

# CHAPTER 19: PUBLIC HEALTH

The public health system consists of a network of agencies as diverse as the population they serve. These agencies include city and county government and non-profit agencies, hospitals, educational institutions, and others. Together we protect and serve the community. The mission of Tarrant County Public Health (TCPH) is to safeguard the community's health. TCPH does this through prevention of disease and injury, promotion of health, and protection from disease and injury. Following the elimination of the Fort Worth Public Health Department in 2010, many functions of the department were combined with similar functions of Tarrant County Public Health. Other functions were transferred to the Fort Worth Code Compliance Department.

Public health activities are based on the foundational framework that emphasizes three main areas; (1) assessment (monitor, diagnose and investigate), (2) policy development (inform and educate people, mobilize partnerships, develop policies) and (3) assurance (link people to needed services, assure a competent workforce, evaluate health services).

Within the main area of assessment there are many public health services that monitor, diagnose and investigate health issues. The Epidemiology Division monitors the health status of the community and provides disease surveillance and outbreak investigation. TCPH works closely with Fort Worth's Code Compliance Department to assure safe eating establishments and with local physicians and hospitals to assure protection of the public from communicable diseases. TCPH has received 7 model practice awards from the National Association of County and City Health Officials (NACCHO) and partners with the University of North Texas Health Science Center (UNTHSC) and the Center for Disease Control (CDC) on tuberculosis research and with NACCHO on syndromic surveillance research.

The area of policy development, which includes informing and educating the public, mobilizing partnerships, and developing policies may have the greatest impact on the largest number of people. Currently, Tarrant County Public Health (TCPH) and partners are working with elected officials and senior decision-makers to establish obesity prevention policies. Most of TCPH's divisions provide education regarding various health issues such as HIV/AIDS, STDs, immunizations, nutrition and physical activity, chronic disease prevention and control, and parenting.

The area of assurance is broad and involves the collaboration and cooperation of many service providers. Assurance includes linking people to needed services, assuring a competent workforce, and evaluating health services. Public health works in collaboration with community partners to diagnose and treat communicable diseases, provide maternal and child health services, population-based primary prevention services, immunization services, and many other activities. The Nurse Family Partnership provides case management and home visiting by nurses to first time pregnant, low income women and their children up to two years of age. The Breast and Cervical Cancer program refers low income women for follow up

## Building Healthy Environments and a Healthy Population



## Tarrant County Public Health



The Tarrant County Public Health building is located at 1101 S. Main St.  
(Source: Tarrant County Public Health, 2011.)

services, as does the Refugee Health program. TCPH partners with local professional schools such as TCU School of Nursing, and UNTHSC School of Public Health and the School of Medicine, in order to provide practical learning experiences for students.

## EXISTING CONDITIONS AND TRENDS

Officials and organizations at the community, state, and national levels utilize the Behavioral Risk Factor Surveillance System (BRFSS) data to determine health needs within their communities and to more efficiently and effectively target public health policy initiatives.

TCPH recently collected data, from October 2009 through February 2010, for its third Behavioral Risk Factor Surveillance System (BRFSS) project. The survey evaluates health behaviors linked to chronic disease among non-institutionalized adults aged 18 years and older. In regards to chronic disease conditions, the TCPH Epidemiology and Health Information Division is the only entity in the North Texas region to conduct the BRFSS locally on a regular basis. The BRFSS in Tarrant County is unique in that few local entities across the state or nation have access to county-specific data of this quality, focus, and magnitude.

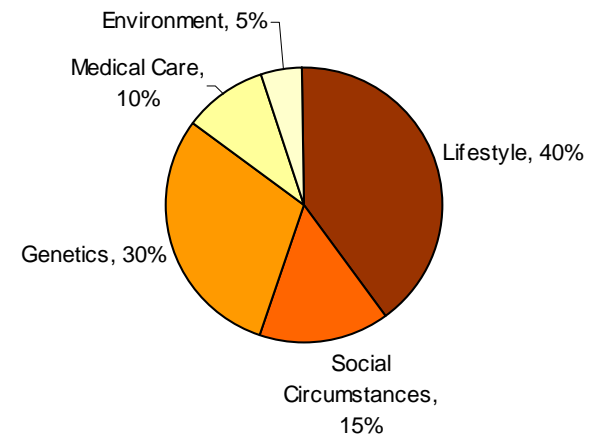
### Development Patterns and Public Health

The City of Fort Worth promotes walkable, mixed-use neighborhood development, sustainable communities, and healthier living conditions. Since the early part of the decade, the City of Fort Worth has worked with private developers, business groups, and neighborhood associations to transform many of the central city's older commercial districts into vibrant "urban villages."

Urban villages are urbanized places that have a concentration of jobs, housing, commercial uses, public spaces, public transportation and pedestrian activity. Within these relatively compact geographical areas, different land uses are found side-by-side or within the same structures. This mix of uses, including a variety of owner- and renter-occupied multifamily residential products, is located in taller buildings with minimal setbacks from the street and reduced parking requirements, achieving the densities necessary to support transit and pedestrian activity, attract private investment, and create a sense of place.

Because the denser development pattern and mix of nearby uses favor pedestrian mobility instead of catering solely to private automobiles, urban village developments make walking a fun activity again as well as efficient and inexpensive transportation alternative within the urban village environment. Similarly, mixed-use growth centers provide an expanded area that may include one or more urban villages, while retaining the same mix of uses, and walkable urban environment. Combining the mixed-use higher density, walkable urban form of an urban village with a passenger rail station results in a transit-oriented development (TOD).

## Factors Influencing Health



Lifestyle and social circumstances account for 55% of early deaths. (Source: McGinnis, et al., *Health Affairs*, 21(2), p. 83, 2002.)

## Mixed-Use Development



The West Seventh development near downtown provides a walkable environment to live, work, and play. Source: *Planning and Development*, 2011.)

Each of these development patterns – the urban village, the mixed-use growth center, and the TOD—supports improved public health outcomes by encouraging walking and cycling rather than driving between homes, stores, restaurants, offices, and neighborhood services. Encouraging walking and cycling rather than driving helps fight the obesity epidemic by increasing physical activity while improving air quality by reducing vehicle miles traveled by residents and visitors to these walkable urban neighborhoods.

### Obesity and Related Health Conditions

Adult obesity rates have been increasing at an alarming rate. Approximately one out of every seven individuals, aged 20 years and older in the United States, is classified as overweight or obese (body mass index >25.0). Nationally, overweight and obesity prevalence varies significantly by age, gender, and race/ethnicity. As the demographics change so will the obesity rates.

Based on population projections from the Texas State Data Center, the number of obese adults in Texas is projected to increase from 3.5 million in 2000 to over 9 million in 2040, with the greatest increase occurring among Hispanics. In Texas, the rates of obesity among Hispanics and among the elderly are staggering, and these are the fastest growing populations.

The consequences for our health care systems of treating the resulting complications of obesity are of great concern. 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. Researchers estimate that obesity cost Texans approximately \$5.3 billion annually in 2003 with Medicaid and Medicare covering slightly less than half of these expenditures. By extension reducing obesity will cut health care costs significantly and save taxpayer dollars.

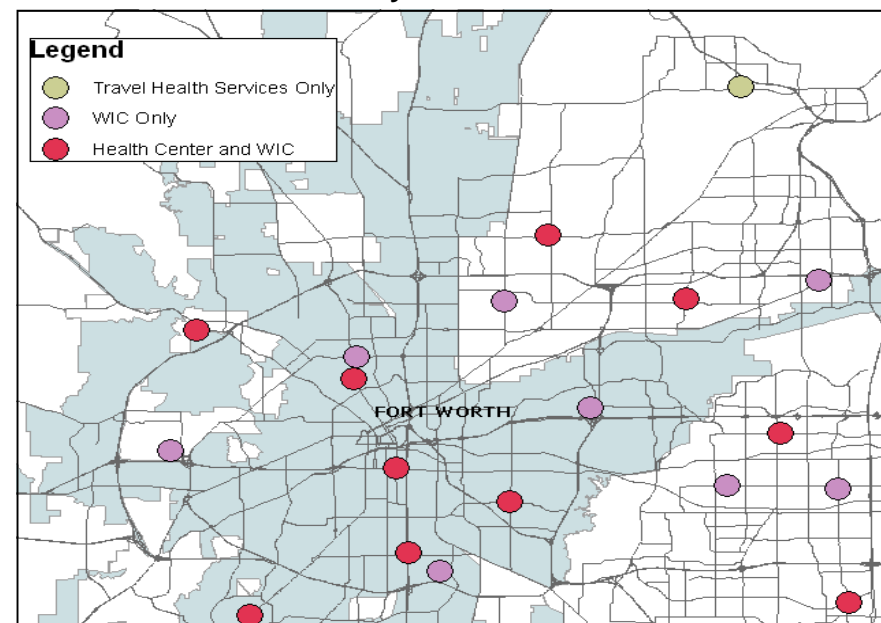
### Diabetes

The number of Americans diagnosed with diabetes has risen from 1.5 million in 1958 to 18.8 million in 2010, an increase of epidemic proportions. According to the most recent Tarrant County BRFSS (2009-2010), physician diagnosed diabetes in the City of Fort Worth is 10.8 percent, which is higher than Tarrant County (8.5 percent) and the United States (8.3 percent).

Between 2010 and 2040 the State of Texas' projected rate of change for diabetes is an astounding 250 percent increase. Tarrant County's projected rate of change for the same time period is an increase of 355 percent.

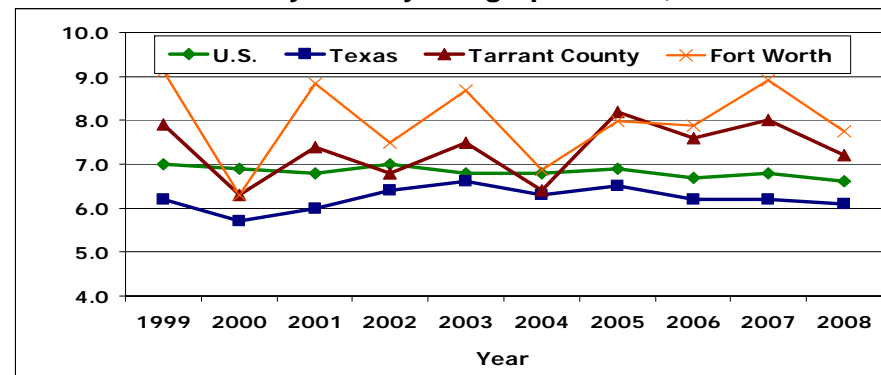
Diabetes can contribute to increases in many chronic diseases, including heart disease and stroke, high blood pressure, vision problems, kidney and nervous system diseases, amputations, and periodontal disease. Diabetes can lead to serious complications and premature death, but people with diabetes can take steps to control the disease and lower the risk of complications.

### Tarrant County Public Health Centers



Tarrant County Public Health centers are located throughout fort Worth. (Source: Tarrant County Public Health, 2011.)

### Infant Mortality Rate by Geographic Area, 1999-2008



From 2005 to 2008, the infant mortality rate among African Americans decreased 31% in Fort Worth and 40% in Tarrant County. (Source: Tarrant County Public Health, 2011.)

### Infant Mortality

Infant mortality is considered a definitive indicator in assessing the health and well-being of a population, including issues of maternal health status, quality of and access to medical care, socioeconomic conditions, and public health practices. For this reason, Tarrant County Public Health actively monitors infant mortality among Fort Worth residents and uses this information to raise awareness and influence program and policy development focused on positively impacting the lives of women, infants, and families in our community.

Since 1999, the infant mortality rate (IMR) for Fort Worth has been consistently higher than the IMR for Tarrant County, Texas, and the United States. In 2008, the IMR for Fort Worth was 7.8 infant deaths per 1,000 live births, more than 70 percent higher than the *Healthy People 2010* objective of 4.5 infant deaths per 1,000 live births.

As also seen at the county, state, and national levels, IMRs in Fort Worth are historically highest among babies born to non-Hispanic Black mothers. IMRs among Blacks in Fort Worth are often two to three times higher than among Whites and Hispanics. However, progress has been made in this area with a 31 percent decrease in the IMR among Blacks in Fort Worth from 2005 to 2008, reflecting a three-year consecutive decline in infant mortality in this population.

### Compliance with Public Health Laws, Regulations, and Ordinances

Whether ensuring safe and healthy environments for consumers or minimizing the threat of pet and human exposure to rabies, the City enforces public health laws, regulations, and ordinances designed to prevent disease, injury, and illness through its Code Compliance Department. Following the elimination of the City of Fort Worth Public Health Department in 2010, the City's Code Compliance Department took over some consumer health functions formerly carried out by the City's own Public Health Department.

**Animal Care and Control** – The Code Compliance Department's Animal Care and Control Division enforces animal-specific regulations including those requiring adequate licensing and vaccinations designed in part to minimize the risk of rabies and other zoonotic diseases being transmitted from wildlife to domestic pets and then to humans. Additionally, the division is charged with protecting citizens from stray, homeless, aggressive, or nuisance animals.

**Consumer Health** – The Code Compliance Department's Consumer Health Division issues permits, performs health inspections, and ensures compliance with all laws, regulations, and ordinances related to food establishments (including restaurants), mobile food vendors, day care centers, hotels and motels, and public swimming pools. Protecting the public from food-borne and water-borne diseases and other health risks associated with food establishments, mobile vendors, day care centers, hotels and motels, and swimming pools is the division's primary objective.

## Ensuring Healthy and Safe Environments for Consumers



A registered sanitarian confirms appropriate food safety practices during a routine restaurant inspection. (Source: Code Compliance Department, 2011.)

## Prevalence of Selected Health Indicators Among Adults 18 Years and Older, Fort Worth and Tarrant County, 2009/2010

Health Indicator	Weighted Percentage <sup>†</sup>	
	Fort Worth	Tarrant County
Self-reported fair or poor health	14.9	11.7
Overweight (BMI 25.0-29.9)	34.3	37.5
Obese (BMI ≥ 30.0)	32.0	28.2
High Blood Pressure <sup>1</sup>	28.8	27.4
Heart Disease <sup>1</sup>	5.7	4.6
Diabetes <sup>1</sup>	11.0	8.5
Physical activity recommendations met <sup>2</sup>	43.9	47.4
Consumed fruits and vegetables five or more times per day	28.9	25.7

<sup>†</sup>Estimates weighted to population characteristics. Physician diagnosed.

<sup>2</sup>U.S. Department of Health and Human Services

Note: No statistically significant differences were found between Fort Worth and Tarrant County among the included prevalence estimates (Data source: Tarrant County Public Health, 2011.)

## GOALS AND OBJECTIVES

### Development Patterns and Public Health

Enhance the multimodal circulation network in which visitors, workers and residents may conveniently walk, drive, bike, or ride mass transit to destinations.

- Develop walkable urban neighborhoods such as mixed-use growth centers, urban villages, and transit-oriented developments that encourage and facilitate residents and visitors to walk, bike, and use transit between home, work, school, and other locations.
- Increase the miles of bikeways in Fort Worth from 104 miles to 150 miles by 2013.
- Provide at least three multimedia campaigns annually to increase carpooling, park and ride, transit use, and bicycling to work.

### Obesity

Reduce obesity, overweight rates, and incidence of related health conditions through effective actions to achieve the following objectives:

- Increase access to fresh fruits and vegetables, and establish and promote local farmers markets.
- Provide nutrition education materials annually to Fort Worth farmers markets.
- Educate residents regarding selection, storage, and preparation of fruits and vegetables.
- Promote fruit and vegetable intake through six annual Live a More Colorful Life classes and on the Live a more colorful Life website.

### Diabetes

Decrease diabetes incidence and improve the quality of life for those who have or are at risk for diabetes.

- Complete two diabetes self-management programs in Fort Worth in 2012.
- Offer six general diabetes educational classes in Fort Worth annually.

### Infant Mortality

Reduce infant mortality rates via heightening awareness and recommending policy changes and/or specific interventions.

- Produce infant mortality awareness/education report annually.

### Compliance

Reduce the risk of illness and injury associated with permitted facilities, including food establishments, aquatic facilities, daycare centers, and hotels/motels.

- Maintain a restaurant health inspection passing rate of 95% for all restaurants in Fort Worth.
- Perform 9,000 health inspections of permitted facilities annually.

Rapidly respond to reports/complaints involving imminent health hazards related to permitted facilities.

- Investigate 100% of food borne illness and other imminent health hazard complaints associated with permitted facilities within 24 hours.

### Key Near-Term Public Health Objectives

- ❑ Develop walkable urban neighborhoods such as mixed-use growth centers, urban villages, and transit-oriented developments that encourage and facilitate residents and visitors to walk, bike, and use transit between home, work, school, and other locations.
- ❑ Increase the miles of bikeways in Fort Worth from 104 miles to 150 miles by 2013.
- ❑ Increase access to fresh fruits and vegetables, and establish and promote local farmers markets.
- ❑ Maintain a restaurant health inspection passing rate of 95% for all restaurants in Fort Worth.

### **Protecting Residents from Dangers Posed by Stray Animals**



Animal Control Officers make sure that residents are protected from the threats posed by stray and homeless animals and the diseases that they may carry, including rabies. (Source: Code Compliance Department, 2009.)

- Research the causes of infant mortality by analyzing anonymous fetal and infant deaths to ascertain and identify system changes or educational needs.
- Provide education and training for food and day care establishment owners, managers, and employees and swimming pool operators to ensure safe environments for the public.
- Train 20,000 permitted facility employees in health and safety practices promoting consumer protection by 20??
- Reduce the number of stray animals roaming free in neighborhoods in order to decrease the incidence of animal bites and attacks.
- Respond to 100% of all priority one calls within 6 hours.
  - Provide responsible pet ownership education classes to 900 pet owners annually, with an emphasis on proper restraint and enclosures.
- Rapidly respond to animal bites and animal cruelty reports to fully investigate and remove dangerous and/or abused/neglected animals to preserve the public's and the animal's safety.
- Respond to 100% of all cruelty reports within 24 hours.
  - Respond to 100% of all bite reports within 24 hours.
- Reduce the incidence of dangerous and nuisance wildlife encounters with citizens, especially in neighborhoods.
- Develop protocols and implement the Urban Wildlife program to include capture and citizen education components.

## POLICIES AND STRATEGIES

### Development Patterns and Public Health

- Promote traditional neighborhood and other pedestrian-oriented developments, which encourage human interaction, walking, bicycling, mixed uses, slower traffic, public places, and attractive streetscapes.

### Obesity

- Work with local chefs, nutritionists, and farmers to provide information to residents in selecting, preparing and incorporating healthy food choices into their family's diet.
- Continue community based programs designed to introduce youth to the importance of eating right and increasing physical activity.
- Encourage linkages between neighborhoods and farmers markets and community gardens.

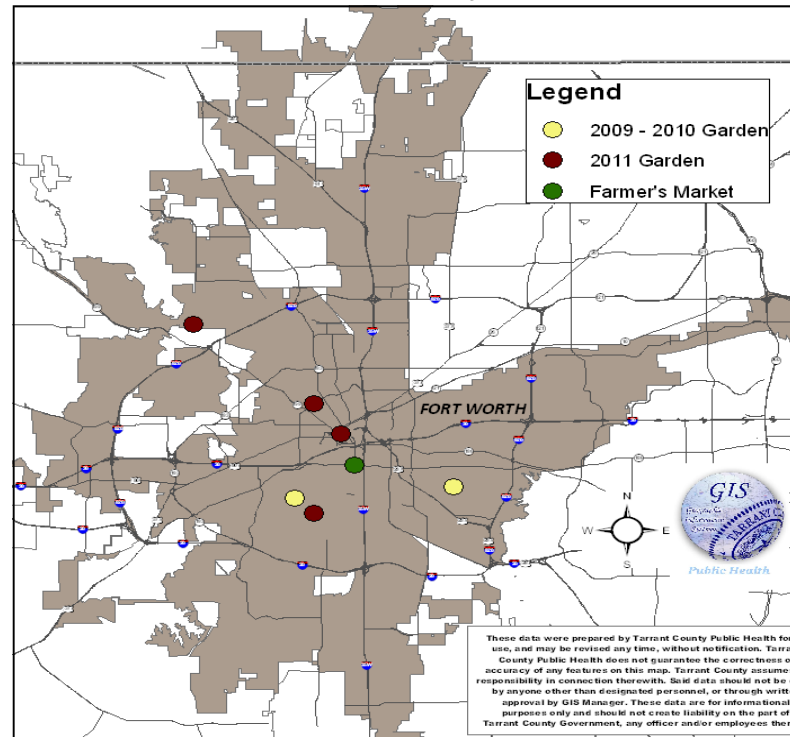
### Diabetes

- Expand the collaborative partnership of Tarrant County agencies to address and educate residents on diabetes.

### Infant Mortality

- Continue to work with community partners to examine social, economic, cultural, safety and health system factors associated with fetal and infant mortality.

## Farmers Markets and Community Gardens in Fort Worth



A community garden is any piece of land gardened by a group of people. It can grow flowers, vegetables or community. It can be one community plot, or it can be many individual plots. It can be at a school, hospital, or in a neighborhood. (Source: Tarrant County Public Health, 2011.)

## Compliance

- Partner with permitted facility owners and managers to provide education and training for food and day care establishment employees and swimming pool managers.
- Schedule health inspections according to risk-based matrix assigning more frequent inspection schedules to higher-risk facilities.
- Create and implement public education campaigns to promote pet licensing and vaccination and provide convenient methods for citizens to attain compliance.
- Continue to create and enforce ordinances that reward compliance with animal licensing and containment requirements and penalize violators.
- Continue to promote spay and neuter practices for all pets and ensure all pets adopted from shelter are altered prior to release.

## **PROGRAMS AND PROJECTS**

### Obesity

- Live a More Colorful Life! is a TCPH initiative to educate consumers about the benefits of incorporating a wide and colorful array of fruits and vegetables into their daily diets. The Live a More Colorful Life webpage contains easy-to-access information, including tips for selecting fresh fruits and vegetables, recipes from well-known local chefs and nutritionists and ongoing features highlighting specific produce that is in season locally.
- Kids Growing Healthy is a program designed for 5th grade students in Tarrant County. The program is facilitated by Health Educators and Nutritionists from TCPH and the Texas Cooperative Extension. Kids Growing Healthy offers five free, interactive sessions and a 2 to 3 month follow-up evaluation to identify changes in daily nutrition and physical activity behaviors. The students maintain a nutrition/physical activity journal during the duration of the lessons to reflect on class activities and daily behaviors.
- There are several community gardens in Tarrant County. They were created for three primary reasons; 1) for individuals who live in food deserts, 2) for senior citizens, and 3) to address the general interest by communities with existing infrastructure to support the gardens. Excess harvested food is donated to the Tarrant Area Food Bank.

### Diabetes

- Fort Worth residents receive the Stanford Diabetes Self Management Program and various diabetes education classes from a collaborative partnership of Tarrant County agencies, including Public Health, Diabetes Collaboration, Area Agency on Aging, and United Way.
- The Kids Growing Healthy Program is provided to Fort Worth Independent
- School District students, community based programs, and civic organizations. This program is designed to introduce youth to the importance of eating right, getting physical activity, and avoiding tobacco products.

### **Nurse Family Partnership**

Nurse-Family Partnership helps transform the lives of vulnerable first-time moms and their babies. (Source: Tarrant County Public Health, 2011.)



### **Communicable Disease Surveillance**

A component of conducting timely investigations is the reporting of:

- Notifiable diseases,
- Laboratory and investigation results

as is appropriate and required by law.



### **Public Health Preparedness**



Public Health Preparedness mission:

To plan and implement critical measures before, during and after an emergency or public health threat. (Source: Tarrant County Public Health, 2011.)

### Infant Mortality

- Tarrant County's Fetal Infant Mortality Review (TC FIMR) program was developed in 2007 and uses the National Fetal and Infant Mortality Review model. Members represent various agencies that provide services or community resources for families. The community partners examine social, economic, cultural, safety, and health system factors associated with fetal and infant mortality. TC FIMR heightens awareness and recommends policy changes and specific interventions to better serve families and the community as a whole.
- The Texas Department of State Health Services funded four Community Health Workers (CHW) for the TCPH Women Infant and Children (WIC) program. These CHWs provide health education and outreach to potential WIC clients. The CHWs emphasize the impact of a woman's health before pregnancy on the health of her baby, answer questions about WIC, and make referrals to health care, job training, parenting classes, and WIC agencies.

### Compliance

- Communicable Disease Surveillance continuously monitors factors that contribute to disease conditions and uses data to implement changes that lead to a reduction in disease. Tarrant County Public Health (TCPH's Epidemiology Division, North Texas Regional Laboratory, and Advanced Practice Center work together with State and federal agencies in monitoring, tracking, controlling and/or preventing the spread of communicable diseases in Tarrant County.