	224	49.1	474	43.6-54.7
Southeast	178	45.1	409	39.3-51.1
Central	211	42.5	541	37.7-47.5
Southwest	208	46.3	463	41.1-51.5
Northwest	188	41.1	450	36.1-46.3
Gender				
Male	407	46.1	897	41.9-50.4
Female	602	43.4	1440	40.2-46.7
Age				
18-24	86	48.1	172	38.7–57.7
25-34	230	50.2	476	44.4-56.0
35-44	251	45.9	516	40.6-51.3
45-54	184	42.1	436	36.2-48.1
55-65	119	35.5	346	29.7-41.8
65+	127	38.2	365	32.5-44.2
Education				
<= High school	121	35.5	352	28.6-43.1
High school or GED	242	40.5	605	35.2-46.0
Tech/some college	289	44.8	636	39.9-49.8
College degree	355	52.4	739	47.9-56.8
Annual Income				
<$15,000	86	30.8	285	23.6-39.1
$15,000-<$25,000	157	39.1	398	33.1-45.4
$25,000-<$35,000	105	43.4	233	35.4-51.8
$35,000-<50,000	135	47.6	305	40.3-55.1
$50,000+	414	50.8	832	46.5-55.0
Race/Ethnicity				
White	640	46.6	1448	43.4-49.9
African-American	157	46.2	380	38.8-53.7
Hispanic	173	38.8	424	32.8-45.1
Other	32	43.5	70	30.1-57.9
Employment				
Employed	544	44.9	1204	41.2-48.7
Self-employed	101	56.0	186	46.6-65.0
Out of work for >1yr	25	48.8	61	32.0-65.9
Out of work for <1yr	36	46.2	80	32.7-60.2
Homemaker	118	43.9	29	36.7-51.2
Student	34	48.0	68	33.7-62.7
Retired	122	38.3	356	32.5-44.3
Unable to work	21	23.8	108	13.4-38.7

n represents the number of respondents who meet recommendations for physical activity
N represents the number of respondents to the question
* Percentages are weighted to population characteristics
‡ Variable calculated by the Centers for Disease Control and Prevention – respondents who do 30 or more minutes of moderate physical activity per day for 5 or more days per week or 20 or more minutes of vigorous physical activity per day for three or more days per week

Table 6.2 No Physical Activity in Past 30 Days in Tarrant County Adults Age 18 and Older

	No Physical Activity Within the Past 30 Days‡			
	n	Weighted Percentage*	N	95% Confidence Interval
Total	317	11.1	2337	9.6-12.8
Sub-County Area				
Northeast	44	10.1	474	7.1-14.2
Southeast	40	8.5	409	5.9-12.0
Central	117	19.2	541	15.7-23.2
Southwest	61	12.5	463	9.2-16.8
Northwest	55	11.2	450	8.4-14.8
Gender				
Male	101	9.7	897	7.6-12.4
Female	216	12.4	1440	10.5-14.6
Age				
18-24	15	6.4	172	3.3-12.1
25-34	57	9.4	476	6.6-13.2
35-44	59	11.8	516	8.6-16.0
45-54	49	9.1	436	6.5-12.7
55-65	58	14.4	346	10.5-19.6
65+	75	18.2	365	14.2-23.1
Education				
<= High school	94	24.5	352	18.7-31.3
High School or GED	86	10.6	605	8.1-13.8
Tech/Some college	72	8.3	636	6.3-11.0
College Degree	64	7.2	739	5.3-9.7
Annual Income				
<$15,000	90	30.9	285	23.7-39.2
$15,000 - $25,000	70	15.1	398	10.8-20.6
$25,000 - $35,000	32	11.9	233	7.6-18.0
$35,000 - $49,999	35	9.2	305	6.2-13.5
$50,000+	42	4.2	832	3.0-6.0
Race/Ethnicity				
White	150	7.9	1448	6.5-9.5
African-American	67	12.2	380	8.6-17.1
Hispanic	88	19.1	424	14.7-24.5
Other	11	14.4	70	7.2-26.9
Employment				
Employed	132	9.4	1204	7.5-11.7
Self-employed	11	7.4	186	3.8-14.2
Out of work for >1yr	8	12.7	61	3.9-34.2
Out of work for <1yr	12	9.2	80	4.3-18.6
Homemaker	45	15.4	29	10.8-21.4
Student	3	4.9	68	1.3-17.0
Retired	56	13.7	356	10.2-18.1
Unable to work	48	38.9	108	27.4-51.7

n represents the number of respondents who meet recommendations for physical activity
N represents the number of respondents to the question
* Percentages are weighted to population characteristics
‡ Variable calculated by the Centers for Disease Control and Prevention – respondents who do 30 or more minutes of moderate physical activity per day for 5 or more days per week or 20 or more minutes of vigorous physical activity per day for three or more days per week

Table 6.3 Comparison of Tarrant County, Texas, the United States and Healthy People 2010 Objectives for Physical Activity

Geographic Area	Meets Recommended Physical Activity
Tarrant County	44.7% (42.1-47.4)
Texas*	44.7% (43.1-46.2)
United States*	47.2%
HP 2010 Objective	Moderate/Vigorous 60%

* Source: Division of Adult and Community Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System Online Prevalence Data, 2003 [**Note: State and National BRFSS 2004 data not available at time of publication]

Table 6.4 Risk Associations Between Physical Activity and Other Health-Related Conditions

	Health Status[3]		Overweight and Obesity BMI = 24.9–99.8		Myocardial Infarction		Stroke	
	Yes	No	Yes	No	Yes	No	Yes	No
Physical Activity[2]								
Does not meet recommendations	92	1235	812	408	48	1275	41	1284
Meets recommendations	17	990	581	380	21	987	14	995
Relative Risk[1]	3.42*		1.17*		1.61		1.81	
95% Confidence Interval	1.62-7.22		1.05-1.31		0.86-3.03		0.87-3.77	

	Diabetes Mellitus		Hypertension		High Blood Cholesterol		Coronary Artery Disease	
	Yes	No	Yes	No	Yes	No	Yes	No
Physical Activity[2]								
Does not meet recommendations	131	1197	434	892	431	579	40	1274
Meets recommendations	62	947	223	783	271	523	34	971
Relative Risk[1]	1.45		1.33*		1.21*		0.83	
95% Confidence Interval	0.98-2.14		1.10-1.61		1.02-1.42		0.47-1.48	

1. Adjusted to complex sampling population weights
2. Variable calculated by the Centers for Disease Control and Prevention – respondents who do 30 or more minutes of moderate physical activity per day for 5 or more days per week or 20 or more minutes of vigorous physical activity per day for three or more days per week
3. The response to the question: "Would you say that in general your health is excellent, very good, fair or poor?" were collapsed into two categories; 'excellent', 'very good', and 'good' = "Good" and 'fair' and 'poor' = "Poor"

* Statistically significant at alpha = 0.05 level

[Note: table orientation reports health outcomes in the rows and risk factors in the columns]

Table 6.5 Risk Associations Between TV Viewing and Physical Activity

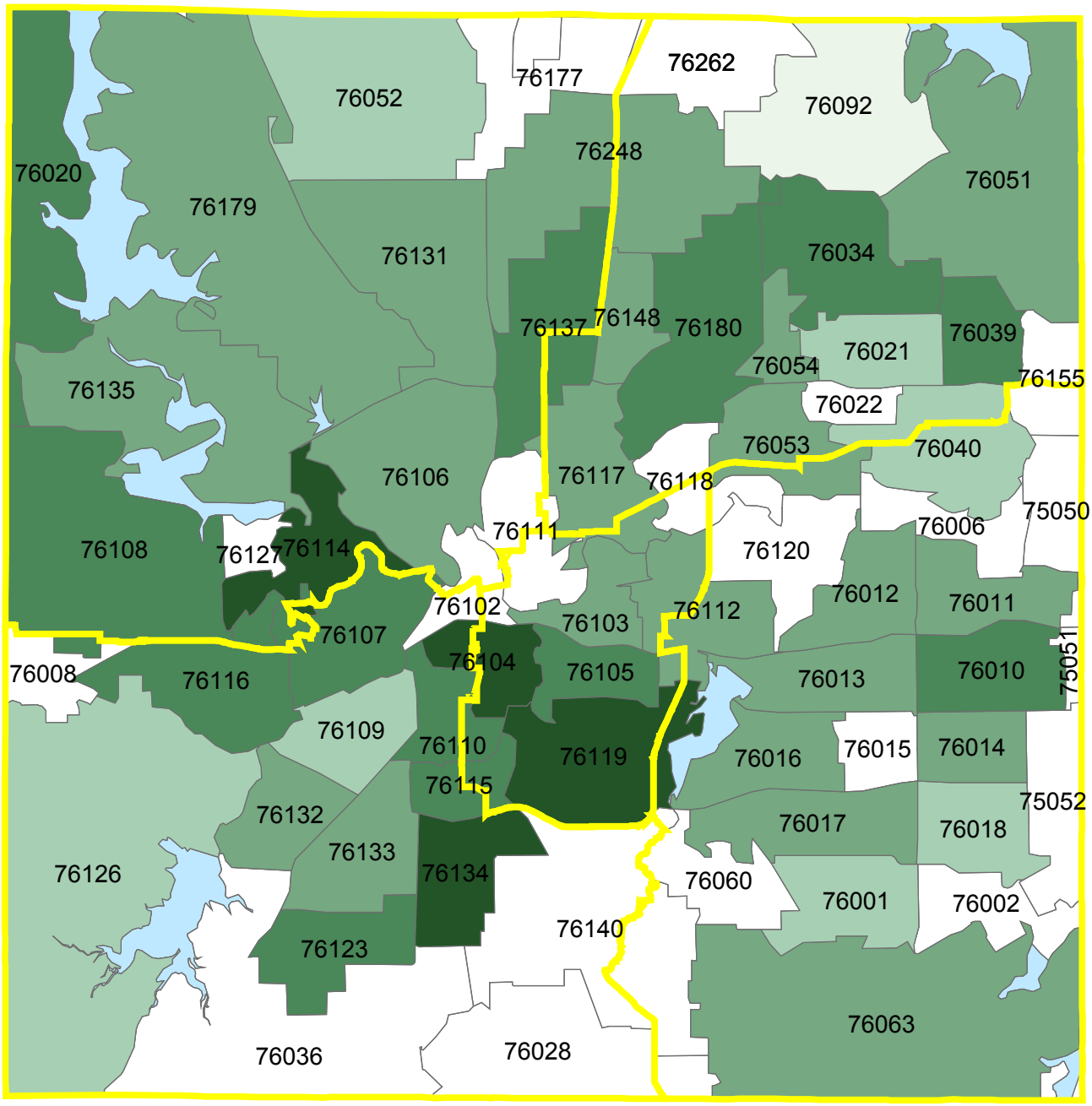
	Physical Activity[2]	
	Does not meet recommendations	**Meets recommendations**
TV Viewing		
> 2hours	161	895
≤ 2 hours	151	1113
Relative Risk[1]	1.220	
95% Confidence Interval	0.917 – 1.624	

1. Adjusted to complex sampling population weights
2. Variable calculated by the Centers for Disease Control and Prevention – respondents who do 30 or more minutes of moderate physical activity per day for 5 or more days per week or 20 or more minutes of vigorous physical activity per day for three or more days per week

* Statistically significant at alpha = 0.05 level

[Note: table orientation reports health outcomes in the rows and risk factor in the columns]

Figure 6.1 Respondents Who Meet Recommendation for Physical Activity by ZIP Code in Tarrant County, Texas



Percentage of Respondents

- Reported Do Not Meet Recommendation
- 3.8% - 8.7%
- 9.3% - 17.5%
- 17.9% - 26.2%
- 28.1% - 35.0%
- Inadequate Sample Size
- Water
- Sub County Area

N W E S

Table 6.6 Questions Asked On Physical Activity in Tarrant County Adults Age 18 and Older

Questions	Respondents n	Respondents %[1]
1. During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?		
Yes	1882	76.3
No	680	23.7
2. When you are at work, which of the following best describes what you do? Would you say…?		
Mostly sitting or standing	905	60.4
Mostly walking	357	26.9
Mostly heavy labor or physically demanding work	164	12.7
3. Do you do moderate activities for at least 10 minutes at a time, such as brisk walking, bicycling, vacuuming, gardening, or anything else that causes some increase in breathing or heart rate?		
Yes	2048	85.2
No	384	14.8
4. How many days do you do these moderate activities for at least 10 minutes?		
1 day per week	90	4.0
2 days per week	239	12.3
3 days per week	477	23.9
4 days per week	283	13.7
5 days per week	349	16.3
6 days per week	132	7.0
7 days per week	461	22.6
No moderate activity for at least 10 minutes at a time.	2	0.2
5. On days when you do moderate activities for at least 10 minutes at a time, how much total time per day do you spend doing these activities?		
Less than 30 minutes	1024	52.6
30 - 45 minutes	195	10.4
45 – 75 minutes	5	0.2
More than 75 minutes	727	36.8
6. Do you do vigorous activities for at least 10 minutes at a time, such as running, aerobics, heavy yard work, or anything else that causes large increases in breathing or heart rate?		
Yes	1142	51.9
No	1281	48.1
7. How many days do you do these vigorous activities for at least 10 minutes?		
1 day per week	230	22.1
2 days per week	245	21.7
3 days per week	262	22.9
4 days per week	142	11.0
5 days per week	139	10.5
6 days per week	47	5.6
7 days per week	64	5.7
No moderate physical activity for at least 10 minutes at a time	3	0.1
8. On days when you do vigorous activities for at least 10 minutes at a time, how much total time per day do you spend doing these activities?		
Less than 30 minutes	460	41.8
30 - 45 minutes	132	12.2
45 – 75 minutes	5	0.5
More than 75 minutes	502	45.5

1. Percentages are weighted to population characteristics

Table 6.7 Question Asked on TV, Video and Computer Use in Tarrant County Adults Age 18 and Older

Questions	Respondents n	Respondents %[1]
1. Over the past 30 days, on a typical day, how much time did you spend sitting and watching TV or videos or using a computer outside of work?		
Less than 1 hour	251	10.5
1 hour	394	17.1
2 hours	628	25.4
3 hours	447	19.3
4 hours	227	9.4
5 hours or more	420	16.6
You do not watch TV or videos or use computer outside of work	44	1.7

1. Percentages are weighted to population characteristics

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Introduction

Eating a healthy and well-balanced diet has been long associated with good health and disease prevention (1). Fruits and vegetables play an import role in maintaining a well-balanced diet. Fruits and vegetables provide essential vitamins, minerals, fiber, carbohydrates, and antioxidants. The benefits of eating adequate amounts of fruits and vegetables are well established. Consuming the recommended daily amount of fruits and vegetables has been linked with lowering risk of certain cancers (2), stroke and heart disease (3), high blood pressure (4), high cholesterol (5), diverticulitis (6) and certain vision problems (7 – 9). Recent recommendations released in January of 2005, call for at least 9 servings of fruits and vegetables per day (10).

Methods

Fruit and vegetable consumption was determined by respondents' answers to the following six questions in the BRFSS:

1. How often do you drink fruit juices such as orange, grapefruit, or tomato?
2. Not counting juice, how often do you eat fruit?
3. How often do you eat green salad?
4. How often do you eat potatoes not including french fries, fried potatoes, or potato chips?
5. How often do you eat carrots?
6. Not counting carrots, potatoes, or salad, how many servings of vegetables do you usually eat?

The resulting variable is the overall consumption of fruits and vegetables per day for the respondents.

Results

Key Findings

- **Only 25% of Tarrant County residents consume 5 or more servings of fruits and vegetables per day**
- **Females tend to eat more fruits and vegetables than males**
- **More people with college, some college and technical school education consumed more fruits and vegetables than those with less than a high school education**
- **Inadequate fruit and vegetable consumption increases the risk for stroke**
- **The proportion of Tarrant County residents consuming 5 or more servings of fruits and vegetables per day falls short of the Healthy People 2010 objective**

Overall, about a quarter of Tarrant County residents meet the recommended daily consumption of 5 or more servings of vegetables and fruits per day. The proportion of residents who meet the recommended daily consumption in each of the sub-county areas of Tarrant County did not differ significantly. Females (29.6%) generally ate more fruit and vegetables than males (22.0%). Fruit and vegetable consumption tended to increase with age. It was highest for age 65 and older (31.1%), followed by age 55-64 (27.4%) and 25 -54 (about 25%). Fruit and vegetable consumption was lowest for teenagers and young adults (20.1%). This reflects the common pattern of fast food consumption among young people. Most fast foods do not contain fruits and vegetables. Whites (27.4%) and African-Americans (26.9%) tended to consume more fruits and vegetables than Hispanics (21.4%). The proportion of Tarrant County residents consuming five or more servings of fruits and vegetables per day was highest for those with a college degree (29.7%), followed by those with some college or technical education (28.0%) and was lowest for people who had less than high school education (17.3%). The proportion of those with less than a high school education was significantly lower than for those with other education status. Fruit and vegetable consumption was highest for the retired (32.6%), followed by homemakers (29.9%) and those employed (26.9%). Fruit and vegetable consumption was lowest for the self-employed (15.9%) and those out of work for more than a year (15.8%). The difference between the highest and the lowest were statistically significant. [Table 7.1]

The proportion of Tarrant County residents (25.9%) who met the recommended daily consumption of fruits and vegetables was slightly higher than that of Texas (22.6%) and the nation (22.5%). Tarrant County residents, however still fall short of the Healthy People 2010 national objectives for fruit (75%) and vegetable (50%) consumption. [Table 7.2]

Eating a well-balanced diet has a significant impact on health. We found that people living in Tarrant County who ate less than 5 servings of fruits and vegetables per day were 2.59 times more likely to have a stroke and 1.29 times more likely to live a sedentary or inactive lifestyle [Table 7.3].

Table 7.1 Consumption of Fruits and Vegetables per Day in Tarrant County Adults 18 and Older

	Consume 5 or More Servings per Day			
	n	Weighted Percentage*	N	95% Confidence Interval
Total	670	25.9	2458	23.7-28.2
Sub-County Area				
Northeast	129	26.3	493	21.7-31.5
Southeast	116	24.9	425	20.3-30.2
Central	168	26.4	578	22.5-30.7
Southwest	127	24.1	487	20.2-28.5
Northwest	130	28.1	475	23.6-32.9
Gender				
Male	207	22.0	948	18.7-25.6
Female	463	29.6	1510	26.8-32.6
Age				
18-24	36	20.1	178	12.9-29.8
25-34	126	25.3	491	20.8-30.4
35-44	141	25.7	535	21.4-30.6
45-54	121	25.6	453	20.7-31.1
55-65	104	27.4	367	22.3-33.2
65+	132	31.1	407	26.1-36.5
Education				
≤ High school	82	17.3	382	13.1-22.4
High school or GED	161	24.4	647	19.9-29.4
Tech/some college	190	28.0	664	23.7-32.4
College degree	235	29.7	757	25.9-33.8
Annual Income				
<$15,000	83	21.5	301	16.1-28.2
$15,000 - $25,000	109	22.4	428	17.9-27.7
$25,000 - $35,000	77	32.1	242	24.9-40.2
$35,000 - $49,999	75	25.9	317	19.6-33.4
$50,000+	238	25.5	850	22.1-29.2
Race/Ethnicity				
White	425	27.2	1520	24.4-30.2
African-American	125	26.9	405	21.5-33.2
Hispanic	98	21.4	444	17.0-26.6
Other	19	27.3	74	16.2-42.1
Employment				
Employed	330	26.9	1256	23.7-30.2
Self-employed	38	15.9	196	11.0-22.4
Out of work for >1yr	18	21.7	63	10.5-39.6
Out of work for <1yr	20	15.8	81	9.3-25.4
Homemaker	82	29.9	267	23.8-36.9
Student	18	19.7	73	19.7-32.9
Retired	129	32.6	392	27.4-38.2
Unable to work	30	19.2	115	11.5-30.3

n represents the number of respondents who consume 5 or more servings of fruits and vegetables per day
N represents the number of respondents to each question
* Percentages are weighted to population characteristics

Table 7.2 Comparison of Tarrant County, Texas, the United States and Healthy People 2010 Objectives for Consumption of Fruits and Vegetables

Geographic Area	Percent Consume 5 or More Servings of Fruits and Vegetables per Day
Tarrant County	25.9% (23.7 - 28.2)
Texas*	22.5% (21.3 - 23.7)
United States*	22.6%
HP 2010 Objective	75% (fruits) 50% (vegetables)

*Source: Division of Adult and Community Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System Online Prevalence Data, 2003. [**Note: State and National BRFSS 2004 data not available at time of publication]

Table 7.3 Risk Associations Between Fruit and Vegetable Consumption and Other Health-Related Conditions

	Health Status[2]		Diabetes Mellitus	
	Poor	Good	Yes	No
Fruit and Vegetable Consumption				
Less than 5 per day or never	358	1426	147	1640
5 or more times per day	116	554	59	611
Relative Risk[1]	1.21		1.03	
95% Confidence Interval	0.91 – 1.61		0.71 – 1.49	

	Myocardial Infarction		Stroke	
	Yes	No	Yes	No
Fruit and Vegetable Consumption				
Less than 5 per day or never	55	1725	50	1735
5 or more times per day	19	648	10	658
Relative Risk[1]	0.92		2.59*	
95% Confidence Interval	0.45 – 1.90		1.11 - 6.07	

1. Adjusted to complex sampling population weights
2. The response to the question: "Would you say that in general your health is excellent, very good, fair or poor? were collapsed into two categories; 'excellent', 'very good', and 'good' = "Good" and 'fair' and 'poor' = "Poor"

*Statistically significant at alpha = 0.05 level

Table 7.3 Risk Associations Between Fruit and Vegetable Consumption and Other Health-Related Conditions, cont.

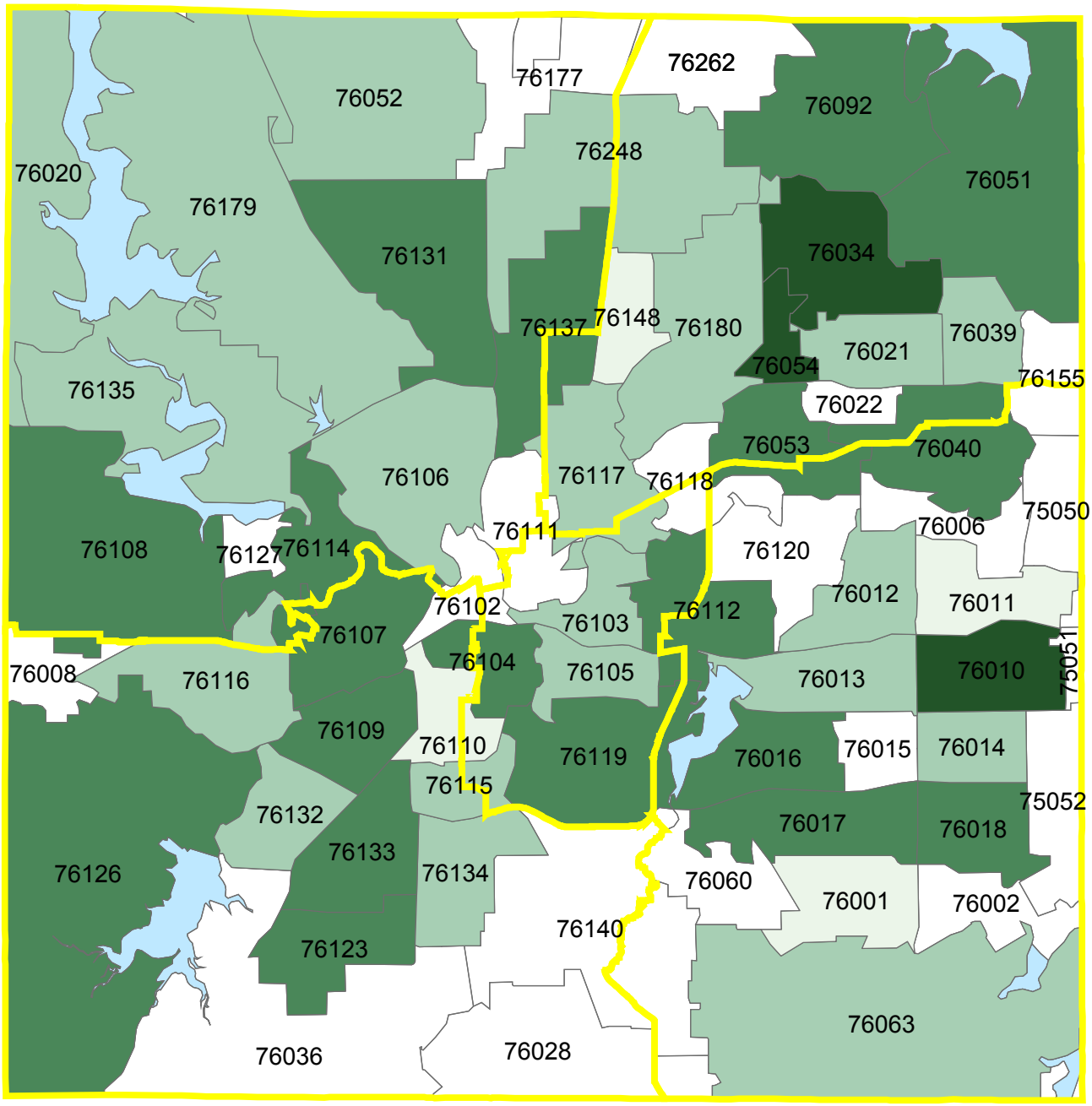
	Hypertension		High Blood Cholesterol	
	Yes	No	Yes	No
Fruit and Vegetable Consumption				
Less than 5 per day or never	507	1276	531	820
5 or more times per day	194	476	206	335
Relative Risk[1]	1.00		1.05	
95% Confidence Interval	0.83 – 1.22		0.88 - 1.24	

	Coronary Artery Disease		Physical Activity[2]	
	Yes	No	Does Not Meet Recommendation	Meets Recommendation
Fruit and Vegetable Consumption				
Less than 5 per day or never	56	1719	1031	662
5 or more times per day	24	639	296	346
Relative Risk[1]	0.99		1.29*	
95% Confidence Interval	0.83 – 1.22		1.14 - 1.46	

1. Adjusted to complex sampling population weights
2. Respondents who report 30 or more minutes per day of moderate physical activity for five or more days per week or vigorous physical activity for 20 or more minutes per day for three or more days per week

* Statistically significant at alpha = 0.05 level

Figure 7.1 Respondents Who Consume 5 or More Servings of Fruit and Vegetables per Day by ZIP Code in Tarrant County, Texas



Percentage of Respondents

- 7% - 14%
- 15% - 28%
- 29% - 42%
- 43% - 56%
- Inadequate Sample Size
- Water
- Sub County Area

N W E S

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Introduction

Cigarette smoking is the single most preventable cause of disease and death in the United States (1). Smoking results in more deaths each year in the United States than AIDS, alcohol, cocaine, heroin, homicide, suicide, motor vehicle crashes, and fires—combined (2). Excessive alcohol consumption is the third leading preventable cause of death in the United States (3). These two health risk factors independently and combined constitute a significant health burden to the society.

Over the past 4 decades, cigarette smoking has caused an estimated 12 million deaths, including 4.1 million deaths from cancer, 5.5 million deaths from cardiovascular diseases, 2.1 million deaths from respiratory diseases, and 94,000 infant deaths related to their mother's smoking (3). Cigarette smoking is responsible for more than 440,000 deaths each year. More than 8.6 million people in the United States have at least one serious illness caused by smoking (3). If current patterns of smoking persist, 6.4 million people currently younger than 18 will die prematurely from a tobacco-related disease (3). Paralleling this enormous health toll is the economic burden of tobacco use: more than $75 billion per year in medical expenditures and another $80 billion per year resulting from lost productivity (3).

Excessive alcohol consumption is also associated with multiple adverse health consequences including liver cirrhosis, various cancers, unintentional injuries and violence. In 2001, excessive alcohol use was responsible for approximately 75,000 preventable deaths and 2.3 million YPLLs (Years of Potential Life Lost) in the United States (3). YPLL is an estimate of premature mortality that has been defined as the number of years of life lost among persons who die before the predetermined age of 65. The 2.3 million YPLLs for excessive drinking is approximately half of the total YPLLs that were caused by smoking in 1999 (4).

Methods

The BRFSS respondents were asked seven questions on smoking, smoking cessation and health professional's advice to stop smoking and four questions were asked about alcohol and risk factors associated with alcohol consumption. These questions and number of respondents can be found in Table 8.5. Questions about current smoking and heavy alcohol consumption were further analyzed relative to demographic characteristics and health-related consequences.

Results

Key Findings

- **Twenty-two percent of Tarrant County residents are current smokers and 4.3% are heavy drinkers**
- **More people in northeast Tarrant County than central Tarrant County drink heavily**
- **More males than females are smokers**
- **Over 40% did not receive advice to stop smoking in the past 12 months**
- **Over half, 55% of all current smokers have attempted to quit smoking in the past 12 months**
- **The proportion of current smokers among college educated individuals was lower than individuals with lower educational status**

Overall, 43% of Tarrant County residents have smoked at least 100 cigarettes in their lifetime. Of these, over half are current smokers. About 22% of Tarrant County residents are current smokers [Table 8.1]. Current smoking was highest in northeast Tarrant County (26.0%), followed by northwest (23.7%) and southeast (21.7%) and lowest in central (19.9%) and southwest (19.5%), but the differences were not statistically significant. Current smoking in males (26.7%) was significantly higher than females (18.0%). Current smoking in people age 65 and older (9.9%) was significantly less than any other age groups (22.3% - 26.5%) [Table 8.1]. Years of formal education appears to have a positive effect on current smoking. Significantly fewer college graduates (13.7%) smoke than others with lower education (technical school/some college 22.5%; high school/GED 27.0%; less than high school 31.7%) [Table 8.1]. Current smoking tended to be lower in groups with higher income levels. People with an annual income less than $35,000 (28.8%; 25.1%& 28.7%) smoked more than those with an annual income greater than $35,000 (22.1% & 21.9%). Although, current smoking was highest in Whites (23.2%), followed by other races (22.7%) and Hispanics (20.7%), the differences were not significant. Homemakers (11.1%) and retirees (12.1%) reported the lowest rates of current smoking and were significantly fewer than those currently employed (24.5%), out of employment for more than one year (37.1%), students (27.7%) and those unable to work (37.3%) [Table 8.1].

Of all the current smokers, over half (55%) have attempted to quit smoking in the past 12 months [Table 8.5]. The majority (71%) of those who are not current smokers quit smoking over 10 years ago, thus reducing their risk of heart problems and cancer by more than half (6). About one third of current smokers report that they did not receive advice from health professionals in the past 12 months to quit smoking and in the majority of cases, health professionals did not discuss or recommend medication or other strategies for smoking cessation with them [Table 8.5].

Although 4.3% of all Tarrant County residents engage in heavy alcohol consumption, the proportion is highest in northeast Tarrant County (7.7%), followed by northwest (4.2%) and lowest in central (1.9%) [Table 8.2]. The difference between northeast and central is statistically significant [Table 8.2]. Heavy alcohol consumption in males (5.8%) tended to be higher than females (2.9%) [Table 8.1]. Heavy alcohol consumption was highest for teenagers and young adults (8.2%), followed by ages 25-34 (4.4%) and ages 35-54 (3.8%). Older people ranked lowest in heavy alcohol consumption (3.0%; 2.6%). College students (2.7%) tended to report heavy alcohol consumption less than other educational groups (technical school/some college 3.5%; high school/GED 6.7%; less than high school 5.2%). Heavy alcohol consumption in relation to income did not show any identifiable pattern. African-Americans (1.0%) were less prone to heavy alcohol consumption than Whites (4.9%) and Hispanics (5.3%) [Table 8.2]. Students (12.0%) reported the highest prevalence of heavy alcohol consumption followed by those out of work for less than a year (7.8%) [Table 8.1].

Both tobacco use and heavy alcohol consumption in Tarrant County residents is comparable to that of Texas and the nation [Table 8.3]. Tarrant County residents, however are 54% over the HP 2010 objective for current smokers.

Current smokers are 3.4 times more likely to suffer from coronary artery disease [Table 8.4].

Table 8.1 Tobacco Use in Tarrant County Adults Age 18 and Older

	Current Smokers			
	n	Weighted Percentage*	N	95% Confidence Interval
Total	536	22.2	2555	20.2 – 24.4
Sub-County Area				
Northeast	123	26.0	511	21.3 – 31.3
Southeast	94	21.7	441	17.5 – 26.6
Central	111	19.9	606	16.3 – 24.0
Southwest	97	19.5	504	15.8 – 23.7
Northwest	111	23.7	493	19.7 – 28.4
Gender				
Male	252	26.7	982	23.3 – 30.4
Female	283	18.0	1570	15.8 – 20.5
Age				
18-24	37	22.5	178	15.7 – 31.2
25-34	99	22.8	504	18.4 – 27.8
35-44	147	26.5	555	22.1 – 31.4
45-54	114	22.3	479	17.9 – 27.5
55-65	92	25.5	377	20.4 – 31.4
65+	43	9.9	430	7.1 – 13.5
Education				
<High school	106	31.7	391	25.5 – 38.6
High school or GED	169	27.0	678	22.7 – 31.8
Tech/some college	159	22.5	684	18.8 – 26.7
College degree	101	13.7	789	11.0 – 17.1
Annual Income				
<$15,000	78	28.7	312	21.7 – 36.8
$15,000 - $24,999	108	25.1	443	20.1 – 30.9
$25,000 - $34,999	69	28.8	252	22.1 – 36.7
$35,000 - $49,999	68	22.1	325	16.9 – 28.3
>$50,000	172	21.9	870	18.6 – 25.6
Race/Ethnicity				
White	357	23.2	1575	20.7 – 26.0
African-American	74	19.6	430	14.2 – 26.4
Hispanic	88	20.7	455	16.3 – 25.9
Other	15	22.7	76	13.2 – 36.2
Employment				
Employed	314	24.5	1311	21.6 – 27.6
Self-employed	43	21.2	205	14.7 – 29.6
Out of work for >1yr	22	37.1	66	22.1 – 55.0
Out of work for <1yr	21	25.9	83	15.5 – 40.0
Homemaker	31	11.1	273	7.4 – 16.4
Student	15	27.7	73	16.5 – 42.6
Retired	52	12.5	407	9.3 – 16.7
Unable to work	36	37.3	120	25.5 – 50.8

n represents the number of respondents who are current smokers
N represents the number of respondents to the question
* Percentages are weighted to population characteristics

Table 8.2 Alcohol Consumption in Tarrant County Adults Age 18 and Older

	Heavy Alcohol Consumption§			
	n	Weighted Percentage*	N	95% Confidence Interval
Total	93	4.3	2535	3.2 – 5.7
Sub-County Area				
Northeast	30	7.7	508	4.9 – 11.8
Southeast	15	3.8	437	1.8 – 8.1
Central	10	1.9	601	1.0 – 3.8
Southwest	23	3.6	502	2.3 – 5.6
Northwest	15	4.2	487	2.4 – 7.3
Gender				
Male	46	5.8	967	3.8 – 8.6
Female	47	2.9	1568	2.0 – 4.0
Age				
18-24	13	8.2	178	4.4 - 14.7
25-34	18	4.4	501	2.1 -9.3
35-44	23	3.8	550	2.2 – 6.5
45-54	20	3.8	473	2.2 – 6.4
55-65	9	3.0	374	1.5 – 6.1
65+	9	2.6	428	1.3 – 5.2
Education				
<High school	10	5.3	388	1.9 – 13.7
High School or GED	32	6.7	675	4.4 – 10
Tech/Some college	27	3.5	680	2.2 – 5.5
College Degree	24	2.7	779	1.6 -4.3
Annual Income				
<$15,000	8	2.8	311	1.1– 6.7
$15,000 - $24,999	16	4.0	442	2.0 – 7.9
$25,000 - $34,999	8	2.5	249	1.0 – 5.9
$35,000 - $49,999	16	5.7	324	3.1 – 10.2
>$50,000	37	4.1	864	2.8 – 5.9
Race/Ethnicity				
White	74	4.9	1560	3.7 – 6.4
African-American	7	1.0	430	0.4 – 2.3
Hispanic	12	5.3	452	2.3 – 11.4
Other	0	0.0	76	-
Employment				
Employed	62	5.1	1300	3.5 – 7.4
Self-employed	7	2.6	202	1.1 – 5.9
Out of work for >1yr	0	0.0	66	-
Out of work for <1yr	4	7.8	83	2.7 – 20.8
Homemaker	6	1.7	271	0.7 – 4.1
Student	6	12.0	72	5.2 – 25.7
Retired	7	1.7	405	0.8 – 3.9
Unable to work	1	1.1	119	0.2 – 7.6

n represents the number of respondents who engage in heavy alcohol consumption
N represents the number of respondents to the question
* Percentages are weighted to population characteristics
§ CDC calculated heavy alcohol consumption: > 1 drink on an occasion for women and >2 drinks on an occasion for men

Table 8.3 Comparison of Tarrant County, Texas, the United States and Healthy People 2010 Objectives for Current Smokers

Geographic Area	Current Smokers
Tarrant County	22.2% (20.2 – 24.4)
Texas*	20.5% (19.2-21.8)
United States*	20.8%
HP 2010 Objective	12.0%

*Source: Division of Adult and Community Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System Online Prevalence Data, 2004.

Table 8.4 Risk Associations Between Tobacco Use and Other Health-Related Conditions

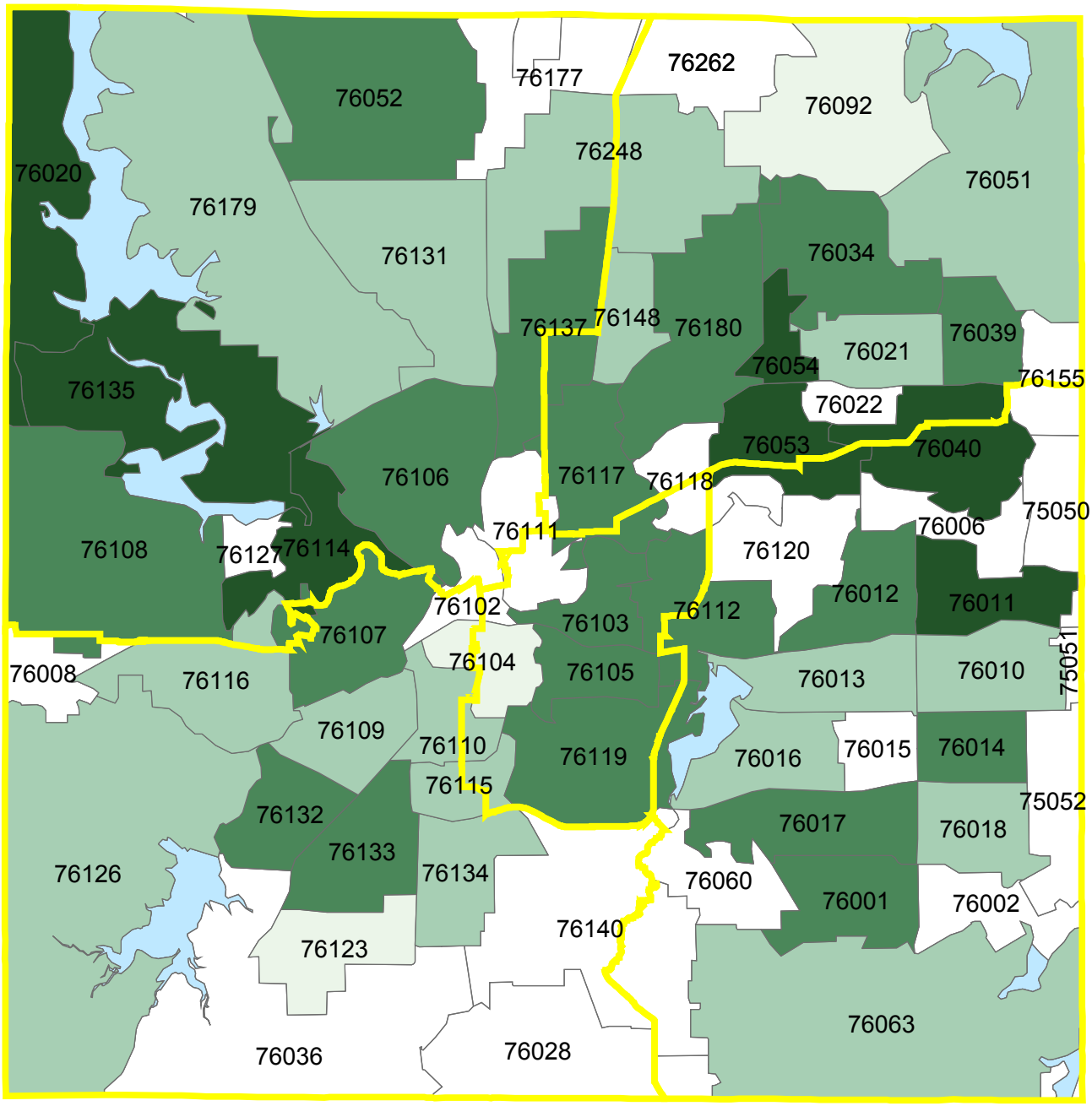
	Health Status[2]		Myocardial Infarction		Stroke	
	Yes	Yes	Yes	Yes	Yes	No
Tobacco Use						
Yes	154	21	21	499	20	503
No	587	55	55	1,899	41	1,913
Relative Risk[1]	1.29		6.25		1.62	
95% Confidence Interval	0.87 - 1.86		0.74 – 2.51		0.78 – 3.39	

	Hypertension		Coronary Artery Disease	
	Yes	No	Yes	No
Tobacco Use				
Yes	141	385	18	184
No	574	1,397	62	2,206
Relative Risk[1]	1.11		3.44*	
95% Confidence Interval	0.83 – 1.48		1.81 - 6.53	

1. Adjusted to complex sampling population weights
2. The response to the question: "Would you say that in general your health is excellent, very good, fair or poor? were collapsed into two categories; 'excellent', 'very good', and 'good' = "Good" and 'fair' and 'poor' = "Poor"

* Statistically significant at alpha = 0.05 level

Fig 8.1 Respondents Who are Current Smokers by ZIP Code, Tarrant County, Texas

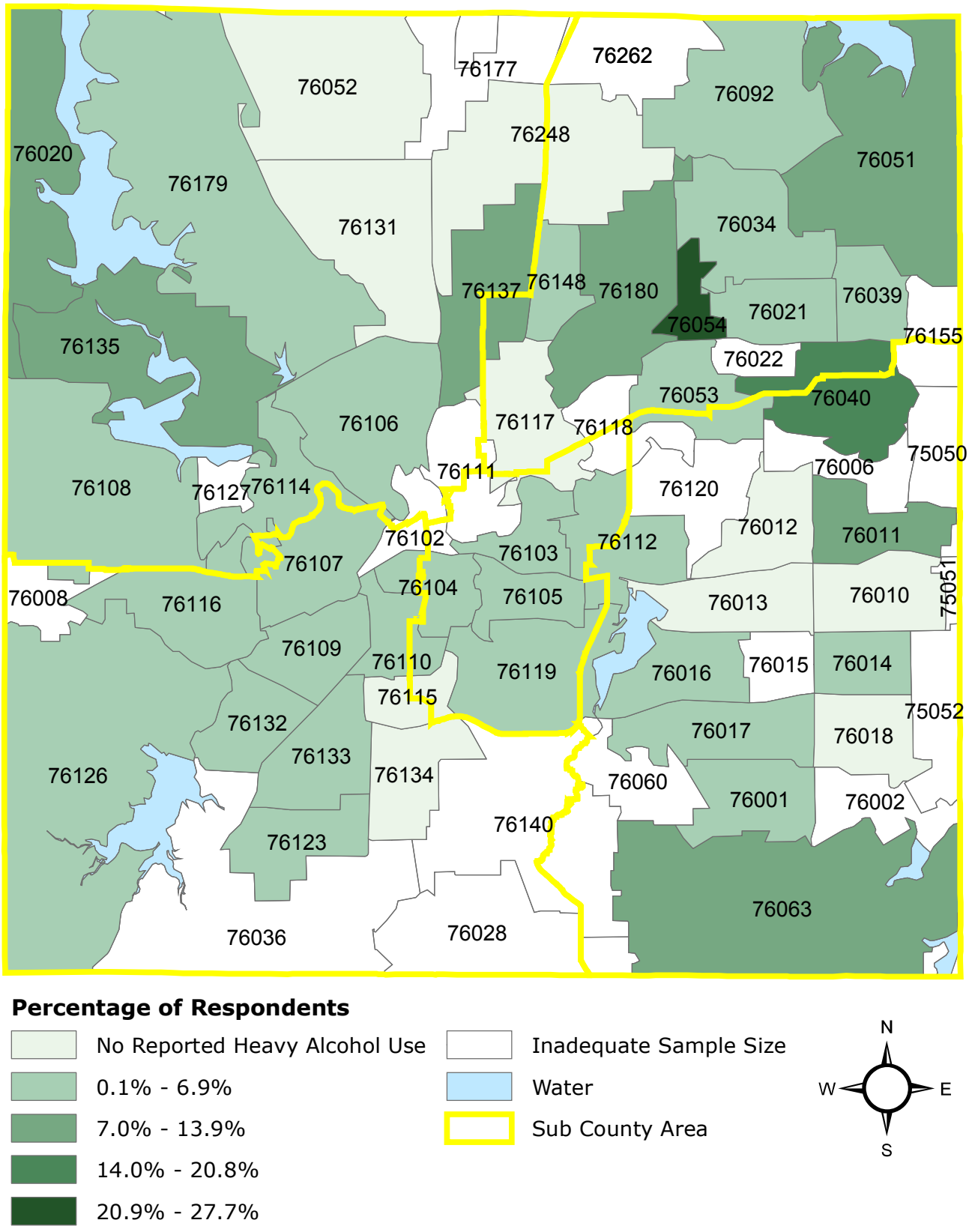


Percentage of Respondents

- 1.7% - 10.1%
- 10.2% - 20.2%
- 20.3% - 30.3%
- 30.4% - 40.5%
- Inadequate Sample Size
- Water
- Sub County Area

N
W E
S

Fig 8.2 Respondents Reporting Heavy Alcohol Consumption by ZIP Code, Tarrant County, Texas



Percentage of Respondents

- No Reported Heavy Alcohol Use
- 0.1% - 6.9%
- 7.0% - 13.9%
- 14.0% - 20.8%
- 20.9% - 27.7%
- Inadequate Sample Size
- Water
- Sub County Area

N W E S

Table 8.5 Questions Asked on Tobacco Use and Heavy Alcohol Consumption in Tarrant County Adults Age 18 and Older

Questions	Respondents n	Respondents %[1]
1. Have you smoked at least 100 cigarettes in your entire live?		
Yes	1068	43.1
No	1488	56.9
2. Do you now smoke cigarettes every day, some days, or not all?[2]		
Everyday	369	34.3
Some days	167	17.3
Not at all	531	48.4
3. During the past 12 months, have you stopped smoking for one day or longer because you were trying to quit smoking?[2]		
Yes	284	55.2
No	252	44.8
4. About how long has it been since you last smoked cigarettes?[2]		
Within the past month	15	15
Within the past 3 months (1 month but less than 3 months ago)	14	14
Within the past 6 months (3 months but less than 6 months ago)	13	13
Within the past year (6 months but less than 1 year ago)	20	20
Within the past 5 years (1 year but less than 5 years ago)	78	78
Within the past 10 years (5 years but less than 10 years ago)	56	56
10 or more years ago	295	295
5. In the last 12 months, on how many visits were you advised to quit smoking by a doctor or other health professional?[2]		
None	175	175
< 5 visits	201	201
5 – 10 visits	23	23
> 10 visits	12	12
6. On how many visits did your doctor, nurse or other health professional recommend or discuss medications to assist you with quitting smoking?[2]		
None	308	308
< 5 visits	90	90
5 – 10 visits	7	7
> 10 visits	2	2
7. On how many visits did your doctor or health provider recommend or discuss methods and strategies other than medication to assist you in quitting smoking?[2]		
None	332	332
< 5 visits	69	69
5 – 10 visits	6	6
> 10 visits	1	1

1. Percentages are weighted to population characteristics
2. Asked of those responding "Yes" to Question 1

Table 8.5 Questions Asked on Tobacco Use and Heavy Alcohol Consumption in Tarrant County Adults Age 18 and Older, cont.

Questions	Respondents n	Respondents %[1]
8. During the past 30 days, how many days per week or month did you have at least one drink of any alcoholic beverage?		
Daily or more	74	3.0
3-6 times per week	160	7.2
1-2 times per week	347	15.0
1-3 times per month	639	27.6
Never	1329	47.2
9. On the days when you drank, about how many drinks did you drink on the average?		
More than 2 drinks	303	31.2
1-2 drinks	371	30.1
1 drink	539	38.7
10. Considering all types of alcoholic beverages, how many times during the past 30 days did you have 5 or more drinks on an occasion?		
More than twice	104	9.0
1-2 times	69	6.7
Once	92	9.0
None	949	75.4
11. During the past 30 days, how many times have you driven when you've had perhaps too much to drink?		
10 times	1	0.3
7 times	2	0.2
5 times	3	0.5
3 times	2	0.2
Twice	11	0.7
Once	31	2.9
None	1175	95.3

1. Percentages are weighted to population characteristics

References

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Introduction

Firearms are present in about one third of households in the United States (1). Firearm injuries are a leading cause of both fatal and nonfatal injury in the United States (2 – 3). In 2001, there were 58,841 emergency room visits and 29,573 deaths resulting from gunshot wounds. About 17% of the emergency room visits and 7% of the deaths were among children aged 1 to 18. More than one-third of emergency room visits (35%) and deaths (38%) among youth were due to unintentional injuries (4). Not surprisingly, the presence of a firearm in the home is associated with an increased risk for suicide. In a study of suicide attempters and completers, investigators found that 75% of the guns were stored in the residence of the victim, friend, or relative (5).

Methods

The BRFSS respondents were asked three questions regarding firearms. Each respondent was asked: 'are any firearms kept in or around your home,' 'are any of these firearms now loaded,' and 'are any of these loaded firearms also unlocked.' A summary of responses is presented in Table 9.3.

Results

Key Findings

- **Approximately 9% of the Tarrant County population has a loaded firearm within their residence**
- **Approximately 5% of the Tarrant County population has a loaded and unlocked firearm within their residence**
- **Self-employed (9.6%) and retired persons (8.9%) reported the highest prevalence of loaded and unlocked firearms within their residence**
- **Whites reported the highest prevalence of loaded and unlocked firearms (6.8%)**

Overall, about 8.7% of Tarrant County residents have a loaded firearm within their residence. Furthermore, the prevalence of living at home with a loaded and unlocked firearm in Tarrant County is 4.8%. Males reported a higher prevalence of loaded and unlocked firearms (6.3%) than females (3.5%). Persons over the age of 55 reported the highest prevalence of loaded and unlocked firearms,with those age 55 to 64 reporting 8.9%, followed by those age 65 and older reporting 7.6%. The prevalence of living at home with a loaded and unlocked firearm was highest for those who earn more than $34,999 per year, approximately 13%, and was significantly different than those who earned lower annual incomes. While Whites reported the highest prevalence of living in a home with a loaded and unlocked firearm (6.8%), this estimate did not differ significantly from other ethnic groups. Individuals reporting that they were self employed or who are currently retired had the highest prevalence of loaded and unlocked firearms within their residence [Table 9.2].

No point prevalence estimates are currently available at the state or national level. Healthy People 2010 objectives for firearms and firearm safety are measured by a reduction in homicides, and therefore can not be used as a direct comparison for this survey.

The geographic distributions of loaded and loaded and unlocked firearms by ZIP Codes are reported in Figures 9.1 and 9.2. ZIP Code 76034 reported the highest prevalence of loaded firearms (26.1%). ZIP Code 76020 reported the highest prevalence of loaded and unlocked firearms.

Table 9.1 Living in a Home With a Loaded Firearm in Tarrant County Adults Age 18 and Older

	Living in a Home With a Loaded Firearm			
	n	Weighted Percentage*	N	95% Confidence Interval
Total	211	8.7	2,380	7.3 – 10.2
Sub-County Area				
Northeast	42	7.9	486	5.6-11.1
Southeast	39	8.2	410	5.7-11.7
Central	35	5.5	571	3.9-7.9
Southwest	49	9.4	461	7.0-12.6
Northwest	46	10.1	452	7.3-13.7
Gender				
Male	122	11.0	911	8.9-13.6
Female	89	6.4	1469	7.3-10.2
Age				
18-24	6	4.3	176	1.8-10.1
25-34	31	6.9	485	4.6-10.2
35-44	47	8.0	530	5.6-11.2
45-54	33	9.1	435	6.0-13.6
55-65	49	15.5	351	11.2-21.1
>65	44	12.2	382	8.8-16.6
Education				
<High school	11	2.2	383	1.0-4.6
High school or GED	53	7.7	630	5.5-10.6
Tech/some college	66	11.1	641	8.2-14.9
College degree	81	10.9	720	8.5-13.8
Annual Income				
<$15,000	18	4.8	300	2.7-8.4
$15,000 - $24,999	18	2.7	428	1.6-4.7
$25,000 - $34,999	20	4.8	239	2.9-7.9
$35,000 - $49,999	37	12.7	307	8.5-18.5
>$50,000	97	12.1	819	9.7-15.1
Race/Ethnicity				
White	164	11.8	1447	9.8-14.1
African-American	23	5.8	402	3.3-10.1
Hispanic	16	2.5	447	1.4-4.4
Other	6	6.0	71	2.5-13.8
Employment				
Employed	101	7.7	1227	6.0-9.7
Self-employed	37	18.3	191	12.5-25.8
Out of work >1yr	2	1.4	61	0.3-5.6
Out of work <1yr	2	2.4	79	0.5-10.5
Homemaker	10	3.9	261	1.9-8.0
Student	3	6.7	70	2.1-20.0
Retired	48	14.5	366	10.7-19.4
Unable to work	7	9.6	113	3.5-23.4

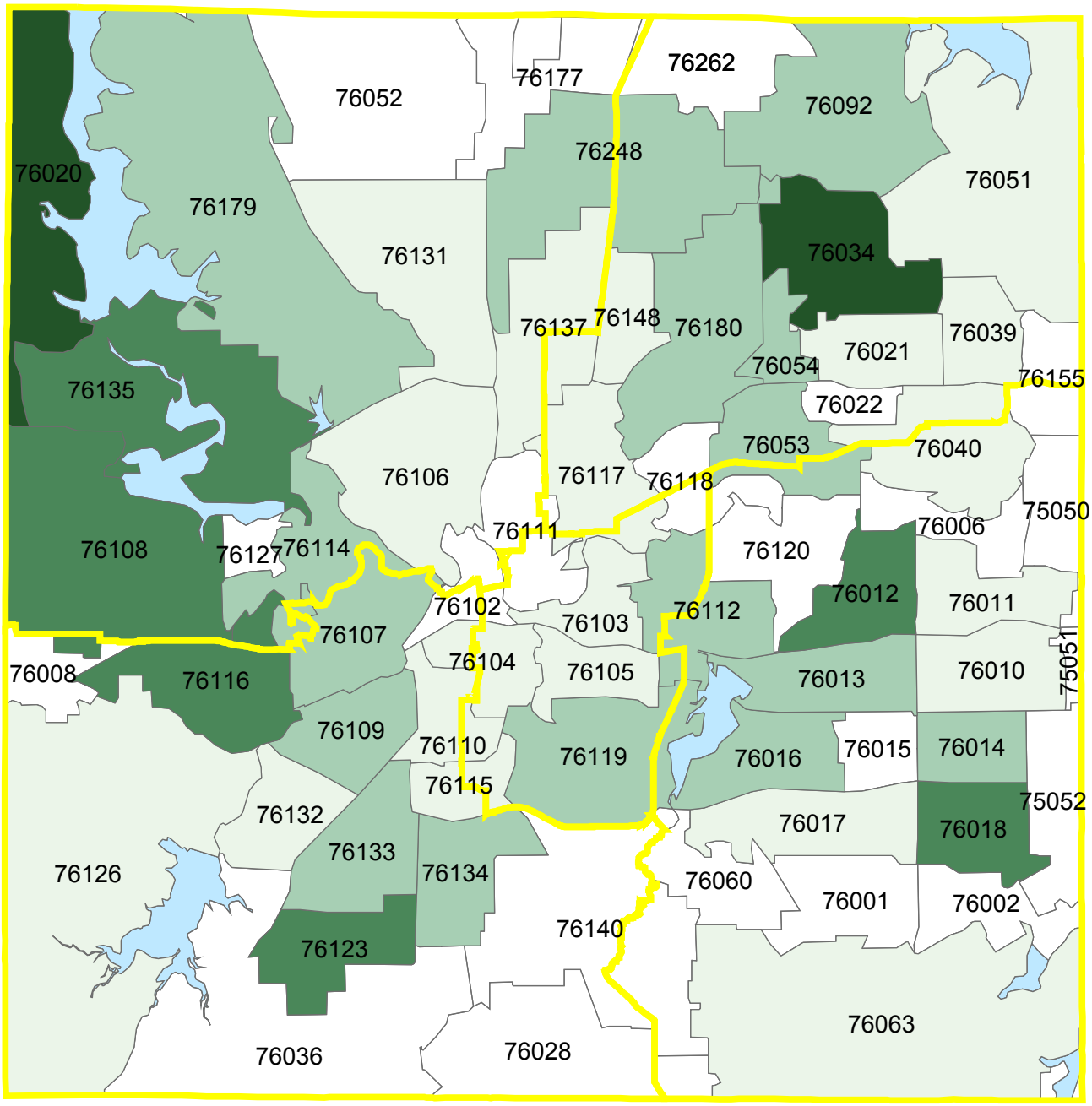
n represents the number of respondents who are living in a home with a loaded firearm
N represents the number of respondents to each question
* Percentages are weighted to population characteristics

Table 9.2 Living in a Home With a Loaded and Unlocked Firearm in Tarrant County Adults Age 18 and Older

	Living in a Home With a Loaded and Unlocked Firearm			
	n	Weighted Percentage*	N	95% Confidence Interval
Total	119	4.8	2,376	3.9 – 6.1
Sub-County Area				
Northeast	23	4.2	486	2.5-6.9
Southeast	24	5.0	409	3.1-7.9
Central	19	3.3	569	2.0-5.4
Southwest	27	5.0	460	3.3-7.4
Northwest	26	5.4	452	3.5-8.4
Gender				
Male	70	6.3	909	4.7-8.4
Female	49	3.5	1467	2.5-4.9
Age				
18-24	3	1.8	176	0.5-5.9
25-34	15	3.6	485	2.0-6.4
35-44	25	4.1	530	2.5-6.7
45-54	22	6.0	435	3.5-10.3
55-65	28	8.9	348	5.9-13.2
>65	26	7.6	381	4.9-11.6
Education				
<High school	5	1.3	383	0.4-3.9
High school or GED	32	4.2	629	2.8-6.4
Tech/some college	38	6.7	640	4.4-10.0
College degree	44	5.7	718	4.1-7.9
Annual Income				
<$15,000	8	1.4	299	0.6-3.0
$15,000 - $24,999	11	1.9	428	0.9-3.8
$25,000 - $34,999	14	3.7	238	2.1-6.6
$35,000 - $49,999	20	6.7	307	3.7-11.9
>$50,000	55	6.7	818	4.9-9.0
Race/Ethnicity				
White	97	6.8	1445	5.4-8.7
African-American	13	3.6	402	1.7-7.5
Hispanic	6	1.0	445	0.4-2.6
Other	2	1.0	71	0.2-4.0
Employment				
Employed	57	4.3	1224	3.1-6.0
Self-employed	19	9.6	191	5.5-16.0
Out of work >1yr	2	1.4	61	0.3-5.6
Out of work <1yr	2	2.4	79	0.5-10.5
Homemaker	6	2.4	260	1.0-5.8
Student	1	1.4	70	0.2-9.5
Retired	27	8.9	366	5.9-13.3
Unable to work	4	2.9	113	0.8-10.0

n represents the number of respondents who are living in a home with a loaded and unlocked firearm
N represents the number of respondents to each question
* Percentages are weighted to population characteristics

Figure 9.1 Respondents Living in Homes With a Loaded Firearm by ZIP Code in Tarrant County, Texas

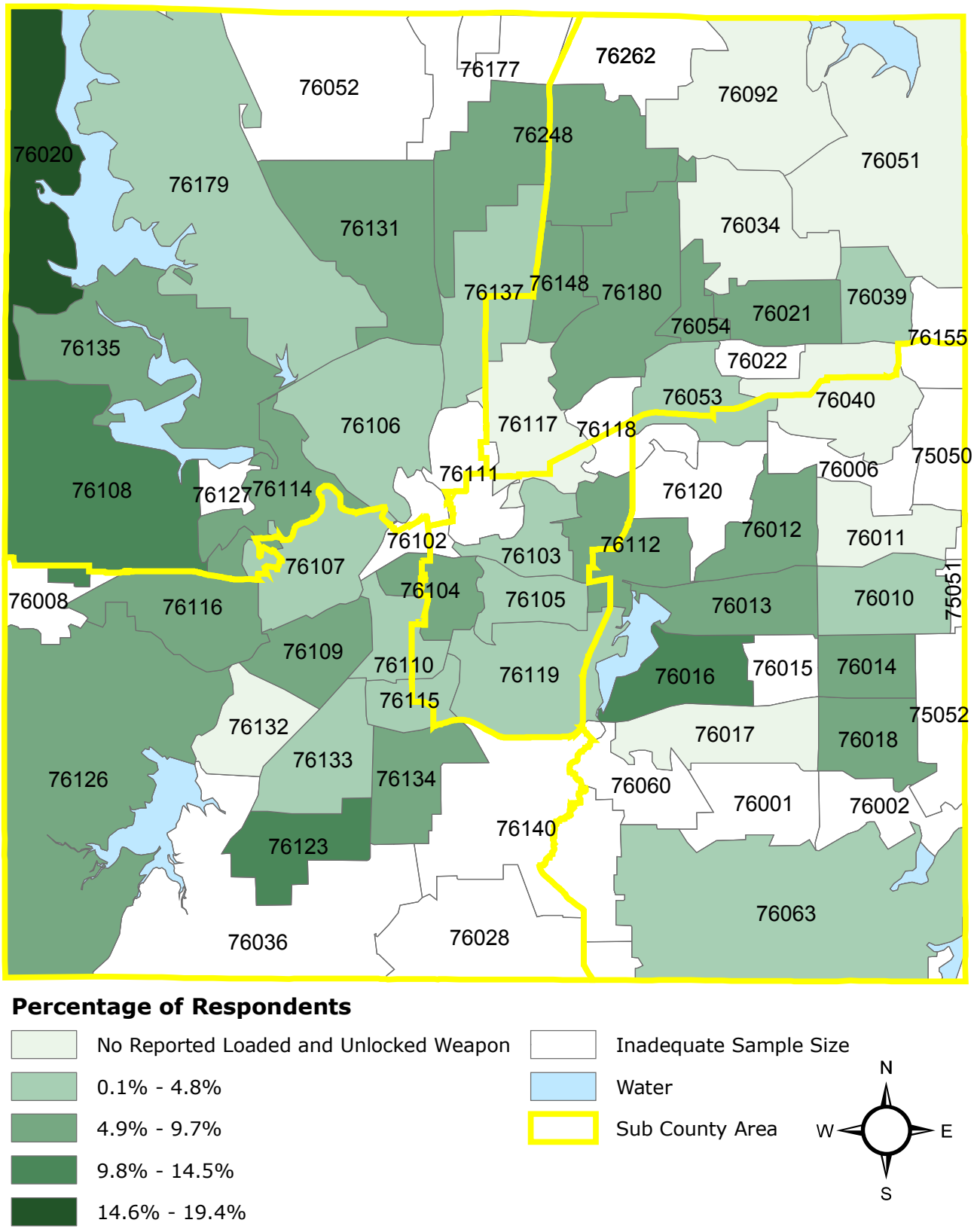


Percentage of Respondents

- 0.9% - 6.5%
- 6.6% - 13.0%
- 13.1% - 19.5%
- 19.6% - 26.0%
- Inadequate Sample Size
- Water
- Sub County Area

N W E S

Figure 9.2 Respondents Living in Homes With a Loaded and Unlocked Firearm by ZIP Code in Tarrant County, Texas



Percentage of Respondents

- No Reported Loaded and Unlocked Weapon
- 0.1% - 4.8%
- 4.9% - 9.7%
- 9.8% - 14.5%
- 14.6% - 19.4%
- Inadequate Sample Size
- Water
- Sub County Area

N W E S

Table 9.3 Questions Asked on Firearms Kept in the Home in Tarrant County Adults Age 18 and Older

Questions	Respondents n	Respondents %[1]
1. Are any firearms kept in or around your home?		
Yes	689	27.7
No	1704	66.2
2. Are any of these firearms now loaded?[2]		
Yes	211	29.8
No	465	70.2
3. Are any of these loaded firearms also unlocked? [by unlocked, we mean you don't not need a key or combination to get the gun or fire it. We don't count a safety as a lock.][3]		
Yes	119	56.7
No	88	43.3

1. Percentages are weighted to population characteristics
2. Asked of those responding "Yes" to Question 1
3. Asked of those responding "Yes" to Question 2

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Introduction

Except for skin cancer, breast cancer is the most commonly diagnosed cancer among American women (1). It is second to lung cancer as the leading cause of cancer-related deaths among women. In 2004, an estimated 215,990 new cases of invasive breast cancer will be diagnosed among women (1). In 2004, an estimated 40,580 women will die of this disease. Seventy-five percent of all diagnosed cases of breast cancer are among women age 50 years or older (1). The U.S. Preventive Services Task Force (USPSTF) recommends screening mammography, with or without clinical breast examination (CBE), every 1-2 years for women age 40 and older (2).

The incidence of invasive cervical cancer has decreased significantly over the past 40 years, in large part because of screening for, and treatment of, precancerous cervical lesions (3). In 2004, an estimated 10,520 new cases will be diagnosed (1). In 2004, an estimated 3,900 women will die of this disease (1). Routine screening with the Papanicolaou (Pap) test, a highly effective preventive measure for cervical cancer, can prevent most occurrences of this disease (3). The USPSTF strongly recommends screening for cervical cancer in women who have been sexually active and have a cervix (4). Although the causes and natural histories of breast and cervical cancer are different, the public health responses to these diseases have been similar.

Methods

The BRFSS respondents were asked seven questions related to clinical breast exam, mammogram and Pap test. These questions, number of respondents and their responses can be found in Table 10.5. Some of these questions were analyzed according to demographic characteristics and compared to those of Texas, the United States and Healthy People 2010 objectives.

Results

Key Findings

- **About three-fourths of women age 40 and older have had a mammogram within the past 2 years**
- **Almost all Tarrant County women 18 and older have ever had a Pap test and about 84% of women with intact cervix have had a Pap test within the past 3 years**
- **Having a clinical breast examination, a mammogram within the past 2 years and a Pap test within the past 3 years were associated with increasing age, education and income**
- **Clinical breast examinations were more frequent in Whites than African-Americans, Hispanics and other races/ethnicities**
- **Tarrant County women more frequently had a clinical breast examination, a mammogram within the past 2 years and a Pap test within the past 3 years than did women throughout Texas**

Close to 90% of Tarrant County women have ever had a clinical breast examination (CBE) [Table 10.1]. Of these, the majority (86.8%) have had CBE within the past 2 years [Table 10.5]. The prevalence of those who reported that they ever had CBE was highest for southwest Tarrant County (93.4%) and lowest for central Tarrant County (79.1%). There were significant differences between central and southwest and central and northwest Tarrant County (91.0%) [Table 10.1]. Women age 45-54 (96.0%) reported the highest prevalence of ever having a CBE, followed by age 65 and older (94.4%) and age 55-64 (93.0%) [Table 10.1]. Those age 18-24 reported the lowest prevalence (74.8%). This was significantly different from women age 35 and over [Table 10.1]. Education was a significant determining factor for ever having a CBE showing a steady increase in those with less than high school (77.5%) to individuals with a college degree (95.3%) [Table 10.1]. Annual income was also a significant determining factor. Almost all women with an annual income of $50,000 and over (97.5%) have ever had a CBE, followed by those with an annual income of $35,000-$49,999 (95.3%) [Table 10.1]. Reported prevalence was significantly different from that of women with an annual income of less than $15,000 (79.7%) [Table 10.1]. CBE was higher in Whites (95.4%) than African-Americans (85.0%), Hispanics (77.9%) and other races/ethnicities (68.4%) [Table 10.1]. Employment status was not related to ever having a CBE, although women who were retired (95.5%), unable to work (94.8%) and out of work for less than one year (93.5%) had the highest prevalence of ever having a CBE [Table 10.1].

About three-fourths of all women age 40 and older in Tarrant County have had a mammogram within the past 2 years [Table 10.2]. There were no significant geographic differences in prevalence for each sub-county area [Table 10.2]. The prevalence of women who have had a mammogram within the past 2 years tended to increase with age [Table 10.2]. There were significant differences between the highest age 65 and older (82.6%) and the lowest age 35-44 (57.0%) [Table 10.2]. Women with a college education (81.9%) were significantly more likely to have had a mammogram within the past 2 years than women with less than high school education (59.2%) [Table 10.2]. Women with an annual income of $50,000 and over (81.1%) were significantly more likely to have had a mammogram within the past 2 years than women with an annual income less than $15,000 (57.6%) [Table 10.2]. There were no significant racial/ethnic or employment status differences in women who had a mammogram within the past 2 years [Table 10.2].

Almost all women (94.3%) in Tarrant County have ever had a Pap test [Table 10.5]. Close to 84% of these women with an intact cervix have had a Pap test within the past 3 years [Table 10.3]. There were no significant geographic differences in prevalence for each sub-county area, though the highest was in central Tarrant County (86.2%), followed by southwest (85.7%) and northeast (84.5%) [Table 10.3]. Having a Pap test was not significantly related to age, although it was highest in age 25-34 (89.2%) followed by age 25-34 (83.8%) and 35-44 (83.8%) [Table 10.3]. Women with a college education (91.6%) were more likely to have had a Pap test within the past 3 years than women with less than high school (77.2%) and technical/some college education (77.9%) [Table 10.3]. Women with annual income of $35,000 and over (93.5% and 93.9% respectively) were significantly more likely have had a Pap test than women with income less than $35,000 (72.4%, 76.7% and 72.8%, respectively) [Table 10.3]. More White women (87.0%) tended to have had a Pap in the past 3 years than African-Americans (82.4%), Hispanics (80.1%) and others (58.4%) [Table 10.3]. There was no significant association of employment status with the prevalence of women who had a Pap test within the past 3 years, although the employed (88.3%) had the highest

prevalence, followed by homemakers (84.0%) and those out of work for less than a year (83.8%) [Table 10.3].

The prevalence of Tarrant County women who ever had a CBE, had a mammogram within the past 2 years or had a Pap test within the past 3 years was higher than that of Texas. CBE, however was lower than the average for the United States and Pap test was higher than the average for the United States [Table 10.4].

Tarrant County meets and exceeds the Healthy People 2010 objective for having a mammogram within the past 2 years but falls short of the objective for having a Pap test within the past 3 years.

Table 10.1 Breast Cancer Screening in Tarrant County Women Age 18 and Older

	Ever Had a Clinical Breast Exam			
	n	Weighted Percentage*	N	95% Confidence Interval
Total	1410	89.5	1557	87.1-91.5
Sub-County Area				
Northeast	305	88.8	326	82.6-93.0
Southeast	257	88.8	279	82.5-93.0
Central	312	79.1	374	73.5-83.7
Southwest	262	93.4	279	88.6-96.3
Northwest	274	91.0	299	86.4-94.1
Age				
18-24	80	74.8	106	61.3-84.7
25-34	276	87.3	317	81.8-91.3
35-44	296	90.5	326	85.7-93.9
45-54	265	96.0	276	91.9-98.1
55-64	211	93.0	223	87.3-96.3
>65	262	94.4	282	90.9-96.6
Education				
<High school	183	77.5	236	69.9-83.6
High school or GED	385	87.8	431	82.5-91.7
Tech/some college	416	90.7	447	85.4-94.3
College degree	421	95.3	436	92.1-97.3
Annual Income				
<$15,000	187	79.7	223	70.0-86.8
$15,000 - $24,999	252	87.2	288	81.3-91.4
$25,000 - $34,999	124	84.3	141	72.3-91.6
$35,000 - $49,999	186	95.3	194	90.1-97.9
>$50,000	469	97.5	480	94.9-98.8
Race/Ethnicity				
White	925	95.4	967	93.3-96.9
African-American	258	85.0	295	76.7-90.8
Hispanic	197	77.9	255	70.9-83.6
Other	26	68.4	34	43.7-85.8
Employment				
Employed	658	89.4	722	85.8-92.2
Self-employed	79	90.8	82	68.9-97.8
Out of work >1yr	41	88.2	47	73.9-95.2
Out of work <1yr	52	93.5	59	85.2-97.3
Homemaker	232	86.7	269	80.8-91.0
Student	27	74.7	35	46.0-91.1
Retired	239	95.4	253	92.1-97.4
Unable to work	76	94.8	83	87.6-97.9

n represents the number of respondents who have ever had clinical breast exam
N represents the number of respondents to each question
* Percentages are weighted to population characteristics

Table 10.2 Mammogram Screening in Tarrant County Women Age 40 and Older

	Had a Mammogram Within the Past 2 Years			
	n	Weighted Percentage*	N	95% Confidence Interval
Total	693	74.0	938	70.3-77.4
Sub-County Area				
Northeast	141	69.4	199	61.9-76.0
Southeast	139	74.9	177	66.2-82.0
Central	163	69.8	225	62.2-76.4
Southwest	124	74.3	173	66.5-80.8
Northwest	126	76.6	164	68.6-83.1
Age				
35-44	84	57.0	157	47.1-66.4
45-54	206	75.0	279	68.1-80.8
55-65	178	80.2	224	73.5-85.5
>65	225	82.6	278	77.0-87.1
Education				
<High school	79	59.2	123	46.8-70.6
High School or GED	209	76.4	276	69.6-82.1
Tech/Some college	198	70.5	281	63.5-76.7
College Degree	204	81.9	254	75.4-87.1
Annual Income				
<$15,000	87	57.6	130	46.0-68.4
$15,000 - $24,999	114	67.2	169	57.8-75.4
$25,000 - $34,999	59	65.0	85	49.9-77.6
$35,000 - $49,999	80	70.4	112	58.5-80.1
>$50,000	228	81.1	284	75.0-86.0
Race/Ethnicity				
White	493	74.6	664	70.3-78.4
African-American	139	71.3	188	60.4-80.3
Hispanic	51	74.1	72	60.8-84.1
Other	8	66.1	12	30.7-89.6
Employment				
Employed	277	77.0	377	71.6-81.6
Self-employed	35	65.4	55	49.3-78.7
Out of work >1yr	19	62.3	30	41.0-79.7
Out of work <1yr	21	67.6	31	42.2-85.6
Homemaker	82	64.3	118	53.1-74.2
Student	3	100.0	3	0.00-100.0
Retired	201	83.7	245	77.6-88.3
Unable to work	51	59.3	74	41.7-74.8

n represents the number of respondents who had a mammogram within the past 2 years
N represents the number of respondents to each question
* Percentages are weighted to population characteristics

Table 10.3 Cervical Cancer Screening in Tarrant County Women Age 18 and Older

	Had a Pap Test Within the Past 3 Years (Women With Intact Cervix)			
	n	Weighted Percentage*	N	95% Confidence Interval
Total	889	83.7	1043	80.3-86.5
Sub-County Area				
Northeast	195	84.5	223	77.2-89.8
Southeast	157	81.5	188	73.3-87.6
Central	223	86.2	258	80.4-90.4
Southwest	159	85.7	187	78.7-90.7
Northwest	155	83.1	187	76.4-88.3
Age				
18-24	79	74.2	97	59.6-84.9
25-34	252	89.2	280	83.7-92.9
35-44	223	83.8	262	77.0-88.9
45-54	157	83.8	181	75.4-89.8
55-65	88	82.9	108	73.5-89.4
>65	90	77.8	115	67.4-85.6
Education				
<High school	135	77.2	167	67.2-84.9
High school or GED	231	84.2	271	76.8-89.6
Tech/some college	234	77.9	289	70.5-83.9
College degree	288	91.6	315	87.2-94.6
Annual Income				
<$15,000	115	72.4	153	60.6-81.8
$15,000 - $24,999	161	76.7	202	68.4-83.3
$25,000 - $34,999	71	72.8	88	56.5-84.6
$35,000 - $49,999	116	93.5	126	87.0-96.8
>$50,000	315	92.9	340	88.9-95.5
Race/Ethnicity				
White	535	87.0	617	83.3-90.1
African-American	166	82.4	193	71.8-89.6
Hispanic	170	80.1	204	71.8-86.4
Other	16	58.4	26	33.2-79.8
Employment				
Employed	461	88.3	523	84.1-91.4
Self-employed	45	75.7	55	55.2-88.8
Out of work >1yr	24	83.8	32	66.5-93.1
Out of work <1yr	35	73.7	44	53.1-87.4
Homemaker	176	84.0	200	76.4-89.5
Student	24	63.4	33	37.1-83.6
Retired	84	77.8	105	66.3-86.1
Unable to work	37	70.9	47	44.6-88.1

n number of respondents who had a pap test within the past 2 years
N number of respondents to the question
* Percentages are weighted to population characteristics

Table 10.4 Comparison of Tarrant County, Texas, the United States And Healthy People Objectives for Clinical Breast Exam, Mammogram and Pap Test

Geographic Area	Ever Had Clinical Breast Exam in Females Age 18 and Older[1]	Mammogram Within the Past 2 Years in Females Age 40 and Older	Pap Test Within the Past 3 Years in Females Age 18 and Older
Tarrant County	89.5% (87.1-91.5)	74.0% (70.3-77.4)	83.7% (80.3-86.5)
Texas*	86.6% (85.2-87.9)	67.8% (65.5-70.0)	82.2% (80.4-83.9)
United States*	91.0%	74.6%	85.9%
Healthy People 2010 Objective	NA	70%	90%

*Source: Division of Adult and Community Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System Online Prevalence Data, 2004

1. State and National data available for 2003 only

Table 10.5 Questions Asked On Breast Cancer Screening in Tarrant County Women Age 18 and Older

Questions	Respondents n	Respondents %[1]
1. Have you ever had a mammogram?		
Yes	1037	58.3
No	528	41.7
2. How long has it been since you had your last mammogram?[2]		
Within the past year (anytime less than 12 months ago)	600	59.7
Within the past 2 years (1 year but less than 2 years ago)	197	18.1
Within the past 3 years (2 years but less than 3 years ago)	96	9.9
Within the past 5 years (3 years but less than 5 years ago)	65	7.1
5 or more years ago	65	5.2
3. Have you ever had a clinical breast exam?		
Yes	1410	89.5
No	147	10.5
4. How long has it been since your last breast exam? [3]		
Within the past year (anytime less than 12 months ago)	957	69.6
Within the past 2 years (1 year but less than 2 years ago)	238	17.2
Within the past 3 years (2 years but less than 3 years ago)	85	5.8
Within the past 5 years (3 years but less than 5 years ago)	59	4.1
5 or more years ago	56	3.3
5. Have you ever had a Pap test?		
Yes	1491	94.3
No	67	5.7
6. How long has it been since you had your last Pap smear? [4]		
Within the past year (anytime less than 12 months ago)	884	62
Within the past 2 years (1 year but less than 2 years ago)	268	17.8
Within the past 3 years (2 years but less than 3 years ago)	114	7.5
Within the past 5 years (3 years but less than 5 years ago)	81	5.1
5 or more years ago	128	7.6
7. Have you had a hysterectomy?		
Yes	445	25.6
No	1066	74.4

1. Percentages are weighted to population characteristics
2. Asked of those responding "Yes" to Question 1
3..Asked of those responding "Yes" to Question 3
4. Asked of those responding "Yes" to Question 4

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4. US Preventive Task Force. Screening for Cervical Cancer: Summary of Recommendations, January, 2003. Available at : http://www.ahrq.gov/clinic/uspstf/uspscerv.htm. Last accessed May 23, 2005.

Introduction

Prostate cancer is the most common form of cancer among men in the United States, other than skin cancer. In 2004, approximately 230,110 new cases of prostate cancer will be diagnosed and 29,900 men will die of the disease, according to the American Cancer Society (1). Prostate cancer is the second leading cause of cancer deaths of men in the United States, after lung cancer, and the sixth leading cause of death of men overall (2,3).

The two most common tests used by physicians to detect prostate cancer are the digital rectal examination (DRE) and the prostate-specific antigen (PSA) test. For DRE, which has been used for many years, the physician palpates the prostate gland for irregularities. The PSA test is a blood test that measures the prostate-specific antigen, an enzyme produced only by the prostate.

Colorectal cancer—cancer of the colon or rectum—is the second leading cause of cancer-related deaths in the United States. The American Cancer Society estimates that 56,730 Americans will die of colorectal cancer this year (1). Colorectal cancer is also one of the most commonly diagnosed cancers in the United States; approximately 146,940 new cases will be diagnosed in 2004. Colorectal cancer is the third most common cancer in men and in women. The risk of developing colorectal cancer increases with advancing age, with more than 90% of cases occurring in persons age 50 years or older (4). Several scientific organizations recommend regular screening for all adults age 50 or older. Recommended screening tests and intervals are as follows (4):

- Fecal occult blood test (FOBT) every year
- Flexible sigmoidoscopy every 5 years
- Double-contrast barium enema every 5 years
- Colonoscopy every 10 years

Methods

The BRFSS respondents were asked nine questions relating to digital rectal examination (DRE), Prostate specific antigen (PSA), fecal occult blood test (FOBT) test and sigmoidoscopy or colonoscopy. These questions, number of respondents and their responses can be found in Table 11.6. Some of these questions were analyzed according to the demographic characteristics and compared to results for Texas, the nation and Healthy People 2010 objectives.

Results

Key Findings

- **About 47% of male Tarrant County residents age 40 and older had prostate specific antigen (PSA) tests within the past 2 years**
- **About 70% of male Tarrant County residents age 40 and older have ever had a digital rectal exam (DRE)**
- **About 30% of all Tarrant County residents age 50 and older had a blood stool test within the past 2 years**
- **About 50% of all Tarrant County residents age 50 and older have ever had a sigmoidoscopy or colonoscopy**
- **The proportion who had a PSA test and DRE increased with education and was highest for those with a college degree**
- **A higher proportion of Whites and African-Americans than Hispanics had PSA tests and DRE**

Forty-seven (46.9%) percent of male Tarrant County residents age 40 and older had PSA tests within the past 2 years [Table 11.1]. There were no significant sub-county differences, although the proportions were lowest for central Tarrant County (37.9%) and highest for southwest (51.8%) and northeast (51.4%). Age was a significant determining factor for cancer screening, showing an increase from youngest to oldest groups. A majority of the male respondents age 65 and older (78.5%) and age 55-64 (67.6%) had ever had a DRE, followed by those age 45-54 (39.4%) and age 35-44 (21.1%). Having a PSA test in the past 2 years tended to increase with education and annual income, but the differences between each group were not significant. A higher proportion of White males (52.5%) and African-American males (55.6%) age 40 and older had PSA testing in the past 2 years than did Hispanics (32.4%) and other races/ethnic groups (19.8%). Although a majority of retired individuals (77.9%) had a PSA test within the past year, having a PSA test did not show any pattern of relationship with other employment categories. Because retirement tends to correlate with age, those age 65 and older are most likely responsible for the observed relationship.

About 70% of Tarrant County males age 40 and older have ever had a DRE [Table 11.2]. There were no significant sub-county area differences, although the proportion was lowest for central Tarrant County (54.1%) and highest for southwest (73.4%) and northeast (73.9%). As with PSA testing, age was a significant factor, showing an increase in proportion from youngest to oldest groups. A large proportion of the male respondents age 65 and older had ever had a DRE (92.4%), followed by age 55-64 (80.2%), age 45-54 (68.4%) and age 35-44 (47.4%). Education was a significant determining factor for ever having a DRE. The proportion of those who report ever having a DRE was highest for those with a college degree (81.2%), followed by those with technical/some college (68.5%), high school or GED (67.3%) and less than high

school (42.0%). Ever having a DRE tended to increase with income level, showing a significant difference between the highest income category, $50,000 and over (82.1%) and incomes below $35,000 (52.2%, 50.4% & 51.6%). The proportion of White males (78.7%) who reported ever having a DRE was significantly higher than African-Americans (58.4%) and Hispanics (39.7%). There was no recognizable pattern of relationship with employment except the majority (92.9%) of retired respondents had ever had a DRE.

About 30% of all Tarrant County residents age 50 and older reported having blood stool tests within the past 2 years [Table 11.3]. There were no significant sub-county differences, although the proportion was lowest for northwest Tarrant County (22.8%) and highest for northeast (33.8%). More females (32.6%) tended to report having a blood stool test within the past 2 years than males (26.0%). The proportions reporting a blood stool test increased with age, and there is a significant difference between respondents age 65 and older (34.7%) and age 45-54 (18.8%). The proportion of respondents with education below high school (17.9%) who had a blood stool test tended to be lower than those with a high school diploma and higher education (31.2%, 29.8% and 32.5%). More Whites (31.8%) and African-Americans (29.4%) than Hispanics (12.8%) tended to have had a blood stool test within the past 2 years. There was no identifiable relationship with annual income and employment status except that the highest proportion being tested was in retired individuals.

Fifty percent of Tarrant County residents age 50 and older have ever had a sigmoidoscopy or colonoscopy [Table 11.4]. There were no significant sub-county differences, although the proportion was lowest for central Tarrant County (40.6%) and highest for southwest (57.8%). More females (52.1%) tended to have ever had sigmoidoscopy or colonoscopy than males (26.0%). There is an increasing age relationship in the proportions of those who have ever had a sigmoidoscopy or colonoscopy from age 45-54 (33.2%), followed by age 55-64 (50.4%) and age 65 and older (61.6%). Education, annual income, race/ethnicity and employment do not show any pattern or appear to have a relationship with ever having a sigmoidoscopy or colonoscopy.

The proportion who had PSA test, DRE, blood stool test, sigmoidoscopy or colonoscopy increased with age and were highest for those age 65 and older.

The proportions of Tarrant County residents who had a blood stool test within the past 2 years or have ever had a sigmoidoscopy or colonoscopy is higher than of the state of Texas, but comparable to the national average [Table 11.5]. Tarrant County residents meet the Healthy People 2010 objective for sigmoidoscopy or colonoscopy, but fall 40% short of the Healthy People 2010 objective for blood stool test [Table 11.5]

Table 11.1 PSA Screening For Prostate Cancer in Tarrant County Males Age 40 and Older

	Prostrate-Specific Antigen Test Within the Past 2 Years			
	n	Weighted Percentage*	N	95% Confidence Interval
Total	297	46.9	582	41.8-52.1
Sub-County Area				
Northeast	64	51.4	121	41.7-61.0
Southeast	51	49.4	89	37.7-61.1
Central	52	37.9	130	29.2-47.4
Southwest	71	51.8	124	42.0-61.4
Northwest	59	41.0	118	31.5-51.2
Age				
35-44	30	21.1	125	13.7-31.1
45-54	72	39.4	180	30.7-48.7
55-65	90	67.6	143	57.7-76.2
>65	105	78.5	134	69.3-85.6
Education				
<High school	25	33.1	73	20.8-48.3
High school or GED	74	43.5	151	33.5-54.1
Tech/some college	68	49.9	130	39.2-60.6
College degree	130	53.2	226	45.3-60.9
Annual Income				
<$15,000	17	31.6	53	17.0-51.1
$15,000 - $24,999	33	32.2	90	21.4-45.4
$25,000 - $34,999	28	39.5	62	25.4-55.5
$35,000 - $49,999	43	55.7	69	40.2-70.2
>$50,000	138	52.1	246	44.6-59.6
Race/Ethnicity				
White	219	52.5	398	46.5-58.5
African-American	37	55.6	78	41.4-68.9
Hispanic	33	32.4	83	21.3-45.9
Other	7	19.8	19	8.0-41.1
Employment				
Employed	131	40.3	300	33.5-47.5
Self-employed	42	41.8	87	29.9-54.7
Out of work >1yr	4	25.9	11	7.4-60.7
Out of work <1yr	5	59.9	8	15.6-92.4
Student	0	0	1	-
Retired	105	77.9	140	69.4-84.5
Unable to work	10	38.8	30	18.4-64.1

n represents the number of respondents who had prostrate-specific antigen test
N represents the number of respondents to each question
* Percentages are weighted to population characteristics

Table 11.2 DRE Screening For Prostate Cancer in Tarrant County Males Age 40 and Older

	Digital Rectal Exam			
	n	Weighted Percentage*	N	95% Confidence Interval
Total	455	69.3	627	64.3-73.9
Sub-County Area				
Northeast	100	73.9	127	64.1-81.8
Southeast	71	71.1	92	58.8-80.9
Central	87	54.1	142	44.7-63.1
Southwest	106	73.4	138	64.1-81.1
Northwest	91	66.6	128	56.1-75.7
Age				
35-44	67	47.4	133	36.8-58.2
45-54	129	68.4	190	59.6-76.0
55-65	124	80.2	155	71.5-86.8
>65	130	92.4	144	86.6-95.8
Education				
<High school	41	42.0	77	28.5-56.9
High school or GED	107	67.3	160	56.4-76.5
Tech/some college	107	68.5	146	58.0-77.4
College degree	197	81.2	240	74.6-86.4
Annual Income				
<$15,000	37	52.2	59	33.1-70.6
$15,000 - $24,999	47	50.4	91	37.2-63.5
$25,000 - $34,999	43	51.6	67	35.9-67.1
$35,000 - $49,999	57	69.2	75	53.0-81.7
>$50,000	212	82.1	259	76.1-86.9
Race/Ethnicity				
White	341	78.7	427	73.4-83.2
African-American	57	58.4	91	43.8-71.7
Hispanic	38	39.7	82	27.1-53.8
Other	13	61.9	21	36.6-82.1
Employment				
Employed	217	64.7	325	57.7-71.1
Self-employed	61	59.8	88	45.6-72.5
Out of work >1yr	8	74.2	13	40.2-92.5
Out of work <1yr	5	36.3	8	8.2-78.5
Student	1	14.5	2	1.0-73.1
Retired	137	92.9	152	87.8-95.9
Unable to work	21	70.1	31	44.9-87.1

n represents the number of respondents who had prostrate-specific antigen test
N represents the number of respondents to each question
* Percentages are weighted to population characteristics

Table 11.3 FOBT Screening For Colorectal Cancer in Tarrant County Adults Age 50 and Older

	Had a Blood Stool Test Within the Past 2 Years			
	n	Weighted Percentage*	N	95% Confidence Interval
Total	285	29.6	994	26.1-33.4
Sub-County Area				
Northeast	60	33.8	190	26.6-41.8
Southeast	55	32.9	170	24.9-42.1
Central	61	26.0	244	20.3-32.5
Southwest	66	32.8	203	26.1-40.2
Northwest	43	22.8	187	16.5-30.6
Gender				
Male	99	26.0	371	20.5-32.3
Female	186	32.6	623	28.2-37.3
Age				
45-54	36	18.8	215	11.9-28.4
55-65	108	32.4	371	26.8-38.6
>65	141	34.7	408	29.5-40.3
Education				
<High school	28	17.9	128	11.4-26.9
High school or GED	87	31.2	290	24.8-38.4
Tech/some college	68	29.8	268	22.6-38.3
College degree	101	32.5	303	26.7-38.9
Annual Income				
<$15,000	31	22.4	126	15.0-32.1
$15,000 - $24,999	35	18.9	179	13.1-26.4
$25,000 - $34,999	26	29.1	97	19.6-40.9
$35,000 - $49,999	36	25.7	121	18.0-35.4
>$50,000	97	33.1	299	26.9-40.0
Race/Ethnicity				
White	219	31.8	724	27.7-36.2
African-American	49	29.4	176	21.4-38.9
Hispanic	10	12.8	68	6.1-24.9
Other	6	28.7	21	11.0-56.8
Employment				
Employed	88	27.4	336	21.2-34.7
Self-employed	17	20.0	95	12.1-31.1
Out of work >1yr	4	14.2	22	4.7-35.6
Out of work <1yr	3	20.2	15	6.1-49.8
Homemaker	17	28.3	64	17.4-42.6
Student	0	0	1	0
Retired	139	37.5	380	32.0-43.3
Unable to work	16	26.5	74	13.9-44.6

n represents the number of respondents who had prostrate-specific antigen test
N represents the number of respondents to each question
* Percentages are weighted to population characteristics

Table 11.4 Colorectal Cancer Screening in Tarrant County Adults Age 50 and Older

	Ever Had a Sigmoidoscopy or a Colonoscopy			
	n	Weighted Percentage*	N	95% Confidence Interval
Total	521	50.4	1037	46.6-54.3
Sub-County Area				
Northeast	100	50.7	198	42.8-58.6
Southeast	97	50.4	184	41.8-58.9
Central	108	40.6	249	34.1-47.5
Southwest	127	57.8	215	50.5-64.9
Northwest	89	47.3	191	39.4-55.4
Gender				
Male	184	48.4	377	42.0-54.8
Female	337	52.1	660	47.4-56.7
Age				
45-54	63	33.2	214	24.9-42.7
55-65	195	50.4	375	44.1-56.6
>65	249	61.6	419	56-66.9
Education				
<High school	75	53.6	131	42.0-64.9
High school or GED	129	44.1	299	37.0-51.5
Tech/some college	138	52.7	279	45.2-60.1
College degree	176	52.6	321	46.1-59.1
Annual Income				
<$15,000	66	51.6	129	40.3-62.8
$15,000 - $24,999	79	40.2	183	31.8-49.1
$25,000 - $34,999	48	52.0	101	40.6-63.3
$35,000 - $49,999	63	46.4	123	35.6-57.5
>$50,000	169	54.4	310	47.7-61.0
Race/Ethnicity				
White	397	52.5	752	48.5-56.8
African-American	84	49.0	184	39.1-59.1
Hispanic	32	46.3	70	32.5-60.8
Other	5	23.7	22	7.8-53.4
Employment				
Employed	156	44.2	355	37.4-51.2
Self-employed	35	38.4	94	27.2-51.0
Out of work >1yr	8	29.3	25	12.7-54.2
Out of work <1yr	6	38.8	16	16.7-66.8
Homemaker	33	50.4	68	37.3-63.4
Student	1	100	1	0.0-100.0
Retired	241	62.7	395	57.0-68.1
Unable to work	38	53.1	74	37.8-67.8

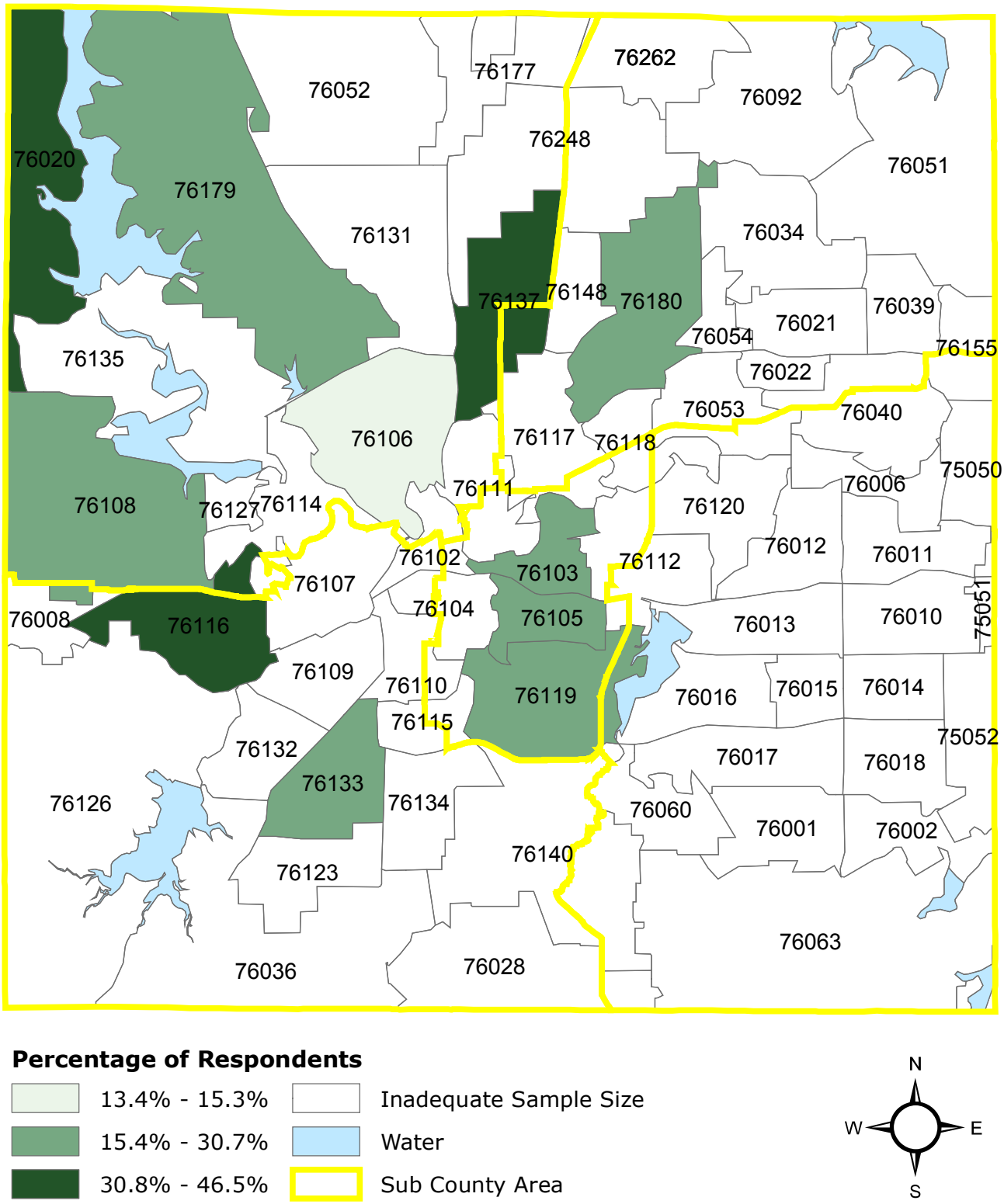
n represents the number of respondents who had prostrate-specific antigen test
N represents the number of respondents to each question
* Percentages are weighted to population characteristics

Table 11.5 Comparison of Tarrant County, Texas, the United States and Healthy People 2010 Objectives for Cancer Screening

Geographic Area	PSA Test Within the Past 2 Years in Males Age 40 and Older	Digital Rectal Examination in Males Age 40 and Older	Blood Stool Test Within the Past 2 Years in Adults Age 50 and Older	Sigmoidoscopy or Colonoscopy in Adults Age 50 and Older
Tarrant County	46.9% (41.8-52.1)	69.3% (64.3-73.9)	29.6% (26.1-33.4)	50.4% (46.6-54.3)
Texas*	49.4% (46.3-52.5)	N/A	23.4% (21.5-25.3)	48.4% (46.1-50.7)
United States*	52.1%	N/A	26.5%	53.0%
Healthy People 2010 Objective	N/A	N/A	50%	50%

*Source: Division of Adult and Community Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System Online Prevalence Data, 2004.

Figure 11.1 Respondents with Blood Stool Test by ZIP Code in Tarrant County, Texas



Percentage of Respondents

- 13.4% - 15.3%
- 15.4% - 30.7%
- 30.8% - 46.5%
- Inadequate Sample Size
- Water
- Sub County Area

N W E S

Table 11.6 Questions Asked on Prostrate Cancer Screening in Tarrant County Adults Males 40 and Older

Questions	Respondents n	Respondents % [1]
1. Have you ever had a PSA test?		
Yes	361	55.3
No	237	44.7
2. How long has it been since you had your PSA test? [2]		
Within the past year (anytime less than 12 months ago)	243	70.6
Within the past 2 years (1 year but less than 2 years ago)	57	15.
Within the past 3 years (2 years but less than 3 years ago)	27	7.0
Within the past 5 years (3 years but less than 5 years ago)	15	5.2
5 or more years ago	7	1.6
3. Have you ever had a digital rectal exam?		
Yes	455	69.3
No	172	30.7
4. How long has it been since your last digital rectal exam?		
Within the past year (anytime less than 12 months ago)	240	54.5
Within the past 2 years (1 year but less than 2 years ago)	85	16.4
Within the past 3 years (2 years but less than 3 years ago)	47	10.1
Within the past 5 years (3 years but less than 5 years ago)	38	9.0
5 or more years ago	37	10.0
5. Have you ever been told that you had prostrate cancer?		
Yes	23	3.2
No	607	96.8

1. Percentages are weighted to population characteristics
2. Asked of those responding "Yes" to Question 1

Table 11.7 Questions Asked on Colorectal Cancer Screening in Tarrant County Adults Age 50 and Older

Questions	Respondents n	Respondents %[1]
1. Have you ever had a blood stool test using a home kit?		
Yes	509	50.4
No	530	49.6
2. How long has it been since you had your last blood stool test using a home kit?[2]		
Within the past year (anytime less than 12 months ago)	187	37.0
Within the past 2 years (1 year but less than 2 years ago)	107	22.5
Within the past 5 years (2 years but less than 5 years ago)	122	23.0
5 or more years ago	75	17.5
3. Have you ever had a sigmoidoscopy or a colonoscopy?		
Yes	521	50.4
No	516	49.6
4. How long has it been since your last sigmoidoscopy or colonoscopy?		
Within the past year (anytime less than 12 months ago)	165	36.0
Within the past 2 years (1 year but less than 2 years ago)	105	19.6
Within the past 5 years (2 years but less than 5 years ago)	160	29.9
Within the past 10 years (5 years but less than 10years ago)	47	8.6
10 or more years ago	35	5.9

1. Percentages are weighted to population characteristics
2. Asked of those responding “Yes” to Question 1

References

1. American Cancer Society. Cancer Facts and Figures in: http://www.cancer.org/docroot/STT/content/STT_1x_Cancer_Facts__Figures_2004.asp

2. Centers for Disease Control and Prevention. Recent Trends in Mortality Rates for Four Major Cancers, by Sex and Race/Ethnicity - United States, 1990—1998. MMWR 2002;51(03);49-53.

3. Centers for Disease Control and Prevention. 2004/2005 Fact Sheet – Prostate Cancer: The Public Health Perspective in: http://www.cdc.gov/cancer/prostate/about2004.htm

4. Centers for Disease Control and Prevention. 2004/2005 Fact Sheet – Colorectal Cancer: The Importance of Prevention and Early Detection in: http://www.cdc.gov/cancer/colorctl/about2004.htm

Introduction

Two vaccine-preventable diseases, influenza and pneumococcal disease, contribute to the mortality of older persons in the United States. Epidemics of influenza typically occur during the winter months in temperate regions and have been responsible for approximately 36,000 deaths each year in the United States from 1990 to 1999 (1). Influenza viruses also can cause pandemics, during which rates of illness and death from influenza-related complications substantially increase worldwide. Influenza viruses cause disease among all age groups (2 - 4). Rates of infection are highest among children, but rates of serious illness and death are highest among persons age 65 years and older and persons of any age who have medical conditions that place them at increased risk for complications from influenza (2, 5-7). Persons age 65 years and older accounted for approximately 90% of these deaths from influenza (8). Influenza vaccination is the primary method for preventing influenza and its severe complications.

Streptococcus pneumoniae is a bacterial pathogen causing pneumococcal disease such as pneumonia that affects children and adults worldwide. Before the advent of vaccination, it was a leading cause of illness in young children, and illness and death among the elderly and persons who have certain underlying medical conditions. Pneumococcal disease caused approximately 3,400 deaths among persons age 65 years and older in the United States in 1998 (9). Pneumococcal vaccination is recommended for:

- People age 65 or older
- People who have problems with their lungs, heart, liver, or kidneys
- People with health problems like diabetes, sickle cell disease, alcoholism, or HIV/AIDS

National Healthy People objectives for 2010 include increasing influenza and pneumococcal vaccination levels to $\geq$90% among persons age 65 years and older (10).

Methods

The BRFSS respondents were asked four questions about the influenza and pneumoccocal vaccines. These questions and responses to each question can be found in Table 12.5. Responses of people age 65 and over to questions about having a flu vaccine during the past 12 months and ever having a pneumonia shot were separated into another category by the CDC and these were analyzed according to demographic characteristics and health-related consequences.

Results

Key Findings

- **Fifty-eight percent of adults 65 and older in Tarrant County had a flu shot in the past 12 months**
- **Sixty-six percent have ever had pneumococcal vaccine**
- **More older Whites than African-Americans had flu vaccine within the past 12 months**
- **The proportion of older Tarrant County residents who had a flu shot was less than that of Texas and the average for the United States**
- **The proportion of older Tarrant County residents who had a flu shot and pneumococcal vaccine is lower than the Healthy People 2010 objectives**
- **More people with chronic diseases are getting flu and pneumoccocal vaccinations**

Overall, 28.1% of all Tarrant County adults age 18 and older have had a flu shot or vaccine in the past 12 months and 22.7% have ever had pneumonia shots. The most common place for residents to receive a flu shot is their doctor's office or health maintenance organization (33.9%) followed by the workplace (25.3%) and another clinic or health center (12.7%). [Table 12.6]

Of the respondents age 65 and over, 58.2% had received a flu shot in the past 12 months while 66.0% had ever received pnuemococcal shots. More older Whites (60.0%) than African-Americans (38.4%) had received the flu vaccine. Pneumococcal vaccination status was not related to race/ethnicity. Both flu vaccine and pneumococcal vaccine status was unrelated to geographic distribution, gender, or education, annual income and employment status. [Tables 12.1. 12.2]

Flu vaccination status among those 65 and over in Tarrant County (58.2%) was lower than that of Texas (67.7%) and the United States (69.9%). Pneumococcal vaccination status among older Tarrant County residents was comparable to that of the state and the nation. Both were substantially below the Healthy People 2010 objectives. [Table 12.3]

Individuals with poor health status were 3.42 times more likely to have had a flu vaccination in the past 12 months [Table 12.4]. Individuals more likely to have received pneumonococcal vaccine included those with histories of myocardial infarction, (2.75 more likely) stroke, (3.25 more likely), diabetes, (2.86 times more likely) and coronary artery disease, (2.49 more likely) [Table 12.5].

Table 12.1 Influenza Vaccination in Tarrant County Adults Age 65 and Older

	Received Flu Vaccination in Past 12 Months			
	n	Weighted Percentage*	N	95% Confidence Interval
Total	242	58.2	424	52.7-63.6
Sub-County Area				
Northeast	39	52.2	73	39.3-64.7
Southeast	44	60.8	79	48.9-71.5
Central	64	51.5	117	41.5-61.4
Southwest	60	66.9	91	55.9-76.3
Northwest	35	52.1	64	39.1-64.7
Gender				
Male	87	60.6	143	51.3-69.2
Female	155	56.6	281	49.6-63.3
Age				
18-24				
25-34				
35-44				
45-54				
55-65				
65+	242	58.2	424	52.7-63.6
Education				
<= High school	36	47.1	78	33.7-60.9
High school or GED	79	62.2	136	52.5-71.0
Tech/some college	58	53.4	99	42.2-64.3
College degree	66	64.2	105	53.3-73.7
Annual Income				
<$15,000	37	49.6	74	36.1-63.2
$15,000 - $24,999	50	54.5	88	42.1-66.4
$25,000 - $34,999	27	60.4	43	43.8-74.9
$35,000 - $49,999	31	67.1	47	51.1-79.9
>$50,000	40	66.5	63	52.6-78.0
Race/Ethnicity				
White	191	60.0	328	53.9-65.8
African-American	31	38.4	65	25.8-52.9
Hispanic	13	55.4	19	28.5-79.5
Other	4	82.8	6	41.3-97.0
Employment				
Employed	17	38.3	37	22.2-57.3
Self-employed	11	48.5	20	25.8-71.9
Out of work for >1yr	1	43.4	4	6.7-89.1
Out of work for <1yr	0	0.0	1	
Homemaker	18	70.7	30	51.7-84.5
Student	0	0.0	1	
Retired	180	60.1	308	53.6-66.3
Unable to work	13	55.1	21	30.4-77.5

N represents the number of respondents to the question
n represents the number of respondents who had an influenza vaccine in the past 12 months
* Percentages are weighted to population characteristics

Table 12.2 Pneumococcal Vaccination in Tarrant County Adults Age 65 and Older

	Ever Received Pneumococcal Vaccination[§]			
	n	Weighted Percentage[*]	N	95% Confidence Interval
Total	279	66.0	418	60.3-71.2
Sub-County Area				
Northeast	58	75.0	72	60.8-85.3
Southeast	54	67.6	78	54.6-78.3
Central	66	56.5	114	46.2-66.2
Southwest	61	66.3	90	55.1-76.0
Northwest	40	62.8	64	49.6-74.4
Gender				
Male	86	62.0	137	52.4-70.8
Female	193	68.5	281	61.6-74.7
Age				
18-24				
25-34				
35-44				
45-54				
55-65				
65+	279	66.0	418	60.3-71.2
Education				
<= High school	45	61.3	78	47.4-73.6
High school or GED	100	76.3	134	66.9-83.6
Tech/some college	62	65.9	95	54.4-75.8
College degree	69	59.9	105	48.5-70.4
Annual Income				
<$15,000	45	65.5	75	52.5-76.6
$15,000 - $24,999	61	67.6	86	54.5-78.4
$25,000 - $34,999	37	89.6	42	75.7-96.0
$35,000 - $49,999	37	76.5	48	60.8-87.2
>$50,000	32	48.8	61	35.3-62.5
Race/Ethnicity				
White	232	68.5	325	62.3-74.0
African-American	33	51.0	65	36.4-65.5
Hispanic	9	60.0	17	31.6-83.0
Other	3	48.0	6	11.2-87.1
Employment				
Employed	14	34.8	35	19.4-54.2
Self-employed	8	35.1	19	16.3-60.0
Out of work for >1yr	2	78.4	4	33.7-96.3
Out of work for <1yr	1	100.0	1	0.0-100.0
Homemaker	22	75.5	31	56.0-88.2
Student	1	100.0	1	0.0-100.0
Retired	213	69.4	304	62.8-75.2
Unable to work	16	83.9	21	62.0-94.4

N represents the number of respondents to the question
n represents the number of respondents who have ever had a pneumonococcal vaccine
* Percentages are weighted to population characteristics
§ Pneumonococcal vaccine confers extended immunity requiring only one or two vaccinations per lifetime

Table 12.3 Comparison of Tarrant County, Texas, the United States and Healthy People 2010 Objectives for Adult Immunizations

Geographic Area	Influenza Vaccination (65 and older)	Pneumococcal Vaccination (65 and older)
Tarrant County	58.2% (52.7 - 63.6)	66.0% (60.3-71.2)
Texas*	67.1% (63.8 - 70.3)	61.4% (58.0 - 64.7)
United States*	67.9%	64.6%
Healthy People 2010 Objective	90%	90%

*Source: Division of Adult and Community Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System Online Prevalence Data, 2004

Table 12.4 Associations Between Flu Vaccination and Other Health-Related Conditions

	Health Status[#]		Myocardial Infarction		Stroke		Diabetes Mellitus		Coronary Artery Disease	
	Poor	Good	Yes	No	Yes	No	Yes	No	Yes	No
Flu Shot[§]										
Yes	92	17	32	42	94	123	28	32	31	49
No	1235	990	693	1696	655	1674	699	1709	691	1682
Rate Ratio[1]	3.42*		1.66		1.81*		1.62*		1.37	
95% Confidence Interval	1.62 - 7.22		1.19 - 2.34		1.27 - 2.58		1.31 - 2.02		0.95 - 1.96	

1. Relative Risk calculation adjusted to complex sampling population weights
* Statistically significant at alpha = 0.05 level
\# The responses to the question: 'Would you say that in general your health is excellent, very good, good, fair, or poor?' were collapsed into two categories: 'Excellent', 'Very Good' and 'Good' = 'Good' and 'fair' and 'poor' = 'poor'
§ Represents reported flu vaccination in the past 12 months among all respondents age 18 and older

Table 12.5 Associations Between Pneumonococcal Vaccination and Other Health-Related Conditions

	Health Status[#]		Myocardial Infarction		Stroke		Diabetes Mellitus		Coronary Artery Disease	
	Poor	Good	Yes	No	Yes	No	Yes	No	Yes	No
Pneumococcal Vaccination[§]										
Yes	194	418	43	29	34	21	119	86	43	35
No	273	1452	548	1643	560	1651	496	1639	546	1630
Rate Ratio[1]	1.73*		2.75*		3.25*		2.86*		2.49*	
95% Confidence Interval	1.41 - 2.11		2.13 - 3.56		2.58 - 4.08		2.37 - 3.45		1.88 - 3.31	

1. Relative Risk calculation adjusted to complex sampling population weights
* Statistically significant at alpha = 0.05 level
\# The responses to the question: 'Would you say that in general your health is excellent, very good, good, fair, or poor?' were collapsed into two categories: 'Excellent', 'Very Good' and 'Good' = 'Good' and 'fair' and 'poor' = 'poor'
§ Represents reported pneumococcal vaccination in the past 12 months among all respondents age 18 and older

Table 12.6 Questions Asked on Adult Immunizations in Tarrant County Adults Age 18 and Older

Questions	Respondents n	Respondents %[1]
1. During the past 12 months, have you had a flu shot?		
Yes	749	26.5
No	1797	73.5
2. During the past 12 months, have you had a flu vaccine that was sprayed in your nose?		
Yes	28	1.6
No	2533	98.4
3, Have you ever had a pneumonia shot?		
Yes	616	22.7
No	1725	77.3
4. At what kind of place did you get your last flu shot?		
A doctor's office or health maintenance organization	252	33.9
A health department	25	3.2
Another type of clinic or health center	88	12.7
A senior, recreation, or community center	13	1.5
A store (e.g. supermarket, drug store)	85	9.8
A hospital or emergency room	31	3.7
Workplace, or	154	25.3
Some other kind of place	69	9.8

1. Percentages are weighted to population characteristics

References

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Introduction

Heart disease and stroke are the first and third leading causes of death for both men and women in the United States, accounting for nearly 40% of all deaths (1). More than 927,000 Americans die of cardiovascular disease each year, which amounts to one death every 34 seconds (2). Although these largely preventable conditions are more common among people age 65 or older, the number of sudden deaths from heart disease among people age 15–34 has increased (2).

Physical inactivity, unhealthy diet, and smoking are three leading health behaviors contributing to the prevalence of heart disease in the United States (3, 4). Yet, only one in five persons in the U.S. meets the recommendations for fruit and vegetable intake (5), one in four meets the recommendations for exercise (6), and one in four is a current smoker (7). Prevalence of these unhealthy habits remains above the national goals (4).

Methods

The BRFSS respondents were asked 17 questions related to cardiovascular disease prevalence, such as, myocardial infarction (heart attacks), coronary heart disease, and stroke. These questions, the number of respondents and their responses can be found in Table 13.12.

Results

Key Findings

- **5.5% of Tarrant County's population has been diagnosed with heart disease**
- **23.1% of the Tarrant County population have been diagnosed with high blood pressure**
- **Persons with high blood pressure are 8.8 times more likely to have heart disease**
- **Persons with high serum blood cholesterol are 5.11 times more likely to have heart disease**
- **Persons with diabetes are 4.7 times more likely to have heart disease**
- **Persons that are diabetic, hypertensive and have high serum blood cholesterol are 5.97 times more likely to have heart disease than the population without such risks**
- **Prevalence of high blood pressure in African-Americans and Whites is significantly higher than in Hispanics and other races**

Overall, 5.5% of Tarrant County residents have been diagnosed with heart disease. The geographic distribution of reported heart disease did not differ significantly between sub-county areas [Figure 13.1]. The central sub-county area reported the highest average prevalence of heart disease (7.9%), however this finding is not significantly different from the other sub-county areas. No significant differences in gender were identified with heart disease prevalence among females (5.3%) and males (5.8%). Age was a significant risk factor for heart disease, myocardial infarction, coronary heart disease and stroke. Persons over the age of 65 reported the highest prevalence of doctor-diagnosed heart disease (24.6%), myocardial infarction (11.6%), coronary heart disease (11.8%) and stroke (7.3%). The prevalence of doctor-diagnosed heart disease was highest for those who earn less than $25,000 per year (16.4%). Hispanics consistently reported the lowest prevalence of cardiovascular disease, including heart disease (1.4%), myocardial infarction (0.4%) and stroke (0.2%). These estimates also were significantly different from that of other ethnic groups. Individuals reporting that they were unable to work or who are currently retired had the highest prevalence of doctor-diagnosed heart disease (29.9% and 19.3%, respectively). Employment status appears to be an important indicator for doctor-diagnosed heart disease, as the prevalence of disease is higher for those who are unemployed, unable to work, or who are retired, however this finding may be confounded by age [Table 13.4.].

Twenty-three percent of Tarrant County residents have been diagnosed with high blood pressure (hypertension) [Table 13.5]. The geographic distribution of high blood pressure did not significantly differ between sub-county areas [Figure 13.1]. No significant differences were identified in hypertension prevalence among females (23.0%) and males (23.1%). Age was a significant risk factor for hypertension. Persons over the age of 65 reported the highest prevalence of hypertension (60.0%) followed by those age 55 to 64 years (43.6%). Hispanics reported the lowest prevalence of hypertension (12.5%). Individuals reporting that they were unable to work or who are currently retired had the highest prevalence of hypertension with 65.2% and 57.2%, respectively. Employment status appears to be an important indicator for hypertension, as the prevalence of disease is higher for those who are unemployed, unable to work, or who are retired, however this finding may be confounded by age [Table 13.5.]. Three out of four Tarrant County residents diagnosed with hypertension are currently taking medication to control their blood pressure. More than 95% of persons age 65 or older who have doctor-diagnosed hypertension are currently taking medication to control their blood pressure. Women reported a significantly higher prevalence (83.5%) of taking medication for hypertension than men (68.9%) [Table 13.6].

The prevalence of heart disease in Tarrant County residents (5.5%) did not differ significantly from the prevalence reported in Texas (7.6%) [Table 13.7]. National heart disease prevalence data is not available for comparison. Healthy People 2010 objectives for cardiovascular disease, myocardial infarction, coronary heart disease, and stroke are measured by mortality rates and cannot be used as a valid comparison.

The prevalence of high blood pressure in Tarrant County residents (23.1%) is lower than that reported in Texas (24.6%) and the nation (24.8%) [Table 13.7]. This estimate, however falls short of the Health People 2010 objective of 16.0%.

Several significant risk factors were identified for doctor-diagnosed heart disease, myocardial infarction, coronary heart disease, and stroke [Table 13.8]. Tarrant County residents who are diabetic, hypertensive or have high blood cholesterol were significantly more likely to suffer from heart disease, myocardial infarction, coronary heart disease and stroke.

Smoking has a significant impact on health, specifically cardiovascular health. Persons that reported that they have never smoked were significantly less likely to have doctor-diagnosed heart disease, heart attacks, coronary heart disease and stroke [Table 13.8 – Table 13.11].

Table 13.1 Doctor-Diagnosed Heart Disease in Tarrant County Adults Age 18 and Older

	Doctor-Diagnosed Heart Disease			
	n	Weighted Percentage*	N	95% Confidence Interval
Total	178	5.5	2476	4.6 – 6.7
Sub-County Area				
Northeast	26	4.8	497	3.1 – 7.4
Southeast	29	5.6	430	3.6 – 8.5
Central	56	7.9	582	5.9 – 10.4
Southwest	38	6.2	489	4.4 – 8.8
Northwest	29	4.5	478	3.1 – 6.7
Gender				
Male	77	5.8	952	4.3 – 7.6
Female	101	5.3	1524	4.1 – 6.8
Age				
18-24	2	0.4	180	0.1 – 1.5
25-34	9	0.8	498	0.3 – 1.9
35-44	16	3.9	539	2.1 – 7.2
45-54	19	4.0	458	2.2 – 6.9
55-64	30	9.0	366	5.8 – 13.9
65+	102	24.6	407	20.0 – 29.8
Education				
≤ High school	39	6.4	379	4.1 – 9.9
High school or GED	47	5.9	655	4.0 – 8.6
Tech/some college	56	6.3	670	4.6 – 8.4
College degree	36	4.2	763	2.8 – 6.3
Annual Income				
<$15,000	41	9.4	303	6.4 – 13.5
$15,000 - $24,999	38	7.0	433	4.8 – 10.1
$25,000 - $34,999	19	7.9	244	4.3 – 14.6
$35,000 - $49,999	16	4.9	318	2.7 – 14.2
>$50,000	33	3.9	855	2.6 – 5.7
Race/Ethnicity				
White	119	6.5	1527	5.2 – 8.1
African-American	37	6.6	408	4.3 – 9.9
Hispanic	13	1.4	450	0.7 – 2.7
Other	6	9.1	74	3.5 – 21.7
Employment				
Employed	37	2.5	1276	1.7 – 3.7
Self-employed	10	4.9	197	2.4 – 9.9
Out of work for >1yr	7	10.8	65	2.9 – 32.8
Out of work for <1yr	5	5.1	82	2.0 – 12.5
Homemaker	9	2.2	267	1.0 – 4.6
Student	1	0.3	73	0.0 – 2.5
Retired	77	19.3	389	15.2 – 24.2
Unable to work	30	29.9	111	18.6 – 44.3

n represents the number of respondents who have doctor diagnosed heart disease
N represents the number of respondents to each question
* Percentages are weighted to population characteristics

Table 13.2 Myocardial Infarction in Tarrant County Adults Age 18 and Older

	Myocardial Infarction			
	n	Weighted Percentage*	N	95% Confidence Interval
Total	76	2.2	2481	1.6 – 2.9
Sub-County Area				
Northeast	10	2.0	499	1.0 – 3.9
Southeast	7	1.4	430	0.6 – 3.5
Central	27	3.7	585	2.5 – 5.5
Southwest	16	2.6	488	1.5 – 4.3
Northwest	16	2.3	479	1.4 – 3.8
Gender				
Male	35	2.4	955	1.5 – 3.7
Female	41	1.9	1526	1.4 – 2.8
Age				
18-24	0	- -	180	- -
25-34	3	0.2	498	0.0 – 0.6
35-44	6	1.3	540	0.4 – 3.8
45-54	7	0.7	460	0.3 – 1.5
55-64	12	3.9	367	2.1 – 7.1
65+	48	11.6	408	8.3 – 15.8
Education				
≤ High school	16	2.4	383	1.3 – 4.3
High school or GED	19	1.8	654	1.0 – 3.0
Tech/some college	26	2.8	672	1.8 – 4.4
College degree	15	1.8	763	0.9 – 3.6
Annual Income				
<$15,000	22	5.6	42	3.4 – 9.1
$15,000 - $24,999	18	3.0	57	1.7 – 5.0
$25,000 - $34,999	7	3.2	24	1.1 – 8.6
$35,000 - 49,999	2	0.4	21	0.1 – 2.1
>$50,000	11	1.3	34	0.6 – 2.4
Race/Ethnicity				
White	52	2.3	1530	1.7 – 3.1
African-American	14	2.6	410	1.3 – 4.9
Hispanic	5	0.4	450	0.1 – 1.2
Other	3	6.7	74	2.0 – 20.4
Employment				
Employed	12	0.7	1275	0.4 – 1.2
Self-employed	5	2.5	197	0.8 – 7.5
Out of work for >1yr	4	8.8	65	1.8 – 33.9
Out of work for <1yr	2	2.4	82	0.6 – 9.2
Homemaker	5	1.4	268	0.7 – 3.9
Student	0	- -	73	- -
Retired	31	7.0	390	4.7 – 10.3
Unable to work	15	10.6	115	5.8 – 18.7

n represents the number of respondents who reported ever had a myocardial infarction (heart attack)
N represents the number of respondents to each question
* Percentages are weighted to population characteristics

Table 13.3 Coronary Heart Disease in Tarrant County Adults Age 18 and Older

	Coronary Heart Disease			
	n	Weighted Percentage*	N	95% Confidence Interval
Total	80	2.6	2471	2.0 – 3.5
Sub-County Area				
Northeast	9	1.7	497	0.8 – 3.7
Southeast	16	3.0	429	1.7 – 5.4
Central	22	3.1	580	2.0 – 4.9
Southwest	20	3.2	488	2.0 – 5.1
Northwest	13	2.1	477	1.2 – 3.6
Gender				
Male	37	2.7	948	1.8 – 4.0
Female	43	2.6	1523	1.7 – 3.8
Age				
18-24	1	0.2	180	0.0 – 1.6
25-34	4	0.3	498	0.1 – 0.8
35-44	7	2.0	538	0.8 – 4.9
45-54	9	2.2	460	1.0 – 5.2
55-64	13	3.7	364	2.0 – 6.8
65+	46	11.8	403	8.7 – 16.0
Education				
≤ High school	14	3.1	377	1.4 – 6.7
High school or GED	22	2.8	652	1.6 – 5.0
Tech/some college	24	2.7	671	1.7 – 4.3
College degree	20	2.2	762	1.3 – 3.5
Annual Income				
<$15,000	18	4.7	300	2.7 – 8.1
$15,000 - $24,999	15	2.6	435	1.4 – 4.8
$25,000 - $34,999	10	4.4	242	1.9 – 10.0
$35,000 - 49,999	10	3.6	318	1.7 – 7.3
>$50,000	16	1.6	855	0.9 – 2.9
Race/Ethnicity				
White	54	3.4	1525	2.4 – 4.6
African-American	18	3.2	408	1.7 – 5.7
Hispanic	7	0.9	450	0.4 – 2.0
Other	0	- -	73	- -
Employment				
Employed	20	1.4	1276	0.8 – 2.4
Self-employed	6	3.1	197	1.4 – 7.1
Out of work for >1yr	2	1.2	64	0.3 – 5.3
Out of work for <1yr	2	2.1	82	0.4 – 9.2
Homemaker	5	0.8	266	0.3 – 2.1
Student	0	- -	73	- -
Retired	35	9.5	386	6.6 – 13.6
Unable to work	10	13.0	112	5.4 – 28.3

n represents the number of respondents who reported ever having doctor diagnosed coronary heart disease
N represents the number of respondents to each question
* Percentages are weighted to population characteristics

Table 13.4 Stroke in Tarrant County Adults Age 18 and Older

	Stroke			
	n	Weighted Percentage*	N	95% Confidence Interval
Total	61	1.8	2468	1.3 – 2.5
Sub-County Area				
Northeast	11	1.9	501	0.9 – 3.8
Southeast	10	1.7	431	0.8 – 3.5
Central	19	2.4	586	1.5 – 3.9
Southwest	10	1.7	490	0.8 – 3.3
Northwest	11	1.7	478	0.9 – 3.3
Gender				
Male	21	1.7	954	1.0 – 2.9
Female	40	1.9	1532	1.3 – 2.7
Age				
18-24	1	0.1	180	0.0 – 1.0
25-34	3	0.4	498	0.1 – 1.8
35-44	6	0.9	540	0.4 – 2.5
45-54	7	1.5	460	0.6 – 3.5
55-64	12	3.6	369	1.6 – 8.2
65+	32	7.3	411	4.9 – 10.7
Education				
≤ High school	18	2.3	387	1.3 – 4.1
High school or GED	16	2.2	654	1.1 – 4.4
Tech/some college	20	2.2	671	1.3 – 3.6
College degree	7	0.8	765	0.4 – 1.9
Annual Income				
<$15,000	17	3.3	304	1.9 – 5.8
$15,000 - $24,999	16	3.4	434	1.9 – 5.9
$25,000 - $34,999	5	1.4	244	0.5 – 3.7
$35,000 - $49,999	5	1.0	319	0.4 – 2.8
>$50,000	10	1.4	857	0.7 – 2.9
Race/Ethnicity				
White	41	2.2	1534	1.5 – 3.1
African-American	13	2.3	413	1.0 – 5.1
Hispanic	3	0.2	450	0.1 – 0.8
Other	4	3.4	74	1.1 – 10.0
Employment				
Employed	12	0.8	1276	0.4 – 1.6
Self-employed	- -	- -	197	- -
Out of work for >1yr	3	1.7	65	0.5 – 5.8
Out of work for <1yr	1	0.6	82	0.1 – 4.4
Homemaker	3	0.8	269	0.2 – 2.8
Student	1	0.3	73	0.0 – 2.5
Retired	27	7.0	394	4.6 – 10.6
Unable to work	14	12.6	115	5.8 – 25.2

n represents the number of respondents who reported ever having doctor diagnosed stroke
N represents the number of respondents to each question
* Percentages are weighted to population characteristics

Table 13.5 High Blood Pressure in Tarrant County Adults Age 18 and Older

	Diagnosed with High Blood Pressure			
	n	Weighted Percentage*	N	95% Confidence Interval
Total	717	23.1	2506	21.1 – 25.1
Sub-County Area				
Northeast	121	19.0	504	15.5 – 22.9
Southeast	132	22.7	434	18.7 – 27.3
Central	201	28.5	595	24.7 – 32.7
Southwest	136	22.7	493	19.1 – 26.8
Northwest	127	24.3	480	20.3 – 28.9
Gender				
Male	277	23.1	967	20.1 – 26.4
Female	440	23.0	1539	20.6 – 25.6
Age				
18-24	6	1.4	179	0.6 – 3.3
25-34	41	8.8	459	6.1 – 12.5
35-44	96	17.5	545	13.7 – 22.0
45-54	142	29.2	462	24.2 – 34.8
55-64	167	43.6	372	37.6 – 49.9
65+	259	60.0	420	54.3 – 65.4
Education				
≤ High school	115	21.4	387	16.8 – 26.9
High school or GED	221	27.2	664	23.2 – 31.7
Tech/some college	193	21.4	675	18.1 – 25.1
College degree	186	22.1	770	18.7 – 25.9
Annual Income				
<$15,000	116	31.0	307	24.5 – 38.2
$15,000 - $24,999	124	21.4	440	17.1 – 26.3
$25,000 - $34,999	77	23.1	247	17.5 – 30.0
$35,000 - $49,999	91	23.2	320	18.3 – 29.0
>$50,000	195	20.9	861	17.8 – 24.4
Race/Ethnicity				
White	462	25.8	1545	23.3 – 28.5
African-American	173	32.2	419	26.5 – 38.6
Hispanic	67	12.5	451	9.3 – 16.6
Other	11	14.6	74	7.1 – 27.6
Employment				
Employed	277	18.0	1285	15.6 – 20.7
Self-employed	43	19.4	198	13.7 – 26.8
Out of work for >1yr	19	30.6	65	16.7 – 49.2
Out of work for <1yr	16	17.3	82	9.4 – 29.5
Homemaker	42	14.0	296	9.9 – 19.4
Student	4	2.9	73	0.6 – 11.9
Retired	239	57.2	402	51.4 – 62.7
Unable to work	72	65.2	117	52.9 – 75.7

n represents the number of respondents who reported having doctor diagnosed hypertension
N represents the number of respondents to each question
* Percentages are weighted to population characteristics

Table 13.6 Medication for High Blood Pressure in Tarrant County Adults Age 18 and Older

	Taking Medication for High Blood Pressure			
	n	Weighted Percentage*	N	95% Confidence Interval
Total	572	76.3	715	71.7 – 80.3
Sub-County Area				
Northeast	98	78.1	121	67.8 – 85.7
Southeast	111	77.5	132	66.7 – 85.6
Central	164	69.1	201	69.1 – 83.2
Southwest	101	65.9	136	65.9 – 82.3
Northwest	98	64.8	126	64.8 – 82.8
Gender				
Male	201	68.9	277	61.2 – 75.6
Female	371	83.5	438	78.5 – 87.4
Age				
18-24	1	15.1	6	2.0 – 61.2
25-34	13	31.2	41	17.1 – 50.0
35-44	52	60.7	96	47.8 – 72.4
45-54	111	74.9	142	64.5 – 83.1
55-64	146	86.6	167	78.4 – 92.0
65+	243	95.8	257	92.4 – 97.7
Education				
≤ High school	89	75.5	115	63.6 – 84.4
High school or GED	177	74.9	221	65.8 – 82.2
Tech/some college	158	83.1	191	76.3 – 88.3
College degree	146	72.3	186	62.4 – 80.4
Annual Income				
<$15,000	91	74.7	115	61.4 – 84.5
$15,000 - $24,999	98	75.1	124	62.1 – 84.8
$25,000 - $34,999	63	84.2	77	73.2 – 91.2
$35,000 - $49,999	73	76.8	91	64.6 – 85.7
>$50,000	148	71.7	195	62.6 – 79.4
Race/Ethnicity				
White	369	77.8	460	72.4 – 82.5
African-American	154	87.5	173	77.6 – 93.4
Hispanic	40	59.2	67	43.9 – 72.9
Other	6	46.6	11	16.4 – 79.5
Employment				
Employed	191	63.8	276	55.9 – 71.0
Self-employed	31	63.7	43	43.6 – 79.9
Out of work for >1yr	12	61.4	19	28.3 – 86.5
Out of work for <1yr	11	83.4	16	60.9 – 94.2
Homemaker	33	81.9	42	66.1 – 91.3
Student	2	78.5	4	25.7 – 97.5
Retired	228	97.2	238	94.5 – 98.6
Unable to work	61	83.2	72	69.5 – 91.5

n represents the number of respondents who reported taking medicine for hypertension
N represents the number of respondents to each question
* Percentages are weighted to population characteristics

Table 13.7 Comparison of Tarrant County to Texas, the United States and Healthy People 2010 Objectives for Heart Disease and Hypertension

Geographic Area	Heart Disease	Hypertension
Tarrant County	5.5% (4.6 – 6.7)	23.1% (21.1 – 25.1)
Texas*	7.6 % (6.2 – 9.1)[1]	24.6 % (23.4 - 25.8)
United States*	NA	24.8 %
Healthy People 2010 Objective	NA	16.0 %

*Source: Division of Adult and Community Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System Online Prevalence Data, 2003

1. Texas Council on Cardiovascular Disease and Stroke. Cardiovascular Disease in Texas: A Risk Factor Report, 1999. Available at http://www.tdh.state.tx.us/chs/brfss/Reports/cvdrep.pdf

[**Note: State and National BRFSS 2004 data not available at time of publication]

Table 13.8 Risk Associations Between Diagnosed Heart Disease and Other Health-Related Conditions

	Health Status [2]		Overweight and Obesity		Diabetes Mellitus	
	Poor	Good	Yes	No	Yes	No
Doctor-Diagnosed Heart Disease						
Yes	21	8	112	57	44	134
No	706	498	1,341	784	161	2,136
Relative Risk [1]	1.03		1.18		4.68*	
95% Confidence Interval	0.34 – 2.93		0.78 – 1.79		2.95 – 7.43	

	Hypertension		High Blood Cholesterol		Never Smoked	
	Yes	No	Yes	No	Yes	No
Doctor-Diagnosed Heart Disease						
Yes	124	53	109	50	76	101
No	575	1719	636	1,111	1,356	935
Relative Risk [1]	8.84*		5.11*		0.56*	
95% Confidence Interval	5.82 – 13.44		3.26 – 8.00		0.37 – 0.84	

1. Adjusted to complex sampling population weights
2. The response to the question: "Would you say that in general your health is excellent, very good, fair or poor?" were collapsed into two categories; 'excellent', 'very good', and 'good' = "Good" and 'fair' and 'poor' = "Poor"

* Statistically significant at alpha = 0.05 level

Note: table orientation reports health outcomes in the rows and risk factors in the columns

Table 13.9 Risk Associations Between Myocardial Infarction and Other Health-Related Conditions

	Health Status [2]		Overweight and Obesity		Diabetes Mellitus	
	Poor	Good	Yes	No	Yes	No
Myocardial Infarction						
Yes	11	1	52	22	22	54
No	718	505	1,408	817	184	2,220
Relative Risk [1]	1.28		1.27		6.25*	
95% Confidence Interval	0.15 – 10.83		0.68 – 2.38		3.37 – 11.63	

	Hypertension		High Blood Cholesterol		Never Smoked	
	Yes	No	Yes	No	Yes	No
Myocardial Infarction						
Yes	55	20	50	17	29	47
No	647	1745	696	1,145	1,407	991
Relative Risk [1]	10.59*		9.00*		0.52*	
95% Confidence Interval	5.42 – 20.71		4.61 – 17.57		0.28 – 0.98	

1. Adjusted to complex sampling population weights
2. The response to the question: "Would you say that in general your health is excellent, very good, fair or poor?" were collapsed into two categories; 'excellent', 'very good', and 'good' = "Good" and 'fair' and 'poor' = "Poor"

* Statistically significant at alpha = 0.05 level

Note: table orientation reports health outcomes in the rows and risk factors in the columns

Table 13.10 Risk Associations Between Coronary Heart Disease and Other Health-Related Conditions

	Health Status [2]		Overweight and Obesity		Diabetes Mellitus	
	Poor	Good	Yes	No	Yes	No
Coronary Heart Disease						
Yes	7	5	53	24	18	62
No	719	500	1,398	815	184	2,206
Relative Risk [1]	1.15		1.57		3.44*	
95% Confidence Interval	0.32 – 4.10		0.88 – 2.80		1.81 – 6.53	

	Hypertension		High Blood Cholesterol		Never Smoked	
	Yes	No	Yes	No	Yes	No
Coronary Heart Disease						
Yes	59	21	56	20	31	48
No	634	1752	682	1,143	1,396	987
Relative Risk [1]	10.75*		7.87*		0.51	
95% Confidence Interval	5.92 – 19.52		3.88 – 15.96		0.27 – 1.00	

1. Adjusted to complex sampling population weights
2. The response to the question: "Would you say that in general your health is excellent, very good, fair or poor?" were collapsed into two categories; 'excellent', 'very good', and 'good' = "Good" and 'fair' and 'poor' = "Poor"

* Statistically significant at alpha = 0.05 level

Note: table orientation reports health outcomes in the rows and risk factors in the columns

Table 13.11 Risk Associations Between Stroke and Other Health-Related Conditions

	Health Status [2]		Overweight and Obesity		Diabetes Mellitus	
	Poor	Good	Yes	No	Yes	No
Stroke						
Yes	5	2	35	22	19	42
No	724	504	1,429	819	188	2,236
Relative Risk [1]	0.78		0.83		6.24*	
95% Confidence Interval	0.14 – 4.27		0.42 – 1.65		3.11 – 12.49	

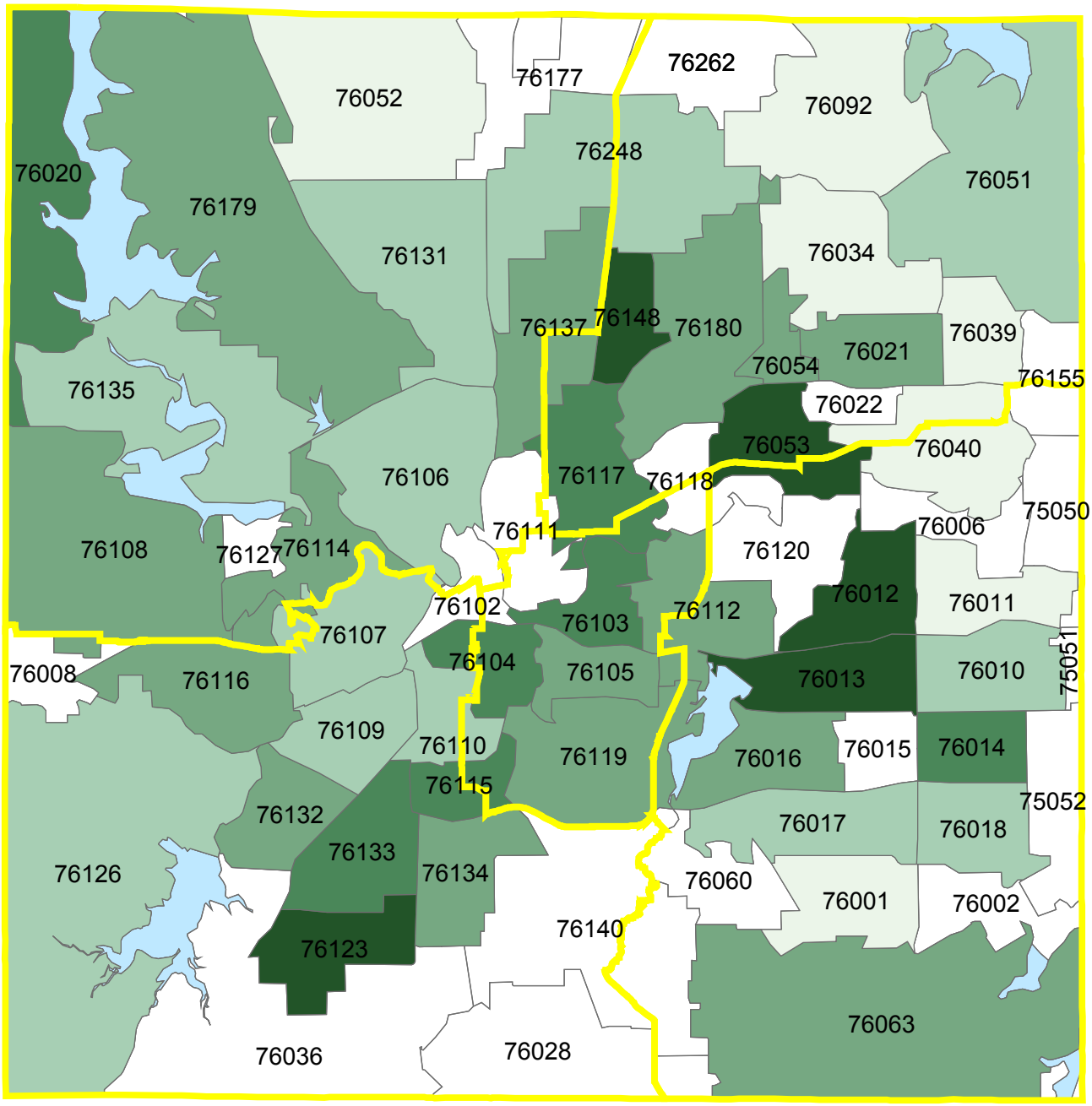
	Hypertension		High Blood Cholesterol		Never Smoked	
	Yes	No	Yes	No	Yes	No
Stroke						
Yes	43	18	32	19	23	38
No	662	1758	717	1,144	1,413	1,003
Relative Risk [1]	7.08*		2.22*		0.47*	
95% Confidence Interval	3.51 – 14.30		1.08 – 4.57		0.27 – 0.84	

1. Adjusted to complex sampling population weights
2. The response to the question: "Would you say that in general your health is excellent, very good, fair or poor?" were collapsed into two categories; 'excellent', 'very good', and 'good' = "Good" and 'fair' and 'poor' = "Poor"

* Statistically significant at alpha = 0.05 level

Note: table orientation reports health outcomes in the rows and risk factors in the columns

Figure 13.1 Respondents with Doctor-Diagnosed Heart Disease by ZIP Code in Tarrant County, Texas



Percentage of Respondents

- No Reported Heart Disease
- 0.8% - 4.0%
- 4.1% - 8.0%
- 8.1% - 12.0%
- 12.1% - 16.1%
- Inadequate Sample Size
- Water
- Sub County Area

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Table 13.12 Questions Asked on Heart Disease in Tarrant County Adults Age 18 and Older

Questions	Respondents[1] n	%
1. To lower your risk of developing heart disease or stroke, are you eating fewer high-fat or high-cholesterol foods?		
Yes	1544	62.2
No	870	37.8
2. To lower your risk of developing heart disease or stroke, are you eating more fruits and vegetables?		
Yes	2005	79.1
No	470	20.9
3. To lower your risk of developing heart disease or stroke, are you more physically active?		
Yes	1732	71.2
No	728	28.8
4. Within the past 12 months, has a doctor, nurse or other health professional told you to eat fewer high fat or high cholesterol foods?		
Yes	565	20.5
No	1920	79.5
5. Within the past 12 months, has a doctor, nurse or other health professional told you to eat more fruits and vegetables?		
Yes	925	34.7
No	1553	65.3
6. Within the past 12 months, has a doctor, nurse or other health professional told you to be more physically active?		
Yes	1031	39.7
No	1449	60.3
7. Has a doctor, nurse or other health professional ever told you that you had a heart attack, also called a myocardial infarction?		
Yes	76	2.2
No	2405	97.8
8. Has a doctor, nurse or other health professional ever told you that you had angina or coronary heart disease?		
Yes	80	2.6
No	2391	97.4
9. Has a doctor, nurse or other health professional ever told you that you had a stroke?		
Yes	61	1.8
No	2425	98.2

1. Percentages are weighted to population characteristics

Table 13.12 Questions Asked on Heart Disease
Tarrant County Adults Age 18 and Older, cont.

Questions	Respondents[1] n	%
10. At what age did you have your first heart attack?		
18 - 24	4	8.4
25 - 34	7	12.4
35 - 44	8	24.1
45 - 54	10	12.1
55 - 64	9	12.8
65 +	17	30.2
11. At what age did you have your first stroke?		
18 - 24	2	1.6
25 - 34	6	16.9
35 - 44	8	11.2
45 - 54	14	22.2
55 - 64	16	23.3
65 +	19	24.8
12. After you left the hospital following your heart attack or stroke, did you go to any kind of outpatient rehabilitation?		
Yes	33	23.1
No	91	76.9
13. Do you take aspirin daily or every other day?		
Yes	569	29.6
No	1238	70.4
14. Do you have a health problem or condition that makes taking aspirin unsafe for you?		
Yes, not stomach related	77	5.1
Yes, stomach problems	75	5.8
No	1085	89.1
15. Why do you take aspirin, to relieve pain?		
Yes	119	18.5
No	445	81.5
16. Why do you take aspirin, to reduce the chance of a heart attack?		
Yes	486	85.8
No	74	14.2
17. Why do you take aspirin, to reduce the chance of a stroke?		
Yes	408	74.5
No	129	25.5

1. Percentages are weighted to population characteristics

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Introduction

The prevalence of diagnosed diabetes among adults has more than doubled over the past 20 years, from 5.8 million cases in 1980 to 13.3 million cases in 2002 (1). It is estimated that the number of individuals in the United States with diabetes will increase by 165% by 2050, with the fastest increases occurring in some older and minority groups (2).

Uncontrolled diabetes has a major impact on the development of other chronic diseases and can result in serious disability such as amputation, blindness and kidney failure resulting in dialysis (3). Adult diabetics are more likely to suffer from cardiovascular conditions and events, such as hypertension myocardial infarction, coronary heart disease, and stroke (4 - 6). Persons with diabetes have a risk of premature death that is approximately two times greater than that of persons without the disease (7).

Up to 30% of persons suffering from diabetes remain undiagnosed (8). Having regular eye exams and timely treatment can prevent up to 90% of diabetes-related blindness (9). Foot care programs that include regular examinations and patient education can prevent up to 85% of diabetes-related amputations (9). Treatment to better control blood pressure in diabetic patients can reduce heart disease and stroke by 33%–50% and reduce diabetes-related kidney failure by 33% (9).

Methods

The responses to some diabetes-related questions were categorized to reflect the clinical recommendations of the American Diabetes Association (ADA), "*Standards of Medical Care in Diabetes*" (10). The ADA currently recommends:

a. Lifestyle modification focusing on the reduction of high fat/high cholesterol intake, weight loss, and increased physical activity
b. Self-monitoring of blood glucose
c. Routine blood pressure monitoring at every diabetes visit
d. Routine eye exams to reduce the risk of diabetic retinopathy
e. Annual foot examinations to identify high-risk foot conditions

Results

Key Findings

- **About 6% of the Tarrant County population has been diagnosed with diabetes**
- **1 out of 4 diabetics are insulin dependent**
- **Diabetes was highest among African-Americans**
- **The risk of diabetes diagnosis increases with age**
- **Diabetics are more likely to suffer from cardiovascular conditions, such as myocardial infarctions, stroke, and coronary heart disease**
- **Diabetics tend to have poor health status and are more likely to be overweight or obese**

Overall, about 6% of Tarrant County residents have been diagnosed with diabetes. Respondents in ZIP Codes 76103 (18.2%) and 76114 (13.8%) reported the highest prevalence of diabetes, however the geographical distribution of the disease did not differ significantly between sub-county areas [Figure 14.1]. No significant differences in gender were identified with regards to diabetes diagnosis among females (6.2%) and males (5.6%). Persons over the age of 65 reported the highest prevalence of doctor diagnosed diabetes (18.9%) followed by those age 55 to 65 (13.0%). The prevalence of doctor-diagnosed diabetes was highest for those who earn less than $25,000 per year, approximately 10%, and was significantly different than those who earned higher annual incomes. While African-Americans reported the highest prevalence of diagnosed diabetes (9.2%), this estimate did not differ significantly from other ethnic groups. Individuals reporting that they were unable to work or who are currently retired had the highest prevalence of doctor-diagnosed diabetes with 18.7% and 16.5%, respectively. Employment status appears to be an important indicator for doctor-diagnosed diabetes, as the prevalence of disease is significantly higher for those who are unemployed, unable to work, or who are retired, however this finding may be confounded by age [Table 14.1.].

The point prevalence estimate for doctor-diagnosed diabetes in Tarrant County (5.9%) is lower than both the state (7.7%) and national (7.0%) point estimates [Table 14.2].

Tarrant County's diabetic residents are 6.3 times more likely to have suffered from myocardial infarction; 6.2 times more likely to have suffered a stroke; 2.4 times more likely to be hypertensive; 6.3 times more likely to have high blood cholesterol; and 2.4 times more likely to be overweight or obese than non-diabetics. These findings are consistent with the current literature (3-6) [Table 14.3].

Table 14.1 Diabetes Mellitus in Tarrant County Adults Age 18 and Older

	Diagnosed with Diabetes ‡			
	n	Weighted Percentage*	N	95% Confidence Interval
Total	217	5.9	2,564	5.0 – 7.0
Sub-County Area				
Northeast	36	5.5	512	3.8 – 7.8
Southeast	24	4.5	442	2.8 – 7.2
Central	79	10.4	610	8.2 – 13.2
Southwest	46	7.3	507	5.3 – 10.0
Northwest	32	5.2	493	3.6 – 7.4
Gender				
Male	88	6.2	988	4.8 – 8.1
Female	129	5.6	1,573	4.5 – 6.9
Age				
18-24	0	- -	180	- -
25-34	6	1.3	505	0.4 – 3.9
35-44	24	3.0	557	1.8 – 5.1
45-54	42	7.5	479	5.1 – 10.9
55-65	57	13.0	380	9.6 – 17.3
>65	85	18.9	431	14.9 – 23.6
Education				
<High school	40	6.9	396	4.3 – 10.8
High school or GED	69	7.0	678	5.2 – 9.4
Tech/some college	69	6.5	687	4.8 – 8.6
College degree	38	4.1	790	2.8 – 5.8
Annual Income				
<$15,000	42	10.0	313	6.6 – 14.8
$15,000 - $24,999	58	10.4	445	7.6 – 14.1
$25,000 - $34,999	24	6.7	252	4.0 – 11.0
$35,000 - $49,999	21	3.9	326	2.3 – 6.4
>$50,000	34	3.3	873	2.1 – 5.0
Race/Ethnicity				
White	126	5.8	1577	4.7 – 7.2
African-American	58	9.2	433	6.3 – 13.3
Hispanic	29	5.2	459	3.4 – 7.9
Other	1	1.5	76	0.2 – 9.8
Employment				
Employed	73	3.8	1317	2.8 – 5.0
Self employed	6	3.3	206	0.9 – 11.4
Out of work >1yr	8	12.6	66	4.7 – 29.4
Out of work <1yr	5	7.6	83	2.6 – 19.8
Homemaker	16	4.6	273	2.6 – 8.0
Student	2	0.4	73	0.1 – 2.0
Retired	72	16.5	409	12.7 – 21.1
Unable to work	33	18.7	120	12.3 – 27.5

n represents the number of respondents who are diabetics
N represents the number of respondents to each question
* Percentages are weighted to population characteristics
‡ Doctor-diagnosed diabetes mellitus

Table 14.2 Comparison of Tarrant County, Texas, and the United States for Adults Diagnosed with Diabetes

Geographic Area	Diagnosed with Diabetes
Tarrant County	5.9% (5.0 – 7.0)
Texas*	7.7% (6.9 - 8.4)
United States*	7.0%
Healthy People 2010 Objective	NA

*Source: Division of Adult and Community Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System Online Prevalence Data, 2004

Table 14.3 Risk Associations Between Diagnosed Diabetes and Other Health-Related Conditions

	Health Status [2]		Overweight and Obesity		Myocardial Infarction	
	Yes	No	Yes	No	Yes	No
Doctor Diagnosed Diabetes						
Yes	26	3	165	31	22	184
No	718	520	1,339	835	54	2,220
Relative Risk [1]	2.99		2.35*		6.25*	
95% Confidence Interval	0.86 - 10.33		1.38 - 4.01		3.36 - 11.63	

1. Adjusted to complex sampling population weights
‡ The response to the question: "Would you say that in general your health is excellent, very good, fair or poor? were collapsed into two categories; 'excellent', 'very good', and 'good' = "Good" and 'fair' and 'poor' = "Poor"

* Statistically significant at alpha = 0.05 level

Note: table orientation reports health outcomes in the rows and risk factor in the columns

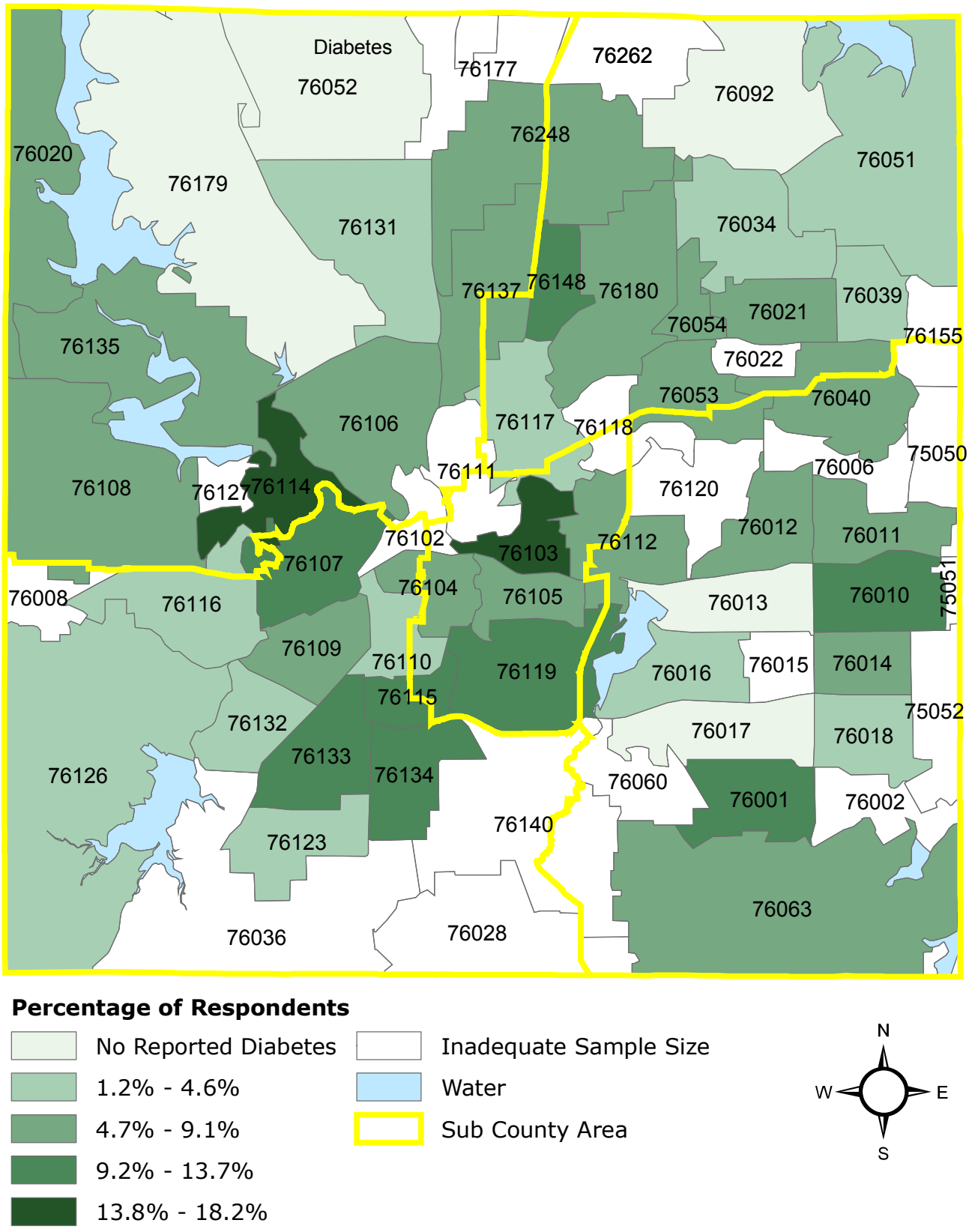
	Stroke		Hypertension		High Blood Cholesterol		Coronary Artery Disease	
	Yes	No	Yes	No	Yes	No	Yes	No
Doctor Diagnosed Diabetes								
Yes	19	188	155	18	184	73	18	184
No	42	2,236	561	62	2,206	1,098	62	2,206
Relative Risk [1]	6.24*		2.35*		6.25*		3.44*	
95% Confidence Interval	3.11 - 12.49		1.38 - 4.01		3.36 - 11.63		1.81 - 6.53	

1. Adjusted to complex sampling population weights

* Statistically significant at alpha = 0.05 level

Note: table orientation reports health outcomes in the rows and risk factor in the columns

Figure 14.1 Respondents with Doctor-Diagnosed Diabetes by ZIP Code in Tarrant County, Texas



Percentage of Respondents

- No Reported Diabetes
- 1.2% - 4.6%
- 4.7% - 9.1%
- 9.2% - 13.7%
- 13.8% - 18.2%
- Inadequate Sample Size
- Water
- Sub County Area

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Table 14.4 Questions Asked on Diabetes Mellitus in Tarrant County Adults Age 18 and Older

Questions	Respondents n	% [1]
1. Have you ever been told by a doctor that you have diabetes?		
Yes	217	5.9
Yes, but female told only during pregnancy	27	1.0
No, pre-diabetes or borderline diabetes	19	0.6
No	2301	92.5
2. How old were you when you were told you have diabetes? [2,3]		
12 years old or younger	1	0.8
13 – 20 years old	4	4.0
21 – 39 years	40	19.1
40 – 59 years	102	49.8
= 60 years	54	26.3
3. About how often do you check your blood for glucose or sugar? [2,3]		
Daily or more	140	62.0
3 – 6 times per week	28	14.1
1 – 2 times per week	16	13.6
1 – 3 times per month	11	5.2
Never	13	5.1
4. About how often do you check your feet for any sores or irritations? [includes times checked by a family member or friend, does not include times checked by a health professional] [2,3]		
Daily or more	155	69.7
3 – 6 times per week	20	12.1
1 – 2 times per week	13	5.6
1 – 3 times per month	6	2.8
1 – 3 times per year	1	0.4
Never	16	9.4
5. Have you ever had any sores or irritations on your feet that took more than fours weeks to heal? [2]		
Yes	24	10.4
No	190	89.6
6. About how many times in the past 12 months have you seen a health care professional for your diabetes? [2,3]		
No visits	24	11.1
Less than 3 visits	90	46.9
3 – 4 visits	47	24.3
4 – 6 visits	13	6.2
More than 6 visits	29	11.5
7. About how many times in the past 12 months has a health care professional checked you for "A one C"? [2,3]		
Less than 4 times	139	83.8
Greater than 4 times	14	6.6
Never	15	9.6

1. Percentages are weighted to population characteristics
2. Asked of those responding "Yes" to Question 1
3. Responses categorized to reflect current clinical guidelines. [American Diabetes Association. Standards of Medical Care in Diabetes. *Diabetes Care* 28:S4-S36, 2005]
4. The use of the A1C for the diagnosis of diabetes is not currently recommended by the American Diabetes Association, but to be used to assess treatment efficacy. [American Diabetes Association. Standards of Medical Care in Diabetes. *Diabetes Care* 28:S4-S36, 2005]

Table 14.4 Questions Asked on Diabetes Mellitus, Tarrant County Adults Age 18 and Older, cont.

Questions	Respondents n	Respondents % [1]
8. About how many times in the past 12 months has a health care professional checked you for feet for any sores or irritations? [2,3]		
1 – 5 times	128	63.4
More than 5 times	25	7.3
Never	53	29.3
9. When was the last time you had an eye exam in which the pupils were dilated? [2]		
Within the past month (anytime less than 1 month ago)	51	22.4
Within the past year (1 month but less than 12 months ago)	85	38.3
Within the past 2 years (1 year but less than 2 years ago)	37	18.0
2 or more years ago	24	11.3
Never	16	10.0
10. Has a doctor ever told you that diabetes has affected your eyes or that you had retinopathy? [2]		
Yes	44	16.1
No	169	83.9
11. Have you ever taken a course or class in how to manage your diabetes yourself? [2]		
Yes	140	64.9
No	75	35.1
12. What is your hemoglobin A1C level? [2 – 4]		
Less than 4.99	1	1.7
5.00 – 6.99	26	20.3
7.00 – 7.99	10	7.5
More than 8.00	110	70.5
13. About how many times in the past 12 months has a health care professional checked you for feet for any sores or irritations? [2,3]		
1 – 5 times	128	63.4
More than 5 times	25	7.3
Never	53	29.3
14. When was the last time you had an eye exam in which the pupils were dilated? [2]		
Within the past month (anytime less than 1 month ago)	51	22.4
Within the past year (1 month but less than 12 months ago)	85	38.3
Within the past 2 years (1 year but less than 2 years ago)	37	18.0
2 or more years ago	24	11.3
Never	16	10.0

1. Percentages are weighted to population characteristics
2. Asked of those responding "Yes" to Question 1
3. Responses categorized to reflect current clinical guidelines. [American Diabetes Association. Standards of Medical Care in Diabetes. *Diabetes Care* 28:S4-S36, 2005]
4. The use of the A1C for the diagnosis of diabetes is not currently recommended by the American Diabetes Association, but to be used to assess treatment efficacy. [American Diabetes Association. Standards of Medical Care in Diabetes. *Diabetes Care* 28:S4-S36, 2005]

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Introduction

Asthma is a chronic illness that has been increasing in prevalence in the United States since 1980 (1). In 2001 (2), an estimated:

- 31.3 million people had been diagnosed with asthma during their lifetime
- 20.3 million people currently were diagnosed with asthma
- 12 million people experienced an asthma attack in the previous year

Among persons of all ages in 2000 (3), asthma accounted for:

- 10.4 million outpatient visits
- 1.8 million emergency department visits
- 465,000 hospitalizations
- 4,487 deaths

Methods

The BRFSS respondents were asked 11 questions about asthma and two questions about childhood asthma in the household. These questions and the responses can be found in Table 15.4. Questions about current asthma were further analyzed relative to demographic characteristics, health-related consequences, and ZIP Code distribution. Asthma prevalence comparisons between Tarrant County, Texas, and the United States are found in Table 15.2.

Results

Key Findings

- **Over 8% of adults in Tarrant County are currently asthmatic**
- **More females than males are asthmatic**
- **Current asthma is higher in teenagers and young adults ages 18-24 than in adults**
- **Asthma tended to be lower in adults with a college degree than in those with less than a high school education**
- **Asthma prevalence was highest among those earning less than $15,000 and lowest among those earning $50,000 or more**
- **Current asthma is associated with poor health status and current smoking**

Overall, 13.4% of Tarrant County residents have been told that they have asthma by a health professional. The proportion of adults in Tarrant County who currently have asthma is 8.5% [Table 15.1]. More than half (53.0%) of those with current asthma had an episode of asthma attack in the past 12 months, but fewer (12.2%) of them needed emergency treatment. Many, however did not report having routine checkups. More than half (55.3%) did not see a health professional during the past 12 months. The majority (74.5%) did not miss work or usual activities in the past 12 months because of asthma symptoms.

The proportion of those who report current asthma did not differ significantly among the five sub-county areas in Tarrant County [Table 15.1]. Current asthma was higher in females (10.8%) than males (6.1%) [Table 15.1]. Teenagers and young adults age 18-24 (16.7%) were more prone to report that they currently have asthma than adults age 25 to 34 (5.7%) [Table 15.1]. Current asthma was highest for those with less than a high school education (11.3%) followed by those with high school or GED and some technical and some college (9.0%) and was lowest for those with a college degree (6.3%). Current asthma tends to be related to income. Respondents with income less than $15,000 reported the highest proportion of current asthma (12.7%) and they differ significantly from those with an income of $50,000 and above (5.9%). Among the racial/ethnic groups, more Whites (9.4%) and African-Americans (10.0%) tended to report current asthma than Hispanics (5.2%). Current asthma was highest for those unable to work (29.0%) followed by students (21.2%) and those out of work for more than one year (12.8%) and less than one year (10.5%). There was a significant difference between the employed and students or those unable to work [Table 15.1]. About 18% of all adults with children report that they have at least one child that had ever been diagnosed with asthma in their household and 75% of these children still have asthma [Table 15.4].

The proportion of those who reported that they currently have asthma in Tarrant County (8.5%) was higher that that of Texas (7.1%) and the United States (8.3%) [Table 15.2]. Those who report current asthma are 1.8 times more likely to report poor health status and 1.5 times more likely to be smokers [Table 15.3].

Table 15.1 Current Asthma in Tarrant County Adults Age 18 and Older

	Current Asthma			
	n	Weighted Percentage*	N	95% Confidence Interval
Total	224	8.5	2554	7.1-10.0
Sub-County Area				
Northeast	48	8.5	508	6.0-11.9
Southeast	44	9.4	440	6.5-13.4
Central	53	8.2	608	6.2-10.9
Southwest	37	7.5	504	5.2-10.9
Northwest	42	8.2	494	5.9-11.2
Gender				
Male	57	6.1	986	4.4-8.3
Female	167	10.8	1565	8.9-13.1
Age				
18-24	21	16.7	177	9.9-26.7
25-34	32	5.7	505	3.8-8.5
35-44	47	7.7	556	5.4-10.7
45-54	49	8.9	479	6.3-12.3
55-65	39	9.2	377	6.4-12.9
65+	32	7.4	430	4.9-10.8
Education				
<High school	39	11.3	395	7.5-16.6
High school or GED	61	9.0	675	6.1-13.1
Tech/some college	68	9.0	683	6.8-11.9
College degree	56	6.3	788	4.6-8.5
Annual Income				
<$15,000	40	12.7	312	8.2-19.2
$15,000 - $24,999	38	8.2	445	5.5-12.1
$25,000 - $34,999	22	9.5	252	5.7-15.6
$35,000 - $49,999	29	9.4	325	5.3-16.2
>$50,000	58	5.9	869	4.3-8.0
Race/Ethnicity				
White	146	9.4	1568	7.7-11.5
African-American	50	10.0	433	6.6-14.8
Hispanic	20	5.2	459	3.2-8.5
Other	8	9.2	76	3.6-21.9
Employment				
Employed	96	7.3	1312	5.6-9.4
Self-employed	8	3.7	206	1.5-8.6
Out of work >1yr	9	10.5	65	4.8-21.3
Out of work <1yr	11	12.8	82	6.2-24.6
Home maker	19	6.4	273	3.7-10.7
Student	10	21.2	72	10.9-37.3
Retired	34	7.9	407	5.4-11.6
Unable to work	36	29.0	120	19.7-40.5

n represents the number of respondents who reported that they currently have asthma
N represents the number of respondents to each question
* Percentages are weighted to population characteristics

Table 15.2 Comparison of Tarrant County, Texas, and the United States for Adults with Current Asthma

Geographic Area	Current Asthma
Tarrant County	8.5% (7.1 - 10.0)
Texas*	7.1% (6.4 - 7.9)
United States*	8.3%
Healthy People 2010 Objective	NA

*Source: Division of Adult and Community Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System Online Prevalence Data, 2004

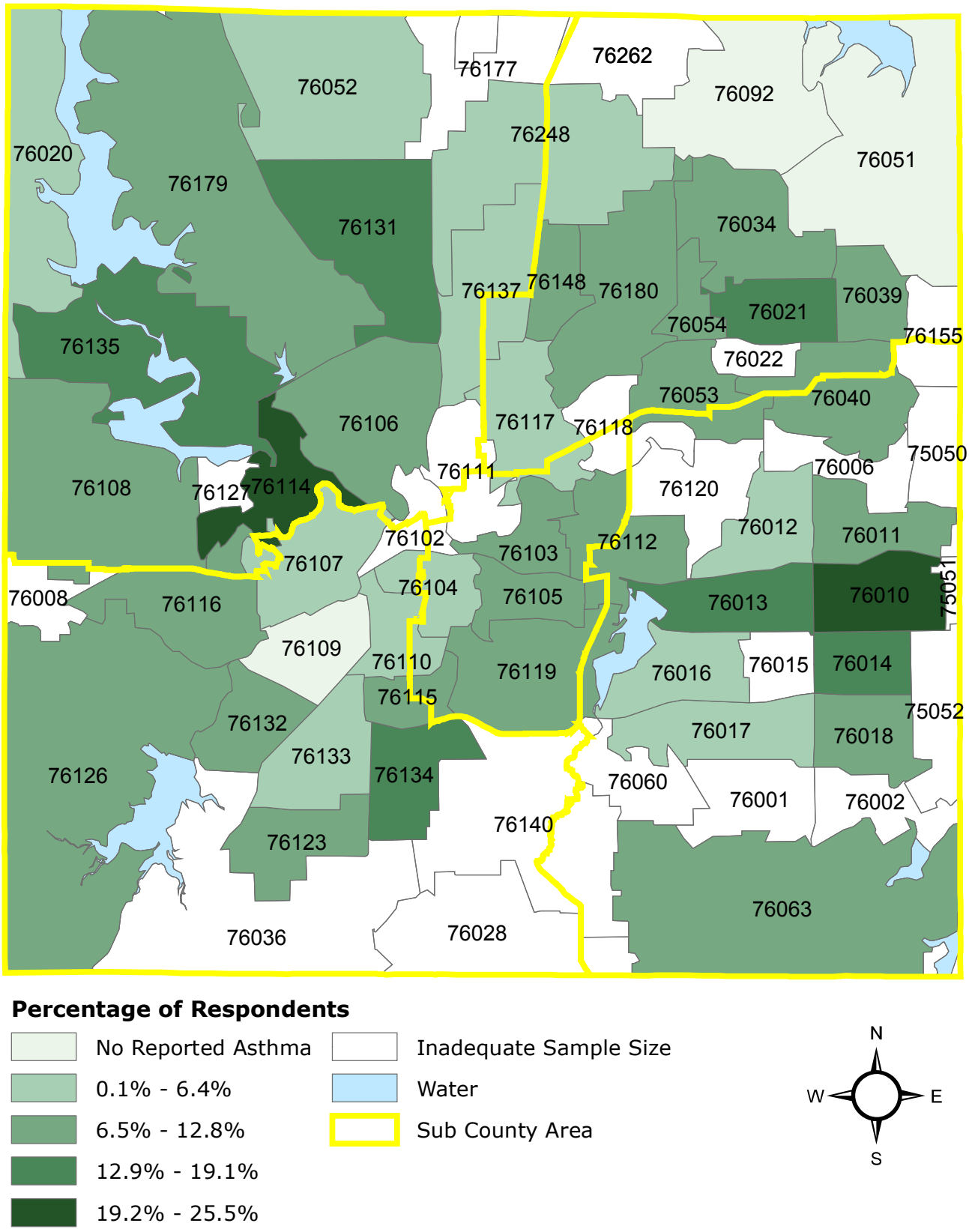
Table 15.3 Risk Associations Between Asthma and Other Health-Related Conditions

	Health Status[2]		Current Smoker	
	Poor	Good	Yes	No
Current Asthma				
Yes	76	147	62	160
No	420	1907	472	1850
Relative Risk[1]	1.775*		1.476*	
95% Confidence Interval	1.33 – 2.37		1.11 – 1.96	

1. Adjusted to complex sampling population weights
2. The response to the question: "Would you say that in general your health is excellent, very good, fair or poor? were collapsed into two categories; 'excellent', 'very good', and 'good' = "Good" and 'fair' and 'poor' = "Poor"

* Statistically significant at alpha = 0.05 level

Figure 15.1 Respondents Reporting Current Asthma by ZIP Code in Tarrant County, Texas



Percentage of Respondents

- No Reported Asthma
- 0.1% - 6.4%
- 6.5% - 12.8%
- 12.9% - 19.1%
- 19.2% - 25.5%
- Inadequate Sample Size
- Water
- Sub County Area

N
W E
S

Table 15.4 Questions Asked on Current Asthma in Tarrant County

Questions	Respondents n	Respondents %[1]
1. Have you ever been told by a doctor, nurse or other health professional that you had asthma?		
Yes	342	13.4
No	2219	86.6
2. Do you still have asthma?[2]		
Yes	224	64.6
No	111	35.4
3. How old were you when you were first told by a doctor or other health professional that you had asthma?		
11-17 years	31	29.4
18-24 years	21	12.1
25-34 years	22	13.1
35-44 years	39	23.0
45-54 years	28	12.1
55-64 years	15	5.3
65+	13	5.0
4. During the past 12 months, have you had an episode of asthma attack?		
Yes	117	53.0
No	97	47.0
5. During the past 12 months, how many times did you visit an emergency room or urgent care center because of your asthma?		
1-2 times	26	78.2
3-5 times	6	13.1
> 5 times	3	8.7
None	178	87.9
6. During the past 12 months, how many times did you see a doctor, nurse or other health professional for urgent treatment of worsening asthma symptoms?		
1-2 times	41	71.4
3-5 times	15	19.9
> 5 times	6	8.7
None	147	75.1
7. During the past 12 months, how many times did you see a doctor, nurse or other health professional for a routine checkup for your asthma?		
1-2 times	71	34.0
3-5 times	25	9.3
> 5 times	6	1.5
None	101	55.3
8. During the past 12 months, how many days were you unable to work or carry out your usual activities because of your asthma?		
Less than a week	36	69.3
One week to one month	9	14.9
More than a month	7	15.8
None	152	77.0

1. Percentages are weighted to population characteristics
2. Asked of those responding "Yes" to Question 1

Table 15.4 Questions Asked on Current Asthma in Tarrant County, cont.

Questions	Respondents n	Respondents %[1]
9. During the past 30 days, how often did you have any symptoms of asthma?		
Less than once a week	47	24.4
Once or twice a week	54	26.6
More than 2 times a week, but not every day	22	5.8
Every day, but not all the time, or	24	12.9
Every day, all the time	13	3.6
None	45	26.7
10. During the past 30 days, how many days did symptoms of asthma make it difficult for you to stay asleep?		
1 or 2	38	22.0
3-4	19	9.8
5	7	4.4
6-10 or	10	5.5
> 10	15	4.9
None	75	53.5
11. During the past 30 days, how often did you take asthma medication that was prescribed or given to you by a doctor?		
Less than once a week	28	12.9
Once or twice a week	29	14.3
More than 2 times a week, but not every day	13	3.8
Once every day, or	29	9.2
Two or more times every day	44	21.7
Did not take any	62	38.0
12. How many of the children age 17 or younger living in your household have ever been diagnosed with asthma?		
One	178	14.1
Two	40	2.9
Three	8	0.6
Four	1	0.1
Five	1	0.2
None	861	82.1
13. Does this child/how many of these children still have asthma?		
One	133	63.4
Two	24	9.1
Three	7	2.6
None	58	24.9

1. Percentages are weighted to population characteristics

References

1. Mannino D.M., Homa D.M., Akinbami L.J., et al. Surveillance for asthma—United States, 1980--1999. In: CDC surveillance summaries (March 29). MMWR 2002:51(No. SS-1).

2. Centers for Disease Control and Prevention. Department of Health and Human Services. Self-Reported Asthma Prevalence and Control Among Adults – United States, 2001. (May 2). MMWR 2003:52(No.17);381-384.

3. Centers for Disease Control and Prevention. National Center for Health Statistics. Asthma prevalence, health care use and mortality, 2000-2001. Available at http://www.cdc.gov/nchs/products/pubs/pubd/hestats/asthma.htm

APPENDICES

Tarrant County 1998-2004 BRFSS Results Comparisons
Questionnaire
Technical Report

Comparison of Selected Risk Factors in Tarrant County (1998 and 2004[1])

	Tarrant County, 1998	Tarrant County, 2004	% Change
	Percent	Percent	
Fair or Poor Health Status Would you say that in general your health is excellent, very good, fair or poor?	13.8	16.0	+2.2
No Health Insurance Do you have any health care coverage?	14.4	23.8	+9.4
Overweight Body Mass Index >27.8 for men and >27.3 for women	32.3	37.8	+5.5
Consumes 5 or More Servings of Fruits and Vegetables per Day	19.5	25.9	+6.4
Current Smoker Do you smoke cigarettes everyday, some days, or not all?	20.6	22.2	+1.6
Blood Cholesterol Screening Have you ever had your blood checked for cholesterol?	74.3	74.9	+0.6
Pap Test Within the Past 3 Years (Females Age 18 and Older) Have you ever have a "pap smear" test?	94.8	83.7	-11.1
Diagnosed with Diabetes Have you ever been told by a doctor that you have diabetes?	6.6	5.9	-0.7
Diagnosed with Hypertension Have you ever been told by a doctor or other health professional that you have high blood pressure?	23.9	23.1	-0.8
Diagnosed with Hypercholesterolemia[2] Have you ever been told by a doctor or other health professional that you have high cholesterol?	30.1	36.4	+6.3

1. Data is presented for comparison purposes only. It is inappropriate to infer a statistical trend from only two data points
2. Significant modifications to lipid/lipoprotein classification released in 2001 may have an impact on differences in point estimates. [Executive summary of the Third Report of the National Cholesterol Education Program (NCEP) Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III). *JAMA* 2001;285:2486-97]

2004

Behavioral Risk Factor Surveillance System

Tarrant County Questionnaire

July 2004

Revised July 15, 2004

U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES

Centers for Disease Control and Prevention

National Center for Chronic Disease Prevention and Health Promotion

Division of Adult and Community Health

Document: Tarrant County 2004 BRFSS Questionnaire
Saved: 7/20/2005
Project: Tarrant County 2004 BRFSS Questionnaire.doc

Clearwater Research, Inc.

INTROQ

HELLO, I'm calling for the Tarrant County Department of Health and the Centers for Disease Control and Prevention. My name is **(name)**. We're gathering information on the health of Tarrant County residents. Your phone number has been chosen randomly, and I'd like to ask some questions about health and health practices.

Is this XXX-XXX-XXXX?

1. Correct Number (Proceed to next question)
2. Number is not the same – **SKIP TO WRONGNUM**

PRIVRES

Is this a private residence?

1. Yes, continue.
2. No, non-residential – **SKIP TO NONRES**

C13Q12

What county do you live in?

__ __ __ FIPS county code

777. DON'T KNOW / NOT SURE
999. REFUSED

*** IF Fips <> 439 Tarrant County Terminate***

NONRES – ONLY GET THIS IF PRIVRES = 2 (NON-RESIDENTIAL)

Thank you very much, but we are only interviewing private homes.

******<F3>******

WRONGNUM – ONLY GET THIS IF INTROQ = 2 (NUMBER IS NOT THE SAME)

Thank you very much, but it I seem to have dialed the wrong number. It's possible that your number may be called at a later time.

****<F3>****

ADULTS

I need to randomly select one adult who lives in your household to be interviewed. How many members of your household, including yourself, are 18 years of age or older?

_ _ ENTER THE NUMBER OF ADULTS

IF ANS = 1 SKIP TO ONEADULT

MEN

How many of these adults are men?

0. None
1. One
2. Two
3. Three
4. Four
5. Five
6. Six
7. Seven
8. Eight
9. Nine

IF ANS = ADULTS SKIP TO SELECTED

WOMEN

How many of these adults are women?

0. None
1. One
2. Two
3. Three
4. Four
5. Five
6. Six
7. Seven
8. Eight
9. Nine

IF ANS + MEN = ADULTS SKIP TO SELECTED

WRONGTOT – ONLY GET IF MEN + WOMEN <> ADULTS

I'm sorry, something is not right.

Number of Men -
Number of Women -

Number of Adults –

1. CORRECT THE NUMBER OF MEN
2. CORRECT THE NUMBER OF WOMEN
3. CORRECT THE NUMBER OF ADULTS

SELECTED - ONLY GET IF MORE THAN ONE ADULT IN HOUSEHOLD

The person in your household I need to speak with is the .

Are you the ?

1. YES – SKIP **TO YOURTHE1**
2. NO – **SKIP TO GETNEWAD**

ONEADULT – ONLY GET THIS IF ONE ADULT IN HOUSEHOLD

Are you the adult?

1. YES AND THE RESPONDENT IS A MALE – **SKIP TO YOURTHE1**
2. YES AND THE RESPONDENT IS A FEMALE – **SKIP TO YOURTHE1**
3. NO – **SKIP TO ASKGENDR**

ASKGENDER – ONLY GET IF ONEADULT = 3

Is the Adult a man or a woman?

1. Male
2. Female

GETADULT - ONLY GET IF ONEADULT = 3

May I speak with him or her?

1. YES, ADULT COMING TO THE PHONE
2. NO, GO TO NEXT SCREEN, PRESS F3 AND SCHEDULE A CALL-BACK

*****DO NOT USE <F3> ON THIS SCREEN*****

YOURTHE1 - ONLY GET IF ONEADULT = 1 (YES) OR IF SELECTED = 1 (YES)

Then you are the person I need to speak with.

1. PERSON INTERESTED, CONTINUE – **SKIP TO FIRSTSCR**

2. GO BACK TO ADULTS QUESTION. WARNING:A NEW RESPONDENT MAY BE SELECTED

GETNEWAD - **ONLY GET IF SELECTED = 2 (NO)**

May I speak with the ?

1. YES, SELECTED RESPONDENT COMING TO THE PHONE

2. NO, GO TO NEXT SCREEN, PRESS F3 AND SCHEDULE A CALL-BACK

3. GO BACK TO ADULTS QUESTION. WARNING:A NEW RESPONDENT MAY BE SELECTED

*****DO NOT USE F3 ON THIS SCREEN*****

GETNEWAD - ONLY GET IF SELECTED = 2 (NO)

HELLO, I'm _____ calling for the Tarrant County Department of Health and the Centers for Disease Control and Prevention. We're gathering information on the health of Tarrant County residents. Your phone number has been chosen randomly to be interviewed, and I'd like to ask some questions about health and health practices.

1. PERSON INTERESTED, CONTINUE – **SKIP TO INTROSCR**

2. GO BACK TO ADULTS QUESTIONS. WARNING: A NEW RESPONDENT MAY BE SELECTED

INTROSCR – ONLY GET IF NEWADULT = 1 or Yourthe1 = 1

I won't ask for your name, address, or other personal information that can identify you. You don't have to answer any question you don't want to, and you can end the interview at any time. Any information you give to me will be confidential. If you have any questions about this survey, I will provide a telephone number for you to call to get more information.

1. Person interested, continue

2. Go Back to Adults Question. Warning: A New Respondent may be selected

NONQAL - ONLY GET IF CATI THINKS THE QUOTACELL IS FULL

INTERVIEWER:

PLEASE ALERT YOUR SUPERVISOR IMMEDIATELY!!!!
THE QUOTAS SET FOR THIS STUDY ARE INCORRECT.

AFTER NOTIFYING YOUR SUPERVISOR, RETURN THE RECORD

Core 1: Health Status

C01Q01

Would you say that in general your health is excellent, very good, good, fair, or poor?

1. Excellent
2. Very good
3. Good
4. Fair
5. Poor

7. DON'T KNOW/NOT SURE
9. REFUSED

Core 2: Health Days – Health-related Quality of Life

C02Q01

Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?

__ __ Number of days

88. None
77. DON'T KNOW/NOT SURE
99. REFUSED

C02Q02

Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?

__ __ Number of days

88. None
77. DON'T KNOW/NOT SURE
99. REFUSED

C02Q03 – ONLY GET IF C02Q01<>88 OR C02Q02<>88

During the past 30 days, for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation?

__ __ Number of days

88. None
77. DON'T KNOW/NOT SURE
99. REFUSED

Core 3: Health Care Access

C03Q01

Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicare?

1. Yes
2. No

7. DON'T KNOW/NOT SURE
9. REFUSED

C03Q02

Do you have one person you think of as your personal doctor or health care provider?

(If "No," ask: *"Is there more than one or is there no person who you think of?"*)

1. Yes, only one
2. More than one
3. No

7. DON'T KNOW/NOT SURE
9. REFUSED

C03Q03

Was there a time in the past 12 months when you needed to see a doctor but could not because of the cost?

1. Yes
2. No

7. DON'T KNOW/NOT SURE
9. REFUSED

Core 4: Exercise

C04Q01

During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?

1. Yes
2. No

7. DON'T KNOW / NOT SURE
9. REFUSED

Core 7: Tobacco Use

C07Q01

Have you smoked at least 100 cigarettes in your entire life?

NOTE: 5 packs = 100 cigarettes

1. Yes
2. No – **SKIP TO C08Q01**

7. DON'T KNOW / NOT SURE – **SKIP TO C08Q01**
9. REFUSED – **SKIP TO C08Q01**

C07Q02 – ONLY GET IF C07Q01=1

Do you now smoke cigarettes every day, some days, or not at all?

1. Everyday
2. Some days
3. Not at all **– SKIP TO C08Q01**

9. REFUSED **– SKIP TO C08Q01**

C07Q03 – ONLY GET IF C07Q01=1 AND C07Q02<3

During the past 12 months, have you stopped smoking for one day or longer because you were trying to quit smoking?

1. Yes
2. No

7. DON'T KNOW / NOT SURE
9. REFUSED

Core 8: Alcohol Consumption

C08Q01

A drink of alcohol is 1 can or bottle of beer, 1 glass of wine, 1 can or bottle of wine cooler, 1 cocktail, or 1 shot of liquor. During the past 30 days, how many days per week or per month did you have at least one drink of any alcoholic beverage?

1__ __ Days per week
2__ __ Days in past 30

888. NO DRINKS IN PAST 30 DAYS **– SKIP TO C09Q01**
777. DON'T KNOW / NOT SURE
999. REFUSED **– SKIP TO C09Q01**

C08Q02 - ONLY GET IF C08Q01<>888 AND C08Q01<>999

On the days when you drank, about how many drinks did you drink on the average?

__ __ Number of drinks

77. DON'T KNOW / NOT SURE
99. REFUSED

C08Q03 – ONLY GET IF C08Q01<>888 AND C08Q01<>999

Considering all types of alcoholic beverages, how many times during the past 30 days did you have 5 or more drinks on an occasion?

__ __ Number of times

88. NONE
77. DON'T KNOW / NOT SURE
99. REFUSED

C08Q04 – ONLY GET IF C08Q01<>888 AND C08Q01<>999

During the past 30 days, how many times have your driven when you've had perhaps too much to drink?

__ __ Number of times

88. NONE
77. DON'T KNOW / NOT SURE
99. REFUSED

Core 9: Asthma

C09Q01

Have you ever been told by a doctor, nurse or other health professional that you had asthma?

1. Yes
2. No **– SKIP TO C10Q01**

7. DON'T KNOW / NOT SURE **– SKIP TO C10Q01**
9. REFUSED **– SKIP TO C10Q01**

C09Q02 – ONLY GET IF C09Q01=1

Do you still have asthma?

1. Yes
2. No

7. DON'T KNOW / NOT SURE
9. REFUSED

Core 10: Diabetes

C10Q01

Have you ever been told by a doctor that you have diabetes?

**(If "Yes" and respondent is female, ask: *"Was this only when you were pregnant?"* -
If Respondent says pre-diabetes or borderline diabetes, use response code 4.)**

1. Yes
2. Yes, but female told only during pregnancy **– SKIP TO C11Q01**
3. No **– SKIP TO C11Q01**
4. No, pre-diabetes or borderline diabetes**– SKIP TO C11Q01**

7. DON'T KNOW / NOT SURE **– SKIP TO C11Q01**
9. REFUSED **– SKIP TO C11Q01**

Module 1: Diabetes

M01Q01 – ONLY GET IF C10Q01=1

How old were you when you were told you have diabetes?

__ __ Code age in years **[97 = 97 and older]**

98. DON'T KNOW/ NOT SURE
99. REFUSED

M01Q02 – ONLY GET IF C10Q01=1

Are you now taking insulin?

1. Yes
2. No

9. REFUSED

M01Q03 – ONLY GET IF C10Q01=1

Are you now taking diabetes pills?

1. Yes
2. No

7. DON'T KNOW/ NOT SURE
9. REFUSED

M01Q04 – ONLY GET IF C10Q01=1

About how often do you check your blood for glucose or sugar? Include times when checked by a family member or friend, but do not include times when checked by a health professional.

1 __ __Times per day
2 __ __Times per week
3 __ __Times per month
4 __ __Times per year

888. NEVER
777. DON'T KNOW / NOT SURE
999. REFUSED

M01Q05 – ONLY GET IF C10Q01=1

About how often do you check your feet for any sores or irritations? Include times when checked by a family member or friend, but do not include times when checked by a health professional.

1 __ __Times per day
2 __ __Times per week
3 __ __Times per month
4 __ __Times per year

888. NEVER
555. NO FEET
777. DON'T KNOW / NOT SURE
999. REFUSED

M01Q06 – ONLY GET IF C10Q01=1

Have you ever had any sores or irritations on your feet that took more than four weeks to heal?

1. Yes
2. No

7. DON'T KNOW/ NOT SURE
9. REFUSED

M01Q07 – ONLY GET IF C10Q01=1

About how many times in the past 12 months have you seen a doctor, nurse, or other health professional for your diabetes?

__ __ Number of times **[76 = 76 or more]**

88. NONE
77. DON'T KNOW / NOT SURE
99. REFUSED

M01Q08 – ONLY GET IF C10Q01=1

A test for hemoglobin "A one C" measures the average level of blood sugar over the past three months. About how many times in the past 12 months has a doctor, nurse, or other health professional checked you for "A one C"?

__ __ Number of times **[76 = 76 or more]**

88. NONE
98. NEVER HEARD OF "A ONE C" TEST
77. DON'T KNOW / NOT SURE
99. REFUSED

M01Q09 – ONLY GET IF C10Q01=1 AND M01Q05<>555

About how many times in the past 12 months has a health professional checked your feet for any sores or irritations?

__ __ Number of times **[76 = 76 or more]**

88. NONE
77. DON'T KNOW / NOT SURE
99. REFUSED

M01Q10 – ONLY GET IF C10Q01=1

When was the last time you had an eye exam in which the pupils were dilated? This would have made you temporarily sensitive to bright light.

Read only if necessary:

1. Within the past month (anytime less than 1 month ago)
2. Within the past year (1 month but less than 12 months ago)
3. Within the past 2 years (1 year but less than 2 years ago)
4. 2 or more years ago

8. NEVER
7. DON'T KNOW / NOT SURE
9. REFUSED

M01Q11 – ONLY GET IF C10Q01=1

Has a doctor ever told you that diabetes has affected your eyes or that you had retinopathy?

1. Yes
2. No

7. DON'T KNOW/ NOT SURE
9. REFUSED

M01Q12 – ONLY GET IF C10Q01=1

Have you ever taken a course or class in how to manage your diabetes yourself?

1. Yes
2. No

7. DON'T KNOW/ NOT SURE
9. REFUSED

Core 12: Immunization

C12Q01

During the past 12 months, have you had a flu shot?

IF NECESSARY: ***We want to know if you had a flu shot injected in your arm.***

1. Yes
2. No

7. DON'T KNOW / NOT SURE
9. REFUSED

C12Q02

During the past 12 months, have you had a flu vaccine that was sprayed in your nose?

1. Yes
2. No

7. DON'T KNOW / NOT SURE
9. REFUSED

C12Q03

Have you ever had a pneumonia shot? This shot is usually given only once or twice in a person's lifetime and is different from the flu shot. It is also called the pneumococcal vaccine.

1. Yes
2. No

7. DON'T KNOW / NOT SURE
9. REFUSED

Core 13: Demographics

C13Q01

What is your age?

__ __ Code age in years

07. DON'T KNOW / NOT SURE
09. REFUSED

C13Q02

Are you Hispanic or Latino?

1. Yes
1. No

7. DON'T KNOW / NOT SURE
9. REFUSED

C13Q03

Which one or more of the following would you say is your race? Would you say: White, Black or African American, Asian, Native Hawaiian or Other Pacific Islander, American Indian or Alaska Native, or Other?

(Check all that apply)

1. White
2. Black or African American
3. Asian
4. Native Hawaiian or Other Pacific Islander
5. American Indian , Alaska Native or
6. Other **[specify]**_____

8. NO ADDITIONAL CHOICES
7. DON'T KNOW / NOT SURE
9. REFUSED

C13Q04 – ONLY GET IF MORE THAN ONE RESPONSE FOR C13Q03

Which one of these groups would you say best represents your race?

1. White
2. Black or African American
3. Asian
4. Native Hawaiian or Other Pacific Islander
5. American Indian, Alaska Native or
6. Other **[specify]**_____

7. DON'T KNOW / NOT SURE
9. REFUSED

C13Q05

Are you married, divorced, widowed, separated, never married, or a member of an unmarried couple?

Please read:

1. Married
2. Divorced
3. Widowed
4. Separated
5. Never married
6. A member of an unmarried couple

9. REFUSED

C13Q06

How many children less than 18 years of age live in your household?

__ __ Number of children

88. NONE
99. REFUSED

C13Q07

What is the highest grade or year of school you completed?

Read only if necessary:

1. Never attended school or only attended kindergarten
2. Grades 1 through 8 (Elementary)
3. Grades 9 through 11 (Some high school)
4. Grade 12 or GED (High school graduate)
5. College 1 year to 3 years (Some college or technical school)
6. College 4 years or more (College graduate)

9. REFUSED

C13Q08

Are you currently: employed for wages, self-employed, out of work for more than 1 year, out of work for less than 1 year, a homemaker, a student, retired, or unable to work?

1. Employed for wages
2. Self-employed
3. Out of work for more than 1 year
4. Out of work for less than 1 year
5. A Homemaker
6. A Student
7. Retired
8. Unable to work

9. REFUSED

C13Q09

Is your annual household income from all sources?

1. Less than $10,000
2. Less than $15,000 ($10,000 to less than $15,000)
3. Less than $20,000 ($15,000 to less than $20,000)
4. Less than $25,000 ($20,000 to less than $25,000)
5. Less than $35,000 ($25,000 to less than $35,000)
6. Less than $50,000 ($35,000 to less than $50,000)
7. Less than $75,000 ($50,000 to less than $75,000)
8. $75,000 or more

77. DON'T KNOW/NOT SURE
99. REFUSED

C13Q10

About how much do you weigh without shoes?

Round fractions up

__ __ __ Weight (*pounds)*
9__ __ __ Weight (kilograms*)*

7777. DON'T KNOW / NOT SURE
9999. REFUSED

C13Q11

About how tall are you without shoes?

Round fractions down

__ __ __ Height ft/inches (Ex. 5 feet 9 inches = 509)
9 __ __ __ Height meters/centimeters

7777. DON'T KNOW / NOT SURE
9999. REFUSED

C13Q13

Do you have more than one telephone number in your household? Do not include cell phones or numbers that are only used by a computer or fax machine.

1. Yes
2. No **– SKIP TO C13Q15**

7. DON'T KNOW / NOT SURE **– SKIP TO C13Q15**
9. REFUSED **– SKIP TO C13Q15**

C13Q14 – ONLY GET IF C13Q13=1

How many of these phone numbers are residential numbers?

__ Residential telephone numbers **[6=6 or more]**

7. DON'T KNOW / NOT SURE
9. REFUSED

C13Q15

During the past 12 months, has your household been without telephone service for 1 week or more?

Note: Do not include interruptions of phone service due to weather or natural disasters.

1. Yes
2. No

7. DON'T KNOW/ NOT SURE
9. REFUSED

C13Q16

Indicate sex of respondent. Ask only if necessary.

1. Male **- SKIP TO C14Q01**
2. Female

C13Q17 – ONLY GET IF C13Q16=2 AND C13Q01<45

To your knowledge, are you now pregnant?

1. Yes
2. No

7. DON'T KNOW/ NOT SURE
9. REFUSED

Core 15: Women's Health

C15Q01 – ONLY GET IF C13Q16=2

A mammogram is an x-ray of each breast to look for breast cancer. Have you ever had a mammogram?

1. Yes
2. No – **SKIP TO C15Q03**

7. DON'T KNOW/ NOT SURE – **SKIP TO C15Q03**
9. REFUSED – **SKIP TO C15Q03**

C15Q02 – ONLY GET IF C15Q01=1

How long has it been since you had your last mammogram?

Read only if necessary

1. Within the past year (anytime less than 12 months ago)
2. Within the past 2 years (1 year but less than 2 years ago)
3. Within the past 3 years (2 years but less than 3 years ago)
4. Within the past 5 years (3 years but less than 5 years ago)
5. 5 or more years ago

7. DON'T KNOW/ NOT SURE
9. REFUSED

C15Q03 – ONLY GET IF C13Q16=2

A clinical breast exam is when a doctor, nurse or other health professional feels the breasts for lumps. Have you ever had a clinical breasts exam?

1. Yes
2. No – **SKIP TO C15Q05**

7. DON'T KNOW/ NOT SURE – **SKIP TO C15Q05**
9. REFUSED – **SKIP TO C15Q05**

C15Q04 – ONLY GET IF C15Q03=1

How long has it been since your last breast exam?

Read only if necessary

1. Within the past year (anytime less than 12 months ago)
2. Within the past 2 years (1 year but less than 2 years ago)
3. Within the past 3 years (2 years but less than 3 years ago)
4. Within the past 5 years (3 years but less than 5 years ago)
5. 5 or more years ago

7. DON'T KNOW/ NOT SURE
9. REFUSED

C15Q05 – ONLY GET IF C13Q16=2

A Pap test is a test for cancer of the cervix. Have you ever had a Pap test?

1. Yes
2. No – **SKIP TO C15Q07**

7. DON'T KNOW/ NOT SURE – **SKIP TO C15Q07**
9. REFUSED – **SKIP TO C15Q07**

C15Q06 – ONLY GET IF C15Q05=1

How long has it been since you had your last Pap smear?

Read only if necessary

1. Within the past year (anytime less than 12 months ago)
2. Within the past 2 years (1 year but less than 2 years ago)
3. Within the past 3 years (2 years but less than 3 years ago)
4. Within the past 5 years (3 years but less than 5 years ago)
5. 5 or more years ago

7. DON'T KNOW/ NOT SURE
9. REFUSED

C15Q07 – ONLY GET IF C13Q16=2 AND C13Q17<>1

Have you had a hysterectomy?

If necessary: A hysterectomy is an operation to remove the uterus (womb).

1. Yes
2. No

7. DON'T KNOW/ NOT SURE
9. REFUSED

Core 16: Prostate Cancer Screening

C16Q01 – ONLY GET IF C13Q16=1 AND C13Q01>39

A prostate-Specific Antigen test, also called a PSA test, is a blood test used to check men for prostate cancer. Have you ever had a PSA test?

1. Yes
2. No – **SKIP TO C16Q03**

7. DON'T KNOW/ NOT SURE – **SKIP TO C16Q03**
9. REFUSED – **SKIP TO C16Q03**

C16Q02 – ONLY GET IF C16Q01=1

How long has it been since you had your last PSA test?

Read only if necessary

1. Within the past year (anytime less than 12 months ago)
2. Within the past 2 years (1 year but less than 2 years ago)
3. Within the past 3 years (2 years but less than 3 years ago)
4. Within the past 5 years (3 years but less than 5 years ago)
5. 5 or more years ago

7. DON'T KNOW/ NOT SURE
9. REFUSED

C16Q03 – ONLY GET IF C13Q16=1 AND C13Q01>39

A digital rectal exam is an exam in which a doctor, nurse or other health professional places a gloved finger into the rectum to feel the size, shape, and hardness of the prostate gland. Have you ever had a digital rectal exam?

1. Yes
2. No – **SKIP TO C16Q05**

7. DON'T KNOW/ NOT SURE – **SKIP TO C16Q05**
9. REFUSED – **SKIP TO C16Q05**

C16Q04 – ONLY GET IF C16Q03=1

How long has it been since your last digital rectal exam?

Read only if necessary

1. Within the past year (anytime less than 12 months ago)
2. Within the past 2 years (1 year but less than 2 years ago)
3. Within the past 3 years (2 years but less than 3 years ago)
4. Within the past 5 years (3 years but less than 5 years ago)
5. 5 or more years ago

7. DON'T KNOW/ NOT SURE
9. REFUSED

C16Q05 – ONLY GET IF C13Q16=1 AND C13Q01>39

Have you ever been told by a doctor, nurse or other health professional that you had prostate cancer?

1. Yes
2. No

7. DON'T KNOW/ NOT SURE
9. REFUSED

Core 17: Colorectal Cancer Screening

C17Q01 – ONLY GET IF C13Q01>49

A blood stool test is a test that may use a special kit at home to determine whether the stool contains blood. Have you ever had this test using a home kit?

1. Yes
2. No – **SKIP TO C17Q03**

7. DON'T KNOW/ NOT SURE – **SKIP TO C17Q03**
9. REFUSED – **SKIP TO C17Q03**

C17Q02 – ONLY GET IF C17Q01=1

How long has it been since you had your last blood stool test using a home kit?

Read only if necessary

1. Within the past year (anytime less than 12 months ago)
2. Within the past 2 years (1 year but less than 2 years ago)
3. Within the past 5 years (2 years but less than 5 years ago)
4. 5 or more years ago

7. DON'T KNOW/ NOT SURE
9. REFUSED

C17Q03 – ONLY GET IF C13Q01>49

Sigmoidoscopy and colonoscopy are exams in which a tube is inserted in the rectum to view the colon for signs of cancer or other health problems. Have you ever had either of these exams?

1. Yes
2. No – **SKIP TO C18Q01**

7. DON'T KNOW/ NOT SURE – **SKIP TO C18Q01**
9. REFUSED – **SKIP TO C18Q01**

C17Q04 – ONLY GET IF C17Q03=1

How long has it been since you had your last sigmoidoscopy or colonoscopy?

Read only if necessary

1. Within the past year (anytime less than 12 months ago)
2. Within the past 2 years (1 year but less than 2 years ago)
3. Within the past 5 years (2 years but less than 5 years ago)
4. Within the past 10 years (5 years but less than 10 years ago)
5. 10 or more years ago

7. DON'T KNOW/ NOT SURE
9. REFUSED

Core 19: Disability

C19Q01

The following questions are about health problems or impairments you may have.

Are you limited in any way in any activities because of physical, mental, or emotional problems?

1. Yes
2. No

7. DON'T KNOW/ NOT SURE
9. REFUSED

C19Q02

Do you now have any health problem that requires you to use special equipment, such as a cane, a wheelchair, a special bed, or a special telephone? Include occasional use or use in certain circumstances.

1. Yes
2. No

7. DON'T KNOW/ NOT SURE
9. REFUSED

Core 21: Firearms

C21Q01

The next questions are about firearms. We are asking these in a health survey because of our interest in firearm-related injuries. Please include weapons such as pistols, shotguns, and rifles; but not BB guns, starter pistols, or guns that cannot fire. Include those kept in a garage, outdoor storage area, or motor vehicle.

Are any firearms kept in or around your home?

1. Yes
2. No **– SKIP TO M08Q01**

7. DON'T KNOW/ NOT SURE **– SKIP TO M08Q01**
9. REFUSED **– SKIP TO M08Q01**

C21Q02 – ONLY GET IF C21Q01=1

Are any of these firearms now loaded?

1. Yes
2. No **– SKIP TO M08Q01**

7. DON'T KNOW/ NOT SURE **– SKIP TO M08Q01**
9. REFUSED **– SKIP TO M08Q01**

C21Q03 – ONLY GET IF C21Q02=1

Are any of these loaded firearms also unlocked? By unlocked, we mean you do not need a key or combination to get the gun or to fire it. We don't count a safety as a lock.

1. Yes
2. No

7. DON'T KNOW/ NOT SURE
9. REFUSED

Module 3: Hypertension Awareness

M03Q01 - *EVERYBODY*

Have you ever been told by a doctor, nurse, or other health professional that you have high blood pressure?
NOTE: IF "YES" AND RESPONDENT IS FEMALE, ASK: "WAS THIS ONLY WHEN YOU WERE PREGNANT?"

1 Yes
2 Yes, but female told only during pregnancy - GO TO NEXT MODULE
3 No - GO TO NEXT MODULE
7 Don't know / Not sure - GO TO NEXT MODULE
9 Refused - GO TO NEXT MODULE

M03Q02 - *M03Q01 = 1*

Are you currently taking medicine for your high blood pressure?

1 Yes
2 No
7 Don't know / Not sure
9 Refused

Module 4: Cholesterol Awareness

M04Q01 - *EVERYBODY*

Blood cholesterol is a fatty substance found in the blood. Have you ever had your blood cholesterol checked?

1 Yes
2 No Go to next section
7 Don't know / Not sure Go to next section
9 Refused Go to next section

M04Q02 - *M04Q01 = 1*

About how long has it been since you last had your blood cholesterol checked?
READ ONLY IF NECESSARY

1 Within the past year (anytime less than 12 months ago)
2 Within the past 2 years (1 year but less than 2 years ago)
3 Within the past 5 years (2 years but less than 5 years ago)
4 5 or more years ago
7 Don't know / Not sure
9 Refused

M04Q03 - *M04Q01 = 1*

Have you ever been told by a doctor, nurse or other health professional that your blood cholesterol is high?

1 Yes
2 No
7 Don't know / Not sure
9 Refused

Module 8: Influenza

M08Q01 – ONLY GET IF C12Q01=1

At what kind of place did you get your last flu shot?

Read only if necessary

01. A doctor's office or health maintenance organization
02. A health department
03. Another type of clinic or health center (example: a community health center)
04. A senior, recreation, or community center
05. A store (examples: supermarket, drug store)
06. A hospital or emergency room
07. Workplace, or
08. Some other kind of place

77. DON'T KNOW
99. REFUSED

Module 9: Adult Asthma History

M09Q01 – ONLY GET IF C09Q01=1

Previously you said you were told by a doctor, nurse or other health professional that you had asthma.

How old were you when you were first told by a doctor or other health professional that you had asthma?

__ __ Age in years 11 or older **[96 = 96 and older]**

97. AGE 10 OR YOUNGER
98. DON'T KNOW / NOT SURE
99. REFUSED

M09Q02 – ONLY GET IF C09Q02=1

During the past 12 months, have you had an episode of asthma or an asthma attack?

1. Yes
2. No

7. DON'T KNOW/ NOT SURE
9. REFUSED

M09Q03 – ONLY GET IF C09Q02=1

During the past 12 months, how many times did you visit an emergency room or urgent care center because of your asthma?

__ __ Number of visits **[87=87 or more]**

88. None
98. DON'T KNOW/NOT SURE
99. REFUSED

M09Q04 – ONLY GET IF C09Q02=1

[If one or more visits to Q3, fill in (Besides those emergency room visits.)] During the past 12 months, how many times did you see a doctor, nurse or other health professional for urgent treatment of worsening asthma symptoms?

__ __ Number of visits **[87=87 or more]**

88. None
98. DON'T KNOW/NOT SURE
99. REFUSED

M09Q05 – ONLY GET IF C09Q02=1

During the past 12 months, how many times did you see a doctor, nurse or other health professional for a routine checkup for your asthma?

__ __ Number of visits **[87=87 or more]**

88. None
98. DON'T KNOW/NOT SURE
99. REFUSED

M09Q06 – ONLY GET IF C09Q02=1

During the past 12 months, how many days were you unable to work or carry out your usual activities because of your asthma?

__ __ __ Number of visits

888. None
777. DON'T KNOW/NOT SURE
999. REFUSED

M09Q07 – ONLY GET IF C09Q02=1

Symptoms of asthma include cough, wheezing, shortness of breath, chest tightness and phlegm production when you don't have a cold or respiratory infection. During the past 30 days, how often did you have any symptoms of asthma? Would you say not at any time, less than once a week, once or twice a week, more than 2 times a week, but not every day, every day, but not all the time, or every day, all the time?

1. Less than once a week
2. Once or twice a week
3. More than 2 times a week, but not every day
4. Every day, but not all the time, or
5. Every day, all the time

7. DON'T KNOW / NOT SURE
8. Not at any time **– SKIP TO M09Q09**
9. REFUSED

M09Q08 – ONLY GET IF C09Q02=1 AND M09Q07<>8

During the past 30 days, how many days did symptoms of asthma make it difficult for you to stay asleep? Would you say none, one or two, three to four, five, six to ten, or more than ten?

1. One or two
2. Three to four
3. Five
4. Six to ten, or
5. More than ten

7. DON'T KNOW / NOT SURE
8. None
9. REFUSED

M09Q09 – ONLY GET IF C09Q02=1

During the past 30 days, how often did you take asthma medication that was prescribed or given to you by a doctor? This includes using an inhaler. Would you say you didn't take any, less than once a week, once or twice a week, more than 2 times a week, but not every day, once every day, or two or more times every day?

1. Less than once a week
2. Once or twice a week
3. More than 2 times a week, but not every day
4. Once every day, or
5. Two or more times every day

7. DON'T KNOW / NOT SURE
8. Didn't take any
9. REFUSED

Module 10: Childhood Asthma

M10Q01 – ONLY GET IF C13Q06<88

Earlier you said there were **[fill in number from C13Q06]** children age 17 or younger living in your household. How many of these children have ever been diagnosed with asthma?

_ _ Number of children

88. NONE **– SKIP TO M13Q01**
77. DON'T KNOW/ NOT SURE **– SKIP TO M13Q01**
99. REFUSED **– SKIP TO M13Q01**

M10Q02 – ONLY GET IF M10Q01<77

Does this child/how many of these children still have asthma?

If only one child from M10Q01 and response is "Yes" to this question, code '01'. If response is "No," code as '88."

_ _ Number of children

88. NONE
77. DON'T KNOW/ NOT SURE
99. REFUSED

Module 12: Cardiovascular Disease

M12Q01A - *EVERYBODY*

To lower your risk of developing heart disease or stroke, are you eating fewer high fat or high cholesterol foods?

1. Yes
2. No
7. DON'T KNOW/ NOT SURE
9. REFUSED

M12Q01B - *EVERYBODY*

To lower your risk of developing heart disease or stroke, are you eating more fruits and vegetables?

1. Yes
2. No
7. DON'T KNOW/ NOT SURE
9. REFUSED

M12Q01C - *EVERYBODY*

To lower your risk of developing heart disease or stroke, are you more physically active?

1. Yes
2. No
7. DON'T KNOW/ NOT SURE
9. REFUSED

M12Q02A - *EVERYBODY*

Within the past 12 months, has a doctor, nurse, or other health professional told you to eat fewer high fat or high cholesterol foods?

1. Yes
2. No
7. DON'T KNOW/ NOT SURE
9. REFUSED

M12Q02B - *EVERYBODY*

Within the past 12 months, has a doctor, nurse, or other health professional told you to eat more fruits and vegetables?

1. Yes
2. No
7. DON'T KNOW/ NOT SURE
9. REFUSED

M12Q02C - *EVERYBODY*

Within the past 12 months, has a doctor, nurse, or other health professional told you to be more physically active?

1. Yes
2. No
7. DON'T KNOW/ NOT SURE
9. REFUSED

M12Q03A - *EVERYBODY*

Has a doctor, nurse or other health professional ever told you that you had any of the following? A heart attack, also called a myocardial infarction.

1. Yes
2. No
7. DON'T KNOW/ NOT SURE
9. REFUSED

M12Q03B - *EVERYBODY*

Angina or coronary heart disease.

1. Yes
2. No
7. DON'T KNOW/ NOT SURE
9. REFUSED

M12Q03C - *EVERYBODY*

A stroke

1. Yes
2. No
7. DON'T KNOW/ NOT SURE
9. REFUSED

M12Q04 - *M12Q03A=1*

At what age did you have your first heart attack?

_ _ Code age in years [10=AGE 10 OR LESS]
07. DON'T KNOW/ NOT SURE
09. REFUSED

M12Q05 - *M12Q03C=1*

At what age did you have your first stroke?

_ _ Code age in years [10=AGE 10 OR LESS]
07. DON'T KNOW/ NOT SURE
09. REFUSED

M12Q06 - *M12Q03A=1 OR M12Q03C=1*

After you left the hospital following your heart attack or stroke, did you go to any kind of outpatient rehabilitation? This is sometimes called "rehab."

1. Yes
2. No
7. DON'T KNOW/ NOT SURE
9. REFUSED

M12Q07 - *C13Q01>34*

Do you take aspirin daily or every other day?

1. Yes - SKIP TO M12Q09A
2. No

7. DON'T KNOW/ NOT SURE
9. REFUSED

M12Q08 - *M12Q06>1*

Do you have a health problem or condition that makes taking aspirin unsafe for you?
IF "YES," ASK "IS THIS A STOMACH CONDITION? CODE UPSET STOMACHS AS STOMACH PROBLEMS.

1. Yes, not stomach related - SKIP TO M15Q01
2. Yes, stomach problems - SKIP TO M15Q01
3. No - SKIP TO M15Q01
7. DON'T KNOW/ NOT SURE - SKIP TO M15Q01
9. REFUSED- SKIP TO M15Q01

M12Q09A - *M12Q07=1*

Why do you take aspirin, to relieve pain?

1. Yes
2. No
7. DON'T KNOW/ NOT SURE
9. REFUSED

M12Q09B - *M12Q07=1*

Why do you take aspirin, to reduce the chance of a heart attack?

1. Yes
2. No
7. DON'T KNOW/ NOT SURE
9. REFUSED

M12Q09C - *M12Q07=1*

Why do you take aspirin, to reduce the chance of a stroke?

1. Yes
2. No
7. DON'T KNOW/ NOT SURE
9. REFUSED

County Added 1: Fruits and Vegetables

T01Q01

These next questions are about the foods you usually eat or drink. Please tell me how often you eat or drink each one, for example, twice a week, three times a month, and so forth. Remember, I am only interested in the foods **you** eat. Include all foods **you** eat, both at home and away from home.

How often do you drink fruit juices such as orange, grapefruit, or tomato? (90-92)

1__ __ Per day
2__ __ Per week
3__ __ Per month
4__ __ Per year

555. NEVER
777. DON'T KNOW / NOT SURE
999. REFUSED

T01Q02

Not counting juice, how often do you eat fruit? (93-95)

1__ __ Per day
2__ __ Per week
3__ __ Per month
4__ __ Per year

555. NEVER
777. DON'T KNOW / NOT SURE
999. REFUSED

T01Q03

How often do you eat green salad? (96-98)

1__ __ Per day
2__ __ Per week
3__ __ Per month
4__ __ Per year

555. NEVER
777. DON'T KNOW / NOT SURE
999. REFUSED

T01Q04

How often do you eat potatoes not including French fries, fried potatoes, or potato chips? (99-101)

1__ __ Per day
2__ __ Per week
3__ __ Per month
4__ __ Per year

555. NEVER
777. DON'T KNOW / NOT SURE
999. REFUSED

T01Q05

How often do you eat carrots? (102-104)

1__ __ Per day
2__ __ Per week
3__ __ Per month
4__ __ Per year

555. NEVER
777. DON'T KNOW / NOT SURE
999. REFUSED

T01Q06

Not counting carrots, potatoes, or salad, how many servings of vegetables do you usually eat?

(Example: A serving of vegetables at both lunch and dinner would be two servings.)

(105-107)

1__ __ Per day
2__ __ Per week
3__ __ Per month
4__ __ Per year

555. NEVER
777. DON'T KNOW / NOT SURE
999. REFUSED

Module 15: Smoking Cessation

M15Q01 – ONLY GET IF C07Q02=3

Previously you said you have smoked cigarettes:

About how long has it been since you last smoked cigarettes?

Read only if necessary

01. Within the past month (anytime less than 1 month ago)
02. Within the past 3 months (1 month but less than 3 months ago)
03. Within the past 6 months (3 months but less than 6 months ago)
04. Within the past year (6 months but less than 1 year ago)
05. Within the past 5 years (1 year but less than 5 years ago) **– SKIP TO M16Q01**
06. Within the past 10 years (5 years but less than 10 years ago) **– SKIP TO M16Q01**
07. 10 or more years ago **– SKIP TO M16Q01**

77. DON'T KNOW / NOT SURE **– SKIP TO M16Q01**
99. REFUSED **– SKIP TO M16Q01**

M15Q02 – ONLY GET IF C07Q02<3 OR M15Q01<05

The next questions are about interactions you might have had with a doctor, nurse, or other health professional.

In the last 12 months, how many times have you seen a doctor, nurse or other health professional to get any kind of care for yourself?

__ __ Number of times **(1-76)**

88. NONE **- SKIP TO M16Q01**
77. DON'T KNOW/NOT SURE
99. REFUSED

M15Q03 – ONLY GET IF (C07Q02<3 OR M15Q01<05) AND M15Q02<>88

In the last 12 months, on how many visits were you advised to quit smoking by a doctor or other health provider?

__ __ Number of visits **(1-76)**

88. NONE
77. DON'T KNOW/NOT SURE
99. REFUSED

M15Q04 – ONLY GET IF (C07Q02<3 OR M15Q01<05) AND M15Q02<>88

On how many visits did your doctor, nurse or other health professional recommend or discuss medication to assist you with quitting smoking, such as nicotine gum, patch, nasal spray, inhaler, lozenge, or prescription medication such as Wellbutrin/Zyban/Bupropion? **(Pronunciation: Well BYOU trin/ZEYE ban/byou PRO pee on)**

__ __ Number of visits **(1-76)**

88. None
77. DON'T KNOW/NOT SURE
99. REFUSED

M15Q05 – ONLY GET IF (C07Q02<3 OR M15Q01<05) AND M15Q02<>88

On how many visits did your doctor or health provider recommend or discuss methods and strategies other than medication to assist you with quitting smoking?

__ __ Number of visits **(1-76)**

88. None
77. DON'T KNOW/NOT SURE
99. REFUSED

State Added 1: Diabetes A1C

TX01Q01 – ONLY GET IF C10Q01=1 AND M01Q08<77

What is your hemoglobin A1C level?

_ _ ._ Enter A1C level

777. DON'T KNOW/ NOT SURE
999. REFUSED

State Added 4 : Physical Activity

TX04Q01 – ONLY GET IF C13Q08<3

When you are at work, which of the following best describes what you do? Would you say…

1. Mostly sitting or standing
2. Mostly walking
3. Mostly heavy labor or physically demanding work.

7. DON'T KNOW / NOT SURE
9. REFUSED

TX04Q02

We are interested in two types of physical activity – vigorous and moderate. Vigorous activities cause large increases in breathing or heart rate while moderate activities cause small increases in breathing or heart rate.

Now, thinking about the moderate activities you do [**fill in** (when you are not working,) **if "employed" or self-employed"**] in a usual week, do you do moderate activities for at least 10 minutes at a time, such as brisk walking, bicycling, vacuuming, gardening, or anything else that causes some increase in breathing or heart rate?

Yes
1. No **– SKIP TO TX04Q05**

7. DON'T KNOW / NOT SURE **– SKIP TO TX04Q05**
9. REFUSED **– SKIP TO TX04Q05**

TX04Q03 – ONLY GET IF TX04Q02=1

How many days do you do these moderate activities for at least 10 minutes?

_ Days per week

DON'T KNOW / NOT SURE - **SKIP TO TX04Q05**

88. DO NOT DO ANY MODERATE PHYSICAL ACTIVITY FOR AT LEAST 10 MINUTES AT A TIME –**SKIP TO TX04Q05**

99. REFUSED - **SKIP TO TX04Q05**

TX04Q04 – ONLY GET IF TX04Q03<77

On days when you do moderate activities for at least 10 minutes at a time, how much total time per day do you spend doing these activities?

_ _ _ Hours and minutes per day

DON'T KNOW / NOT SURE

999. REFUSED

TX04Q05

Now, thinking about the vigorous activities you do [**fill in** (when you are not working) **if "employed" or "self-employed"**] in a usual week, do you do vigorous activities for at least 10 minutes at a time, such as running, aerobics, heavy yard work, or anything else that causes large increases in breathing or heart rate?

Yes

1. No – **SKIP TO TX05Q01**

7. DON'T KNOW / NOT SURE – **SKIP TO TX05Q01**
9. REFUSED – **SKIP TO TX05Q01**

TX04Q06 – ONLY GET IF TX04Q05=1

How many days do you do these vigorous activities for at least 10 minutes?

_ Days per week

DON'T KNOW / NOT SURE - **SKIP TO TX05Q01**

88. DO NOT DO ANY MODERATE PHYSICAL ACTIVITY FOR AT LEAST 10 MINUTES AT A TIME –**SKIP TO TX05Q01**

99. REFUSED - **SKIP TO TX05Q01**

TX04Q07 – ONLY GET IF TX04Q06<77

On days when you do vigorous activities for at least 10 minutes at a time, how much total time per day do you spend doing these activities?

_ _ _ Hours and minutes per day

DON'T KNOW / NOT SURE
999. REFUSED

State Added 5: TV Viewing

TX05Q01

Over the past 30 days, on a typical day, how much time did you spend sitting and watching TV or videos or using a computer outside of work? Would you say…

1. Less than 1 hour
2. 1 hour
3. 2 hours
4. 3 hours
5. 4 hours
6. 5 hours or more
8. You do not watch TV or videos or use computer outside of work.

7. DON'T KNOW / NOT SURE
9. REFUSED

State Added 6 : Zip code

TX06Q01

What is the zip code where you live?

_ _ _ _ _ Enter zip code

99999. REFUSED

CLOSING

That's my last question. Everyone's answers will be combined to give us information about the health practices of people in this state. Thank you very much for your time and cooperation.

Tarrant County Public Health

Tarrant County BRFSS Survey

Final Technical Report

November 2004

Tarrant County BRFSS Survey

Technical Report

For:
Tarrant County Public Health

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Contents

Introduction

In this research project Tarrant County Public Health examined health patterns of Tarrant County residents.

Clearwater Research, Inc., provided sample design, questionnaire consultation, data collection, and data preparation services for the Tarrant County BRFSS Survey. This report provides technical information regarding those services.

Survey Instrument

Clearwater Research collaborated with Tarrant County Public Health to refine a questionnaire. The questionnaire used sections from the 2004 BRFSS Core, 2004 optional Modules, several Texas BRFSS state-added sections, and included an extra module from 2003 Core Section 7, Fruits and Vegetables.

The questionnaire is presented in a separate Word document included in the "Deliverables.zip file" provided to the client.

Sample Design

The 2004 Behavioral Risk Factor Surveillance System (BRFSS) random digit-dialing (RDD) method was used to obtain a probability sample of the noninstitutionalized adult (18 years and older) population in Tarrant County in five pre-determined regions. This method uses a sample frame that includes all telephone numbers serving households in the geographic target areas. This RDD method involves disproportationate stratification (DSS), dividing the telephone number sampling frame into listed and unlisted telephone numbers. The listed number stratum is sampled at a rate 1.5 times the rate for unlisted numbers, which improves the sample efficiency (ratio of sample records to completed interviews) compared with an unstratified RDD approach. The sample size goal of 2000 completed interviews was exceeded by 431.

Data Collection

Clearwater Research conducted interviews between September 2004 and November 2004. The average interview length was 17.5 minutes. Interviewer performance was closely monitored throughout the field period to assure data quality.

Sampled telephone numbers were called according to a schedule designed to minimize bias problems associated with difficult-to-reach respondents. Each sample record was resolved by attempting it a minimum of fifteen times during the calling period or until a final disposition code (such as "completed interview" or "disconnected/nonworking number") was assigned. The calling occasions for the project were weekdays, weekday evenings and weekends. However, the number of weekday calls were restricted in order to maximize the chance of reaching potential respondents.

Final Dispositions

At the close of the field period, each sampled telephone number was assigned a final disposition that summarizes the separate outcomes of each call attempt for that number. The final dispositions for the Tarrant County BRFSS Survey sample are presented in Table 1. A total of 2431 interviews were completed during the field period.

Table 1. Final Dispositions

Code	Description	Count
110	Complete	2431
120	Partial complete	134
210	Termination within questionnaire	203
220	Refusal after respondent selection	858
230	Selected respondent did not start interview	257
240	Selected respondent unavailable during interview period	114
250	Language Barrier-Resp. Sel.	51
260	Unable to communicate-Sel Resp.	81
270	Hang up or Term-Befor Resp Sel	36
280	HH Contact-Bef Resp. Sel.	2
305	HH Away during Int. Per.	32
310	Hangup or term-unknown if Elig. Resp	1306
315	HH contact-unkown if Elig Resp	190
320	Language barrier before selected	88
325	Unable to comm. before Sel. Resp.	31
330	Hang-up or term, unknown residence	1190
332	Contact, Unknown if prvt res.	63
335	Residential answering machine	630
340	Techno barrier, known pvt residence	3
345	Answering machine, unknown if pvt res.	101
350	Techno barrier, unknown if pvt residence	9
355	Number no longer in service	292
360	No answer	817
365	Busy	81
370	Never call	0
405	Out of Interviewing Area	303
410	Household, no elig. resp.	16
420	Not a residence	1118
430	FAX / Modem	647
435	Cell Phone	15
440	Fast busy	183
450	Non-working / disconnect	4350
	Total Records	15632

Data Preparation and Analysis

Survey data were entered and automatically consolidated into a CATI database as the interviews were being conducted. At the conclusion of data collection interviewer errors produced from the survey and previously documented on data change forms were corrected in the data set using CI3 data editing capabilities. Clearwater Research then implemented a comprehensive routine of data preparation. Data were converted from the CATI database and formatted for review and analysis in SPSS, a statistical analysis software package. Data were thoroughly checked and verified as necessary to correct any potential errors or out-of-range values.

In addition, open-ended responses were examined and cleaned for overall comprehension. Open-ends cleaning involved correcting spelling, putting responses into sentence text, and sorting responses into a logical order. Responses to all open-ended questions are included in a separate text file. This file includes the cleaned open-ended response as well as the following information: RESPNUM (which allows for linking back to the data), the question, and the open ended response.

A listing of non-questionnaire variables included in the final data set is presented in Appendix A.

An SPSS datafile was delivered to the client along with the “open-ends” file and this Technical Report.

Appendix A: Non-Questionnaire Variables in Final Data Set

Variable	Description
Respnum$	Record identifier assigned by CATI programming software.
Respgend	System variable determining gender
Adults / NumAdult	Number of adults in the household as indicated by the person answering the phone.
numMen	Number of male adults in the household as indicated by the person answering the phone.
numWomen	Number of female adults in the household as indicated by the person answering the phone.
Phone7	Phone number with the last two digits trimmed off.
Lang	The language that the interview was conducted in (1 = English, 2 = Spanish).
Nattmpts	The total number of attempt on the record before a final disposition was assigned
State	Sampling variable
Geostr	Sampling variable
Denstr2	Sampling variable
Precall	Sampling variable (Genesys pre-screened identifier: 1= working number, 3= non-working/disconnected, 5=business) We dialed every record for this study.
Repnum	Sampling variable
Seqno	Unisue record identifier.
Aapor	Final disposition of the record.

Adult Immunizations

Women's Health

Cancer Screening

Asthma

Health Status

Diabetes

Cardiovascular Disease

Health Care Access

Physical Activity

Overweight and Obesity

Tobacco and Alcohol Use

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