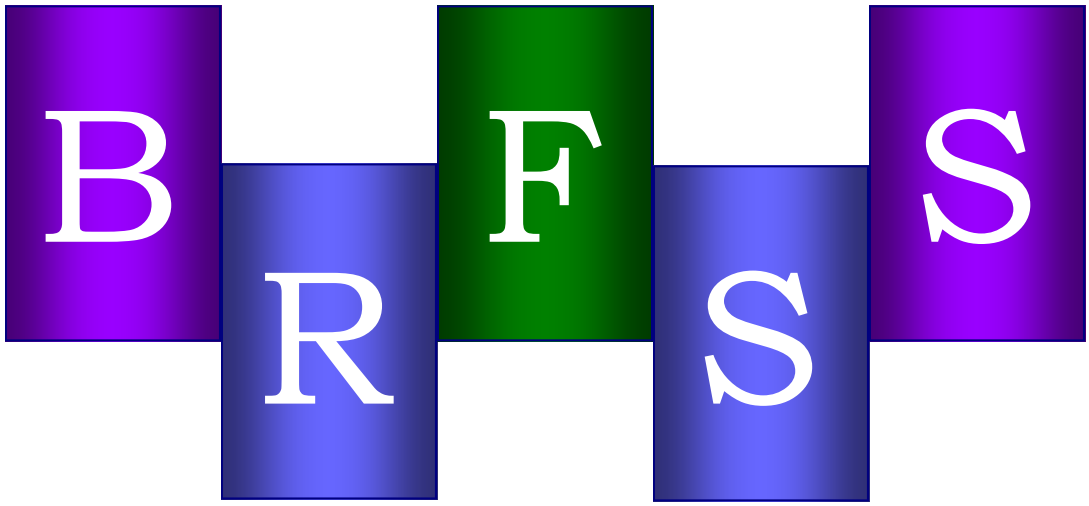
TARRANT COUNTY



Behavioral Risk Factor Surveillance System 2009/2010

Turning Information into Health

Tarrant County Public Health
Safeguarding our community's health

Tarrant County Behavioral Risk Factor Surveillance System 2009/2010

Tarrant County Public Health

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INTRODUCTION

The Behavioral Risk Factor Surveillance System (BRFSS) is a nationally conducted random-digit-dialed telephone interview survey supported by the Centers for Disease Control and Prevention (CDC) along with state and local health departments for the evaluation of health behaviors linked to chronic disease among non-institutionalized adults aged 18 years and older. Because the BRFSS uses a standardized questionnaire to collect data, information gathered via this system is comparable across population groups and time periods. Officials and organizations at the local, state, and national levels utilize these data to target public health policy and program implementation.

First conducted specifically for Tarrant County residents in 1998, the BRFSS in Tarrant County is a unique project in that few local entities across the state or nation have access to county-specific data of this quality and focus. From October 2009 through February 2010, Tarrant County Public Health collected data for its third BRFSS; the first was completed in 1998 and the second in 2004.

SURVEY METHODOLOGY

The BRFSS utilized a random-digit-dialing disproportionate stratification method to select a sample of households for survey with a sampling frame that included five geographical subunits based on individual census blocks. All persons selected for survey responded anonymously and without compensation. Interviewers utilized a computer-assisted telephone interview system (CATI) to collect participant responses. Data from a total of 3,959 adult Tarrant County residents along with 1,026 randomly selected children from among adult respondents who indicated that at least one child resided in their home at the time of the interview were included in the final analyses and described based on seven demographic factors including geographic distribution at the sub-county level (Tables 1.1-1.8). Benchmarking against prevalence measures in Texas and the United States as well as *Healthy People 2010* objectives was also performed (Table 1.9). As a result of Tarrant County Public Health's previous work with BRFSS, comparable data on health behaviors reported by Tarrant County residents spanning more than 10 years are now available and have been summarized in Table 1.10.

The questionnaire used in the 2009/2010 Tarrant County BRFSS consisted of three main components: a CDC-stipulated core section, all additional modules from the 2009 Texas BRFSS questionnaire, and any modules added by Tarrant County in the 2004 Tarrant County BRFSS questionnaire. Prior to inclusion in any BRFSS questionnaire, individual questions undergo rigorous cognitive testing and validation by the CDC. Modules assessed various behaviors related to chronic disease prevention and management such as overall health status and overweight or obesity. Population weighting was applied to responses during analysis in order to minimize bias and provide results representative of the population distribution in Tarrant County; data were analyzed using SPSS 17.0.

USES AND LIMITATIONS

BRFSS provides prevalence data with utility across a broad spectrum of program and policy areas in a cost-effective and timely manner. Telephone interviews permit the

collection of a large quantity of data from a central location, scripting limits variations in responses due to interviewer differences, and all responses remain anonymous. Additionally, interviewers input respondents' answers directly into a database rather than performing interviews and data entry in two separate steps which reduces reporting error.

However, as with any survey, BRFSS data are limited by several factors. Potential interviewees are only selected from among individuals with a working land-line telephone. Respondents may recall past information incorrectly, refuse to answer a question, or interpret a question differently than intended. Lastly, the prevalence of certain health behaviors may be too low to be adequately characterized by this method.

In summary, the 2009/2010 Tarrant County BRFSS report serves to provide a reliable analysis of health-related behaviors among non-institutionalized adult Tarrant County residents aged at least 18 years. Information presented in this report can assist in evaluating the efficacy of current practices, developing policies, and planning programs aimed at the reduction of chronic disease among citizens of Tarrant County.

RESULTS

In the 2009/2010 Tarrant County BRFSS report, summarized data from 3,959 adult respondents are reported along with key findings from each module. Where applicable, similar information is described for 1,026 randomly selected children from among adult respondents who indicated that at least one child resided in their home at the time of interview. If the number of respondents was less than five or the underlying sample size for that particular measure was less than 20, estimates and their corresponding 95% confidence intervals are not presented (represented in tables with "-"). Risk factor data summarized in this section represent Tarrant County adults aged 18 years and older with the following exceptions:

- Mammogram within past year – women aged 40 years and older,
- Mammogram within past two years – women aged 50 years and older,
- Pap test within past three years – women aged 18 years and older,
- Prostate-specific antigen (PSA) test within past two years and digital rectal exam (DRE) screening within past five years – men aged 40 years and older,
- Fecal occult blood test within past two years, sigmoidoscopy within past five years, colonoscopy within past ten years, and met colorectal cancer screening guidelines – adults aged 50 years and older,
- Pneumococcal vaccination – adults aged 65 years and older, and
- Child influenza vaccination and child asthma – children aged less than 18 years.

Health Status

- Approximately 12 percent of Tarrant County adults aged 18 years and older had poor or fair health.
- Seventeen percent of residents experienced five or more days within the past 30 days in which their physical health was not good.
- Slightly less than 19 percent of individuals endured five or more days in the past 30 days in which their mental health was not good.
- About 11 percent of residents experienced physical activity limitations due to health impairment for five or more days within the past 30 days.

Individuals with less than a high school diploma, annual incomes below $15,000, and the inability to work consistently possessed the highest percentage of poor health-related quality of life indicators. Over 25 percent of Tarrant County residents aged 18 to 24 years experienced five or more days in which their mental health was not good during the past 30 days. Additionally, about one-quarter of Blacks experienced five or more days of poor physical health during the past 30 days.

Health Care Access

- More than 23 percent of adult Tarrant County residents possessed no type of health care coverage.
- Slightly less than 18 percent of residents experienced a time in the past year when they could not see a doctor because of the cost.

Lack of health insurance was significantly higher among self-employed persons than among otherwise employed individuals. Approximately one in four individuals aged 18 to 24 years could not see a doctor due to cost within the past 12 months. The prevalence of uninsured in Tarrant County was similar to that of the state of Texas, but significantly higher than that of the United States.

Overweight and Obesity

- Calculated body mass indices (BMI's) for Tarrant County residents indicated that more than 37 percent of residents were overweight (BMI = 25.0-29.9).
- Approximately 28 percent of residents had calculated BMI's that classified them as obese (BMI $\geq$ 30).
- The calculated BMI's of almost 66 percent of residents indicated that these individuals were either overweight or obese (BMI $\geq$ 25).

One out of every three Blacks living in Tarrant County had a calculated BMI of 30.0 or greater. More than three-fourths of persons with less than a high school education as

well as individuals with an annual income of less than $15,000 were classified as either overweight or obese. The prevalence of overweight and obesity in Tarrant County was similar to that of Texas as well as the United States.

Physical Activity

- About 47 percent of individuals met the U.S. Department of Health and Human Services weekly physical activity recommendations.
- Approximately 63 percent of Tarrant County residents obtained sufficient aerobic physical activity each week.

Almost half of Tarrant County residents aged 18 years and older met the recommendations for moderate or vigorous physical activity. As age group, education level, and annual income increased, the percentage of individuals who met the recommendations for physical activity also increased. Approximately eight out of every ten self-employed residents participated in sufficient weekly aerobic physical activity.

Fruits and Vegetables

- Slightly more than 25 percent of Tarrant County residents consumed fruits and vegetables five or more times per day.

One-sixth of residents aged 18 to 24 years ate fruits and vegetables at least five times per day. Approximately one out of every four retired persons ate fruits and vegetables five times or more per day compared to one out of every eight students.

Tobacco and Alcohol Use

- Approximately 18 percent of Tarrant County adults were classified as current smokers.
- More than 95 percent of individuals did not consume heavy amounts of alcohol.
- Over 13 percent of Tarrant County residents participated in binge drinking.

Among age groups, prevalence of current smokers was highest among persons aged 18 to 24 years. Almost half of all individuals who were without work for less than a year were classified as current smokers. As age group increased, the percentage of residents who participated in binge drinking decreased.

Arthritis

- About 19 percent of residents were diagnosed with some form of arthritis by a health professional.
- Of those individuals diagnosed with some form of arthritis by a health professional, more than 45 percent experienced limitations in their usual activities due to arthritis or joint pain.

As age group increased, the percentage of individuals with diagnosed arthritis also increased. Eighty percent of individuals diagnosed with arthritis that were unable to work experienced limitations in activities due to arthritis or other joint symptoms.

Women's Health

- More than 58 percent of women aged 40 years and older in Tarrant County had a mammogram within the past year, thus meeting the breast cancer screening guidelines issued by the American Cancer Society (ACS).
- Almost 80 percent of women aged 50 years and older in Tarrant County met the United States Preventative Services Task Force (USPSTF) breast cancer screening guidelines by having a mammogram within the past two years.
- Approximately 77 percent of women obtained a Pap test within the past three years.

Compared to women in the northwest area of Tarrant County, a significantly greater percentage of women in the northeast county area met ACS guidelines regarding breast cancer screening. Seventy-seven percent of Black women aged 50 years and older in Tarrant County met USPSTF recommendations for breast cancer screening. More than 87 percent of women with a college degree met the cervical cancer screening recommendations of having a Pap test within the past three years.

Cancer Screening

- Fifty-three percent of Tarrant County male residents aged 40 years and older obtained a PSA test within the past two years.
- About 67 percent of Tarrant County men aged 40 years and older underwent DRE screening within the past five years.
- Slightly less than 13 percent of individuals aged 50 years and older in Tarrant County obtained a fecal occult blood test within the past two years.
- Almost 60 percent of Tarrant County residents aged 50 years and older had a sigmoidoscopy within the past five years or a colonoscopy within the past ten years.

- Less than 10 percent of Tarrant County adults aged 50 years and older fully met ACS and USPSTF colorectal cancer screening guidelines.

As age group, education level, and annual income level increased, the percentage of males aged 40 years and older who underwent DRE screening within the past five years also increased. One-third of Hispanics aged 50 years and older in Tarrant County obtained either a sigmoidoscopy within the past five years or a colonoscopy within the past ten years.

Immunizations

- Slightly greater than 40 percent of individuals aged 18 years and older in Tarrant County received an influenza vaccine (either seasonal or monovalent 2009 H1N1) within the past 12 months.

- Approximately 72 percent of Tarrant County adults aged 65 years and older had ever received a pneumococcal vaccine.

- With respect to seasonal influenza vaccination, about 45 percent of children aged 6 months through 17 years in Tarrant County received this vaccine within the past 12 months.

Less than one out of every three Hispanic or Black adults aged 18 years and older received an influenza vaccine within the past 12 months. Three-quarters of women aged 65 years and older had ever received a pneumococcal vaccine. Approximately 60 percent of children aged 6 months to 4 years received a seasonal influenza vaccine within the previous 12 months.

Cardiovascular Health

- About 27 percent of Tarrant County residents had ever received a diagnosis of high blood pressure.

- Less than 40 percent of adults had ever been diagnosed with high blood cholesterol.

- Approximately five percent of individuals aged 18 years and older had healthcare provider-diagnosed heart disease.

- Three percent of residents had ever suffered a heart attack.

- Approximately two percent of residents had ever been diagnosed as having a stroke.

As both education and annual income levels increased, the percentage of Tarrant County residents with healthcare provider-diagnosed high blood cholesterol decreased. Almost one out of every ten individuals with an annual income of less than $15,000 had ever received a diagnosis of heart disease. The proportion of individuals aged 65 years and older that had ever had a heart attack was higher than the proportion among all other age groups.

Diabetes

- Approximately eight percent of Tarrant County residents were diagnosed with diabetes.

As age group increased, the percentage of residents who had ever received a diagnosis of diabetes also increased. Twenty-eight percent of adults classified as unable to work had been diagnosed with diabetes.

Asthma

- Approximately nine percent of Tarrant County adults had asthma.
- Slightly more than seven percent of Tarrant County children aged less than 18 years had asthma.

Asthma prevalence among adult women was almost twice that of adult men. Approximately one in seven Black children had been diagnosed with asthma by a health care provider.

Summary of Risk Factors with Statistically Significant Differences

Following is a summary of those health-related behaviors which expressed statistically significant differences across seven key demographic characteristics: sub-county area of residence, gender, age group, race/ethnicity, education, annual income, and employment status. For additional discussion on the methods used to determine statistical significance in this report, see Appendix B starting on page 140 of the full report.

Sub-County Area of Residence

Health Status

- With the exception of southwest Tarrant County (13.9%), the percentage of residents with fair or poor health was higher in central Tarrant County (19.8%) compared to all other sub-county areas.

Health Care Access

- The percentage of residents without health insurance in central Tarrant County (37.6%) was higher than the percentage among residents in northeast (17.2%), southwest (21.1%), and northwest (22.2%) Tarrant County.
- A greater percentage of individuals in central Tarrant County (23.4%) could not see a doctor in the past 12 months due to cost compared to residents of northeast Tarrant County (12.9%).

Overweight and Obesity

- Compared to individuals in central Tarrant County (27.8%), a greater percentage of residents in southeast Tarrant County (40.8%) were classified as overweight based on BMI calculations (BMI = 25.0-29.9).

- The prevalence of obese residents (BMI $\geq$ 30.0) in central Tarrant County (39.7%) was greater than the prevalence of obese persons in both southeast (23.4%) and southwest (26.3%) Tarrant County.

Tobacco and Alcohol Use

- A higher percentage of residents in central Tarrant County (22.4%) were classified as current smokers compared to residents in southwest Tarrant County (14.0%).

- Binge drinking prevalence was higher among individuals in northeast Tarrant County (21.1%) compared to residents of both southwest (11.1%) and southeast (9.5%) Tarrant County.

Women's Health

- In relation to the prevalence of women aged 40 years and older who obtained a mammogram within the past year (ACS guidelines) in northeast Tarrant County (69.1%), the prevalence of this behavior in northwest Tarrant County (53.3%) was lower.

- A lower proportion of women aged 50 years and older obtained a mammogram within the past two years (USPSTF guidelines) in northwest Tarrant County (70.8%) compared to women of this age group in northeast Tarrant County (86.7%).

- The percentage of women who received a Pap test within the past three years was lower in northwest (74.0%), central (74.0%), and southwest (75.8%) Tarrant County compared to northeast Tarrant County (88.0%).

Cancer Screening

- The prevalence of DRE screening among Tarrant County males aged 40 years and older was lower in central Tarrant County (53.3%) than northeast Tarrant County (77.9%).

- A lower proportion of residents aged 50 years and older in central Tarrant County (51.8%) received a sigmoidoscopy within the past five years or a colonoscopy within the past ten years compared to individuals within this age group in northeast Tarrant County (67.6%).

Immunizations

- A higher percentage of adults in southwest Tarrant County (44.0%) received either a seasonal or monovalent 2009 H1N1 influenza vaccine within the past 12 months than in central Tarrant County (34.1%).

Diabetes

- Compared to residents of northeast Tarrant County (6.1%), the prevalence of healthcare provider-diagnosed diabetes was higher among residents of central (10.8%) and northwest (10.9%) Tarrant County.

GENDER

Health Status

- The proportion of females (22.8%) who reported that their mental health was not good for five or more days in the past 30 days was greater than the proportion among males (14.7%).

Overweight and Obesity

- A higher percentage of males (44.8%) were classified as overweight based on BMI calculations (BMI = 25.0-29.9) than females (30.0%).

- The prevalence of overweight and obesity among males (74.0%) was greater than the prevalence of these conditions among females (57.1%).

Physical Activity

- A lower proportion of females (57.9%) participated in sufficient weekly amounts of aerobic physical activity compared to males (68.3%).

Tobacco and Alcohol Use

- A greater percentage of males (22.4%) were classified as current smokers than females (14.8%).

- The proportion of males who participated in binge drinking (19.4%) was greater than the proportion of females (7.6%) who participated in this activity.

Arthritis

- Health care provider-diagnosed arthritis prevalence was greater among females (23.1%) than among males (15.4%) in Tarrant County.

Immunizations

- A higher percentage of females (44.5%) aged 18 years and older received either the seasonal or monovalent 2009 H1N1 influenza vaccine within the past 12 months compared to males (36.4%) in this age group.

Asthma

- Prevalence of asthma diagnosis among adult women (11.9%) was higher than among adult men (6.5%).
- Among Tarrant County children less than 18 years old, a greater percentage of males (10.1%) were diagnosed with asthma than females (4.3%).

AGE GROUP

Health Status

- A lower percentage of persons aged 18 to 24 years (7.4%) had fair or poor health compared individuals aged 55 to 64 years (22.1%) as well as 65 years and older (23.4%).
- The proportion of individuals who reported five or more days of not good physical health in the past 30 days was lower among persons aged 18 to 24 years (8.7%) compared to persons aged 55 to 64 years (26.1%) as well as persons aged at least 65 years (24.9%).
- A greater percentage of adults aged 18 to 24 years (25.7%) experienced five or more days in the past 30 days in which their mental health was not good compared to adults aged 65 years and older (11.7%).
- Individuals aged 25 to 34 years (7.6%) and 35 to 44 years (8.3%) had a lower prevalence of physical activity limitation due to health impairment compared to residents aged 55 to 64 years (15.8%) and 65 years and older (14.3%).

Health Care Access

- Residents aged 18 to 24 years old (44.8%) had a higher prevalence of lack of health insurance compared to residents aged 35 to 44 years (23.7%), 45 to 54 years (17.9%), 55 to 64 years (11.9%), and 65 years and older (2.1%).
- Compared to individuals aged 55 to 64 years (10.6%) as well as 65 years and older (5.3%), a greater percentage of persons aged 18 to 24 years (25.6%) were unable to see a doctor within the past 12 months due to cost.

Overweight and Obesity

- A lower proportion of individuals aged 18 to 24 years (15.8%) possessed a calculated BMI indicating obesity (BMI $\geq$ 30.0) than individuals aged 35 to 44 years (29.6%), 45 to 54 years (33.5%), and 55 to 64 years (36.5%).

- Persons aged 18 to 24 years (47.4%) had a lower prevalence of overweight and obesity (BMI $\geq$ 25.0) compared to individuals aged 35 to 44 years (69.0%), 45 to 54 years (72.9%), 55 to 64 years (71.7%), and at least 65 years (66.2%).

Physical Activity

- The proportion of individuals aged 65 years and older (38.8%) who met the physical activity recommendations was lower than the proportion among residents aged 25 to 34 years (50.2%) or 18 to 24 years (62.3%).

- With the exception of individuals aged 55 to 64 years, the percentage of adults aged 65 years and above (51.9%) who took part in sufficient weekly aerobic physical activity was lower than that of all other age groups.

Tobacco and Alcohol Use

- Compared to persons in all other age groups, a greater percentage of residents aged 18 to 24 years were classified as current smokers (36.0%).

- Individuals aged 18 to 24 years (19.2%), 25 to 34 years (18.7%), and 35 to 44 years (15.2%) had a higher prevalence of binge drinking than persons aged 55 to 64 years (6.3%) or 65 years and older (1.8%).

Arthritis

- Residents aged 65 years and older (51.6%) or 55 to 64 years (44.0%) had a higher percentage of health care provider-diagnosed arthritis than persons in all other age groups.

- Among individuals diagnosed with some form of arthritis, persons aged 35 to 44 years old (26.3%) had a lower prevalence of activity limitation due to arthritis or joint symptoms compared to individuals of most other age groups.

Women's Health

- The proportion of women who obtained a mammogram within the past year was lower among women aged 40 to 49 years (50.4%) than among women aged 50 to 64 years (63.0%) or 65 years and older (64.1%).

- Women aged 18 to 24 years (51.8%) or 65 years and older (59.9%) had a lower prevalence of obtaining a Pap test within the past three years compared to women in all other age groups.

Cancer Screening

- The percentage of men aged 40 to 49 years (25.5%) who received a PSA test within the past two years was lower than this percentage among men aged 50 to 64 years (60.2%) as well as men aged 65 years and older (84.0%).
- Men aged 40 to 49 years (52.2%) had a lower prevalence of DRE screening within the past five years compared to men aged 50 to 64 years (70.8%) and men aged 65 years and older (84.6%).
- A greater proportion of persons aged 65 years and older (71.1%) obtained either a sigmoidoscopy within the past five years or a colonoscopy within the past ten years compared to individuals aged 50 to 64 years (51.5%).
- Among individuals aged 50 to 64 years (6.6%), prevalence of meeting ACS and USPSTF guidelines for colorectal cancer screening was lower than among individuals aged 65 years and older (11.9%).

Immunizations

- Compared to individuals in all other age groups, adults aged 65 years and older had a greater proportion of individuals (71.7%) who received either the seasonal or monovalent 2009 H1N1 influenza vaccine within the past 12 months.
- A greater percentage of children aged 6 months through 4 years (60.5%) received a seasonal influenza vaccine within the past 12 months compared to children aged 10 to 14 years (38.5%) or 15 to 17 years (34.6%).

Cardiovascular Health

- The prevalence of health care provider-diagnosed high blood pressure was higher among individuals aged 65 years and older (60.8%) than among individuals of all other age groups.
- Compared to adults aged 25 to 34 years (22.7%), 35 to 44 years (32.1%), and 45 to 54 years (43.6%), a higher percentage of persons aged 55 to 64 years (60.0%) and 65 years and older (55.8%) had ever been diagnosed with high blood cholesterol.
- A greater proportion of individuals aged 65 years and older (17.6%) were diagnosed with heart disease than persons in any other age group.
- Compared to individuals of all other age groups, prevalence of heart attack was higher among residents aged 65 years and older (12.4%).
- Persons aged 65 years and older (9.7%) had a higher prevalence of stroke than individuals of all other age groups.

Diabetes

- A higher percentage of adults aged 55 to 64 years (20.3%) and 65 years and older (23.0%) had physician-diagnosed diabetes compared to individuals in all other age groups.

Asthma

- Among Tarrant County children, prevalence of asthma was lower among children aged 0 to 4 years (1.6%) compared to children of all other child age groups.

RACE/ETHNICITY

Health Status

- Compared to the percentage among Whites (10.1%), a greater percentage of Hispanics (17.2%) experienced poor or fair health.

- Among racial and ethnic groups, Others (5.2%) had a lower proportion of individuals experiencing five or more days of poor physical health within the past 30 days than Whites (16.2%), Hispanics (18.4%), and Blacks (24.3%).

Health Care Access

- Prevalence of lack of health insurance was higher among Hispanics (55.4%) than persons of all other racial and ethnic groups.

- A lower proportion of Whites (12.7%) were unable to see a doctor due to cost within the past 12 months than Blacks (24.9%) and Hispanics (32.4%).

Overweight and Obesity

- Compared to persons of all other racial and ethnic groups, Others (40.7%) possessed a lower percentage of individuals classified as overweight and obese (BMI $\geq$ 25.0).

Arthritis

- Among racial and ethnic groups, the proportion of those with arthritis was lower among Hispanics (8.2%) than Blacks (18.3%) and Whites (22.9%).

Cancer Screening

- The percentage of Hispanic males aged 40 years and older (35.7%) who obtained a PSA test within the past two years was lower than this percentage among White males (59.0%) in the same age group.

- Compared to Hispanic males aged at least 40 years (41.0%), a greater proportion of White males in this age group (72.6%) underwent DRE screening within the past five years.

- The prevalence of having a fecal occult blood test performed within the past year was lower among Hispanic adults aged 50 years and older (6.2%) than among White adults in this age group (13.1%).

- A higher proportion of White adults aged 50 years and older (62.3%) obtained either a sigmoidoscopy within the past five years or a colonoscopy within the past ten years compared to either Hispanics (35.4%) or Others (29.9%) aged at least 50 years.

- A smaller proportion of Hispanics aged 50 years and older (2.7%) met ACS and USPSTF guidelines for colorectal cancer screening compared to Whites in this age group (8.9%).

Immunizations

- Prevalence of either seasonal or monovalent 2009 H1N1 influenza vaccination within the past 12 months was higher among White adults (46.4%) than both Black (29.1%) and Hispanic (26.2%) adults.

- Compared to White adults aged 65 years and older (74.2%), a lower percentage of Hispanic adults in this age group (51.4%) had ever received a pneumococcal vaccine.

- A higher proportion of Hispanic children aged 6 months to 18 years (52.1%) received a seasonal influenza vaccine within the past 12 months compared to Black children in this age group (31.3%).

Cardiovascular Health

- Compared to Blacks (36.8%) and Whites (28.5%), a lower proportion of Hispanics (20.3%) had ever received a diagnosis of high blood pressure.

- The prevalence of high blood cholesterol diagnosis among Whites (41.1%) was greater than the prevalence of this diagnosis among Blacks (24.9%) and Others (23.9%).

- A lower percentage of Blacks (2.9%) had ever received a diagnosis of heart disease compared to Whites (5.4%).

- Among racial and ethnic groups, a greater proportion of Whites (3.7%) had ever had a heart attack compared to Hispanics (1.6%).

- The percentage of individuals who had ever had a stroke was lower among Hispanics (1.0%) than among Whites (2.5%).

Asthma

- A higher percentage of Black children (14.2%) had healthcare provider-diagnosed asthma than Hispanic children (4.0%).

EDUCATION

Health Status

- A greater percentage of individuals with less than a high school diploma (21.2%) had fair or poor health compared to persons with technical school or some college (10.5%) as well as persons with a college degree (5.5%).
- Prevalence of experiencing five or more days of not good physical health in the past 30 days was lower among residents with a college degree (12.5%) than among persons with either a high school diploma (19.9%) or less than a high school diploma (25.2%).
- Compared to persons with a college degree (12.5%), a higher proportion of individuals with less than a high school diploma (27.5%) experienced five or more days of not good mental health within the past 30 days.
- The percentage of residents who experienced activity limitations due to health impairment was lower among persons with a college degree (6.2%) compared to individuals of all other education levels.

Health Care Access

- Prevalence of lack of health insurance was higher among individuals with less than a high school diploma (58.3%) compared to persons of all other education levels.
- A greater proportion of individuals with less than a high school diploma (38.8%) could not see a doctor within the past 12 months due to cost than among those with a high school diploma (19.7%), some college or technical school (19.0%), or a college degree (7.4%).

Overweight and Obesity

- Compared to residents with a high school diploma (31.0%), a lower percentage of persons with a college degree (22.8%) were classified as obese (BMI $\geq$ 30.0).
- Prevalence of overweight and obesity (BMI $\geq$ 25.0) was higher among persons with less than a high school diploma (77.5%) than among individuals of all other education levels.

Physical Activity

- Among education levels, a higher proportion of residents with a college degree (66.1%) or some college or technical school (67.9%) obtained sufficient weekly aerobic physical activity compared to individuals with a high school diploma (54.5%).

Fruits and Vegetables

- The prevalence of daily consumption of five or more fruits and vegetables was higher among persons with a college degree (29.4%) than among persons with a high school diploma (20.6%).

Tobacco and Alcohol Use

- Compared to persons of all other education levels, a lower percentage of individuals with a college degree were classified as current smokers (5.5%).

- A lower proportion of residents with some college or technical school (2.4%) participated in heavy alcohol consumption compared to persons with less than a high school diploma (9.2%).

Arthritis

- Compared to residents with a high school diploma (21.9%) or some college or technical school (21.6%), a lower percentage of individuals with less than a high school diploma (13.5%) were ever diagnosed with arthritis.

- Prevalence of experiencing limitations in activities due to arthritis or joint symptoms was higher among individuals with less than a high school education (72.2%) than among persons of all other education levels.

Women's Health

- A higher proportion of women aged 40 years and older with a college degree (67.6%) met ACS guidelines for the early detection of breast cancer compared to women of this age group with less than a high school diploma (46.2%).

- Compared to women aged 50 years and older with less than a high school diploma (64.7%), a greater percentage of women in this age group with a college degree (87.1%) met USPSTF guidelines for the early detection of breast cancer.

- The prevalence of having a Pap test within the past three years was higher among women with a college degree (87.6%) than among women of all other education levels.

Cancer Screening

- Among males aged 40 years and older, the proportion of men who obtained a PSA test within the past two years was lower among men with less than a high school education (25.4%) than among men with technical training or some college (55.3%) or with a college degree (58.8%).

- Prevalence of obtaining DRE screening within the past five years among males aged 40 years and older was lower among men with less than a high school diploma (36.2%) compared to men of all other education levels.

- Compared to adults aged 50 years and older with less than a high school diploma (39.3%), prevalence of meeting ACS and USPSTF guidelines for sigmoidoscopy and colonoscopy among adults of this age group was higher among all other education levels.

- The percentage of adults aged 50 years and older with less than a high school diploma (3.1%) who met ACS and USPSTF guidelines for the early detection of colorectal cancer was lower than the percentage among almost all other education levels.

Immunizations

- A higher proportion of adults with a college degree (49.8%) received either a seasonal or 2009 monovalent H1N1 influenza vaccine within the past 12 months compared to adults of all other education levels.

- Among adults aged 65 years and older, the prevalence of pneumococcal vaccination was higher among individuals with technical school or some college (77.3%) compared to individuals with less than a high school diploma (61.1%).

Cardiovascular Health

- A lower percentage of individuals with a college degree (3.0%) were diagnosed with heart disease compared to persons with a high school diploma (5.4%).

- The prevalence of prior heart attack was lower among residents with a college degree (1.7%) than individuals of all other education levels.

- Among Tarrant County residents, a greater proportion of adults with a high school diploma (3.5%) had ever had a stroke compared to adults with a college degree (1.0%).

ANNUAL INCOME

Health Status

- Compared to residents with an annual income below $15,000 (28.5%), the percentage of individuals with fair or poor health was lower among persons with annual incomes of $35,000 to $49,999 (11.8%) and $50,000 or more (5.0%).
- The prevalence of experiencing five or more days of not good physical health in the past 30 days was higher among persons with annual incomes below $15,000 (32.7%) compared to individuals with annual incomes of $35,000 to $49,999 (16.2%) or $50,000 or more (12.6%).
- A lower proportion of residents with annual incomes of $50,000 or more (13.8%) experienced five or more days of not good mental health within the past 30 days than individuals with annual incomes of less than $15,000 (40.0%).
- Prevalence of activities limited due to health impairment was higher among persons with annual incomes below $15,000 (30.8%) than among individuals of all other annual income brackets.

Health Care Access

- A higher percentage of individuals with annual incomes less than $15,000 (59.1%) lacked health insurance compared to individuals with annual incomes of $25,000 to $34,999 (35.4%), $35,000 to $49,999 (23.1%), and $50,000 or more (7.3%).
- Compared to persons with annual incomes below $15,000 (47.4%), a lower proportion of residents with annual incomes of $35,000 to $49,999 (18.0%) and $50,000 or more (6.2%) were unable to see a doctor within the past 12 months due to cost.

Overweight and Obesity

- A greater proportion of individuals with annual incomes below $15,000 (79.3%) were classified as overweight or obese (BMI $\geq$ 25.0) than persons with annual incomes of $50,000 or more (66.0%).

Physical Activity

- The percentage of individuals with annual incomes of $50,000 or more (50.1%) who met the recommendations for physical activity was greater than that of residents with annual incomes of less than $15,000 (30.0%).
- Compared to individuals with annual incomes below $15,000 (46.4%), the prevalence of obtaining sufficient weekly aerobic physical activity among persons with annual incomes of $50,000 or more (67.6%) was higher.

Tobacco and Alcohol Use

- The proportion of individuals classified as current smokers with annual incomes of $50,000 or more (12.8%) was lower than this proportion among persons of almost all other annual income groups.

- A lower percentage of residents with annual incomes of $25,000 to $34,999 (7.3%) participated in binge drinking compared to persons with annual incomes of $50,000 or more (15.8%).

Arthritis

- Prevalence of arthritis diagnosis among persons with annual incomes of $50,000 or more (16.3%) was lower than the prevalence of this diagnosis among individuals with annual incomes of $15,000 to $24,999 (24.5%) or $25,000 to $34,999 (25.7%).

- The percentage of individuals with annual incomes of $50,000 or more (32.4%) who experienced activity limitations due to arthritis or joint symptoms was lower than the percentage among individuals of almost all other annual income groups.

Women's Health

- A greater proportion of women aged 40 years and older with annual incomes of $50,000 or more (63.5%) obtained a mammogram within the past year compared to women of this age group with annual incomes of $15,000 to $24,999 (47.0%).

- Prevalence of having a Pap test within the past three years was higher among women with annual incomes of $50,000 or more (87.8%) compared to women with annual incomes of $25,000 to $34,999 (68.2%), $15,000 to $24,999 (68.2%), or less than $15,000 (57.6%).

Cancer Screening

- Among males aged 40 years and older, a higher percentage of men with annual incomes of $50,000 or more (58.2%) obtained a PSA test within the past two years compared to men with annual incomes of $15,000 to $24,999 (37.3%) or below $15,000 (22.2%).

- Prevalence of DRE screening within the past five years was lower among males aged 40 years and older with annual incomes of $15,000 to $24,999 (48.2%) or less than $15,000 (46.5%) than among men of this age group with annual incomes of $50,000 or more (73.7%).

- A greater proportion of adults aged 50 years and older with annual incomes of $50,000 or more (62.2%) obtained a sigmoidoscopy within the past five years or a colonoscopy within the past ten years compared to adults in this age group with annual incomes of $15,000 to $24,999 (45.6%) or below $15,000 (46.6%).

Immunizations

- Among Tarrant County adults, the prevalence of having received either the seasonal or monovalent 2009 H1N1 influenza vaccine within the past 12 months was higher among persons with annual incomes of $50,000 or more (45.0%) than among persons with annual incomes of $15,000 to $24,999 (34.6%).

Cardiovascular Health

- Prevalence of high blood cholesterol was higher among persons with annual incomes of $15,000 to $24,999 (45.4%) compared to individuals with annual incomes of $50,000 or more (34.5%).
- The proportion of individuals diagnosed with heart disease with annual incomes of $50,000 or more (2.8%) was lower than the proportion among persons of almost all other annual income levels.
- A greater percentage of residents with annual incomes of less than $15,000 (5.7%) had ever had a heart attack compared to residents with annual incomes of $50,000 or more (1.8%).
- Prevalence of a previous history of stroke was lower among persons with annual incomes of $50,000 or more (0.8%) than among individuals of all other annual income levels.

EMPLOYMENT

Health Status

- Compared to individuals of all other employment statuses, a greater percentage of persons who were unable to work (56.2%) had fair or poor health.
- Prevalence of experiencing five or more days of not good physical health in the past 30 days was higher among residents who were unable to work (63.2%) than among individuals of all other employment classifications.
- Among Tarrant County residents, a lower proportion of retired persons (10.5%) experienced five or more days of not good mental health in the past 30 days compared to persons of all other employment classifications.
- A higher percentage of adults who were unable to work (51.1%) experienced activities limited by health impairment than individuals of all other employment statuses.

Health Care Access

- Regarding health insurance coverage, a greater proportion of individuals who were out of work for less than one year (52.6%) lacked health insurance compared to individuals employed for wages (17.3%) and persons who were unable to work (16.2%).

- Compared to persons of all other employment statuses, a lower percentage of retired Tarrant County residents (4.7%) could not see a doctor in the past 12 months due to cost.

Overweight and Obesity

- A lower proportion of self-employed individuals (18.8%) were classified as obese (BMI $\geq$ 30.0) than otherwise employed persons (30.8%).

- A greater percentage of individuals employed for wages (68.8%) were classified as either overweight or obese (BMI $\geq$ 25.0) compared to homemakers (53.2%).

Physical Activity

- Compared to individuals in almost every other employment category, a higher percentage of self-employed individuals (66.7%) met the physical activity recommendations.

- Prevalence of participating in sufficient aerobic physical activity was lower among persons who were unable to work (32.3%) compared to that of individuals in all other employment categories.

Fruits and Vegetables

- A lower proportion of residents who were unable to work (15.2%) consumed at least five fruits and vegetables per day compared to persons employed for wages (25.6%).

Tobacco and Alcohol Use

- Compared to Tarrant County residents employed for wages (15.4%), a higher percentage of residents out of work for less than one year (46.7%) as well as persons who were unable to work (35.4%) were classified as current smokers.

- A lower proportion of homemakers (1.3%) consumed heavy amounts of alcohol compared to individuals employed for wages (4.7%).

- Prevalence of binge drinking was lower among individuals who were unable to work (2.6%) than among persons out of work for more than one year (21.3%), individuals out of work for less than one year (21.2%), self-employed individuals (18.3%), otherwise employed persons (15.1%), and students (19.7%).

Arthritis

- A greater proportion of retired individuals (52.6%) and persons who were unable to work (53.3%) had health care provider-diagnosed arthritis compared to individuals in all other employment categories.

- Among Tarrant County residents, the percentage of individuals who experienced activities limited due to arthritis or joint symptoms was higher among residents who were unable to work (80.0%) compared to individuals in almost every other employment category.

Women's Health

- Compared to women employed for wages (84.3%), prevalence of obtaining a Pap test within the past three years was lower among persons who were unable to work (68.4%) as well as retired women (65.8%).

Cancer Screening

- The percentage of males aged 40 years and older who obtained a PSA test within the past two years was higher among retired men (82.6%) than among men of all other employment categories.

- Compared to retired men aged 40 years and older (83.9%), prevalence of receipt of DRE screening within the past five years among men in this age group was lower for men employed for wages (64.3%), men who were unable to work (53.2%), persons out of work for more than one year (44.6%), and men who were out of work for less than one year (34.1%).

- Among adults aged 50 years and older, a greater proportion of retired persons (71.6%) obtained either a sigmoidoscopy within the past five years or a colonoscopy within the past ten years compared to individuals employed for wages (50.9%), adults out of work less than one year (26.9%) and persons unable to work (56.7%).

- Prevalence of meeting ACS and USPSTF guidelines for colorectal cancer screening was lower among adults employed for wages aged 50 years and older (6.4%) than among retired individuals in this age group (11.9%).

Immunizations

- Compared to individuals in all other employment categories, a greater proportion of retired adults (70.2%) received a seasonal or monovalent 2009 H1N1 influenza vaccine within the past 12 months.

- Among adults aged 65 years and older, prevalence of pneumococcal vaccination was lower among persons employed for wages (60.3%) than among retired individuals (75.4%).

Cardiovascular Health

- Prevalence of high blood pressure was lower among individuals employed for wages (22.4%) than among persons who were unable to work (59.2%) or persons who were retired (61.9%).

- A greater proportion of retired residents (58.4%) and residents who were unable to work (62.0%) had ever been diagnosed with high blood cholesterol compared to individuals in all other employment categories.

- Prevalence of healthcare provider-diagnosed heart disease was higher among individuals who were unable to work (18.5%) than among individuals of almost every other employment category.

- The percentage of individuals with a history of heart attack was higher among retired persons (12.7%) and individuals who were unable to work (11.6%) than among persons of all other employment categories.

- Among Tarrant County residents, a higher percentage of retired residents (10.0%) as well as persons who were unable to work (11.1%) had ever had a stroke compared to individuals of all other employment categories.

Diabetes

- Prevalence of physician-diagnosed diabetes was higher among retired Tarrant County residents (23.1%) as well as individuals who were unable to work (28.0%) than among persons of all other employment categories.

Asthma

- Compared to individuals who were unable to work (23.3%), a lower percentage of self-employed (8.1%), otherwise employed (8.0%), homemakers (6.4%), and retired persons (7.8%) had health care provider-diagnosed asthma.

TARRANT COUNTY VERSUS TEXAS AND THE UNITED STATES

Health Status

- A lower proportion of Tarrant County residents (11.7%) had fair or poor health compared to residents of Texas (16.0%) and the United States (16.1%).

Health Care Access

- Compared to residents of the United States (15.3%), a greater percentage of individuals in Tarrant County (23.5%) lacked health insurance.

- A higher proportion of adults in Tarrant County (17.8%) could not see a doctor within the past 12 months due to cost than adults in the United States (14.9%).

Arthritis

- Prevalence of healthcare provider-diagnosed arthritis was lower among Tarrant County residents (19.3%) compared to residents of Texas (22.5%) and the United States (25.9%).

Cancer Screening

- A greater percentage of individuals aged 50 years and older in Tarrant County (63.8%) had ever had a sigmoidoscopy or colonoscopy compared to individuals within this age group in the state of Texas (56.2%).

Cardiovascular Health

- Compared to adults in the United States (6.1%), prevalence of healthcare provider-diagnosed heart disease was lower among Tarrant County adults (4.6%).

Asthma

- A lower proportion of Texas adults (6.5%) had healthcare provider-diagnosed asthma compared to Tarrant County adults (9.2%).

HEALTHY PEOPLE 2010 OBJECTIVES

Developed by the United States Department of Health and Human Services, the *Healthy People 2010* project seeks to set national standards for the adoption of healthy behaviors by all Americans. Following is a comparison of *Healthy People 2010* objectives against behaviors evaluated by the 2009/2010 Tarrant County BRFSS.

Physical Activity

- The percentage of individuals in Tarrant County (47.4%) who met the physical activity recommendations was below the *Health People 2010* objective (60.0%) for this behavior.

Fruits and Vegetables

- Compared to the *Healthy People 2010* objectives for the daily consumption of the recommended amount of fruits (75.0%) and vegetables (50.0%), prevalence of meeting this recommendation was lower among Tarrant County residents (25.7%).

Tobacco and Alcohol Use

- The proportion of Tarrant County adults (18.5%) classified as current smokers was greater than the *Health People 2010* objective (12.0%) for this behavior.

Women's Health

- Compared to the *Healthy People 2010* objective for breast cancer screening (70.0%), the percentage of women aged 40 years and older in Tarrant County who received a mammogram within the past two years was higher (73.5%).

Cancer Screening

- Prevalence of ever having a sigmoidoscopy or colonoscopy among adults aged 50 years and older in Tarrant County (63.8%) was greater than the *Health People 2010* objective (50.0%) for this behavior.

SUMMARY TABLES

The following tables summarize BRFSS data by demographic variables including sub-county area of residence, gender, age group, race/ethnicity, education, annual income, and employment. Additionally, the prevalence of key health behaviors among Tarrant County residents are compared to that of residents of Texas and the United States as well as evaluated against *Healthy People 2010* benchmarks. Finally, where applicable, Tarrant County trend data from 1998 to 2010 are reported.

TABLE 1.1 SUMMARY OF RISK FACTORS, TARRANT COUNTY, 2009/2010

TARRANT COUNTY RESIDENTS	
RISK FACTORS	**WEIGHTED PERCENTAGE***
Health Status	
Fair or poor health	11.7
Physical health not good	17.0
Mental health not good	18.8
Activities limited by health impairment	10.8
Health Care Access	
No health insurance	23.5
Could not see a doctor due to cost	17.8
Overweight and Obesity	
Overweight (BMI = 25.0-29.9)	37.5
Obese (BMI ≥ 30.0)	28.2
Overweight and obese (BMI ≥ 25.0)	65.7
Physical Activity	
Met recommendations for physical activity	47.4
Sufficient aerobic physical activity	63.1
Fruits and Vegetables	
Consume ≥5 times per day	25.7
Tobacco and Alcohol Use	
Current smoker	18.5
Heavy alcohol consumption	4.1
Binge drinking	13.3
Arthritis	
Diagnosed with some form of arthritis	19.3
Activities limited due to arthritis	45.3
Women's Health	
Mammogram within past year	58.6
Mammogram within past two years	79.5
Pap test within past three years	77.1
Cancer Screening	
PSA test within past two years	53.0
DRE screening within past five years	66.9
Fecal occult blood test within past year	12.9
Sigmoidoscopy within past five years OR colonoscopy within past ten years	58.7
Met colorectal cancer screening guidelines	8.5
Immunizations	
Adult influenza vaccination	40.6
Pneumococcal vaccination	72.4
Child influenza vaccination	44.9
Cardiovascular Health	
High blood pressure	27.4
High blood cholesterol	37.7
Diagnosed with heart disease	4.6
Heart attack	3.0
Stroke	2.1
Diabetes	
Diagnosed with diabetes	8.5
Asthma	
Adult asthma	9.2
Child asthma	7.2

**Estimates weighted to population characteristics; see page x for age inclusion criteria*

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TABLE 1.2 SUMMARY OF RISK FACTORS BY SUB-COUNTY AREA, TARRANT COUNTY, 2009/2010

RISK FACTORS	NORTH-EAST	SOUTH-EAST	CENTRAL	SOUTH-WEST	NORTH-WEST
	WEIGHTED PERCENTAGE BY SUB-COUNTY AREA*				
Health Status					
Fair or poor health	7.3	9.3	19.8	13.9	12.7
Physical health not good	16.6	15.8	17.4	17.1	18.5
Mental health not good	16.3	20.5	18.9	20.2	16.8
Activities limited by health impairment	11.8	10.6	12.1	10.3	10.6
Health Care Access					
No health insurance	17.2	25.3	37.6	21.1	22.2
Could not see a doctor due to cost	12.9	18.0	23.4	19.1	17.4
Overweight and Obesity					
Overweight (BMI = 25.0-29.9)	38.4	40.8	27.8	36.5	37.3
Obese (BMI ≥ 30.0)	29.8	23.4	39.7	26.3	30.6
Overweight and obese (BMI ≥ 25.0)	68.2	64.2	67.5	62.7	67.9
Physical Activity					
Met recommendations for physical activity	48.3	47.0	43.4	49.6	47.0
Sufficient aerobic physical activity	69.6	61.9	59.4	64.7	60.4
Fruits and Vegetables					
Consume ≥5 times per day	25.0	23.5	27.2	28.7	25.9
Tobacco and Alcohol Use					
Current smoker	18.6	19.3	22.4	14.0	19.7
Heavy alcohol consumption	6.6	3.1	7.1	4.5	2.7
Binge drinking	21.1	9.5	17.1	11.1	13.7
Arthritis					
Diagnosed with some form of arthritis	18.6	16.1	22.1	21.7	21.0
Activities limited due to arthritis	38.3	42.5	43.9	47.0	50.8
Women's Health					
Mammogram within past year	69.1	58.2	62.4	57.8	53.3
Mammogram within past two years	86.7	80.7	82.4	82.2	70.8
Pap test within past three years	88.0	76.1	74.0	75.8	74.0
Cancer Screening					
PSA test within past two years	56.7	53.1	45.9	53.8	52.7
DRE screening within past five years	77.9	68.9	53.3	66.5	63.9
Fecal occult blood test within past year	15.6	12.9	14.4	14.2	9.9
Sigmoidoscopy within past five years OR colonoscopy within past ten years	67.6	56.3	51.8	60.9	57.0
Met colorectal cancer screening guidelines	11.6	10.4	9.1	7.1	5.9
Immunizations					
Adult influenza vaccination	43.7	38.2	34.1	44.0	41.3
Pneumococcal vaccination	80.0	69.3	68.8	76.6	67.2
Child influenza vaccination	49.1	47.0	38.8	41.3	41.9
Cardiovascular Health					
High blood pressure	23.0	25.4	31.6	29.0	29.8
High blood cholesterol	37.9	33.2	41.6	40.2	39.7
Diagnosed with heart disease	3.4	4.3	5.6	5.6	4.3
Heart attack	2.6	2.8	3.9	3.6	2.9
Stroke	2.1	1.6	2.1	2.8	2.1
Diabetes					
Diagnosed with diabetes	6.1	7.4	10.8	8.0	10.9
Asthma					
Adult asthma	9.3	10.4	8.6	9.4	7.8
Child asthma	7.7	5.5	7.1	8.5	8.6

**Estimates weighted to population characteristics; see page x for age inclusion criteria*

TABLE 1.3 SUMMARY OF RISK FACTORS BY GENDER, TARRANT COUNTY, 2009/2010

WEIGHTED PERCENTAGE BY GENDER*		
RISK FACTORS	**MALES**	**FEMALES**
Health Status		
Fair or poor health	10.8	12.6
Physical health not good	15.2	18.8
Mental health not good	14.7	22.8
Activities limited by health impairment	9.2	12.5
Health Care Access		
No health insurance	26.2	21.1
Could not see a doctor due to cost	14.8	20.7
Overweight and Obesity		
Overweight (BMI = 25.0-29.9)	44.8	30.0
Obese (BMI ≥ 30.0)	29.2	27.1
Overweight and obese (BMI ≥ 25.0)	74.0	57.1
Physical Activity		
Met recommendations for physical activity	49.2	45.7
Sufficient aerobic physical activity	68.3	57.9
Fruits and Vegetables		
Consume ≥5 times per day	22.7	28.5
Tobacco and Alcohol Use		
Current smoker	22.4	14.8
Heavy alcohol consumption	5.6	2.8
Binge drinking	19.4	7.6
Arthritis		
Diagnosed with some form of arthritis	15.4	23.1
Activities limited due to arthritis	40.0	48.6
Cancer Screening		
Fecal occult blood test within past year	14.8	11.2
Sigmoidoscopy within past five years OR colonoscopy within past ten years	55.5	61.5
Met colorectal cancer screening guidelines	9.4	7.8
Immunizations		
Adult influenza vaccination	36.4	44.5
Pneumococcal vaccination	68.4	75.0
Child influenza vaccination	48.8	40.9
Cardiovascular Health		
High blood pressure	29.8	25.2
High blood cholesterol	39.9	35.8
Diagnosed with heart disease	5.2	3.9
Heart attack	3.4	2.8
Stroke	1.8	2.5
Diabetes		
Diagnosed with diabetes	8.2	8.9
Asthma		
Adult asthma	6.5	11.9
Child asthma	10.1	4.3

**Estimates weighted to population characteristics; see page x for age inclusion criteria*

TABLE 1.4 SUMMARY OF RISK FACTORS BY AGE GROUP, TARRANT COUNTY, 2009/2010

RISK FACTORS	WEIGHTED PERCENTAGE BY AGE GROUP (IN YEARS)*					
	18-24	25-34	35-44	45-54	55-64	≥65
Health Status						
Fair or poor health	7.4	5.3	7.5	16.1	22.1	23.4
Physical health not good	8.7	13.6	15.1	20.1	26.1	24.9
Mental health not good	25.7	20.9	16.4	21.1	16.2	11.7
Activities limited by health impairment	11.9	7.6	8.3	13.2	15.8	14.3
Health Care Access						
No health insurance	44.8	32.4	23.7	17.9	11.9	2.1
Could not see a doctor due to cost	25.6	23.3	16.1	20.1	10.6	5.3
Overweight and Obesity						
Overweight (BMI = 25.0-29.9)	31.6	36.9	39.4	39.4	35.2	40.0
Obese (BMI ≥ 30.0)	15.8	27.7	29.6	33.5	36.5	26.2
Overweight and obese (BMI ≥ 25.0)	47.4	64.6	69.0	72.9	71.7	66.2
Physical Activity						
Met recommendations for physical activity	62.3	50.2	46.5	43.4	40.1	38.8
Sufficient aerobic physical activity	70.5	67.3	63.1	61.4	58.4	51.9
Fruits and Vegetables						
Consume ≥5 times per day	16.8	29.7	23.6	25.6	28.1	28.1
Tobacco and Alcohol Use						
Current smoker	36.0	14.5	17.3	20.5	17.7	9.2
Heavy alcohol consumption	4.2	6.5	2.6	3.9	3.4	3.0
Binge drinking	19.2	18.7	15.2	10.8	6.3	1.8
Arthritis						
Diagnosed with some form of arthritis	-	6.2	10.3	26.2	44.0	51.6
Activities limited due to arthritis	-	53.0	26.3	52.5	48.1	45.4
Women's Health						
Pap test within past three years	51.8	83.0	86.0	79.3	82.4	59.9
Immunizations						
Adult influenza vaccination	21.4	35.2	33.7	40.3	58.0	71.7
Cardiovascular Health						
High blood pressure	13.3	13.8	16.7	35.1	51.8	60.8
High blood cholesterol	-	22.7	32.1	43.6	60.0	55.8
Diagnosed with heart disease	-	-	1.4	5.8	10.7	17.6
Heart attack	0.0	-	-	3.9	7.4	12.4
Stroke	0.0	-	0.8	1.9	4.0	9.7
Diabetes						
Diagnosed with diabetes	-	2.9	3.8	12.8	20.3	23.0
Asthma						
Adult asthma	8.1	10.5	7.3	10.6	10.2	9.1

**Estimates weighted to population characteristics; see page x for age inclusion criteria*

TABLE 1.5 SUMMARY OF RISK FACTORS BY RACE/ETHNICITY, TARRANT COUNTY, 2009/2010

RISK FACTORS	WEIGHTED PERCENTAGE BY RACE/ETHNICITY*			
	WHITE	BLACK	HISPANIC	OTHER
Health Status				
Fair or poor health	10.1	14.5	17.2	6.8
Physical health not good	16.2	24.3	18.4	5.2
Mental health not good	17.4	21.8	23.7	14.4
Activities limited by health impairment	10.5	12.2	12.2	7.1
Health Care Access				
No health insurance	14.3	29.5	55.4	18.6
Could not see a doctor due to cost	12.7	24.9	32.4	15.4
Overweight and Obesity				
Overweight (BMI = 25.0-29.9)	36.4	36.9	45.6	24.2
Obese (BMI ≥ 30.0)	27.1	34.5	31.7	16.6
Overweight and obese (BMI ≥ 25.0)	63.5	71.4	77.3	40.7
Physical Activity				
Met recommendations for physical activity	49.4	42.9	40.8	55.8
Sufficient aerobic physical activity	65.7	56.7	55.5	68.1
Fruits and Vegetables				
Consume ≥5 times per day	24.1	30.7	26.5	36.0
Tobacco and Alcohol Use				
Current smoker	19.7	21.4	14.1	12.0
Heavy alcohol consumption	3.6	3.2	7.3	0.0
Binge drinking	14.6	8.3	14.1	-
Arthritis				
Diagnosed with some form of arthritis	22.9	18.3	8.2	11.1
Activities limited due to arthritis	45.2	40.9	53.9	-
Women's Health				
Mammogram within past year	58.9	64.8	51.4	61.4
Mammogram within past two years	79.9	77.0	78.0	87.1
Pap test within past three years	78.3	81.3	69.0	70.0
Cancer Screening				
PSA test within past two years	59.0	42.3	35.7	26.6
DRE screening within past five years	72.6	64.6	41.0	49.5
Fecal occult blood test within past year	13.1	15.9	6.2	15.4
Sigmoidoscopy within past five years OR colonoscopy within past ten years	62.3	53.6	35.4	29.9
Met colorectal cancer screening guidelines	8.9	9.3	2.7	10.1
Immunizations				
Adult influenza vaccination	46.4	29.1	26.2	42.6
Pneumococcal vaccination	74.2	69.3	51.4	-
Child influenza vaccination	44.4	31.3	52.1	62.3
Cardiovascular Health				
High blood pressure	28.5	36.8	20.3	18.5
High blood cholesterol	41.1	24.9	36.2	23.9
Diagnosed with heart disease	5.4	2.9	2.8	3.9
Heart attack	3.7	1.9	1.6	2.0
Stroke	2.5	2.0	1.0	-
Diabetes				
Diagnosed with diabetes	8.0	11.8	8.6	7.6
Asthma				
Adult asthma	9.8	13.0	5.4	5.9
Child asthma	7.7	14.2	4.0	-

Estimates weighted to population characteristics; see page x for age inclusion criteria

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TABLE 1.6 SUMMARY OF RISK FACTORS BY EDUCATION, TARRANT COUNTY, 2009/2010

RISK FACTORS	WEIGHTED PERCENTAGE BY EDUCATION*			
	< HIGH SCHOOL	HIGH SCHOOL OR GED	TECH/SOME COLLEGE	COLLEGE DEGREE
Health Status				
Fair or poor health	21.2	17.0	10.5	5.5
Physical health not good	25.2	19.9	16.6	12.5
Mental health not good	27.5	18.4	22.7	12.5
Activities limited by health impairment	16.2	13.1	12.3	6.2
Health Care Access				
No health insurance	58.3	28.3	21.4	8.9
Could not see a doctor due to cost	38.8	19.7	19.0	7.4
Overweight and Obesity				
Overweight (BMI = 25.0-29.9)	45.0	34.2	33.2	40.9
Obese (BMI ≥ 30.0)	32.5	31.0	30.7	22.8
Overweight and obese (BMI ≥ 25.0)	77.5	65.2	63.8	63.6
Physical Activity				
Met recommendations for physical activity	42.6	42.9	49.2	50.5
Sufficient aerobic physical activity	58.3	54.5	67.9	66.1
Fruits and Vegetables				
Consume ≥5 times per day	25.7	20.6	25.0	29.4
Tobacco and Alcohol Use				
Current smoker	24.1	28.0	24.3	5.5
Heavy alcohol consumption	9.2	5.2	2.4	2.9
Binge drinking	13.5	12.8	12.1	14.4
Arthritis				
Diagnosed with some form arthritis	13.5	21.9	21.6	18.1
Activities limited due to arthritis	72.2	46.4	46.5	36.2
Women's Health				
Mammogram within past year	46.2	57.3	53.9	67.6
Mammogram within past two years	64.7	78.4	77.7	87.1
Pap test within past three years	56.8	70.3	77.9	87.6
Cancer Screening				
PSA test within past two years	25.4	48.4	55.3	58.8
DRE screening within past five years	36.2	64.1	64.8	75.0
Fecal occult blood test within past year	8.9	13.7	13.2	13.3
Sigmoidoscopy within past five years OR colonoscopy within past ten years	39.3	56.8	59.6	63.7
Met colorectal cancer screening guidelines	3.1	9.7	9.1	8.7
Immunizations				
Adult influenza vaccination	30.4	35.7	38.1	49.8
Pneumococcal vaccination	61.1	73.9	77.3	71.3
Child influenza vaccination	40.9	42.5	42.6	48.9
Cardiovascular Health				
High blood pressure	24.6	29.5	30.8	24.4
High blood cholesterol	44.7	39.9	36.0	36.0
Diagnosed with heart disease	5.9	5.4	5.2	3.0
Heart attack	3.8	4.3	3.4	1.7
Stroke	2.5	3.5	2.2	1.0
Diabetes				
Diagnosed with diabetes	9.9	10.3	8.5	6.8
Asthma				
Adult asthma	6.8	9.8	9.1	9.9
Child asthma	2.8	10.5	7.3	7.4

**Estimates weighted to population characteristics; see page x for age inclusion criteria*

TABLE 1.7 SUMMARY OF RISK FACTORS BY ANNUAL INCOME, TARRANT COUNTY, 2009/2010

WEIGHTED PERCENTAGE BY ANNUAL INCOME (IN $10,000'S)*					
RISK FACTORS	**<$15**	**$15-$24.9**	**$25-$34.9**	**$35-$49.9**	**≥$50**
Health Status					
Fair or poor health	28.5	21.7	17.3	11.8	5.0
Physical health not good	32.7	25.8	20.1	16.2	12.6
Mental health not good	40.0	25.0	21.2	22.0	13.8
Activities limited by health impairment	30.8	16.4	9.9	11.6	7.3
Health Care Access					
No health insurance	59.1	49.7	35.4	23.1	7.3
Could not see a doctor due to cost	47.4	34.5	28.7	18.0	6.2
Overweight and Obesity					
Overweight (BMI = 25.0-29.9)	41.9	40.0	37.8	31.0	38.8
Obese (BMI ≥ 30.0)	37.4	29.0	32.3	33.3	27.2
Overweight and obese (BMI ≥ 25.0)	79.3	69.0	70.1	64.3	66.0
Physical Activity					
Met recommendations for physical activity	30.0	44.6	44.6	48.4	50.1
Sufficient aerobic physical activity	46.4	58.3	63.2	58.5	67.6
Fruits and Vegetables					
Consume ≥5 times per day	25.1	23.2	30.1	23.1	26.0
Tobacco and Alcohol Use					
Current smoker	27.3	25.6	29.8	17.9	12.8
Heavy alcohol consumption	6.0	6.4	2.3	6.1	3.8
Binge drinking	8.9	12.1	7.3	11.0	15.8
Arthritis					
Diagnosed with some form of arthritis	18.4	24.5	25.7	20.2	16.3
Activities limited due to arthritis	64.3	66.4	50.7	41.8	32.4
Women's Health					
Mammogram within past year	49.0	47.0	50.8	54.7	63.5
Mammogram within past two years	73.7	73.0	75.1	82.8	84.1
Pap test within past three years	57.6	68.2	68.2	80.7	87.8
Cancer Screening					
PSA test within past two years	22.2	37.3	57.9	50.8	58.2
DRE screening within past five years	46.5	48.2	59.5	65.2	73.7
Fecal occult blood test within past year	14.4	12.1	16.3	12.7	12.5
Sigmoidoscopy within past five years OR colonoscopy within past ten years	46.6	45.6	56.0	63.6	62.2
Met colorectal cancer screening guidelines	6.4	7.2	12.3	10.3	8.6
Immunizations					
Adult influenza vaccination	32.5	34.6	34.5	45.4	45.0
Pneumococcal vaccination	73.2	76.7	75.9	78.8	63.6
Child influenza vaccination	39.4	40.6	47.2	38.2	44.5
Cardiovascular Health					
High blood pressure	28.1	28.4	29.2	28.1	25.8
High blood cholesterol	49.9	45.4	39.5	38.6	34.5
Diagnosed with heart disease	9.4	7.4	6.0	4.5	2.8
Heart attack	5.7	4.7	4.3	3.6	1.8
Stroke	4.8	3.3	3.3	2.5	0.8
Diabetes					
Diagnosed with diabetes	12.2	9.7	12.0	7.9	7.4
Asthma					
Adult asthma	8.4	7.6	9.8	11.1	9.6
Child asthma	8.1	6.2	6.7	2.7	8.5

**Estimates weighted to population characteristics; see page x for age inclusion criteria*

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TABLE 1.8A SUMMARY OF RISK FACTORS BY EMPLOYMENT, TARRANT COUNTY, 2009/2010

WEIGHTED PERCENTAGE BY EMPLOYMENT*				
RISK FACTORS	**EMPLOYED FOR WAGES**	**SELF-EMPLOYED**	**OUT OF WORK >1 YR**	**OUT OF WORK <1 YR**
Health Status				
Fair or poor health	6.6	8.7	21.2	18.3
Physical health not good	13.0	12.9	25.2	11.5
Mental health not good	16.1	24.3	23.0	26.6
Activities limited by health impairment	6.9	11.9	15.3	15.9
Health Care Access				
No health insurance	17.3	41.5	51.9	52.6
Could not see a doctor due to cost	14.3	29.2	39.4	33.4
Overweight and Obesity				
Overweight (BMI = 25.0-29.9)	38.0	48.3	33.0	42.5
Obese (BMI ≥ 30.0)	30.8	18.8	32.4	34.8
Overweight and obese (BMI ≥ 25.0)	68.8	67.1	65.4	77.4
Physical Activity				
Met recommendations for physical activity	46.0	66.7	32.0	41.9
Sufficient aerobic physical activity	64.1	79.8	58.6	65.5
Fruits and Vegetables				
Consume ≥5 times per day	25.6	27.6	35.4	20.9
Tobacco and Alcohol Use				
Current smoker	15.4	25.8	22.4	46.7
Heavy alcohol consumption	4.7	4.2	11.9	4.9
Binge drinking	15.1	18.3	21.3	21.2
Arthritis				
Diagnosed with some form of arthritis	14.1	13.6	17.1	12.5
Activities limited due to arthritis	35.7	33.3	68.8	47.0
Women's Health				
Mammogram within past year	59.6	59.6	51.5	43.7
Mammogram within past two years	82.6	79.2	56.0	74.7
Pap test within past three years	84.3	82.5	66.7	65.5
Cancer Screening				
PSA test within past two years	45.8	49.4	27.5	29.3
DRE screening within past five years	64.3	74.1	44.6	34.1
Fecal occult blood test within past year	10.8	13.2	7.0	-
Sigmoidoscopy within past five years OR colonoscopy within past ten years	50.9	59.4	53.8	26.9
Met colorectal cancer screening guidelines	6.4	8.6	0.0	-
Immunizations				
Adult influenza vaccination	40.8	26.5	39.0	20.8
Pneumococcal vaccination	60.3	66.9	-	-
Child influenza vaccination	46.6	35.1	55.1	33.5
Cardiovascular Health				
High blood pressure	22.4	26.1	37.1	20.4
High blood cholesterol	34.4	29.2	31.7	28.9
Diagnosed with heart disease	1.8	2.6	3.6	4.8
Heart attack	1.3	1.5	1.9	2.2
Stroke	0.5	-	1.9	1.4
Diabetes				
Diagnosed with diabetes	6.4	7.0	6.4	4.1
Asthma				
Adult asthma	8.0	8.1	18.4	11.4
Child asthma	7.6	7.8	-	10.1

*Estimates weighted to population characteristics; see page x for age inclusion criteria

TABLE 1.8B SUMMARY OF RISK FACTORS BY EMPLOYMENT, TARRANT COUNTY, 2009/2010

RISK FACTORS	WEIGHTED PERCENTAGE BY EMPLOYMENT*			
	HOME-MAKER	STUDENT	RETIRED	UNABLE TO WORK
Health Status				
Fair or poor health	10.4	5.7	21.2	56.2
Physical health not good	19.6	9.0	23.8	63.2
Mental health not good	20.8	22.7	10.5	42.2
Activities limited by health impairment	10.9	4.6	14.6	51.1
Health Care Access				
No health insurance	36.9	26.3	2.3	16.2
Could not see a doctor due to cost	22.7	15.6	4.7	26.4
Overweight and Obesity				
Overweight (BMI = 25.0-29.9)	30.8	25.3	40.6	33.2
Obese (BMI ≥ 30.0)	22.5	14.0	27.5	39.8
Overweight and obese (BMI ≥ 25.0)	53.2	39.3	68.1	73.0
Physical Activity				
Met recommendations for physical activity	50.4	61.7	43.5	25.8
Sufficient aerobic physical activity	58.3	69.1	58.8	32.3
Fruits and Vegetables				
Consume ≥5 times per day	29.8	12.3	27.9	15.2
Tobacco and Alcohol Use				
Current smoker	15.0	18.1	9.1	35.4
Heavy alcohol consumption	1.3	-	3.3	2.3
Binge drinking	4.7	19.7	3.8	2.6
Arthritis				
Diagnosed with some form of arthritis	14.7	-	52.6	53.3
Activities limited due to arthritis	36.8	-	45.1	80.0
Women's Health				
Mammogram within past year	52.0	-	66.5	54.9
Mammogram within past two years	74.5	-	83.3	71.5
Pap test within past three years	74.7	64.5	65.8	68.4
Cancer Screening				
PSA test within past two years	-	-	82.6	45.2
DRE screening within past five years	-	-	83.9	53.2
Fecal occult blood test within past year	10.1	-	15.9	18.2
Sigmoidoscopy within past five years OR colonoscopy within past ten years	60.5	-	71.6	56.7
Met colorectal cancer screening guidelines	7.4	-	11.9	10.8
Immunizations				
Adult influenza vaccination	35.0	30.3	70.2	53.5
Pneumococcal vaccination	68.9	-	75.4	74.7
Child influenza vaccination	50.6	44.8	51.6	29.9
Cardiovascular Health				
High blood pressure	20.2	6.4	61.9	59.2
High blood cholesterol	37.2	15.7	58.4	62.0
Diagnosed with heart disease	3.4	-	17.7	18.5
Heart attack	2.5	0.0	12.7	11.6
Stroke	1.0	0.0	10.0	11.1
Diabetes				
Diagnosed with diabetes	5.9	-	23.1	28.0
Asthma				
Adult asthma	6.4	14.0	7.8	23.3
Child asthma	5.0	-	-	12.8

**Estimates weighted to population characteristics; see page x for age inclusion criteria*

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TABLE 1.9 COMPARISON OF TARRANT COUNTY RISK FACTORS (2009/2010) TO TEXAS, THE UNITED STATES, AND *HEALTHY PEOPLE 2010* OBJECTIVES

WEIGHTED PERCENTAGE FOR TARRANT COUNTY VERSUS TEXAS, THE UNITED STATES, AND *HEALTHY PEOPLE 2010* OBJECTIVES*				
RISK FACTORS	**TARRANT COUNTY**	**TEXAS[1]**	**UNITED STATES[2]**	**HP 2010†**
Health Status				
Fair or poor health	11.7	16.0	16.1	N/A
Physical health not good	17.0	17.9	19.0	N/A
Mental health not good	18.8	19.9	19.7	N/A
Activities limited by health impairment	10.8	12.3	12.3	N/A
Health Care Access				
No health insurance	23.5	25.2	15.3	N/A
Could not see a doctor due to cost	17.8	19.7	14.9	N/A
Overweight and Obesity				
Overweight (BMI = 25.0-29.9)	37.5	37.3	35.5	N/A
Obese (BMI ≥ 30.0)	28.2	29.5	28.3	N/A
Overweight and obese (BMI ≥ 25.0)	65.7	66.8	63.8	
Physical Activity				
Met recommendations for physical activity	47.4	48.1	49.2	60.0
Sufficient aerobic physical activity	63.1	64.6	65.2	N/A
Fruits and Vegetables				
Consume ≥5 times per day	25.7	23.8	23.7	F‡ – 75.0 V§– 50.0
Tobacco and Alcohol Use				
Current smoker	18.5	17.9	18.0	12.0
Binge drinking	13.3	14.9	15.1	6.0
Arthritis				
Diagnosed with some form of arthritis	19.3	22.5	25.9	N/A
Activities limited due to arthritis	45.3	47.2	45.9	N/A
Women's Health				
Mammogram within past two years∫	73.5	72.6	76.8	70.0
Pap test within the past three years	77.1	81.5	82.9	90.0
Cancer Screening				
Ever had sigmoidoscopy or colonoscopy	63.8	56.2	62.3	50.0
Immunizations				
Adult influenza vaccination	40.6	38.2	38.5	N/A
Cardiovascular Health				
High blood pressure	27.4	29.1	29.3	16.0
Diagnosed with heart disease	4.6	5.1	6.1	N/A
Diabetes				
Diagnosed with diabetes	8.5	9.3	9.1	N/A
Asthma				
Adult asthma	9.2	6.5	8.4	N/A

**Estimates weighted to population characteristics; see page x for age inclusion criteria*
[1]Data source: Texas Department of State Health Services, 2008-2009
[2]Data source: Center for Disease Control and Prevention, 2008-2009
†N/A = no comparable Healthy People 2010 objective available
‡F = at least two fruits servings per day
§V = at least three vegetable servings per day
∫Among women aged 40 years and older

TABLE 1.10 COMPARISON OF SELECT TARRANT COUNTY RISK FACTORS, 1998-2010

WEIGHTED PERCENTAGE FOR TARRANT COUNTY, 1998-2010*				
RISK FACTORS	**TARRANT COUNTY, 1998**	**TARRANT COUNTY, 2004**	**TARRANT COUNTY, 2009/2010**	**% CHANGE FROM 1998 TO 2010**
Health Status				
Fair or poor health	13.8	16.0	11.7	**(-) 15.2**
Health Care Access				
No health insurance	14.4	23.8	23.5	**(+) 63.2**
Overweight and Obesity				
Overweight (BMI = 25.0-29.9)	32.3†	37.8	37.5	**(+) 16.1**
Overweight and obese (BMI ≥ 25.0)	N/A	64.0	65.7	N/A
Physical Activity				
Met recommendations for physical activity	N/A	44.7	47.4	N/A
Fruits and Vegetables				
Consume ≥5 times per day	19.5	25.9	25.7	**(+) 31.8**
Tobacco and Alcohol Use				
Current smoker	20.6	22.2	18.5	**(-) 10.2**
Women's Health				
Mammogram within past two years‡	78.9	74.0	73.5	**(-) 6.8**
Pap test within past three years	92.6	83.7	77.1	**(-) 16.7**
Cancer Screening				
Ever had sigmoidoscopy or colonoscopy	N/A	50.4	63.8	N/A
Immunizations				
Pneumococcal vaccination	N/A	66.0	72.4	N/A
Cardiovascular Health				
High blood pressure	23.9	23.1	27.4	**(+) 14.6**
High blood cholesterol	30.1	36.4	37.7	**(+) 25.2**
Diagnosed with heart disease	N/A	5.5	4.6	N/A
Diabetes				
Diagnosed with diabetes	6.6	5.9	8.5	**(+) 28.8**
Asthma				
Adult asthma	N/A	8.5	9.2	N/A

**Estimates weighted to population characteristics; except where noted see page x for age inclusion criteria*
N/A = no comparable 1998 Tarrant County BRFSS measure available
†Overweight classified as BMI > 27.8 for men and BMI > 27.3 for women
‡Among women aged 40 years and older
Note: For the column "% Change from 1998 to 2010", green indicates the health estimate has improved over time and red indicates the health estimate has worsened over time.

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INTRODUCTION

The Behavioral Risk Factor Surveillance System (BRFSS) is a nationally conducted random-digit-dialed telephone interview survey supported by the Centers for Disease Control and Prevention (CDC) along with state and local health departments for the evaluation of health behaviors linked to chronic disease among non-institutionalized adults aged 18 years and older. Because the BRFSS uses a standardized questionnaire to collect data, information gathered via this system is comparable across population groups and time periods. Officials and organizations at the community, state, and national levels utilize these data to target public health policy and program implementation.

First conducted specifically for Tarrant County residents in 1998, the BRFSS in Tarrant County is a unique project in that few local entities across the state or nation have access to county-specific data of this quality and focus. From October 2009 through February 2010, Tarrant County Public Health collected data for its third BRFSS; the first was completed in 1998 and the second in 2004. As a result of Tarrant County Public Health's previous work with BRFSS, comparable data on health behaviors reported by Tarrant County residents spanning more than 10 years are now available (Table 1.10, page xliv of the Executive Summary).

While presented as one cohesive document, the design of individual modules within the 2009/2010 Tarrant County BRFSS report enables these modules to act as stand alone sections for data consideration. The beginning of each module defines the evaluated health behavior in terms of its scope of impact on the well-being of Tarrant County residents. BRFSS data are then described based on seven demographic factors as well as geographic distribution at the sub-county level. Estimates and their 95% confidence intervals are not presented (represented in tables with "-") if the number of respondents was less than five or the underlying sample size for that particular measure was less than 20. Key behaviors are further compared to state and national benchmarks as delineated by the U.S. Department of Health and Human Services *Healthy People 2010* objectives. These objectives seek to quantify specific health-related behaviors for adoption by individuals in order to promote the well-being of our communities.

SURVEY METHODOLOGY

The BRFSS utilized a random-digit-dialing disproportionate stratification method to select a sample of households for survey. Consequently, selection into the survey was contingent upon the presence of land-line telephone within the household. Furthermore, the sampling frame included five geographical subunits based on individual census blocks categorized as northwest, northeast, southwest, southeast, and central Tarrant County.

All persons selected for survey responded anonymously and without compensation. Interviewers utilized a computer-assisted telephone interview system (CATI) to collect participant responses. Various processes were in place to continuously monitor interviewer consistency and data quality. Population weighting was applied to responses during analysis in order to minimize bias and provide results representative of the population distribution in Tarrant County; data were analyzed using SPSS 17.0. Data from a total of 3,959 adult Tarrant County residents along with 1,026 randomly selected children from

among adult respondents who indicated that at least one child resided in their home at the time of interview were included in the final analyses.

Prior to inclusion in the BRFSS questionnaire, individual questions underwent rigorous cognitive testing and validation by the CDC. The questionnaire used in the 2009/2010 Tarrant County BRFSS consisted of three main components:

- A core section stipulated for use by the CDC in every BRFSS conducted in the United States
- A state-added section which included all optional modules added by the state of Texas in the Texas 2009 BRFSS questionnaire
- A county-added section comprised of the same optional modules added by Tarrant County in the Tarrant County 2004 BRFSS questionnaire.

Modules assessed various health behaviors related to chronic disease management and prevention including access to healthcare, fruit and vegetable consumption, physical activity, and immunization practices. (Further discussion of techniques applied in survey methodology can be found in the glossary of technical terms in Appendix B.)

USES AND LIMITATIONS

BRFSS provides prevalence data with utility across a broad spectrum of program and policy areas in a cost-effective and timely manner. In contrast with other survey methods, telephone interviews allow the collection of a large number of responses from one centralized location. Similarly, interview scripting serves to limit variations in responses due to differences between interviewers. Individuals provide anonymous answers to reduce the influence of social pressure on reporting a certain response to any given question. Additionally, interviewers input respondents' answers directly into a database rather than performing interviews and data entry in two separate steps.

However, as with any survey, BRFSS data are limited by several factors. First of all, respondents are selected from among individuals with land-line telephones, thus excluding individuals utilizing solely cellular telephones or without reliable telephone service in their residence. Additionally, since the data are self-reported by the respondents, certain risk behaviors are often underestimated, especially those that may be illegal or socially unacceptable. Another limitation is that respondents may recall information regarding past health behaviors incorrectly or avoid answering the question entirely. Individuals may also interpret certain questions differently than intended. Lastly, the prevalence of certain health behaviors may be too low to be adequately characterized via this survey method.

In general, the 2009/2010 Tarrant County BRFSS report serves to provide a reliable analysis of health-related behaviors among non-institutionalized adult Tarrant County residents aged at least 18 years. By benchmarking data from Tarrant County against the state of Texas, the United States, and *Healthy People 2010* objectives, organizations can better evaluate current local intervention efforts. At the same time, information presented in this report can assist in policy development as well as program planning efforts aimed at the reduction of chronic disease among the citizens of Tarrant County.

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INTRODUCTION

A total of 3,959 interviews were conducted among non-institutionalized adults aged 18 years and older residing in Tarrant County during the study period.

METHODS

BRFSS compiled basic demographic information regarding respondents via a series of more than 20 questions designed to capture data such as gender, race/ethnicity, and annual income level. Results for both adults and children were analyzed for seven core demographic factors (Tables 2.1-2.2).

RESULTS

Demographic data from 3,959 adult respondents aged 18 years and older are reported by Tarrant County area of residence, gender, age group in years, race/ethnicity, education level, annual income level, and employment status (Table 2.1). Additionally, similar information is described for 1,026 randomly selected children (less than 18 years old) among adult respondents who indicated that at least one child resided in their home at the time of the interview (Table 2.2).

TABLE 2.1 DEMOGRAPHIC CHARACTERISTICS AMONG TARRANT COUNTY ADULT BRFSS RESPONDENTS, 2009/2010

ADULT DEMOGRAPHICS			
CHARACTERISTICS	**n**	**WEIGHTED PERCENTAGE***	**95% CONFIDENCE INTERVAL**
Total	3,959	-	-
Sub-County Area			
Northeast	802	14.8	13.4-16.4
Southeast	625	30.9	28.0-33.9
Central	872	8.5	7.6-9.5
Southwest	848	20.4	18.6-22.4
Northwest	812	25.3	23.2-27.5
Gender			
Male	1,345	49.0	46.3-51.6
Female	2,607	51.0	48.4-53.7
Age (in years)			
18-24	127	12.6	10.2-15.4
25-34	361	24.3	21.7-27.2
35-44	601	24.2	22.1-26.4
45-54	824	17.3	15.8-18.9
55-64	810	9.9	9.0-10.9
≥65	1,169	11.7	10.8-12.7
Race/Ethnicity			
White	2,793	66.1	63.4-68.8
Black	520	11.1	9.4-13.1
Hispanic	477	18.4	16.3-20.8
Other	112	4.3	3.2-5.7
Education			
< High school	456	13.7	11.8-15.9
High school or GED	951	22.8	20.7-25.0
Tech/Some college	1,123	28.5	26.1-31.1
College degree	1,416	35.0	32.7-37.5
Annual Income			
<$15,000	381	9.1	7.4-11.1
$15,000 - $24,999	559	14.5	12.7-16.5
$25,000 - $34,999	328	9.4	7.8-11.2
$35,000 - $49,999	437	12.9	11.0-15.2
≥$50,000	1,603	54.1	51.2-57.0
Employment			
Employed for wages	1,646	52.8	50.1-55.4
Self-employed	270	8.3	6.8-10.0
Out of work for >1yr	134	3.3	2.4-4.4
Out of work for <1yr	148	5.2	4.1-6.5
Homemaker	402	10.4	8.9-12.1
Student	73	5.5	4.1-7.6
Retired	984	10.4	9.5-11.3
Unable to work	280	4.2	3.5-5.1

n = number of adult respondents age 18 years and older

**Estimates weighted to population characteristics*

- = weighted estimates not applicable

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TABLE 2.2 DEMOGRAPHIC CHARACTERISTICS FOR RANDOMLY SELECTED CHILDREN AMONG TARRANT COUNTY BRFSS RESPONDENTS, 2009/2010

CHILD DEMOGRAPHICS[†]			
CHARACTERISTICS	**n**	**WEIGHTED PERCENTAGE[*]**	**95% CONFIDENCE INTERVAL**
Total	1,026	-	-
Sub-County Area			
Northeast	242	25.0	21.8-28.4
Southeast	170	30.8	26.8-35.1
Central	186	9.9	8.3-11.8
Southwest	187	18.3	15.5-21.4
Northwest	241	16.1	13.5-19.2
Gender			
Male	551	50.0	46.0-54.0
Female	451	50.0	46.0-54.0
Age (in years)			
0-4	233	31.2	27.4-35.3
5-9	245	25.7	22.2-29.4
10-14	254	25.7	22.2-29.5
15-17	187	17.4	14.8-20.5
Race/Ethnicity			
White	568	56.2	52.2-60.2
Black	133	13.0	10.6-15.8
Hispanic	259	26.9	23.4-30.7
Other	38	3.9	2.7-5.7

[†]Adult respondent was asked if there were children in the household, and if so, one child was chosen through a random selection process

n = number of children less than 18 years old

[*]Estimates weighted to population characteristics

- = weighted estimates not applicable

INTRODUCTION

The World Health Organization defines health as "a state of complete physical, mental and social well-being and not just the absence of disease or infirmity".[1] However, determining the health status of a given population poses several challenges due to differing interactions between individuals within the population and various physical and social determinants of health (e.g. access to healthcare, environment, educational attainment, etc.). Health-related quality of life (HRQOL) measurements attempt to measure the well-being of populations by taking into account these factors. In general terms, HRQOL refers to a population's "perceived physical and mental health over time." The CDC has utilized the BRFSS to evaluate differences in HRQOL across the United States for the past seventeen years.[2]

In recent years, clinicians and policymakers have recognized the utility of measuring HRQOL before making patient management and policy decisions. Researchers have used measures of health status, functional abilities, and quality-of-life to evaluate cancer control initiatives, risk-taking behaviors among adults, and the impact of chronic conditions such as obesity on the U.S. population.[3-5] Due to differences in health, demographic, and socioeconomic conditions across Tarrant County, HRQOL indices empower leadership to strategically respond to the needs of their specific community.

METHODS

General health status comprised one of the core components of the 2009 BRFSS questionnaire. To assess general health status, respondents rated their general health status on a 5-point Likert scale. Individuals reporting "excellent," "very good," or "good" general health were classified as possessing "good health" while persons reporting "fair" and "poor" health were classified as having "fair or poor health." Results were further analyzed by seven demographic factors (Table 3.1), compared to estimates for Texas and the U.S. (Figure 3.1), and evaluated geographically at the sub-county level (Figure 3.2).

In a subsequent series of questions pertaining to physical health, mental health, and physical activity limitations, the 2009 BRFSS questionnaire evaluated respondents' HRQOL. Responses were stratified based on the number of days during the past 30 days in which the respondent experienced poor physical health, poor mental health, and/or activities limited by health impairment. Again, results were analyzed by seven demographic factors (Tables 3.2-3.4).

RESULTS

Overall, less than one-eighth of individuals identified themselves as having fair or poor health [11.7%, 95% CI (10.3-13.2)]. Among these persons, a greater percentage of persons residing in the central county area reported fair or poor health (19.8%) than individuals residing in other regions of Tarrant County. Between racial/ethnic groups, Hispanics were 1.7 times more likely to report fair or poor health compared to Whites (17.2% vs. 10.1%). Individuals with less than a high school education were twice as likely to report poor or fair health (21.2%) compared to individuals with some college (10.5%) and almost four times more likely to report this health status than individuals with a college degree (5.5%). As reported annual income increased, the percentage of individuals reporting fair or poor health decreased with more than half of individuals reporting an inability to work indicating fair or poor health (Table 3.1).

Approximately one out of every six individuals reported experiencing five or more days in which their physical health was not good in the past 30 days [17.0%, 95% CI (15.2-18.9)]. Among these individuals, no significant differences were observed based upon sub-county area of residence or gender. However, a significantly greater percentage of individuals aged 55 to 64 years (26.1%) and 65 years or older (24.9%) experienced five or more days in which their physical health was not good in the past 30 days compared to individuals aged 18 to 24 years (8.7%). Similarly, Blacks were four times as likely to report this experience (24.3%) than Others (5.2%). As education and annual income increased, the percentage of individuals reporting this experience decreased, and the percentage of this report among persons indicating an inability to work (63.2%) was twice that of individuals who reported being out of work for more than a year (25.2%) (Table 3.2).

- **Approximately 88 percent of residents were classified as possessing good to excellent health.**
- **Individuals with less than a high school diploma, annual incomes below $15,000, and the inability to work consistently reported the greatest percentage of poor health-related quality of life indicators.**
- **Over 25 percent of persons aged 18 to 24 years experienced five or more days in which their mental health was not good during the past 30 days.**
- **About one-quarter of Blacks indicated experiencing five or more days of poor physical health during the past 30 days.**

With respect to individuals reporting that their mental health was not good for five or more days in the past 30 days, females were significantly more likely to report this experience than males in Tarrant County (22.8% vs. 14.7%). In all, over 18 percent of Tarrant County residents reported experiencing five or more days in which their mental health was not good during the past 30 days [18.8%, 95% CI (16.6-21.1)] with approximately one-fourth of individuals aged 18 to 24 years reporting this experience. No significant differences in the number of poor mental health days were observed between racial/ethnic groups. Less than half as many individuals with a college degree (12.5%) reported this experience than individuals with less than a high school diploma (27.5%), and a significantly greater percentage of individuals with annual incomes below $15,000 (40.0%) or $15,000 to $24,999 (25.0%) reported this experience than persons with an annual income of $50,000 or more (13.8%). Fewer retired persons (10.5%) reported this experience than individuals within other employment classifications (Table 3.3).

Among the approximately 11 percent of persons who reported that their activities were limited by health impairment for five or more days during the past 30 days [10.8%, 95% CI (9.3-12.6)], no significant differences by sub-county area of residence, gender, or race/ethnicity were observed. However, individuals aged 55 to 64 years (15.8%) were almost twice as likely to report this experience as persons aged 35 to 44 years (8.3%). A lower percentage of individuals with a college degree (6.2%) reported this experience than among all other education classifications, and more individuals with annual incomes below $15,000 (30.8%) reported this experience than those among higher income levels. No significant differences were observed between employment levels except among the more than 50 percent of persons reporting this experience among individuals who were unable to work (Table 3.4).

Compared to the percentage of those reporting fair or poor health in the United States (16.1%) and Texas (16.0%), the percentage in Tarrant County (11.7%) was significantly lower (Figure 3.1).

TABLE 3.1 SELF-REPORTED FAIR OR POOR HEALTH AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

FAIR OR POOR HEALTH				
CHARACTERISTIC	**n**	**WEIGHTED PERCENTAGE***	**N**	**95% CONFIDENCE INTERVAL**
Total	696	11.7	3,939	10.3-13.2
Sub-County Area				
Northeast	96	7.3	802	5.5-9.6
Southeast	84	9.3	621	6.6-12.8
Central	197	19.8	862	16.2-24.0
Southwest	164	13.9	843	11.4-16.9
Northwest	155	12.7	811	10.1-16.0
Gender				
Male	225	10.8	1,337	8.8-13.0
Female	470	12.6	2,595	10.8-14.7
Age (in years)				
18-24	12	7.4	127	3.3-15.9
25-34	23	5.3	360	3.2-8.7
35-44	55	7.5	600	5.3-10.6
45-54	132	16.1	821	13.0-19.7
55-64	181	22.1	806	18.7-25.8
≥65	284	23.4	1,159	20.7-26.4
Race/Ethnicity				
White	416	10.1	2,781	8.7-11.7
Black	148	14.5	519	11.0-19.0
Hispanic	108	17.2	470	12.7-22.8
Other	13	6.8	112	3.2-13.9
Education				
< High school	173	21.2	449	16.7-26.5
High school or GED	218	17.0	949	13.4-21.3
Tech/Some college	193	10.5	1,117	8.2-13.4
College degree	109	5.5	1,411	4.2-7.2
Annual Income				
<$15,000	164	28.5	376	20.7-37.9
$15,000 - $24,999	154	21.7	555	16.9-27.4
$25,000 - $34,999	82	17.3	327	12.6-23.3
$35,000 - $49,999	63	11.8	435	7.6-17.8
≥$50,000	104	5.0	1,601	3.9-6.5
Employment				
Employed for wages	139	6.6	1,643	5.1-8.5
Self-employed	29	8.7	268	5.1-14.3
Out of work for >1yr	34	21.2	133	13.1-32.5
Out of work for <1yr	30	18.3	147	9.5-32.4
Homemaker	57	10.4	398	6.7-15.8
Student	8	5.7	73	2.5-12.6
Retired	216	21.2	977	18.3-24.4
Unable to work	179	56.2	278	46.0-65.9

n = number of respondents who reported fair or poor health
N = total number of respondents who answered the question
**Estimates weighted to population characteristics*

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TABLE 3.2 SELF-REPORTED PHYSICAL HEALTH STATUS AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

PHYSICAL HEALTH NOT GOOD IN PAST 30 DAYS[†]				
CHARACTERISTIC	**n**	**WEIGHTED PERCENTAGE[*]**	**N**	**95% CONFIDENCE INTERVAL**
Total	835	17.0	3,828	15.2-18.9
Sub-County Area				
Northeast	134	16.6	785	12.4-21.7
Southeast	116	15.8	610	12.1-20.4
Central	205	17.4	835	14.5-20.7
Southwest	193	17.1	810	14.1-20.6
Northwest	187	18.5	788	15.1-22.3
Gender				
Male	248	15.2	1,315	12.5-18.3
Female	586	18.8	2,506	16.5-21.2
Age (in years)				
18-24	12	8.7	123	4.3-16.9
25-34	41	13.6	353	9.4-19.3
35-44	96	15.1	591	11.7-19.2
45-54	176	20.1	807	16.8-23.8
55-64	208	26.1	788	22.4-30.1
≥65	289	24.9	1,100	22.0-27.9
Race/Ethnicity				
White	563	16.2	2,715	14.3-18.3
Black	149	24.3	503	17.3-33.0
Hispanic	96	18.4	445	13.6-24.4
Other	14	5.2	108	2.6-10.3
Education				
< High school	139	25.2	412	18.9-32.8
High school or GED	233	19.9	907	15.9-24.7
Tech/Some college	250	16.6	1,096	13.4-20.4
College degree	210	12.5	1,402	10.3-15.0
Annual Income				
<$15,000	167	32.7	354	24.6-42.0
$15,000 - $24,999	156	25.8	525	20.1-32.5
$25,000 - $34,999	73	20.1	315	13.9-28.1
$35,000 - $49,999	87	16.2	429	11.4-22.6
≥$50,000	225	12.6	1,591	10.3-15.4
Employment				
Employed for wages	219	13.0	1,620	10.6-15.9
Self-employed	42	12.9	266	8.3-19.4
Out of work for >1yr	37	25.2	128	13.9-41.4
Out of work for <1yr	26	11.5	142	6.3-20.0
Homemaker	78	19.6	386	14.0-26.7
Student	9	9.0	73	4.1-18.7
Retired	237	23.8	931	20.8-27.2
Unable to work	179	63.2	262	52.4-72.8

[†]Physical health not good for five or more days during the past 30 days
n = number of respondents who reported physical health not good for five or more days during the past 30 days
N = total number of respondents who answered the question
[*]Estimates weighted to population characteristics

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TABLE 3.3 SELF-REPORTED MENTAL HEALTH STATUS AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

MENTAL HEALTH NOT GOOD IN PAST 30 DAYS[†]				
CHARACTERISTIC	**n**	**WEIGHTED PERCENTAGE[*]**	**N**	**95% CONFIDENCE INTERVAL**
Total	671	18.8	3,875	16.6-21.1
Sub-County Area				
Northeast	109	16.3	791	12.1-21.6
Southeast	109	20.5	618	15.6-26.6
Central	153	18.9	847	15.1-23.4
Southwest	168	20.2	828	16.6-24.3
Northwest	132	16.8	791	13.6-20.6
Gender				
Male	167	14.7	1,319	11.8-18.1
Female	503	22.8	2,549	19.8-26.0
Age (in years)				
18-24	34	25.7	124	16.8-37.2
25-34	72	20.9	355	15.8-27.2
35-44	113	16.4	594	13.0-20.5
45-54	174	21.1	810	17.8-25.0
55-64	148	16.2	797	13.4-19.5
≥65	125	11.7	1,131	9.6-14.2
Race/Ethnicity				
White	440	17.4	2,745	15.0-20.1
Black	112	21.8	505	16.2-28.8
Hispanic	97	23.7	458	17.6-31.2
Other	16	14.4	111	7.2-26.7
Education				
< High school	105	27.5	434	20.3-36.2
High school or GED	180	18.4	924	14.7-22.9
Tech/Some college	224	22.7	1,108	18.3-27.8
College degree	160	12.5	1,398	10.0-15.4
Annual Income				
<$15,000	136	40.0	367	29.4-51.7
$15,000 - $24,999	126	25.0	542	19.5-31.3
$25,000 - $34,999	75	21.2	320	15.1-29.0
$35,000 - $49,999	74	22.0	432	15.8-29.8
≥$50,000	190	13.8	1,591	11.1-17.0
Employment				
Employed for wages	238	16.1	1,622	13.4-19.2
Self-employed	44	24.3	268	15.4-36.0
Out of work for >1yr	37	23.0	133	14.5-34.7
Out of work for <1yr	40	26.6	145	16.6-39.8
Homemaker	63	20.8	389	13.5-30.8
Student	22	22.7	72	13.2-36.2
Retired	103	10.5	956	8.4-13.1
Unable to work	121	42.2	268	33.4-51.6

[†]Mental health not good for five or more days during the past 30 days
n = number of respondents who reported mental health not good for five or more days during the past 30 days
N = total number of respondents who answered the question
[*]Estimates weighted to population characteristics

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TABLE 3.4 SELF-REPORTED PHYSICAL ACTIVITY LIMITATION AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

KEPT FROM USUAL ACTIVITIES DUE TO POOR PHYSICAL OR MENTAL HEALTH†				
CHARACTERISTIC	**n**	**WEIGHTED PERCENTAGE***	**N**	**95% CONFIDENCE INTERVAL**
Total	522	10.8	3,910	9.3-12.6
Sub-County Area				
Northeast	84	11.8	799	8.1-16.9
Southeast	70	10.6	617	7.1-15.4
Central	137	12.1	854	9.6-15.2
Southwest	114	10.3	834	8.1-12.9
Northwest	117	10.6	806	8.3-13.5
Gender				
Male	157	9.2	1,333	6.9-12.0
Female	365	12.5	2,571	10.5-14.8
Age (in years)				
18-24	13	11.9	126	5.6-23.5
25-34	29	7.6	361	4.8-11.9
35-44	58	8.3	599	5.9-11.5
45-54	127	13.2	821	10.6-16.2
55-64	127	15.8	796	12.9-19.2
≥65	161	14.3	1,142	12.1-16.9
Race/Ethnicity				
White	350	10.5	2,763	8.8-12.6
Black	95	12.2	508	8.3-17.4
Hispanic	57	12.2	472	7.9-18.3
Other	10	7.1	111	3.3-14.7
Education				
< High school	85	16.2	441	11.2-23.0
High school or GED	150	13.1	931	10.0-16.9
Tech/Some college	180	12.3	1,116	9.0-16.5
College degree	105	6.2	1,410	4.7-8.0
Annual Income				
<$15,000	128	30.8	366	22.1-41.1
$15,000 - $24,999	102	16.4	551	12.1-21.8
$25,000 - $34,999	49	9.9	325	6.8-14.2
$35,000 - $49,999	57	11.6	434	7.4-17.8
≥$50,000	116	7.3	1,603	5.3-10.1
Employment				
Employed for wages	105	6.9	1,643	5.2-9.2
Self-employed	21	11.9	270	5.1-25.5
Out of work for >1yr	28	15.3	131	8.6-25.7
Out of work for <1yr	27	15.9	147	7.8-29.6
Homemaker	44	10.9	399	6.7-17.3
Student	6	4.6	73	1.6-12.5
Retired	139	14.6	963	12.1-17.5
Unable to work	150	51.1	263	41.2-61.0

†Poor physical or mental health limiting usual activities such as self-care, work, or recreation for five or more days during the past 30 days

n = number of respondents who reported physical activity limitation

N = total number of respondents who answered the question

**Estimates weighted to population characteristics*

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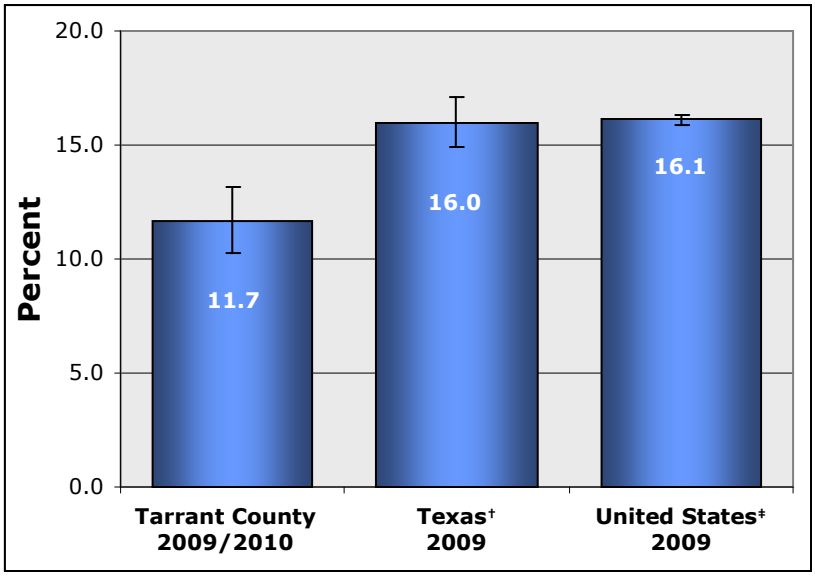
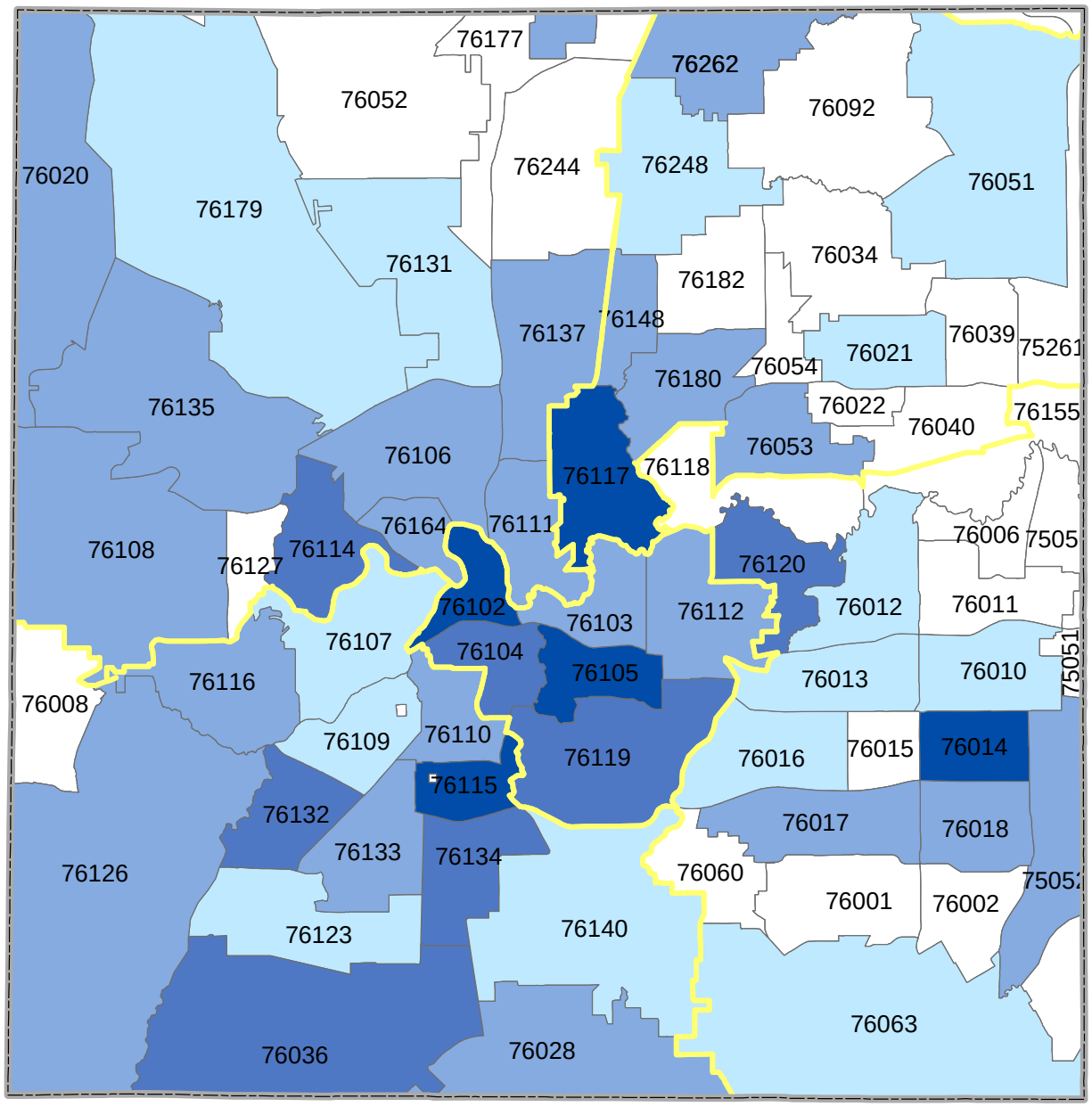
FIGURE 3.1 SELF-REPORTED FAIR OR POOR HEALTH AMONG ADULTS 18 YEARS AND OLDER, TARRANT COUNTY, TEXAS, AND THE UNITED STATES



†Data source: 2009 BRFSS, Texas Department of State Health Services
‡Data source: 2009 BRFSS, Centers for Disease Control and Prevention
Estimates weighted to population characteristics
No comparable Healthy People 2010 Objective available

FIGURE 3.2 SELF-REPORTED FAIR OR POOR HEALTH AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER BY ZIP CODE, 2009/2010



These data were prepared by Tarrant County Public Health for its use, and may be revised any time, without notification. Tarrant County Public Health does not guarantee the correctness or accuracy of any features on this map. Tarrant County assumes no responsibility in connection therewith. Said data should not be edited by anyone other than designated personnel, or through written approval by GIS Manager. These data are for informational purposes only and should not create liability on the part of Tarrant County Government, any officer and/or employees thereof.

Weighted Percent*

- 3.5% - 9.1%
- 9.2% - 18.3%
- 18.4% - 27.4%
- 27.5% - 36.5%
- No or suppressed data
- Subcounty Areas
- Tarrant County boundary

N W E S

GIS Geographic Information Systems TARRANT COUNTY Public Health

*Estimates weighted to population characteristics

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TABLE 3.5 BRFSS QUESTIONS REGARDING HEALTH STATUS, MENTAL HEALTH, AND PHYSICAL HEALTH AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

QUESTIONS	RESPONDENTS	
	n	%*
1. Would you say that in general your health is excellent, very good, good, fair, or poor?		
Excellent	788	24.6
Very good	1,225	33.2
Good	1,230	30.5
Fair	482	8.6
Poor	214	3.1
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	2,365	64.4
1-5 days	786	22.1
6-25 days	366	8.6
25-30 days	311	4.9
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	2,693	67.4
1-5 days	643	17.6
6-25 days	333	10.0
25-30 days	206	5.0
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	1,184	60.3
1-5 days	440	22.9
6-25 days	268	11.8
25-30 days	176	5.0

n= number of respondents
**Estimates weighted to population characteristics*

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INTRODUCTION

Health care access refers to an individual's ability to obtain and pay for recommended and needed care from a medical home. In 2003, approximately 16 percent of the United States population lacked health insurance coverage, including 8.4 million children.[1] Lack of insurance among children and their parents impacts the ability of these families to access both needed and preventive medical and dental care.[2] Disparities exist between racial/ethnic groups with respect to forgoing medical care, the primary location of obtained health care, and access to prescription drugs.[3]

The Texas Department of State Health Services estimates that from 2005 to 2008, Texans spent over $24 billion on hospitalizations among persons aged 18 years and older that could have been prevented if those individuals possessed adequate access to and cooperation with outpatient care.[4] Addressing the issue of health care access among Tarrant County residents impacts the physical, emotional, and financial well-being of the county's citizens.

METHODS

The BRFSS assessed health care access among respondents based upon a series of four questions evaluating health care coverage, possession of a primary care physician, ability to pay for health care, and receipt of routine physical examinations. Results for health care coverage and ability to pay for health care were further analyzed by seven demographic factors (Tables 4.1-4.2). Lastly, Tarrant County health care access determinants were compared with those in Texas and the United States (Figure 4.1) as well as by geographic distribution at the sub-county level (Figure 4.2).

RESULTS

In general, about three out of every four Tarrant County residents possess some type of health care coverage [76.5%, 95% CI (73.7-79.0)]. A significantly greater percentage of individuals residing within central Tarrant County reported a lack of health insurance (37.6%) compared to other sub-county areas. Persons aged 18 to 24 years (44.8%) were more than 20 times more likely to report no health insurance than persons aged 65 years or greater (2.1%). Additionally, more than half of Hispanics (55.4%) reported a lack of health insurance which was significantly greater than all other racial/ethnic groups. As either educational or annual income levels increased, the percentage of individuals reporting no health insurance decreased. Approximately five out of every six employed individuals (excluding self-employed) possessed some type of health care coverage (Table 4.1).

Slightly less than 18 percent of individuals indicated an inability to see a doctor within the past 12 months due to cost [17.8%, 95% CI (15.7-20.1)]. Although residents of central Tarrant County reported the highest percentage of persons being unable to see a doctor within the past 12 months due to cost (23.4%), this level only significantly differed from that of northeast Tarrant County (12.9%). Individuals aged 18 to 24 years and 25 to 34 years were twice as likely to report an inability to visit a physician due to cost during the past 12 months (25.6% and 23.3%, respectively) than 55 to 64 year olds (10.6%).

A greater percentage of Blacks (24.9%) and Hispanics (32.4%) reported these same financial barriers to physician visits than Whites (12.7%). More than 90 percent of individuals with a college degree or annual incomes of $50,000 and greater reported no difficulty in seeing a doctor due to cost within the past 12 months. Approximately one in four individuals reporting an inability to work also reported being unable to see a doctor due to cost within the previous 12 months (Table 4.2).

The percentage of individuals reporting no health insurance in Tarrant County (23.5%) was similar to that of Texas (25.2%). However, both the county and state estimates were significantly higher than that of the United States (15.3%) (Figure 4.1).

- **Approximately 24 percent of Tarrant County residents do not have any type of health care coverage (including health insurance, prepaid plans, and government plans).**
- **Approximately one in four individuals aged 18 to 24 years could not see a doctor due to cost within the past 12 months.**
- **Lack of health insurance was significantly higher among self-employed persons than among otherwise employed individuals.**
- **Almost two-thirds of Tarrant County residents visited a doctor for a routine physical exam within the past year.**
- **The prevalence of uninsured in Tarrant County was similar to that of Texas, but was significantly higher than the prevalence of uninsured in the United States.**

TABLE 4.1 NO HEALTH INSURANCE AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

NO HEALTH INSURANCE				
CHARACTERISTIC	**n**	**WEIGHTED PERCENTAGE***	**N**	**95% CONFIDENCE INTERVAL**
Total	600	23.5	3,943	21.0-26.3
Sub-County Area				
Northeast	80	17.2	796	12.9-22.6
Southeast	79	25.3	622	19.2-32.6
Central	201	37.6	870	32.3-43.2
Southwest	110	21.1	844	16.8-26.1
Northwest	130	22.2	811	18.3-26.7
Gender				
Male	221	26.2	1,338	22.0-30.8
Female	379	21.1	2,598	18.2-24.3
Age (in years)				
18-24	50	44.8	122	33.3-56.9
25-34	110	32.4	360	26.0-39.7
35-44	153	23.7	600	19.7-28.3
45-54	150	17.9	822	14.8-21.6
55-64	102	11.9	808	9.5-15.0
≥65	27	2.1	1,165	1.3-3.5
Race/Ethnicity				
White	242	14.3	2,786	11.6-17.3
Black	115	29.5	519	21.6-38.9
Hispanic	218	55.4	471	48.5-62.1
Other	18	18.6	110	10.7-30.3
Education				
< High school	186	58.3	452	50.4-65.7
High school or GED	175	28.3	944	23.3-33.8
Tech/Some college	163	21.4	1,122	16.8-26.8
College degree	75	8.9	1,413	6.1-12.9
Annual Income				
<$15,000	128	59.1	376	49.3-68.3
$15,000 - $24,999	176	49.7	558	42.7-56.8
$25,000 - $34,999	70	35.4	328	25.9-46.2
$35,000 - $49,999	55	23.1	436	15.4-33.1
≥$50,000	78	7.3	1,602	5.1-10.3
Employment				
Employed for wages	219	17.3	1,640	14.2-20.9
Self-employed	71	41.5	270	31.2-52.7
Out of work for >1yr	56	51.9	134	36.7-66.7
Out of work for <1yr	70	52.6	148	40.6-64.3
Homemaker	98	36.9	400	28.7-45.8
Student	20	26.3	72	13.7-44.5
Retired	26	2.3	979	1.4-3.7
Unable to work	32	16.2	279	9.4-26.4

n = number of respondents who reported having no health insurance
N = total number of respondents who answered the question
**Estimates weighted to population characteristics*

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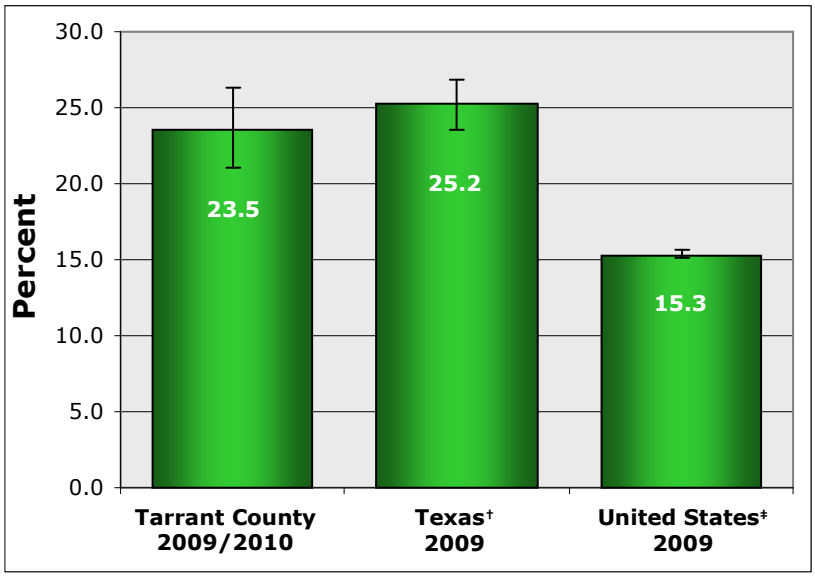
TABLE 4.2 COULD NOT SEE A DOCTOR DUE TO COST AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

COULD NOT SEE A DOCTOR DUE TO COST				
CHARACTERISTIC	**n**	**WEIGHTED PERCENTAGE***	**N**	**95% CONFIDENCE INTERVAL**
Total	562	17.8	3,947	15.7-20.1
Sub-County Area				
Northeast	83	12.9	801	9.5-17.3
Southeast	75	18.0	624	13.2-24.0
Central	164	23.4	871	19.2-28.3
Southwest	109	19.1	845	15.1-24.0
Northwest	131	17.4	806	14.1-21.2
Gender				
Male	150	14.8	1,340	11.7-18.5
Female	412	20.7	2,601	17.9-23.8
Age (in years)				
18-24	36	25.6	126	16.7-37.1
25-34	92	23.3	361	18.0-29.5
35-44	111	16.1	600	12.7-20.2
45-54	165	20.1	822	16.7-24.0
55-64	96	10.6	806	8.4-13.4
≥65	57	5.3	1,165	3.8-7.3
Race/Ethnicity				
White	268	12.7	2,787	10.5-15.4
Black	125	24.9	517	18.9-32.0
Hispanic	146	32.4	474	26.0-39.6
Other	15	15.4	112	8.2-27.0
Education				
< High school	142	38.8	454	30.8-47.5
High school or GED	149	19.7	947	15.6-24.4
Tech/Some college	174	19.0	1,120	15.0-23.8
College degree	97	7.4	1,413	5.5-9.9
Annual Income				
<$15,000	123	47.4	379	36.7-58.4
$15,000 - $24,999	148	34.5	555	28.1-41.5
$25,000 - $34,999	70	28.7	328	20.2-39.0
$35,000 - $49,999	62	18.0	437	12.6-25.1
≥$50,000	74	6.2	1,601	4.2-8.9
Employment				
Employed for wages	215	14.3	1,643	11.9-17.1
Self-employed	44	29.2	269	19.3-41.7
Out of work for >1yr	49	39.4	134	25.2-55.6
Out of work for <1yr	55	33.4	147	22.5-46.4
Homemaker	59	22.7	402	15.3-32.3
Student	18	15.6	73	8.3-27.2
Retired	46	4.7	980	3.3-6.7
Unable to work	72	26.4	278	19.8-34.4

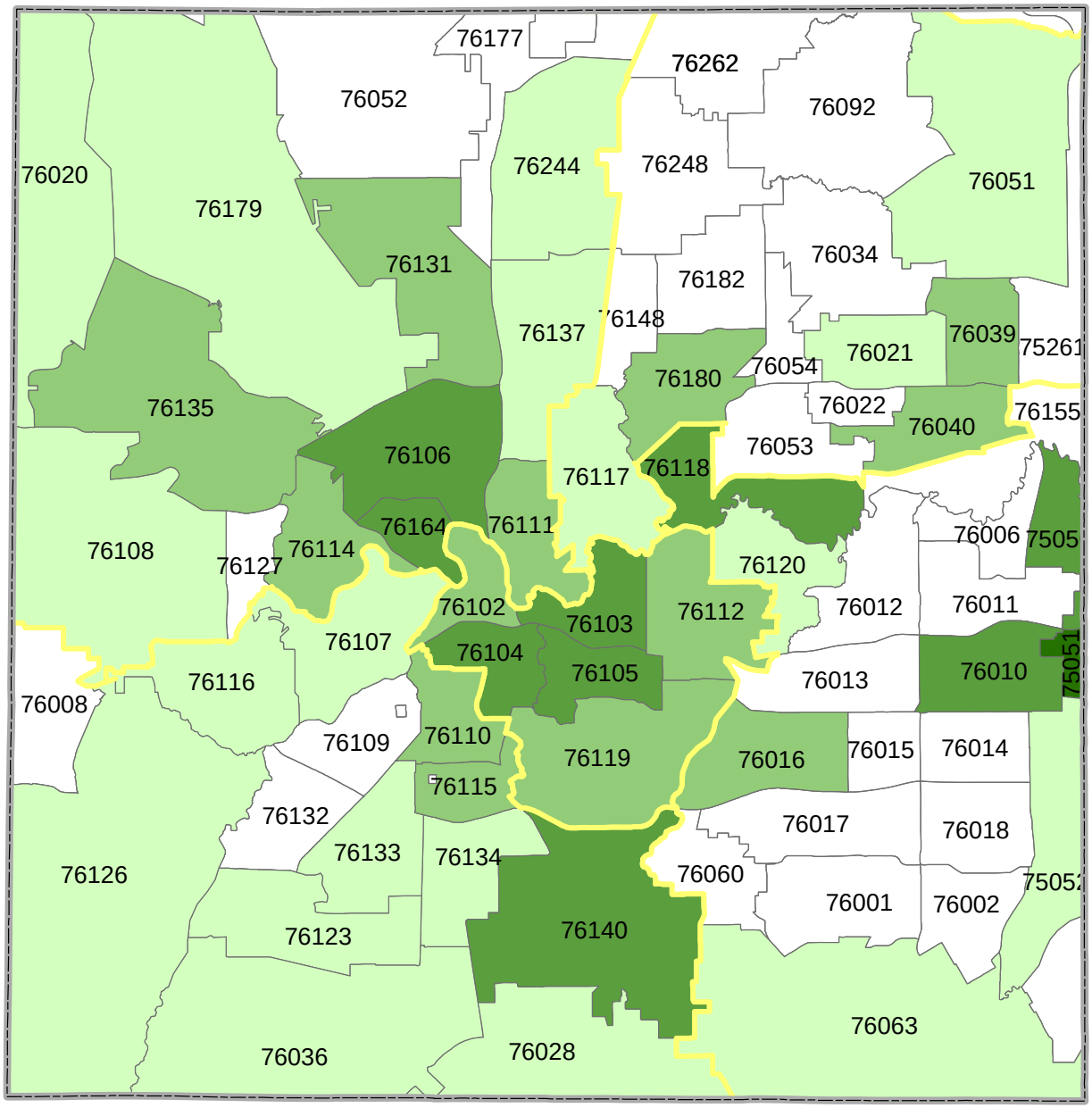
n = number of respondents who reported they could not see a doctor in the past 12 months due to cost
N = total number of respondents who answered the question
**Estimates weighted to population characteristics*

FIGURE 4.1 NO HEALTH INSURANCE AMONG ADULTS 18 YEARS AND OLDER, TARRANT COUNTY, TEXAS, AND THE UNITED STATES



†Data source: 2009 BRFSS, Texas Department of State Health Services
‡Data source: 2009 BRFSS, Centers for Disease Control and Prevention
Estimates weighted to population characteristics
No comparable Health People 2010 Objective available

FIGURE 4.2 NO HEALTH INSURANCE AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER BY ZIP CODE, 2009/2010



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Weighted Percent*

- 4.4% - 23.6%
- 23.7% - 47.2%
- 47.3% - 70.9%
- 71.0% - 94.5%
- No or suppressed data
- Subcounty Areas
- Tarrant County boundary

N, W, E, S

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*Estimates weighted to population characteristics

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TABLE 4.3 BRFSS QUESTIONS REGARDING HEALTH CARE ACCESS AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

QUESTIONS	RESPONDENTS	
	n	%*
1. Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicare?		
Yes	3,343	76.5
No	600	23.5
2. Do you have one person you think of as your personal doctor or health care provider?		
Yes, only one	3,060	69.1
More than one	285	5.6
No	599	25.2
3. Was there a time in the past 12 months when you needed to see a doctor but could not because of cost?		
Yes	562	17.8
No	3,385	82.2
4. About how long has it been since you last visited a doctor for a routine checkup? A routine checkup is a general physical exam, not an exam for a specific injury, illness, or condition.		
Within past year (anytime less than 12 months ago)	2,845	62.5
Within past 2 years (1 year but less than 2 years ago)	474	15.1
Within past 5 years (2 years but less than 5 years ago)	256	10.4
5 or more years ago	302	10.9
Never	35	1.1

n = number of respondents

**Estimates weighted to population characteristics*

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2. DeVoe JE, Tillotson CJ, Wallace LS. Children's receipt of health care services and family health insurance patterns. Ann Fam Med; 2009:7(5).

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INTRODUCTION

Among men and women aged 20 years and older in the United States, approximately one out of every seven individuals is classified as overweight or obese (body mass index $\geq$ 25.0). Nationally, overweight and obesity prevalence varies significantly by age, gender, and race/ethnicity.[1] Overweight and obesity contribute to numerous adverse health conditions including coronary heart disease, type II diabetes, cancer, stroke, and hypertension.[2] Studies estimate that if current trends in obesity and overweight continue, U.S. health care costs for this condition could reach over $860 billion – almost one-sixth of total expenditures – by 2030.[3] Researchers estimate that this condition cost Texans approximately $5.3 billion (2003 dollars) with Medicaid and Medicare covering slightly less than half of these expenditures.[4] Because various physical, environmental, social, and genetic factors all contribute to overweight and obesity in different populations, in 2001, the U.S. Surgeon General called for targeted, community-level interventions to address this issue of growing concern.[5]

METHODS

The BRFSS evaluated overweight and obesity through the calculation of each respondent's body mass index (BMI) by dividing the individual's self-reported weight (without shoes) in kilograms by his/her self-reported height (without shoes) in meters squared (BMI = kg/m^2). Standard BMI groupings consist of four categories:

- BMI below 18.5 – Underweight
- BMI between 18.5 and 24.9 –Healthy weight
- BMI between 25.0 and 29.9 – Overweight
- BMI 30.0 and greater – Obese

Results for overweight and obesity were further analyzed by seven demographic factors (Tables 5.1-5.3). Tarrant County overweight and obesity estimates were compared with those in Texas and the United States (Figure 5.1) as well as by geographic distribution at the sub-county level (Figure 5.2).

There are several caveats to the use of BMI in determining overweight and obesity in individuals as a high BMI does not necessarily indicate that a person is overweight. For example, BMI may overestimate body fat in people who are muscular or athletic. However, because other measures of overweight and obesity lack standardization for wide use and oftentimes are more complicated, more expensive, or less accurate, BMI calculations offer the most accurate comparison of overweight and obesity within populations.[6]

RESULTS

Calculated BMIs indicated that more than one-third of Tarrant County residents were overweight [37.5%, 95% CI (34.9-40.3)]. The prevalence of overweight was almost 1.5 times higher among males (44.8%) than among females (30.0%). Although a smaller percentage (31.6%) of individuals aged 18 to 24 years were classified as overweight than among all other age groups, percentages between these age groups were

not statistically different. More than two out of every five Hispanic residents in Tarrant County were overweight. Differences in prevalence of overweight by education, annual income, or employment status were not statistically significant (Table 5.1).

More than one-quarter of residents' calculated BMIs were 30.0 points or greater [28.2%, 95% CI (25.9-30.5)]. Prevalence of obesity among residents of southeastern (23.4%) and southwestern (26.3%) Tarrant County was significantly less than that of residents of central (39.7%) Tarrant County. While a greater percentage of males (29.2%) than females (27.1%) were obese, this difference was not significantly different. Persons aged 55 to 64 years had the greatest prevalence of obesity (36.5%) compared to other age groups. Slightly more than one-third of Blacks (34.5%) were obese, but this figure did not differ significantly from obesity prevalence among Hispanics (31.7%), Whites (27.1%), and Others (16.6%). As levels of education increased, the percentage of individuals classified as obese decreased. A significantly lower percentage of self-employed individuals (18.8%) were identified as obese compared to individuals employed by an external organization (30.8%) (Table 5.2).

One out of every three Tarrant County residents was not classified as overweight or obese [34.3%, 95% CI (31.7-37.0)]. The percentage of overweight or obese individuals did not significantly differ by sub-county area, but a significant difference between males (74.0%) and females (57.1%) did exist. Additionally, two-thirds of residents aged 65 years or older were classified as obese or overweight (66.2%). The BMI of more than three out of every four Hispanics (77.3%) as well as persons with less than a high school diploma (77.5%) was 25.0 or greater. Among employment types, prevalence of overweight or obesity was lowest among homemakers (53.2%) and students (39.3%) (Table 5.3).

Compared to the percentage of overweight or obese individuals in the United States (63.8%) and Texas (66.8%), the percentage among Tarrant County residents (65.7%) was not statistically different (Figure 5.1).

- **Approximately 66 percent of Tarrant County residents were overweight or obese (BMI≥25.0).**
- **One out of every three Blacks living in Tarrant County had a BMI of 30.0 or greater.**
- **More than three-fourths of persons with less than a high school education as well as individuals with an annual income of less than $15,000 were either overweight or obese.**
- **The prevalence of overweight or obesity in Tarrant County was similar to that of Texas as well as the United States.**

TABLE 5.1 OVERWEIGHT (BMI 25.0-29.9) AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

OVERWEIGHT (BMI 25.0-29.9)				
CHARACTERISTICS	n	WEIGHTED PERCENTAGE*	N	95% CONFIDENCE INTERVAL
Total	1,331	37.5	3,712	34.9-40.3
Sub-County Area				
Northeast	275	38.4	752	33.2-43.9
Southeast	211	40.8	572	34.2-47.6
Central	264	27.8	808	23.5-32.7
Southwest	284	36.5	808	31.6-41.6
Northwest	297	37.3	772	32.9-41.9
Gender				
Male	578	44.8	1,319	40.4-49.2
Female	751	30.0	2,387	27.1-33.0
Age (in years)				
18-24	33	31.6	125	21.5-43.8
25-34	110	36.9	340	30.1-44.2
35-44	198	39.4	554	34.5-44.6
45-54	267	39.4	771	35.1-43.9
55-64	266	35.2	770	31.1-39.5
≥65	439	40.0	1,109	36.6-43.4
Race/Ethnicity				
White	946	36.4	2,644	33.3-39.7
Black	166	36.9	502	28.8-45.7
Hispanic	164	45.6	409	38.2-53.2
Other	32	24.2	107	15.3-35.9
Education				
< High school	139	45.0	394	36.1-54.3
High school or GED	297	34.2	901	29.2-39.6
Tech/Some college	376	33.2	1,071	28.3-38.3
College degree	517	40.9	1,336	36.6-45.2
Annual Income				
<$15,000	127	41.9	356	31.5-53.1
$15,000 - $24,999	176	40.0	520	32.6-47.9
$25,000 - $34,999	107	37.8	313	28.5-48.1
$35,000 - $49,999	136	31.0	416	22.7-40.6
≥$50,000	574	38.8	1,532	35.1-42.6
Employment				
Employed for wages	558	38.0	1,540	34.2-41.9
Self-employed	101	48.3	267	38.0-58.8
Out of work for >1yr	41	33.0	124	18.8-51.2
Out of work for <1yr	55	42.5	141	31.1-54.8
Homemaker	105	30.8	348	24.0-38.6
Student	16	25.3	72	13.8-41.7
Retired	375	40.6	936	36.9-44.4
Unable to work	75	33.2	265	23.9-44.1

n = number of respondents who were overweight (BMI 25.0-29.9)
N = total number of respondents who answered the question
**Estimates weighted to population characteristics*

TABLE 5.2 OBESITY (BMI ≥ 30.0) AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

OBESE (BMI ≥ 30.0)				
CHARACTERISTIC	**n**	**WEIGHTED PERCENTAGE***	**N**	**95% CONFIDENCE INTERVAL**
Total	1,105	28.2	3,712	25.9-30.5
Sub-County Area				
Northeast	206	29.8	752	25.1-35.1
Southeast	154	23.4	572	18.6-28.9
Central	296	39.7	808	34.2-45.4
Southwest	209	26.3	808	22.2-30.7
Northwest	240	30.6	772	26.5-35.0
Gender				
Male	407	29.2	1,319	25.7-33.0
Female	697	27.1	2,387	24.5-30.0
Age (in years)				
18-24	30	15.8	125	9.8-24.3
25-34	105	27.7	340	22.2-34.0
35-44	163	29.6	554	25.0-34.6
45-54	263	33.5	771	29.4-37.9
55-64	273	36.5	770	32.3-40.9
≥65	265	26.2	1,109	23.2-29.5
Race/Ethnicity				
White	705	27.1	2,644	24.5-29.8
Black	226	34.5	502	27.4-42.4
Hispanic	144	31.7	409	25.5-38.6
Other	19	16.6	107	8.9-28.7
Education				
< High school	140	32.5	394	25.5-40.4
High school or GED	303	31.0	901	26.4-36.1
Tech/Some college	335	30.7	1,071	26.1-35.6
College degree	324	22.8	1,336	19.8-26.1
Annual Income				
<$15,000	141	37.4	356	28.1-47.7
$15,000 - $24,999	172	29.0	520	23.5-35.2
$25,000 - $34,999	106	32.3	313	24.3-41.6
$35,000 - $49,999	139	33.3	416	26.0-41.5
≥$50,000	423	27.2	1,532	24.1-30.6
Employment				
Employed for wages	492	30.8	1,540	27.5-34.3
Self-employed	62	18.8	267	13.4-25.7
Out of work for >1yr	44	32.4	124	19.7-48.4
Out of work for <1yr	50	34.8	141	23.6-48.0
Homemaker	85	22.5	348	17.3-28.7
Student	16	14.0	72	7.6-24.5
Retired	242	27.5	936	24.1-31.1
Unable to work	111	39.8	265	31.2-49.0

n = number of respondents who were obese (BMI ≥ 30.0)
N = total number of respondents who answered the question
**Estimates weighted to population characteristics*

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TABLE 5.3 OVERWEIGHT OR OBESITY (BMI ≥ 25.0) AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

OVERWEIGHT OR OBESE (BMI ≥ 25.0)				
CHARACTERISTIC	n	WEIGHTED PERCENTAGE*	N	95% CONFIDENCE INTERVAL
Total	2,436	65.7	3,712	63.0-68.3
Sub-County Area				
Northeast	481	68.2	752	63.3-72.8
Southeast	365	64.2	572	57.5-70.3
Central	560	67.5	808	61.8-72.8
Southwest	493	62.7	808	57.7-67.5
Northwest	537	67.9	772	63.1-72.4
Gender				
Male	985	74.0	1,319	69.9-77.7
Female	1,448	57.1	2,387	53.8-60.4
Age (in years)				
18-24	63	47.4	125	36.1-59.0
25-34	215	64.6	340	58.0-70.6
35-44	361	69.0	554	64.2-73.5
45-54	530	72.9	771	69.0-76.5
55-64	539	71.7	770	67.6-75.4
≥65	704	66.2	1,109	63.0-69.3
Race/Ethnicity				
White	1,651	63.5	2,644	60.4-66.5
Black	392	71.4	502	61.1-79.8
Hispanic	308	77.3	409	71.0-82.5
Other	51	40.7	107	28.2-54.7
Education				
< High school	279	77.5	394	70.5-83.2
High school or GED	600	65.2	901	59.6-70.4
Tech/Some college	711	63.8	1,071	58.2-69.1
College degree	841	63.6	1,336	59.6-67.5
Annual Income				
<$15,000	268	79.3	356	71.9-85.2
$15,000 - $24,999	348	69.0	520	62.0-75.3
$25,000 - $34,999	213	70.1	313	60.7-78.1
$35,000 - $49,999	275	64.3	416	55.1-72.5
≥$50,000	997	66.0	1,532	62.5-69.4
Employment				
Employed for wages	1,050	68.8	1,540	65.1-72.2
Self-employed	163	67.1	267	58.0-75.1
Out of work for >1yr	85	65.4	124	49.9-78.2
Out of work for <1yr	105	77.4	141	65.4-86.0
Homemaker	190	53.2	348	45.4-60.9
Student	32	39.3	72	25.4-55.2
Retired	617	68.1	936	64.5-71.5
Unable to work	186	73.0	265	63.1-81.0

n = number of respondents who were overweight or obese (BMI ≥ 25.0)
N = total number of respondents who answered the question
**Estimates weighted to population characteristics*

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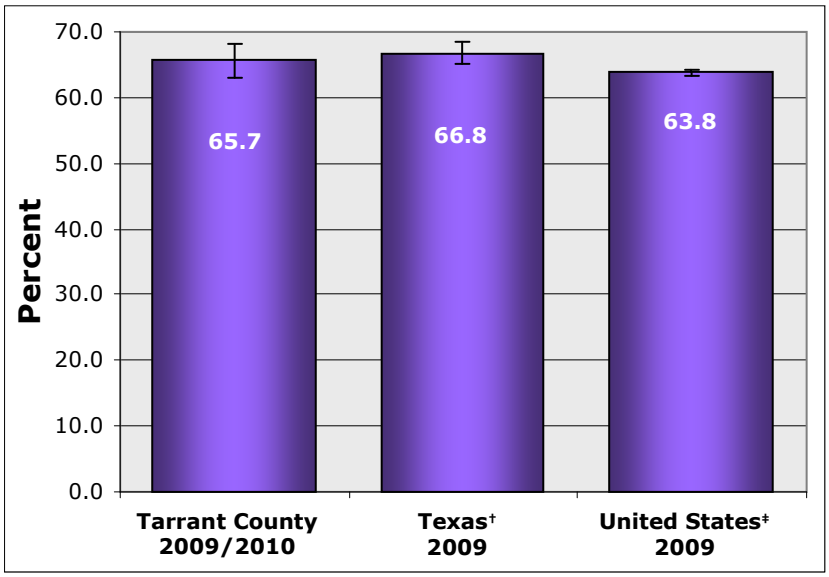
FIGURE 5.1 OVERWEIGHT OR OBESITY (BMI ≥ 25.0) AMONG ADULTS 18 YEARS AND OLDER, TARRANT COUNTY, TEXAS, AND THE UNITED STATES



†Data source: 2009 BRFSS, Texas Department of State Health Services
‡Data source: 2009 BRFSS, Centers for Disease Control and Prevention
Estimates weighted to population characteristics
No comparable Healthy People 2010 Objective available

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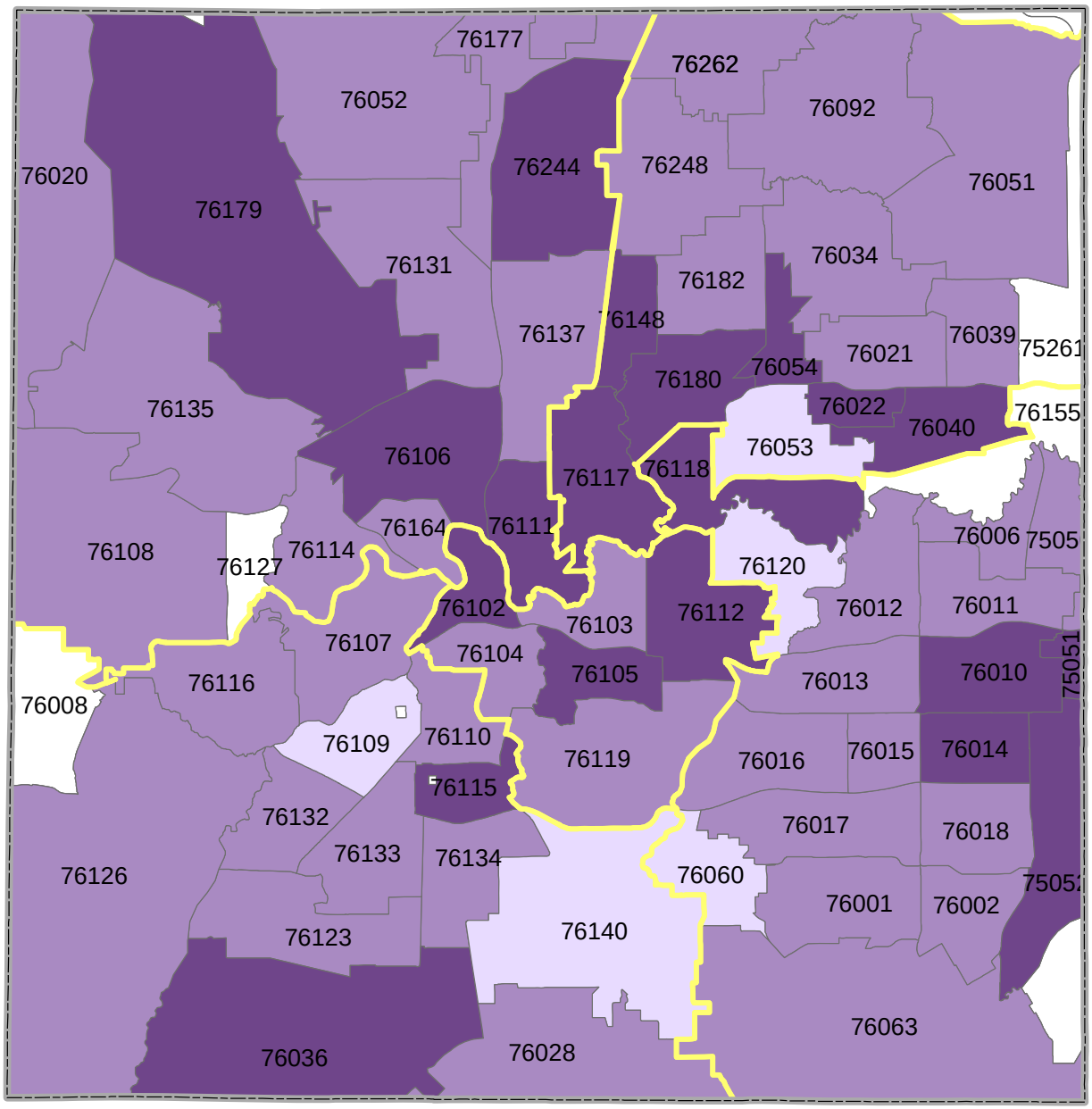
FIGURE 5.2 OVERWEIGHT OR OBESITY (BMI ≥ 25.0) AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER BY ZIP CODE, 2009/2010



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Weighted Percent*

- 43.0% - 48.6%
- 48.7% - 72.9%
- 73.0% - 97.2%
- No or suppressed data
- Subcounty Areas
- Tarrant County boundary

N, W, E, S

GIS Geographic Information Systems TARRANT COUNTY Public Health

**Estimates weighted to population characteristics*

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INTRODUCTION

Even though numerous studies continue to demonstrate the benefits of physical activity, less than two-thirds of Americans report participating in some type of leisure-time physical activity.[1] In general, experts recommend that adults pursue either 30 or more minutes of moderate physical activity (i.e. brisk walking, bicycling, vacuuming, etc.) for five or more days per week or 20 minutes or greater of vigorous physical activity (i.e. running, aerobics, heavy yard work, etc.) at least three days a week. Proven benefits of regular physical activity among adults include a lowered risk of stroke, type 2 diabetes, coronary heart disease, depression, and early death along with better weight control and a higher quality of sleep.[2]

METHODS

The BRFSS examined physical activity levels among Tarrant County residents by analyzing the respondents' self-reported amount of time spent in either moderate or vigorous leisure-time physical activity. Individuals were then classified as meeting the U.S. Department of Health and Human Services activity level recommendations in two different categories:

- ***physical activity*** - defined as 30 or more minutes of moderate physical activity per day for five or more days per week OR 20 or more minutes of vigorous physical activity per day for three or more days per week, and

- ***aerobic activity*** - defined as at least 150 minutes a week of moderate-intensity aerobic activity OR 75 minutes a week of vigorous-intensity aerobic activity or a combination of moderate- and vigorous-intensity aerobic activity a week.[2]

Results for respondents meeting either of these two standards were then analyzed by seven demographic factors (Tables 6.1-6.2). Lastly, Tarrant County physical activity measures were compared with measures in Texas and the United States (Figure 6.1) as well as by geographic distribution at the sub-county level (Figures 6.2).

RESULTS

Overall, approximately half of Tarrant County residents met the recommendations for physical activity [47.4%, 95% CI (44.5-50.4)]. Responses did not vary significantly by sub-county area or gender. However, a significantly greater percentage of individuals in the 18 to 24 year old age group (62.3%) reported meeting the recommendations for physical activity compared to persons aged 65 years and older (38.8%). As education or annual income level increased, the percentage of individuals meeting the physical activity recommendations also increased. Additionally, two out of every three self-employed persons met these recommendations (Table 6.1).

In reference to obtaining sufficient aerobic physical activity, slightly less than two-thirds of residents met this recommendation [63.1%, 95% CI (60.3-65.8)]. The northeast area of Tarrant County possessed the greatest percentage (69.6%) of persons who indicated participating in sufficient aerobic physical activity while more than half of

individuals in all age groups reported participating in such activity. Hispanics reported the lowest percentage of individuals meeting these recommendations (55.5%). A significantly greater proportion of individuals with an annual income of $50,000 or greater (67.6%) met these recommendations for aerobic physical activity compared to persons making less than $15,000 a year (46.4%). One out of every three individuals classified as unable to work met these recommendations (Table 6.2).

Although the percentage of individuals in Tarrant County meeting the U.S. Department of Health and Human Services physical activity recommendations (47.4%) was slightly below that of the state of Texas (48.1%) and the United States (49.2%), these differences were not significant (Figure 6.1).

- **Almost half of Tarrant County residents aged 18 years and older reported meeting the recommendations for physical activity.**
- **More than two-thirds of persons worked in positions in which they were mostly sitting or standing throughout the work day.**
- **As education and annual income levels increased, the percentage of individuals who reported meeting the recommendations for physical activity also increased.**
- **Approximately four out of every five self-employed adults reported participating in sufficient aerobic physical activity.**

TABLE 6.1 MET RECOMMENDATIONS FOR PHYSICAL ACTIVITY AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

MET RECOMMENDATIONS FOR PHYSICAL ACTIVITY[†]				
CHARACTERISTIC	**n**	**WEIGHTED PERCENTAGE[*]**	**N**	**95% CONFIDENCE INTERVAL**
Total	1,438	47.4	3,351	44.5-50.4
Sub-County Area				
Northeast	315	48.3	690	42.8-53.8
Southeast	223	47.0	545	40.1-54.0
Central	294	43.4	725	37.6-49.5
Southwest	316	49.6	700	44.3-55.0
Northwest	290	47.0	691	42.1-52.0
Gender				
Male	520	49.2	1,152	44.5-54.0
Female	918	45.7	2,199	42.2-49.2
Age (in years)				
18-24	53	62.3	103	49.6-73.5
25-34	150	50.2	310	42.8-57.6
35-44	247	46.5	515	41.2-51.9
45-54	304	43.4	698	38.9-48.1
55-64	289	40.1	712	35.7-44.6
≥65	370	38.8	971	35.3-42.4
Race/Ethnicity				
White	1,081	49.4	2,423	46.0-52.7
Black	142	42.9	404	33.0-53.4
Hispanic	149	40.8	389	33.3-48.8
Other	49	55.8	94	40.1-70.4
Education				
< High school	114	42.6	347	33.1-52.6
High school or GED	310	42.9	781	37.2-48.8
Tech/Some college	412	49.2	964	43.4-55.0
College degree	600	50.5	1,251	46.1-54.8
Annual Income				
<$15,000	108	30.0	316	20.7-41.3
$15,000 - $24,999	168	44.6	461	36.6-52.9
$25,000 - $34,999	102	44.6	271	34.0-55.7
$35,000 - $49,999	165	48.4	386	39.1-57.8
≥$50,000	690	50.1	1,425	46.2-54.0
Employment				
Employed for wages	606	46.0	1,416	41.9-50.1
Self-employed	128	66.7	224	56.6-75.4
Out of work for >1yr	36	32.0	110	18.3-49.6
Out of work for <1yr	58	41.9	133	30.4-54.3
Homemaker	166	50.4	329	41.5-59.3
Student	32	61.7	64	44.4-76.4
Retired	340	43.5	823	39.5-47.6
Unable to work	65	25.8	235	18.5-34.8

[†]U.S. Department of Health and Human Services recommendations: 30 or more minutes of moderate physical activity per day for five or more days per week OR 20 or more minutes of vigorous physical activity per day for three or more days per week
n = number of respondents who met recommendations for physical activity
N = total number of respondents who answered the question
[*]Estimates weighted to population characteristics

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TABLE 6.2 SUFFICIENT AEROBIC PHYSICAL ACTIVITY AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

SUFFICIENT AEROBIC PHYSICAL ACTIVITY[†]				
CHARACTERISTIC	**n**	**WEIGHTED PERCENTAGE[*]**	**N**	**95% CONFIDENCE INTERVAL**
Total	1,955	63.1	3,362	60.3-65.8
Sub-County Area				
Northeast	440	69.6	692	64.7-74.1
Southeast	320	61.9	547	55.2-68.3
Central	397	59.4	725	53.7-65.0
Southwest	413	64.7	704	59.7-69.4
Northwest	385	60.4	694	55.6-65.1
Gender				
Male	746	68.3	1,155	64.0-72.3
Female	1,209	57.9	2,207	54.4-61.4
Age (in years)				
18-24	68	70.5	103	57.6-80.7
25-34	202	67.3	310	60.1-73.9
35-44	331	63.1	517	57.7-68.2
45-54	425	61.4	700	56.7-65.9
55-64	411	58.4	715	53.9-62.8
≥65	488	51.9	974	48.3-55.6
Race/Ethnicity				
White	1,446	65.7	2,430	62.7-68.6
Black	208	56.7	406	46.3-66.6
Hispanic	214	55.5	390	47.6-63.1
Other	61	68.1	94	52.4-80.6
Education				
< High school	167	58.3	348	48.8-67.1
High school or GED	411	54.5	784	48.5-60.4
Tech/Some college	576	67.9	967	62.7-72.7
College degree	797	66.1	1,255	62.0-69.9
Annual Income				
<$15,000	145	46.4	317	34.7-58.5
$15,000 - $24,999	235	58.3	464	50.7-65.5
$25,000 - $34,999	158	63.2	274	52.8-72.5
$35,000 - $49,999	224	58.5	386	49.0-67.4
≥$50,000	920	67.6	1,426	63.9-71.0
Employment				
Employed for wages	861	64.1	1,417	60.2-67.7
Self-employed	165	79.8	226	71.7-86.0
Out of work for >1yr	58	58.6	111	42.6-72.9
Out of work for <1yr	87	65.5	134	51.1-77.5
Homemaker	197	58.3	330	48.8-67.2
Student	41	69.1	64	51.4-82.6
Retired	458	58.8	827	54.7-62.7
Unable to work	80	32.3	236	24.0-41.9

[†]U.S. Department of Health and Human Services recommendations: At least 150 minutes a week of moderate-intensity aerobic activity OR 75 minutes a week of vigorous-intensity aerobic activity or a combination of moderate- and vigorous-intensity aerobic activity a week

n = number of respondents who met recommendations for sufficient aerobic physical activity

N = total number of respondents who answered the question

[*]Estimates weighted to population characteristics

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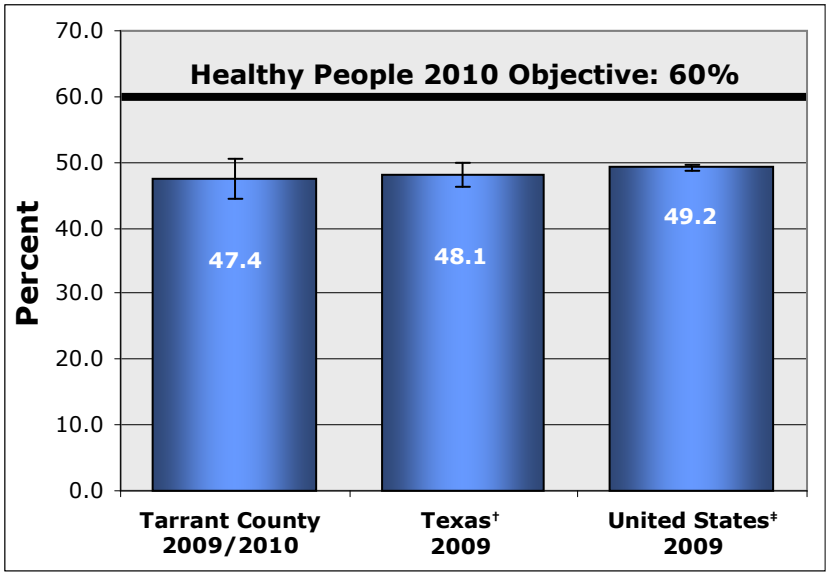
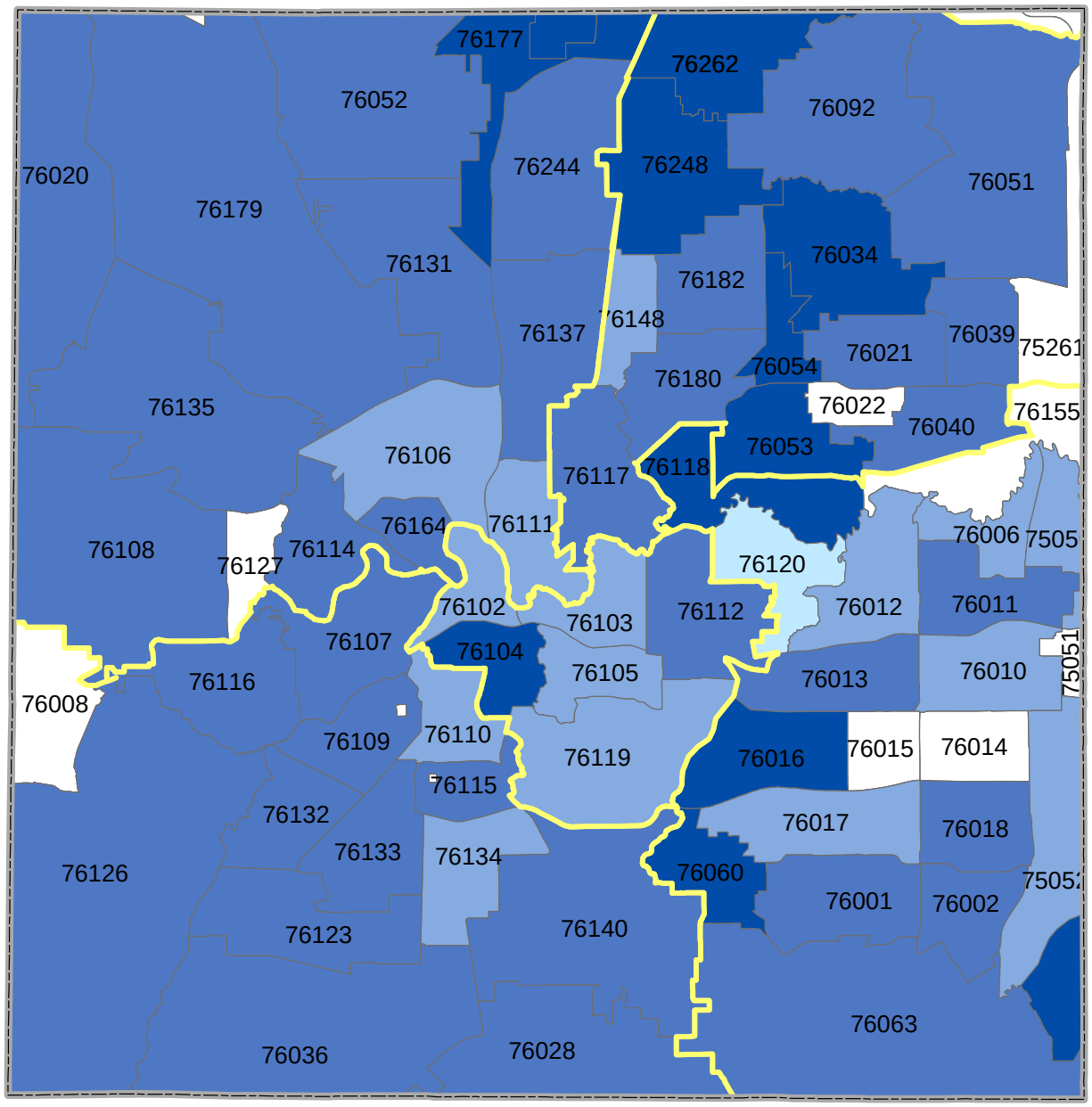
FIGURE 6.1 MET RECOMMENDATIONS FOR PHYSICAL ACTIVITY AMONG ADULTS 18 YEARS AND OLDER, TARRANT COUNTY, TEXAS, AND THE UNITED STATES*



**U.S. Department of Health and Human Services recommendations: 30 or more minutes of moderate physical activity per day for five or more days per week OR 20 or more minutes of vigorous physical activity per day for three or more days per week*
†Data source: 2009 BRFSS, Texas Department of State Health Services
‡Data source: 2009 BRFSS, Centers for Disease Control and Prevention
Estimates weighted to population characteristics

FIGURE 6.2 MET RECOMMENDATIONS FOR PHYSICAL ACTIVITY AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER BY ZIP CODE, 2009/2010†



†*Physical activity recommendation from the US Department of Health and Human Services: 30 or more minutes of moderate physical activity per day for five or more days per week OR 20 or more minutes of vigorous physical activity per day for three or more days per week*

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*Estimates weighted to population characteristics

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TABLE 6.3A BRFSS QUESTIONS REGARDING PHYSICAL ACTIVITY AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

QUESTIONS	RESPONDENTS	
	n	%*
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	2,762	74.0
No	1,190	26.0
2. When you are at work, which of the following best describes what you do?[1]		
Mostly sitting or standing	1,208	67.3
Mostly walking	354	22.2
Mostly heavy labor or physically demanding work	120	10.5
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	2,924	86.6
No	577	13.4
4. How many days per week do you do these moderate activities for at least 10 minutes at a time?[2]		
1 day	125	3.3
2 days	297	11.4
3 days	612	22.3
4 days	406	13.6
5 days	512	17.7
6 days	186	5.2
7 days	759	26.4
Do not do any moderate physical activity for at least 10 minutes at a time	-	-
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?[2]		
< 30 minutes	749	24.9
30-45 minutes	1,064	38.9
46-60 minutes	539	19.4
>1 hour	442	16.8
6. Now, thinking about the vigorous activities you do [when you are not working] 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	1,490	52.4
No	1,977	47.6

n = number of respondents
**Estimates weighted to population characteristics*
1. Among those who were employed for wages or self-employed
2. Among those who did moderate activities for at least 10 minutes at a time in a week

TABLE 6.3B BRFSS QUESTIONS REGARDING PHYSICAL ACTIVITY AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

QUESTIONS	RESPONDENTS	
	n	%*
7. How many days per week do you do these vigorous activities for at least 10 minutes at a time?[3]		
1 day	286	15.6
2 days	323	19.3
3 days	372	30.1
4 days	157	11.3
5 days	174	11.3
6 days	42	2.8
7 days	121	9.0
Do not do any moderate physical activity for at least 10 minutes at a time	5	0.5
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?[3]		
< 30 minutes	272	15.8
30-45 minutes	549	39.4
46-60 minutes	359	25.9
>1 hour	263	19.0

n = number of respondents
**Estimates weighted to population characteristics*
3. Among those who did vigorous physical activities for at least 10 minutes at a time in a week

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Introduction

Current dietary guidelines call for the consumption of five servings of fruits and vegetables a day (based on a 2,000 calorie diet).[1] However, less than one-third of U.S. adults eat the recommended amounts of fruits and vegetables.[2] Various studies exist linking adequate fruit and vegetable intake with a decrease in lung conditions such as chronic obstructive pulmonary disease and asthma, a decrease in the risk of cardiovascular and coronary heart diseases, and a reduction of certain cancers.[3-7] Factors associated with inadequate consumption of fruits and vegetables include inability to access fresh sources of produce, cost, time of preparation, and neighborhood socioeconomic status, but current research suggests the success of community-level interventions in mitigating these barriers.[8-9]

Methods

In assessing fruit and vegetable intake, the BRFSS questioned respondents with respect to their consumption of fruit juices, fruit, green salad, non-fried potatoes, carrots, and other vegetables. From these data, daily fruit and vegetable consumption was calculated. Results for respondents consuming fruits and vegetables five or more times per day were analyzed by seven demographic factors (Tables 7.1). Lastly, Tarrant County fruit and vegetable consumption measures were compared with levels in Texas and the United States (Figure 7.1) as well as by geographic distribution at the sub-county level (Figure 7.2).

Results

One out of every four residents consumed fruits and vegetables at least five times per day [25.7%, 95% CI (23.3-28.2)]. In general, a smaller percentage of individuals in the younger age groups consumed fruits and vegetables five or more times a day than in the older age groups with the exception of individuals aged 25 to 34 years. Less than a quarter of Whites (24.1%) met the five a day fruit and vegetable threshold compared to over a third of Others (36.0%). A significantly greater percentage of individuals with a college degree (29.4%) consumed an adequate daily amount of fruits and vegetables compared to individuals with only a high school diploma or GED (20.6%). Of individuals classified as unable to work (15.2%), a significantly lower proportion ate fruits and vegetables at least five times per day compared to externally-employed individuals (25.6%) (Table 7.1).

A greater percentage of Tarrant County residents (25.7%) reported consuming fruits and vegetables five or more times a day compared to residents of Texas (23.8%) and the United States (23.7%) (Figure 7.1).

- **Three-quarters of Tarrant County residents consumed fruits and vegetables less than five times per day.**
- **One out of every six individuals aged 18 to 24 years ate fruits and vegetables five or more times daily.**

TABLE 7.1 DAILY CONSUMPTION OF FRUITS AND VEGETABLES AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

CONSUMED FRUITS AND VEGETABLES FIVE OR MORE TIMES PER DAY				
CHARACTERISTIC	**n**	**WEIGHTED PERCENTAGE***	**N**	**95% CONFIDENCE INTERVAL**
Total	985	25.7	3,544	23.3-28.2
Sub-County Area				
Northeast	188	25.0	719	20.5-30.0
Southeast	150	23.5	570	18.4-29.6
Central	231	27.2	772	22.5-32.4
Southwest	223	28.7	748	24.1-33.9
Northwest	193	25.9	735	22.1-30.2
Gender				
Male	283	22.7	1,205	19.1-26.8
Female	702	28.5	2,339	25.6-31.6
Age (in years)				
18-24	21	16.8	111	9.5-28.2
25-34	95	29.7	316	23.4-36.9
35-44	137	23.6	535	19.6-28.3
45-54	197	25.6	734	21.9-29.6
55-64	210	28.1	742	24.3-32.4
≥65	311	28.1	1,057	25.0-31.3
Race/Ethnicity				
White	708	24.1	2,556	21.7-26.7
Black	125	30.7	431	22.2-40.8
Hispanic	97	26.5	413	19.8-34.5
Other	40	36.0	96	22.2-52.5
Education				
< High school	79	25.7	381	17.5-35.9
High school or GED	199	20.6	841	16.8-25.0
Tech/Some college	281	25.0	1,015	20.5-30.1
College degree	423	29.4	1,297	25.9-33.1
Annual Income				
<$15,000	79	25.1	337	15.9-37.3
$15,000 - $24,999	111	23.2	491	16.4-31.8
$25,000 - $34,999	93	30.1	295	21.8-40.1
$35,000 - $49,999	100	23.1	403	16.0-32.2
≥$50,000	453	26.0	1,464	23.1-29.2
Employment				
Employed for wages	418	25.6	1,476	22.4-29.1
Self-employed	74	27.6	239	19.6-37.4
Out of work for >1yr	26	35.4	117	19.5-55.5
Out of work for <1yr	32	20.9	137	13.3-31.2
Homemaker	111	29.8	351	22.9-37.8
Student	11	12.3	66	4.0-31.9
Retired	257	27.9	882	24.5-31.5
Unable to work	49	15.2	255	10.3-21.8

n = number of respondents who consumed fruits and vegetables five or more times per day
N = total number of respondents who answered the question
**Estimates weighted to population characteristics*

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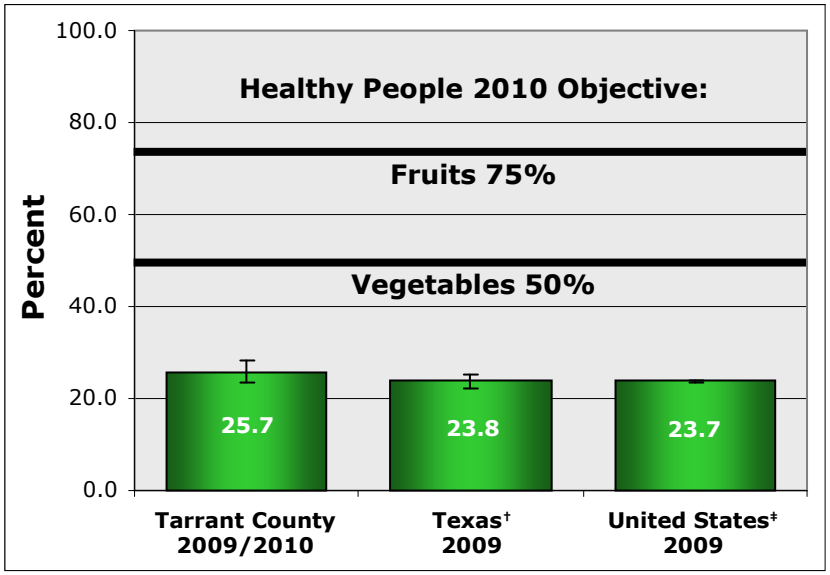
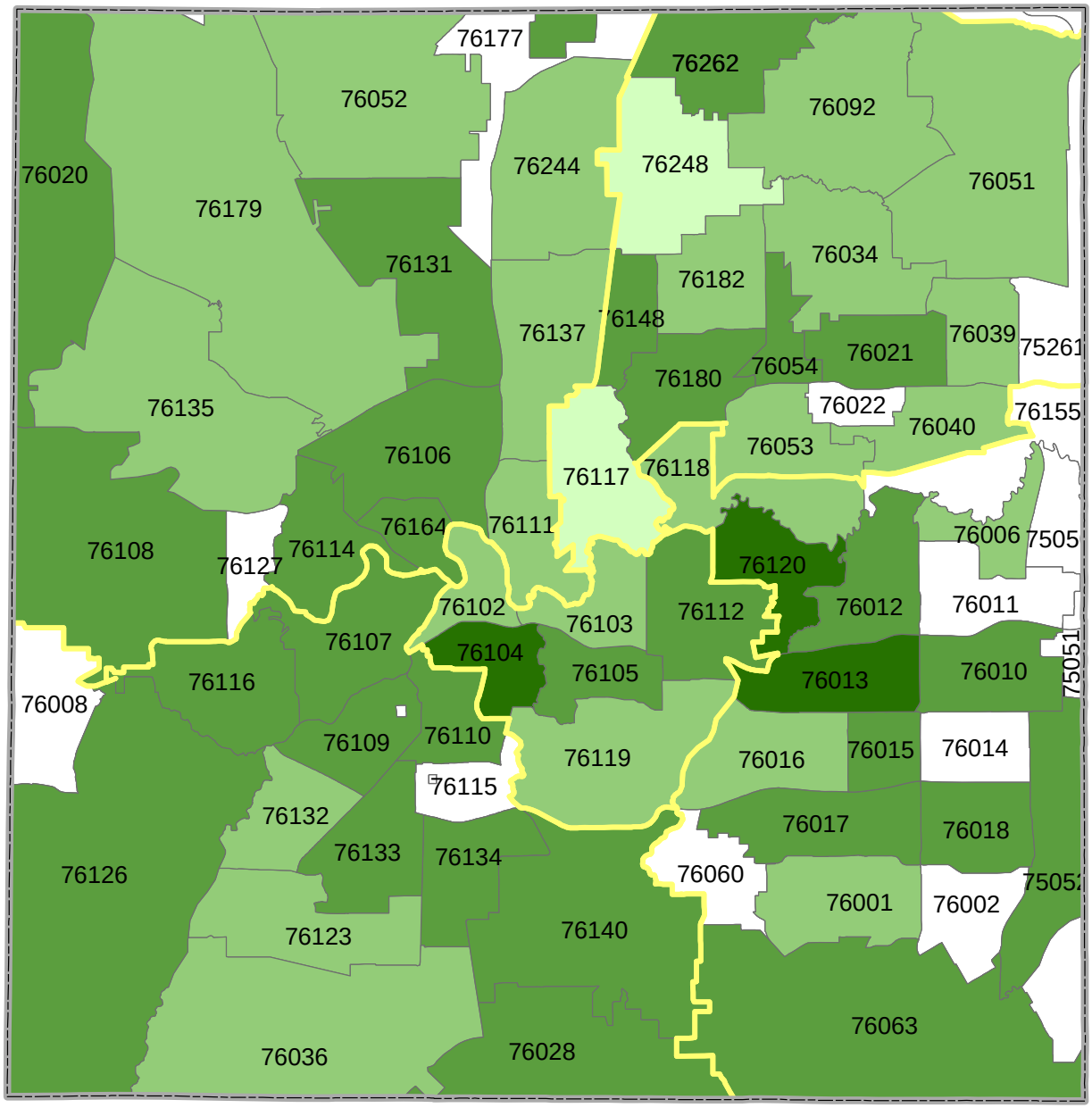
FIGURE 7.1 CONSUMED FRUITS AND VEGETABLES FIVE OR MORE TIMES PER DAY AMONG ADULTS 18 YEARS AND OLDER, TARRANT COUNTY, TEXAS, AND THE UNITED STATES



†Data source: 2009 BRFSS, Texas Department of State Health Services
‡Data source: 2009 BRFSS, Centers for Disease Control and Prevention
Estimates weighted to population characteristics

FIGURE 7.2 CONSUMED FRUITS AND VEGETABLES FIVE OR MORE TIMES PER DAY AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER BY ZIP CODE, 2009/2010



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Weighted Percent*

- 9.9% - 13.1%
- 13.2% - 26.2%
- 26.3% - 39.2%
- 39.3% - 52.3%
- No or suppressed data
- Subcounty Areas
- Tarrant County boundary

N, W, E, S

GIS Geographic Information Systems TARRANT CO. Public Health

*Estimates weighted to population characteristics

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INTRODUCTION

Research consistently demonstrates a link between smoking and adverse health outcomes including various cancers, respiratory and cardiovascular diseases, and poor reproductive health.[1] Exposure to second-hand smoke (particularly in homes and at work) among both children and adults contributes to disease and premature death.[2] Between 2000 and 2004, smoking contributed to more than 443,000 deaths in the United States resulting in more than $96 million of productivity losses for the U.S. economy.[3] In 2004, Texas state Medicaid expenditures attributable to smoking totaled more than $980 million.[4]

Of additional concern is the impact of heavy alcohol consumption on the health of Tarrant County residents. Heavy alcohol consumption is the third leading lifestyle-associated cause of death in the United States with around 79,000 deaths attributed to this behavior nationally each year.[5] Approximately 60 percent of respondents to the 2005 U.S. National Alcohol Survey reported experiencing adverse events due to another individual's consumption of alcohol including assault, marital disputes, vehicular accidents, and financial difficulties.[6] Compared to non-binge drinkers, binge-drinkers are more likely to report experiencing 14 or more unhealthy days in the previous month leading to lower health-related quality of life measures, particularly in areas relating to mental health.[7] Neurological indicators suggest that alcohol consumption contributes to smoking relapses among individuals attempting to quit tobacco use.[8]

METHODS

BRFSS determined prevalence of current smokers in Tarrant County via responses to a series of five questions relating to cigarette and smokeless tobacco use (both current and previous). Another eight questions regarding patient and physician interactions evaluated tobacco cessation experiences among respondents. Lastly, respondents were questioned regarding smoking practices at home, work, and other establishments to determine second-hand smoke exposures.

To evaluate levels of heavy alcohol consumption (more than one drink per day for women or more than two drinks per day for men), BRFSS questioned respondents regarding frequency of drinks per month and day. Binge drinking prevalence was calculated based on responses to two questions assessing frequency of more than five drinks per occasion among men or more than four drinks per occasion among women.

Results for current smoker status, heavy alcohol consumption, and binge drinking were further analyzed by seven demographic factors (Tables 8.1-8.3). Tarrant County's current smoker prevalence was also compared with this prevalence in Texas and the United States (Figure 8.1) as well as by geographic distribution at the sub-county level (Figure 8.2).

RESULTS

Almost one out of every five Tarrant County residents were classified as current smokers [18.5%, 95% CI (16.4-20.8)]. The percentage of males classified as current smokers (22.4%) was close to double the percentage of females (14.8%) in this category. Approximately twice as many individuals in the 18 to 24 year old age group were classified as current smokers compared to all other age groups. A greater percentage of Blacks (21.4%) were classified as current smokers than Whites (19.7%), Hispanics (14.1%), and Others (12.0%), but this difference was not statistically significant. Less than 10 percent of individuals with a college degree (5.5%) were classified as current smokers. The proportion of individuals classified as current smokers in the highest annual income group (12.8%) was less than half the proportion of current smokers in the $25,000 to $34,999 annual income group (29.8%). Slightly more than one-quarter of self-employed individuals (25.8%) were current smokers (Table 8.1).

- **A significantly greater percentage of individuals aged 18 to 24 years reported being current smokers compared to all other age groups.**
- **Almost half of all individuals who were without work for less than a year reported being current smokers.**
- **As age group increased, the percentage of residents reporting binge drinking decreased.**

More than 95 percent of Tarrant County residents did not report any heavy alcohol consumption [95.9%, 95% CI (94.4-97.0)]. Compared to individuals residing in the northwest area of Tarrant County (2.7%), the percentage of persons in the central county area who reported heavy alcohol consumption was almost three times greater (7.1%). Individuals in the 25 to 34 year old age group reported the highest percentage of heavy alcohol consumption (6.5%). Twice as many Hispanics reported heavy alcohol consumption (7.3%) compared to both Whites (3.6%) and Blacks (3.2%); no Others reported this activity (0.0%). Approximately one out of every ten individuals with less than a high school education (9.2%) reported heavy alcohol consumption, and almost three times as many individuals out of work for more than one year (11.9%) reported this activity compared to all other employment categories (Table 8.2).

In general, over 13 percent of residents reported binge drinking within the past 30 days [13.3%, 95% CI (11.3-15.5)]. A significantly greater proportion of individuals living in the northeast county area reported binge drinking episodes (21.1%) compared to those in the southeast area of the county (9.5%). About one out of every five Tarrant County males reported binge drinking while binge drinking percentages did not differ significantly by education level. Among annual income levels, persons with an annual income of $50,000 or more reported the greatest proportion of binge drinking (15.8%). Less than five percent of homemakers (4.7%), retired persons (3.8%), and individuals with an inability to work (2.6%) reported binge drinking episodes (Table 8.3).

Lastly, compared to the state of Texas (17.9%) and the United States (18.0%), the proportion of individuals classified as current smokers in Tarrant County (18.5%) was not statistically different (Figure 8.1).

TABLE 8.1 CURRENT SMOKERS AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

CURRENT SMOKERS				
CHARACTERISTICS	n	WEIGHTED PERCENTAGE*	N	95% CONFIDENCE INTERVAL
Total	650	18.5	3,940	16.4-20.8
Sub-County Area				
Northeast	107	18.6	799	14.1-24.2
Southeast	102	19.3	621	14.5-25.3
Central	173	22.4	867	17.8-27.7
Southwest	121	14.0	846	11.1-17.5
Northwest	147	19.7	807	16.1-23.9
Gender				
Male	245	22.4	1,333	18.8-26.4
Female	404	14.8	2,600	12.7-17.2
Age (in years)				
18-24	44	36.0	127	25.6-47.9
25-34	56	14.5	359	10.6-19.4
35-44	99	17.3	598	13. 6-21.8
45-54	177	20.5	818	17.3-24.1
55-64	160	17.7	809	14.7-21.1
≥65	108	9.2	1,163	7.4-11.3
Race/Ethnicity				
White	436	19.7	2,780	17.1-22.6
Black	127	21.4	517	15.7-28.5
Hispanic	62	14.1	475	9.6-20.3
Other	17	12.0	111	5.5-24.2
Education				
< High school	106	24.1	454	17.7-31.9
High school or GED	214	28.0	947	23.1-33.5
Tech/Some college	234	24.3	1,117	19.9-29.4
College degree	93	5.5	1,409	4.1-7.3
Annual Income				
<$15,000	108	27.3	379	19.2-37.2
$15,000 - $24,999	137	25.6	557	20.3-31.7
$25,000 - $34,999	79	29.8	328	21.2-40.1
$35,000 - $49,999	64	17.9	436	12.3-25.4
≥$50,000	177	12.8	1,595	10.2-15.9
Employment				
Employed for wages	240	15.4	1,639	12.8-18.4
Self-employed	49	25.8	268	16.3-38.4
Out of work for >1yr	38	22.4	134	13.9-34.0
Out of work for <1yr	55	46.7	146	34.6-59.1
Homemaker	55	15.0	400	10.2-21.6
Student	17	18.1	73	9.8-31.0
Retired	91	9.1	979	7.1-11.6
Unable to work	102	35.4	279	26.5-45.4

n = number of respondents who were current smokers
N = total number of respondents who answered the question
**Estimates weighted to population characteristics*

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TABLE 8.2 HEAVY ALCOHOL CONSUMPTION AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

HEAVY ALCOHOL CONSUMPTION[†]				
CHARACTERISTIC	**n**	**WEIGHTED PERCENTAGE[*]**	**N**	**95% CONFIDENCE INTERVAL**
Total	147	4.1	3,781	3.0-5.6
Sub-County Area				
Northeast	31	6.6	755	3.8-11.3
Southeast	19	3.1	601	1.2-7.7
Central	39	7.1	833	4.3-11.5
Southwest	32	4.5	810	2.3-8.7
Northwest	26	2.7	782	1.7-4.3
Gender				
Male	57	5.6	1,268	3.6-8.7
Female	90	2.8	2,513	2.1-3.7
Age (in years)				
18-24	8	4.2	118	1.9-8.8
25-34	16	6.5	347	3.2-13.0
35-44	21	2.6	575	1.6-4.2
45-54	35	3.9	785	2.6-5.8
55-64	32	3.4	779	2.2-5.1
≥65	34	3.0	1,123	2.1-4.4
Race/Ethnicity				
White	122	3.6	2,681	2.8-4.5
Black	10	3.2	489	1.5-6.5
Hispanic	13	7.3	455	3.2-16.1
Other	0	0.0	103	0.0-0.0
Education				
< High school	12	9.2	431	3.8-20.6
High school or GED	39	5.2	905	3.4-7.9
Tech/Some college	40	2.4	1,072	1.6-3.6
College degree	56	2.9	1,363	2.0-4.0
Annual Income				
<$15,000	11	6.0	366	1.6-19.5
$15,000 - $24,999	15	6.4	533	2.1-17.6
$25,000 - $34,999	11	2.3	313	1.1-4.9
$35,000 - $49,999	21	6.1	429	3.2-11.0
≥$50,000	77	3.8	1,538	2.7-5.4
Employment				
Employed for wages	71	4.7	1,569	3.0-7.2
Self-employed	12	4.2	257	2.1-8.3
Out of work for >1yr	8	11.9	127	2.9-38.2
Out of work for <1yr	7	4.9	142	1.6-14.0
Homemaker	10	1.3	385	0.6-2.6
Student	-	-	-	-
Retired	28	3.3	936	2.2-5.0
Unable to work	9	2.3	275	1.0-4.9

[†]Heavy alcohol consumption defined as more than one drink per day for women and more than two drinks per day for men
n = number of respondents who engaged in heavy alcohol consumption during the past 30 days
N = total number of respondents who answered the question
[*]Estimates weighted to population characteristics

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TABLE 8.3 BINGE DRINKING AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

BINGE DRINKING[†]				
CHARACTERISTIC	n	WEIGHTED PERCENTAGE[*]	N	95% CONFIDENCE INTERVAL
Total	340	13.3	3,803	11.3-15.5
Sub-County Area				
Northeast	92	21.1	764	16.5-26.7
Southeast	41	9.5	605	5.8-15.2
Central	80	17.1	836	12.3-23.3
Southwest	57	11.1	813	7.7-15.7
Northwest	70	13.7	785	10.5-17.7
Gender				
Male	178	19.4	1,280	15.8-23.5
Female	162	7.6	2,523	6.1-9.3
Age (in years)				
18-24	26	19.2	118	11.5-30.3
25-34	60	18.7	350	13.7-25.0
35-44	84	15.2	576	11.9-19.4
45-54	83	10.8	787	8.3-14.0
55-64	62	6.3	783	4.6-8.5
≥65	22	1.8	1,132	1.1-2.9
Race/Ethnicity				
White	258	14.6	2,704	12.3-17.2
Black	34	8.3	489	5.2-12.9
Hispanic	41	14.1	452	8.7-22.1
Other	-	-	-	-
Education				
< High school	30	13.5	430	7.3-23.7
High school or GED	74	12.8	908	9.6-16.9
Tech/Some college	97	12.1	1,082	8.5-16.9
College degree	139	14.4	1,372	11.8-17.6
Annual Income				
<$15,000	23	8.9	364	3.6-20.4
$15,000 - $24,999	37	12.1	535	6.5-21.3
$25,000 - $34,999	24	7.3	317	4.2-12.3
$35,000 - $49,999	37	11.0	428	7.1-16.8
≥$50,000	180	15.8	1,550	13.0-19.2
Employment				
Employed for wages	190	15.1	1,574	12.4-18.3
Self-employed	31	18.3	261	10.1-30.7
Out of work for >1yr	18	21.3	128	9.4-41.3
Out of work for <1yr	24	21.2	144	13.0-32.7
Homemaker	19	4.7	387	2.7-7.9
Student	13	19.7	71	10.4-34.1
Retired	33	3.8	946	2.5-5.8
Unable to work	12	2.6	274	1.3-5.0

[†]Binge drinking defined as having (men five or more drinks/women four or more drinks) on an occasion in the past 30 days
n = number of respondents who were classified binge drinkers
N = total number of respondents who answered the question
[*]Estimates weighted to population characteristics

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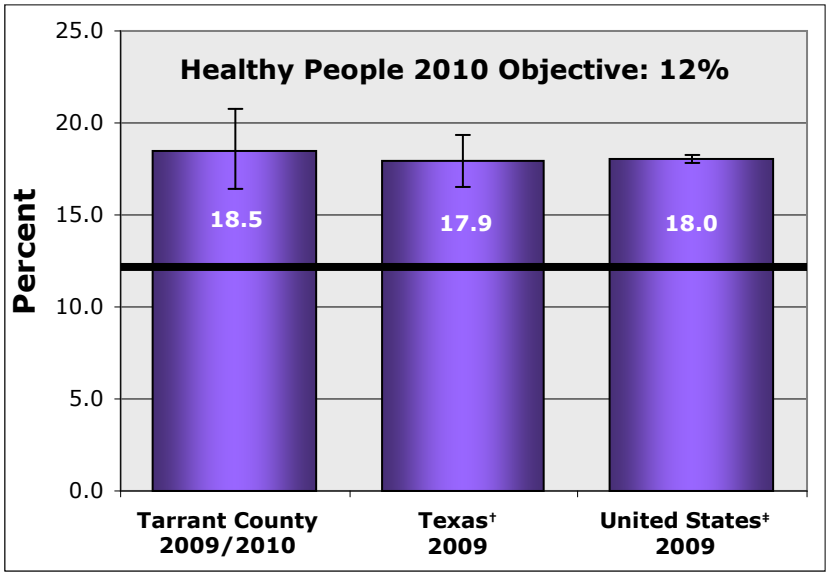
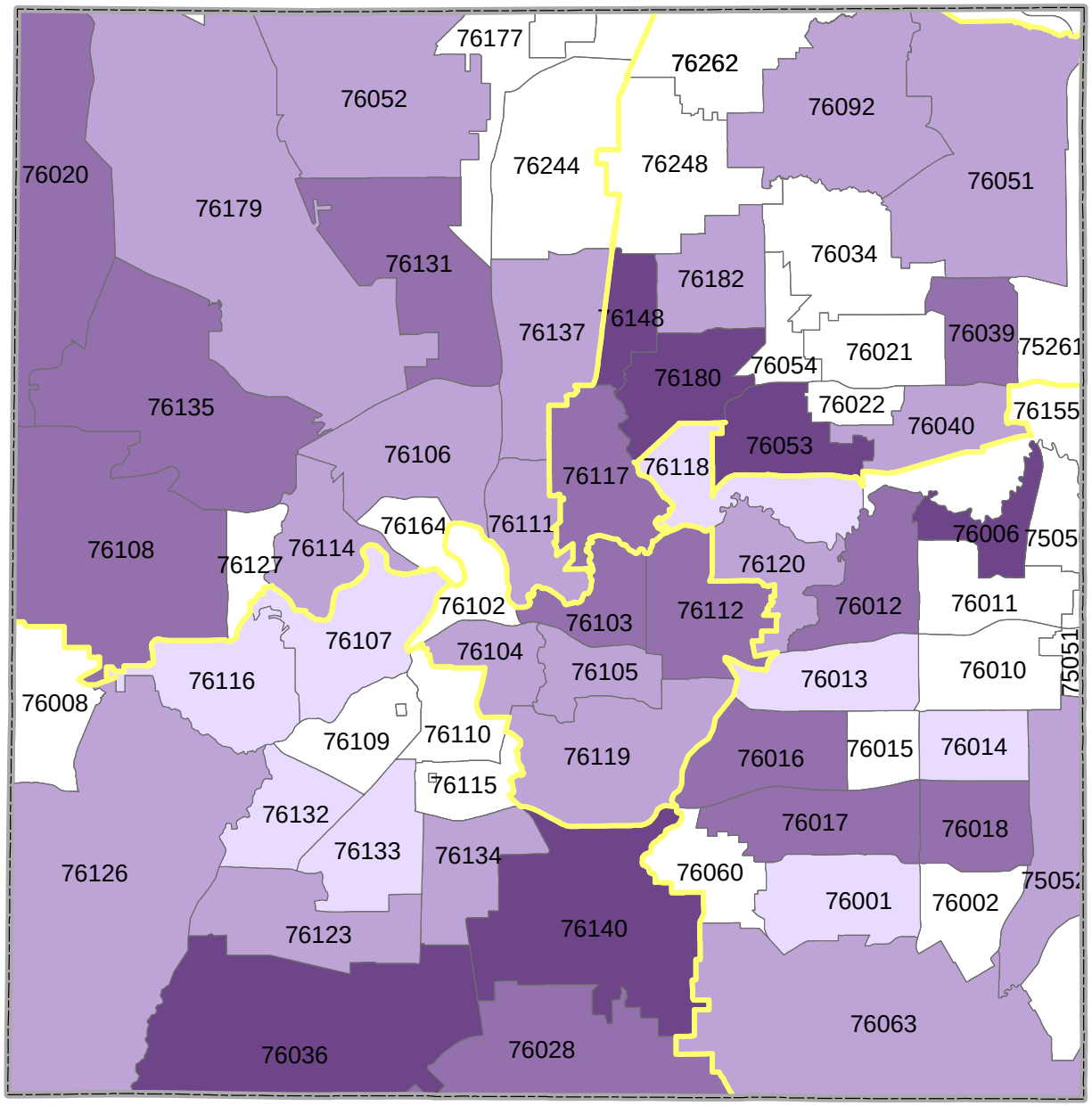
FIGURE 8.1 CURRENT SMOKERS AMONG ADULTS 18 YEARS AND OLDER, TARRANT COUNTY, TEXAS, AND THE UNITED STATES



†Data source: 2009 BRFSS, Texas Department of State Health Services
‡Data source: 2009 BRFSS, Centers for Disease Control and Prevention
Estimates are weighted to population characteristics

FIGURE 8.2 CURRENT SMOKERS AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER BY ZIP CODE, 2009/2010



These data were prepared by Tarrant County Public Health for its use, and may be revised any time, without notification. Tarrant County Public Health does not guarantee the correctness or accuracy of any features on this map. Tarrant County assumes no responsibility in connection therewith. Said data should not be edited by anyone other than designated personnel, or through written approval by GIS Manager. These data are for informational purposes only and should not create liability on the part of Tarrant County Government, any officer and/or employees thereof.

Weighted Percent*

- 4.5% - 11.3%
- 11.4% - 22.6%
- 22.7% - 33.9%
- 34.0% - 45.2%
- No or suppressed data
- Subcounty Areas
- Tarrant County boundary

N, W, E, S

GIS Geographic Information Systems TARRANT COUNTY Public Health

*Estimates weighted to population characteristics

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TABLE 8.4 BRFSS QUESTIONS REGARDING TOBACCO USE AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

QUESTIONS	RESPONDENTS	
	n	%*
1. Have you smoked at least 100 cigarettes in your entire life?		
Yes	1,704	39.2
No	2,238	60.8
2. Do you now smoke cigarettes every day, some days or not at all?[1]		
Every day	442	30.8
Some days	208	16.4
Not at all	1,052	52.8
3. During the past 12 months, have you stopped smoking for one day or longer because you were trying to quit smoking?[2]		
Yes	364	57.6
No	284	42.4
4. How long has it been since you last smoked cigarettes regularly?[3]		
Within the past month	8	1.6
Within the past 3 months	17	2.7
Within the past 6 months	13	2.0
Within the past year	41	5.1
Within the past 5 years	133	20.7
Within the past 10 years	104	13.9
10 years or more	717	51.4
Never smoked regularly	16	2.7
5. Do you currently use chewing tobacco, snuff, or snus every day, some days, or not at all?		
Every day	47	1.7
Some days	49	1.8
Not at all	3,860	96.5

n = number of respondents
**Estimates weighted to population characteristics*
1. Among those who have smoked at least 100 cigarettes in their entire life
2. Among those who now smoke cigarettes every day or some days
3. Among those who have smoked at least 100 cigarettes in their entire life but now do not smoke at all

TABLE 8.5 BRFSS QUESTIONS REGARDING TOBACCO CESSATION AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

QUESTIONS	RESPONDENTS	
	n	%*
1. Did you use (or are you currently using) smokeless tobacco products such as chewing tobacco, snuff, or snus as an option to quit smoking?[1]		
Yes	19	62.2
No	26	37.8
2. 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?		
Saw health professional	2,862	82.2
Did not see health professional	391	17.8
3. During the past 12 months, on how many visits were you advised to quit smoking cigarettes by a doctor, nurse or other health professional?[2]		
Advised	299	60.6
Not advised	135	39.4
4. On how many visits did a 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?[2]		
Recommended	155	28.4
Not recommended	280	71.6
5. On how many visits did a doctor, nurse or other health professional recommend or discuss methods and strategies other than medication to assist you with quitting smoking?[2]		
Recommended	102	23.8
Not recommended	329	76.2
6. During the past 12 months, on how many visits were you advised to stop using chewing tobacco, snuff or snus by a doctor, nurse or other health professional?[3]		
Advised	15	26.1
Not advised	42	73.9
7. When you quit smoking (or the last time you tried to quit smoking), did you call a telephone quitline?[4]		
Called	25	1.7
Did not call	1,425	98.3

n = number of respondents

**Estimates weighted to population characteristics*

1. Among those who use chewing tobacco, snuff, or snus every day or some days AND who smoked at least 100 cigarettes in their life but now smoke not at all OR who now smoke every day or some days AND stopped smoking for one day or longer during the past 12 months because they were trying to quit smoking

2. Among those who now smoke every day or some days

3. Among those who currently use chewing tobacco, snuff, or snus every day or some days

4. Among those who smoked at least 100 cigarettes in their life but now smoke not at all OR who now smoke every day or some days AND stopped smoking for one day or longer during the past 12 months because they were trying to quit smoking

TABLE 8.6 BRFSS QUESTIONS REGARDING SECONDHAND SMOKE AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

QUESTIONS	RESPONDENTS	
	n	%*
1. Which statement best describes the rules about smoking inside your home?		
Smoking is not allowed anywhere inside your home	2,793	87.6
Smoking is allowed in some places or at some times	180	4.9
Smoking is allowed anywhere inside your home	48	0.9
There are no rules about smoking inside your home	310	6.7
2. While working at your job, are you indoors most of the time?[1]		
Yes	1,403	84.3
No	196	15.7
3. Which of the following best describes your place of work's official smoking policy for indoor public or common areas, such as lobbies, restrooms, and lunchrooms?[2]		
Not allowed in any public areas	1,186	80.2
Allowed in some public areas	130	13.3
Allowed in all public areas	10	0.8
No official policy	53	5.7
4. Which of the following best describes your place of work's official smoking policy for work areas?[2]		
Not allowed in any work areas	1,257	85.7
Allowed in some work areas	69	7.8
Allowed in all work areas	9	0.9
No official policy	56	5.6
5. If there were a total ban on smoking in restaurants, would you eat out more, less, or would it make no difference?		
More often	866	28.5
Less often	168	4.7
No difference	2,266	66.9
6. If there were a total ban on smoking in bars and music clubs, would you go to bars and music clubs more, less, or would it make no difference?		
More often	533	18.1
Less often	266	8.7
No difference	2,432	73.2

n = number of respondents
**Estimates weighted to population characteristics*
1. Among those who are employed for wages or are self-employed
2. Among those who are employed for wages or are self-employed AND are indoors most of the time while working at their job

TABLE 8.7 BRFSS QUESTIONS REGARDING ALCOHOL CONSUMPTION AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

QUESTIONS	RESPONDENTS	
	n	%*
1. During the past 30 days, have you had at least one drink of any alcoholic beverage such as beer, wine, a malt beverage or liquor?		
Yes	1,747	49.9
No	2,108	50.1
2. 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]		
Daily	132	6.4
3-6 times per week	290	15.7
1-2 times per week	587	37.6
1-3 times per month	673	40.3
3. During the past 30 days, on the days when you drank, about how many drinks did you drink on the average?[1]		
1 drink	791	36.7
2 drinks	537	34.5
More than 2 drinks	345	28.8
4. Considering all types of alcoholic beverages, how many times during the past 30 days did you have [5 (men) / 4 (women)] or more drinks on an occasion?[1]		
Once	139	9.9
Twice	64	3.8
More than twice	137	13.7
None	1,333	72.6
5. During the past 30 days, what is the largest number of drinks you had on any occasion?[1]		
1-2 drinks	1,004	49.1
3-5 drinks	486	32.3
6-10 drinks	113	10.4
More than 10 drinks	45	8.2

n = number of respondents
**Estimates weighted to population characteristics*
1. Among those who had at least one drink of any alcoholic beverage during the past 30 days

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INTRODUCTION

The term "arthritis" refers to more than 100 inflammatory conditions involving the joints, tissues next to the joints, and other connective tissues in the body. While arthritis currently affects more than 46 million adults in the United States, this figure is expected to grow to more than 67 million by the year 2030. Approximately 17 million adults experience limitations in daily activities due to arthritis each year, and it is one of the top two leading causes of disability among American men and women.[1-2] The age-adjusted prevalence of arthritis is highest among American Indians and Alaskan Natives compared to other racial/ethnic groups, whereas Blacks possess the highest age-adjusted proportion of individuals experiencing arthritis-attributable activity limitations.[3] In 2003, arthritis-related expenditures cost Texans more than $7.6 billion in medical bills and lost earnings, thus placing it fourth in the United States for such expenses.[4]

METHODS

In order to evaluate the burden of arthritis among Tarrant County residents, BRFSS questioned respondents regarding health care provider-diagnosed arthritic conditions as well as activity limitations due to arthritis or joint pain via a series of five questions. Results for diagnosis of arthritis (or similar condition) and arthritis-attributable limitations in activity were further analyzed by seven demographic factors (Tables 9.1-9.2). Tarrant County arthritis prevalence was also compared with the prevalence of this condition in Texas and the United States (Figure 9.1) as well as by geographic distribution at the sub-county level (Figure 9.2).

RESULTS

In general, approximately 19 percent of Tarrant County residents indicated that they had been diagnosed with some form of arthritis by a health professional [19.3%, 95% CI (17.7-21.0)]. Although the central area of Tarrant County reported the greatest percentage of residents with an arthritis diagnosis, this number was not significantly different from the other regions of the county. The prevalence of arthritis diagnosis among women (23.1%), however, was 1.5 times greater than this prevalence among men (15.4%). More than one out of every two individuals aged 65 years or older reported that they had been diagnosed with some form of arthritis (51.6%). The percentage of Whites (22.9%) and Blacks (18.3%) reporting an arthritis diagnosis was significantly greater than the percentage of Hispanics (8.2%) reporting this condition. More than one-quarter of individuals with an annual income of $25,000 to $34,999 reported ever being diagnosed with some form of arthritis. The percentage of retired individuals reporting an arthritis diagnosis (52.6%) was more than three times that of individuals employed for wages (14.1%) or self-employed (13.6%) persons (Table 9.1).

Among individuals with a diagnosis of some form of arthritis by a health professional, more than 45 percent reported now being limited in their usual activities due to arthritis or joint pain [45.3%, 95% CI (41.3-49.4)]. Additionally, more than 50 percent of residents of the northwest area of Tarrant County reported such limitations. Although a greater percentage of females (48.6%) reported this limited activity than males (40.0%), this difference was not significant. The percentage of individuals reporting activity limitations

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due to arthritis did not significantly differ by race/ethnicity. On the other hand, a significantly greater proportion of persons with less than a high school education (72.2%) reported being limited in their usual activities due to arthritis compared to all other education levels. More than twice as many individuals with annual incomes of $15,000 to $24,999 (66.4%) or less than $15,000 (64.3%) reported such limitations compared to individuals with an annual income of $50,000 or more (32.4%). Four out of every five individuals reporting an inability to work also reported being limited in their usual activities due to arthritis or joint pain (Table 9.2).

The proportion of Tarrant County residents who reported ever receiving a diagnosis of some form of arthritis by a health professional (19.3%) was significantly lower than this proportion among residents of Texas (22.5%) and the United States (25.9%) (Figure 9.1).

- **Almost one out of every five residents reported being diagnosed with some form of arthritis by a health professional.**
- **Eighty percent of individuals diagnosed with arthritis who were unable to work reported that their activities were limited in the past 30 days due to arthritis or other joint symptoms.**
- **As age group increased, the percentage of persons who reported an arthritis diagnosis also increased.**
- **More than one-third of individuals indicated that arthritis or joint symptoms had interfered with their normal social activities within the past 30 days.**

TABLE 9.1 DIAGNOSED WITH SOME FORM OF ARTHRITIS AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

DIAGNOSED WITH SOME FORM OF ARTHRITIS[†]				
CHARACTERISTIC	**n**	**WEIGHTED PERCENTAGE***	**N**	**95% CONFIDENCE INTERVAL**
Total	1,244	19.3	3,598	17.7-21.0
Sub-County Area				
Northeast	237	18.6	728	15.7-21.9
Southeast	178	16.1	576	13.0-19.8
Central	298	22.1	785	18.4-26.2
Southwest	279	21.7	766	18.5-25.2
Northwest	252	21.0	743	17.9-24.4
Gender				
Male	332	15.4	1,222	13.1-18.0
Female	912	23.1	2,376	21.0-25.3
Age (in years)				
18-24	-	-	-	-
25-34	22	6.2	321	3.8-9.9
35-44	64	10.3	539	7.7-13.6
45-54	211	26.2	747	22.5-30.3
55-64	346	44.0	755	39.6-48.4
≥65	586	51.6	1,073	48.1-55.1
Race/Ethnicity				
White	964	22.9	2,586	20.9-25.1
Black	175	18.3	447	13.8-24.0
Hispanic	72	8.2	418	5.9-11.2
Other	18	11.1	96	5.9-19.8
Education				
< High school	131	13.5	386	10.3-17.7
High school or GED	317	21.9	854	18.5-25.7
Tech/Some college	394	21.6	1,039	18.3-25.3
College degree	401	18.1	1,308	15.7-20.7
Annual Income				
<$15,000	144	18.4	341	13.5-24.6
$15,000 - $24,999	204	24.5	502	19.7-30.1
$25,000 - $34,999	133	25.7	297	19.6-32.9
$35,000 - $49,999	154	20.2	410	15.6-25.8
≥$50,000	397	16.3	1,482	14.3-18.6
Employment				
Employed for wages	344	14.1	1,502	12.1-16.4
Self-employed	59	13.6	240	9.3-19.5
Out of work for >1yr	39	17.1	121	10.2-27.3
Out of work for <1yr	28	12.5	137	7.6-20.0
Homemaker	97	14.7	356	11.2-19.1
Student	-	-	-	-
Retired	500	52.6	895	48.7-56.5
Unable to work	167	53.3	258	42.9-63.5

[†]Diagnosed by a health professional with some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia
n = number of respondents who reported they have been diagnosed with some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia
N = total number of respondents who answered the question
[*]Estimates weighted to population characteristics

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TABLE 9.2 ACTIVITIES LIMITED DUE TO ARTHRITIS OR JOINT SYMPTOMS AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

ACTIVITIES LIMITED DUE TO ARTHRITIS OR JOINT SYMPTOMS†				
CHARACTERISTIC	**n**	**WEIGHTED PERCENTAGE***	**N**	**95% CONFIDENCE INTERVAL**
Total	579	45.3	1,232	41.3-49.4
Sub-County Area				
Northeast	96	38.3	236	30.9-46.3
Southeast	74	42.5	177	32.9-52.7
Central	146	43.9	295	35.5-52.6
Southwest	131	47.0	273	39.6-54.6
Northwest	132	50.8	251	42.9-58.7
Gender				
Male	142	40.0	329	32.8-47.7
Female	437	48.6	903	44.1-53.2
Age (in years)				
18-24	-	-	-	-
25-34	9	53.0	22	30.0-74.8
35-44	21	26.3	64	15.8-40.4
45-54	115	52.5	208	43.8-61.0
55-64	163	48.1	344	41.6-54.8
≥65	266	45.4	580	40.7-50.2
Race/Ethnicity				
White	434	45.2	953	40.7-49.8
Black	88	40.9	174	29.9-52.9
Hispanic	39	53.9	72	38.7-68.4
Other	-	-	-	-
Education				
< High school	82	72.2	130	62.0-80.5
High school or GED	151	46.4	314	38.7-54.4
Tech/Some college	189	46.5	390	38.8-54.4
College degree	157	36.2	397	30.3-42.6
Annual Income				
<$15,000	96	64.3	144	51.8-75.1
$15,000 - $24,999	113	66.4	202	57.3-74.5
$25,000 - $34,999	69	50.7	132	39.2-62.2
$35,000 - $49,999	64	41.8	152	31.2-53.2
≥$50,000	138	32.4	393	27.0-38.4
Employment				
Employed for wages	117	35.7	342	28.4-43.7
Self-employed	20	33.3	59	19.5-50.7
Out of work for >1yr	23	68.8	38	47.9-84.1
Out of work for <1yr	10	47.0	28	25.3-69.8
Homemaker	34	36.8	97	26.0-49.1
Student	-	-	-	-
Retired	232	45.1	493	40.0-50.4
Unable to work	135	80.0	165	70.0-87.3

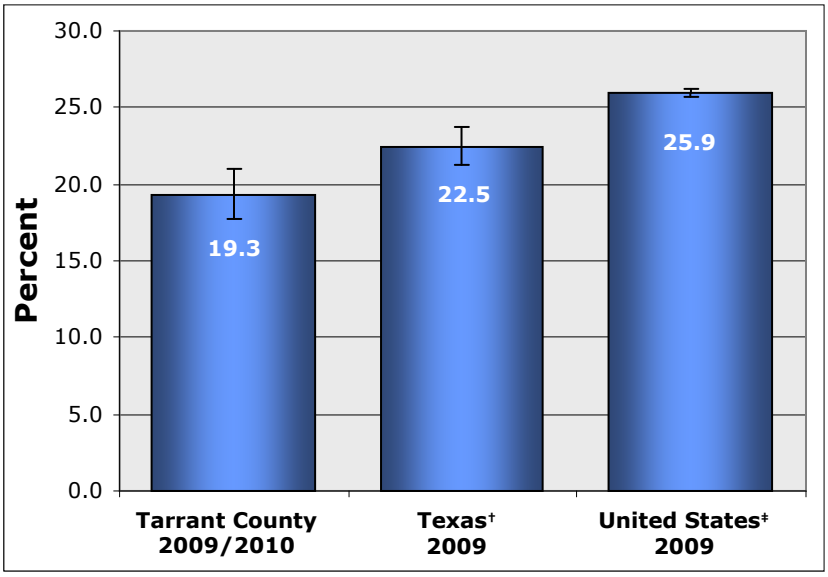
†Among those who had ever been told by a health professional that they had some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia

n = number of respondents who reported their activities were limited due to arthritis or joint symptoms

N = total number of respondents with some form of arthritis who answered the question

**Estimates weighted to population characteristics*

FIGURE 9.1 DIAGNOSED WITH SOME FORM OF ARTHRITIS AMONG ADULTS 18 YEARS AND OLDER, TARRANT COUNTY, TEXAS, AND THE UNITED STATES*



*Diagnosed by a health professional with some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia

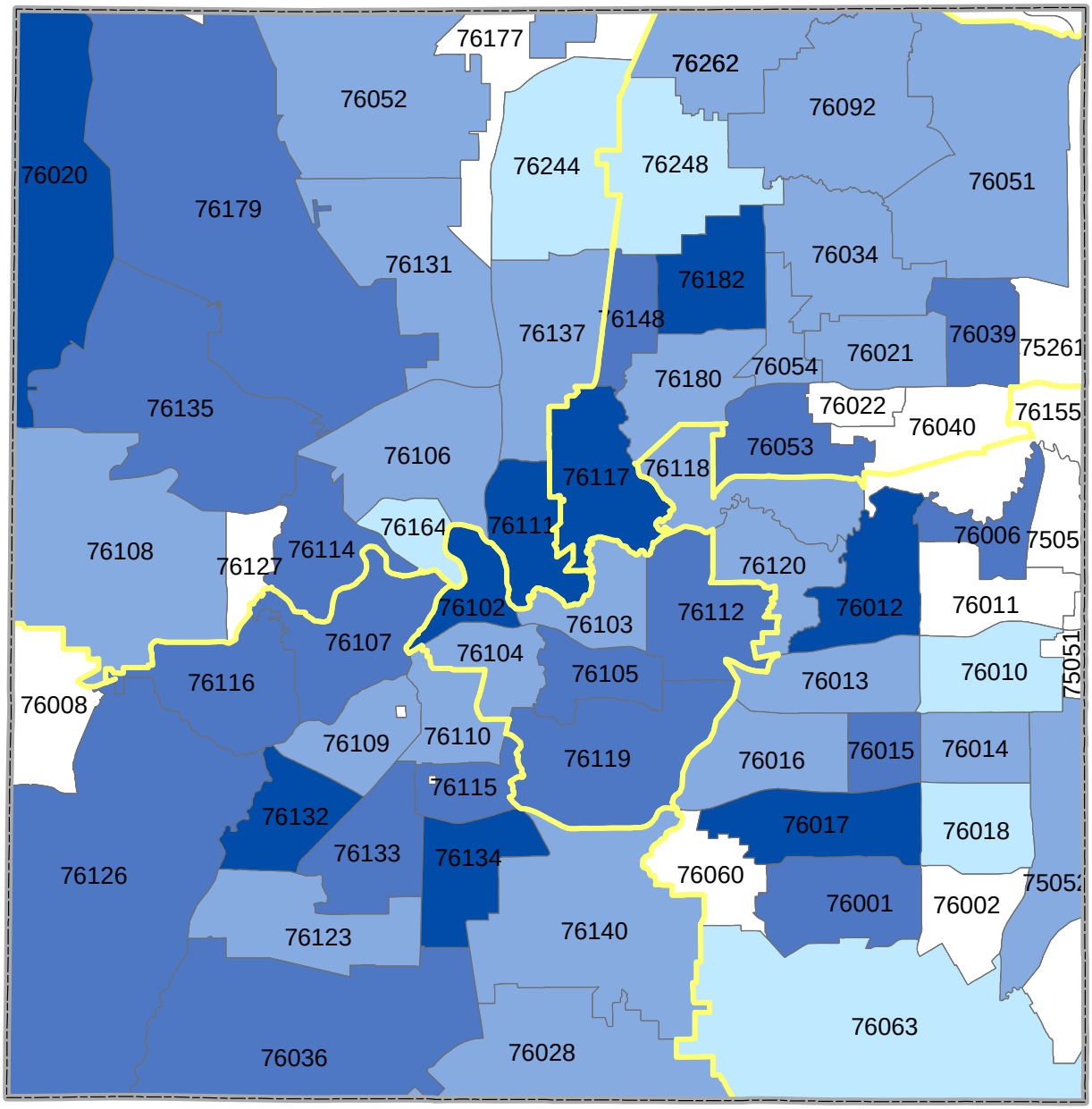
†Data source: 2009 BRFSS, Texas Department of State Health Services

‡Data source: 2009 BRFSS, Centers for Disease Control and Prevention

Estimates weighted to population characteristics

No comparable Healthy People 2010 Objective available

FIGURE 9.2 DIAGNOSED WITH SOME FORM OF ARTHRITIS AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER BY ZIP CODE, 2009/2010†



†Diagnosed by a health professional with some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia

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Weighted Percent*

- 6.5% - 10.7%
- 10.8% - 21.5%
- 21.6% - 32.2%
- 32.3% - 43.0%
- No or suppressed data
- Subcounty Areas
- Tarrant County boundary

N, W, E, S

GIS Geographic Information Systems TARRANT CO. Public Health

*Estimates weighted to population characteristics

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TABLE 9.3 BRFSS QUESTIONS REGARDING ARTHRITIS AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

QUESTIONS	RESPONDENTS	
	n	%*
1. Have you EVER been told by a doctor or other health professional that you have some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia?		
Yes	1,244	19.3
No	2,354	80.7
2. Are you now limited in any way of your usual activities because of arthritis or joint symptoms?[1]		
Yes	579	45.3
No	653	54.7
3. Do arthritis or joint symptoms now affect whether you work, the type of work you do, or the amount of work you do?[1]		
Yes	352	29.0
No	842	71.0
4. During the past 30 days, to what extent has your arthritis or joint symptoms interfered with your normal social activities, such as going shopping, to the movies, or to religious or social gatherings?[1]		
A lot	237	17.3
A little	282	20.8
Not at all	713	61.9
5. During the past 30 days, how bad was your joint pain ON AVERAGE?[1]		
No pain	115	10.1
Mild pain	362	33.0
Moderate pain	377	29.4
Severe pain	256	21.8
Extreme pain	90	5.7

n = number of respondents
**Estimates weighted to population characteristics*
1. Among those who have ever been told by a health professional that they have some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia

REFERENCES

1. Centers for Disease Control and Prevention. Prevalence of doctor-diagnosed arthritis and arthritis-attributable activity limitation – United States, 2003-2005. MMWR. 2006;55(40).

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3. Bolen J, Schieb L, Hootman JM, Helmick CG, et al. Differences in the prevalence and impact of arthritis among racial/ethnic groups in the United States, National Health Interview Survey, 2002, 2003, and 2006. Prev Chronic Dis. 2010;7(3).

4. Centers for Disease Control and Prevention. National and state medical expenditures and lost earnings attributable to arthritis and other rheumatic conditions – United States, 2003. MMWR. 2007;56(1).

INTRODUCTION

Among Tarrant County women, breast cancer is the second leading cause of cancer-related death and more than 1,000 women in Tarrant County are projected to be diagnosed with breast cancer in 2010.[1] For the early detection and treatment of breast cancer, the American Cancer Society (ACS) recommends that women obtain a mammography each year beginning at age 40 while the U.S. Preventive Services Task Force (USPSTF) recommends biennial mammography from ages 50 to 74 years.[2-3]

In 2006, over 76,000 American women were diagnosed with and slightly less than 28,000 died from a gynecologic cancer.[4] According to 2008 data, approximately three-fourths of women in the U.S. obtained a Papanicolaou (Pap) test, or test to detect early signs of cervical cancer, within the past three years. Both USPSTF and ACS recommend that women obtain a Pap test within three years of the initiation of sexual intercourse or by age 21 years and then every two to three years thereafter.[2,5] Evidence suggests a correlation between obtaining breast and cervical cancer screening and the possession of a primary healthcare provider among women in the United States.[6]

METHODS

On the subject of women's health issues, the BRFSS questioned women regarding their receipt of a mammography, clinical breast exam, and (among women with intact cervix) Pap test. Results for mammography within the past two years among women aged 40 years and older, receipt of a mammogram within the past two years among women aged 50 years and older, and Pap test among women at least 18 years of age were further analyzed by seven demographic factors (Tables 10.1-10.3). Receipt of a mammogram among Tarrant County women was also compared with mammogram receipt among women in Texas and the United States (Figure 10.1). Lastly, Figures 10.2 and 10.3 show the geographic distribution of mammogram receipt and Pap test at the sub-county level.

RESULTS

With respect to guidelines issued by the ACS regarding breast cancer screening, more than half of women aged 40 years and older in Tarrant County reported having a mammogram within the past year [58.6%, 95% CI (55.2-62.0)]. This percentage was significantly greater among residents of the northeast area of Tarrant County (69.1%) compared to residents of the northwest county area (53.3%). The percentage of women aged 50 to 64 years who met this ACS breast cancer screening guideline (63.0%) was 1.25 times greater than this percentage among women aged 40 to 49 years (50.4%). Approximately three out of every five Black women in Tarrant County met this recommendation while less than 50 percent of women without a high school diploma had received a mammogram within the past year. Overall, as annual income levels increased, the percentage of women meeting this guideline also increased. Compared to women who had been out of work for less than one year (43.7%), a significantly higher percentage of retired women (66.5%) obtained a mammogram within the past year (Table 10.1).

Approximately eight out of every ten women aged 50 years and older in Tarrant County met the USPSTF guideline of having a mammogram within the past two years [79.5%, 95% CI (76.6-82.1)]. As was the case with respect to the ACS guideline, a significantly higher proportion of residents in the northeast area of Tarrant County (86.7%) met the USPSTF guideline for breast cancer screening compared to the northwest county area (70.8%). Approximately four out of every five women aged 50 to 64 years (78.8%) as well as 65 years and older (80.5%) met the USPSTF guideline. Results did not differ significantly by race/ethnicity, education, or annual income level. The percentage of retired women who met the USPSTF breast cancer screening guideline (83.3%) was over 1.4 times higher than this percentage among women who reported being out of work for more than one year (56.0%) (Table 10.2).

Lastly, approximately 77 percent of women received a Pap test within the past three years [77.1%, 95% CI (73.5-80.3)]. The percentage of women in the northeast area of Tarrant County (88.0%) was significantly higher than that of women in the northwest county area (74.0%) with regards to receipt of a Pap test in the past three years. Over 1.6 times more women in the 35 to 44 year age group (86.0%) obtained a Pap test in the past three years compared to women aged 18 to 24 years (51.8%). Slightly more than eight out of every ten Black females reported having a Pap test within this same time period which was the highest percentage among racial/ethnic groups. As either education level or annual income level increased, the proportion of women reporting receipt of a Pap test in the last three years also increased. Compared to retired women (65.8%) or women who were unable to work (68.4%), a significantly greater percentage of women employed for wages (84.3%) reported receiving a Pap test within the past three years (Table 10.3).

Although the percentage of Tarrant County women aged 40 years and older who received a mammogram within the past two years (73.5%) was slightly higher than this percentage in Texas (72.6%) and lower than this percentage in the United States (76.8%), these estimates did not differ significantly (Figure 10.1).

- **More than three-quarters of Tarrant County female residents with intact cervixes received a Pap test within the past three years.**
- **Approximately 65 percent of Black women aged 40 years and older in Tarrant County met the American Cancer Society guideline for breast cancer screening.**
- **Eight out of every ten women aged 50 years and older in Tarrant County met the United States Preventive Task Force recommendation for breast cancer screening.**

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TABLE 10.1 BREAST CANCER SCREENING AMONG TARRANT COUNTY WOMEN 40 YEARS AND OLDER, 2009/2010

HAD A MAMMOGRAM WITHIN THE PAST YEAR[†]				
CHARACTERISTIC	**n**	**WEIGHTED PERCENTAGE[*]**	**N**	**95% CONFIDENCE INTERVAL**
Total	1,091	58.6	1,723	55.2-62.0
Sub-County Area				
Northeast	247	69.1	352	63.1-74.5
Southeast	155	58.2	249	49.9-66.0
Central	257	62.4	395	56.4-68.1
Southwest	235	57.8	382	51.5-63.9
Northwest	197	53.3	345	46.3-60.1
Age (in years)				
40-49	202	50.4	354	43.5-57.4
50-64	470	63.0	711	58.4-67.5
≥65	419	64.1	658	59.6-68.4
Race/Ethnicity				
White	834	58.9	1,323	55.1-62.6
Black	145	64.8	212	54.6-73.9
Hispanic	81	51.4	141	40.8-62.0
Other	23	61.4	33	29.1-86.1
Education				
< High school	89	46.2	165	35.8-56.9
High school or GED	270	57.3	435	50.0-64.3
Tech/Some college	322	53.9	534	47.8-60.0
College degree	409	67.6	586	62.3-72.6
Annual Income				
<$15,000	95	49.0	171	38.8-59.2
$15,000 - $24,999	142	47.0	254	37.5-56.7
$25,000 - $34,999	83	50.8	149	40.6-61.0
$35,000 - $49,999	141	54.7	215	43.7-65.3
≥$50,000	454	63.5	655	58.3-68.4
Employment				
Employed for wages	402	59.6	610	53.8-65.1
Self-employed	56	59.6	93	45.1-72.6
Out of work for >1yr	30	51.5	56	35.0-67.8
Out of work for <1yr	31	43.7	60	29.7-58.7
Homemaker	131	52.0	222	42.4-61.4
Student	-	-	-	-
Retired	346	66.5	513	61.3-71.3
Unable to work	85	54.9	152	44.5-64.8

[†]American Cancer Society guideline for early detection of breast cancer
n = number of female respondents 40 years and older who reported having a mammogram within the past year
N = total number of female respondents 40 years and older who answered the question
[*]Estimates weighted to population characteristics

TABLE 10.2 BREAST CANCER SCREENING AMONG TARRANT COUNTY WOMEN 50 YEARS AND OLDER, 2009/2010

HAD A MAMMOGRAM WITHIN THE PAST TWO YEARS[†]				
CHARACTERISTIC	**n**	**WEIGHTED PERCENTAGE[*]**	**N**	**95% CONFIDENCE INTERVAL**
Total	1,101	79.5	1,369	76.6-82.1
Sub-County Area				
Northeast	234	86.7	271	81.2-90.7
Southeast	146	80.7	187	74.1-85.9
Central	272	82.4	328	76.8-86.8
Southwest	262	82.2	319	76.8-86.6
Northwest	187	70.8	264	64.0-76.8
Age (in years)				
50-64	579	78.8	711	74.7-82.5
≥65	522	80.5	658	76.7-83.7
Race/Ethnicity				
White	886	79.9	1,100	76.8-82.7
Black	130	77.0	159	66.7-84.8
Hispanic	63	78.0	79	63.9-87.7
Other	17	87.1	21	66.8-95.8
Education				
< High school	87	64.7	130	53.4-74.6
High school or GED	291	78.4	366	72.7-83.2
Tech/Some college	339	77.7	433	72.2-82.3
College degree	383	87.1	438	82.7-90.4
Annual Income				
<$15,000	102	73.7	140	63.7-81.7
$15,000 - $24,999	165	73.0	216	64.2-80.3
$25,000 - $34,999	93	75.1	124	65.0-83.0
$35,000 - $49,999	149	82.8	180	74.8-88.7
≥$50,000	405	84.1	466	79.3-88.0
Employment				
Employed for wages	347	82.6	411	77.3-86.8
Self-employed	51	79.2	64	63.5-89.3
Out of work for >1yr	29	56.0	44	36.1-74.1
Out of work for <1yr	31	74.7	41	56.0-87.3
Homemaker	124	74.5	162	65.3-82.0
Student	-	-	-	-
Retired	425	83.3	513	79.2-86.8
Unable to work	88	71.5	126	61.2-80.0

[†]United States Preventative Services Task Force guideline for early detection of breast cancer
n = number of female respondents 50 years and older who had a mammogram in the past two years
N = total number of female respondents 50 years and older who answered the question
[*]Estimates weighted to population characteristics

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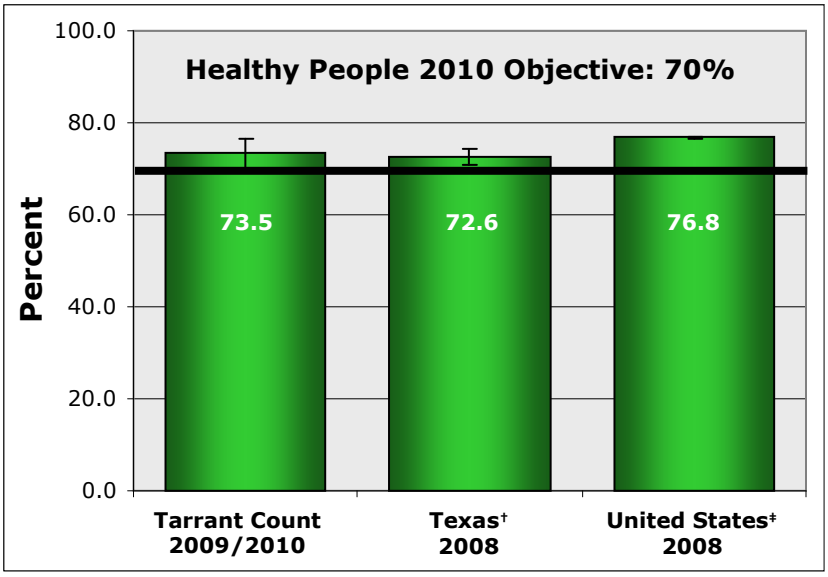
TABLE 10.3 CERVICAL CANCER SCREENING AMONG TARRANT COUNTY WOMEN 18 YEARS AND OLDER, 2009/2010

HAD A PAP TEST WITHIN THE PAST THREE YEARS[†]				
CHARACTERISTIC	**n**	**WEIGHTED PERCENTAGE[*]**	**N**	**95% CONFIDENCE INTERVAL**
Total	1,620	77.1	2,132	73.5-80.3
Sub-County Area				
Northeast	374	88.0	436	83.0-91.7
Southeast	243	76.1	318	66.5-83.7
Central	355	74.0	487	67.8-79.4
Southwest	339	75.8	453	68.8-81.7
Northwest	309	74.0	438	68.3-78.9
Age (in years)				
18-24	35	51.8	51	34.0-69.1
25-34	162	83.0	188	72.7-90.0
35-44	273	86.0	322	80.8-90.0
45-54	357	79.3	442	74.2-83.6
55-64	383	82.4	463	77.7-86.3
≥65	388	59.9	639	55.3-64.3
Race/Ethnicity				
White	1,176	78.3	1,551	74.7-81.6
Black	217	81.3	280	73.0-87.5
Hispanic	182	69.0	236	55.7-79.8
Other	30	70.0	47	46.9-86.0
Education				
< High school	137	56.8	220	43.8-69.0
High school or GED	369	70.3	512	61.8-77.6
Tech/Some college	489	77.9	650	71.7-83.0
College degree	621	87.6	745	84.1-90.4
Annual Income				
<$15,000	136	57.6	207	38.9-74.3
$15,000 - $24,999	215	68.2	324	59.7-75.7
$25,000 - $34,999	117	68.2	171	55.6-78.5
$35,000 - $49,999	195	80.7	260	73.5-86.3
≥$50,000	731	87.8	836	84.2-90.7
Employment				
Employed for wages	691	84.3	830	79.9-87.9
Self-employed	100	82.5	121	69.3-90.8
Out of work for >1yr	53	66.7	71	42.6-84.3
Out of work for <1yr	57	65.5	80	41.0-83.8
Homemaker	231	74.7	305	63.5-83.3
Student	32	64.5	41	42.9-81.4
Retired	334	65.8	508	60.7-70.6
Unable to work	113	68.4	163	57.0-78.0

[†]American Cancer Society and United States Preventative Services Task Force guidelines for early detection of cervical cancer
n = number of female respondents with intact cervixes who had a Pap test within the last three years
N = total number of female respondents with intact cervixes who answered the question
[*]Estimates weighted to population characteristics

FIGURE 10.1 MAMMOGRAM WITHIN THE PAST TWO YEARS AMONG WOMEN 40 YEARS AND OLDER, TARRANT COUNTY, TEXAS, AND THE UNITED STATES



†Data source: 2008 BRFSS, Texas Department of State Health Services
‡Data source: 2008 BRFSS, Centers for Disease Control and Prevention
Estimates weighted to population characteristics

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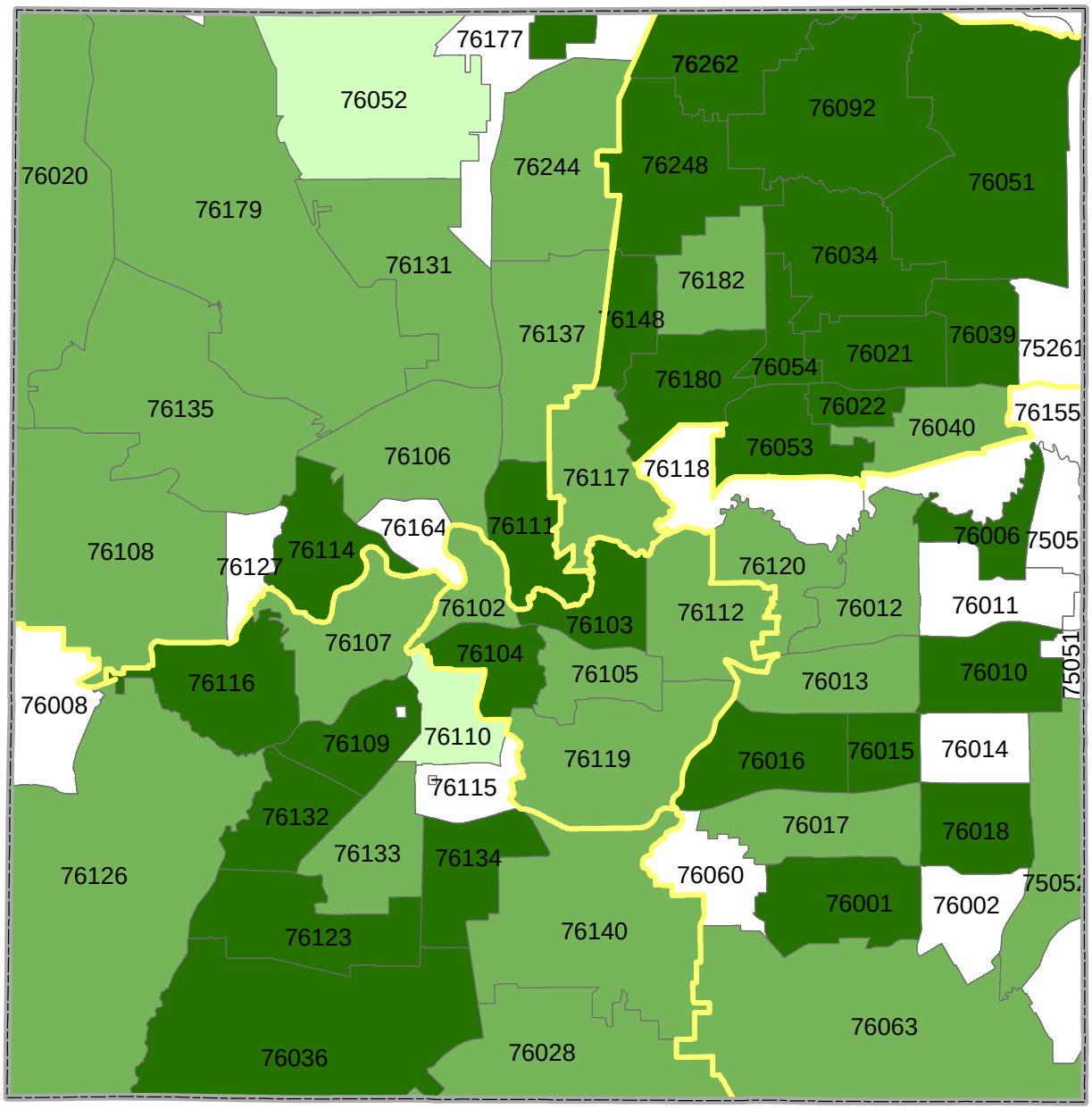
FIGURE 10.2 MAMMOGRAM WITHIN THE PAST YEAR AMONG TARRANT COUNTY WOMEN 40 YEARS AND OLDER BY ZIP CODE, 2009/2010†



†American Cancer Society guideline for early detection of breast cancer

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Weighted Percent*

- 30.8% - 31.9%
- 32.0% - 63.9%
- 64.0% - 96.8%
- No or suppressed data
- Subcounty Areas
- Tarrant County boundary

N W E S

GIS Geographic Information Systems TARRANT COUNTY Public Health

*Estimates weighted to population characteristics

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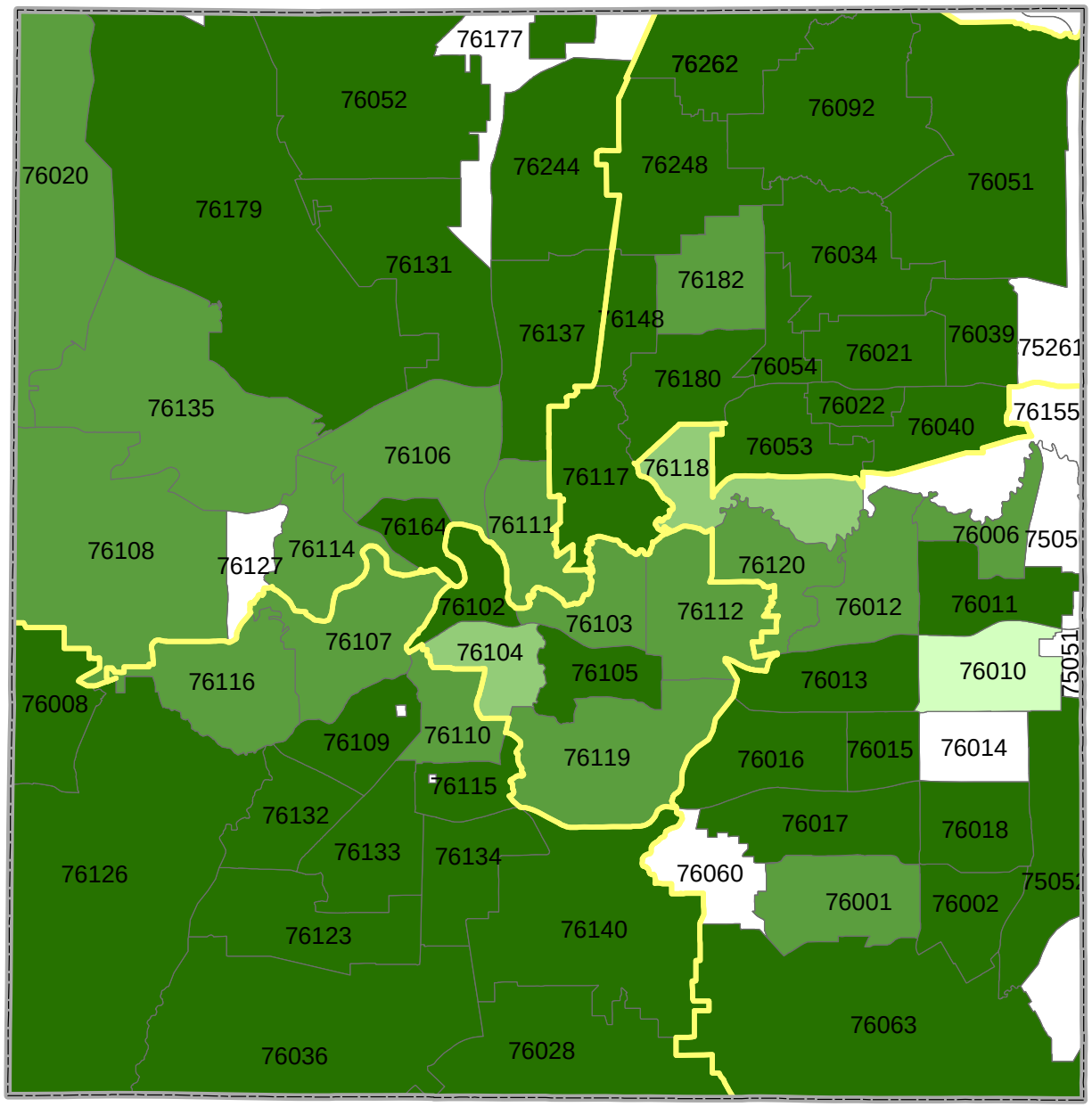
FIGURE 10.3 PAP TEST WITHIN THE PAST THREE YEARS AMONG TARRANT COUNTY WOMEN 18 YEARS AND OLDER BY ZIP CODE, 2009/2010†



†American Cancer Society and United States Preventative Services Task Force guidelines for early detection of cervical cancer

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Weighted Percent*

- 21.1% - 25.0%
- 25.1% - 50.0%
- 50.1% - 75.0%
- 75.1% - 100.0%
- No or suppressed data
- Subcounty Areas
- Tarrant County boundary

N, W, E, S

GIS Geographic Information Systems TARRANT COUNTY Public Health

*Estimates weighted to population characteristics

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TABLE 10.4 BRFSS QUESTIONS REGARDING BREAST CANCER SCREENING AMONG TARRANT COUNTY WOMEN 18 YEARS AND OLDER, 2009/2010

Questions	RESPONDENTS	
	n	%*
1. Have you ever had a mammogram?		
Yes	1,750	59.0
No	419	41.0
2. How long has it been since you had your last mammogram?[1]		
Within past year (anytime less than 12 months ago)	1,153	61.2
Within past 2 years (1 year but less than 2 years ago)	277	17.0
Within past 3 years (2 years but less than 3 years ago)	103	8.1
Within past 5 years (3 years but less than 5 years ago)	83	6.2
5 or more years ago	121	7.6
3. Have you ever had a clinical breast exam?		
Yes	2,009	88.5
No	151	11.5
4. How long has it been since your last breast exam?[2]		
Within past year (anytime less than 12 months ago)	1,422	72.6
Within past 2 years (1 year but less than 2 years ago)	271	14.2
Within past 3 years (2 years but less than 3 years ago)	86	4.2
Within past 5 years (3 years but less than 5 years ago)	83	4.2
5 or more years ago	120	4.8

n = number of respondents
**Estimates are weighted to population characteristics*
1. Among women who ever had a mammogram
2. Among women who ever had a clinical breast exam

TABLE 10.5 BRFSS QUESTIONS REGARDING CERVICAL CANCER SCREENING AMONG TARRANT COUNTY WOMEN 18 YEARS AND OLDER, 2009/2010

Questions	RESPONDENTS	
	n	%*
1. Have you ever had a Pap test?		
Yes	2,071	89.9
No	90	9.4
Do not know / not sure	9	0.7
Refused	-	-
2. How long has it been since you had your last Pap test?[1]		
Within past year (anytime less than 12 months ago)	1,145	62.6
Within past 2 years (1 year but less than 2 years ago)	332	15.7
Within past 3 years (2 years but less than 3 years ago)	143	6.9
Within past 5 years (3 years but less than 5 years ago)	122	5.4
5 or more years ago	300	9.5
3. Have you had a hysterectomy?		
Yes	-	-
No	51	99.8

n = number of respondents
**Estimates are weighted to population characteristics*
1. Among women who ever had a Pap test

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INTRODUCTION

Prostate cancer is the number one type of newly diagnosed cancer among males across all racial/ethnic groups in Texas. In 2006, approximately 140 new cases of prostate cancer were diagnosed for every 100,000 males in the state.[1] To screen for prostate cancer, the American Cancer Society (ACS) recommends the use of either a Digital Rectal Examination (DRE) every five years or Prostate-Specific Antigen (PSA) test every two years on men aged 40 years or older with at least a 10 year life expectancy in consultation with their physician regarding the strengths and limitations of prostate cancer screening.[2] The U.S. Preventive Services Task Force (USPSTF) makes no recommendation with respect to prostate cancer screening practices due to insufficient evidence.[3]

Among men and women in Tarrant County, colorectal cancer is the third leading cause of cancer-related death and more than 650 new cases of colorectal cancer are expected to be diagnosed in 2010.[4] According to the ACS and USPSTF, men and women should be screened for early signs of colorectal cancer with an annual fecal occult blood test (FOBT) starting at age 50 years along with either a flexible sigmoidoscopy every five years or a colonoscopy every ten years; USPSTF recommends against routine colorectal cancer screening among persons aged 76 to 85 years and does not recommend colorectal cancer screening among persons aged older than 85 years.[2,5]

METHODS

Prostate and colorectal cancer screening practices among Tarrant County residents were assessed by the BRFSS via a series of 10 questions related to PSA testing, DRE examination, FOBT testing, sigmoidoscopy, and colonoscopy. Results for PSA testing and DRE screening among males aged 40 years or more along with blood stool testing and receipt of sigmoidoscopy or colonoscopy among Tarrant County adults aged 50 years and older were further analyzed by seven demographic factors (Tables 11.1-11.5). Lastly, Tarrant County cancer screening practices were compared with practices in Texas and the United States (Figure 11.1) as well as by geographic distribution at the sub-county level (Figures 11.2 and 11.3).

RESULTS

More than half of Tarrant County male residents aged 40 years and older reported obtaining a PSA test within the past two years [53.0%, 95% CI (48.4-57.6)]. These percentages did not differ significantly by sub-county area of residence. Males aged 65 years and older (84.0%) had a PSA testing prevalence more than three times higher than that of males aged 40 to 49 years (25.5%). The percentage of White males reporting PSA testing within the past two years (59.0%) was 1.6 times higher than the percentage of Hispanic males reporting this testing (35.7%). As level of education increased, the percentage of males who reported receiving PSA testing increased as well. One out of every five males aged 40 years and older with an annual income below $15,000 reported PSA testing. The proportion of retired males who obtained a PSA test within the past two years (82.6%) was significantly higher than this proportion among all other employment categories (Table 11.1).

Additionally, two out of every three Tarrant County males aged 40 years and older reported the receipt of DRE screening within the past five years [66.9%, 95% CI (62.4-71.1)]. The percentage of males in the northeast area of Tarrant County who reported this screening (77.9%) was significantly higher than this percentage among male residents of the central county area (53.3%). As age group, education level, and annual income level increased, the percentage of individuals indicating receipt of DRE screening within the past five years also increased. Just over 40 percent of Hispanic males met the DRE screening guideline, and one-third of men who reported being out of work for less than one year obtained this screening within the past five years (Table 11.2).

An estimated 13 percent of individuals aged 50 years and older in Tarrant County obtained a fecal occult blood test within the past two years [12.9%, 95% CI (11.2-14.9)]. The percentage of residents in the northeast area of Tarrant County who received this test (15.6%) was greater than this percentage among northwest county area residents (9.9%), but not at a statistically significant level. Results also did not differ significantly by gender. Approximately one-sixth of persons aged 65 years and older obtained this test and the percentage of Blacks aged 50 years and older who received a fecal occult blood test (15.9%) was more than twice this percentage among Hispanics (6.2%). Fecal occult blood testing prevalence did not differ significantly by education levels, annual income levels, or employment status (Table 11.3).

Slightly less than 60 percent of Tarrant County residents aged 50 years and older reported having a sigmoidoscopy within the past five years or a colonoscopy within the past ten years [58.7%, 95% CI (55.8-61.5)]. The proportion of persons residing in the northeast area of Tarrant County who met this guideline (67.6%) was 1.3 times higher than this proportion among residents of the central county area (51.8%). As age group and education level increased, the percentage of residents who reported ever receiving one of these tests within the appropriate time frame also increased. This percentage was significantly higher among Whites (62.3%) than among both Hispanics (35.4%) and Others (29.9%). Slightly less than three out of four retired individuals (71.6%) reported obtaining a sigmoidoscopy within the past five years or a colonoscopy within the past ten years (Table 11.4).

- **Over half of Tarrant County males aged 40 years and older obtained a PSA test within the past two years.**
- **As age group, education level, and annual income level increased, the percentage of males aged 40 years and older who reported DRE screening within the past five years also increased.**
- **One-third of Hispanics aged 50 years and older in Tarrant County obtained either a sigmoidoscopy within the past five years or a colonoscopy within the past ten years.**
- **Less than 10 percent of Tarrant County adults aged 50 years and older completely met colorectal cancer screening guidelines.**

In summary, fewer than one out of every ten Tarrant County residents aged 50 years and older completely met the ACS and USPSTF colorectal cancer screening guidelines of obtaining a FOBT annually in conjunction with having a sigmoidoscopy within the past five years or a colonoscopy within the past ten years [8.5%, 95% CI (7.1-10.2)]. The percentage of residents in the northeast area of Tarrant County (11.6%) who met these guidelines was about twice that of residents of the northwest county area (5.9%). Although the percentage of individuals meeting this requirement was greater among males (9.4%) than females (7.8%), this difference was not significant. One in fifteen residents aged 50 to 64 years met the colorectal screening guidelines, and about three percent of Hispanic adults as well as individuals with less than a high school education were adequately screened. Among persons who reported being out of work for more than one year, no individuals fully met these colorectal cancer screening guidelines (Table 11.5).

Compared to the state of Texas (56.2%), the percentage of Tarrant County residents aged 50 years and older who reported ever obtaining a sigmoidoscopy or colonoscopy was significantly higher (63.8%), but this Tarrant County estimate did not differ significantly from that of the United States (62.3%) (Figure 11.1).

TABLE 11.1 PROSTATE-SPECIFIC ANTIGEN (PSA) SCREENING AMONG TARRANT COUNTY MALES 40 YEARS AND OLDER, 2009/2010

PSA TEST WITHIN PAST TWO YEARS[†]				
CHARACTERISTICS	**n**	**WEIGHTED PERCENTAGE***	**N**	**95% CONFIDENCE INTERVAL**
Total	526	53.0	836	48.4-57.6
Sub-County Area				
Northeast	113	56.7	170	47.3-65.7
Southeast	96	53.1	152	43.4-62.5
Central	107	45.9	182	36.8-55.4
Southwest	105	53.8	163	44.4-63.0
Northwest	105	52.7	169	43.0-62.1
Age (in years)				
40-49	51	25.5	162	18.2-34.5
50-64	219	60.2	360	53.8-66.3
≥65	256	84.0	314	79.3-87.8
Race/Ethnicity				
White	445	59.0	651	53.9-63.9
Black	39	42.3	77	27.4-58.8
Hispanic	23	35.7	67	21.1-53.5
Other	11	26.6	28	13.1-46.7
Education				
< High school	24	25.4	70	14.1-41.5
High school or GED	102	48.4	170	38.2-58.7
Tech/Some college	139	55.3	220	46.1-64.1
College degree	259	58.8	373	51.9-65.4
Annual Income				
<$15,000	27	22.2	71	13.4-34.5
$15,000 - $24,999	45	37.3	94	25.5-50.8
$25,000 - $34,999	42	57.9	67	42.0-72.3
$35,000 - $49,999	58	50.8	89	37.5-64.0
≥$50,000	280	58.2	408	51.6-64.5
Employment				
Employed for wages	188	45.8	348	39.3-52.6
Self-employed	47	49.4	75	35.5-63.4
Out of work for >1yr	10	27.5	28	12.9-49.3
Out of work for <1yr	7	29.3	24	12.6-54.2
Homemaker	-	-	-	-
Student	-	-	-	-
Retired	244	82.6	297	77.1-87.1
Unable to work	26	45.2	58	29.5-62.0

[†]American Cancer Society guideline for early detection of prostate cancer
n = number of male respondents 40 years and older who had a PSA test within the past two years
N = total number of male respondents 40 years and older who answered the question
[*]Estimates weighted to population characteristics

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TABLE 11.2 DIGITAL RECTAL EXAM (DRE) SCREENING AMONG TARRANT COUNTY MALES 40 YEARS AND OLDER, 2009/2010

DRE SCREENING WITHIN THE PAST FIVE YEARS[†]				
CHARACTERISTIC	**n**	**WEIGHTED PERCENTAGE[*]**	**N**	**95% CONFIDENCE INTERVAL**
Total	628	66.9	861	62.4-71.1
Sub-County Area				
Northeast	144	77.9	173	68.0-85.3
Southeast	114	68.9	158	59.6-76.9
Central	125	53.3	189	43.6-62.8
Southwest	119	66.5	167	56.9-74.9
Northwest	126	63.9	174	54.0-72.7
Age (in years)				
40-49	91	52.2	173	43.2-61.1
50-64	271	70.8	370	64.4-76.5
≥65	266	84.6	318	79.7-88.4
Race/Ethnicity				
White	523	72.6	669	67.7-77.0
Black	46	64.6	74	46.6-79.2
Hispanic	32	41.0	76	26.8-57.0
Other	16	49.5	28	29.3-69.9
Education				
< High school	34	36.2	71	23.7-50.9
High school or GED	127	64.1	177	53.7-73.3
Tech/Some college	160	64.8	230	55.7-72.9
College degree	305	75.0	380	68.6-80.5
Annual Income				
<$15,000	39	46.5	74	31.7-61.9
$15,000 - $24,999	54	48.2	98	35.2-61.4
$25,000 - $34,999	49	59.5	75	43.9-73.3
$35,000 - $49,999	69	65.2	90	50.1-77.8
≥$50,000	332	73.7	414	67.5-79.0
Employment				
Employed for wages	256	64.3	363	57.7-70.4
Self-employed	60	74.1	76	59.6-84.8
Out of work for >1yr	15	44.6	28	23.3-68.0
Out of work for <1yr	9	34.1	27	16.1-58.2
Homemaker	-	-	-	-
Student	-	-	-	-
Retired	251	83.9	300	78.4-88.1
Unable to work	33	53.2	61	36.6-69.0

[†]American Cancer Society guideline for early detection of prostate cancer
n = number of male respondents 40 years and older who had a DRE within the past five years
N = total number of male respondents 40 years and older who answered the question
[*]Estimates weighted to population characteristics

TABLE 11.3 COLORECTAL CANCER SCREENING BY FECAL OCCULT BLOOD TEST AMONG TARRANT COUNTY ADULTS 50 YEARS AND OLDER, 2009/2010

FECAL OCCULT BLOOD TEST WITHIN THE PAST YEAR[†]				
CHARACTERISTIC	**n**	**WEIGHTED PERCENTAGE[*]**	**N**	**95% CONFIDENCE INTERVAL**
Total	278	12.9	2,040	11.2-14.9
Sub-County Area				
Northeast	63	15.6	399	12.1-20.0
Southeast	40	12.9	315	9.2-17.9
Central	73	14.4	477	11.1-18.6
Southwest	61	14.2	443	10.7-18.7
Northwest	41	9.9	406	6.9-14.0
Gender				
Male	106	14.8	695	11.8-18.4
Female	172	11.2	1,345	9.4-13.4
Age (in years)				
50-64	131	11.2	1,080	9.0-14.0
≥65	147	15.8	960	13.3-18.8
Race/Ethnicity				
White	207	13.1	1,640	11.1-15.4
Black	41	15.9	217	10.7-23.0
Hispanic	16	6.2	123	3.4-11.0
Other	8	15.4	40	6.9-30.7
Education				
< High school	22	8.9	183	5.4-14.3
High school or GED	73	13.7	508	10.3-17.9
Tech/Some college	81	13.2	618	10.0-17.3
College degree	102	13.3	726	10.4-16.7
Annual Income				
<$15,000	35	14.4	200	9.8-20.6
$15,000 - $24,999	41	12.1	290	8.3-17.2
$25,000 - $34,999	30	16.3	186	10.7-24.1
$35,000 - $49,999	30	12.7	257	8.1-19.3
≥$50,000	100	12.5	778	9.8-15.8
Employment				
Employed for wages	74	10.8	644	7.9-14.5
Self-employed	16	13.2	121	7.4-22.5
Out of work for >1yr	5	7.0	64	2.3-19.5
Out of work for <1yr	-	-	-	-
Homemaker	18	10.1	164	5.8-17.1
Student	-	-	-	-
Retired	127	15.9	800	13.1-19.2
Unable to work	34	18.2	177	12.0-26.5

[†]American Cancer Society and United States Preventative Services Task Force guidelines for fecal occult blood testing
n = number of respondents 50 years and older who had a fecal occult blood test within the past year
N = total number of respondents50 years and older who answered the question
[*]Estimates weighted to population characteristics

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TABLE 11.4 COLORECTAL CANCER SCREENING BY SIGMOIDOSCOPY OR COLONOSCOPY AMONG TARRANT COUNTY ADULTS 50 YEARS AND OLDER, 2009/2010

SIGMOIDOSCOPY WITHIN THE PAST FIVE YEARS OR COLONOSCOPY WITHIN THE PAST TEN YEARS[†]				
CHARACTERISTIC	**n**	**WEIGHTED PERCENTAGE[*]**	**N**	**95% CONFIDENCE INTERVAL**
Total	1,251	58.7	2,007	55.8-61.5
Sub-County Area				
Northeast	265	67.6	391	61.9-72.7
Southeast	188	56.3	313	49.8-62.6
Central	275	51.8	469	46.0-57.6
Southwest	278	60.9	436	55.2-66.3
Northwest	245	57.0	398	51.0-62.9
Gender				
Male	411	55.5	680	50.7-60.2
Female	840	61.5	1,327	58.1-64.8
Age (in years)				
50-64	596	51.5	1,065	47.5-55.4
≥65	655	71.1	942	67.7-74.4
Race/Ethnicity				
White	1,057	62.3	1,620	59.2-65.3
Black	113	53.6	211	44.3-62.6
Hispanic	53	35.4	119	25.3-46.9
Other	15	29.9	37	16.0-48.8
Education				
< High school	82	39.3	172	30.1-49.3
High school or GED	288	56.8	502	51.2-62.2
Tech/Some college	391	59.6	611	54.3-64.8
College degree	488	63.7	717	58.8-68.3
Annual Income				
<$15,000	97	46.6	194	38.0-55.5
$15,000 - $24,999	150	45.6	287	38.3-53.1
$25,000 - $34,999	103	56.0	179	45.9-65.6
$35,000 - $49,999	176	63.6	257	55.5-71.0
≥$50,000	518	62.2	770	57.6-66.6
Employment				
Employed for wages	369	50.9	647	45.8-56.0
Self-employed	73	59.4	118	47.8-70.0
Out of work for >1yr	34	53.8	63	38.5-68.4
Out of work for <1yr	17	26.9	55	14.9-43.5
Homemaker	100	60.5	161	50.9-69.3
Student	-	-	-	-
Retired	559	71.6	786	67.6-75.3
Unable to work	94	56.7	165	46.8-66.2

[†]American Cancer Society and United States Preventative Services Task Force guidelines for sigmoidoscopy and colonoscopy
n = number of respondents 50 years and older who had a sigmoidoscopy within the past five years OR colonoscopy within the past ten years
N = total number of respondents 50 years and older who answered the question
[*]Estimates weighted to population characteristics

TABLE 11.5 TARRANT COUNTY ADULTS 50 YEARS AND OLDER WHO MET COLORECTAL CANCER SCREENING GUIDELINES, 2009/2010

MET GUIDELINES FOR COLORECTAL CANCER SCREENING[†]				
CHARACTERISTIC	**n**	**WEIGHTED PERCENTAGE[*]**	**N**	**95% CONFIDENCE INTERVAL**
Total	179	8.5	1,976	7.1-10.2
Sub-County Area				
Northeast	46	11.6	386	8.5-15.6
Southeast	31	10.4	309	7.1-15.1
Central	45	9.1	459	6.4-12.8
Southwest	32	7.1	430	4.9-10.3
Northwest	25	5.9	392	3.8-9.1
Gender				
Male	69	9.4	672	7.1-12.4
Female	110	7.8	1,304	6.2-9.7
Age (in years)				
50-64	74	6.6	1,057	4.9-8.8
≥65	105	11.9	919	9.6-14.7
Race/Ethnicity				
White	138	8.9	1,593	7.2-10.8
Black	23	9.3	207	5.4-15.8
Hispanic	8	2.7	119	1.1-6.4
Other	5	10.1	37	3.7-24.7
Education				
< High school	9	3.1	170	1.4-6.4
High school or GED	45	9.7	496	6.7-13.9
Tech/Some college	56	9.1	599	6.4-12.6
College degree	69	8.7	706	6.6-11.3
Annual Income				
<$15,000	19	6.4	193	3.8-10.6
$15,000 - $24,999	23	7.2	279	4.3-11.9
$25,000 - $34,999	18	12.3	178	7.2-20.2
$35,000 - $49,999	22	10.3	252	6.1-17.0
≥$50,000	72	8.6	761	6.5-11.3
Employment				
Employed for wages	48	6.4	633	4.4-9.1
Self-employed	10	8.6	117	3.9-17.7
Out of work for >1yr	0	0.0	63	0.0-0.0
Out of work for <1yr	-	-	-	-
Homemaker	13	7.4	161	3.7-14.3
Student	-	-	-	-
Retired	89	11.9	770	9.4-15.0
Unable to work	17	10.8	165	5.7-19.4

[†]American Cancer Society and United States Preventative Services Task Force guidelines for early detection of colorectal cancer include 1) a fecal occult blood test within the past year AND 2) a sigmoidoscopy within the past five years OR a colonoscopy within the past ten years

n = number of respondents 50 years and older who met both criteria for colorectal cancer screening

N = total number of respondents 50 years and older who answered the question

[*]Estimates weighted to population characteristics

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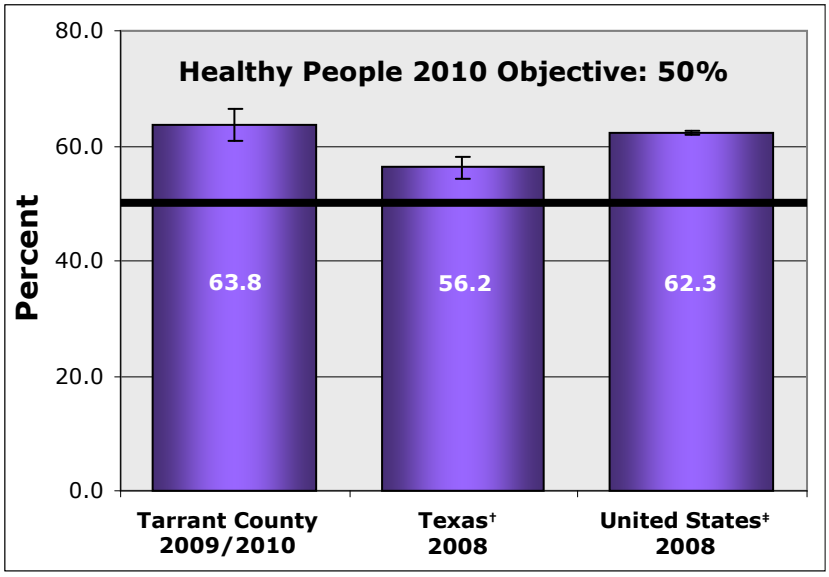
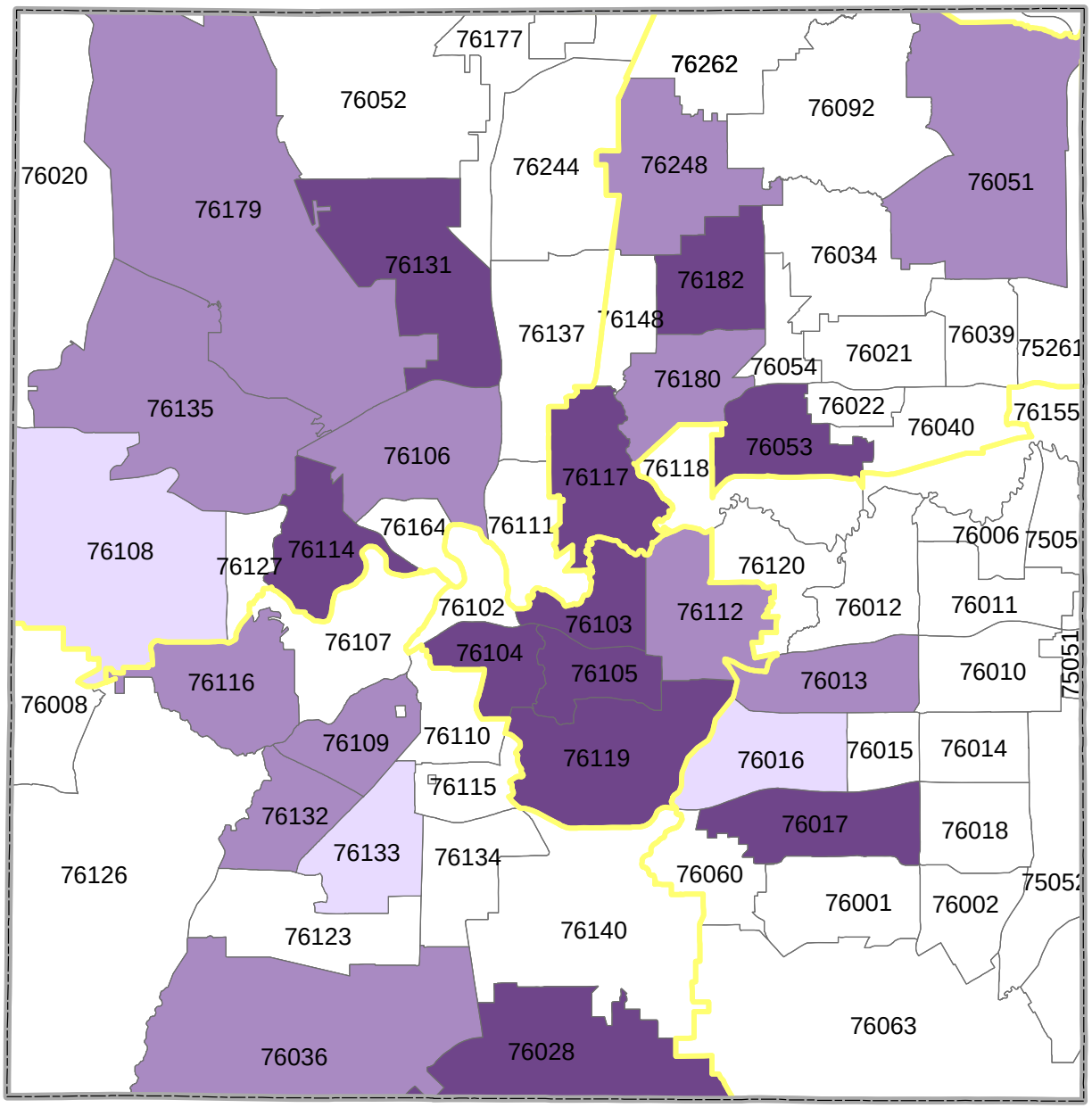
FIGURE 11.1 EVER HAD A SIGMOIDOSCOPY OR COLONOSCOPY AMONG ADULTS 50 YEARS AND OLDER, TARRANT COUNTY, TEXAS, AND THE UNITED STATES



†Data source: 2008 BRFSS, Texas Department of State Health Services
‡Data source: 2008 BRFSS, Centers for Disease Control and Prevention
Estimates weighted to population characteristics

FIGURE 11.2 FECAL OCCULT BLOOD TEST WITHIN THE PAST YEAR AMONG TARRANT COUNTY ADULTS 50 YEARS AND OLDER BY ZIP CODE, 2009/2010†



†American Cancer Society and United States Preventative Services Task Force guidelines for fecal occult blood testing

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Weighted Percent*

- 8.6% - 9.6%
- 9.7% - 19.2%
- 19.3% - 29.0%
- No or suppressed data
- Subcounty Areas
- Tarrant County boundary

N, W, E, S

*Estimates weighted to population characteristics

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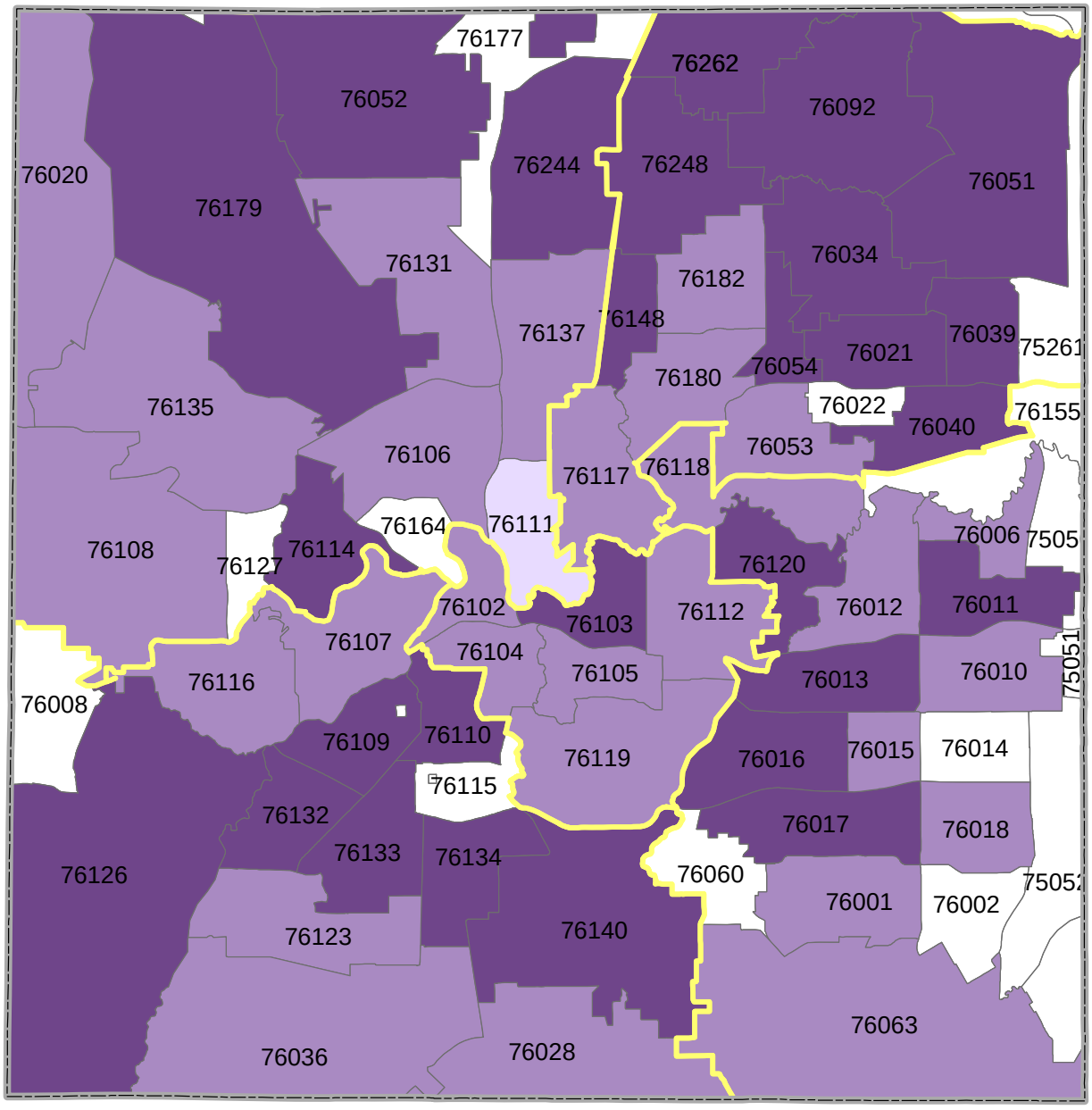
FIGURE 11.3 SIGMOIDOSCOPY WITHIN THE PAST FIVE YEARS OR COLONOSCOPY WITHIN THE PAST TEN YEARS AMONG TARRANT COUNTY ADULTS 50 YEARS AND OLDER BY ZIP CODE, 2009/2010†



†American Cancer Society and United States Preventative Services Task Force guidelines for sigmoidoscopy and colonoscopy

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Weighted Percent*

- 28.2% - 30.5%
- 30.6% - 61.0%
- 61.1% - 92.4%
- No or suppressed data
- Subcounty Areas
- Tarrant County boundary

N, W, E, S

GIS Geographic Information Systems TARRANT CO Public Health

*Estimates weighted to population characteristics

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TABLE 11.6 BRFSS QUESTIONS REGARDING PROSTATE CANCER SCREENING AMONG TARRANT COUNTY MALES 40 YEARS AND OLDER, 2009/2010

QUESTIONS	RESPONDENTS	
	n	%*
1. Have you ever had a PSA test?		
Yes	619	63.9
No	223	36.1
2. How long has it been since you had your last PSA test?[1]		
Within past year (anytime less than 12 months ago)	442	69.3
Within past 2 years (1 year but less than 2 years ago)	84	14.0
Within past 3 years (2 years but less than 3 years ago)	35	8.1
Within past 5 years (3 years but less than 5 years ago)	31	5.8
5 or more years ago	21	2.8
3. Have you ever had a digital rectal exam?		
Yes	728	78.6
No	143	21.4
4. How long has it been since your last digital rectal exam?[2]		
Within past year (anytime less than 12 months ago)	417	55.1
Within past 2 years (1 year but less than 2 years ago)	114	17.5
Within past 3 years (2 years but less than 3 years ago)	54	7.0
Within past 5 years (3 years but less than 5 years ago)	43	5.9
5 or more years ago	90	14.5
5. Have you ever been told by a doctor, nurse, or other health professional that you had prostate cancer?		
Yes	50	3.1
No	829	96.9

n = number of respondents
**Estimates weighted to population characteristics*
1. Among males aged 40 years and older who ever had a PSA test
2. Among males aged 40 years and older who ever had a digital rectal exam

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TABLE 11.7 BRFSS QUESTIONS REGARDING COLORECTAL CANCER SCREENING AMONG TARRANT COUNTY ADULTS 50 YEARS AND OLDER, 2009/2010

QUESTIONS	RESPONDENTS	
	n	%*
1. Have you ever had [a blood stool] test using a home kit?		
Yes	987	42.7
No	1,082	57.3
2. How long has it been since you had your last blood stool test using a home kit?[1]		
Within past year (anytime less than 12 months ago)	278	30.7
Within past 2 years (1 year but less than 2 years ago)	165	16.8
Within past 5 years (2 years but less than 5 years ago)	247	26.1
5 or more years ago	268	26.5
3. Have you ever had [a sigmoidoscopy or colonoscopy]?		
Yes	1,384	63.8
No	681	36.2
4. How long has it been since you had your last sigmoidoscopy or colonoscopy?[2]		
Within past year (anytime less than 12 months ago)	334	24.4
Within past 2 years (1 year but less than 2 years ago)	276	21.4
Within past 5 years (2 years but less than 5 years ago)	511	36.0
Within past 10 years (5 years but less than 10 years ago)	171	11.6
10 or more years ago	77	6.6
5. Was your MOST RECENT exam called a sigmoidoscopy or a colonoscopy?[2]		
Sigmoidoscopy	74	5.1
Colonoscopy	1,263	94.1
Something else	10	0.9

n = number of respondents
**Estimates weighted to population characteristics*
1. Among those aged 50 years and older who ever had a blood stool test using a home kit
2. Among those aged 50 years and older who ever had a sigmoidoscopy or colonoscopy

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INTRODUCTION

Using data from the 1972 to 1973 through 2002 to 2003 influenza seasons, experts estimated that seasonal influenza contributed to over 25,000 excess deaths per year, and preliminary data for the 2009 to 2010 influenza season suggests that 2009 H1N1 influenza contributed to more than 245,000 hospitalizations in the United States.[1-2] Furthermore, yearly influenza epidemics cost Americans over $10 billion due to medical bills and approximately $16 billion in lost earnings each year.[3] During the 2009 to 2010 influenza season, an estimated 40 percent of Americans obtained a seasonal influenza vaccine.[4] In the 2006 to 2007 influenza season, 23 percent of Americans aged 18 to 49 years classified as not high-risk obtained an influenza vaccine.[5] Approximately 40 percent of children aged 6 months through 17 years received a seasonal influenza vaccine during the 2009 to 2010 influenza season which was 16 percentage points higher than the proportion of children who obtained this vaccine during the 2008 to 2009 influenza season.[4] As of February 2010, the Advisory Committee for Immunization Practices (ACIP) recommends that all individuals aged 6 months and older receive a yearly influenza vaccine; previously unvaccinated children aged 6 months through 8 years are recommended to receive two doses of influenza vaccine at least four weeks apart.[6]

From 2005 to 2008 in Tarrant County, residents spent over $4 billion in hospital charges due to bacterial pneumonia.[7] Additionally, studies estimate that pneumococcal infections account for over 40,000 deaths each year in the United States. One of the target groups for vaccination is adults aged 65 years and older for which the case-fatality rate of pneumococcal bacteremia ranges from 30 percent to 40 percent. The ACIP recommends that adults in this age group receive at least one dose of the pneumococcal vaccine, including individuals who have not received the vaccine in the past five years and were younger than 65 years at the time of vaccination.[8]

METHODS

BRFSS evaluated influenza and pneumococcal vaccination practices by questioning adult respondents regarding their uptake of any influenza vaccine within the past year (both seasonal and monovalent 2009 H1N1) and receipt of the pneumococcal vaccine as well as the uptake of seasonal influenza vaccine by their child. Additional questions were asked regarding adult HPV, tetanus, and shingles vaccination as well as child HPV and tetanus immunization. Results for influenza and pneumococcal immunizations were further analyzed by seven demographic factors (Tables 12.1-12.3). Lastly, Tarrant County adult influenza vaccination within the past year was compared with the prevalence in Texas and the United States (Figure 12.1) as well as by geographic distribution at the sub-county level (Figure 12.2).

RESULTS

In general, two out of every five individuals aged 18 years and older reported obtaining an influenza vaccine (either seasonal or monovalent 2009 H1N1) within the past 12 months [40.6%, 95% CI (38.1-43.2)]. A significantly higher percentage of residents in the southwest county area (44.0%) reported receipt of one of these vaccines compared to residents of the central area (34.1%) of Tarrant County. Four out of every nine women

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reported obtaining one of these immunizations within the past 12 months. The percentage of residents aged 65 years and older who received an influenza vaccine (71.7%) was three times greater than this percentage among individuals aged 18 to 24 years (21.4%). The percentage of Whites who obtained an influenza vaccine (46.4%) was significantly greater than this percentage among Blacks (29.1%) and Hispanics (26.2%). As education level increased, the percentage of individuals reporting influenza vaccination also increased with persons who earned a college degree having a significantly higher vaccination percentage than all other education levels. Twice as many persons employed for wages reported influenza immunization (40.8%) compared to individuals who had been out of work for less than one year (20.8%) (Table 12.1).

Among Tarrant County adults aged 65 years and older, more than two-thirds of residents reported ever receiving a pneumococcal vaccine [72.4%, 95% CI (69.0-75.4)]. Results did not differ significantly by sub-county area of residence, gender, or annual income level. The percentage of Whites reporting pneumococcal immunization (74.2%) was 1.4 times greater than this percentage among Hispanics (51.4%). Approximately three out of every four persons who attended technical school or some college reported pneumococcal vaccination. Additionally, six out of every ten individuals employed for wages reported pneumococcal vaccination (Table 12.2).

With respect to child seasonal influenza vaccination, approximately 45 percent of children aged 6 months through 17 years in Tarrant County received a seasonal influenza vaccine within the past 12 months [44.9%, 95% CI (40.8-49.0)]. Vaccination proportions by sub-county area of residence, gender, and parent annual income level were not significantly different. The percentage of children aged 6 months to 4 years who received the seasonal influenza vaccine (60.5%) was slightly less than twice this percentage among children aged 15 to 17 years (34.6%). A significantly higher percentage of Hispanic children received the seasonal influenza vaccine (52.1%) compared to Black children (31.3%). As parental education level increased, the percentage of children who received the seasonal influenza vaccine also increased. More than half of children whose parents were either out of work for more than one year (55.1%) or homemakers (50.6%) reported receipt of the seasonal influenza vaccine within the past 12 months (Table 12.3).

Although the percentage of Tarrant County adults aged 18 years and older who were vaccinated against influenza within the past 12 months (40.6%) was greater than this percentage among adults in Texas (38.2%) and the United States (38.5%), these differences were not significant (Figure 12.1).

- **Six out of every ten adults aged 18 years and older in Tarrant County did not receive an influenza vaccine within the past 12 months.**
- **Three-quarters of women aged 65 years and older received the pneumococcal vaccine.**
- **Approximately 60 percent of children aged 6 months to 4 years received a seasonal influenza vaccine.**

TABLE 12.1 INFLUENZA VACCINATION AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

INFLUENZA VACCINATION WITHIN THE PAST 12 MONTHS[†]				
CHARACTERISTIC	**n**	**WEIGHTED PERCENTAGE***	**N**	**95% CONFIDENCE INTERVAL**
Total	1,954	40.6	3,816	38.1-43.2
Sub-County Area				
Northeast	420	43.7	768	38.8-48.8
Southeast	320	38.2	610	32.5-44.1
Central	399	34.1	835	29.6-38.9
Southwest	431	44.0	814	39.1-49.0
Northwest	384	41.3	789	36.9-45.9
Gender				
Male	641	36.4	1,293	32.6-40.4
Female	1,313	44.5	2,523	41.4-47.7
Age (in years)				
18-24	31	21.4	122	14.1-31.1
25-34	116	35.2	349	29.0-42.0
35-44	200	33.7	581	29.2-38.5
45-54	340	40.3	788	36.1-44.6
55-64	447	58.0	788	53.7-62.2
≥65	793	71.7	1,130	68.5-74.7
Race/Ethnicity				
White	1,532	46.4	2,710	43.3-49.4
Black	179	29.1	488	22.4-36.8
Hispanic	162	26.2	458	20.9-32.3
Other	52	42.6	104	29.0-57.4
Education				
< High school	176	30.4	432	23.8-37.8
High school or GED	440	35.7	918	31.0-40.8
Tech/Some college	552	38.1	1,086	33.4-43.0
College degree	779	49.8	1,370	45.7-54.0
Annual Income				
<$15,000	161	32.5	370	23.9-42.4
$15,000 - $24,999	242	34.6	532	28.5-41.3
$25,000 - $34,999	154	34.5	318	26.7-43.3
$35,000 - $49,999	240	45.4	430	37.0-54.0
≥$50,000	822	45.0	1,549	41.4-48.7
Employment				
Employed for wages	757	40.8	1,583	37.3-44.5
Self-employed	101	26.5	261	19.8-34.5
Out of work for >1yr	51	39.0	129	24.3-56.0
Out of work for <1yr	37	20.8	142	13.5-30.6
Homemaker	173	35.0	388	28.3-42.5
Student	20	30.3	71	18.2-45.9
Retired	660	70.2	946	66.5-73.6
Unable to work	151	53.5	275	43.7-63.0

[†]Influenza vaccination by either shot or spray and may include both seasonal and monovalent 2009 influenza A (H1N1) vaccine
n = number of respondents who reported receiving an influenza vaccine (shot or spray)
N = total number of respondents who answered the question
[*]Estimates weighted to population characteristics

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TABLE 12.2 PNEUMOCOCCAL VACCINATION AMONG TARRANT COUNTY ADULTS 65 YEARS AND OLDER, 2009/2010

EVER RECEIVED PNEUMOCOCCAL VACCINE				
CHARACTERISTIC	**n**	**WEIGHTED PERCENTAGE***	**N**	**95% CONFIDENCE INTERVAL**
Total	800	72.4	1,085	69.0-75.4
Sub-County Area				
Northeast	151	80.0	192	73.2-85.4
Southeast	114	69.3	154	60.5-77.0
Central	188	68.8	260	61.7-75.2
Southwest	214	76.6	278	70.5-81.7
Northwest	133	67.2	201	59.9-73.8
Gender				
Male	239	68.4	344	62.6-73.6
Female	561	75.0	741	70.9-78.7
Race/Ethnicity				
White	679	74.2	897	70.7-77.5
Black	67	69.3	97	57.2-79.3
Hispanic	32	51.4	58	36.3-66.3
Other	-	-	-	-
Education				
< High school	90	61.1	139	50.2-70.9
High school or GED	225	73.9	302	67.7-79.3
Tech/Some college	237	77.3	301	71.1-82.5
College degree	247	71.3	340	65.4-76.6
Annual Income				
<$15,000	92	73.2	127	62.5-81.7
$15,000 - $24,999	142	76.7	182	68.8-83.0
$25,000 - $34,999	103	75.9	130	65.6-83.9
$35,000 - $49,999	119	78.8	153	69.9-85.6
≥$50,000	175	63.6	265	56.8-69.9
Employment				
Employed for wages	68	60.3	108	48.7-70.8
Self-employed	30	66.9	44	49.6-80.6
Out of work for >1yr	-	-	-	-
Out of work for <1yr	-	-	-	-
Homemaker	78	68.9	106	57.3-78.5
Student	-	-	-	-
Retired	561	75.4	736	71.4-78.9
Unable to work	45	74.7	60	59.6-85.6

n = number of respondents who reported ever receiving a pneumococcal vaccine
N = total number of respondents who answered the question
**Estimates weighted to population characteristics*

TABLE 12.3 SEASONAL INFLUENZA VACCINATION AMONG TARRANT COUNTY CHILDREN 6 MONTHS AND OLDER, 2009/2010

CHILD SEASONAL INFLUENZA VACCINATION WITHIN THE PAST 12 MONTHS[†]				
CHARACTERISTIC	**n**	**WEIGHTED PERCENTAGE[*]**	**N**	**95% CONFIDENCE INTERVAL**
Total	413	44.9	943	40.8-49.0
Sub-County Area				
Northeast	103	49.1	216	41.4-56.8
Southeast	71	47.0	155	38.1-56.2
Central	71	38.8	174	30.2-48.2
Southwest	73	41.3	172	32.8-50.4
Northwest	95	41.9	226	34.1-50.1
Gender				
Male	236	48.8	514	43.2-54.4
Female	173	40.9	417	35.0-47.0
Age				
6 months - 4 years	115	60.5	199	52.0-68.4
5-9 years	103	44.0	237	36.1-52.3
10-14 years	104	38.5	245	30.8-46.8
15-17 years	61	34.6	182	26.8-43.3
Race/Ethnicity				
White	242	44.4	531	39.0-49.9
Black	39	31.3	124	21.9-42.4
Hispanic	111	52.1	236	43.7-60.4
Other	17	62.3	35	43.2-78.3
Parent Education				
< High school	56	40.9	140	30.6-52.0
High school or GED	77	42.5	191	34.0-51.5
Tech/Some college	95	42.6	238	34.4-51.3
College degree	183	48.9	369	42.5-55.3
Parent Annual Income				
<$15,000	26	39.4	70	24.8-56.3
$15,000 - $24,999	53	40.6	131	30.2-51.9
$25,000 - $34,999	28	47.2	74	32.7-62.2
$35,000 - $49,999	33	38.2	84	26.1-51.9
≥$50,000	215	44.5	474	39.0-50.3
Parent Employment				
Employed for wages	246	46.6	542	41.1-52.1
Self-employed	29	35.1	84	23.3-49.0
Out of work for >1yr	15	55.1	29	33.8-74.7
Out of work for <1yr	17	33.5	52	19.8-50.7
Homemaker	69	50.6	142	40.6-60.5
Student	11	44.8	32	24.2-67.4
Retired	12	51.6	23	26.6-75.9
Unable to work	14	29.9	37	14.6-51.7

[†]*Seasonal influenza vaccination by either shot or spray*
n = number of children who received an influenza vaccine (shot or spray)
N = total number of respondents who answered the question
[*]*Estimates weighted to population characteristics*

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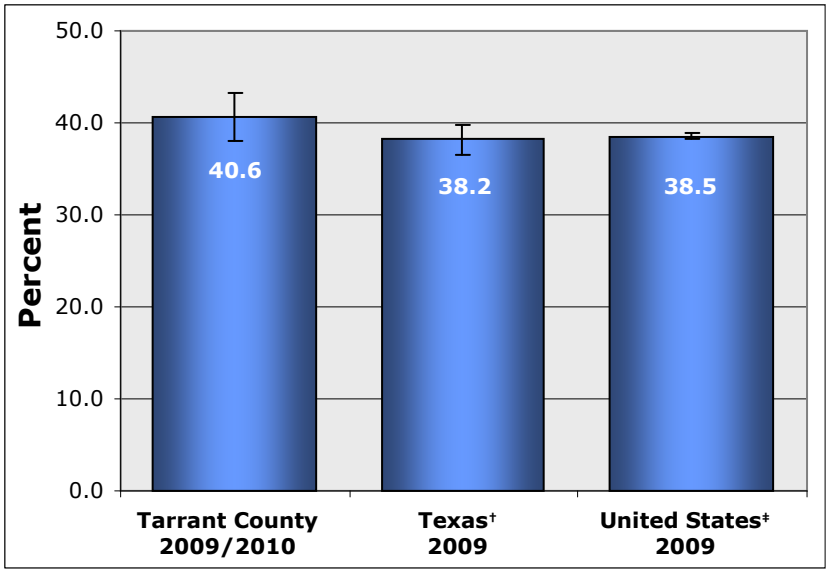
FIGURE 12.1 INFLUENZA VACCINATION WITHIN THE PAST YEAR AMONG ADULTS 18 YEARS AND OLDER, TARRANT COUNTY, TEXAS, AND THE UNITED STATES*



*Influenza vaccination by either shot or spray and may include both seasonal and monovalent 2009 influenza A (H1N1) vaccine

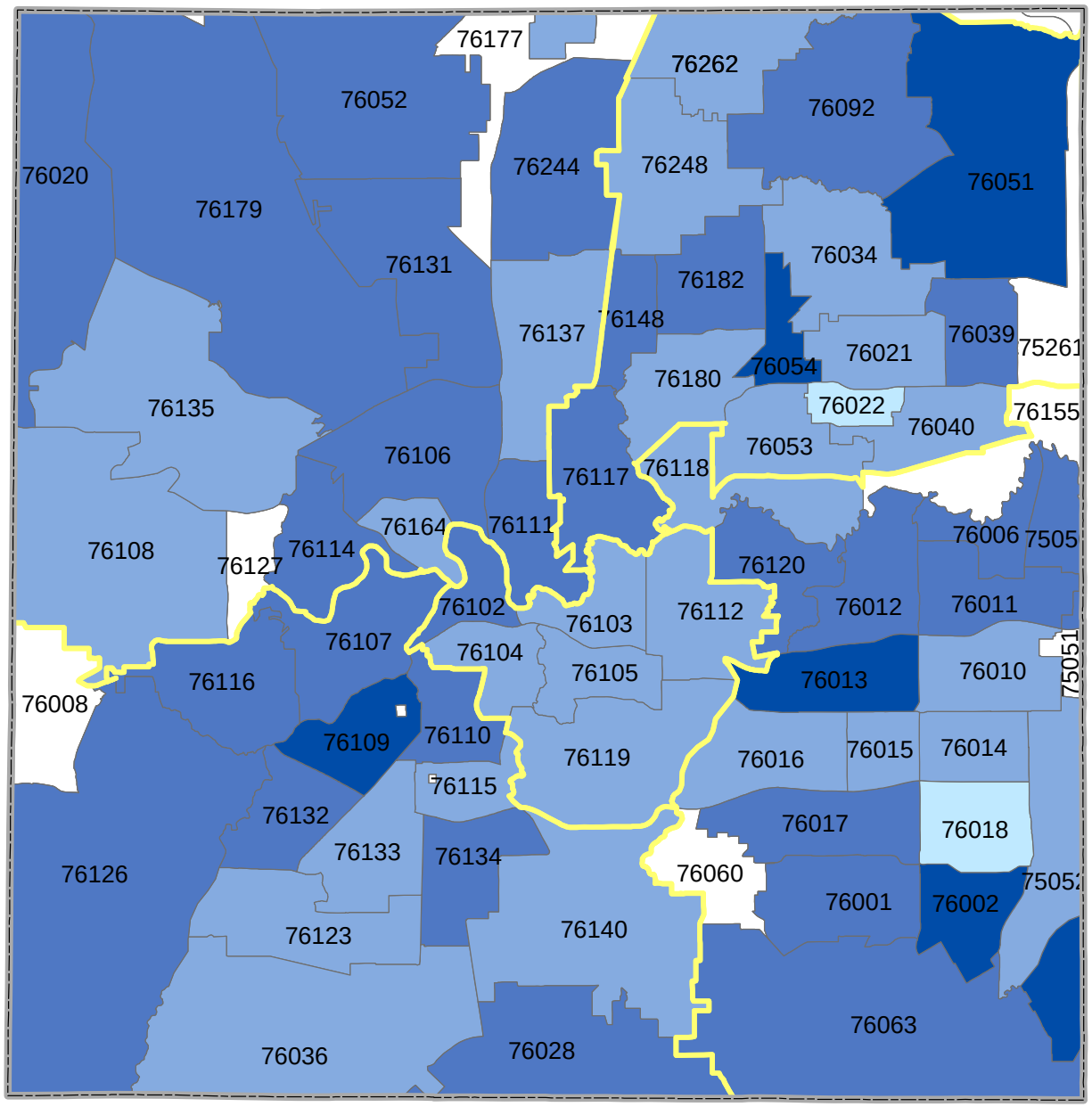
†Data source: 2009 BRFSS, Texas Department of State Health Services

‡Data source: 2009 BRFSS, Centers for Disease Control and Prevention

Estimates weighted to population characteristics

No comparable Healthy People 2010 Objective available

FIGURE 12.2 INFLUENZA VACCINATION WITHIN THE PAST YEAR AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER BY ZIP CODE, 2009/2010†



†*Influenza vaccination by either shot or spray and may include both seasonal and monovalent 2009 influenza A (H1N1) vaccine*

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Weighted Percent*

- 11.4% - 20.4%
- 20.5% - 40.8%
- 40.9% - 61.2%
- 61.3% - 81.5%
- No or suppressed data
- Subcounty Areas
- Tarrant County boundary

N, W, E, S

GIS Geographic Information Systems TARRANT COUNTY Public Health

**Estimates weighted to population characteristics*

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TABLE 12.4 BRFSS QUESTIONS REGARDING INFLUENZA AND PNEUMONIA IMMUNIZATION AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

QUESTIONS	RESPONDENTS	
	n	%*
1. During the past 12 months, have you had a flu shot?		
Yes	1,934	39.6
No	1,888	60.4
2. During the past 12 months, have you had a flu vaccine that was sprayed in your nose?		
Yes	40	1.7
No	3,780	98.3
3. Have you ever had a pneumonia shot?		
Yes	1,371	25.6
No	2,090	74.4

n = number of respondents
**Estimates weighted to population characteristics*

TABLE 12.5 BRFSS QUESTIONS REGARDING ADDITIONAL IMMUNIZATIONS AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

QUESTIONS	RESPONDENTS	
	n	%*
1. Have you received a tetanus shot in the past 10 years?		
Yes	1,086	71.7
No	455	28.3
2. Was your most recent shot given in 2005 or later?[1]		
Yes	666	67.8
No	326	32.2
3. Did your doctor say your recent tetanus shot included the pertussis or whooping cough vaccine?[2]		
Yes	134	36.5
No	312	63.5
4. Have you EVER had the HPV vaccination?[3]		
Yes	13	8.2
No	337	91.8
5. How many HPV shots did you receive?[4]		
1	-	-
2	-	-
All shots	-	-
Do not know / not sure	-	-
6. Have you had [Zostavax®/the zoster vaccine/the shingles vaccine]?[5]		
Yes	87	8.0
No	966	92.0

n = number of respondents
**Estimates weighted to population characteristics*
1. Among those who received a tetanus shot in the past 10 years
2. Among those who received a tetanus shot in the past 10 years AND who received the tetanus shot in 2005 or later
3. Among females aged 18 through 49 years
4. Among females aged 18 through 49 years who ever received the HPV vaccination
5. Among those aged 50 years and older

TABLE 12.6 BRFSS QUESTIONS REGARDING IMMUNIZATIONS AMONG TARRANT COUNTY CHILDREN LESS THAN 18 YEARS OLD, 2009/2010

QUESTIONS	RESPONDENTS	
	n	%*
1. During the past 12 months, has [your child] had a seasonal flu vaccination?[1]		
Yes	413	44.9
No	530	55.1
2. Has this child EVER had the HPV vaccination?[2]		
Yes	45	21.1
No	150	78.9
3. How many HPV shots did she receive?[3]		
1	7	14.9
2	12	33.4
All shots	23	51.7
4. Has [he/she] received a tetanus shot in the past 10 years?[4]		
Yes	330	86.2
No	45	13.8
5. Was [his/her] most recent tetanus shot given in 2005 or later?[5]		
Yes	194	78.8
No	57	21.2
6. Did the doctor say [his/her] most recent tetanus shot included the pertussis or whooping cough vaccine?[6]		
Yes	109	68.3
No	42	31.7

n = number of respondents
**Estimates weighted to population characteristics*
1. Among children aged 6 months through 17 years
2. Among female children aged 9 through 17 years
3. Among female children aged 9 through 17 years who ever received the HPV vaccination
4. Among children aged 10 through 17 years
5. Among children aged 10 through 17 years who received a tetanus shot in the past 10 years
6. Among children aged 10 through 17 years who received a tetanus shot in the past 10 years AND whose most recent tetanus shot was given in 2005 or later

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INTRODUCTION

Cardiovascular disease refers to a wide range of conditions including coronary heart disease, stroke, heart failure, high blood pressure, and diseases of the arteries. More than 70 percent of individuals with some type of cardiovascular disease also possess two or more risk factors including tobacco use, high blood cholesterol, physical inactivity, overweight, and diabetes.[1] Additionally, one out of every two non-Hispanic Black adults in the United States aged 18 years and older in 2003 possessed at least two risk factors for heart disease and stroke compared to slightly more than one out of every three non-Hispanic White and Hispanic adults.[2]

Among Tarrant County adults in 2007, heart disease ranked as the leading cause of death for both men and women.[3] Also, during the years 2000 to 2005, Tarrant County residents spent about $500 million on preventable hospitalizations due to angina, congestive heart failure, and high blood pressure.[4] Research suggests that interventions aimed at lowering the prevalence of smoking, high blood pressure, poor blood glucose regulation, and overweight/obesity could reduce regional cardiovascular disease mortality disparities in the U.S. by almost 70 percent.[5]

METHODS

The BRFSS assessed the cardiovascular health of Tarrant County residents via a series of questions regarding hypertension, blood cholesterol, various heart diseases, prevention behaviors, and signs of heart attack or stroke. Results for high blood pressure, high blood cholesterol, heart disease, heart attack, and stroke were further analyzed by seven demographic factors (Table 13.1-13.5). The proportion of Tarrant County residents with heart disease was compared to the proportion with this condition among adults in Texas and the United States (Figure 13.1) as well as by geographic distribution at the sub-county level (Figure 13.2).

RESULTS

Slightly more than one out of every four Tarrant County residents aged 18 years and older reported ever receiving a diagnosis of high blood pressure from a healthcare provider [27.4%, 95% CI (25.3-29.6)]. However, the proportion of those in Tarrant County who ever received this diagnosis did not differ significantly by sub-county area of residence, gender or education and annual income levels. As age group increased, the percentage of individuals who reported receiving a diagnosis of high blood pressure also increased. Compared to both Hispanics (20.3%) and Others (18.5%), a significantly higher percentage of Black Tarrant County residents (36.8%) reported ever receiving a diagnosis of high blood pressure. More than two times as many of those in Tarrant County who are retired reported a diagnosis of high blood pressure (61.9%) than individuals employed for wages (22.4%) (Table 13.1).

Additionally, more than one-third of Tarrant County residents reported ever receiving a healthcare provider diagnosis of high blood cholesterol [37.7%, 95% CI (35.2-40.3)]. The prevalence of this diagnosis did not differ significantly by sub-county area of residence, gender, or education level. Three out of every five individuals aged 55 to 64 years

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reported receiving a diagnosis of high blood cholesterol. The proportion of Whites who ever received this diagnosis (41.1%) was significantly greater than that of Blacks (24.9%) or Others (23.9%). Almost half of Tarrant County residents with an annual income of less than $15,000 reported ever receiving a diagnosis of high blood cholesterol. With the exception of retired individuals, the percentage of persons with an inability to work who reported high blood cholesterol (62.0%) was approximately twice that of all other employment categories (Table 13.2).

In contrast, less than five percent of Tarrant County residents reported ever receiving a diagnosis of heart disease from a healthcare provider [4.6%, 95% CI (3.9-5.3)]. Once more, results did not differ significantly by sub-county area of residence or gender. More than one out of every six residents aged 65 years or older reported receipt of this diagnosis. Almost twice as many Whites (5.4%) reported ever receiving a diagnosis of heart disease compared to Blacks (2.9%) and Hispanics (2.8%). Similar to receipt of a diagnosis of high blood cholesterol, as both education and annual income levels increased, the percentage of those in Tarrant County who reported ever receiving a diagnosis of heart disease decreased. Fewer than three percent of externally employed (1.8%) or self-employed (2.6%) residents indicated having heart disease diagnosed by a healthcare provider (Table 13.3).

- **More than one-quarter of Tarrant County adults aged 18 years and older reported ever receiving a diagnosis of high blood pressure.**
- **As both education and annual income levels increased, the percentage of Tarrant County residents reporting healthcare provider-diagnosed high blood cholesterol decreased.**
- **Almost one out of every ten individuals with an annual income of less than $15,000 reported receiving a diagnosis of heart disease from a healthcare provider.**
- **The proportion of individuals aged 65 years and older who reported ever having a heart attack was significantly higher than this proportion among all other age groups.**
- **Two percent of persons aged 18 years and older reported ever having a stroke.**

Three percent of Tarrant County individuals aged 18 years and older reported ever experiencing a heart attack [95% CI (2.6-3.6)]. This percentage was not significantly different by sub-county area of residence or gender. The proportion of Tarrant County residents who had ever had a heart attack was approximately 1.7 times higher among persons aged 65 years and older (12.4%) compared to those aged 55 to 64 years (7.4%). Similarly, reported prevalence of heart attack among Whites (3.7%) was almost twice that of all other racial or ethnic groups. The percentage of individuals with only a high school diploma or GED who reported a prior heart attack (4.3%) was significantly higher than

this percentage among individuals with a college degree (1.7%). The proportion of individuals with an annual income of less than $15,000 who reported ever having a heart attack was more than three times this proportion among individuals with an annual income of at least $50,000. More than one out of every ten retired individuals or persons who were unable to work reported ever having a heart attack (Table 13.4).

The prevalence of ever having a stroke among Tarrant County residents aged 18 years and older was below five percent [2.1%, 95% CI (1.7-2.6)]. The percentage of Tarrant County residents who reported ever experiencing a stroke did not differ significantly by sub-county area of residence or gender. As age group increased, the proportion of individuals who reported ever having a stroke also increased while as annual income increased, the proportion of individuals reported to have experienced a stroke decreased. Significantly more Whites reported ever having a stroke (2.5%) compared to Hispanics (1.0%). The percentage of individuals with a college degree who reported ever having a stroke (1.0%) was significantly lower than this percentage among individuals with only a high school diploma or GED (3.5%) as well as among persons who attended technical school or some college (2.2%). Around one out of every ten retired Tarrant County residents as well as residents who were unable to work reported ever experiencing a stroke (Table 13.5).

Although the prevalence of heart disease in Tarrant County (4.6%) was lower than that in Texas (5.1%) and the United States (6.1%), only the difference in heart disease prevalence between Tarrant County and the United States was significant (Figure 13.1).

TABLE 13.1 HIGH BLOOD PRESSURE AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

DIAGNOSED WITH HIGH BLOOD PRESSURE				
CHARACTERISTIC	**n**	**WEIGHTED PERCENTAGE***	**N**	**95% CONFIDENCE INTERVAL**
Total	1,587	27.4	3,949	25.3-29.6
Sub-County Area				
Northeast	261	23.0	800	19.2-27.3
Southeast	249	25.4	622	20.7-30.7
Central	399	31.6	869	27.0-36.6
Southwest	347	29.0	848	25.2-33.2
Northwest	331	29.8	810	26.1-33.8
Gender				
Male	546	29.8	1,342	26.2-33.7
Female	1,038	25.2	2,600	23.0-27.5
Age (in years)				
18-24	13	13.3	125	6.5-25.3
25-34	44	13.8	361	9.8-19.1
35-44	100	16.7	600	13.4-20.6
45-54	274	35.1	823	31.0-39.4
55-64	413	51.8	808	47.5-56.1
≥65	719	60.8	1,165	57.5-64.0
Race/Ethnicity				
White	1,109	28.5	2,785	26.0-31.2
Black	273	36.8	518	29.3-45.0
Hispanic	141	20.3	477	16.0-25.5
Other	38	18.5	112	11.8-27.8
Education				
< High school	187	24.6	454	19.2-31.0
High school or GED	440	29.5	949	25.5-33.9
Tech/Some college	481	30.8	1,120	26.3-35.8
College degree	472	24.4	1,413	21.5-27.5
Annual Income				
<$15,000	200	28.1	381	21.5-35.7
$15,000 - $24,999	240	28.4	553	23.4-34.0
$25,000 - $34,999	154	29.2	327	22.2-37.3
$35,000 - $49,999	199	28.1	437	22.2-34.9
≥$50,000	507	25.8	1,602	22.7-29.1
Employment				
Employed for wages	467	22.4	1,645	19.7-25.4
Self-employed	73	26.1	270	16.7-38.3
Out of work for >1yr	57	37.1	132	24.0-52.4
Out of work for <1yr	49	20.4	148	13.8-29.0
Homemaker	130	20.2	402	15.8-25.5
Student	11	6.4	71	3.0-13.4
Retired	613	61.9	980	58.2-65.5
Unable to work	181	59.2	279	49.5-68.3

n = number of respondents who had been diagnosed with high blood pressure (not during pregnancy) by a health professional
N = total number of respondents who answered the question
**Estimates are weighted to population characteristics*

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TABLE 13.2 HIGH BLOOD CHOLESTEROL AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

DIAGNOSED WITH HIGH BLOOD CHOLESTEROL				
CHARACTERISTIC	**n**	**WEIGHTED PERCENTAGE***	**N**	**95% CONFIDENCE INTERVAL**
Total	1,619	37.7	3,427	35.2-40.3
Sub-County Area				
Northeast	328	37.9	728	33.3-42.8
Southeast	250	33.2	547	27.7-39.3
Central	353	41.6	719	36.1-47.4
Southwest	356	40.2	730	35.6-45.0
Northwest	332	39.7	703	35.1-44.5
Gender				
Male	564	39.9	1,136	35.8-44.2
Female	1,054	35.8	2,285	32.7-38.9
Age (in years)				
18-24	-	-	-	-
25-34	55	22.7	234	16.3-30.6
35-44	143	32.1	481	27.1-37.7
45-54	324	43.6	742	39.1-48.1
55-64	451	60.0	769	55.6-64.2
≥65	615	55.8	1,093	52.3-59.2
Race/Ethnicity				
White	1,234	41.1	2,509	38.2-44.1
Black	194	24.9	435	19.3-31.5
Hispanic	135	36.2	336	28.4-44.7
Other	36	23.9	96	15.2-35.5
Education				
< High school	159	44.7	317	35.3-54.5
High school or GED	401	39.9	802	34.7-45.4
Tech/Some college	479	36.0	989	31.1-41.1
College degree	574	36.0	1,309	32.5-39.7
Annual Income				
<$15,000	170	49.9	304	37.4-62.5
$15,000 - $24,999	227	45.4	437	38.4-52.6
$25,000 - $34,999	151	39.5	280	31.1-48.5
$35,000 - $49,999	187	38.6	382	31.0-46.8
≥$50,000	622	34.5	1478	31.1-37.9
Employment				
Employed for wages	589	34.4	1,437	31.0-37.9
Self-employed	92	29.2	237	21.7-38.0
Out of work for >1yr	47	31.7	94	19.7-46.9
Out of work for <1yr	42	28.9	106	18.8-41.6
Homemaker	133	37.2	319	27.9-47.6
Student	12	15.7	40	7.2-31.0
Retired	550	58.4	933	54.6-62.2
Unable to work	150	62.0	247	51.4-71.5

n = number of respondents who had been diagnosed with high blood cholesterol by a health professional
N = total number of respondents who answered the question
**Estimates are weighted to population characteristics*

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TABLE 13.3 HEART DISEASE AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

DIAGNOSED WITH HEART DISEASE[†]				
CHARACTERISTIC	**n**	**WEIGHTED PERCENTAGE[*]**	**N**	**95% CONFIDENCE INTERVAL**
Total	343	4.6	3,918	3.9-5.3
Sub-County Area				
Northeast	50	3.4	793	2.4-4.8
Southeast	61	4.3	618	3.1-6.0
Central	93	5.6	863	4.3-7.2
Southwest	72	5.6	840	4.2-7.6
Northwest	67	4.3	804	3.2-5.9
Gender				
Male	138	5.2	1,333	4.1-6.6
Female	205	3.9	2,578	3.3-4.7
Age (in years)				
18-24	-	-	-	-
25-34	-	-	-	-
35-44	6	1.4	597	0.5-3.8
45-54	48	5.8	819	4.2-8.1
55-64	78	10.7	804	8.2-13.8
≥65	203	17.6	1,146	15.1-20.3
Race/Ethnicity				
White	254	5.4	2,773	4.6-6.4
Black	49	2.9	511	2.0-4.3
Hispanic	23	2.8	469	1.5-5.2
Other	13	3.9	108	1.8-8.3
Education				
< High school	62	5.9	446	3.8-9.0
High school or GED	98	5.4	941	4.2-6.9
Tech/Some college	109	5.2	1,113	4.0-6.9
College degree	73	3.0	1,405	2.2-4.0
Annual Income				
<$15,000	70	9.4	371	6.6-13.2
$15,000 - $24,999	67	7.4	552	5.0-10.8
$25,000 - $34,999	39	6.0	325	4.0-8.9
$35,000 - $49,999	34	4.5	434	2.9-7.1
≥$50,000	70	2.8	1,596	2.1-3.8
Employment				
Employed for wages	48	1.8	1,643	1.3-2.7
Self-employed	16	2.6	266	1.4-4.7
Out of work for >1yr	10	3.6	130	1.6-7.8
Out of work for <1yr	6	4.8	146	1.5-14.4
Homemaker	25	3.4	396	2.1-5.4
Student	-	-	-	-
Retired	167	17.7	966	14.9-20.9
Unable to work	69	18.5	276	13.5-24.7

[†]Heart disease includes health care provider-diagnosed heart attack, angina, or coronary heart disease
n = number of respondents who had been diagnosed as having had a heart attack, angina, or coronary heart disease by a health professional
N = total number of respondents who answered the question
[*]Estimates are weighted to population characteristics

TABLE 13.4 HEART ATTACK AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

EVER HAD A HEART ATTACK				
CHARACTERISTIC	**n**	**WEIGHTED PERCENTAGE***	**N**	**95% CONFIDENCE INTERVAL**
Total	239	3.0	3,940	2.6-3.6
Sub-County Area				
Northeast	35	2.6	798	1.7-3.8
Southeast	45	2.8	624	2.0-3.9
Central	65	3.9	865	2.9-5.4
Southwest	48	3.6	846	2.6-5.0
Northwest	46	2.9	807	2.0-4.3
Gender				
Male	97	3.4	1,338	2.6-4.3
Female	142	2.8	2,595	2.2-3.4
Age (in years)				
18-24	0	0.0	126	0.0-0.0
25-34	-	-	-	-
35-44	-	-	-	-
45-54	33	3.9	820	2.6-5.8
55-64	54	7.4	806	5.4-10.0
≥65	143	12.4	1,162	10.3-14.8
Race/Ethnicity				
White	178	3.7	2,787	3.1-4.5
Black	32	1.9	514	1.2-3.1
Hispanic	15	1.6	472	0.9-2.8
Other	10	2.0	110	0.9-4.4
Education				
< High school	44	3.8	449	2.5-5.6
High school or GED	78	4.3	946	3.2-5.7
Tech/Some college	73	3.4	1,119	2.5-4.8
College degree	43	1.7	1,413	1.2-2.4
Annual Income				
<$15,000	46	5.7	373	3.8-8.6
$15,000 - $24,999	48	4.7	555	3.2-6.7
$25,000 - $34,999	28	4.3	326	2.7-6.7
$35,000 - $49,999	25	3.6	437	2.2-6.0
≥$50,000	47	1.8	1,602	1.3-2.5
Employment				
Employed for wages	33	1.3	1,644	0.9-2.1
Self-employed	9	1.5	268	0.7-3.4
Out of work for >1yr	6	1.9	131	0.7-5.0
Out of work for <1yr	5	2.2	146	0.8-6.1
Homemaker	18	2.5	401	1.4-4.4
Student	0	0.0	73	0.0-0.0
Retired	120	12.7	978	10.3-15.5
Unable to work	47	11.6	277	8.0-16.6

n = number of respondents who had ever been diagnosed by a health professional as having had a heart attack
N = total number of respondents who answered the question
**Estimates are weighted to population characteristics*

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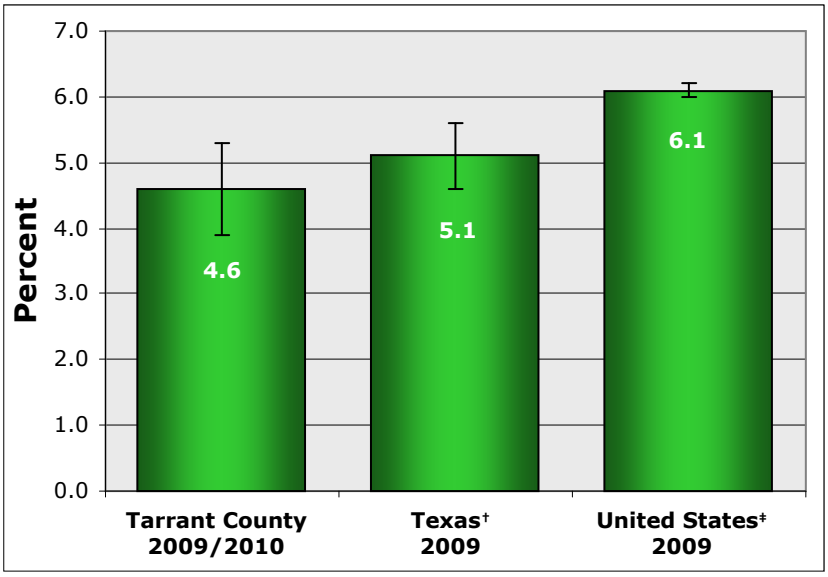
TABLE 13.5 STROKE AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

EVER HAD A STROKE				
CHARACTERISTIC	**n**	**WEIGHTED PERCENTAGE***	**N**	**95% CONFIDENCE INTERVAL**
Total	180	2.1	3,948	1.7-2.6
Sub-County Area				
Northeast	30	2.1	801	1.4-3.2
Southeast	34	1.6	622	1.1-2.4
Central	38	2.1	869	1.4-3.3
Southwest	42	2.8	846	1.9-4.2
Northwest	36	2.1	810	1.4-3.2
Gender				
Male	58	1.8	1,340	1.3-2.4
Female	122	2.5	2,601	2.0-3.1
Age (in years)				
18-24	0	0.0	125	0.0-0.0
25-34	-	-	-	-
35-44	8	0.8	599	0.3-1.8
45-54	21	1.9	824	1.1-3.2
55-64	35	4.0	808	2.6-6.0
≥65	111	9.7	1,164	7.9-11.8
Race/Ethnicity				
White	134	2.5	2,785	2.0-3.1
Black	29	2.0	519	1.3-3.2
Hispanic	11	1.0	476	0.5-1.9
Other	-	-	-	-
Education				
< High school	29	2.5	455	1.5-4.0
High school or GED	64	3.5	946	2.5-4.9
Tech/Some college	60	2.2	1,120	1.6-3.1
College degree	26	1.0	1,414	0.6-1.5
Annual Income				
<$15,000	38	4.8	380	3.1-7.3
$15,000 - $24,999	34	3.3	557	2.0-5.4
$25,000 - $34,999	23	3.3	328	2.0-5.3
$35,000 - $49,999	17	2.5	433	1.4-4.5
≥$50,000	25	0.8	1,602	0.5-1.3
Employment				
Employed for wages	16	0.5	1,644	0.3-1.0
Self-employed	-	-	-	-
Out of work for >1yr	5	1.9	133	0.7-5.1
Out of work for <1yr	5	1.4	147	0.5-3.4
Homemaker	10	1.0	401	0.5-2.0
Student	0	0.0	73	0.0-0.0
Retired	96	10.0	980	8.0-12.5
Unable to work	43	11.1	279	7.4-16.4

n = number of respondents who had ever been diagnosed by a health professional as having had a stroke
N = total number of respondents who answered the question
**Estimates are weighted to population characteristics*

FIGURE 13.1 HEART DISEASE AMONG ADULTS 18 YEARS AND OLDER, TARRANT COUNTY, TEXAS, AND THE UNITED STATES*



*Heart disease includes health care provider-diagnosed heart attack, angina, or coronary heart disease

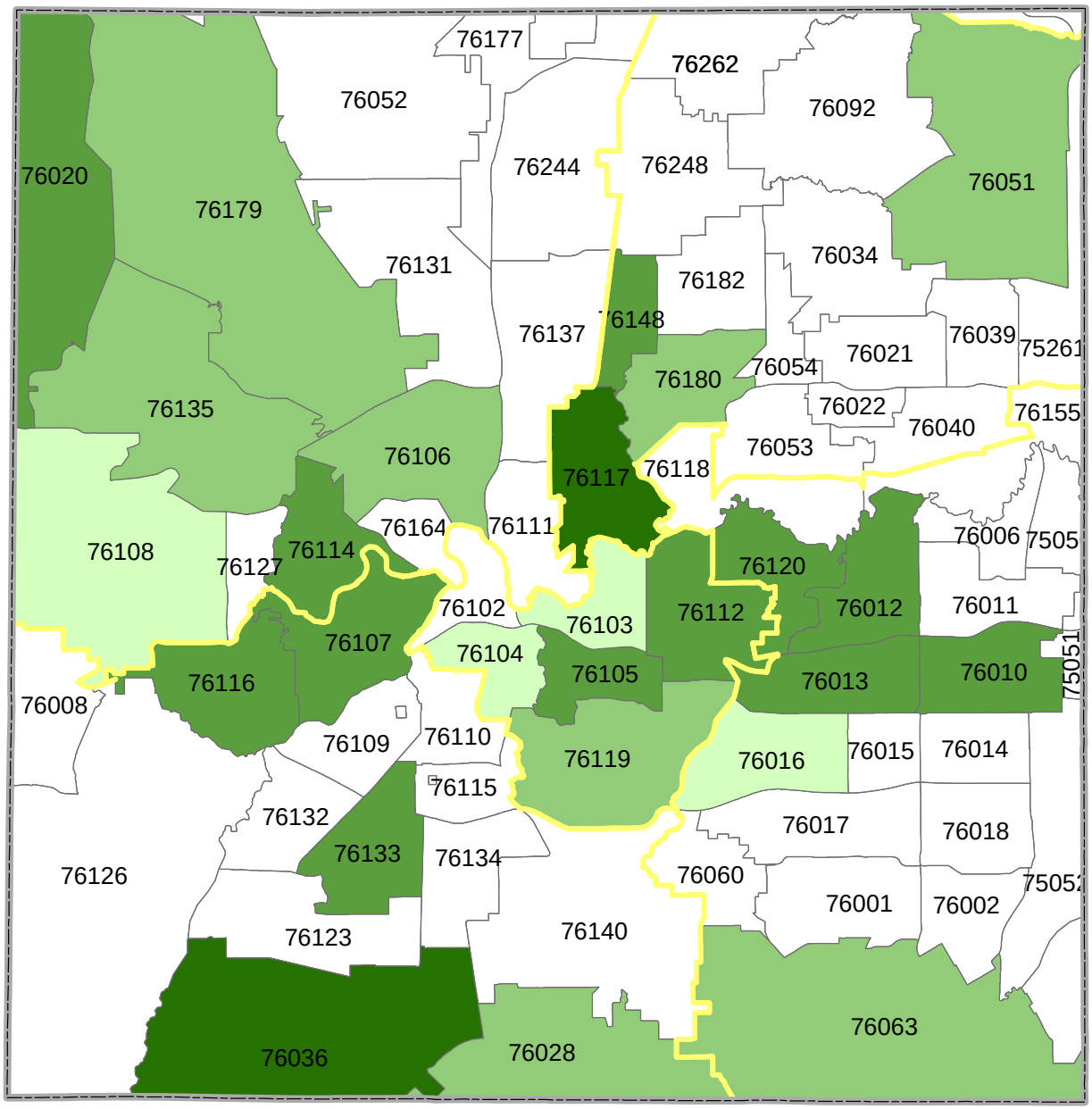
†Data source: 2009 BRFSS, Texas Department of State Health Services

‡Data source: 2009 BRFSS, Centers for Disease Control and Prevention

Estimates weighted to population characteristics

No comparable Health People 2010 Objective available

FIGURE 13.2 HEART DISEASE AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER BY ZIP CODE, 2009/2010†



†Heart disease includes heart attack, angina, and coronary heart disease

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Weighted Percent*

- 2.0% - 3.4%
- 3.5% - 6.9%
- 7.0% - 10.3%
- 10.4% - 13.8%
- No or suppressed data
- Subcounty Areas
- Tarrant County boundary

*Estimates weighted to population characteristics

TABLE 13.6 BRFSS QUESTIONS REGARDING CARDIOVASCULAR DISEASE AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

QUESTIONS	RESPONDENTS	
	n	%*
1. Have you EVER been told by a doctor, nurse, or other health professional that you have high blood pressure?		
Yes	1,587	27.4
Yes, but female told only during pregnancy	38	1.0
No	2,279	70.8
Told borderline high or pre-hypertensive	45	0.8
2. Are you currently taking medicine for your high blood pressure?[1]		
Yes	1,351	72.6
No	233	27.4
3. Have you EVER had your blood cholesterol checked?		
Yes	3,462	79.3
No	417	20.7
4. About how long has it been since you last had your blood cholesterol checked?[2]		
Within past year (anytime less than 12 months ago)	2,768	72.8
Within past 2 years (1 year but less than 2 years ago)	355	13.9
Within past 5 years (2 years but less than 5 years ago)	209	10.0
5 or more years ago	101	3.3
5. Have you EVER been told by a doctor, nurse, or other health professional that your blood cholesterol is high?[2]		
Yes	1,619	37.7
No	1,808	62.3
6. Has a doctor, nurse, or other health professional EVER told you that you had a heart attack, also called a myocardial infarction?		
Yes	239	3.0
No	3,701	97.0
7. Has a doctor, nurse, or other health professional EVER told you that you had angina or coronary heart disease?		
Yes	226	3.0
No	3,690	97.0
8. Has a doctor, nurse, or other health professional EVER told you that you had a stroke?		
Yes	180	2.1
No	3,768	97.9

n = number of respondents
**Estimates are weighted to population characteristics*
1. Among those ever told by a health professional that they have high blood pressure (not including females told only during pregnancy)
2. Among those who ever had their blood cholesterol checked

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TABLE 13.7 BRFSS QUESTIONS REGARDING CARDIOVASCULAR HEALTH AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

QUESTIONS	RESPONDENTS	
	n	%*
1. Following your heart attack, did you go to any kind of outpatient rehabilitation?[1]		
Yes	49	40.5
No	61	59.5
2. Following your stroke, did you go to any kind of outpatient rehabilitation?[2]		
Yes	19	18.3
No	58	81.7
3. Do you take aspirin daily or every other day?		
Yes	599	20.6
No	1,142	79.4
4. Do you have a health problem or condition that makes taking aspirin unsafe for you?[3]		
Yes, not stomach related	93	4.2
Yes, stomach problems	77	3.4
No	966	92.4

n = number of respondents
**Estimates are weighted to population characteristics*
1. Among those ever told by a health professional that they had a heart attack
2. Among those ever told by a health professional that they had a stroke
3. Among those who did not take aspirin daily or every other day

TABLE 13.8 BRFSS QUESTIONS REGARDING ACTIONS TO CONTROL HIGH BLOOD PRESSURE AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010[†]

QUESTIONS	RESPONDENTS	
	n	%[*]
1. Are you now changing your eating habits to help lower or control your high blood pressure?		
Yes	488	65.4
No	242	34.6
2. Are you now cutting down on salt to help lower or control your high blood pressure?		
Yes	536	68.0
No	139	25.9
Do not use salt	60	6.2
3. Are you now reducing alcohol use to help lower or control your high blood pressure?		
Yes	242	38.4
No	154	29.2
Do not drink	336	32.4
4. Are you now exercising to help lower or control your high blood pressure?		
Yes	475	71.0
No	250	29.0
5. Has a doctor or health provider ever advised you to change your eating habits to help lower or control your high blood pressure?		
Yes	427	57.6
No	303	42.4
6. Has a doctor or health provider ever advised you to cut down on salt to help lower or control your high blood pressure?		
Yes	466	58.0
No	239	39.9
Do not use salt	24	2.1
7. Has a doctor or health provider ever advised you to reduce alcohol use to help lower or control your high blood pressure?		
Yes	175	24.9
No	350	54.4
Do not drink	208	20.6
8. Has a doctor or health provider ever advised you to exercise to help lower or control your high blood pressure?		
Yes	563	74.2
No	167	25.8
9. Has a doctor or health provider ever advised you to take medication to help lower or control your high blood pressure?		
Yes	678	80.1
No	53	19.9
10. Were you told on two or more different visits to a doctor or other health professional that you had high blood pressure?		
Yes	625	77.0
Yes, but female told only during pregnancy	-	-
No	97	22.5
Told borderline or pre-hypertensive	-	-

n = number of respondents
[*]Estimates are weighted to population characteristics
[†]Among those with high blood pressure

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TABLE 13.9 BRFSS QUESTIONS REGARDING SIGNS OF HEART ATTACK AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

QUESTIONS	RESPONDENTS	
	n	%*
1. Do you think pain or discomfort in the jaw, neck, or back are symptoms of a heart attack?		
Yes	1,045	59.5
No	416	40.5
2. Do you think feeling weak, lightheaded, or faint are symptoms of a heart attack?		
Yes	1,073	74.5
No	402	25.5
3. Do you think chest pain or discomfort are symptoms of a heart attack?		
Yes	1,626	96.5
No	52	3.5
4. Do you think sudden trouble seeing in one or both eyes is a symptom of a heart attack?		
Yes	580	47.4
No	698	52.6
5. Do you think pain or discomfort in the arms or shoulder are symptoms of a heart attack?		
Yes	1,522	89.3
No	116	10.7
6. Do you think shortness of breath is a symptom of a heart attack?		
Yes	1,494	90.7
No	120	9.3

n = number of respondents
**Estimates are weighted to population characteristics*

TABLE 13.10 BRFSS QUESTIONS REGARDING SIGNS OF STROKE AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

QUESTIONS	RESPONDENTS	
	n	%*
1. Do you think sudden confusion or trouble speaking are symptoms of a stroke?		
Yes	1,546	95.0
No	54	5.0
2. Do you think sudden numbness or weakness of face, arm, or leg, especially on one side are symptoms of a stroke?		
Yes	1,627	97.6
No	28	2.4
3. Do you think sudden trouble seeing in one or both eyes is a symptom of a stroke?		
Yes	1,271	89.3
No	132	10.7
4. Do you think sudden chest pain or discomfort are symptoms of a stroke?		
Yes	615	47.9
No	655	52.1
5. Do you think sudden trouble walking, dizziness, or loss of balance are symptoms of a stroke?		
Yes	1,485	92.0
No	94	8.0
6. Do you think severe headache with no known cause is a symptom of a stroke?		
Yes	1,047	75.8
No	277	24.2
7. If you thought someone was having a heart attack or stroke, what is the first thing you would do?		
Take them to the hospital	112	6.7
Tell them to call their doctor	13	0.5
Call 911	1,494	88.6
Call their spouse or a family member	19	1.1
Do something else	80	3.0

n = number of respondents
**Estimates are weighted to population characteristics*

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Introduction

Diabetes refers to a group of conditions involving impaired glucose regulation in the body which when left untreated, results in serious disease and even death. In 2007, an estimated 7.8 percent of the United States population suffered from diabetes with 1.6 million new cases of diabetes diagnosed that year. Additionally, diabetes-related complications rank as the seventh leading cause of death in the United States as well as Tarrant County.[1-2]

When untreated or under-treated, diabetes can contribute to increases in heart disease and stroke, high blood pressure, vision problems, kidney and nervous system diseases, amputations, and periodontal disease. Experts approximate that diabetes cost the United States population more than $170 billion in 2007 due to medical expenditures, days of lost work, disability, and years of life lost.[1] During 2005-2008 in Tarrant County, preventable hospitalizations involving diabetes short-term and long-term complications cost residents over $240 million.[3] Among Texan diabetics in 2007, 43 percent had received a dilated eye exam, 66 percent had their feet checked by a physician, and 54 percent had visited a dentist within the past year.[4] Barriers to adequate treatment of diabetes include poor adherence to suggested lifestyle changes, cost of treatment, and a lack of consensus on best practice treatment models among physicians.[5]

Methods

In order to estimate diabetes prevalence among Tarrant County residents, the BRFSS questioned respondents regarding physician diagnosis of diabetes (among both children and adults), pre-diabetes, and diabetes management. Results for diagnosis of diabetes among persons aged 18 years and older were further analyzed by seven demographic factors (Table 14.1). Tarrant County diabetes prevalence among adults was compared to the prevalence of this condition among adults in Texas and the United States (Figure 14.1) as well as by geographic distribution at the sub-county level (Figure 14.2).

Results

- **One out of every twelve individuals aged 18 years and older in Tarrant County reported ever being told by a health professional that they had diabetes.**
- **As age group increased, the percentage of physician-diagnosed diabetes also increased.**
- **Twenty-eight percent of adults who reported being unable to work also reported ever receiving a diagnosis of diabetes.**

Overall, slightly more than eight percent of residents aged 18 years and older reported ever being told by a physician that they had diabetes [8.5%, 95% CI (7.6-9.6)]. A significantly higher percentage of residents in the northwest area of Tarrant County (10.9%) reported ever being diagnosed with diabetes compared to the northeast county

area (6.1%). Results did not significantly differ by gender or education level. More than one out of every five residents aged 55 to 64 years old or 65 years and older reported ever receiving a diabetes diagnosis. Among racial and ethnic groups, the percentage of individuals diagnosed with diabetes was highest among Blacks (11.8%), but not at a statistically significant level. The proportion of individuals with annual incomes below $15,000 who ever received a diabetes diagnosis (12.2%) was 1.6 times higher than this proportion among individuals with annual incomes of $50,000 or higher (7.4%). More than one-quarter of individuals reporting an inability to work also reported ever receiving a diagnosis of diabetes (Table 14.1).

The proportion of Tarrant County adults with diabetes (8.5%) did not differ significantly from the proportion of adults with diabetes in Texas (9.3%) or the United States (9.1%) (Figure 14.1).

TABLE 14.1 DIABETES AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

DIAGNOSED WITH DIABETES				
CHARACTERISTICS	**n**	**WEIGHTED PERCENTAGE***	**N**	**95% CONFIDENCE INTERVAL**
Total	552	8.5	3,956	7.6-9.6
Sub-County Area				
Northeast	80	6.1	801	4.5-8.2
Southeast	80	7.4	625	5.6-9.8
Central	158	10.8	871	8.8-13.2
Southwest	109	8.0	847	6.3-10.0
Northwest	125	10.9	812	8.8-13.5
Gender				
Male	193	8.2	1,343	6.8-9.8
Female	358	8.9	2,606	7.6-10.3
Age (in years)				
18-24	-	-	-	-
25-34	13	2.9	361	1.5-5.3
35-44	26	3.8	601	2.4-6.0
45-54	90	12.8	822	10.0-16.1
55-64	156	20.3	810	16.9-24.2
≥65	259	23.0	1,168	20.3-26.1
Race/Ethnicity				
White	345	8.0	2,792	7.0-9.2
Black	114	11.8	520	8.5-16.1
Hispanic	68	8.6	475	6.2-11.9
Other	16	7.6	112	4.1-13.7
Education				
< High school	79	9.9	454	6.9-14.0
High school or GED	172	10.3	951	8.4-12.6
Tech/Some college	160	8.5	1,123	6.8-10.6
College degree	137	6.8	1,415	5.4-8.5
Annual Income				
<$15,000	91	12.2	381	8.7-16.8
$15,000 - $24,999	90	9.7	558	7.2-12.8
$25,000 - $34,999	59	12.0	328	8.2-17.3
$35,000 - $49,999	62	7.9	437	5.5-11.2
≥$50,000	160	7.4	1,602	6.1-9.1
Employment				
Employed for wages	142	6.4	1,645	5.1-7.9
Self-employed	28	7.0	270	4.1-11.8
Out of work for >1yr	19	6.4	134	3.5-11.4
Out of work for <1yr	14	4.1	147	2.2-7.5
Homemaker	32	5.9	402	3.5-9.8
Student	-	-	-	-
Retired	217	23.1	983	20.1-26.6
Unable to work	94	28.0	280	21.0-36.1

n = number of respondents who reported physician-diagnosed diabetes
N = total number of respondents who answered the question
**Estimates weighted to population characteristics*

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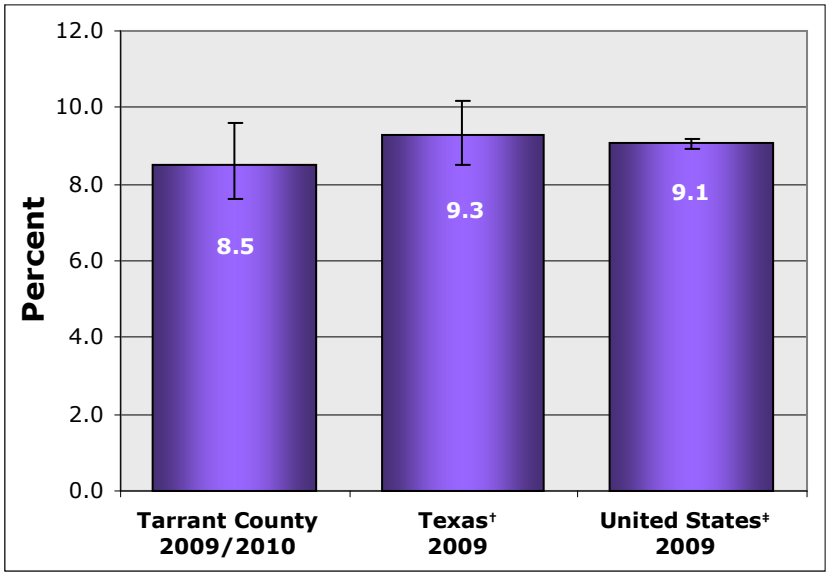
FIGURE 14.1 DIABETES AMONG ADULTS 18 YEARS AND OLDER, TARRANT COUNTY, TEXAS, AND THE UNITED STATES



†Data source: 2009 BRFSS, Texas Department of State Health Services
‡Data source: 2009 BRFSS, Centers for Disease Control and Prevention
Estimates are weighted to population characteristics
No comparable Healthy People 2010 Objective available

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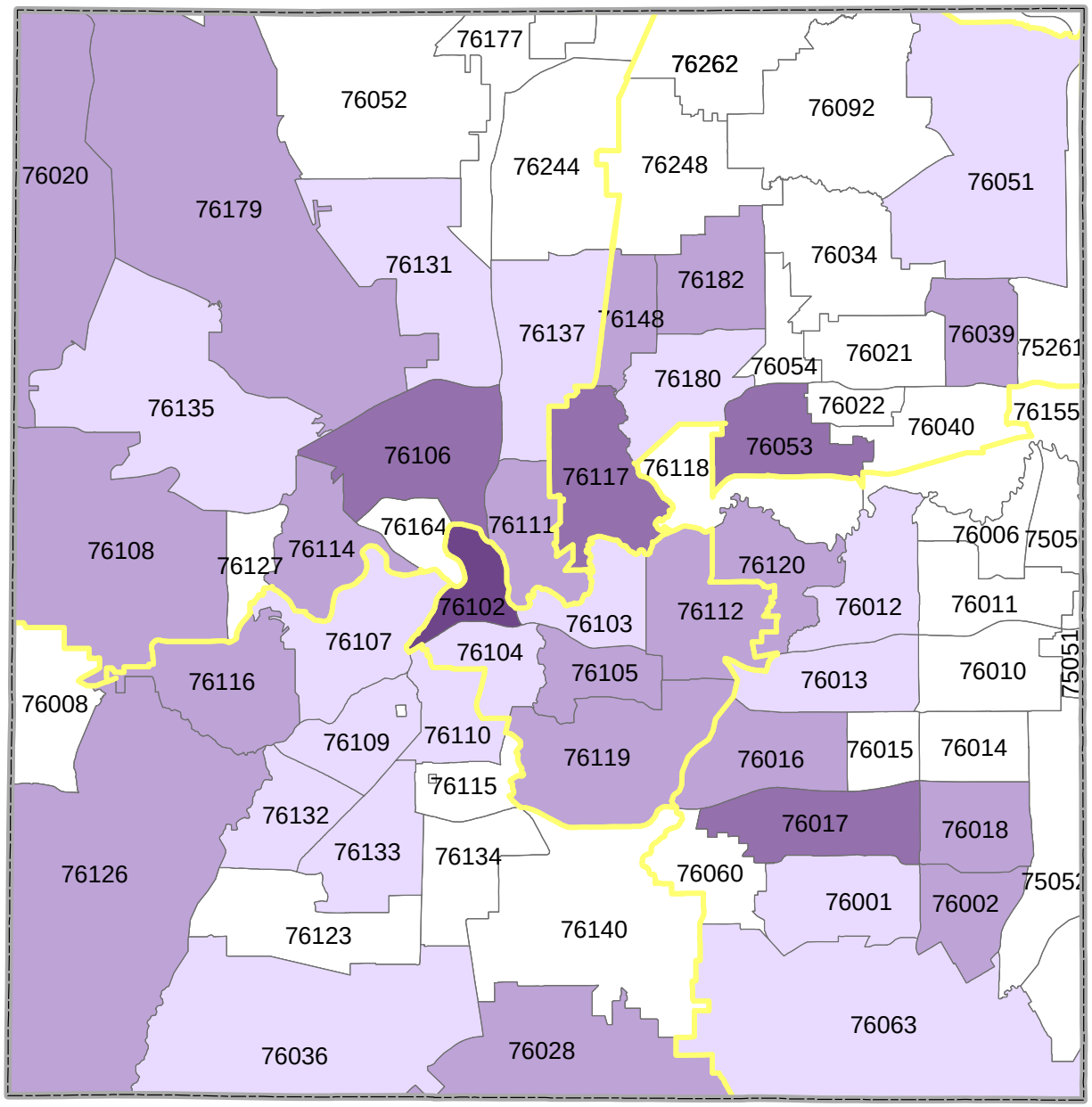
FIGURE 14.2 DIABETES AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER BY ZIP CODE, 2009/2010



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Weighted Percent*

- 2.2% - 8.9%
- 9.0% - 17.8%
- 17.9% - 26.8%
- 26.9% - 35.7%
- No or suppressed data
- Subcounty Areas
- Tarrant County boundary

N, W, E, S

GIS Geographic Information Systems TARRANT COUNTY Public Health

*Estimates weighted to population characteristics

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TABLE 14.2 BRFSS QUESTIONS REGARDING PRE-DIABETES AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

QUESTIONS	RESPONDENTS	
	n	%*
1. Have you had a test for high blood sugar or diabetes within the past three years?		
Yes	2,047	51.8
No	1,239	48.2
2. Have you ever been told by a doctor or other health professional that you have pre-diabetes or borderline diabetes?		
Yes	170	3.8
Yes, during pregnancy	30	0.9
No	3,158	95.3

n = number of respondents
**Estimates weighted to population characteristics*

TABLE 14.3 BRFSS QUESTIONS REGARDING DIABETES AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

QUESTIONS	RESPONDENTS	
	n	%*
1. Have you ever been told by a doctor that you have diabetes?		
Yes	552	8.5
Yes, but female told during pregnancy	41	1.1
No	3,326	89.7
No, pre-diabetes or borderline diabetes	37	0.7
2. How old were you when you were told you have diabetes?[1]		
<18 years	9	2.8
18-39 years	79	25.5
40-64 years	340	61.8
≥65 years	92	9.9

n = number of respondents
**Estimates weighted to population characteristics*
1. Among those ever told that they have diabetes

TABLE 14.4 BRFSS QUESTIONS REGARDING DIABETES AMONG TARRANT COUNTY CHILDREN LESS THAN 18 YEARS OLD, 2009/2010

QUESTIONS	RESPONDENTS	
	n	%*
1. Has a doctor, nurse, or other health professional EVER said that this child has diabetes?		
Yes	-	-
No	992	99.6
2. Does this child have type 1 or type 2 diabetes?[1]		
Type 1	-	-
Type 2	-	-

n = number of respondents
**Estimates weighted to population characteristics*
1. Among those reported to have ever been told that they have diabetes

TABLE 14.5 BRFSS QUESTIONS REGARDING DIABETES MANAGEMENT AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010†

QUESTIONS	RESPONDENTS	
	n	%*
1. Are you now taking insulin?		
Yes	162	27.6
No	391	72.4
2. About how often do you check your blood for glucose or sugar?		
Daily	385	68.4
3-6 times per week	40	5.7
1-2 times per week	46	11.1
1-3 times per month	20	3.9
1-6 times per year	6	2.1
Never	50	8.8
3. About how often do you check your feet for any sores or irritations?		
Daily	341	59.7
3-6 times per week	30	5.4
1-2 times per week	69	13.8
1-3 times per month	24	6.6
1-6 times per year	-	-
Never	55	13.4
4. About how many times in the past 12 months have you seen a doctor, nurse, or other health professional for your diabetes?		
None	59	12.5
1-2 times	179	37.8
3-4 times	189	32.9
5-6 times	49	7.0
More than 6 times	54	9.8
5. About how many times in the past 12 months has a doctor, nurse, or other health professional check you for "A one C"?		
None	42	9.0
Once	70	14.0
Twice	116	27.1
More than twice	240	42.8
Never heard of A1C	38	7.1
6. About how many times in the past 12 months has a health professional checked your feet for any sores or irritations?		
None	142	27.9
Once	104	22.7
More than once	281	49.3
7. When was the last time you had an eye exam in which the pupils were dilated?		
Within past month (anytime less than 1 month ago)	104	17.1
Within past year (1 month but less than 12 months ago)	275	52.0
Within past 2 years (1 year but less than 2 years ago)	83	16.2
2 or more years ago	69	10.8
Never	15	3.8
8. Has a doctor ever told you that diabetes has affected your eyes or that you had retinopathy?		
Yes	97	16.4
No	446	83.6
9. Have you ever taken a course or class in how to manage your diabetes yourself?		
Yes	361	64.3
No	191	35.7

†*Among those ever told that they have diabetes*
n = number of respondents
**Estimates weighted to population characteristics*

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Introduction

Asthma is a chronic condition involving inflammation of the airways that affects approximately 20 million Americans each year with slightly more than 11 million Americans reporting asthma attacks within any given month. From 1980 to 1996, asthma prevalence appeared to increase within the United States before leveling off in the time period of 2001 to 2003.[1] During 2005 to 2008, preventable hospitalizations due to asthma among persons aged 18 years and older in Tarrant County resulted in hospital charges of almost $85 million.[2] However, asthma-associated costs consist not only of hospitalization and medication charges, but also lost work and school days due to illness.[3]

Methods

BRFSS assessed adult and childhood asthma prevalence in Tarrant County by questioning respondents regarding a history of asthma diagnosed by a health professional. Results for current asthma among children and adults were further analyzed by seven demographic factors (Tables 15.1-15.2). Lastly, Tarrant County asthma prevalence among adults was compared with the prevalence in Texas and the United States (Figure 15.1) as well as by geographic distribution at the sub-county level (Figure 15.2).

Results

Fewer than one out of every ten Tarrant County adults aged 18 years and older reported currently having asthma [9.2%, 95% CI (7.9-10.8)]. Results did not differ significantly by sub-county area of residence, age group, race/ethnicity, education level, or annual income. Approximately twice as many adult women reported currently having asthma (11.9%) compared to adult men (6.5%). Compared to self-employed (8.1%), otherwise employed (8.0%), and retired adults (7.8%), the percentage of adults who were unable to work and currently had asthma (23.3%) was almost four times higher (Table 15.1).

- **Less than 10 percent of Tarrant County adults reported currently having asthma.**
- **Asthma prevalence among adult women was almost twice this prevalence among adult men.**
- **Approximately one in seven Tarrant County Black children was reported to currently have asthma.**

The reported prevalence of asthma among those in Tarrant County aged less than 18 years was below 10 percent [7.2%, 95% CI (5.6-9.2)]. As with asthma prevalence among adults, results did not significantly differ by sub-county area of residence, parent education level, or parent annual income; additionally, asthma prevalence was not significantly different by parent employment status. In contrast to asthma prevalence among Tarrant County adults, the percentage of male children reported to currently have asthma (10.1%) was more than twice that of female children (4.3%). Fewer than one out of every fifty children aged 4 years and younger were reported to currently have asthma. A significantly higher proportion of Black children (14.2%) than Hispanic children (4.0%) currently suffered from asthma (Table 15.2).

Although the prevalence of asthma among Tarrant County adults was significantly higher (9.2%) than that of adult Texans (6.5%), this prevalence was not significantly different from that of adults in the United States (8.4%) (Figure 15.1).

TABLE 15.1 ASTHMA AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

ASTHMA AMONG ADULTS				
CHARACTERISTIC	**n**	**WEIGHTED PERCENTAGE***	**N**	**95% CONFIDENCE INTERVAL**
Total	387	9.2	3,929	7.9-10.8
Sub-County Area				
Northeast	72	9.3	797	6.3-13.7
Southeast	66	10.4	621	7.4-14.4
Central	86	8.6	866	6.2-11.8
Southwest	83	9.4	841	7.1-12.3
Northwest	80	7.8	804	6.0-10.1
Gender				
Male	80	6.5	1,336	4.8-8.7
Female	307	11.9	2,586	9.9-14.1
Age (in years)				
18-24	11	8.1	124	4.0-15.7
25-34	38	10.5	357	7.2-15.1
35-44	46	7.3	598	5.1-10.2
45-54	96	10.6	819	8.3-13.5
55-64	85	10.2	804	7.9-13.2
≥65	105	9.1	1,162	7.3-11.2
Race/Ethnicity				
White	284	9.8	2,770	8.2-11.7
Black	63	13.0	517	8.6-19.1
Hispanic	26	5.4	475	3.1-9.2
Other	9	5.9	112	2.7-12.4
Education				
< High school	42	6.8	451	4.0-11.4
High school or GED	95	9.8	946	7.0-13.5
Tech/Some college	115	9.1	1,112	6.8-12.2
College degree	134	9.9	1,407	7.8-12.5
Annual Income				
<$15,000	48	8.4	376	5.5-12.6
$15,000 - $24,999	53	7.6	556	5.5-10.6
$25,000 - $34,999	35	9.8	325	5.3-17.3
$35,000 - $49,999	41	11.1	435	6.8-17.5
≥$50,000	149	9.6	1,594	7.6-12.0
Employment				
Employed for wages	155	8.0	1,633	6.3-10.0
Self-employed	28	8.1	268	5.0-12.8
Out of work for >1yr	15	18.4	134	9.1-33.8
Out of work for <1yr	19	11.4	143	5.7-21.2
Homemaker	27	6.4	401	3.3-12.1
Student	9	14.0	73	6.5-27.4
Retired	74	7.8	979	6.0-10.0
Unable to work	58	23.3	276	16.7-31.6

n = number of respondents who reported that they currently have health care provider-diagnosed asthma
N = total number of respondents who answered the question
**Estimates weighted to population characteristics*

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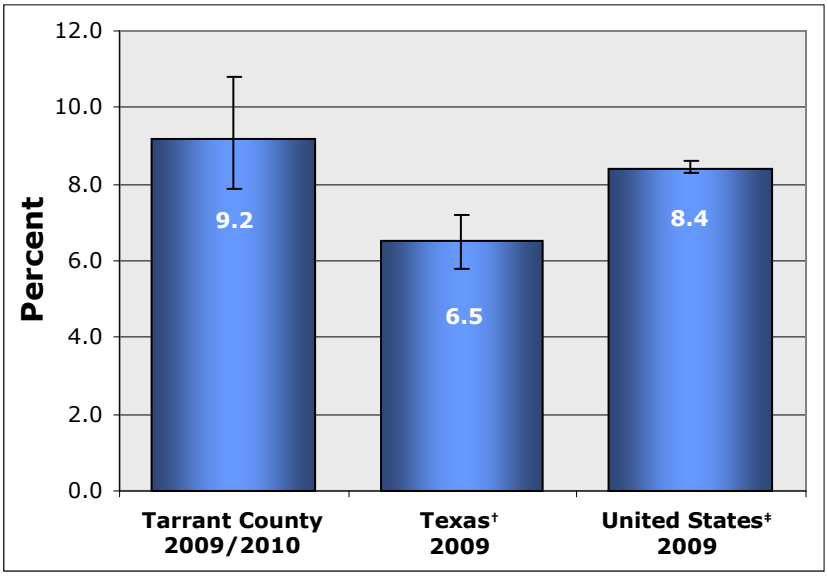
TABLE 15.2 ASTHMA AMONG TARRANT COUNTY CHILDREN LESS THAN 18 YEARS OLD, 2009/2010

ASTHMA AMONG CHILDREN				
CHARACTERISTIC	**n**	**WEIGHTED PERCENTAGE***	**N**	**95% CONFIDENCE INTERVAL**
Total	94	7.2	1,001	5.6-9.2
Sub-County Area				
Northeast	21	7.7	231	4.8-12.2
Southeast	14	5.5	167	3.1-9.4
Central	16	7.1	183	3.9-12.5
Southwest	18	8.5	185	4.7-14.7
Northwest	25	8.6	235	5.3-13.8
Gender				
Male	64	10.1	544	7.4-13.5
Female	28	4.3	444	2.8-6.6
Age (in years)				
0-4	6	1.6	229	0.6-4.1
5-9	33	10.8	244	7.2-15.8
10-14	31	10.6	252	6.7-16.3
15-17	19	8.5	187	5.2-13.8
Race/Ethnicity				
White	57	7.7	562	5.6-10.4
Black	17	14.2	130	8.0-23.7
Hispanic	17	4.0	255	2.3-6.8
Other	-	-	-	-
Parent Education				
< High school	7	2.8	149	1.0-7.9
High school or GED	23	10.5	207	6.7-16.1
Tech/Some college	25	7.3	260	4.4-11.9
College degree	39	7.4	381	5.0-10.8
Parent Annual Income				
<$15,000	5	8.1	77	2.6-22.0
$15,000 - $24,999	13	6.2	143	3.2-11.7
$25,000 - $34,999	8	6.7	76	3.0-14.4
$35,000 - $49,999	5	2.7	86	1.0-7.5
≥$50,000	54	8.5	499	6.2-11.6
Parent Employment				
Employed for wages	57	7.6	577	5.5-10.2
Self-employed	10	7.8	86	3.4-16.8
Out of work for >1yr	-	-	-	-
Out of work for <1yr	6	10.1	56	3.4-26.0
Homemaker	10	5.0	149	2.4-10.0
Student	-	-	-	-
Retired	-	-	-	-
Unable to work	5	12.8	39	4.4-31.9

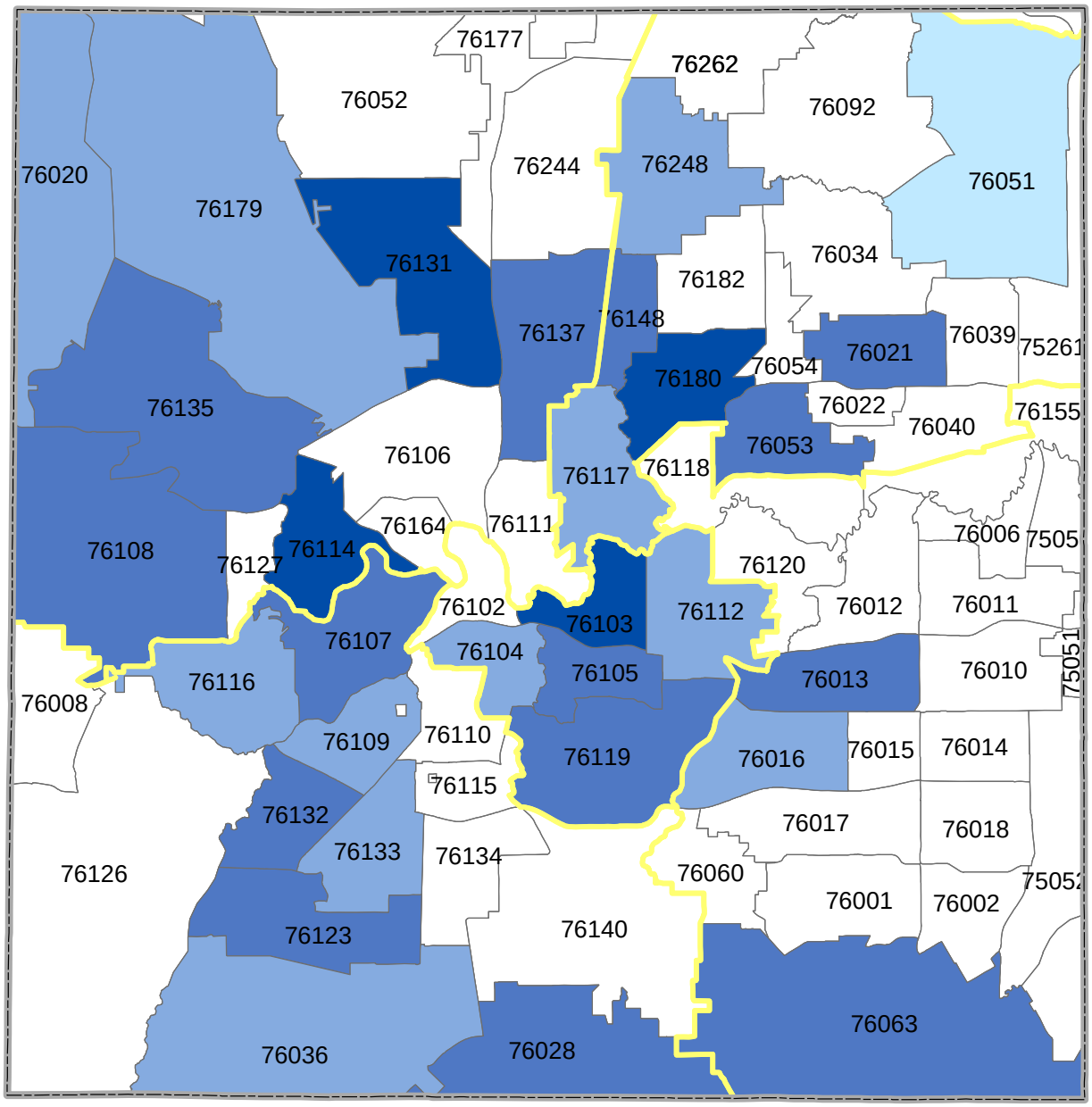
n = number of children reported to currently have health care provider-diagnosed asthma
N = total number of respondents who answered the question
**Estimates weighted to population characteristics*

FIGURE 15.1 ASTHMA AMONG ADULTS 18 YEARS AND OLDER, TARRANT COUNTY, TEXAS, AND THE UNITED STATES



†Data source: 2009 BRFSS, Texas Department of State Health Services
‡Data source: 2009 BRFSS, Centers for Disease Control and Prevention
Estimates weighted to population characteristics
No comparable Healthy People 2010 Objective available

FIGURE 15.2 ASTHMA AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER BY ZIP CODE, 2009/2010



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Weighted Percent*

- 4.7% - 4.8%
- 4.9% - 9.5%
- 9.6% - 14.3%
- 14.4% - 19.0%
- No or suppressed data
- Subcounty Areas
- Tarrant County boundary

N, W, E, S

GIS Geographic Information System TARRANT COUNTY Public Health

*Estimates weighted to population characteristics

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TABLE 15.3 BRFSS QUESTIONS REGARDING ASTHMA AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

QUESTIONS	RESPONDENTS	
	n	%*
1. Have you ever been told by a doctor, nurse or other health professional that you had asthma?		
Yes	574	15.3
No	3,379	84.7
2. Do you still have asthma?[1]		
Yes	387	63.4
No	163	36.6

n = number of respondents
**Estimates weighted to population characteristics*
1. Among those who had ever been told by a health professional that they had asthma

TABLE 15.4 BRFSS QUESTIONS REGARDING ASTHMA AMONG TARRANT COUNTY CHILDREN LESS THAN 18 YEARS OLD, 2009/2010

QUESTIONS	RESPONDENTS	
	n	%*
1. Has a doctor, nurse or other health professional EVER said that the child has asthma?		
Yes	135	11.1
No	870	88.9
2. Does the child still have asthma?[1]		
Yes	94	67.6
No	37	32.4

n = number of respondents
**Estimates weighted to population characteristics*
1. Among those reported to have ever been told by a health professional that they had asthma

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ADDITIONAL BRFSS MODULES

TABLE A.1 BRFSS QUESTIONS REGARDING HEALTHY DAYS (SYMPTOMS) AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

HEALTHY DAYS (SYMPTOMS)		
QUESTIONS	**RESPONDENTS**	
	n	**%** *
1. During the past 30 days, for about how many days did pain make it hard for you to do your usual activities, such as self-care, work, or recreation?		
None	1,137	72.5
Less than five days	205	14.5
Five or more days	315	13.0
2. During the past 30 days, for about how many days have you felt sad, blue, or depressed?		
None	946	57.2
Less than five days	416	26.7
Five or more days	300	16.1
3. During the past 30 days, for about how many days have you felt worried, tense, or anxious?		
None	635	35.2
Less than five days	488	28.5
Five or more days	536	36.2
4. During the past 30 days, for about how many days have you felt very healthy and full of energy?		
None	200	8.9
Less than five days	103	5.2
Five or more days	1,335	85.9

n = number of respondents

**Estimates weighted to population characteristics*

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TABLE A.2 BRFSS QUESTIONS REGARDING EMOTIONAL SUPPORT AND LIFE SATISFACTION AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

EMOTIONAL SUPPORT AND LIFE SATISFACTION		
QUESTIONS	**RESPONDENTS**	
	n	**%***
1. How often do you get the social and emotional support you need?		
Always	1,688	50.2
Usually	980	30.3
Sometimes	459	12.5
Rarely	138	3.3
Never	138	3.6
2. In general, how satisfied are you with your life?		
Very satisfied	1,647	46.6
Satisfied	1,572	46.8
Dissatisfied	174	5.6
Very dissatisfied	36	1.0

n = number of respondents

**Estimates weighted to population characteristics*

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TABLE A.3A BRFSS QUESTIONS REGARDING FAMILY PLANNING AMONG TARRANT COUNTY ADULTS 18 TO 60 YEARS OLD, 2009/2010†

FAMILY PLANNING		
QUESTION	**RESPONDENTS**	
	n	**%***
1. Are you or your partner doing anything now to keep from getting pregnant?		
Yes	353	62.6
No	155	25.1
No partner – not sexually active	77	11.6
Same sex partner	7	0.7
2. What are you or your partner doing now to keep from getting pregnant?[1]		
Male condoms	63	23.0
Tubes tied	71	19.7
Pill, all kinds	55	17.2
Vasectomy	67	15.7
Hysterectomy	25	4.9
Other	59	19.4
3. What is the main reason for not doing anything to keep from getting pregnant?[2]		
You want a pregnancy	25	20.6
You or your partner had a hysterectomy	24	14.8
Do not think you or your partner can get pregnant	11	8.0
Do not care if you get pregnant	8	7.0
You or your partner are too old	17	6.5
Other	57	43.1
4. How do you feel about having a child now or sometime in the future?[3]		
You do not want to have one	124	29.8
You do want to have one	115	49.8
You are not sure if you do or you do not	53	20.4
5. How soon would you want to have a child?[4]		
Less than 12 months from now	39	27.2
Between 12 months to less than two years from now	32	22.8
Between two years to less than five years from now	25	24.4
Five or more years from now	16	25.6

†Among non-pregnant women between 18 and 45 years old and among men between 18 and 60 years old
n = number of respondents
**Estimates are weighted to population characteristics*
1. Among those who reported currently doing something to prevent pregnancy; Top five responses shown with remaining responses classified as "Other"; Other methods include shots, IUD or IUC, not having sex at certain times, abstinence, contraceptive implants, diaphragm, cervical ring/cap, contraceptive patch, female condoms, withdrawal, etc.
2. Among those who reported not currently doing something to prevent pregnancy; Top five responses shown with remaining responses classified as "Other"; Other reasons include tubes tied, did not think was going to have sex, no regular partner, currently pregnant, do not like birth control / fear side effects, cannot pay for birth control, vasectomy, etc.
3. Among those who were able to still have children
4. Among those who were able to still have children and reported wanting to have a child

TABLE A.3B BRFSS QUESTIONS REGARDING FAMILY PLANNING AMONG TARRANT COUNTY ADULTS 18 TO 60 YEARS OLD, 2009/2010†

FAMILY PLANNING (CONTINUED)		
QUESTION	**RESPONDENTS**	
	n	**%***
6. Where is your usual source of service for female health concerns?[5]		
Private gynecologist	482	48.9
Family doctor	467	29.8
I do not get these services	118	12.4
Family planning clinic	55	5.5
Health department	13	1.3
Other	24	2.2
7. In the past 30 days, how many pills that you were supposed to take did you miss?[6]		
Missed only one pill	-	-
Missed two or more pills	-	-
Never missed a pill	29	77.8
8. What reasons were very important in your decision to choose your current method of birth control [can choose up to three responses]?[7]		
Avoiding pregnancy	32	27.2
It does not cause side effects; I know it is safe	14	15.2
It is easy to get	9	11.1
Do not need to take medicine everyday	6	9.9
It does not cost that much	8	5.9
Other	35	30.8
9. There are birth control methods that work for three months or longer such as implant, shots, and IUDs. What are the reasons for you not choosing to use these methods [can choose up to three responses]?[8]		
Afraid of side effects	22	19.5
Did not know they existed	-	-
Do not know if they are safe	8	8.4
They are not affordable / They cost too much	-	-
My doctor did not recommend it	-	-
Other	43	49.9

†Among non-pregnant women between 18 and 45 years old and among men between 18 and 60 years old
n = number of respondents
**Estimates are weighted to population characteristics*
5. Among non-pregnant women between 18 and 45 years old
6. Among non-pregnant women between 18 and 45 years old who reported using the pill to prevent pregnancy
7. Among non-pregnant women between 18 and 45 years old who reported using methods other than tubes tied, hysterectomy, and abstinence to prevent pregnancy; Top five responses shown with remaining responses classified as "Other"; Other reasons include it is easily available, my doctor recommended it, my family recommended it, change in menstrual cycle scares me / would rather have a period every month, I can stop using it and get pregnant when I want, etc.
8. Among non-pregnant women between 18 and 45 years old who reported using methods to prevent pregnancy that do not last for three months or longer; Top five responses shown with remaining responses classified as "Other"; Other reasons include religious beliefs, may want to get pregnant sooner, my friends do not recommend it, insurance does not cover it, cannot get them, etc.

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TABLE A.4 BRFSS QUESTION REGARDING INTIMATE PARTNER VIOLENCE AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

INTIMATE PARTNER VIOLENCE		
QUESTION	RESPONDENTS	
	n	%*
1. In the past 12 months, have you experienced any physical violence or had unwanted sex with an intimate partner?		
Yes	19	1.8
No	1,623	98.2

n = number of respondents
**Estimates weighted to population characteristics*

TABLE A.5 BRFSS QUESTIONS REGARDING HIV/AIDS AMONG TARRANT COUNTY ADULTS 18 TO 64 YEARS OLD, 2009/2010

HIV/AIDS		
QUESTIONS	RESPONDENTS	
	n	%*
1. Have you ever been tested for HIV?		
Yes	999	44.6
No	1,342	55.4
2. Where did you have your last HIV test?[1]		
Private doctor or HMO office	452	45.0
Hospital	191	17.6
Clinic	182	16.6
Counseling and testing site	32	3.6
Jail or prison (or other correctional facility)	19	3.2
At home	28	2.6
Drug treatment facility	-	-
Somewhere else	78	10.8
3. Was it a rapid test where you could get your results within a couple of hours?[2]		
Yes	57	25.8
No	167	74.2
4. Do any of these conditions apply to you?[3]		
Yes	80	3.9
No	2,322	96.1

n = number of respondents
**Estimates weighted to population characteristics*
1. Among those ever tested for HIV
2. Among those tested for HIV within the past 12 months
3. Conditions included participating in any of the following activities within the past year: used intravenous drugs, treated for a sexually transmitted or venereal disease, given or received money or drugs in exchange for sex, or had anal sex without a condom

TABLE A.6 BRFSS QUESTIONS REGARDING HEPATITIS B VACCINE AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

HEPATITIS B VACCINE		
QUESTIONS	RESPONDENTS	
	n	%*
1. Have you EVER received the hepatitis B vaccination?		
Yes	454	45.1
No	895	54.9
2. How many Hepatitis B shots did you receive?[1]		
1	70	13.6
2	83	23.1
All 3 shots	209	63.4

n = number of respondents
**Estimates weighted to population characteristics*
1. Among those who ever received the hepatitis B vaccination

TABLE A.7 BRFSS QUESTION REGARDING CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)		
QUESTION	RESPONDENTS	
	n	%*
1. Have you EVER been told by a doctor or another health care professional that you have chronic obstructive pulmonary disease, also called COPD, emphysema or chronic bronchitis?		
Yes	141	5.1
No	1,528	94.9

n = number of respondents
**Estimates weighted to population characteristics*

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TABLE A.8 BRFSS QUESTIONS REGARDING SLEEP AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

SLEEP		
QUESTIONS	**RESPONDENTS**	
	n	**%***
1. During the past 30 days, for about how many days have you felt you did not get enough rest or sleep?		
None	1,380	30.2
1-6 days	1,161	30.6
7-13 days	399	10.7
14-20 days	451	14.5
21-29 days	123	3.9
30 days	353	10.0
2. On average, how many hours of sleep do you get in a 24-hour period?		
<7 hours	545	35.5
7-9 hours	1,020	58.4
>9 hours	94	6.1
3. Do you snore?		
Yes	745	47.3
No	699	52.7
4. During the past 30 days, for about how many days did you find yourself unintentionally falling asleep during the day?		
None	1,049	64.4
1-6 days	412	26.7
7-13 days	76	2.9
14-20 days	41	3.5
21-29 days	8	0.3
30 days	60	2.2
5. During the past 30 days, have you ever nodded off or fallen asleep, even just for a brief moment, while driving?		
Yes	61	6.5
No	1,554	91.4
Do not drive	48	1.4
Do not have license	5	0.7

n = number of respondents

**Estimates weighted to population characteristics*

TABLE A.9 BRFSS QUESTIONS REGARDING DISABILITY AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

DISABILITY		
QUESTIONS	**RESPONDENTS**	
	n	**%***
1. Are you limited in any way in any activities because of physical, mental, or emotional problems?		
Yes	909	15.3
No	2,946	84.7
2. 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	440	5.6
No	3,435	94.4

n = number of respondents
**Estimates weighted to population characteristics*

TABLE A.10 BRFSS QUESTIONS REGARDING VETERANS' HEALTH STATUS AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010†

VETERANS' HEALTH STATUS		
QUESTIONS	**RESPONDENTS**	
	n	**%***
1. Which of the following best describes your service in the United States military?		
Discharged from military service	349	68.1
Retired from military service	88	17.7
Medically discharged from military service	23	9.3
Currently in a National Guard or Reserve unit	8	3.4
Currently on active duty	-	-
2. Since November 11, 1998, have you served on active duty in a theater of combat operations?		
Yes	31	19.2
No	442	80.8

† Among those who reported they were currently on active duty, on active duty during the last 12 months but not now, on active duty in the past but not during the last 12 months, or training for Reserves or National Guard
n = number of respondents
**Estimates weighted to population characteristics*

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TABLE A.11 BRFSS QUESTION REGARDING CAREGIVER STATUS AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

CAREGIVER STATUS		
QUESTION	RESPONDENTS	
	n	%*
1. During the past month, did you provide [regular] care or assistance to a friend or family member [who has a health problem, long-term illness, or disability]?		
Yes	1,021	25.0
No	2,884	75.0

n = number of respondents
**Estimates weighted to population characteristics*

TABLE A.12 BRFSS QUESTIONS REGARDING CANCER SURVIVORS AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

CANCER SURVIVORS		
QUESTIONS	RESPONDENTS	
	n	%*
1. Have you EVER been told by a doctor, nurse, or other health professional that you had cancer?		
Yes	486	8.7
No	2,943	91.3
2. How many different types of cancer have you had?[1]		
Only one	396	84.9
Two	70	13.1
Three or more	13	2.0
3. At what age [were you told that you had / was your first diagnosis of] cancer?[2]		
<35 years	71	27.4
35-49 years	128	30.7
50-64 years	157	27.3
≥65 years	110	14.6
4. [With your most recent diagnosis of cancer] what type of cancer was it?[2-3]		
Non-melanoma skin cancer	128	28.3
Melanoma (skin cancer)	40	11.6
Cervical cancer	33	11.4
Breast cancer	82	11.2
Prostate cancer	40	6.9
Other cancers	134	30.6

n = number of respondents
**Estimates weighted to population characteristics*
1. Among those ever told by a health professional that they had cancer
2. Among those who reported having at least one type of cancer
3. Top five responses shown with remaining responses classified as "Other"; Other cancers include endometrial, ovarian, head and neck, oral, pharyngeal/throat, thyroid, colon/intestine, esophageal, liver, pancreatic, stomach, Hodgkin's lymphoma/disease, leukemia/blood, Non-Hodgkin's lymphoma, testicular, lung, bladder, renal/kidney, bone, brain, etc.

TABLE A.13A BRFSS QUESTIONS REGARDING PANDEMIC INFLUENZA AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

PANDEMIC INFLUENZA		
QUESTIONS	**RESPONDENTS**	
	n	**%***
1. What do you think is the most effective <u>ONE</u> thing you can do to prevent getting sick from the flu?		
Avoid close contact with others who may have the flu	1,340	38.5
Avoiding touching your eyes, nose or mouth as much as possible during the flu season	1,282	35.4
Getting the flu vaccination	797	20.8
Taking anti-viral medicine, like Tamiflu®, on the first or second day that you have symptoms of the flu	155	5.3
2. What do you think is the most effective thing to do to prevent spreading the flu to people when you are sick?		
Staying home when you are sick with the flu	2,488	64.2
Frequent hand washing	700	19.6
Covering your mouth and nose when coughing or sneezing	305	8.6
Getting the flu vaccination	191	6.0
Something else	39	1.5
3. If there is a pandemic flu outbreak and you do not get the pandemic flu vaccination, what do you think your chances are of getting sick with the pandemic flu?		
Very high (90-100%)	289	8.7
High (70-89%)	519	16.5
Average (50-69%)	1,501	42.2
Low (20-49%)	741	19.8
Very low (0-19%)	529	12.8
4. If there was a pandemic flu outbreak, how likely are you to get a pandemic flu vaccination if it was available to you?		
Definitely get one	1,426	35.0
Probably get one	1,343	38.2
Probably not get one	615	19.3
Definitely not get a pandemic flu vaccination	277	7.5
5. If public health officials recommended that everyone go to a particular public place such as a local school, fire station, or sports stadium to get vaccinated to prevent the spread of pandemic, would you. . .?		
Definitely go	1,096	30.2
Probably go	1,346	35.9
Probably not go	814	23.2
Definitely not go to a particular place to get vaccinated	395	10.6

n = number of respondents

**Estimates weighted to population characteristics*

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TABLE A.13B BRFSS QUESTIONS REGARDING PANDEMIC INFLUENZA AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

PANDEMIC INFLUENZA (CONTINUED)		
QUESTIONS	**RESPONDENTS**	
	n	**%***
6. What would be the most important ONE thing you would want to know [in the event of a pandemic flu outbreak in the U.S.]?		
How to prevent getting the flu	1,531	38.9
Symptoms of the flu	468	15.1
How to treat the flu	486	15.1
Information about the flu vaccine	368	10.8
How to prevent spreading the flu	280	7.1
Cities where cases of the flu have been identified	144	4.5
Something else	269	8.5
7. During a pandemic flu outbreak in the U.S., what would be your ONE most preferred source for getting information about the pandemic flu?		
Television	1,444	36.8
Internet websites	646	27.3
Your doctor	811	17.9
The CDC (Centers for Disease Control and Prevention)	131	4.5
Newspapers	170	4.3
State or local public health departments	103	2.9
Radio	83	2.2
Family or friends	29	0.8
Other government agencies	15	0.4
Religious leaders	-	-
Some other source	107	2.8
8. Excluding vaccination, what is the ONE most likely thing you would do if a pandemic flu outbreak were reported IN YOUR STATE?		
Consult your doctor	1,088	25.0
Avoid crowds and public events	858	23.2
Wash hands frequently	616	18.6
Keep household members at home while the outbreak lasts	335	11.4
Consult a website	136	4.7
Stock up on medicines and food to help with flu symptoms	133	4.2
Try to get a prescription for an anti-viral drug such as Tamiflu®	131	3.7
Reduce or avoid travel	44	1.9
Wear a face mask	55	1.4
Something else	180	5.9

n = number of respondents
**Estimates weighted to population characteristics*

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TABLE A.13C BRFSS QUESTIONS REGARDING PANDEMIC INFLUENZA AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

PANDEMIC INFLUENZA (CONTINUED)		
QUESTIONS	**RESPONDENTS**	
	n	**%***
9. If public health officials recommended that everyone stay at home for a month because of a serious outbreak of pandemic flu in your community, [how likely are you] to stay home for a month?		
Very likely	1,340	32.0
Somewhat likely	929	27.6
Somewhat unlikely	506	15.8
Very unlikely to stay at home for a month	803	24.5
10. Please [indicate] if you currently work in any of these fields?[1]		
Yes	294	15.7
No	1,455	83.6
Refused	-	-

n = number of respondents

**Estimates weighted to population characteristics*

1. Fields of work indicated include emergency medical services, law enforcement, fire services, manufacture of pandemic vaccines or anti-virals, public health, healthcare provider, home health, nursing home, and homeland or national security as one who would be deployed during a flu pandemic

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TABLE A.14 BRFSS QUESTIONS REGARDING EMERGENCY PREPAREDNESS AND RESPONSE BRANCH (EPRB) AMONG TARRANT COUNTY ADULTS 18 YEARS AND OLDER, 2009/2010

EMERGENCY PREPAREDNESS AND RESPONSE BRANCH (EPRB)		
QUESTIONS	**RESPONDENTS**	
	n	**%***
1. If government officials ordered a mandatory evacuation in your area because of a major disaster such as a hurricane, flood, wildfire, or tornado, would you definitely or probably leave or stay?		
I would definitely leave the area	932	60.2
I would probably leave the area	491	29.0
I would definitely stay	32	2.3
I would probably stay	133	8.1
I'm required to stay (e.g. police officer, electrician, health official, etc.)	6	0.5
2. If you had to evacuate, how would you leave the area?		
Go in your car	1,332	84.9
Ride in a family member or friend's car	162	8.5
Use evacuation provided transportation	99	5.1
Use public transportation	14	0.9
Would not leave home	5	0.6
3. If you had to evacuate, would you physically be able to ride on a bus for several hours?		
Yes	1,504	93.9
No	105	5.2
Would not leave home	5	0.9
4. If you had to evacuate, where would you go to stay until you could return home?		
Stay with friends or family members outside of your area	916	60.6
Stay in a hotel or motel	433	26.6
Go to a public disaster shelter	115	6.7
Would leave home for a safer structure in your area	63	4.0
Sleep in a car or outdoors	21	1.5
Would not leave home	8	0.6

n = number of respondents
**Estimates weighted to population characteristics*

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Appendix B

GLOSSARY OF TERMS

BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM (BRFSS)[1]

The BRFSS is a state-based system of health surveys that generate information about health risk behaviors, clinical preventive practices, and health care access and use primarily related to chronic diseases and injury. The BRFSS questionnaire is comprised of core questions and optional modules. There are three types of core questions: fixed core questions (asked every year), rotating core questions (asked alternating years), and emerging core questions (focus on "late-breaking" health issues). All states must ask all core questions. The optional modules consist of standardized questions supported by the Centers for Disease Control and Prevention (CDC) that cover additional health topics or add more detailed questions on a health topic included in the core component. Each year states choose which optional modules they will use based on the data needs of their state.

CENSUS BLOCK[2]

Census blocks are geographic areas established by the U.S. Census Bureau and are the smallest geographic unit for which decennial census data are tabulated.

COMPUTER-ASSISTED TELEPHONE INTERVIEWING (CATI)[3]

CATI systems manage the sample for each interviewer, thus increasing efficiency and reducing the cost of data collection by allowing the interviewer to enter respondents' data directly into electronic files.

CONFIDENCE INTERVAL[3]

The confidence intervals for specific statistics (for example, means or regression lines) provide a range of values around the statistic where the "true" (population) statistic is expected to be located with a given level of certainty.

DISPROPORTIONATE STRATIFIED RANDOM SAMPLE[3]

On the basis of information from previous surveys or telephone listings, blocks of telephone numbers are stratified into groups that are "likely" or "unlikely" to contain residential numbers. Individual members (telephone numbers) in the likely stratum are then sampled at a higher rate than numbers in the unlikely stratum.

Healthy People 2010[4]

Healthy People 2010 is a comprehensive set of disease prevention and health promotion objectives for the United States to achieve over the first decade of the new century. Created by scientists both inside and outside of Government, it identifies a wide range of public health priorities and specific, measurable objectives. Its goal is two-fold: to increase quality and years of healthy life and to eliminate health disparities.

Prevalence Estimate[5]

Prevalence estimates measure the distribution of existing cases of a behavior, disease, or condition. Prevalence is a function of both possibility of developing as well as duration of the target measure.

Random Digit Dialing (RDD)[5]

Random digit dialing (RDD) consists of dialing random telephone numbers via either random or systematic sampling. For random sampling, a table or computer-generated list of random numbers is used to select individuals. For systematic sampling, every *n*th (e.g. every tenth or thirtieth or other appropriate interval) person on the list is selected.

Sampling Frame[3]

In the BRFSS, the sampling frame is the set of all active telephone numbers in the United States that could possibly be assigned to households.

Statistical Significance[5]

Tests of statistical significance are used to determine how likely it is that the observed results could have occurred by chance alone. Non-significance may reflect no difference in the source population but it may also reflect a study size too small to detect a true difference within the source population. In this report, prevalence estimates described as "significantly higher" or "significantly lower" as well as all results discussed in the *Summary of Risk Factors with Statistically Significant Differences* section of the Executive Summary met the criteria for statistical significance.

Suppression of Prevalence Estimates

Estimates and their 95% confidence intervals were not presented (represented in tables with "-") if the number of respondents was less than five or the underlying sample size for that particular measure was less than 20.

WEIGHTING[3]

Data weighting is an important statistical process that reduces bias in the sample. In the BRFSS, weighting corrects for differences in the probability of selection due to non-response and non-coverage errors, adjusts for variations in age and gender between the sample and the entire population, and allows the generalization of findings to the whole population, not just those who respond to the survey.

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