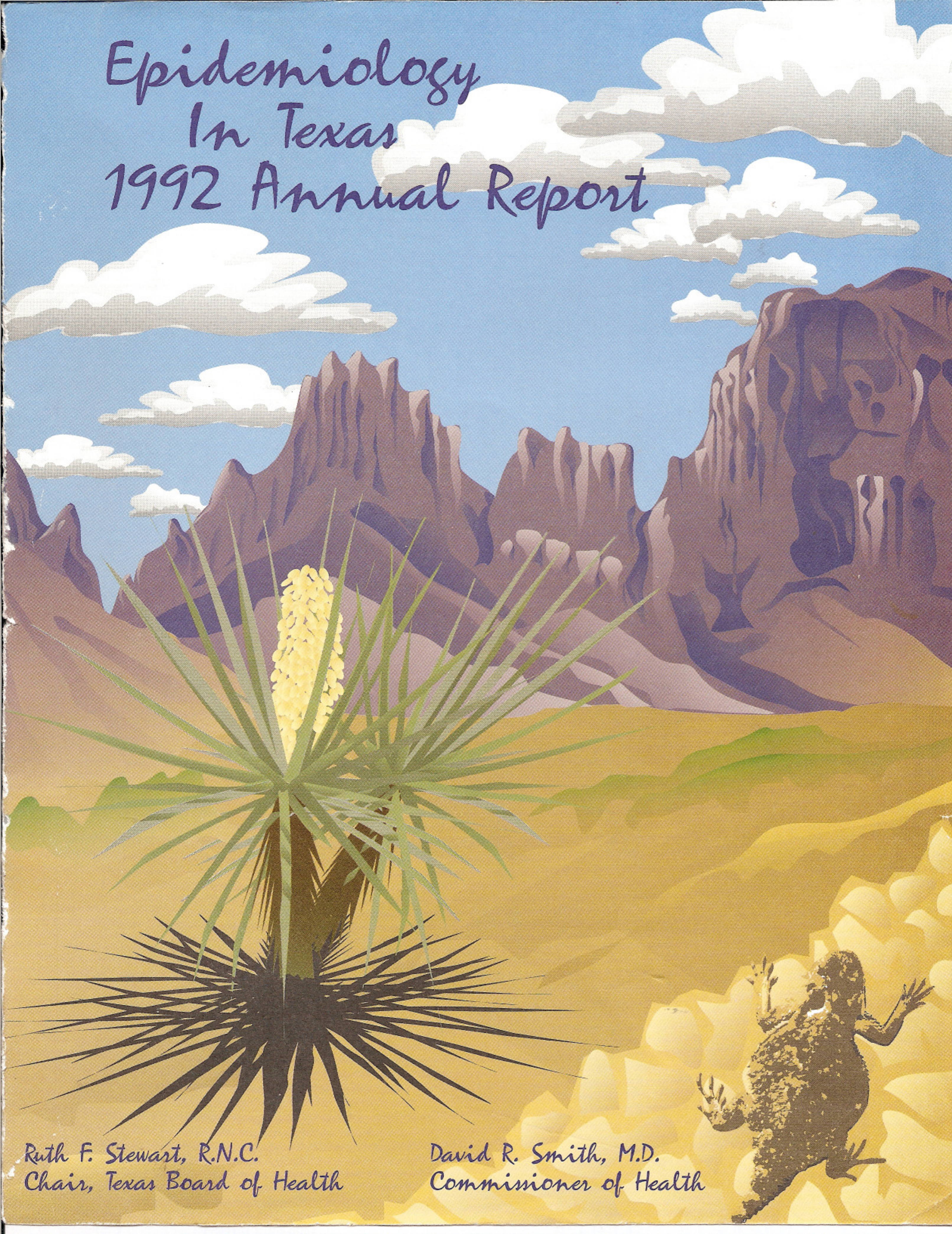
Epidemiology In Texas 1992 Annual Report



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Chair, Texas Board of Health

David R. Smith, M.D.
Commissioner of Health

Epidemiology in Texas
1992
Annual Report

Bureau of Communicable Disease Control
Bureau of Epidemiology
Bureau of HIV/STD Control

Texas Department of Health
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Austin, Texas 78756

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Foreword

The mission of any state health agency is to promote and protect the health of the people of the state. In its report, The *Future* of Public Health, the National Academy of Sciences suggests that the substance of public health "rests on the scientific core of epidemiology." Identifying the patterns of diseases, harmful exposures, and injuries is a central function of public health epidemiology. These patterns often change rapidly and require constant vigilance.

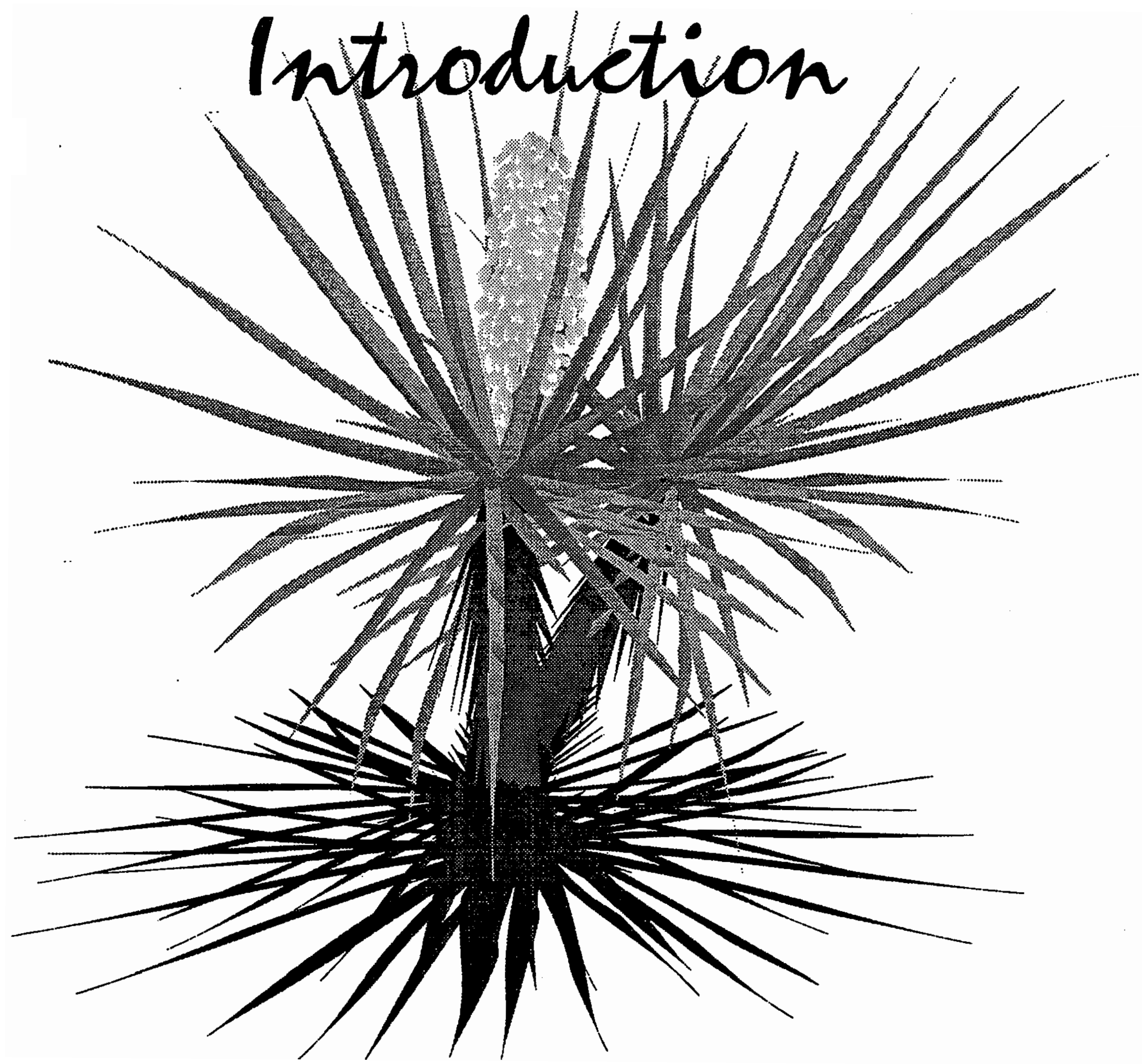
Developing appropriate and aggressive methods to control human illness and injury are difficult tasks that begin with understanding the causes. Combining the methods and concepts of epidemiology and toxicology allows robust investigations of environmental and occupational health concerns to elucidate these causes.

This report describes trends and selected investigations the Texas Department of Health conducted in 1992. Only influenza, hepatitis, and invasive hamophilus influenza disease showed decreases in number of cases, compared to those of 1991. Examination of injury mortality for 1992 indicates that for the second straight year, firearm-related deaths were the leading cause of injury death in Texas. Old public health foes, such as tuberculosis, rabies, and cholera re-emerged as frontline threats, while infection with Human Immunodeficiency Virus continued to have a devastating impact on public health.

The investigation of neural tube defects in Cameron County was expanded to include the entire Texas-Mexico border. The development of a statewide birth defects registry began in 1992. A voluntary reporting system for spinal cord injuries, initiated this year, highlights the devastating costs and preventable nature of serious trauma in the state.

The Texas Department of Health will continue to study infectious diseases, harmful exposures in the workplace and environment, and injuries which threaten the health of the citizens of Texas. With the united efforts of private and public health providers; local, state, and federal agencies; and, of course, the people of Texas - the goal of healthy Texans in the year 2000 can be attained.

Introduction



History of Public Health in Texas

The first real interest in public health in Texas began in the 1800s when most of the state was unsettled frontier territory. The primary public health concerns in those early years were the prevention and control of the epidemic diseases that were so prevalent in Texas. Yellow fever along the Gulf Coast brought death to thousands of Texas residents, and by the mid-1800s, smallpox had spread to the inland towns of the state. These outbreaks led to passage of the Quarantine Act of 1856, which gave cities and counties in Texas the authority to establish their own quarantine regulations appropriate for their respective areas.

In April 1879, government officials planned for the upcoming "sickly season" by taking action to revise the quarantine laws. To lead this effort, Governor O.M. Roberts appointed Robert Rutherford to be the first State Health Officer of Texas. In 1891 the state's first health agency was established - the Texas Quarantine Department. As the population of Texas grew, a greater interest in maintaining complete and accurate records of the public's health developed. As a result, the Texas Quarantine Department was reorganized in 1903 and renamed the Department of Public Health and Vital Statistics; birth and death records for the state began to be recorded and analyzed for the first time. The state's health agency has undergone numerous reorganizations since it first began, as well as several name changes which all reflect its expanding scope and purpose.

Disease Reporting

Communicable disease reporting began as a way to determine the prevalence of diseases which could threaten the public's health. The first reporting law, the Texas Sanitary Code, was passed in 1910, a year after the first State Board of Health was appointed. This code required the reporting of diseases that were common in Texas at the time: anthrax, Asiatic cholera, bubonic plague, diphtheria, epidemic dysentery, epidemic typhus, smallpox, trachoma, typhoid, and yellow fever. In May 1920, the reporting of communicable diseases actually began as the procedures were put into place. Since that time, disease surveillance in Texas has relied on a reporting system whereby physicians notify their local health authorities of infectious and other reportable diseases and conditions. These reports are forwarded to the Texas Department of Health. The collection of these data allow health officials and agencies to plan more effective programs and activities to prevent and control disease throughout the state.

Improved general sanitation, use of antibiotics, and immunization have changed disease trends dramatically over the years. Consequently, the public health laws of Texas must be revised periodically. The Texas Board of Health has the authority to adopt specific rules and regulations relating to the prevention, reporting, and control of communicable diseases and to designate which diseases are "reportable". Because both endemic and epidemic diseases change over time, the list of "reportable" conditions gradually changes to reflect new causes of morbidity.

Disease Surveillance

Public health agencies use surveillance to target interventions; to set program priorities; and to plan, implement, and evaluate their programs. Epidemiologic surveillance includes the ongoing systematic collection, analysis, interpretation, and dissemination of a variety of health data including demographic, environmental, laboratory, morbidity, and mortality data. Surveillance also includes obtaining and evaluating information on animal reservoirs and vectors, investigating epidemics and individual cases of diseases and/or conditions, and conducting special studies and surveys.

The objective of surveillance is to determine the extent of disease and the risk of transmission so that control measures can be applied effectively and efficiently. Surveillance data must be current and complete if actual occurrence and distribution of disease are to be understood. During 1992 several programs were responsible for coordinating infectious and occupational disease and injury surveillance in Texas, as well as the surveillance of environmentally related conditions throughout the state. These programs included the Infectious Diseases Program, the Environmental Epidemiology Program, the Injury Control Program, the Tuberculosis Elimination Division, Immunization Division, and the Bureau of HIV and STD Control.

The Reporting System

The Communicable Disease Prevention and Control Act (Chapter 81, Health and Safety Code) required physians, dentists, and veterinarians to report, after the first professional encounter, each patient examined who is suspected of having a reportable disease or condition. Certain individuals employed in hospitals, laboratories, and schools also are required to report. Chief administrative officiers of hospitals, medical directors of HIV counseling and testing services, and school authorities of public and private schools and institutions of higher learning can designate employees to be responsible for disease reporting. Decisions as to which diseases and conditions will be reportable in Texas are made by the Texas Board of Health based upon the recommendations of public health officials. Detailed rules on disease reporting and the duties of local health authorities can be found in Article 97, Title 25, Texas Administrative Code.

In addition to the individual professionals who are required to report, state schools, state hospitals, veterans' hospitals, and military institutions have been designated as reporting agents. Whenever possible, reports should be made directly to local health departments, which in turn forward these data to the Texas Department of Health.

The *Rules & Regulations for the Control of Communicable and Sexually Transmitted Diseases & Reporting of Occupational Diseases* (**TDH** Stock *No.* 6-101) require that all disease reports (with a few exceptions) include the patient's name, age, sex, race, ethnicity, city of residence, physician's name, date of onset, occurence, and method of diagnosis. The exceptions are as follows. Influenza and influenza-illnesses are reported by number of cases. Chickenpox is reported by number of cases by age group. HIV infections are reported by sex, race, ethnicity, and county and zip code of residence. For specific diseases, additional epidemiologic data may be requested, and in outbreak situations, it may be necessary to identify susceptible individuals and to recommend specific control measures. A current list of reportable conditions is included in the appendix. The appendix also includes phone numbers where professional staff, including epidemiologists, may be reached for consults. The phone numbers of the divisions are included with the reportable conditions list in the appendix. Reporting forms may be obtained by calling the various divisions to which reports are made.

Morbidity data on reportable diseases and conditions also are obtained through other means such as laboratory reports, completed case investigation forms, and death certificates that have been filed with the TDH Bureau of Vital Statistics. Statistical summaries of these data are published bi-monthly in Disease Prevention News (DPN), a biweekly newsletter of the Bureau of Communicable Disease Control. DPN is distributed throughout the state to local and regional health departments, laboratory directors, and hospital infection control practitioners; nationally, to other state epidemiologists; and upon request to other interested persons.

Texas participates in the National Electronic Telecommunications System for Surveillance (NETSS) of the Centers for Disease Control and Prevention (CDC). This system allows CDC to collect specific data on individual cases of reportable diseases throughout the United States. Using NETSS, morbidity data are transmitted electronically each week to CDC and updated periodically. These data are summarized and published weekly in CDC's *Morbidity and Mortality Weekly Report.*

Explanatory Notes

This report contains data for the 1992 reporting period, which extended from January 1, 1992 through December 31,1992. Patients were included in this report only if they were residents of Texas. Patients either had onset of disease during the 1992 calendar year or were first reported in 1992. If the individual became ill or was hospitalized, diagnosed, or exposed in another location, the county of residence was counted for case morbidity. Individuals who resided outside Texas, but who became ill and were hospitalized or diagnosed in Texas, were not included in Texas morbidity; nor are they referred to in this report. Non-resident cases were referred through an interstate reciprocal notification system to the appropriate State Epidemiologist in the state where the individuals resided.

All incidence rates in this report are expressed as the number of reported cases of a disease per 100,000 population unless otherwise specified. Incidence rates measure the frequency of the occurrence of new cases of a disease within a defined population during a specified period of time. Limitations inherent in population projections, as well as underreporting, affect rate comparisons for different population groups or time periods. Rates based on small frequencies should be interpreted with caution since sampling errors may be large.

State and county population data used in computing incidence rates were provided by the TDH Bureau of State Health Data and Policy Analysis (BSHDPA). The 1983-1992 population data are population estimates derived from the TDH Population Data System. The population of Texas in 1992 was estimated to be 17,632,332, the majority of whom (56%) lived in only ten counties: Bexar, Cameron, Collin, Dallas, El Paso, Harris, Hidalgo, Nueces, Tarant, and Travis. The BSHDPA population data show that the racial/ethnic distribution of the Texas population in 1992 was 62% white, 26% Hispanic, and 12% African-American as illustrated in Figure 2.

Case-fatality rates (CFR) describe the number of persons who died from a specific disease or cause to the total number of reported cases of that particular disease or condition, i.e., mortality/morbidity. CFRs in this report are expressed as percentages.

The Associateship of Disease Control and Prevention has adopted the race/ethnicity definitions provided by the U.S. Department of Commerce and Published in the Centers for Disease Control and Prevention's *Manual of Procedures for National Morbidity & Public Health Activities.* The category which most closely reflects an individual's recognition in his or her community is used for purposes of reporting persons who are of mixed racial and/or ethnic origins.

White: Persons having origins in any of the original peoples of Europe, North Africa, or the Middle East.

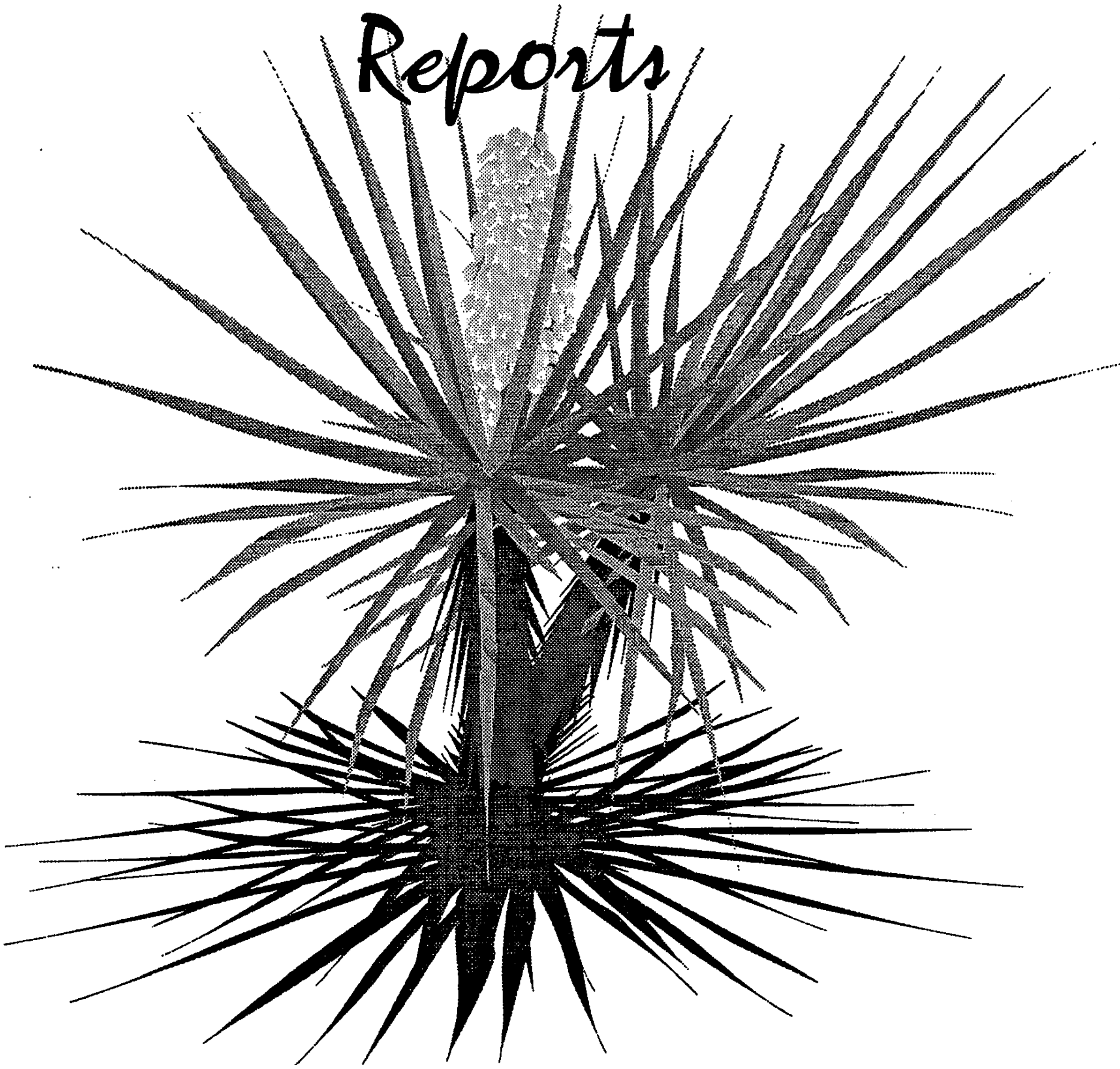
Hispanic: Persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin regardless of race.

African-American: Persons having origins in any of the black racial groups of Africa.

Asian or Pacific Islander: Persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands (including China, Japan, India, Korea, the Phillipines, and Samoa).

American Indian or Alaskan Native: Persons having origins in any of the original peoples of North America, and who maintain cultural identification through tribal affiliation or community recognition.

Reports

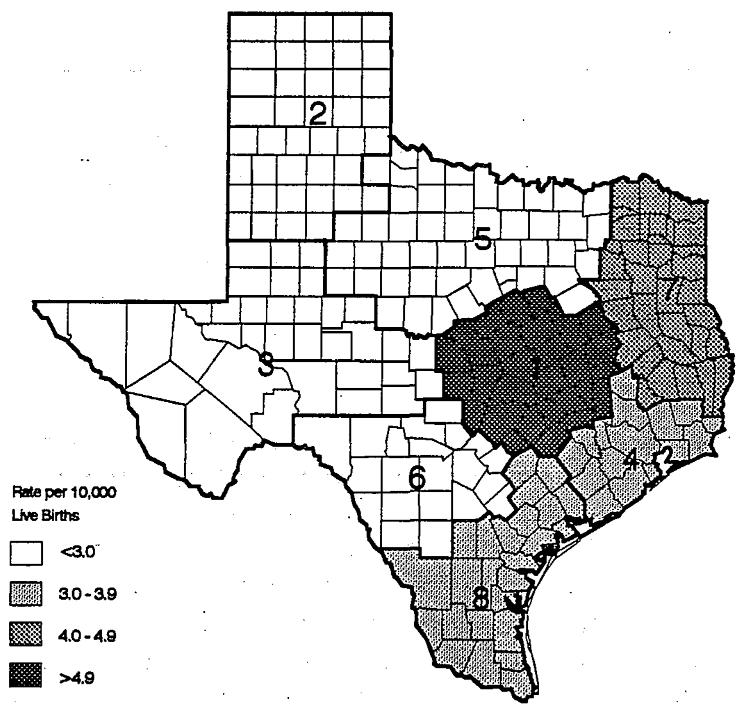


Anencephaly, 1991

Anencephaly is a severe birth defect caused by abnormal development of the brain during the first trimester of pregnancy. Anencephaly occurs when the neural tube fails to close, which results in partial or complete absence of brain mass and incomplete development of the skull. A high proportion of these births can be detected through surveillance of live birth, fetal death, **and** death certificates.

From these vital record sources, 101 anencephalic births were identified among 1991 Texas births. The prevalence of anencephaly in 1991 was **3.2** per 10,000 live births. Figure **1** shows the prevalence of anencephalic births by the state's Public Health Regions (PHRs). Unlike previous years, PHR 1 had the highest rate with 5.6 cases per 10,000 live births. PHR 7 had the second highest rate with 4.5 cases per 10,000 live births.

Figure 1. Prevalence of Anencephalic Births by Public Health Region, 1991



As in previous years and other studies, female births had a higher prevalence for this defect than male births, 3.8 and 2.5 per 10,000, respectively. The prevalence of this defect also varied by race and ethnicity. Figure 2 shows this variation. Hispanics had the highest prevalence for this defect (4.4/10,000 live births) and African-Americans, the lowest (2.3/10,000 live births).

Prevalence of anencephaly showed no trend by maternal age but did show some correlation with the number of previous live births (Figure 3). The highest prevalence (5.9/10,000 live births) occurred among mothers with more than two previous live births.

Figure 2. Prevalence of Anencephaly by Race/Ethnicity of Births, Texas, 1991

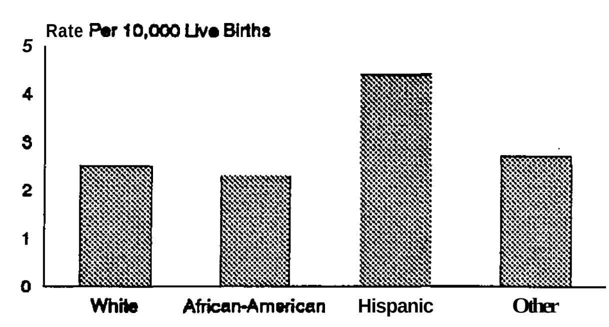


Figure 3. Prevalence of Anencephaly in Texas by the Number of Previous Live Births

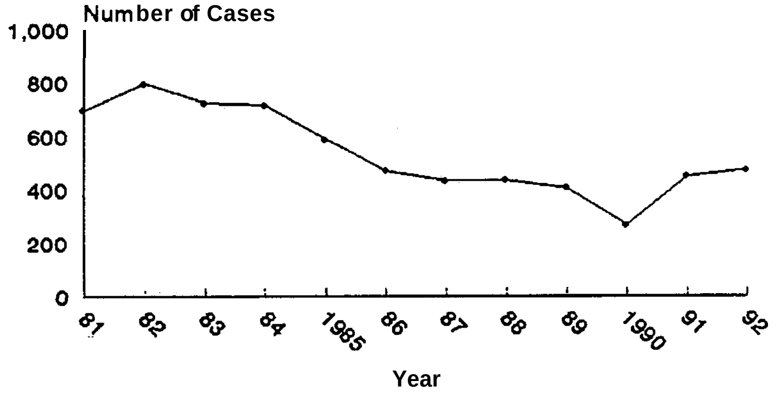
Number of Previous Live Births	Number of Cases*	Rate per 10,000 Live Births
0	29	2.3
1	28	2.8
2	18	3.3
>2	21	5.9

*Missing 5 cases

Animal Rabies

In 1992, 471 (4%) of 10,562 animal specimens submitted to TDH were positive for rabies. This total represents a 5% increase over the 447 cases reported in 1991 and the highest number of animal rabies cases in Texas since 1985 (Figure 1).

Figure 1. Confirmed Cases of Animal Rabies in Texas 1981-1992



Rabies in wildlife accounted for 79% of the cases. Skunks, responsible for 39% of the total cases statewide, continued to be the primary reservoir in most counties throughout Texas. During 1992, 182 skunks were positive for rabies. This represents a 15% decrease from the 209 cases reported in 1991. Rabies in domestic animals (21%) continues to be a concern because rabid domestic animals are five times more likely to come into contact with a human than are rabid wildlife. Figures 2 and 3 compare the numbers of domestic and wildlife rabies cases for the various animal species for 1991 and 1992.

Rabies in wild or domestic animals occurred in 110 Texas counties in 1992 (Figure 4). More rabid animals were reported from Tom Green County than from any other county. Figure 5 illustrates counties from which rabies in domestic animals was reported.

The canine rabies epizootic, which began in 1988 in south Texas, continued throughout 1992; 70 coyotes (a 52% increase from 1991) and 56 dogs (a 56% increase from 1991) tested positive for rabies. All of the rabid coyotes and 73% of the rabid dogs were found in the following 11 counties: Brooks, Duval, Hidalgo, Jim Hogg, Jim Wells, Kenedy, Kleberg, Starr, Webb, Willacy, and Zapata.

Since 1974 the percentage of animal rabies cases in bats has been second only to the percentage of cases in skunks. In spite of a 17% increase in rabid bats from 1991 to 1992, the number of rabid coyotes reported in 1992 slighty outnumbered bats (70 to 69). As in 1991, the greatest number of animal rabies cases of 1992 occurred in March and April.

Figure 2. Rabies in Domestic Animal Species: Texas 1991 and 1992

Species	*1991*	*1992*
Dogs	36	56
Cats	17	16
Cows	15	11
Horses	7	6
Goats	5	7
Sheep	0	2
Total	80	98

Figure 3. Rabies in Wild Animal Species: Texas 1991 and 1992

Species	*1991*	*1992*
Skunks	209	182
Bats	59	69
Foxes	37	33
Coyotes	46	70
Raccoons	13	7
Other	3	12
Total	367	373

Figure 4. Confirmed Cases of Animal Rabies (all species) by County In Texas, 1992

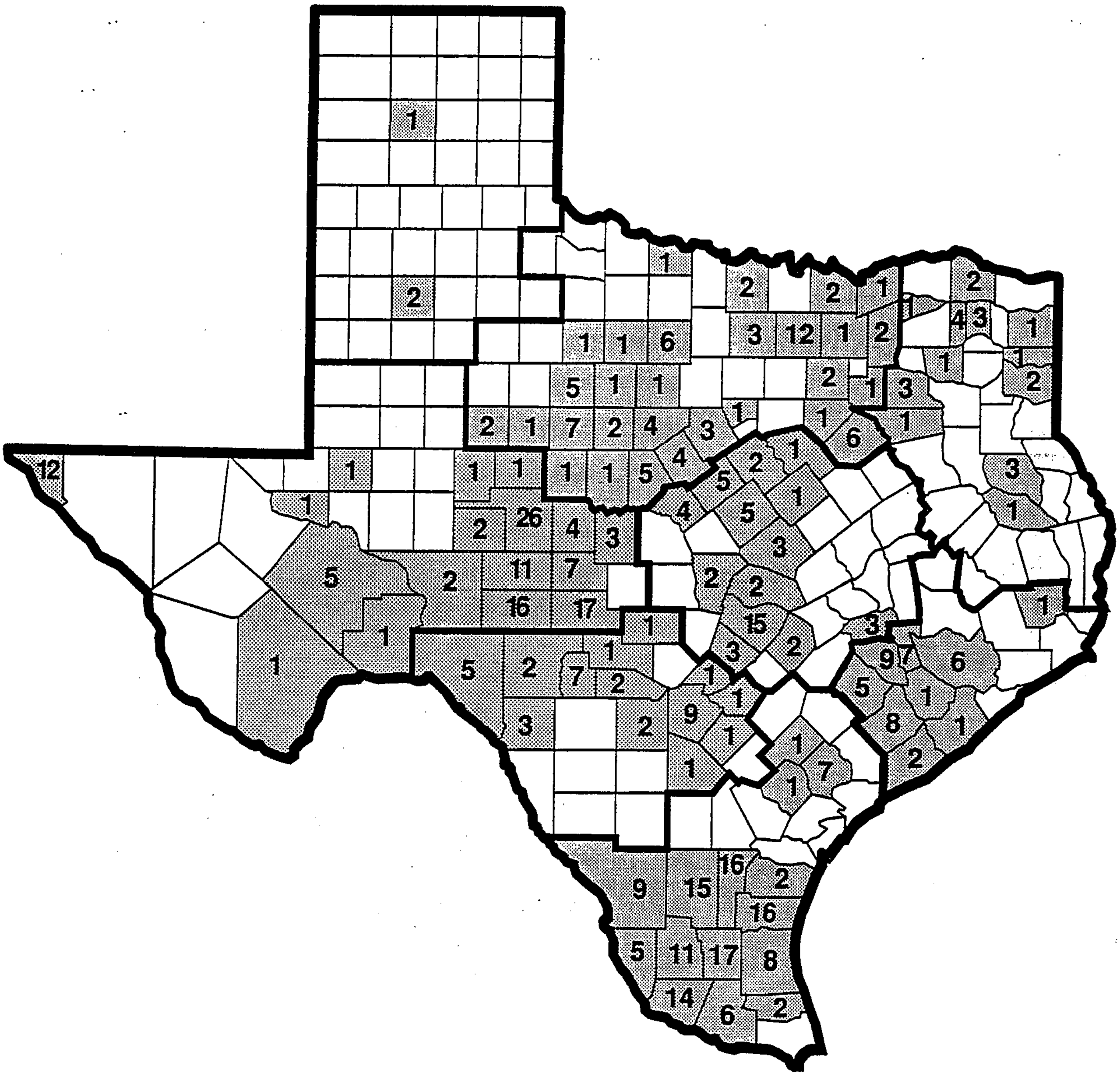
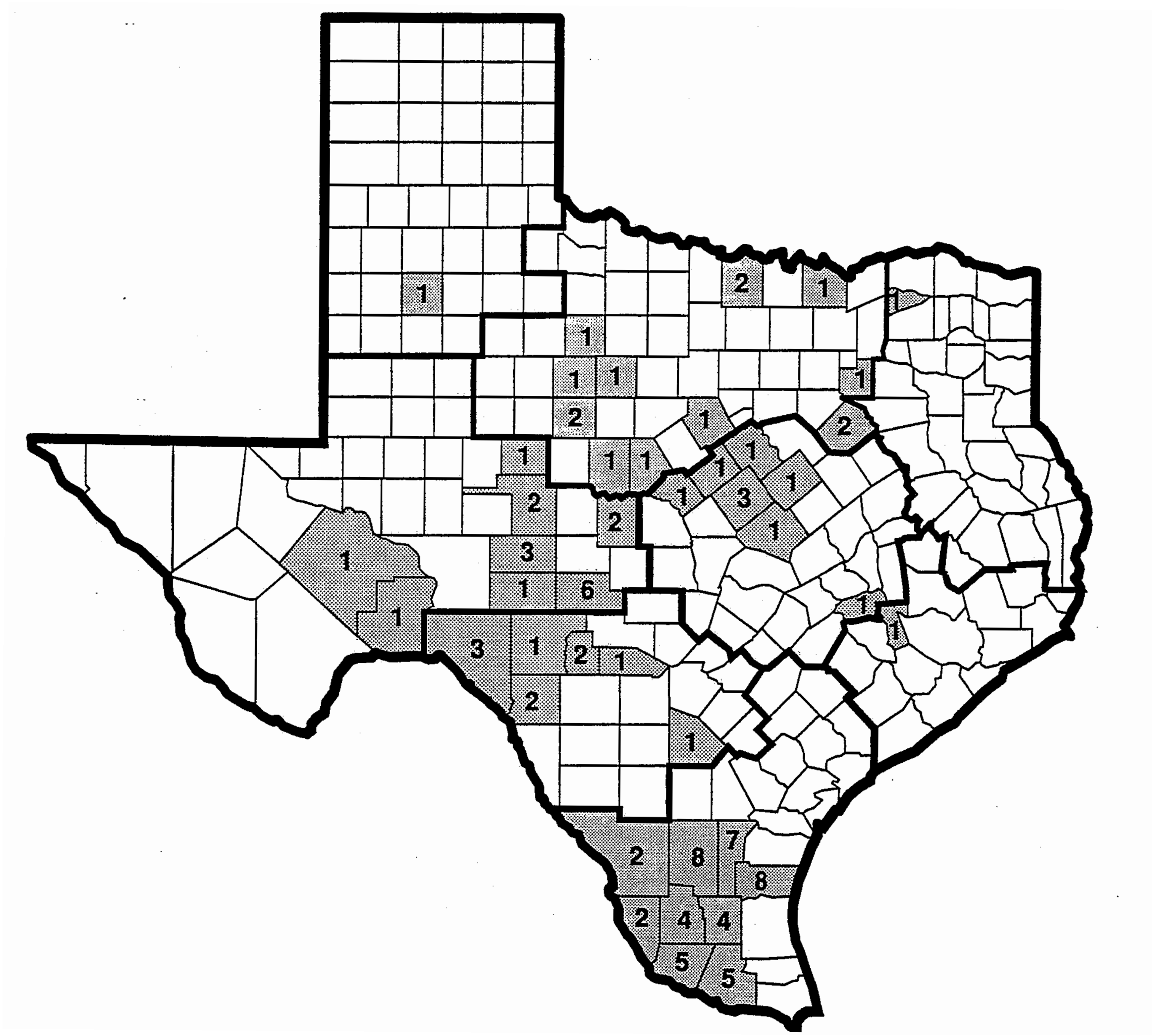


Figure 5. Confirmed Cases of Animal Rabies (domestic species) by County in Texas, 1992



Brucellosis

Texas reported 27 cases of human brucellosis with onset during 1992, down from 36 cases reported in 1991. Continuing the pattern established in recent years, Hispanics represented 89% (24) of reported cases; 63% (15) of whom were female. Although many occupation-associated brucellosis cases occur worldwide, most cases recognized in Texas are secondary to consumption of unpasteurized goat cheese from Mexico.

Because brucellosis is foodborne, cases occur among all age groups and both sexes. Of the brucellosis cases reported in 1992, patients' ages ranged from two to 68 years, with a median age of 35. Six patients (22%) were less than 20 years old, and five patients (19%) were 60 years of age or older. All of the patients in these two age groups were Hispanic, and seven (64%) were female. Females, including 14 Hispanics and one white, outnumbered males 15:12, with 10 males being Hispanic, one Asian, and one white.

A majority of cases (74%) were confirmed through Brucella species cultures, including 17 identified as B. *melitensis* (associated with goats), one as B. *abortus* (cattle), one as B. *suis* (swine), and one as an untyped Brucella sp. organism All 17 B. *melitensis* organisms and the one untyped Brucella were from Hispanic patients. The B. *abortus* organism was cultured from the white female, and the B. *suis* from the white male. Cases in six Hispanics and the one Asian were confirmed serologically.

Ten patients, all of whom were Hispanic, reported consumption of goat cheese from Mexico. Six of these cases were confirmed by B. *melitensis* cultures, and four were confirmed serologically. Three of the Hispanic patients with B. *melitensis* infections reported eating cheese purchased from door-to-door vendors in Texas, including one in San Antonio. This information led to the identification of the vendor and seizure of unlabeled cheese being sold illegally. Eight additional Hispanics infected with B. *melitensis,* who were reported without any specific exposure history, probably were infected through consumption of unpasteurized goat cheese/dairy products from Mexico. The three remaining Hispanic patients included two who had been confirmed serologically and one who had a positive culture for a Brucella organism that could not be typed. None of these individuals had specific exposure reported, but all had been in Mexico prior to onset of illness.

The two white patients included a 57-year-old female with B. *abortus* infection who was exposed while helping a neighbor deliver a calf, and a 29-year-old male with B. *suis* infection whose reported exposure was the field-dressing and processing of a wild hog he had killed while hunting. Prior to the report of the hunting-associated B. *suis* case, a Texas A&M veterinary researcher had raised the question of whether such cases had been reported previously in Texas. A review of cases reported between 1977 and 1991 did not identify any similar cases.

After the 1992 surveillance year closed, a second hunting-associated B. *suis* infection was reported. This patient was a 59-year-old Hispanic man, who had onset of illness in late December 1992 that was not reported until late May 1993. Because this second B. *suis* case was reported so late, it was not included in the official morbidity record for 1992. The first patient's hunting exposure occurred in his county of residence, Liberty County. The best available information on the second patient indicated that he had been hunting both in the "Piney Woods" of East Texas and south of San Antonio.

The Asian patient was a 34-year-old man who was exposed through his work at Texas

A&M University. Because brucellosis is an occupational hazard for veterinarians, and for veterinary researchers and students, cases regularly are recognized at Texas A&M University.

Though no community-wide brucellosis outbreaks were reported, two case clusters were reported in 1992. In one cluster, a woman, her son-in-law, and her granddaughter in Laredo all reported eating Mexican goat cheese. The second cluster involved a husband and wife from San Antonio for whom a complete exposure history was difficult to obtain. They were uncooperative with investigators but were known to have been in Mexico prior to onset of symptoms. All of these cases were confirmed serologically.

Health Risk Assessment of Toxic Substances

In 1988 the Health Risk Assessment Act (Senate Bill No. 537) authorized TDH to conduct health risk assessments of toxic substances and harmful physical agents. In an effort to increase the effectiveness of Environmental Epidemiology Program public health assessments, TDH applied for a Cooperative Agreement from the Agency for Toxic Substances and Disease Registry (ATSDR). The Environmental Epidemiology Program was awarded a Cooperative Agreement entitled "Demonstration Program for Health Department to Conduct Assessment" in August 1988. According to this agreement, TDH is required to conduct public health assessments on sites that have been included in the United States Environmental Protection Agency (EPA) National Priorities List (NPL) of hazardous waste sites. To assess federal, state, and local hazardous waste sites and to respond to individual and community health concerns related to these sites, TDH currently works collaboratively with ATSDR; the Texas Water Commission (TWC); the Texas Air Control Board (TACB); and other local, state, and federal environmental and health agencies.

The Environmental Epidemiology Program has been designated the departmental lead in the design and implementation of public health assessments. A public health assessment is the evaluation of data and information on hazardous substances in the environment to determine current or future impact on public health. Every public health assessment includes evaluation of site information, response to community concerns by determining health implications, and recommendations regarding the health threat posed by the site. Based on the information collected, the health risk assessment staff prepare a release of the health assessment document or site update. This document is reviewed by ATSDR, EPA, and local health agencies prior to publication. Comments received from these agencies and the public are incorporated into the assessment.

What follows is a collection of summaries, detailing the work performed by the Environmental Epidemiology Program in 1992. The location for each of these sites can be found in the accompanying figure.

Crystal Chemical Company NPL - Houston
Public Health Assessment Addendum, published April 27, 1992.

French Limited NPL - Crosby
Public Health Assessment Addendum available for public comment through December 6,1992.

Geneva Industries NPL - Houston
Public Health Assessment Addendum (Draft), completed April 7,1992 and available for public comment, through December 16,1992.

MOTCO Incorporated NPL - Texas City
Public Health Action Section, completed and forwarded to ATSDR February 5, 1992.
Public Health Assessment Addendum, published May 7,1992.

Petro-Chemical Company NPL - Liberty
Public Health Assessment, submitted to ATSDR September 9,1992.

Texarkana Wood Preserving Company NPL - Texarkana
Public Health Action Section, completed and forwarded to ATSDR April 16, 1992.
Public Health Assessment Addendum, published May 11, 1992.

United Geosoting Company NPL - Conroe
Public Comment Copy, submitted to ATSDR, July 22,1992.
Public Health Assessment Addendum forwarded to ATSDR for review, September 8,1992.

Bailey Waste Disposal NPL - Bridge City
Site visit, April 24,1992.
Site Review and Update (Draft), submitted to ATSDR for review, May 27,1992.
Site Review and Update (Revised), submitted to ATSDR for review, October 1992.

Koppers Company NPL - Texarkana
Site Review and Update (Initial Release), submitted to ATSDR for review, August 1992.
Site Review and Update (Revised), submitted to ATSDR for review, November 13,1992.

North Cavalcade Street NPL - Houston
Site visit, April 23,1992.
Site Review and Update (Draft), submitted to ATSDR for review, May 27, 1992.
Site Review and Update (Initial Release), submitted to ATSDR for review, June 1992.
Site Review and Update (Revised), submitted to ATSDR for review, November 13,1992.

Odessa Chromium I and Odessa Chromium II NPL - Odessa
Site visit, July 16, 1992.
Site Review and Update (Draft), submitted to ATSDR for review, August 8,1992.
Site Review and Update (Revised), submitted to ATSDR for review, October 6,1992.

Bio-Ecology NPL - Grand Prairie
Site visit, April 28,1992.
Site Review and Update (Draft), submitted to ATSDR for review, August 5,1992.

NON-NPL SITES

Bethlehem Steel - Port Arthur
Public Health Consultation (Risk Assessment), July 27, 1992.

Arsenic Contamination - Commerce
Health risk consultation to evaluate levels of arsenic found in residential yard, February 1992.

Chlordane Contamination - Laredo
Health Risk Consultation to evaluate levels of chlordane found around the Laredo State Center.

Pesticide Contamination - Laredo
Health Risk Consultation to evaluate levels of chlordane and other pesticides in a residential area adjacent to a pest control facility, September 1992.

BFI Municipal Landfill - **Sinton**
Public Health Consultation (Volatile Organic Compounds), July 1992.
Distributed health questionnaires to residents at public meeting, September 22,1992.

East Austin **Tank Farm** - Austin
Public Health Consultation (Draft), submitted to ATSDR, May 29,1992.
Public Health Consultation (Revised), submitted to ATSDR, August 26,1992.
Organized and conducted seven community health clinics which included health questionnaires, pulmonary function testing, and complete blood counts (Fall 1992).

Fabsteel - Waskom
Health Risk Assessment completed, March 6,1992.

Hayes/Sammons Warehouse - Mission
Human Health Risk Assessment Review, completed March 9,1992.

High Yield - Commerce
Health Consultation (Arsenic Contamination), 1992.
Site visit and Emergency Public Meeting, August 20,1992.

Arsenic Contamination - Hunt County
Health Consultation (Arsenic Contamination), submitted to TWC, February 4, 1992.

Niagara Chemical - **Harlingen**
Review of TWC Pollution Clean-Up Division's Risk Assessment for site, August 1992.

Champion Chemical (Methane Gas Explosion) - Odessa
Health Consultation (Air Monitoring Data), submitted to TWC, 1992.

Water Quality - Odessa
Health Risk Consultation (Sulfates and Chromium) to evaluate levels found in domestic wells, July 1992.

Precision Machine - Odessa
Site Visit, in conjunction with TWC representatives, 1992.

Sonics International, Incorporated - Ranger
Risk Assessment Review (Human Health and Environmental) for TWC, June 24, 1992.
Health Consultation (Livestock Grazing) submitted to TWC, September 1992.

Watersbend Apartments - Austin
Health Consultation in cooperative effort with TWC and City of Austin Staff, July 1992.
Texas Department of Health Commissioner's Evacuation of Site Order, July 24, 1992.
Public Meeting, August 1992.

Maintech - Port Arthur
Evaluation of Human Risk Assessment to possible polycyclic aromatic hydrocarbons contamination.

Public Health Assessment Sites, 1992

1. ODESSA
   Odessa Chromium I & II NPL
   Odessa Water Quality
   Champion Chemical
   Precision Machine

2. RANGER
   Sonics International

3. GRAND PRAIRIE
   Bio-Ecology NPL

4. COMMERCE
   High Yield
   Arsenic Contamination

5. TEXARKANA
   Texarkana Wood Preserving NPL
   Koppers Company NPL

6. WASKOM
   Fabsteel

7. AUSTIN
   East Austin Tank Farm
   Watersbend Apartments

8. HOUSTON
   North Cavalcade NPL
   Crystal Chemical Company NPL
   Geneva Industries NPL

9. CROSBY
   French Limited NPL

10. CONROE
    United Creosoting Company NPL

11. TEXAS CITY
    MOTCO
    Incorporated NPL

12. LIBERTY
    Petro-Chemical NPL

13. PORT ARTHUR
    Maintech
    Bethlehem Steel

14. BRIDGE CITY
    Bailey Waste Disposal NPL

15. SINTON
    BFI Municipal Landfill

16. HARLINGEN
    Niagara Chemical

17. MISSION
    Hayes-Sammons Warehouse

18. LAREDO
    Chlordane Contamination
    Pesticide Contamination

Viral Hepatitis

Viral hepatitis is a collective term used to denote any of several viral diseases whose target organ is the liver. Currently the major viruses in this category are hepatitis A virus (HAV), hepatitis B virus (HBV), hepatitis C virus (HCV), hepatitis D virus (HDV.), and hepatitis E virus (HEV). Of these five types, infections due to HAV, HBV, and HCV account for the majority of hepatitis virus activity in Texas. Hepatitis D is reported infrequently in this state, with most cases coming from our major metropolitan areas. Nationwide, indigenous cases of hepatitis E have yet to be reported.

In 1992, 3,833 cases of viral hepatitis were reported in Texas. This total represents a drop of 23.8% from the previous year's total of 5,031 cases. As with previous years, the 1992 total includes those cases reported for each of the four virus types present in this country (A through D) as well as those reported as "hepatitis non-A, non-B" (NANB) and "hepatitis, type unspecified." The latter represents a category established to accommodate the reporting of cases identified primarily on a clinical basis. Accounting for 87.6% of the viral hepatitis cases reported in the state, hepatitis A and B remain the principle types of hepatitis. The numbers of cases and corresponding incidence rates for individual counties are provided in the Regional Statistical Summary Section.

Hepatitis A

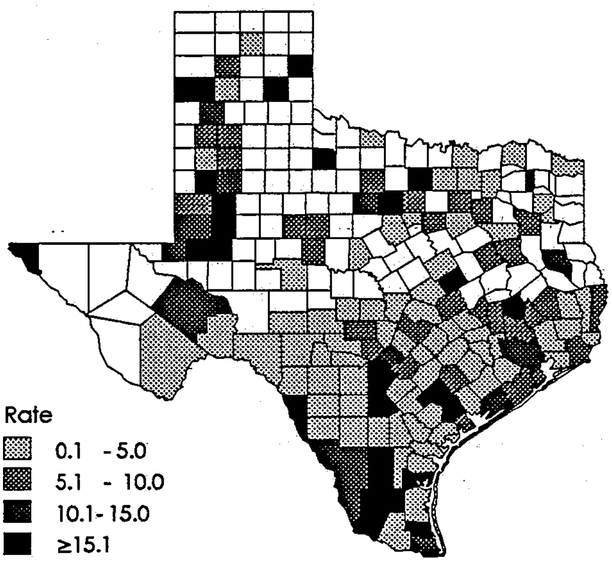
Hepatitis A, one of the most frequently reported diseases in Texas, is an acute, self-limiting viral infection of the liver. Signs and symptoms, when present, may include fatigue, nausea, vomiting, diarrhea, malaise, right upper quadrant discomfort, loss of appetite, dark urine, and jaundice. The immunity that follows an HAV infection is usually complete, thereby preventing reinfections. Therefore, the level of susceptibility to HAV infection within a population is greatest during childhood; the number of susceptible persons drops as the population ages. Since HAV is an enteric virus concentrated in stool, the infection is acquired when a person ingests fecally-contaminated food or beverages or places fecally-contaminated objects (e.g., fingers, cigarettes) in the mouth. Person-to-person contact encompasses all of these exposures, especially where groups of people (e.g., families, day-care centers) are concerned. Good personal hygiene, with an emphasis on handwashing, is the key to prevention.

The year 1992 marked a decrease in the total number of hepatitis A cases reported to the Texas Department of Health, with 1,828 cases reported from 106 counties. This number represents a 31.3% decrease compared to the 1991 case total, and a 32.5% drop in annual incidence rate (Figure 1). A marked decrease in hepatitis A incidence in one region of the state, specifically the Texas-Mexico border, had the greatest impact on the overall statewide figure. Incidence rates by county are presented in Figure 2. Over 99% of hepatitis A cases reported to the TDH were diagnosed serologically. Hepatitis A was the cause of death for three persons in Texas in 1992; all three died of fulminant hepatitis.

Figure 1. The Incidence and Demographics of Hepatitis A in Texas, *1992* and *1991*

	1992	1991
Case Total	1828	2663
Counties Reporting	106	141
Incidence Rate	10.4	15.4
By Race/Ethnicity:		
White	5.6	8.2
Hispanic	20.4	34.1
African-American	4.0	5.2
Male/Female Ratio	1:1	1:1
Deaths	3	6
Case/Fatality Rate	0.2%	0.2%

Figure 2. Incidence Rate per 100,000 of Hepatitis A in Texas, 1992



Among whites the majority of cases involved adults, with almost half (48.0%) of these cases reported in persons age 20 to 49. In contrast, only 26.4% of cases among Hispanics were adults in that same age range.

As in previous years, the group with the highest attack rate for hepatitis A was Hispanic children. Of the 1,828 hepatitis A cases reported in Texas, roughly one of every three (36.2%) was a Hispanic **child/adolescent** under the age of 20. Hispanic children five to nine years-of-age accounted for 17.0% of all the cases in the state. These trends in hepatitis A morbidity, as reflected by the age distribution of cases, suggest that Hispanics tend to acquire this infection early in life and whites later. Differences in socioeconomic settings, association with groups of children, and quality of environmental health are all important factors in the spread of hepatitis A.

The patterns of disease incidence for hepatitis A have remained remarkably consistent over recent years (Figures 3 & 4). Again in 1992, morbidity was concentrated disproportionately in the Hispanic population, accounting for approximately **half** (50.8%) of cases reported statewide. Whites accounted for one of every three cases (32.6%) and African-Americans for relatively few (4.5% of the total). Although males and females were affected equally, attack rates differed with respect to age groups and **race/ethnicity**.

Figure 4. Reported Cases of Hepatitis A per 100,000 Population by Age Group: Texas 1992

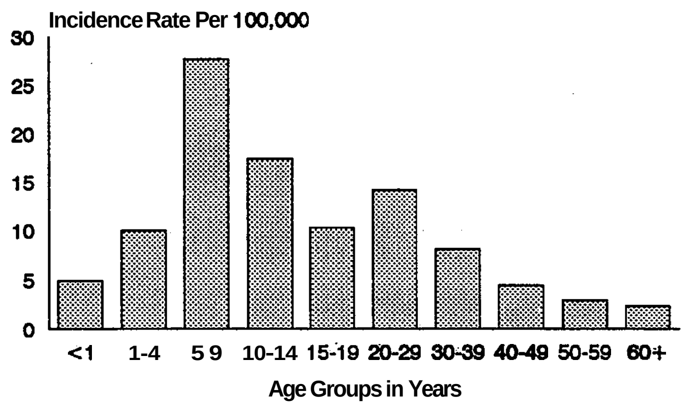
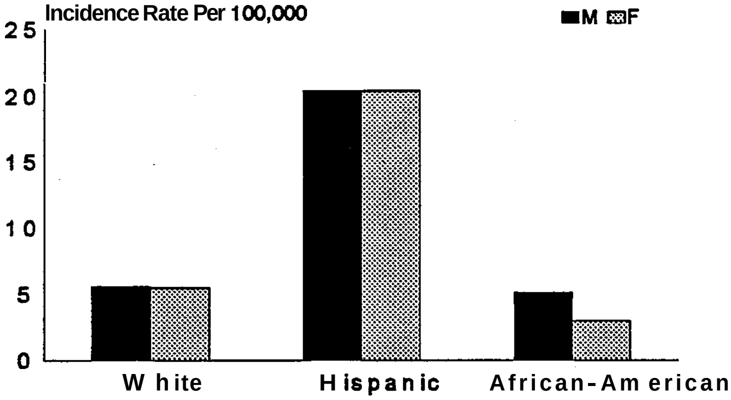
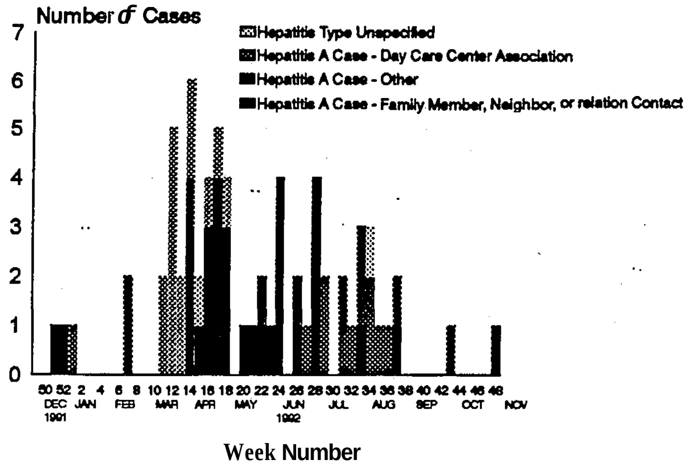


Figure 3. Reported Cases of Hepatitis A per 100,000 Population by Race/Ethnicity and Sex: Texas, 1992



Of the three major types of viral hepatitis, hepatitis A is the type most associated with outbreaks. In recent years, much of the increased incidence of hepatitis A activity in Texas has been attributed to **community-wide outbreaks.** These outbreaks often are difficult to

Figure 5. Hepatitis A - Community-Wide Outbreak: Dawson County, Texas *1992*

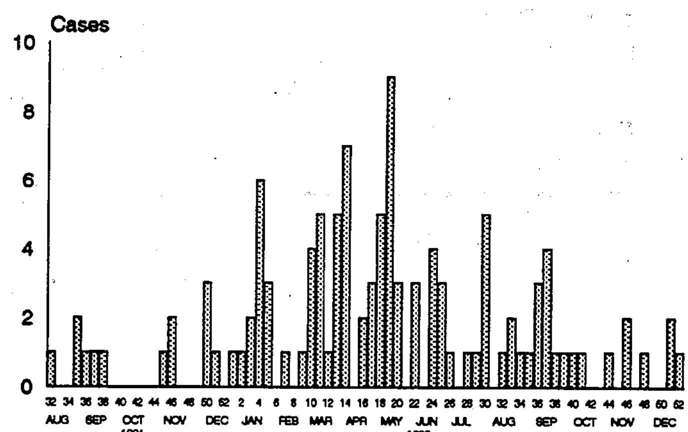


hepatitis A incidence was increasing, each outbreak had gone through several cycles of infection and was well established. Although attack rates generally were highest among children aged five to nine, the Dawson County outbreak also had a day-care center cluster of cases among children four years of age. The spread of hepatitis A among children and staff in the day-care center intensified the outbreak in the months of March and April. The outbreak in Victoria exhibited peak activity during the same time. From that point on, documented person-to-person spread among families, friends, and neighbors accounted for subsequent cycles of infection in both communities. All told, Dawson County reported at least 69 cases of hepatitis A in 1992, while Victoria reported 100 cases.

detect and control. Although many of these outbreaks include "point source" clusters early in the course of events, the outbreak eventually is characterized by the following: 1) insidious beginnings with asymptomatic or subclinical index cases; 2) person-to-person spread through several cycles or waves of infection; 3) transmission among families, friends, neighbors, and especially extended families; 4) high attack rates in children under the age of 15, with the majority of symptomatic illness occurring in children ages five to nine; and 5) asymptomatic, subclinical, or unreported cases that perpetuate the outbreak by shifting the course of the outbreak from a central focus (or foci) to the more diffuse person-to-person means of transmission.

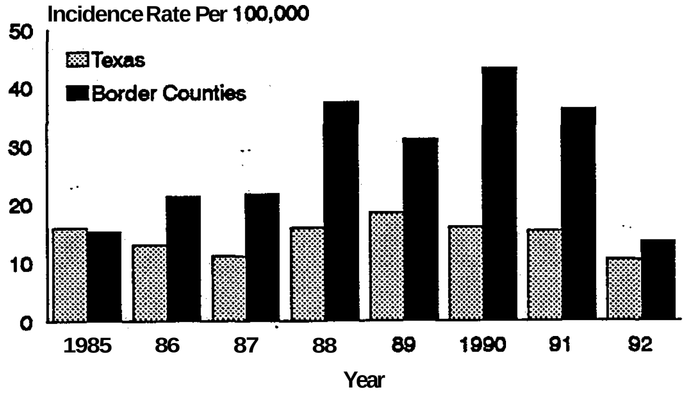
At least two such community-wide outbreaks of hepatitis A occurred in Texas in 1992. The two sites were Dawson and Victoria Counties, located at opposite ends of the state (Figures 5 & 6). Although the two outbreaks were totally unrelated, they were remarkably similar. Both started insidiously in late 1991 and gathered momentum in the first quarter of 1992. By the time local health officials realized that

Figure 6. Hepatitis A - Community-Wide Outbreak Victoria County, Texas *1991-92*



Another perennial focus of hepatitis A activity is the Texas-Mexico border region. This 15-county area has experienced rapid population growth in recent years. Approximately 75% of the population of this area is Hispanic, compared to only 22% for Texas overall. The incidence of reported hepatitis A along the border tripled in the years from 1985 to 1990 (Figure 7). In 1990 the incidence of hepatitis A along the border was almost 2.5 times that for Texas as a whole. From 1990 to 1992, however, there

Figure 7. Incidence of Hepatitis A per 100,000 Population Comparing Texas and Border Counties, 1985-1992



was a remarkable decrease in the incidence of hepatitis in the region, with the incidence rate dropping from approximately 43 cases/100,000 population in 1990 to about 13 cases/100,000 population in 1992. Two hypotheses may account for this dramatic change. One theory holds that health education activities aimed at cholera prevention along the border had a preventive effect on hepatitis A transmission. Intensive education campaigns, mounted during 1992 in the major metropolitan areas along the border, advised people to follow good handwashing practices and other steps to prevent fecal contamination of water supplies and food. Since both cholera and hepatitis A are transmitted via the fecal-oral routes, and both pathogens are environmentally stable, transmission of both diseases may have been minimized through the same health education message. The other possible explanation for the decreased incidence of hepatitis A is that a limited number of susceptibles remained in the area after six years of increased incidence.

Hepatitis, Type Unspecified

The number of cases of "hepatitis type unspecified" reported in Texas continues to drop; the 191 cases reported in 1992 reflected a 26.5% decrease from the 260 cases reported in 1991 (Figure 8). The category of "hepatitis, type unspecified" is used almost always as a means of reporting those cases of hepatitis which are diagnosed clinically, without specific hepatitis serology. Typically, over 90% of the cases in this category are reported on the basis of a clinical diagnosis alone. In 1992, 96% were reported this way. Sixty-six percent of the "unspecified" cases were reported from four of our largest cities - Houston, Dallas, Fort Worth, and Austin.

Figure 8. The Incidence and Demographics of Hepatitis Type Unspecified in Texas, 1992 and 1991

	1992	1991
Case Total	191	260
Counties Reporting	33	45
Incidence Rate	1.1	1.5
By Race/Ethnicity:		
White	0.8	0.7
Hispanic	1.7	3.4
African-American	1.0	1.5
Male:Female Ratio	1.2:1	1:1.2
Deaths	3	4
Case-Fatality Rate	1.6%	1.5%

Figure 9. Reported Cases of Unspecified Hepatitis per 100,000 Population by Race/ Ethnicity and Sex: Texas, 1992

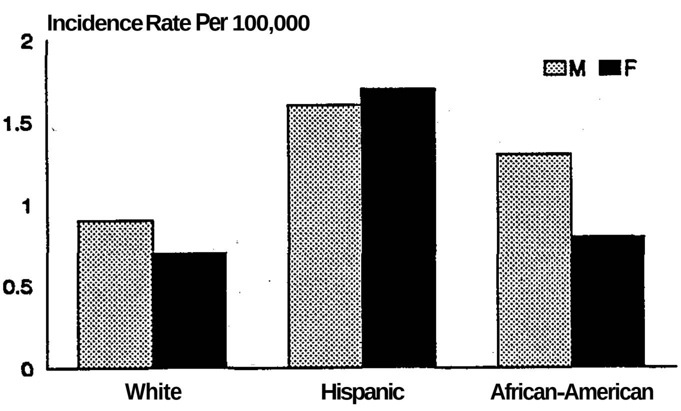
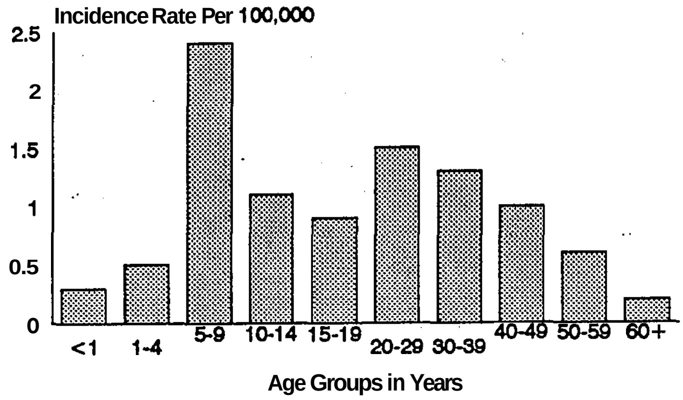


Figure 10. Reported Cases of Unspecified Hepatitis per 100,000 Population by Age Group: Texas, 1992



From year to year, the incidence patterns of "hepatitis type unspecified" resemble those of hepatitis A (Figure 9). As with hepatitis A, the focus of morbidity is among Hispanics, and attack rates are highest among children. For example, incidence was highest among Hispanics, with 1.7 cases/ 100,000 population. This rate is approximately double that for whites and for African-Americans. Regarding the distribution of cases by age group, more than one third (34.0%) of the "hepatitis, type unspecified" cases occurred in children and adolescents (Figure 10). Of those, Hispanic children sustained the highest attack rates. One out of five (20.9%) of all the "hepatitis type unspecified" cases was a Hispanic child under the age of 15. Cases among whites tended to occur in young adults, ages 20 to 39. This incidence pattern is strikingly similar to that of hepatitis A, in which disease occurs at a younger age for Hispanics, but later for whites and African-Americans. The nearly equal distribution of cases between males and females is also typical of that for hepatitis A.

Three deaths from fulminant hepatitis were reported in this category; all three were women. Two of the deceased were in their 20s, and the third was 63.

Hepatitis B

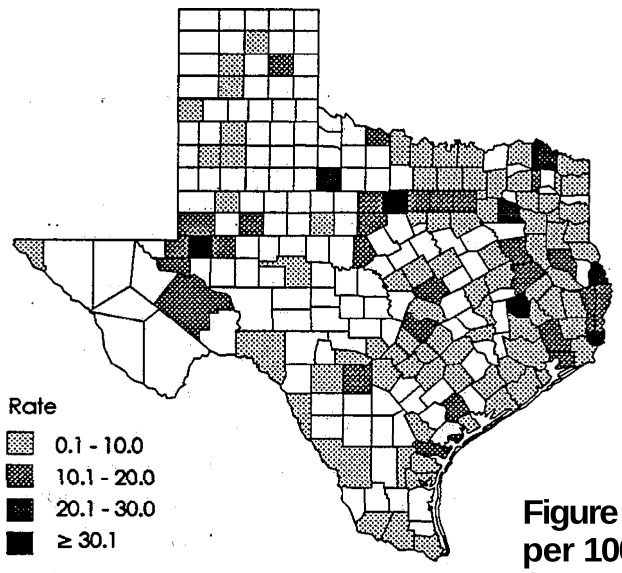
Hepatitis B is the second major type of viral hepatitis and is clinically indistinguishable from hepatitis A. Hepatitis B virus (HBV) is found in the blood and certain body substances (e.g., semen, vaginal secretions) of infected persons. Consequently, transmission of the virus requires direct contact with these infectious substances. Those activities which facilitate HBV transmission include, among others, injection drug use with shared needles, sexual contact with multiple partners, person-to-person contact with an HBV-infected person, and occupational exposures to blood or certain body fluids. Persons with newly acquired hepatitis B infections often recover, but some remain chronically infected. This chronic carrier state often leads to more severe liver disease, such as cirrhosis,., chronic active hepatitis, or even liver cancer.

In 1992, 1,528 cases of hepatitis B were reported to TDH from 106 counties. This figure represents a 22.0% decrease in the number of cases compared to the 1,958 cases reported in 1991 (Figure 11). Figure 12 illustrates the incidence rates of hepatitis B in individual counties in Texas. More than 99% of the cases were reported on the basis of specific hepatitis B serology.

Figure 11. The Incidence and Demographics of Hepatitis B in Texas, 1992 and 1991

	1992	1991
Case Total	1528	1958
Counties Reporting	124	141
Incidence Rate	8.7	11.3
By Race/Ethnicity:		
White	6.4	6.9
Hispanic	6.1	7.6
African-American	11.9	14.0
Male:Female **Ratio**	1.5:1	1.4:1
Deaths	20	21
Case-Fatality Ratio	1.3%	1.1%

Figure 12. Incidence Rate per 100,000 of Hepatitis B in Texas 1992



Compared with HAV, HBV is not stable in the environment. Unlike hepatitis A, environmental factors such as water and sewage treatment play basically no role in the transmission of hepatitis B. Hepatitis B infections result primarily from high-risk behaviors of adults and adolescents. Consequently, the distribution of cases by age group, race, and sex for hepatitis B is very different from that of hepatitis A (Figures **13 & 14**). Over the years, hepatitis B has occurred more frequently in males than in females, a trend which holds true for all three of the race/ethnic groups. In general, there are three cases among males for every two cases in females. African-Americans historically have sustained the highest attack rates of the three race/ethnic groups; in **1992** the incidence rate of hepatitis B among African-Americans was almost twice that for either whites or Hispanics. In contrast to hepatitis A, where attack rates are highest among young children, hepatitis B occurs mainly in adolescents and adults. The age group with the highest attack rates in all three of these three race/ethnic groups was adults **20** to **29** years of age. This age group accounted for approximately 37% of the cases for each of the three race/ethnic groups. Many cases also occurred among adults **30** to **39** years of age. Overall, three of every four hepatitis B cases were adults in the age range of **20** to **49** years. There were **20** deaths among the reported cases for the year. Of these, **14** of the deceased were men, and six were women. The deceased ranged in age from **20** to **77** years, with the average age being 45. Fulminant hepatitis is listed typically as the immediate cause of death in acute hepatitis cases.

Figure 13. Reported Cases of Hepatitis B per 100,000 Population by Age Group Texas, 1992

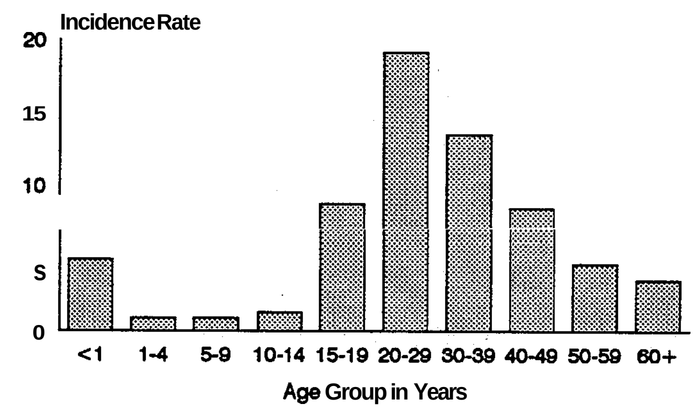
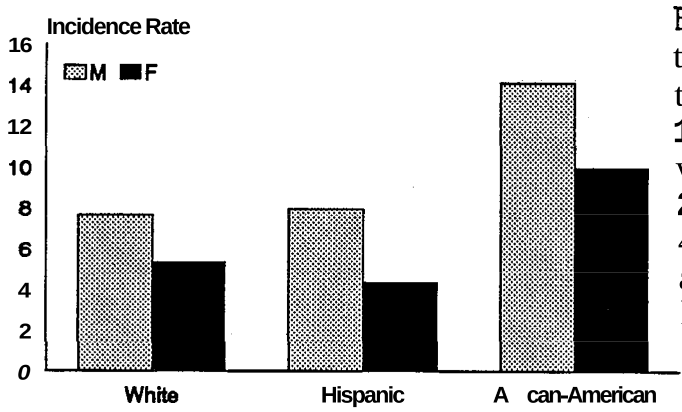


Figure 14. Reported Cases of Hepatitis B per 100,000 Population by Race/Ethnicity and Sex: Texas, 1992



Hepatitis D

Hepatitis D virus (HDV) infections occur only in persons with active hepatitis B infections. The prognosis for the outcome of the HDV infection depends on the status of the HBV infection. Acute co-infection with both viruses, even when severe, results in recovery more frequently than does acute HDV infection superimposed on a chronic HBV infection.

Hepatitis D is probably underreported since most clinicians do not routinely order the specific serology when evaluating their hepatitis B patients. A diagnosis of hepatitis D, however, usually is suspected when the HBsAg-positive patient presents with unusually severe symptoms accompanied by very high transaminase levels in the liver function tests, and the risk factor history is remarkable for injection drug use and sharing of needles.

In 1992 five cases of hepatitis D were reported from three counties (Dallas, Kaufman, and Walker) in Texas. Four white men and one African-American man comprised all of the patients. Four of the five men were in the age range 30-33 years, and the fifth patient was 23 years old. Three of the five patients also were reported for hepatitis B, with serologic markers significant for acute phase hepatitis. The remaining two patients were not positive for acute hepatitis B by serology (i.e., negative for anti-HBc IgM), suggesting that their hepatitis D infection was superimposed on a hepatitis B chronic carrier state. No deaths were reported in the category of hepatitis D.

Hepatitis C

Hepatitis C is the second major form of bloodborne viral hepatitis. Medical epidemiologists have been aware of the existence of this disease as the predominant form of "transfusion-transmitted" hepatitis since the mid-1970s. The symptoms of hepatitis C are similar to, but less severe, than those of hepatitis A and B. Asymptomatic infections are common. The problems presented to society by hepatitis C are enormous, as approximately 50% of acute infections become chronic, and 20% of chronically infected patients will develop cirrhosis, which is still a major cause of death in this country.

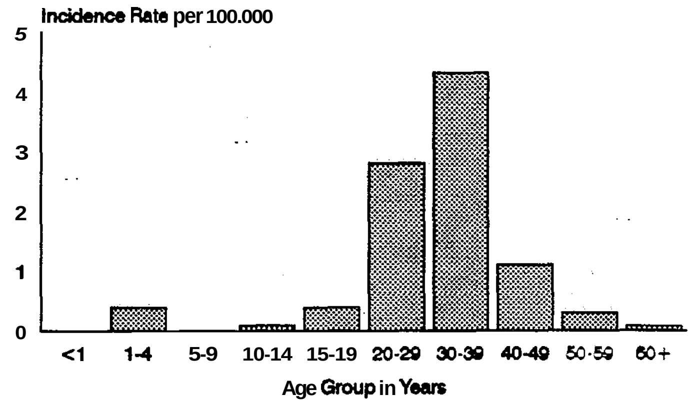
The serologic diagnosis of acute hepatitis C is difficult, because the current laboratory test is incapable of distinguishing acute from chronic or previous infections. This diagnostic problem makes the surveillance of acute hepatitis C very labor-intensive and frustrating for all involved, since communicable disease surveillance in Texas focuses on the incidence of acute infections. Perhaps as many as 80% of reports of hepatitis C antibody-positive patients received by TDH in 1992 reflected non-reportable conditions. Additional efforts are required on the part of personnel in hospitals, local health departments, etc., to evaluate liver function profiles and clinical information in order to ascertain if the anti-HCV-positive patient does indeed have acute hepatitis C.

In 1992, 255 cases of hepatitis C were reported from 44 counties in Texas (Figure 15). The number of hepatitis C cases will continue to increase as the ability to diagnose the acute condition improves. More than 99% of the cases were reported initially

Figure 15. The Incidence and Demographics of Hepatitis C in Texas, 1992 and 1991

	1992	1991
Case Total	255	84
Counties Reporting	44	23
Incidence Rate	1.4	0.5
By Race/Ethnicity:		
White	1.4	0.4
Hispanic	0.9	0.5
African-American	2.4	0.4
Male:Female Ratio	1.8:1	1.5:1
Deaths	0	1
Case-Fatality Ratio	0.0%	1.2%

Figure 16. Reported Cases of Hepatitis C per 100,000 Population, by Age Group: Texas, 1992



on the basis of specific hepatitis C serology.

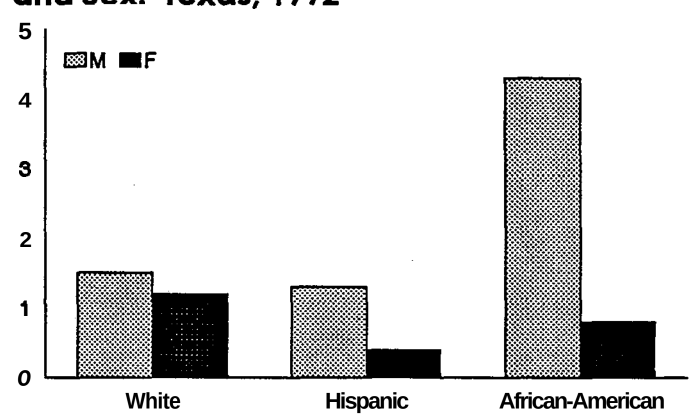
The current case total reflects a 203% increase over the 1991 total. There were no deaths reported among the acute cases. The male:female ratio was approximately 2:1.

Figures 16 and 17 show the distribution of cases by age, race/ethnicity, and sex. Roughly six of every ten cases occurred among whites (58.0%), and 16.5% of the total were African-American males. Only 12 cases occurred among children and adolescents. For each of the race/ethnic groups, adults ranging in age from 20 to 39 accounted for the overwhelming majority of hepatitis C cases. On average, three of four patients in this category were adults. Concentration of cases among adults suggests that blood/body fluid exposures via "adult" high-risk behaviors and activities place this group at risk. Injection drug use via shared needles is the most frequently identified risk factor for hepatitis C in this country.

TDH received numerous reports of persons who were found to be positive for hepatitis C antibody via a screening program of one sort or the other. Invariably, these individuals were asymptomatic but were being tested because of elevated liver function results or significant risk factor history of long duration. These persons were not reported as acute cases because they did not meet case definition criteria. In addition, the Centers for Disease Control and Prevention (CDC) is not accepting reports based on screening programs such as those found in blood banks or plasma centers. Nevertheless, some of the trends noted for the distribution of acute cases also were evident in the groups with the non-reportable conditions. Two such groups of reports were examined.

The first group consisted of reports from several plasma centers around the state. This database had 800 records submitted primarily from four to six plasma centers. Seven of every eight entries had complete demographic information. Of these, 82% of the persons reported were male, 18% were female. Whites accounted for 60% of the persons reported regardless of sex. The distribution of reports by age was remarkably similar to that of the acute hepatitis C cases in the official surveillance. Over 91% of the plasma center reports were for persons ranging in age from 20 to 44 years.

Figure 17. Reported Cases of Hepatitis C per 100,000 Population by Race/Ethnicity and Sex: Texas, 1992



Persons in the age group 30 to 39 years accounted for approximately half of the reports of hepatitis C-positive donors in these plasma centers. In efforts to determine what these data mean with respect to hepatitis C prevalence, the plasma center in Austin was contacted for monthly workload measures. Given the allowable frequency for plasma donation, the number of units processed per month, and the average number of hepatitis C-positive units identified, the Austin data reflect a prevalence range of 0.7% - 5.2% for hepatitis C antibody in the population that makes use of such centers.

The second group of reports came from a screening program conducted at the Rusk State School. Overall, 113 persons were positive for hepatitis C antibody in this facility in 1992. The age distribution of these individuals was remarkably similar to that for the plasma center donors, with 86.7% of the persons reported in the age range of 20 to 44 years. Half the persons reported were in their thirties. Seventy-three percent were male, and of those, whites and African-Americans accounted for 42.7% and 48.9% of the reports respectively. Reports were evenly distributed between white and African-American females. The Rusk State School reports contained information on risk factors as well. Most reports indicated one or more high-risk activities as part of the individual's medical history. Many of the activities involved injection drug use or exposure via some other percutaneous event. For persons with mutually-exclusive risk factors, injection drug use was reported most frequently (39.5%) and sex with multiple partners next in frequency (21.1%). Among those with multiple risk factors, the most frequent combination was that of injection drug use/sex with multiple partners (26.3%), followed by injection drug use/sex with multiple partners/history of hepatitis B (19.7%).

Hepatitis Non-A, Non-B (Non-C)

During the previous two years, there has been a dramatic decrease in the number of hepatitis non-A, non-B (NANB) cases reported in Texas and elsewhere in the nation. This trend is the result of the current extensive use of hepatitis C serology. Prior to mid-1990, all cases of hepatitis that, serologically, were neither hepatitis A nor B, were reported as NANB. In 1993 many of these cases probably would be classified as hepatitis C, leaving a small number of cases remaining that are "non-A, non-B, non-C" in nature. Based on recent studies of transfusion-transmitted hepatitis, hepatitis experts hypothesize that one or more additional bloodborne hepatitis viruses do, in fact, exist.

In 1992 only 26 cases of NANB hepatitis were reported from 11 counties in Texas. Compared to the 1991 case total of 60, the figure for 1992 reflects a 56.7% decrease in the number of cases. The statewide annual incidence rate for NANB was 0.2 cases/100,000 population. Fourteen of the cases involved women, 12 involved men. Two of every three cases (65.6%, 17 cases) were diagnosed among Hispanics. Whites accounted for seven cases, with African-Americans making up the remainder (two cases). Greater than 95% (96.2%) of the cases were diagnosed on the basis of clinical determinations.

Eighteen of the 26 cases occurred in adults 20 years of age or older. Of the remaining cases, six were identified among children and adolescents, and two were reported as "age unknown." This age distribution pattern tends to support findings from the CDC's "Viral Hepatitis Surveillance Program." Frequently cited risk factors such as injection drug use and personal contact with another NANB case, support the assertion that NANB is caused by one or more blood/body fluid-borne virus. As with other forms of hepatitis, asymptomatic infections are important in the epidemiology of the NANB, because they are an insidious source of infection within the community. No deaths were reported in the category of NANB hepatitis during 1992.

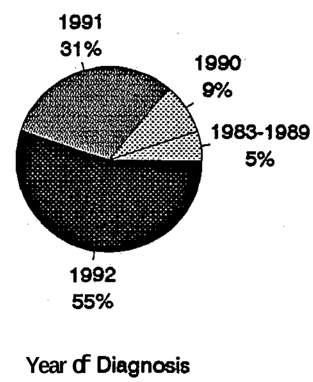
HIV/AIDS

Texas ranked fourth in the United States in the number of AIDS cases reported in 1992. Acquired immunodeficiency syndrome (AIDS) is a specific group of diseases or conditions which characterize severe immunosuppression secondary to infection with the human immunodeficiency virus (HIV). Unlike many other reportable diseases discussed in this report, the clinical manifestations of HIV usually do not develop until years after infection. The average time between infection with HIV and a diagnosis of AIDS is 10-12 years. This lengthy period between infection and development of clinical illness limits the value of statistics based on reported AIDS cases. Attempts are underway to improve reporting of HIV infection so that this limitation may be overcome.

With all reportable diseases, some delay between the date of diagnosis and the date the case is reported to public health officials is inevitable. With AIDS, however, the delay may last years. In 1992 only 55% of the cases reported were actually diagnosed in 1992; 31% were diagnosed in 1991 and 14% prior to 1991 (Figure 1). Reporting lags may be associated with inherent delays in diagnosis and reliance on passive reporting. Although the chance is remote, concern that reporting will result in discrimination against HIV identified individuals is another reason for delay. A form of discrimination particularly feared is loss of insurance benefits. Reporting of AIDS cases has been required by law since 1987. Both the long period between HIV infection and progression to AIDS, as well as the significant delays in AIDS reporting, have considerable impact on analyses of AIDS cases by year of report.

The 3,331 AIDS cases reported to TDH in 1992 translate into a rate of 18.9 per 100,000 population. In this year, ~~120~~ cases were reported from 128 Texas counties. As might be expected, the most populous county, Harris, had the most cases (32%). Dallas County, ranking 2nd in population, accounted for 21% of the cases. In contrast, Travis County, the sixth most populous county, accounted for a larger share of cases (10%) than Bexar or Tarrant counties (with 7% each). Only 1.4% of the cases were reported from El Paso County, the fifth most populous county. Reports of AIDS cases were not limited to large urban areas. In 1992, 64% of the reporting counties were rural; these counties reported 155 cases. (Figures 2 and 3).

Figure 1. Year of Diagnosis for Texas AIDS Cases Reported in 1992



The overall AIDS case rate for males declined by 4% during the two-year period between 1990 and 1992, from 36.3 to 34.9 per 100,000. Overall rates for females increased by 68%, from 2.0 to 3.4 per 100,000. Looking at these two statistics alone can be misleading: rates for white males fell (1990 = 38.7; 1992 = 34.8), while rates for males of other races rose. The most dramatic change in the demographics of the rates occurred among African-American males and females. The rate for African-American males increased by 16% in 1992, from 57.5 per 100,000 in 1990 to 66.5 in 1992. Rates for African-American females increased by 73%, from 7.8 in 1990 to 13.8 in 1992. The largest rate increase, 152%, was observed among

Figure 2. Map of Texas *1992* Reported AIDS Case Rates per *100,000*

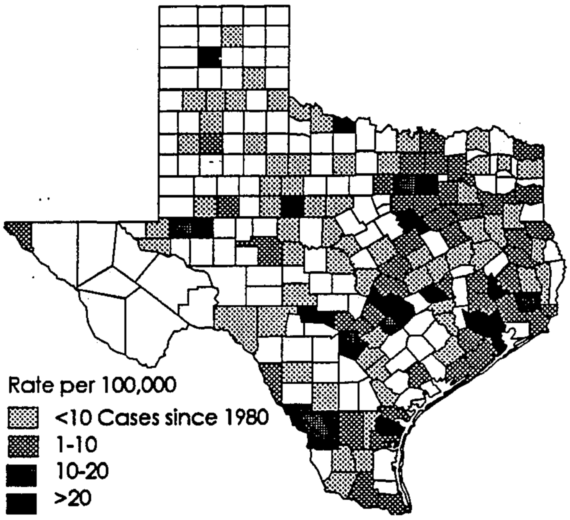
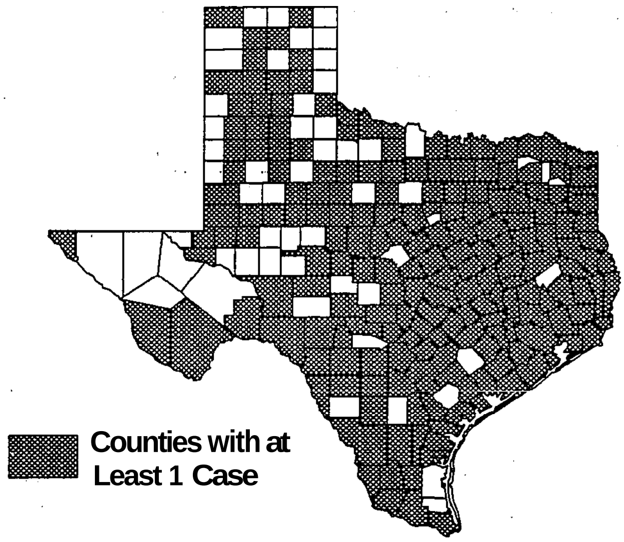


Figure 3. Counties Reporting at Least One Resident AIDS Case through December *31,1992*



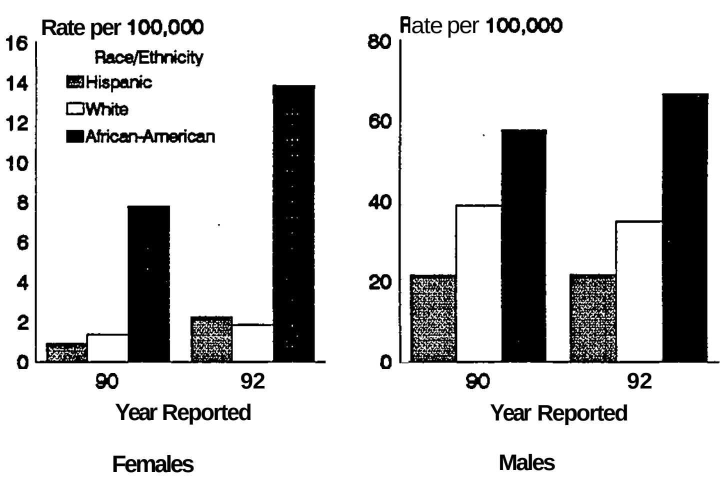
Hispanic females; however, this group accounted for only 19 cases in 1990 and 51 in 1992. Rates for Hispanic males remained stable (1990 = 21.4, 1992 = 21.6). Rates for white females rose 35.2%, from 1.3 per 100,000 in 1990 to 1.8 in 1992 (Figure 4).

Ninety-two percent of cases among males for 1992 were between the ages of 25-54, as were 74% of those among females. Between 1990 and 1992, the proportion of Texas AIDS cases in males has declined while that in females has increased (Figure 5).

The number of Texans practicing behaviors that put them at risk for HIV infection is unknown. Due to the lack of reliable population statistics, the following discussion is limited to changes in the number of reported AIDS patients practicing various behaviors rather than to behavior changes in the general population. Between 1990 and 1992, some modes of exposure for newly reported AIDS cases increased and some decreased (Figure 6). The number of adolescent and adult individuals exposed to HIV through male-to-male sex decreased 11% during this two-year period. In contrast, the number of individuals infected through injecting drug use increased by 49% and exposures attributed to heterosexual contact by 41% between 1990 and 1992. New cases stemming from exposure to blood or blood products fell by 24%.

The new demographic profile of reported AIDS cases increasingly belies the stereotypical portrait of HIV infected people as white homosexual males. Minorities,

Figure 4. Reported AIDS Case Rates per *100,000* by Sex and Race/Ethnicity *1990* and *1992*



women, and injecting drug users and their partners are being added to the statistics at alarming rates. Even more disturbing is the fact that the demographics of AIDS cases will not reflect the demographics of HIV infected persons for 10-12 years. These changing demographics must be taken into account when designing strategies for HIV prevention and for medical and social services for those who are already infected.

Figure 5. Gender of Texas AIDS Cases: Reported *1990* to *1992*

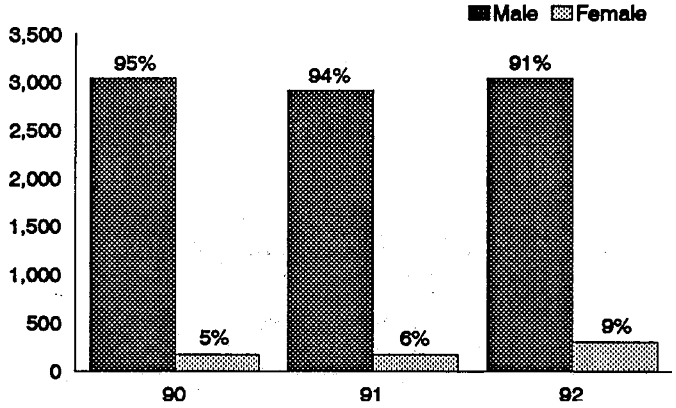


Figure 6. AIDS by Selected Modes of Exposure *1990* and *1992*

Mode of Exposure	Number of Cases Reporting *1990*	Number of Cases Reporting *1992*	Percentage Change
Male-to-Male Sex	2269	2025	-11
Injecting Drug Use	300	446	49
Heterosexual Contact	110	155	41
Blood/Blood Products	88	67	-24

Influenza and Flu-like Illness

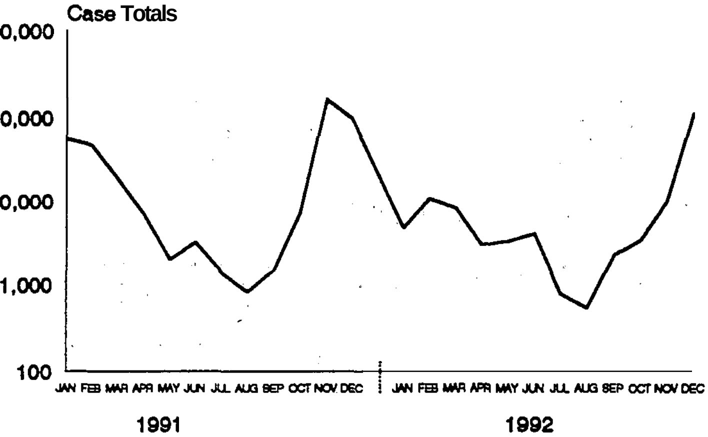
For routine reporting, the category of "influenza and flu-like illness" covers a wide range of upper respiratory infections. Signs and symptoms include fever, cough, coryza, sore throat, malaise, myalgias, arthralgias, and headaches. During 1992, cases were reported by number (case totals by week) without any patient identifiers or demographic information; week of report and the county of residence were obtained from completed EPI-1 surveillance forms.

Upper respiratory infections of viral etiology account for the majority of cases reported in this category. Influenza virus is responsible for most of these infections, especially during the winter months. Infectious agents such as parainfluenza viruses, adenoviruses, respiratory syncytial virus, and *Mycoplasma* species also contribute to the morbidity reported in this category. Even the primary infection of herpes simplex viruses sometimes can include an upper respiratory syndrome similar to a mild case of "flu."

Many respiratory viruses are seasonal, following predictable patterns of incidence. The most prominent of the seasons is that for influenza viruses. The flu season typically begins very late in the fall, continues throughout the winter, and tapers off with the advent of spring. Other viral seasons overlap the flu season at both its beginning and its end.

In 1992, 155,568 cases of influenza and flu-like illness were reported in Texas. Although this figure represents an almost 60% drop in the number of cases compared to those reported in 1991, it most likely reflects the early onset and relative mildness of the 1991-1992 influenza season compared to the previous season. Because the flu season spans the break in the calendar year, 1991 data must be reviewed to understand the complete 1991-92 season. The majority of morbidity for the 1991-92 influenza season occurred in November and December of 1991; virus circulation ceased abruptly by the end of February, 1992. In addition, the 1992-93 season started very late in the fourth quarter of the year. Figure 1 shows the case totals reported by month for 1991 and 1992. Both years show an unusual increase of flu-like illness during the months of May and June, most likely caused by parainfluenza virus type 3, which circulates mainly in the late spring.

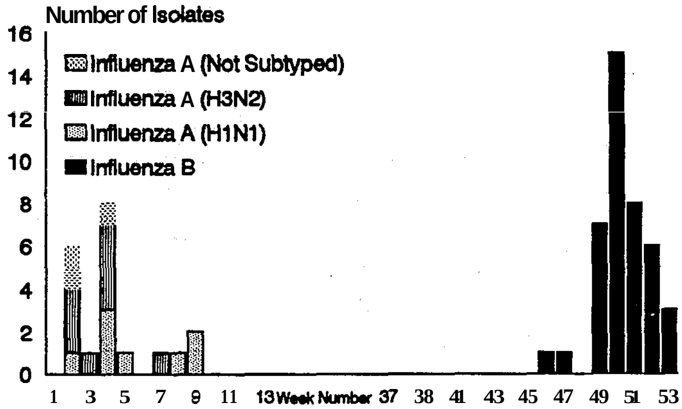
Figure 1. Flu and Flu-Like Illness Monthly Totals: Reported Cases, 1991-1992



Approximately 64% of the total morbidity due to influenza and flu-like pathogens for 1992 was reported from Harris County. This large percentage of total reports for the state is a function of the large number of influenza virus isolates reported to TDH by the Influenza Research Center at Baylor College of Medicine in Houston. Medical epidemiologists at the Center estimate that each influenza virus isolate recovered during active surveillance represents 500 cases occurring in the community. This system of reporting is used for the Harris

County data only. Overall, influenza and cases of flu-like illness were reported from 72 counties in 1992. The apparent absence of influenza in some counties probably reflects a lack of reporting. Historically, influenza and flu-like illnesses are among the most underreported of all the reportable diseases. Disease experts believe that up to 10% of the population becomes ill with influenza during any given season.

Figure 2. Influenza Virus Isolates. Recovered by TDH-Based Statewide Surveillance by Week of Specimen Collection *1992*



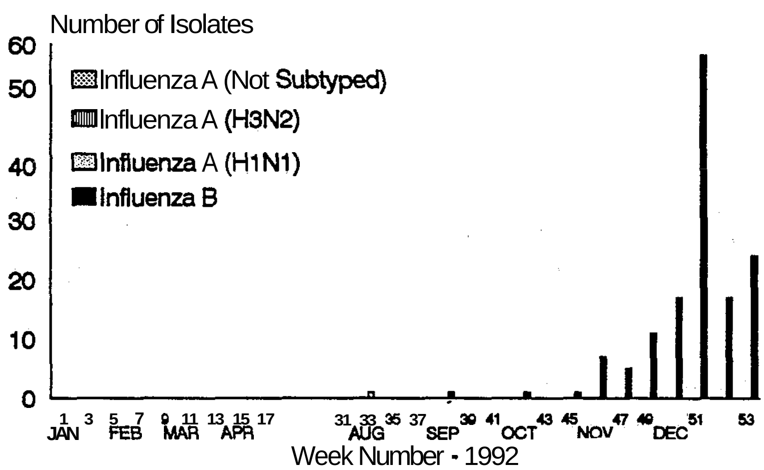
Influenza Virus Surveillance

Of the three types of influenza virus - influenza A, B, and C - infections caused by types A and B account for significant levels of morbidity during the late fall and winter months in temperate climates. Influenza A **and** B infections are indistinguishable on the basis of symptoms alone. Influenza C infections, on the other hand, are usually subclinical and often go unrecognized.

Because of their unique genomic structure, influenza viruses exhibit significant variability over time. Small changes in the antigenic properties of key surface proteins of influenza A or B viruses result in new viral strains or variants. **These** small changes, known as antigenic drift, are the natural response of the virus to increasing levels of immunity in the host population. Influenza A viruses, also can exhibit significant changes in the antigenicity of the hemagglutinin and neuraminidase proteins, such that new subtypes of the virus emerge. Such abrupt changes in the influenza A viruses are referred to as antigenic shift.

Though virus isolation is a lengthy and labor-intensive process, it remains the definitive procedure for laboratory identification of influenza viruses. This approach has been used successfully for several years as part of a statewide surveillance network to characterize the epidemiology of each influenza season. Two centers currently conduct active laboratory-based influenza virus surveillance - the TDH in Austin and the Influenza Research Center at Baylor College of Medicine in Houston.

Figure 3. Influenza Virus Isolates Recovered by the Influenza Research Center. Houston, by Week of Specimen Collection *1992*



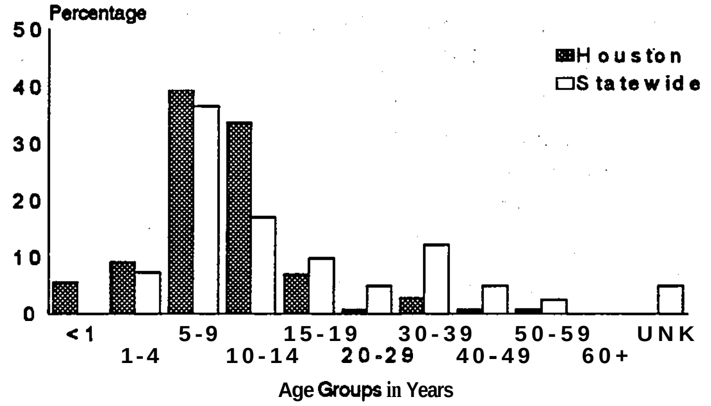
Influenza virus activity in any given calendar year is actually a combination of the events of two different flu seasons. In Texas and elsewhere in the nation, influenza virus activity has alternated from season to season between types A and B, with viruses of one type or the other predominating during the height of that particular season. Figure 2, that shows the influenza virus isolates recovered statewide, depicts the final weeks of the 1991-92 influenza A season and the beginning of the 1992-93 season, during which influenza B was the major virus in circulation.

Regional variations in virus circulation patterns for the influenza season are typical, which is to be expected in a state as large as Texas. In an effort to compare differences in epidemic periods from one area to the next, TDH virus surveillance activities were expanded to include many of the major cities of Texas. During 1992 the TDH network recovered 62 positive virus isolates from the following counties: Bexar, Dallas, El Paso, Grayson, Hays, Lubbock, Nueces, Potter, Tarrant, Travis, and Williamson. The Influenza Research Center in Houston recovered 142 isolates for Harris County in 1992.

A comparison of Figures 2 and 3 demonstrates regional differences. During the final weeks of the 1991 season, late in the winter of 1991, low levels of influenza A virus activity were still evident statewide, especially in Austin. The Influenza Research Center in Houston, on the other hand, recovered no isolates in the first half of 1992. This situation may have been caused by the high levels of morbidity due to influenza A (H3N2) virus in Corpus Christi during November and early December 1991. The following strains of influenza A virus co-circulated toward the end of the 1991-92 season: influenza A/Taiwan/1/86 (H1N1); influenza A/Yamagata/32/89 (H1N1), later designated influenza A/Texas/36/91 (H1N1); and influenza A/Beijing/353/89 (H3N2), the principle virus of the season. In summary, the 1991-92 season started early, intensified quickly to peak virus activity levels in November, then ceased abruptly by the end of February 1992.

The 1992-93 season began in mid-November, with influenza B/Panama/45/90 emerging as the principle virus in circulation. Statewide, virus activity intensified during December, especially in the Houston area. Figure 4 shows the age distribution of patients with confirmed influenza B infections for both the statewide and Houston surveillance systems. Historically, attack rates are highest in children during influenza B seasons. In Houston three out of four patients with confirmed influenza B were from five to 14 years old. Eighty-eight percent of the influenza B patients in the Houston-based surveillance were under the age of 15. Statewide surveillance revealed a similar age distribution of cases. Two out of three patients statewide with confirmed influenza B were less than 15 years of age. Both surveillance systems detected increased morbidity among patients in their thirties; these patients may have been the parents of the children and young adolescents with influenza B.

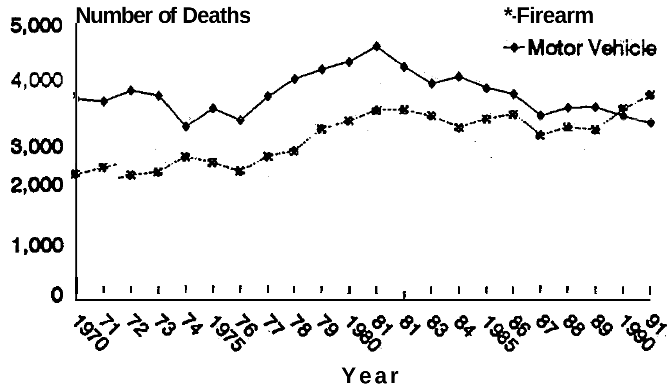
Figure 4. Age Distribution of Patients with Confirmed Influenza B: Houston and TDH Surveillance Compared, 1992



Injury Mortality - Firearms

The Injury Prevention and Control Program routinely reviews death records to determine changing trends in injury deaths of Texas residents. Historically, motor vehicle crashes have been the leading cause of mortality for Texans aged one to 44 years. However, in 1990 **guns** surpassed motor vehicles as the leading cause of injury mortality in the state. Continuing this pattern in **1991, gunfire killed more Texans in this** age group than did motor vehicles (2,698 **vs. 2,301** deaths, respectively). Between 1990 and 1991, the number of Texans of all ages killed by bullets increased 7% (from 3,443 to **3,692),** while motor vehicle-related fatalities declined 4% (from 3,309 to 3,180). Texas was the first state to report this trend to federal health officials (Figure **1).**

Figure 1. Motor Vehicle and Firearm-Related Deaths in Texas, 1970-1991

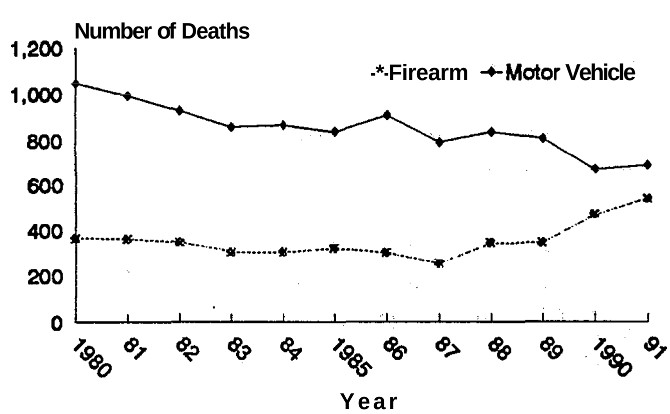


Since approximately **12** million Texans are between the ages of one and 44, gunfire is the leading cause of death for 69% of the state's population. **One** measure of the effect of premature mortality, years of potential life lost (YPLL) is a statistic that represents the sum of years of life lost annually by individuals who die before the age of 65 years. In 1991, guns accounted for **107,638** years of potential life lost, as compared **with 97,549** years of potential life lost due to motor vehicles. **Other** major causes of premature death in 1991 included cancer (113,644 YPLL), heart disease (87,425 YPLL), certain conditions in the perinatal period **(62,175),** and HIV infection (55,810 YPLL). Firearms caused more deaths among those one to 44 years of age than did cancer **(1,692),** HIV infection **(1,654),** heart disease **(1,159),** or stroke **(257).**

The overall increase in firearm-related deaths from **1990** to 1991 can be attributed to a 17% increase in firearm-related homicides. In **1990, 1,635** murders were accomplished with **guns;** in 1991, this increased to 1,918. **The number** of firearm-related deaths that were self-inflicted, unintentional, committed through legal intervention, or whose intention was undetermined, remained essentially unchanged.

Although motor vehicles continue to be the leading injury killer of Texans younger than 20 years of age, the gap between motor vehicles and firearms is also decreasing in this age group (Figure 2). In **1980, 1,047** youths died from motor vehicle-related injuries, and 364 youths died as a result of gunfire. In **1991, 692** youths were killed by

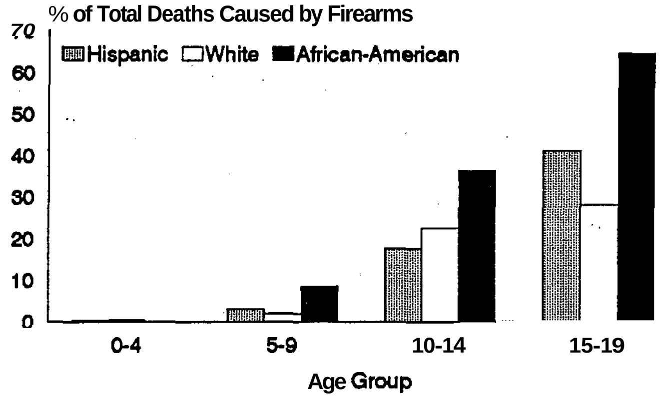
Figure 2. Comparison of Firearm and Motor Vehicle Deaths for Texans <20 Years of Age, 1980-1991



motor vehicles and 544 died from gunfire. Twenty-two children under the age of 10 years died as a result of gunfire in 1991.

Adolescents are particularly at risk of dying from gunfire. Among children 0-4 and 5-9 years of age, the percent total deaths for 1991 were less than 1% and 3%, respectively. The percent total deaths rose dramatically to 18% for children aged 10-14 years. An alarming 36% (456/1,272) of all deaths among Texas adolescents aged 15-19 years were caused by gunfire (Figure 3). The percentage of mortality attributed to firearms in this age group varied by race/ethnicity. Fifty-seven percent of all deaths among African-Americans in this age group were firearm-related, as compared with 23% for whites and 39% for Hispanics. For males in this age group, the racial/ethnic differences were more striking. Sixty-four percent of all deaths among African-American males 15-19 years old in 1991 were firearm-related (Figure 3).

Figure 3. Firearm Deaths for Texas Males <20 Years of Age as a Percent of Total Deaths by Age and Race, *1991*

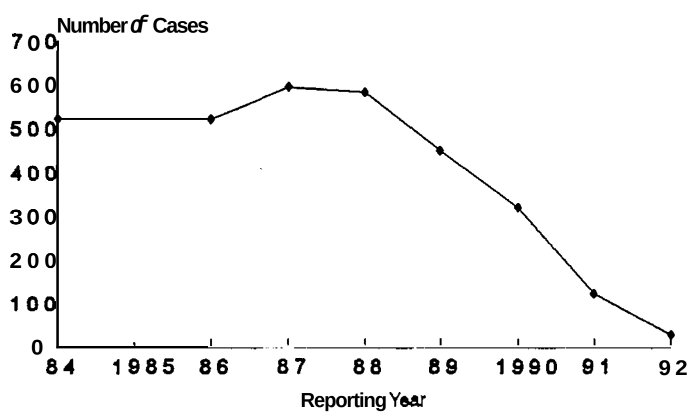


In conclusion, firearms are associated with a significant loss of life. To put this into perspective, more Texans were killed by gunfire during 1991 (3,692) than all the Texans killed in the Vietnam War (3,405).

Invasive *Haemophilus Influenzae* Infections

The Texas communicable disease reporting law was modified in 1986 to require that all invasive H. *influenzae* infections *be* reported without regard to serotype of the organism. Invasive infections include meningitis, septicemia, cellulitis, epiglottitis, septic arthritis, osteomyelitis, pneumonia, and pericarditis. Prior to 1986, only H. *influenzae* meningitis had to be reported to state health officials. The diagnosis of an H. *influenzae* infection is confirmed by isolation of the organism from a normally sterile site (cerebrospinal fluid, blood, joint fluid, or pleural fluid). Because complete information is rarely provided at the time of the initial report, and most hospital laboratories do not type organisms once they are identified, the number of reported H. *influenzae* infections caused by type b organisms is unknown. Therefore, the number of invasive H. *influenzae* infections reported in children under five years of age is used as an estimate of H. *influenzae* type b (Hib) morbidity in Texas. Most H. *influenzae* infections in older age groups are caused by non-typeable strains of *H. influenzae.*

Figure 1. Reported H. Influenzae Infections In Texas Children <5 Years of Age, 1984-1992



One of Texas' greatest success stories of vaccine-preventable diseases is the significant reduction in reported *H. influenzae* infections among Texas children. This reduction has been attributed to increasing use of Hib vaccines during infancy. In the mid- to late '80s, 500-600 H. *influenzae* infections were reported in Texas preschoolers each year. In 1985 the vaccine was first licensed for use; it was added to the Texas Department of Health schedule for routine immunizations in 1991. Since then, Texas has experienced a continuous decline in reported cases (Figure 1).

In 1992, 42 invasive H. *influenzae* infections were reported from 24 counties in Texas. Only 29 of these cases occurred among children under five years of age. These 29 cases included 18 cases of meningitis, 10 cases of septicemia, and 1 case of periorbital cellulitis. Seven of the 29 cases were specifically reported as Hib infections, whereas one was reported to have been associated with a non-typeable strain of *H. influenzae.* Laboratory information was not provided for 21 of the H. *influenzae* infections reported in children under five years of age. Only one death was known to have resulted from an H. *influenzae* infection in 1992, resulting in a case-fatality rate of 3.4%. This was a three-month-old unvaccinated infant who died from meningitis.

Leptospirosis

Leptospirosis is a bacterial disease with over 200 serovars that infects a wide range of mammals, reptiles, and amphibians. *Leptospira* sp. organisms are shed in urine and can survive for extended periods in water and damp soil. Human infection generally follows direct skin or mucous membrane exposure to Leptospira-infected urine, or through ingestion of contaminated water. Because leptospirosis can be difficult to recognize clinically (due to its non-specific symptoms), many mild to asymptomatic infections probably occur.

Clinical manifestations of leptospirosis are variable and may be related to the infecting serovar. Typical symptoms include fever, malaise, myalgias, headache, nausea, and vomiting. Icteric and anicteric disease is recognized, with icteric disease producing more severe symptoms. Infection can lead to encephalitis and kidney failure, but asymptomatic infection also occurs. Various antibiotics, including doxycycline and penicillin G, are used to treat leptospirosis, and the U.S. military has had success with doxycycline used prophylactically to prevent infection among troops undergoing jungle training in Panama.

After having virtually disappeared as a reported disease in Texas (only two reported cases during 1987-1991), five cases of leptospirosis were reported during 1992. Four of the five knew each other. These four individuals included three brothers (aged 4, 6, and 8) and a friend (age 9), who had been swimming in a stock pond in Montague County; all four boys were white. The fifth case was a 20-year-old Hispanic man.

The three brothers were residents of Fort Worth and spent much of the summer at a part-time residence in rural Montague County, adjacent to the ranch of their friend's grandparents. The boys, seven cattle, and 14 bison all shared the stock pond located on the grandparents' ranch. Cattle are a recognized source of human leptospirosis cases. Both cattle and bison are known to wade into water and urinate while drinking. The three brothers were described as being novice swimmers who regularly swallowed water while swimming.

The three brothers developed febrile illnesses that hospitalized the 6- and the 8-year-old with diagnoses of viral gastroenteritis. The leptospirosis outbreak was identified only after the boy's father contacted the Fort Worth/Tarrant County Health Department's communicable disease section. He had become concerned that the two hospitalized children were released without treatment while still febrile and that the third brother had onset of illness that same day. Based on the stock pond exposure history, health department staff suspected leptospirosis and referred the children to a pediatric infectious disease specialist, who confirmed the diagnosis serologically. The 9-year-old friend was seen in a minor emergency center and, based on the brothers' diagnosis, had diagnostic serology performed.

Neither the cattle, bison, nor water were examined for evidence of leptospirosis during the course of the investigation. However, when the grandfather/rancher sent one of the bison to slaughter several months later, the Public Health Region 5 Zoonosis Control Program was notified. Blood, kidney, and liver tissue specimens were negative for leptospirosis, but the blood had an antibody titer of 1:100 (the minimum diagnostic titer for a human case of leptospirosis).

Although laboratory proof is lacking that pinpoints leptospirosis-infected cattle/bison as the source of the boys' illness, epidemiologic association is strongly inferred. Leptospirosis reservoir and transmission, along with other facts of these cases, lend convincing evidence that this cluster represents the largest leptospirosis outbreak reported in Texas in 15 years.

No information is available on the source of exposure for the fifth case reported during 1992. This individual, born with mild mental retardation, was initially admitted to a Cameron County hospital with a diagnosis of encephalitis. He was transferred to a Dallas County hospital, where serology results indicative of leptospirosis (1:6400) were obtained about three weeks before his death in August. Leptospirosis was not mentioned on the death certificate.

Malaria

Only 45 cases of malaria were reported among Texas residents during 1992 - the fewest number reported in any year since 1979, when 45 cases were reported. During the preceding 10 years (1982-1991), the average annual number of reported cases was 73, ranging from 54 in 1983 to 93 in 1985.

Reported cases are categorized by exposure to malaria in a foreign country and exposure in Texas. In 1992, 43 cases (95%) were imported, and two were acquired through blood transfusions in Texas, the first such cases recognized since 1985.

Of the imported cases, 30 (70%) patients were men, and 13 were women. Seventeen (40%) were African-American, 12 (28%) white, nine (21%) Asian, and five (12%) Hispanic. Patients ranged in age from 1-57 years, with a median age of 30. In this group, ten patients (23%) were less than 10 years old; eight of these children were African American, and two were white.

Four species of plasmodium (P. *falciparum*, P. vivax, P. *malariae*, and P. *ovale*) cause malaria in humans. Among cases imported to Texas, P. *falciparum* was identified in 22 cases, P. *vivax* in 13, and *P. malariae* in two. One patient reportedly had both *P. falciparum* and P. *vivax infection*. In five cases, the species of malaria was unknown or not reported.

Nationally, the overwhelming majority of P. *falciparum* infections in 1992 were acquired in sub-Saharan Africa, and the situation was the same in Texas. Twenty of 22 P. *falciparum* infections (91%) occurred among persons who had been in sub-Saharan Africa prior to onset of illness. In Africa, Nigeria was the country most malaria-infected individuals had visited, including 13 with P. *falciparum*, one with P. *vivax*, and three with undetermined species. One of these persons also had visited the Congo. Other *P. falciparum* infections acquired in Africa occurred in persons who had been in the Cameroon (1), Kenya (2), Kenya and Tanzania (2), Uganda (1), and West Africa (2).

Ten *P. falciparum* infections acquired in sub-Saharan Africa occurred among members of three families and included eight patients less than 10 years of age. In one family, **all** six members (including the parents and four children, aged 1, 2, 3 and 5) acquired malaria in Nigeria while visiting family there. In another family visiting Nigeria, two children, aged 3 and 7, were infected. All members of both families were African American. Two white siblings, aged four and eight, acquired malaria while traveling with their missionary parents in Kenya and Tanzania.

The country or region where exposure to malaria occurred was known for 39 imported cases. Twenty-five persons (64%) had been in sub-Saharan Africa, including 17 who had been in Nigeria; 10 had been in Asia, including seven who had been in India; and four had been in various Central American countries. No information on probable place of exposure was reported in four cases. Three of these four cases involved Hispanic men aged 21, 27, and 28; one involved a 40-year-old Asian man.

Although malaria chemoprophylaxis is not 100% effective at preventing malaria infection, appropriate chemoprophylaxis, along with the use of insect repellents and other mosquito-avoidance efforts, is strongly recommended for persons traveling in malarious areas. Some information on the use/non-use of malaria chemoprophylaxis was available for 34 cases. Twenty (71%) individuals used no chemoprophylaxis, and nine (90%) of those who did use a chemoprophylactic agent were using agents other than those recommended by the Centers for Disease Control and Prevention (CDC). Typically, chloroquine phosphate was used in areas where chloroquine-resistant P. *falciparum* malaria occurred.

Two recognized P. falciparum malaria infections were acquired through blood transfusions obtained in Texas. Both patients were Dallas residents, and both were infected by the same donor. This was the first time multiple cases had been linked to a single donor in the U.S. in 10 years. Both individuals had underlying illnesses that required a large number of transfusions; a 71-year-old Hispanic woman received platelets, and a 65-year-old white man received packed red cells. (Modern transfusion therapy allows a single donation to be split among several recipients, depending upon what blood components are necessary.) Both patients recovered from their malaria infections, but the woman subsequently developed complications unrelated to malaria and died of sepsis several months after having been infected with malaria.

Blood collected for donation in the United States is not screened for malaria parasites. Instead, prospective donors are questioned regarding whether they have travelled to or resided in malarious areas, or previously have taken malaria chemoprophylaxis. Individuals with such histories are deferred from donating blood for various time periods (e.g., three years following departure from a malarious area).

The donor implicated in the Texas transfusion-associated cases was born in England of Nigerian parents and had been in Nigeria for several years before returning to England in January 1992. He had then moved to Dallas in March of 1992, where he had donated blood on August 3. The donor had given incomplete information to the blood collection center regarding foreign travel, not mentioning that he had been in Nigeria within the past year. Following his donation, he moved to Utah. A CDC - led epidemiologic investigation of the two transfusion associated cases identified this man as the source of infection, and CDC notified all state health departments. When the Utah State Health Department found the donor a few days before he planned to return to England, he denied symptoms of malaria. Although his blood smears were negative for Plasmodium parasites, he had a high titer to *P. falciparum*. Because of the very low parasitemia common in asymptomatic malaria infections, serologic tests have been shown to be much more sensitive than blood smears in identifying infected donors in transfusion-associated malaria.

One malaria death was identified in Texas, but the deceased was a resident of Mexico and was not included in Texas morbidity. This individual became acutely ill on a flight returning to Mexico from Africa, where she had been traveling as a tourist in Kenya, Uganda, and Zaire. She was hospitalized and died of complications of P. *falciparum* malaria in Houston. She reportedly had used chloroquine phosphate, which is not appropriate malaria chemoprophylaxis for tropical Africa, where chloroquine-resistant P. *falciparum* malaria predominates.

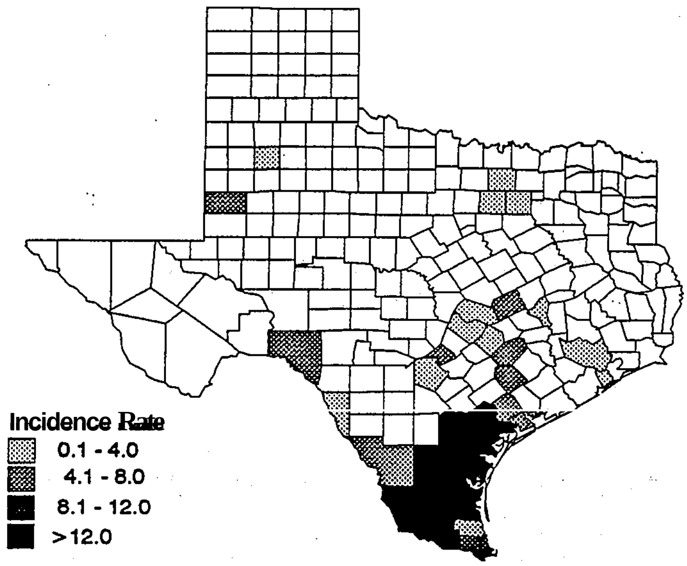
Measles

The ongoing presence and severity of measles in Texas were once again demonstrated by measles morbidity and mortality in 1992. The 1,097 cases of measles reported statewide represented a dramatic increase over 1991 morbidity, when only 294 cases were reported. Almost 2,237 cases of measles were reported nationwide in 1992 from 39 states and the District of Columbia. In 1992 Texas accounted for 49% of the nation's measles morbidity and 75% of the nation's measles mortality. Only one other state, Alaska, reported a measles-associated death in 1992.

The three measles deaths reported in Texas in 1992 attested to the severity of measles, as did reported hospitalizations and complications caused by measles. The patients who died ranged in age from 18 months to 18 years. Fifty-two percent (571) of measles cases in Texas required hospitalization of the patients for an average of 4.7 days each. Pneumonia, dehydration, and encephalopathy were among the most frequently reported causes of measles-associated deaths and hospitalizations in 1992. Thirty-four percent of the cases (372) were reported to have developed complications.

Measles was reported in 38 Texas counties in 1992. Public Health Region 8 (South Texas) reported 1,040 (95%) of the state's 1,097 total cases. One or more cases were from 21 of the 26 counties in this region. Six of the counties in the Rio Grande Valley accounted for 84% of the state's measles morbidity: Hidalgo (440), Nueces (280), San Patricio (76), Jim Wells (64), Kleberg (42), and Brooks (24). Figure 1 illustrates the incidence of measles in individual counties in Texas. Morbidity totals and incidence rates for all Texas counties are provided in the Regional Statistical Summaries section.

Figure 1. Reported Cases of Measles in Texas per 100,000 Population, 1992

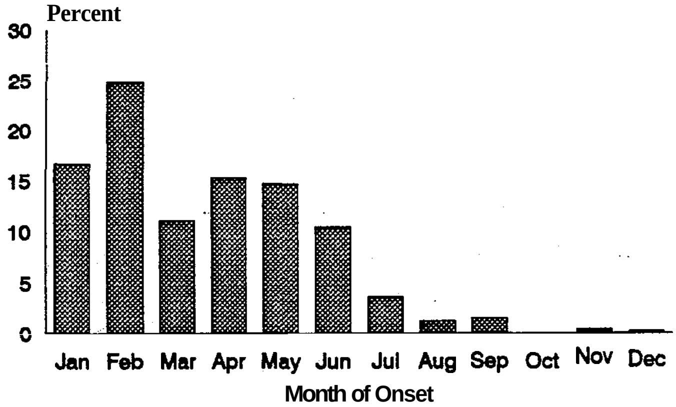


Virtually all of the cases (96.7%) occurred during the first seven months of the year. Figure 2 illustrates reported cases of measles by month of rash onset.

As in previous years, measles affected predominately unvaccinated preschool-aged children. The numbers of cases and incidence rates by age group are provided in Tables IV and V of the Appendix. Children under five years of age accounted for 72% of all Texas cases; likewise, almost 50% of the cases nationwide involved children under five. This trend continues to illustrate the current failure in the United States to vaccinate preschool age populations appropriately to prevent measles. Among children 1-4 years of age, African Americans experienced measles at a rate of 4.4 cases per 100,000 population, whereas the rate was 3.8 for Hispanics and 1.2 for whites. These rates clearly illustrate the importance of immunizing preschoolers, especially minorities.

While measles vaccine usually is not indicated for infants under one year of age, this age group experienced alarmingly high

Figure 2. Distribution of Measles Cases in Texas by Month of Rash Onset, 1992



incidence rates of measles. Hispanics experienced the highest rate for this age group, 9.6 cases per 100,000 population, followed by African Americans (7.3) and whites (2.1). Six hundred forty-seven (59%) of the patients were born in either 1990 or 1991.

Ongoing measles outbreaks, both in Texas and throughout the United States, have focused attention on all vaccine-preventable diseases, as well as on the failure of both public and private health care institutions and providers to immunize children in accordance with current age appropriate recommendations. These ongoing outbreaks not only point out the problems of current vaccine delivery systems, but they also may be harbingers of future outbreaks of other vaccine-preventable diseases.

Major immunization initiatives, both in Texas and nationally, are underway to improve immunization levels among preschool-aged children. These initiatives include components designed to improve the vaccine delivery infrastructure through increased funding (i.e., increasing vaccination clinic personnel and hours of operation), assure universal access to vaccination services, and develop computerized systems to track the vaccination status of children. In addition, TDH has created a statewide multi-organizational coalition to boost efforts to immunize Texas children against vaccine-preventable diseases. The "Shots Across Texas Coalition," made up of organizations from the business, non-profit, and government sectors, will promote the full and age-appropriate immunization of all preschool-aged children in Texas.

It is hoped that renewed and innovative efforts to reach unvaccinated populations, aggressive outbreak control measures, and the continued implementation of the two-dose measles vaccine schedule will lessen the severity and scope of measles outbreaks both in Texas and in the United States.

Occupational Diseases

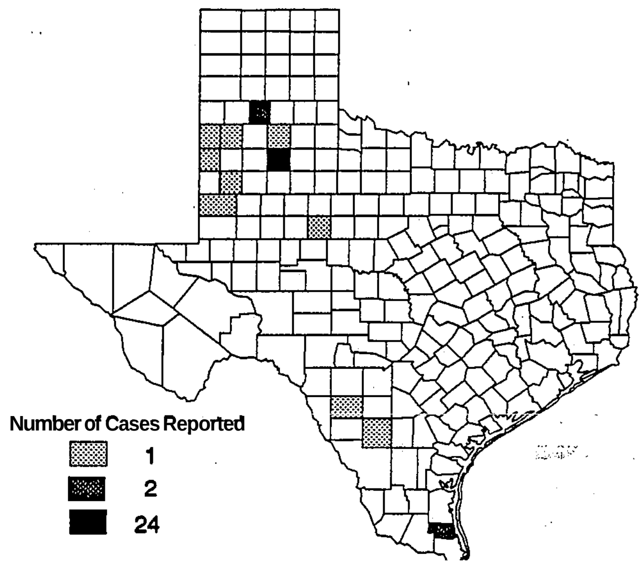
*The Texas Occupational Disease Reporting Act was passed by the 69th Legislature in 1985. This required the reporting of adult elevated blood lead levels, asbestosis, and silicosis and gave the Texas Board of Health the authority to add other preventable occupational diseases to the list. Later **that** same year, the Board made acute occupational pesticide poisoning a reportable condition in Texas.**

Acute Occupational Pesticide Poisoning

The Environmental and Occupational Epidemiology Program (EOEP) conducts active surveillance of acute occupational pesticide poisonings throughout the state. Funding has been provided by the National Institute for Occupational Safety and Health (NIOSH) since 1987. This surveillance effort concentrates primarily on three specific geographic regions of Texas: the Winter Garden area in south central Texas, the Rio Grande Valley in far south Texas, and the Southern High Plains in north Texas and Texas Panhandle. Health providers in other agricultural areas of the state have been added recently. Reports of pesticide-related illness are received from all areas of the state. Sixty-two health clinics, 30 hospital emergency rooms, and 28 physicians participated as sentinel providers in 1992. ~~However, hospital record reviews indicated that 17 sentinels underreported pesticide-related illness.~~

In 1992, 14 incidents involving 37 cases of acute pesticide poisoning were reported to the Texas Department of Health (TDH). One incident involved 24 cases. Patients ranged in age from 2-64 years of age; the majority of cases were Hispanic. (The two-year-old was with his parents while they were working in the fields.) Males accounted for 73% (27 cases); females accounted for 27% (10 cases). Reports of acute occupational pesticide poisoning are presented geographically in (Figure 1).

Figure 1. Acute Pesticide Poisoning



Adult Elevated Blood Lead Levels

Physicians, laboratories, and other responsible parties are required to report to TDH all blood lead levels at or above 40 micrograms per deciliter of blood (mcg/dl) in persons 15 years of age or older. Funding for the blood lead surveillance system has been provided by NIOSH since 1987.

For 1992 the EOEP received 512 reports of elevated blood lead levels for 232 individuals. Because the Occupational Safety and Health Administration (OSHA) requires that employees be tested at two-month intervals if their blood lead levels exceed 40 mcg/dl, multiple reports were received on many individuals. Of the 232 individuals reported, 49 were first diagnosed in 1992.

***Percentages are based on available data. Some reports cannot be completed.**

Figure 2. Newly Diagnosed Adult Elevated Blood Lead Levels by Type of Industry

Type of industry for 49 newly diagnosed cases in 1992:

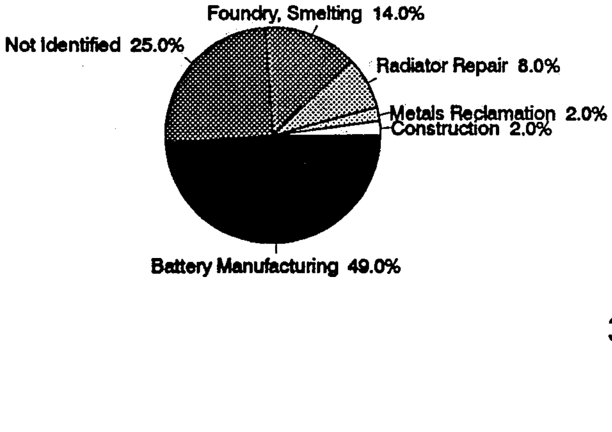
24	(49%)	Battery Manufacturing
12	(25%)	Not Identified
7	(14%)	Foundry, Smelting, Refining
4	(8%)	Radiator Repair
1	(2%)	Construction
1	(2%)	Metals Reclamation

Type of industry for 232 new and ongoing cases during 1992:

153	(66%)	Battery Manufacturing
46	(20%)	Lead Product Fabricating/Brass-Aluminum-Bronze Foundry
13	(6%)	Not Identified
12	(5%)	Radiator Repair Shops
8	(3%)	Other: Manufacturing of Color Pellets, Ceramic Tile, Compressor Bearings, Steel Mill, Construction, Battery/Metals Reclamation

All individuals with reported elevated blood lead levels in 1992 were male. In previous years 3% had been female. Hispanics represented 51% (117) of the cases reported, 29% (68) were non-Hispanic whites, and 13% (31) were African-American. In 7% (16) of the reports received, the race was not identified. The individuals ranged in age from 19 to 70. The largest age group of reported elevated blood lead levels was 30-49 years of age; 126 of 213 complete records (59%) occurred in this age group. Figures 2 and 3 show the percentage of newly diagnosed cases by type of industry. As in previous years, workers who were employed in battery manufacturing represent most of the cases.

Figure 3. Newly Diagnosed Adult Elevated Blood Lead Levels by Type of Industry, Texas 1992



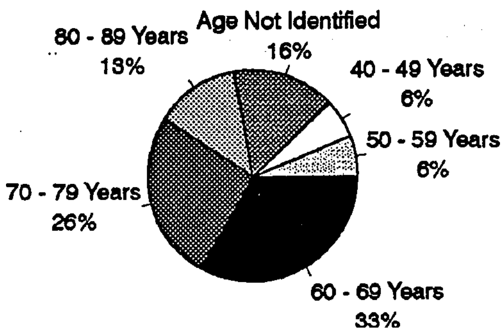
Reports of elevated blood lead levels are prioritized on the basis of the blood lead level and the presence of symptoms. If an employee's blood lead level is greater than 60 mcg/dl and averages 50 mcg/dl over a six-month period, or if the individual exhibits symptoms of lead poisoning, the work site is considered high priority and is inspected by local or state health department staff to identify the source of lead exposures on the job. Industrial hygiene inspections measure lead exposures.

Asbestosis

The majority (51%) of the 69 cases of asbestosis reported to TDH during 1992 were identified by reviewing death certificates filed with the TDH Bureau of Vital Statistics. Twenty-six percent of the cases were reported by one physician, 16% of the cases were reported by hospitals; and 7% by a company physician.

Virtually all of the reported asbestosis cases (97%) involved males; two involved females. The distribution of cases by race/ethnicity included non-Hispanic whites, 58%; African-Americans, 7%; and Hispanics, 1%. The race/ethnicity of 33% was not identified. The distribution of patients by age group is provided in Figure 4; they ranged from 41-89 years of age. In 11 cases, the age of the individual was unknown.

Figure 4. Distribution of Reported Asbestosis Cases In Texas by Age Group, 1992



Varied occupations were identified among the cases reported in 1992. Among the types of occupations listed on males' death certificates were construction worker, electrician, plumber, pipefitter, engineer, machinist, fireman, longshoreman, laborer, rigger, sheet metal worker, ship builder, steel fabricator, iron worker, and welder. The women were either the wife or daughter of men who worked with asbestos. The exposure for the women was by take-home exposure from spouse or father also identified from medical records as having a diagnosis of asbestosis. No single occupation was identified as the cause of the asbestosis-related deaths. In 34 cases (49%), the occupation was not indicated in the record.

In September 1992. a hospital record review was conducted at one Texas hospital. Of 179 records from January 1990 through September 1992, 74 cases of asbestosis were identified. One individual was diagnosed with both asbestosis and silicosis. Of the cases that were noted during the review, 12 asbestosis cases previously had been reported to TDH between 1984 and 1991. The majority (95%) of the asbestosis cases in the hospital record review were male; only four of the cases involved females. The distribution of individuals by race/ethnicity included non-Hispanic whites, 88% (65); African American, 10% (7); no Hispanics; and two unknown. Ages ranged from 37 to 87 years.

Several occupations were identified among the cases reviewed. They included construction workers such as brick layers, carpenters, electricians, painters, plasterers, pipefitters, plumbers, and roofers (31%), asbestos workers (24%), welders (16%), mechanics and maintenance workers (14%), insulators (10%), and shipyard workers (7%). Occupational information was not found in six of the reviewed asbestosis cases.

Silicosis

Eight cases of silicosis were reported in Texas during 1992. For the most part, reports of silicosis in Texas are identified during reviews of death certificates. Seven of the eight cases were identified this way. The types of occupations listed included construction, brick mason, piece maker, welder, sandblaster/painter, plumber/carpenter, and owner of a monument company; one occupation was unknown.

All silicosis patients were male. Of the cases reported, 4 (50%) involved non-Hispanic whites, 3 (38%) African Americans, no Hispanics, and one individual unidentified by race. Ages ranged from 67 to 88 years.

In September 1992, a hospital record review was conducted at one Texas hospital. Of 179 records from January 1990 through September 1992, 23 cases of silicosis were identified. One individual was diagnosed with both silicosis and asbestosis. Of the 23 cases that were noted during the review, six had been reported previously, and 17 silicosis cases had not. Of the six which had been reported, five had been reported in 1987, and one case had been identified from a 1992 death certificate.

All silicosis patients identified through the record review were male. The distribution of patients by race/ethnicity included 11 (48%) non-Hispanic whites and 12 (52%) African-American. No cases involving Hispanics were identified. Ages ranged from 40 to 83 years.

A variety of occupations were identified among the cases reviewed. They included foundry workers (28%), pipe company workers (22%), ceramics company workers (22%), sandblasters, painter, asbestos worker, saw mill worker, asphalt company worker, oil rig cleaner, grinder, and brick factory worker. Occupation could not be identified from one of the records received.

Relapsing Fever

From 1980 through 1991, 14 relapsing fever cases were reported in Texas. The cases had possible tick exposure in eight counties throughout Central and West Texas. In January 1992, TDH investigated an unusual outbreak in that the exposure site was a man-made cave located in Starr County in South Texas. This outbreak was the second to occur in Texas over a one and one-half year period. In November 1990, five relapsing fever cases were associated with tick exposure in Crockett County in West Texas. Although none of the patients in either outbreak had erythema migrans, Lyme borreliosis was the initial diagnosis for patients in both outbreaks. During the 1990 outbreak, positive serologic tests for Lyme borreliosis and Bell's palsy in two patients suggested the diagnosis of Lyme borreliosis to attending physicians. However, clinical and laboratory findings, in addition to tick exposure lustories, supported the diagnosis of relapsing fever in both the 1990 Crockett County and the 1992 Starr County outbreaks.

Figure 1. Tick bites on leg

On January 7,1992, the laboratory director at a South Texas hospital telephoned TDH Infectious Diseases Program requesting information concerning tickborne diseases. Three United States Customs agents had experienced a febrile illness after receiving tick bites while working in a small man-made cave near Escobares in Starr County.

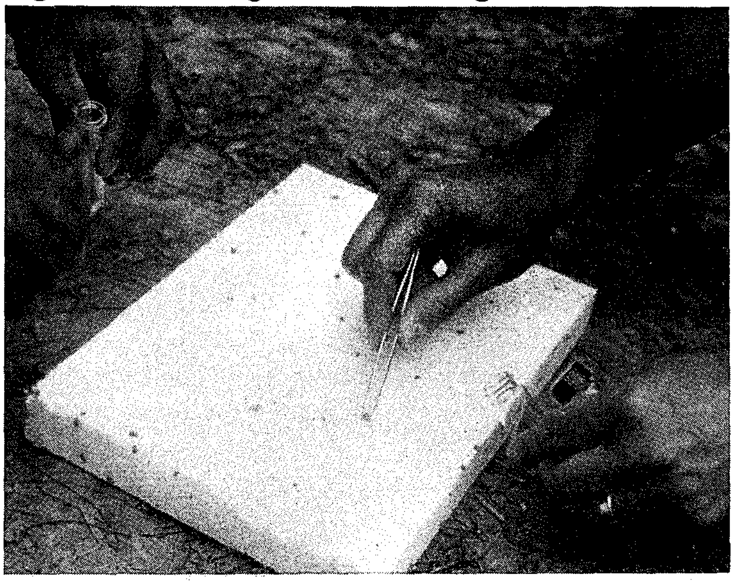
On January 2,1992, the three agents, aged 29, 29, and 37 years, sustained numerous tick bites on the ankles and lower legs during the half hour they spent in the cave. Two agents reported approximately 20 tick bites each; the third reported more than 100 (Figure 1).

In response to the initial telephone report, TDH reviewed records of patient interviews and hospital charts, and collected and evaluated patient blood samples. Onset of illness for all three men occurred on January 5,1992, and all three reported fever, rigors, headache, arthralgias, and nausea. Temperatures in excess of 101°F were documented for each patient. One patient reported paresthesias of his feet and hands. All three were hospitalized. By the fourth day of illness, all three patients began treatment with tetracycline. None experienced a febrile relapse, and all recovered.

A blood smear collected from one patient during a febrile episode revealed *Borrelia.* This patient had received two doses of tetracycline before the smear was collected. Blood smears were not collected for the other two patients. An immunoassay for Lyme borreliosis was positive for two of the patients, and indirect fluorescent antibody results showed elevated titers to both B. *burgdorferi* and *B. turicatae.* Titers were higher to B. *turicatae* in each patient.

To firmly establish the diagnosis, TDH collected and speciated the ticks from the

Figure 2. Investigator collecting ticks



was zero at five to six days post-inoculation, and peaked again at seven to nine days post-inoculation. In a second mouse, borreliae peaked at three to six days and again at nine to 10 days post-inoculation.

Tickborne relapsing fever is caused by bacteria of the genus Borrelia. In the United States, infections with Borrelia *hermsii,* Borrelia *parkerii,* and Borrelia furicatae have been reported. Relapsing fever is transmitted to humans by the bite of ticks of the genus Ornithodoros. Relapsing fever is characterized by the acute onset of high fever with rigors, severe headache, myalgia, and arthralgia four to eight days following exposure. Neurologic findings such as coma and cranial nerve palsies occur in nine percent of patients with tickborne relapsing fever. The case fatality rate for tickborne relapsing fever is two to five percent.

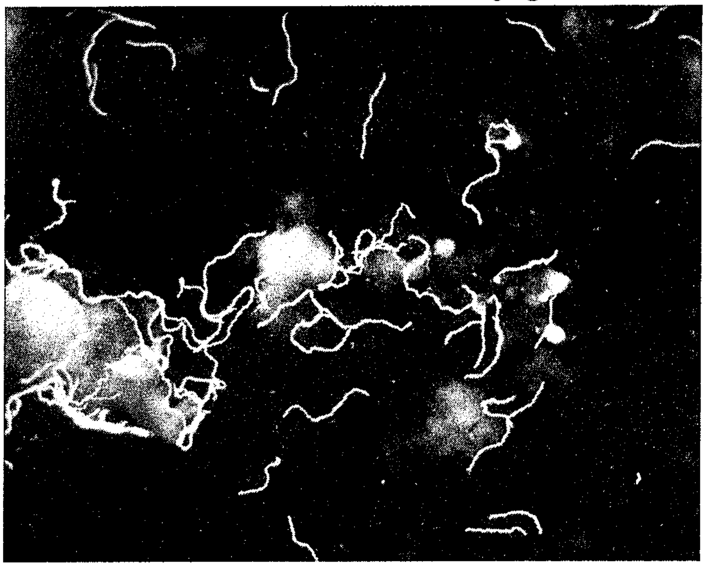
Febrile episodes last from three to five days with an afebrile period of five to 10 days between. Tetracyclines or penicillins are used in the treatment of relapsing fever.

caves (Figure 2). Approximately one to two inches of fine dirt covered the cave floors. Initially no ticks were observed in either cave. After several minutes of activity by the investigators, "thousands" of ticks were observed crawling on the floor. Approximately five to 10 ticks were observed in several three-inch square grids drawn on the cave floor. A total of 984 ticks, all identified as Ornithodoros turicata, were collected at the exposure site; 587 ticks were collected from one cave and 397 ticks from the other (Figure 3). In addition, 23 larvae were removed from the body of one investigator. Approximately one third of the ticks were adults (32.6%). The remainder were nymphs (23.2%) and larvae (44.1%).

Borrelia species were detected by dark-field examination and direct fluorescent antibody tests in 11 of 229 examined ticks (Figure 4). Borreliae were observed in blood from mice within two to three days of intraperitoneal inoculation with suspensions prepared from positive ticks (Figure 5). In one mouse, the number of borreliae peaked at two to three days post-inoculation,

Figure 3. Relapsing fever tick, Ornifhodoros furicafa

Figure 4. Relapsing fever spirochete, Borrelia *turicatae*, labeled with FITC conjugate



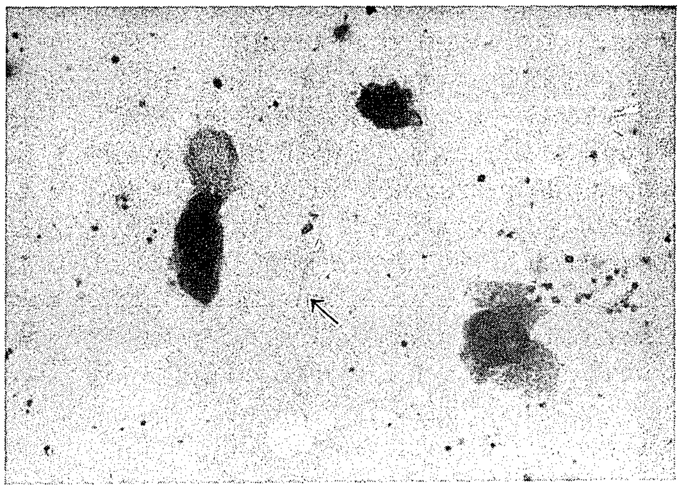
known vectors of Borrelia *burgdorferi*, the etiologic agent of Lyme borreliosis.

The signs and symptoms associated with Lyme borreliosis mimic many other diseases, especially relapsing fever. Clinical similarities between Lyme borreliosis and relapsing fever - facial palsies, fever, arthralgias - and cross reactions on serology tests for these two diseases can lead to difficulty differentiating between these two diseases. Clinicians in Texas should suspect relapsing fever in patients who present with fever, headache, and arthralgias following tick bites acquired in caves.

Diagnosis is usually made by examination of peripheral blood smears for borreliae. Tickborne relapsing fever primarily occurs in the western United States.

The diagnosis of relapsing fever for all three patients was based on clinical findings, presence of borreliae in one blood smear, serology results, and the presence of borrelia-infected Ornithodoros ticks at the exposure site. Although two patients had positive Lyme EIA results, they were not Lyme borreliosis cases. The patients did not have erythema migrans and Ornithodoros ticks are not

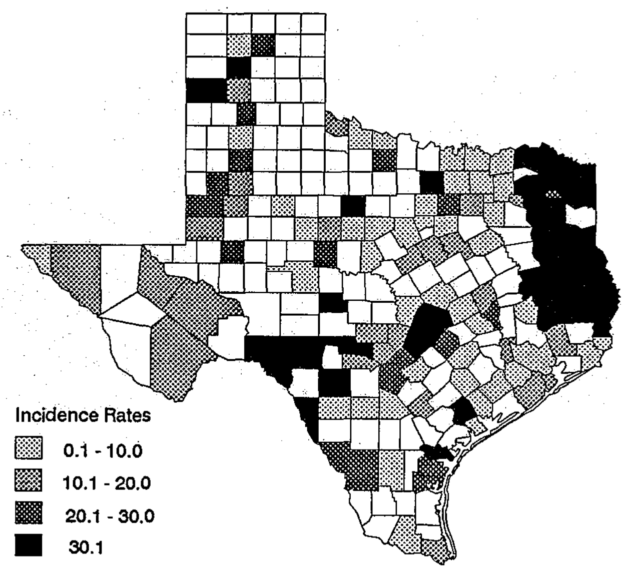
Figure 5. Borrelia turicafae, in a smear of mouse blood



Shigellosis

A total of 3,568 cases of shigellosis were reported in Texas in 1992, an increase of over 1,300 cases from 1991. The annual statewide incidence rate was 20.3 cases per 100,000 population. The geographic distribution of shigellosis by county is illustrated in Figure 1. The actual numbers of cases in individual counties and their corresponding incidence rates are provided in the Regional Statistical Summaries section. Thirty one percent of the reported cases involved children under four years of age. Children one to four years of age experienced the highest age-specific incidence rate, 84.9 cases per 100,000 population. The incidence of shigellosis was higher among Hispanics, (30.6 cases per 100,000 population) than among African-Americans (17.1) or whites (9.6). The serotype was identified and reported for 59% of the cases. Of the 2,104 cases for whom this information was known, 84.4% were *Shigella sonnei;* 14%, *S. flexneri;* 1.1%, *S. boydii;* and 0.5%, *S. dysenteriae.*

Figure 1. Incidence of Shigella by County in Texas, 1992



Seven outbreaks of shigellosis were reported to the Infectious Disease Epidemiology and Surveillance Division in 1992. Altogether these outbreaks accounted for 565 (15.8%) of the shigellosis cases reported in Texas. This rate reflects an eight-fold increase over the number of cases related to outbreaks reported in 1991. Most of the increase, 432 of the 565 cases, is due to a single outbreak of shigellosis in Caldwell County. Four other counties reported shigellosis outbreaks. Harris and Potter Counties each reported two outbreaks, and Kerr and Lubbock Counties reported one each. The outbreaks in these four counties ranged in size from 2-67 cases. *Shigella sonnei* was identified in all the outbreaks. There were no deaths associated with these outbreaks.

Tetanus

Tetanus is a neurologic disease which is preventable through safe and effective vaccination. Yet cases continue to occur, usually in older individuals who are inadequately immunized against the disease. In contaminated wounds, *Clostridium tetani* produce a neurotoxin responsible for the severe muscle spasms that are the hallmark of tetanus. Spasms may be generalized or localized at the site of injury. Although neonatal tetanus continues to be a common cause of infant mortality in developing countries, it occurs infrequently in the United States. The last known case of neonatal tetanus in Texas was reported in 1982.

The incubation period between injury and onset of symptoms ranges from 3-21 days, but onset usually occurs within 14 days of injury. Deep puncture wounds pose the greatest tetanus risk, but cases also occur in individuals who have suffered minor injuries. Some patients recall no injury. Data suggest that more severe injuries result in shorter incubation periods and worse prognoses for recovery.

Five cases of tetanus were reported in Texas in 1992. The patients ranged in age from 21-84 years; the median age was 78 years. Three of the patients died, resulting in a case-fatality rate of 60%. Four cases were associated with injuries, as is customary, and included two puncture wounds, an abrasion, and one scratch. One case, however, was associated with an infected chronic wound. An elderly woman of unknown immunization status developed cellulitis and gangrene in her foot at the site of a chronic ulcer and died six days after onset of her symptoms.

Unlike previous years, when most injuries resulting in tetanus occurred at home, two injuries were reported to have occurred at work in 1992. One involved a 41-year-old landfill worker who stepped on a nail while on the job. The day after the injury, he visited a physician, who described the injury as "not very impressive," and did not give the patient tetanus toxoid. The patient felt certain that he had received at least one dose of tetanus vaccine as an adult but could not remember when. The other work-related injury involved a 21-year-old male who sought no medical attention for a puncture wound to his finger. This young man had received at least four doses of vaccine, the last of which had been received six years earlier. These two individuals recovered.

Another case involved a 79-year-old woman who suffered an abrasion when her dog's chain became wrapped around her lower leg. Six days after the injury occurred, she visited her doctor and received a dose of tetanus toxoid. She had received one dose at least 15 years earlier. Symptoms began soon after this dose was administered and the woman died 23 days later.

Only one case in 1992 involved an individual known never to have been immunized against tetanus. An 84-year-old man had scratched his hand on a corral gate and, because the injury was minor, did not seek medical attention. He died 24 days after onset of symptoms.

Traumatic Spinal Cord Injuries

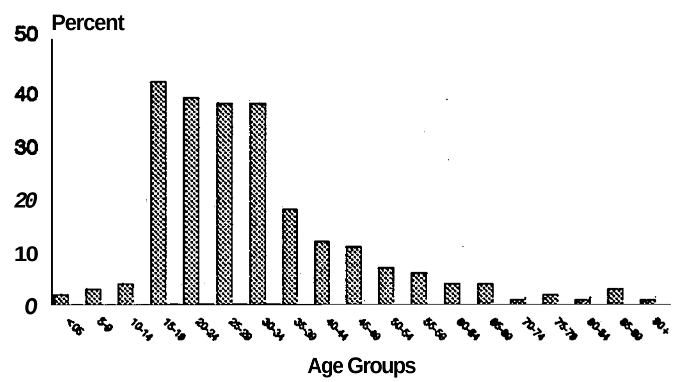
From January through December 1992, 241 traumatic spinal cord injuries (SCIs) were reported to the Texas Department of Health's Injury Control Program; 236 of these were Texans. Six of the 241 SCI patients died; five were Texans. During 1992, cases were reported by 28 of our 48 sentinel reporting facilities, including 13 hospitals, 12 rehabilitation facilities, and the Colorado, Louisiana, and Oklahoma state health departments. Nine new sentinels have been added since our last report (October 1992).

Of the 236 injured Texans, 176 (75%) were male. The sex of one patient was unknown. The racial/ethnic distribution of the cases was: 59% (139) white, 22% (51) Hispanic, 18% (43) African-American, and 1% (3) other. Although the ages ranged from three to 90 years, 184 (78%) were under 40 years of age (Figure 1).

Etiologically, 111 (47%) of the injuries were motor vehicle-related (Figure 2). These injuries involved: 71 individuals injured in automobiles, 16 in pickup trucks, eight on motorcycles, and eight pedestrians and one cyclist hit by motor vehicles; the mode of injury was unspecified for seven. Available information on seat-belt use indicates that 51% (44/87) of the individuals in automobiles and pickups were not wearing seat belts. Four of the eight people injured on motorcycles were known to be wearing helmets at the time of injury.

The etiologies of the 125 non-motor vehicle-related cases were: 50 (21%) from penetrating wounds, 41 (17%) from falls, 19 (8%) during sports/recreation, and 15 (6%) due to other causes (eg, hit by a falling object). Of the 50 penetrating wounds, 47 (94%) were gunshot wounds, and three were stabbings, including one with a screwdriver.

Figure 1. Percent of Spinal Cord Injuries by Age Group: Texas, January-December 1992, N=236

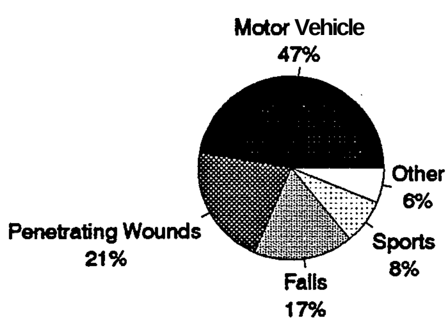


Forty-seven (20%) of the 236 reported injuries were categorized as "intentional." Of these, 44 were due to assaults, and three were self-inflicted.

Ninety-five (40%) of the injuries occurred on Saturday and Sunday; injuries occurring on Friday (34) accounted for an additional 14% (Figure 3).

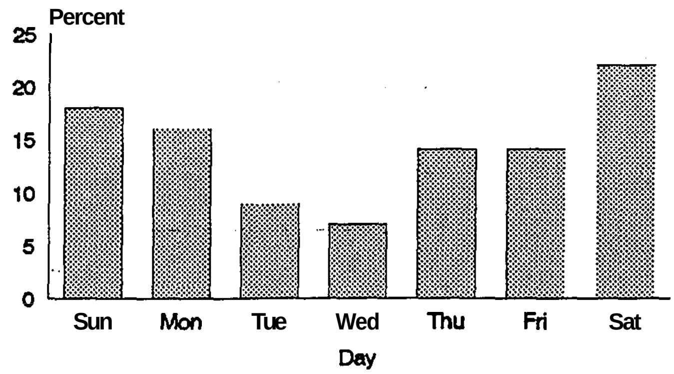
Information about alcohol and drug involvement was available for 194 (82%) and 184 (78%) of the cases, respectively. Forty-five were alcohol-related; seven were drug-related. The drug-related cases primarily involved cocaine and marijuana.

Figure 2. Spinal Cord Injuries by Etiology: Texas, January-December 1992, N=236



Information on whether the injury occurred on the job was reported for 197 (83%) individuals; 29 sustained work-related injuries. Nineteen of these injuries resulted in paraplegia, and 10 in quadriplegia. Fifteen resulted from falls, two from gunshot wounds, five from motor-vehicle crashes, and seven from miscellaneous causes (eg, hit by a falling object).

Figure 3. Percent of Spinal Cord Injuries by Weekday: Texas, January-December 1992, N=236



Among the 236 Texans who sustained SCIs, 118 (50%) of the injuries resulted in quadriplegia, and 118 (50%) resulted in paraplegia. The "neuro-categories" include 56 complete paraplegics, 40 complete quadriplegics, 32 incomplete paraplegics, and 50 incomplete quadriplegics. Sixteen paraplegics and 16 quadriplegics had minimal deficits; 11 cases (seven paraplegics, four quadraplegics) recovered completely. The extent of injury was unknown for 15 cases.

Tuberculosis

During **1992, 2,510** cases of tuberculosis were reported to the Tuberculosis **Elimination** Division, Texas Department of Health. This total represented a 0.6% decrease from 1991.

Reported **tuberculosis** disease in Texas is not evenly distributed among the various racial and ethnic groups (Figure **1).** Although these racial and ethnic differences are not clearly understood, they probably result from disproportionate numbers of high-risk individuals in certain racial and ethnic groups.

Figure 1. Reported Tuberculosis Cases by Race/Ethnicity, Texas, 1992

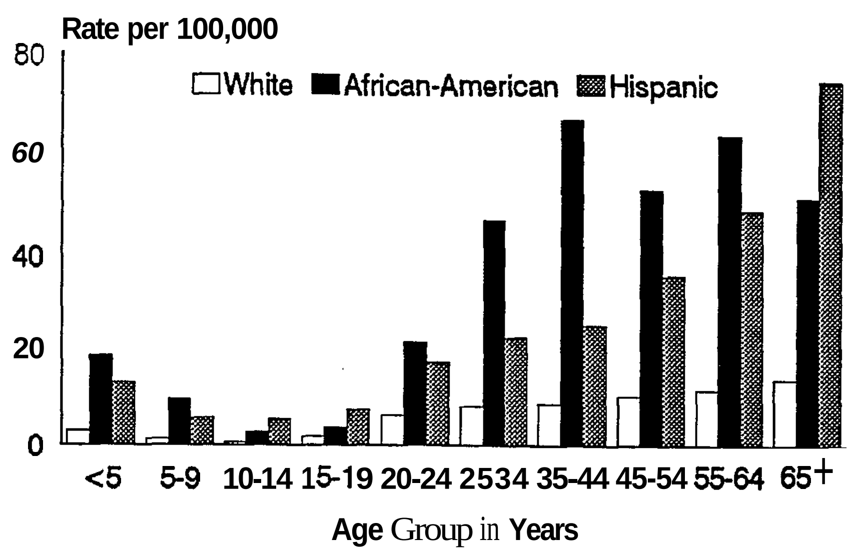
Race/Ethnicity	Number of Cases	Percentage of Total Cases	Case Rate (per 100,000)
Non-Hispanic Whites	810*	32.3*	7.4*
African-Americans	*725*	*28.9*	35.3
Hispanics	*975*	*38.8*	21.1

*These numbers include the Asian, Pacific islander and American Indian populations

Figure 2 illustrates the distinct differences in incidence rates of tuberculosis by age group and **race/ethnicity.** Tuberculosis in children under 15 years of age has increased 72% since 1988; 127 cases were reported in 1988 compared with 218 reported in 1992. Consequently, the **incidence** rate for this age group increased from 3.2 cases per 100,000 **population** in 1988 to 5.0 cases per 100,000 in 1992. This increase could reflect more complete reporting as a result of recent publicity about tuberculosis. Even if that were true, however, the occurrence of any tuberculosis disease or infection among children indicates ongoing transmission of ***Mycobaterium tuberculosis*** within the community.

Historically, low tuberculosis disease rates for children five to **14** years of age were seen in many areas of the world. When the overall rate of tuberculosis in children under 15 years of age is delineated by race, it is evident that white children under 15 years of age have a lower rate (1.6 per 100,000 population) than do Hispanic children (8.0 per 100,000) or African-American children (10.3 per 100,000). The lower rate of tuberculosis **among** white children most likely reflects a **lower** transmission rate among whites. In general, the fact that

Figure 2. Reported Cases of Tuberculosis per 100,000 Population by Age Group and Race/Ethnicity, Texas 1992



whites tend to have less poverty and household crowding as well as earlier access to medical care and preventive therapy decreases the risk of tuberculosis transmission. The higher economic status of the white population also usually correlates with better nutrition, which, in turn, decreases the likelihood that any infection that does occur will progress to disease.

The higher rate of tuberculosis disease among Hispanic children may be attributed partially to the percentage of children who have parents born in countries with a high prevalence of tuberculosis infections. The higher infection rate among these parents leads to more tuberculosis disease in this population and, therefore, a greater risk of exposure for Hispanic children.

African-Americans 25-65 years of age experience higher rates of tuberculosis than do whites or Hispanics. While HIV infection in general is having a significant impact on the prevalence of tuberculosis, its impact on this particular age group is pronounced. In the last five years the number of tuberculosis patients with HIV infection or AIDS has more than doubled from 104 in 1988 to 225 in 1992. Continued efforts must be made to examine both tuberculosis patients and HIV-infected patients for coinfection. Although not currently a reality, reports recommend that HIV counseling and testing be offered routinely to TB patients and contacts. Additionally, patients should be tested in the clinic they initially visit rather than be referred to another location. Those with HIV infection can be treated successfully for tuberculosis infection and disease. However, the recommended duration of treatment for tuberculosis patients with HIV is longer than is generally recommended for persons not infected with HIV. As HIV infection progresses, a person's TB skin test may become falsely negative. Therefore, all individuals at risk or known to be HIV-infected should be evaluated for reaction to other common antigens at the time the tuberculin skin test is placed.

In both non-Hispanic whites and Hispanics, the highest case rates occur in the seventh decade and beyond. A decrease in function of the immune system with age could play a significant role in the higher incidence rates of tuberculosis in these age groups. An aging immune system may allow populations of tubercle bacilli to begin to grow after years or even decades of being adequately controlled. Because many older Hispanics were born and lived portions of their lives in areas highly endemic for tuberculosis, a larger proportion of this group carry tubercle bacilli.

Concurrent debilitating illness also may play an important role in the higher incidence of tuberculosis in older age groups. Diabetes mellitus, a strong risk factor for the development of tuberculous disease, is prevalent among older Hispanics and also may explain some of the difference in tuberculosis rates. That older African-Americans have a tuberculosis rate intermediate to that of whites and Hispanics probably represents a mix of factors which vary by race/ethnicity - namely, the prevalence of.debilitating illness and childhood exposure to tuberculosis.

Multidrug resistant tuberculosis cases are an increasing concern in Texas. When patients do not complete adequate therapy, they are at high risk of developing secondary resistance or relapse. To combat this growing problem it is imperative that treatment follow current guidelines (see MMWR May 21, 1993/Vol. 42/No. RR-7 Initial Therapy for Tuberculosis in the Era of Multidrug Resistance) and that medications are given by directly observed therapy (DOT). Tarrant and El Paso Counties achieve DOT levels of 100% and 96%, respectively, and have achieved low incidences of resistance to first-line drugs.

Underreporting of Four Infectious Diseases by Texas Hospitals

Introduction

In June 1992 the Infectious Diseases Program of the Texas Department of Health (TDH) initiated a study to estimate the degree of underreporting from Texas hospitals of four infectious diseases. In 1990 the program had conducted a similar study in 14 acute care hospitals in six Texas-Mexico border counties. The 1990 study found that underreporting ranged from 100% to 0% depending on the disease.

Methodology

The TDH Hospital and Professional Licensure Division provided a list of licensed acute care hospitals in Texas. This list did not include hospitals administered by the United States Veteran's Administration. Hospitals were ranked by number of licensed beds. With convenience of administering and analyzing questionnaires as the selection criteria, a 20% systematic sample of hospitals was surveyed.

Hospital medical records directors provided names of patients diagnosed with brucellosis, listeriosis, *Neisseria meningitidis* infections, and bacterial meningitis for the years 1990 and 1991. These particular diseases were chosen because of public health interest and extensive availability of diagnostic laboratory tests. International Classification of Diseases (9th Revision) codes for these diseases are brucellosis, 23.0-23.9; listeriosis, 27.0; N. *meningitidis* infections, 36.0-36.9; and bacterial meningitis, 320.0-320.9.

Hospital laboratory directors also provided names of patients with bacteriologic or serologic evidence of infection with Brucella species, N. *meningitidis, Listeria monocytogenes;* and with any bacterial cultures from cerebrospinal fluid. Demographic information, date of admission, and city of residence were supplied for each patient identified. Patients' names were cross-referenced with surveillance records filed with the TDH Infectious Disease Program, for 1990 and 1991 to determine if these cases had been reported through the routine morbidity and mortality surveillance system.

Results

TDH identified 415 acute care hospitals from 57 counties throughout Texas. The 20% systematic sample yielded 83 hospitals for the survey, three of which were closed. The 80 existing hospitals ranged in size from 14 to 940 beds, with a median of 97 beds. Seventy hospitals (87.5%), but only 105 (65.6%) of the 160 persons surveyed, returned questionnaires. Nine (90%) of the ten hospitals that did not respond to the survey were licensed for fewer than 200 beds. All 13 of the surveyed hospitals with 300 beds or more responded to the survey.

Of the 70 hospitals responding to the survey, 40 identified a total of 603 cases; 30 hospitals identified no cases. The number of cases identified by each hospital ranged from one to 185. Hospitals with fewer than 100 beds identified an average of two cases each. Thirty-four percent of the hospitals with fewer than 100 beds, and 95% of the hospitals with 200 beds or more identified at least one case.

Although 40 responding hospitals identified at least one case, only five hospitals identified the majority (70.5%) of the 603 cases. Each of these five hospitals had over 300 beds; four had over 400 beds. Over 80% of the identified brucellosis cases were diagnosed at three hospitals. Over 50% of listeriosis cases were diagnosed at two hospitals. The same profile applied for bacterial meningitis and *N. meningitidis* infections.

Figure 1 presents the number of cases identified by disease and report status. Over 475 bacterial meningitis cases were identified. The number of cases of brucellosis, listeriosis, and invasive meningococcal disease were 36, 40, and 49, respectively. For the two-year period, 78% of the cases identified had not been reported. The percentage underreported for 1990 was hospitals located outside the jurisdiction of a local health department.

Characteristics of reported cases differed from those of unreported cases., For listeriosis, unreported cases for Hispanics were higher (52%) compared with reported cases (18%). The median age of unreported bacterial meningitis cases was higher than

Figure 1. Number of Patients Identified by Report Status and Disease, 1990-1991

Disease	# of Cases Reported	# of Cases not Reported	Total # of Cases	Percent Underreported
Brucellosis	17	19	36	53
Listeriosis	12	28	40	70
Meningococcal Infection	20	29	49	59
Bacterial Meningitis	86	392	478	82

similar to that for 1991 (79% vs 76%). A comparison by disease revealed a range of underreporting from 82% (bacterial meningitis) to 53% (brucellosis). Figure 2 presents the degree of reporting by the hospital's number of beds. Hospitals with fewer than 100 beds and those with between 300-499 beds had the lowest percentage of underreporting.

Twenty-nine hospitals that identified at least one case were located in cities or counties with a local health department. The percentage of underreporting for hospitals located within the jurisdiction of a local health department was similar to that of reported cases (33 years vs. 9 years). *Haemophilus influenza* was the etiologic agent for almost half (49%) of the reported cases with bacterial meningitis, compared with only 9.8% of the unreported bacterial meningitis cases. Only 4.9% of meningitis cases caused by *Staphylococcus* species and 20.3% caused by *Streptococcus* species were reported. None of the 40 cases of meningitis caused by *Enterobacter* or *Pseudomonas* species were reported. No other differences were noted in age, race, and sex distributions when comparing reported with unreported cases. Similarly, no differences were noted in the months of onset of illness between the two groups of patients.

Figure 2. Percentage of Unreported Cases by Number of Hospital Beds, 1990-1991

# of Beds	# of Hospitals	# of Cases Identified	Percent Underreported
<100	12	20	55.0
100-199	8	44	93.2
200-299	8	41	81.5
300-499	7	166	67.0
≤500	5	332	81.9

Discussion

In 1990 the Infectious Diseases Program initiated a study to estimate the effectiveness of passive surveillance for selected infectious diseases in several Texas-Mexico

Figure 3. Level of Underreporting for Four Infectious Diseases

Disease	70 Hospitals Statewide 1990-1991		14 Hospitals Texas-Mexico Border Counties, 1988	
	# of Cases	% Underreported	# of Cases	% Underreported
Brucellosis	36	52.8	11	45.4
Listeriosis	40	70.0	2	100.0
Meningococcal Infection	49	59.2	2	0.0
Bacterial Meningitis	478	82.0	90	89.4

border counties. That study was conducted at 14 acute care hospitals located in 6 counties. Figure 3 presents a comparison among the four diseases studied in the 1990 and 1992 studies. Both studies found that approximately 50% of brucellosis and 80% of bacterial meningitis cases went unreported. The percentage of unreported listeriosis cases was 70% and 100%.

If the findings of this study are applied to all 415 hospitals in Texas, approximately 200 cases of brucellosis or listeriosis occurred in Texas in 1990-1991. However, only 54 brucellosis cases and 84 listeriosis cases were reported during this time period. The estimated number of bacterial meningitis and N. *meningitidis* cases would *be* 2,390 and 245 respectively. Only 682 bacterial meningitis cases were reported. The total *N. meningitidis* cases reported in 1990-1991 were 193.

Five of the 70 hospitals responding to the survey identified a majority (70.5%) of cases in this study. Each of these five hospitals is licensed for more than 300 beds. Efforts to improve infectious disease surveillance for these four diseases could be focused on hospitals with over 300 beds. A total of 335 unreported cases would have been reported by improved surveillance at just these five hospitals.

The current study provides evidence that underreporting of some infectious diseases is not a problem unique to hospitals located along the Texas-Mexico border. It appears to be consistent throughout the state. Although the present study focused on only four diseases, these findings indicate that underreporting could be a problem for all reportable diseases. The impact of underreporting on public health is substantial. Underreporting prevents the timely recognition of common source outbreaks and the initiation of control measures.

Vibrio cholerae Infection

Introduction

The epidemic of cholera that began in Peru in January 1991 and rapidly spread throughout South and Central America continues unabated. Through August 26, 1992, more than 600,000 cases and 5,000 deaths had been reported from 20 countries. As of October 10, 1992, more than 6,323 had been reported from Mexico. More than 700 cases have been reported from each of the following Mexican states: Campeche, Guerrero, Veracruz, and Yucatan.

Microbiology of *V.* cholerae

Of the numerous vibrios, only toxigenic V. *cholerae* with the somatic antigen group O1 is associated with epidemic cholera. The bacterium may be classified by physiologic properties as one of two biotypes, El Tor or classical. The biotype of the present Central and South American epidemic is El Tor. The serotype seen most frequently when this epidemic began in January 1991 was Inaba. Ogawa is now being seen with increasing frequency.

Although only severe diarrheal illness caused by toxigenic V. *cholerae* with the somatic antigen group O1 is considered "cholera," nontoxigenic V. *cholerae* O1 and *V. cholerae* non-O1 can cause diarrheal illness. Because definitive laboratory identification of *V. cholerae* requires several weeks, public health interventions frequently must proceed before identification is completed. These interventions typically require several weeks and several laboratory tests. The following case reports describe *Vibrio cholerae* infections that produced diarrheal illness in Texas during 1992.

Case Reports

Case 1. ***On*** April 23,1992, a 48-year-old Hispanic homemaker from Brownsville presented with three days of nausea, vomiting, diarrhea, and epigastric pain, and was hospitalized. That day she had vomited eight times and had passed 10 watery greenish diarrheal stools.

On admission, her pulse was 103, and her blood pressure was 119/65 mm Hg. A stained preparation of stool revealed a few white blood cells. Other laboratory data were as follows: white blood cell count, 19,900/cu mm; hemoglobin, 17.8 g/dL; hematocrit, 50.7 %; urea nitrogen level, 20 mg/dL; creatinine, 2.7 mg/dL; and carbon dioxide, 10 mEq/L.

The patient was status post cholecystectomy and clinical evaluation initially suggested an obstruction. A nasogastric tube was placed and she was given nothing by mouth. She received lactated Ringers IV fluid at a rate of 200 cc/hr for five hours, and then at 125 cc/hr. Cefotaxime was administered and then replaced the

Figure 1. Vibrio *Cholerae* Case Summary

Case	Residence	Genus & Species	Somatic Antigen Group	Serotype	Biotype	Toxigenic	Source
1. 48 y/o HF	Brownsville	V. *Cholerae*	01	Inaba	El Tor	yes	Shrimp
2. 40 y/o HM	Brownsville	V. *Cholerae*	01	Inaba	El Tor	yea	Shrimp
3. 58 y/o HF	Channelview	V. *Cholerae*	01	Ogawa	El Tor	yes	Shrimp?
4. 54 y/o WM	San Antonio	V. *Cholerae*	01	Inaba	El Tor	yea	Crabs
5. 46 y/o WM	Dallas	V. *Cholerae*	01	Inaba	inconclusive	no	———
6. 42 y/o HF	Laredo	V. *Cholerae*	non-O1	———	———	—	Fish soup

following day by ceftriaxone and aztreonam. On day three she was allowed oral intake. Continuing evidence of poor renal function and acidosis, however, demonstrated an unsatisfactory response to treatment. At that time, her blood urea nitrogen level was 47 mg/dL, creatinine was 3.6 mg/dL, and her serum carbon dioxide was 12 mEq/L.

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When a vibrio was cultured from her stools, her other antibiotics were discontinued and tetracycline therapy was initiated. The pathogenic organism later was identified as toxigenic *V. cholerae* O1, serotype Inaba, biotype El Tor. She recovered fully and was discharged April 28,1992 (Figure1).

When questioned, she recalled that she had recently returned from a five-day car trip with her husband and two daughters to Tampico, Mexico. Their grandson had accompanied them on the trip to Tampico, but had not remained with them after their arrival. On the afternoon of the third day of the trip, she and her husband ate a lot of "cooked shrimp" in Tampico. Their children had not shared this meal.

Neither her husband, daughter, or grandson, complained of any gastrointestinal problems. Stool cultures and acute and convalescent serologies for vibriocidal and cholera toxin antibodies for the three members of her immediate family were negative.

The patient's home was connected to Brownsville's municipal water and wastewater treatment systems. Moore swab surveillance of Brownsville sewage inlets taken prior to the case onset and on May 1, May 4, and May 14 was repeatedly negative for V. *cholerae* O1. Review of emergency logs for the two largest hospitals in Brownsville failed to demonstrate a general increase in complaints of diarrhea during the week of the case onset when compared to the four previous weeks.

Case 2. Early on April 29,1992, a 40-year-old Hispanic man, also from Brownsville, presented to an emergency room weak and confused, with severe watery diarrhea of 6-7 hours duration. His temperature was 101° F, blood pressure was 180/60, pulse was 126, and respiratory rate was 24. A complete blood count obtained on admission revealed the following data: white blood cells, 19,800/cubic mm; and hemoglobin, 18.5 g/dL. The patient was in diabetic ketoacidosis with a glucose level of 432 mg/dL and a pH of 7.2. He was placed on doxycycline when darkfield examination of fresh stool revealed highly motile short curved rods. He received approximately 13 liters of lactated Ringers IV fluid the first day and put out approximately 15 liters of stool and urine. Although his creatinine reached 3.2 mg/dL about seven hours after he arrived, it gradually returned to normal and he recovered uneventfully. The organism was later fully identified as toxigenic V. *cholerae* O1, serotype Inaba, biotype El Tor.

The patient's home was connected to Brownsville's municipal water and wastewater treatment systems. He had traveled by car to Tampico on April 27 and 28. His brother-in-law from Houston made the complete trip with him; his mother- and father-in-law accompanied them on the return trip. In Tampico he had eaten boiled buttered crab and fried shrimp on the evening of the 27. At the same meal, his brother-in-law had eaten fried and boiled shrimp.

Because the outside limit of the incubation period for cholera is five days, stool cultures were obtained from the patient's whole family in Brownsville. Included in the sampling were both parents-in-law, the saleman's wife, and their three children. All stool cultures were negative. In addition, vibriocidal antibodies for the patient's brother-in-law, parents-in-law, wife, and son were negative.

Case 3. On May 23,1992 a 58-year-old Hispanic homemaker from Channelview became ill with 18 stools per day, nausea, abdominal cramps, and headache. She was hospitalized on May 24 for dehydration secondary to diarrhea. On admission her pulse was 115, blood pressure was 92/60 mm Hg, and respiratory rate was 20; she was afebrile. Coherent but weak, she was in renal failure and acidotic with an admission CO_2 of 14 mEq/L. Treated with doxycycline, she recovered slowly and was released on June 4,1992. The organism from her stool was identified as toxigenic V. *cholerae* O1, biotype El Tor, serotype Ogawa.

Prior to her illness she had spent May 18 through 22 in El Salvador. Although she was unable to give a good food history for most of her stay, she did recall eating a shrimp avocado salad on her last day in El Salvador. While in El Salvador, she drank only bottled water but did use ice from unknown sources. Her household in Channelview received water from municipal water and wastewater treatment systems.

The patient's husband, who had traveled to El Salvador with her, had up to nine stools a day and abdominal cramps after returning to the United States but never sought medical attention. Both had vibriocidal antibodies drawn on July 15,1992. Her vibriocidal titer was 1:20,480 and his was 1:5,120. Based on the serology, he also had cholera.

Case 4. On the morning of September 24, 1992, a 54-year-old white woman experienced onset of diarrhea, vomiting, and abdominal cramps. Prior to seeking medical care later that day, she had approximately 30 bouts of diarrhea. She was admitted to a hospital in San Antonio the evening of September 24 for probable viral gastroenteritis. Cardiovascular disease, for which she took one aspirin per day, was her only significant past medical history. On admission she was afebrile and alert. Her pulse was 108, blood pressure was 92/64 mm Hg, and serum CO_2 was 16 mEq/L. She received more than 17 liters of IV fluids during her first full day of hospitalization. Her stool output for the first day totaled more than 5 liters.

The patient's report that she had recently eaten crabs implicated cholera as the cause of her illness. A stool specimen yielded toxigenic *V. cholerae* O1, biotype El Tor, serotype Inaba. The organism exhibited hemolysis on blood agar typical of the endemic gulf coast strain. She was treated with fluids and doxycycline beginning September 25 and recovered.

The patient reported consuming 10 to 12 cooked crabs on September 22,1992. The crabs had been purchased on September 21 from a local fisherman in Seadrift, Texas, which is located on San Antonio Bay. The crabs had been boiled at least 10 minutes in two large pots the night before they were consumed. Each pot held seven to eight crabs at one time. After they were boiled, the crabs were placed on ice in an ice chest. Attempts to isolate *V. cholerae* O1 from leftover crabs were unsuccessful.

Of the six other persons who also consumed these crabs, none reported diarrhea or vomiting. The patient had no history of travel outside of Bexar County and had not eaten any other seafood in the two weeks before illness.

Case 5. On August 11,1992, a 46-year-old white man from the Dallas area had the onset of nausea, abdominal cramps, shaking chills and sweats, and diarrhea "like Niagra Falls." His temperature was 101.2° F. His physician prescribed an antimotility agent. When the man continued to have fever the next day, the doctor obtained a stool culture and prescribed ciprofloxacin.

The stool culture was positive for a group C Salmonella and for nontoxigenic V. *cholerae*

O1, serotype Inaba, biotype inclusive. The strain was hemolytic on blood agar and did not appear to be a Latin American strain. Because the strain was non-toxigenic, this patient did not have cholera.

The patient had not traveled outside the U.S. He had gone to Corpus Christi with his wife and two children on August 7, driven to South Padre Island on August 8, and returned to Dallas on the 11th. While traveling they had eaten at least 15 meals at 11 different eating establishments. Emergency rooms in the area reported no increase in diarrheal illness.

No one in the family could recall eating any seafood, and no one other than the father complained of illness. However, sera were obtained from all family members. Vibriocidal titers for Inaba were as follows: father, 1:1280; mother, 1:640; and daughter, 1:160. Based on these results, both the father and mother had serologic evidence of infection.

Case 6. On April 19,1992, a 42-year-old Hispanic woman from Laredo began having copious watery diarrhea. She had about 40 stools in one day. She presented to an emergency room the next day in a confused state. On admission her temperature was 102° F, blood pressure was 60/40 mm Hg, and pulse was 150. A smear of her stool showed white blood cells "too numerous to count." Both *Salmonella oranienburg* and *V. cholerae* non-O1 were isolated from the patient's stool. Because the *V. cholerae* was a non-O1, she did not have cholera.

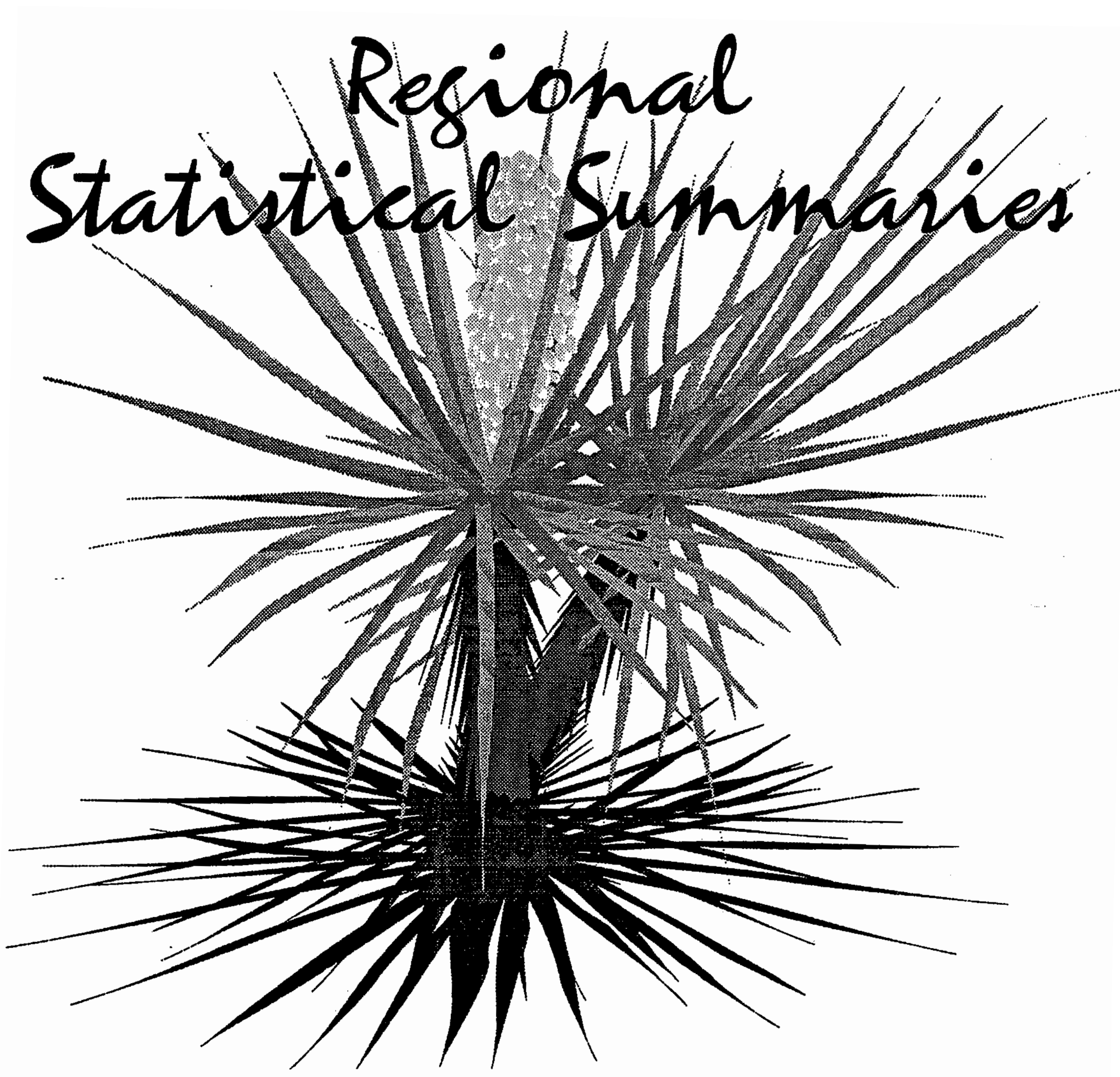
The woman had gone to Nuevo Laredo on April 17. Around midnight that evening, she ate fish soup and lentils with many other family members. Because the fish soup and lentils would not fit into the refrigerator, they were left out overnight. The lentils had foam on top and were discarded the next day. The patient, her husband, and her sister-in-law ate the fish soup cold for lunch on April 18. The woman also ate everyone else's leftovers. All three became ill. No stool or blood specimens could be obtained from the husband.

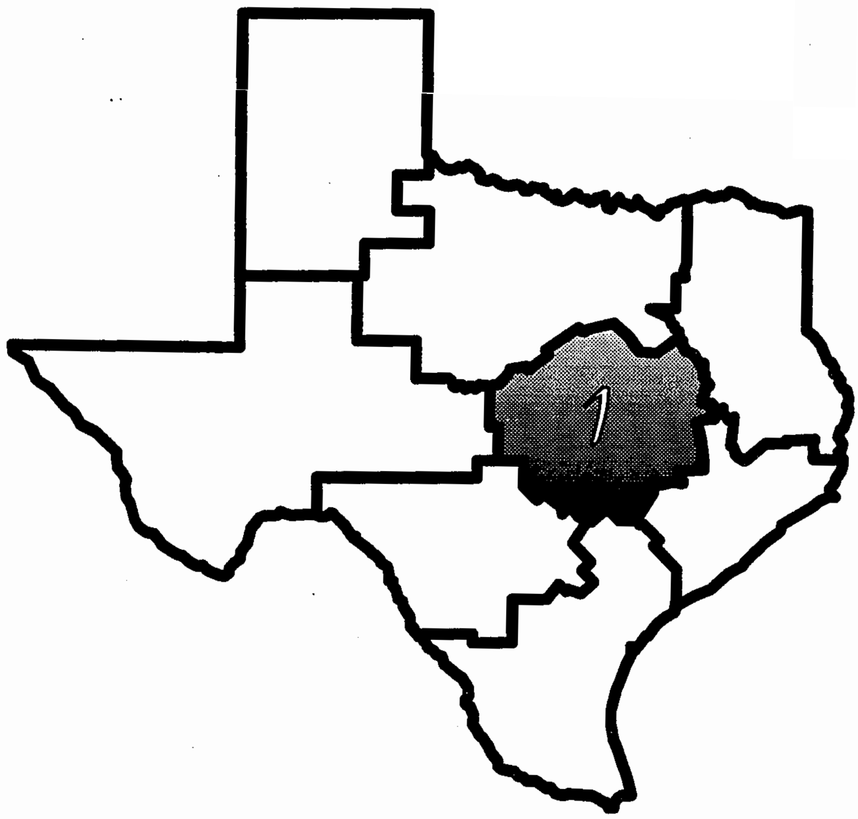
Discussion

The etiologic agents of most Vibrio infections in Texas are, *Vibrio cholerae* non-O1 and *Vibrio parahaemolyticus* - which primarily cause diarrheal illness, and *Vibrio vulnificus* - which usually causes septicemia and wound infections. Infections with toxigenic *V. cholerae* O1 rarely occur in Texas. Three cases were reported in 1981 and one in 1988. In three of these cases, the patient had a history of consuming seafood harvested from the Gulf of Mexico coastal waters: raw oysters, shrimp, a fish, and a turtle. The fourth patient consumed water and food items fecally contaminated with cholera.

Four culture-confirmed cases of toxigenic *V. cholerae* were reported in Texas in 1992. One additional symptomatic case was confirmed through serologic diagnosis. These five cases represent the highest annual number reported in over 50 years. Four cases had exposure histories outside the United States and are considered imported cases. One patient, who had a history of consuming crabs harvested from the Texas Gulf Coast, was the first in Texas to have cholera associated with consumption of crabs from Texas Gulf Coast waters.

Regional Statistical Summaries





Public Health Region 1

REPORTED CASES AND RATES OF HEPATITIS PER 100,000 POPULATION

PUBLIC HEALTH REGION 1 - 1992

COUNTY	1992 POP.	HEPATITIS A CASES	HEPATITIS A RATE	HEPATITIS B CASES	HEPATITIS B RATE	HEPATITIS NANB CASES	HEPATITIS NANB RATE	HEPATITIS UNSPECIFIED CASES	HEPATITIS UNSPECIFIED RATE
BASTROP	40508	2	4.9	3	7.4	0	0.0	0	0.0
BELL	197655	4	2.0	26	13.2	0	0.0	0	0.0
BLANCO	6181	0	0.0	0	0.0	0	0.0	0	0.0
BOSQUE	15320	0	0.0	0	0.0	0	0.0	0	0.0
BRAZOS	122520	9	7.3	6	4.9	0	0.0	0	0.0
BURLESON	14017	0	0.0	0	0.0	0	0.0	0	0.0
BURNET	23395	0	0.0	0	0.0	0	0.0	1	4.3
CALDWELL	27351	1	3.7	1	3.7	0	0.0	0	0.0
CORYELL	65786	0	0.0	2	3.0	0	0.0	0	0.0
FALLS	17915	4	22.3	0	0.0	0	0.0	0	0.0
FAYETTE	20278	0	0.0	1	4.9	0	0.0	0	0.0
FREESTONE	15966	1	6.3	1	6.3	0	0.0	0	0.0
GRIMES	19489	1	5.1	0	0.0	0	0.0	0	0.0
HAMILTON	7673	0	0.0	0	0.0	0	0.0	0	0.0
HAYS	68604	3	4.4	4	5.8	0	0.0	0	0.0
HILL	27578	0	0.0	0	0.0	0	0.0	0	0.0
LAMPASAS	13847	0	0.0	1	7.2	0	0.0	0	0.0
LEE	13214	0	0.0	0	0.0	0	0.0	0	0.0
LEON	13108	0	0.0	1	7.6	0	0.0	0	0.0
LIMESTONE	21252	0	0.0	0	0.0	0	0.0	0	0.0
LLANO	11706	0	0.0	0	0.0	0	0.0	0	0.0
MADISON	11027	0	0.0	0	0.0	0	0.0	0	0.0
MCLENNAN	191601	7	3.7	13	6.8	0	0.0	1	0.5
MILAM	23267	2	8.6	0	0.0	0	0.0	0	0.0
MILLS	4520	0	0.0	0	0.0	0	0.0	0	0.0
ROBERTSON	15930	0	0.0	1	6.3	0	0.0	0	0.0
SAN SABA	5409	0	0.0	0	0.0	0	0.0	0	0.0
TRAVIS	593536	42	7.1	74	12.5	2	0.3	10	1.7
WASHINGTON	26645	0	0.0	2	7.5	0	0.0	0	0.0
WILLIAMSON	149916	5	3.3	7	4.7	0	0.0	2	1.3
REGIONAL TOTAL	1785214	81	4.5	143	8.0	2	0.1	14	0.8
TEXAS	17615745	1828	10.4	1528	8.7	26	0.1	191	1.1

REPORTED CASES OF SELECTED VIRAL DISEASES AND RATES PER 100,000 POPULATION

PUBLIC HEALTH REGION 1 - 1992

COUNTY	1992 POP.	ASEPTIC MENINGITIS CASES	ASEPTIC MENINGITIS RATE	ENCEPHALITIS CASES	ENCEPHALITIS RATE	INFLUENZA & FLU-LIKE LLNESS CASES	INFLUENZA & FLU-LIKE LLNESS RATE	CHICKENPOX CASES	CHICKENPOX RATE
BASTROP	40508	4	9.9	0	0.0	0	0.0	0	0.0
BELL	197655	15	7.6	0	0.0	645	326.3	433	219.1
BLANCO	6181	0	0.0	0	0.0	0	0.0	0	0.0
BOSQUE	15320	1	6.5	0	0.0	0	0.0	0	0.0
BRAZOS	122520	3	2.4	0	0.0	1151	939.4	210	171.4
BURLESON	14017	1	7.1	0	0.0	0	0.0	9	64.2
BURNET	23395	0	0.0	1	4.3	0	0.0	0	0.0
CALDWELL	27351	1	3.7	1	3.7	0	0.0	6	21.9
CORYELL	65786	0	0.0	0	0.0	3	4.6	4	6.1
FALLS	17915	0	0.0	0	0.0	6	33.5	30	167.5
FAYETTE	20278	0	0.0	0	0.0	0	0.0	0	0.0
FREESTONE	15966	0	0.0	0	0.0	3	18.8	0	0.0
GRIMES	19489	0	0.0	0	0.0	8	41.0	0	0.0
HAMILTON	7673	0	0.0	0	0.0	0	0.0	0	0.0
HAYS	68604	1	1.5	0	0.0	0	0.0	22	32.1
HILL	27578	0	0.0	0	0.0	0	0.0	31	112.4
LAMPASAS	13847	0	0.0	0	0.0	0	0.0	0	0.0
LEE	13214	0	0.0	0	0.0	0	0.0	6	45.4
LEON	13108	1	7.6	0	0.0	0	0.0	0	0.0
LIMESTONE	21252	0	0.0	0	0.0	159	748.2	3	14.1
LLANO	11706	1	8.5	0	0.0	0	0.0	0	0.0
MADISON	11027	0	0.0	0	0.0	0	0.0	0	0.0
MCLENNAN	191601	4	2.1	0	0.0	453	236.4	283	147.7
MILAM	23267	1	4.3	0	0.0	105	451.3	16	68.8
MILLS	4520	0	0.0	0	0.0	0	0.0	0	0.0
ROBERTSON	15930	0	0.0	0	0.0	0	0.0	0	0.0
SAN SABA	5409	0	0.0	0	0.0	0	0.0	4	74.0
TRAVIS	593536	74	12.5	7	1.2	60	10.1	1918	323.1
WASHINGTON	26645	0	0.0	0	0.0	0	0.0	0	0.0
WILLIAMSON	149916	7	4.7	0	0.0	20	13.3	3	2.0
REGIONAL TOTAL	1785214	114	6.4	9	0.5	2613	146.4	2978	166.8
TEXAS	17615745	1242	7.1	89	0.5	155568	883.1	20554	116.7

REPORTED CASES OF GASTROINTESTINAL DISEASES AND RATES PER 100,000 POPULATION

PUBLIC HEALTH REGION 1 - 1992

		SALMONELLOSIS		SHIGELLOSIS		CAMPYLOBACTER		AMEBIASIS	
COUNTY	1992 POP.	CASES	RATE	CASES	RATE	CASES	RATE	CASES	RATE
BASTROP	40508	4	9.9	11	27.2	3	7.4	1	2.5
BELL	197655	45	22.8	8	4.0	0	0.0	0	0.0
BLANCO	6181	0	0.0	1	16.2	0	0.0	0	0.0
BOSQUE	15320	2	13.1	2	13.1	0	0.0	0	0.0
BRAZOS	122520	12	9.8	33	26.9	5	4.1	0	0.0
BURLESON	14017	1	7.1	1	7.1	0	0.0	0	0.0
BURNET	23395	5	21.4	2	8.5	1	4.3	0	0.0
CALDWELL	27351	1	3.7	447	1,634.3	3	11.0	0	0.0
CORYELL	65786	1	1.5	0	0.0	0	0.0	0	0.0
FALLS	17915	0	0.0	0	0.0	0	0.0	0	0.0
FAYETTE	20278	3	14.8	1	4.9	1	4.9	0	0.0
FREESTONE	15966	0	0.0	0	0.0	1	6.3	0	0.0
GRIMES	19489	0	0.0	0	0.0	1	5.1	0	0.0
HAMILTON	7673	1	13.0	1	13.0	0	0.0	0	0.0
HAYS	68604	7	10.2	38	55.4	6	8.7	0	0.0
HILL	27578	0	0.0	3	10.9	0	0.0	0	0.0
LAMPASAS	13847	0	0.0	0	0.0	0	0.0	0	0.0
LEE	13214	0	0.0	0	0.0	0	0.0	0	0.0
LEON	13108	0	0.0	0	0.0	0	0.0	0	0.0
LIMESTONE	21252	0	0.0	0	0.0	0	0.0	0	0.0
LLANO	11706	0	0.0	0	0.0	0	0.0	0	0.0
MADISON	11027	0	0.0	0	0.0	0	0.0	0	0.0
MCLENNAN	191601	5	2.6	105	54.8	4	2.1	0	0.0
MILAM	23267	1	4.3	1	4.3	1	4.3	0	0.0
MILLS	4520	0	0.0	0	0.0	0	0.0	0	0.0
ROBERTSON	15930	1	6.3	2	12.6	1	6.3	1	6.3
SAN SABA	5409	0	0.0	0	0.0	0	0.0	0	0.0
TRAVIS	593536	111	18.7	410	69.1	109	18.4	16	2.7
WASHINGTON	26645	3	11.3	0	0.0	0	0.0	0	0.0
WILLIAMSON	149916	14	9.3	80	53.4	9	6.0	0	0.0
REGIONAL TOTAL	1785214	217	12.2	1146	64.2	145	8.1	18	1.0
TEXAS	17615745	1933	11.0	3568	20.3	996	5.7	108	0.6

REPORTED CASES OF SELECTED VACCINE-PREVENTABLE DISEASES AND RATES PER 100,000 POPULATION

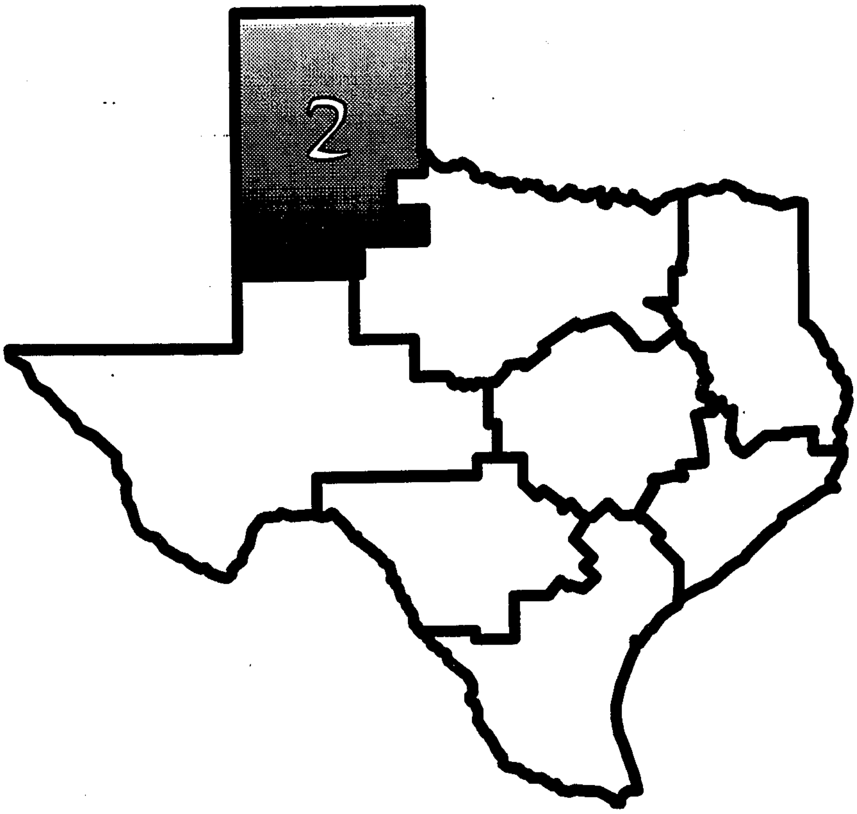
PUBLIC HEALTH REGION 1 - 1992

		MEASLES		MUMPS		PERTUSSIS		RUBELLA	
COUNTY	1992 POP.	CASES	RATE	CASES	RATE	CASES	RATE	CASES	RATE
BASTROP	40508	1	2.5	2	4.9	0	0.0	0	0.0
BELL	197655	0	0.0	1	0.5	5	2.5	0	0.0
BLANCO	6181	0	0.0	0	0.0	0	0.0	0	0.0
BOSQUE	15320	0	0.0	0	0.0	0	0.0	0	0.0
BRAZOS	122520	2	1.6	0	0.0	1	0.8	0	0.0
BURLESON	14017	0	0.0	0	0.0	0	0.0	0	0.0
BURNET	23395	0	0.0	0	0.0	0	0.0	0	0.0
CALDWELL	27351	0	0.0	1	3.7	0	0.0	0	0.0
CORYELL	65786	0	0.0	0	0.0	0	0.0	0	0.0
FALLS	17915	0	0.0	1	5.6	0	0.0	0	0.0
FAYETTE	20278	1	4.9	0	0.0	0	0.0	0	0.0
FREESTONE	15966	0	0.0	2	12.5	0	0.0	0	0.0
GRIMES	19489	0	0.0	1	5.1	0	0.0	0	0.0
HAMILTON	7673	0	0.0	0	0.0	0	0.0	0	0.0
HAYS	68604	0	0.0	2	2.9	1	1.5	0	0.0
HILL	27578	0	0.0	1	3.6	0	0.0	0	0.0
LAMPASAS	13847	0	0.0	0	0.0	0	0.0	0	0.0
LEE	13214	0	0.0	1	7.6	0	0.0	0	0.0
LEON	13108	0	0.0	1	7.6	0	0.0	0	0.0
LIMESTONE	21252	0	0.0	0	0.0	0	0.0	0	0.0
LLANO	11706	0	0.0	0	0.0	0	0.0	0	0.0
MADISON	11027	0	0.0	1	9.1	0	0.0	0	0.0
MCLENNAN	191601	0	0.0	4	2.1	4	2.1	0	0.0
MILAM	23267	1	4.3	0	0.0	0	0.0	0	0.0
MILLS	4520	0	0.0	0	0.0	0	0.0	0	0.0
ROBERTSON	15930	0	0.0	0	0.0	1	6.3	0	0.0
SAN SABA	5409	0	0.0	0	0.0	0	0.0	0	0.0
TRAVIS	593536	4	0.7	7	1.2	9	1.5	1	0.2
WASHINGTON	26645	0	0.0	0	0.0	0	0.0	0	0.0
WILLIAMSON	149916	1	0.7	0	0.0	1	0.7	0	0.0
REGIONAL TOTAL	1785214	10	0.6	25	1.4	22	1.2	1	0.1
TEXAS	17615745	1097	6.2	388	2.2	161	0.9	9	0.1

REPORTED CASES OF OTHER SELECTED DISEASES AND RATES PER 100,000 POPULATION

PUBLIC HEALTH REGION 1 - 1992

		GONORRHEA		CHLAMYDIA		P&S SYPHILIS		TUBERCULOSIS	
COUNTY	1992 POP.	CASES	RATE	CASES	RATE	CASES	RATE	CASES	RATE
BASTROP	40508	30	74.1	76	187.6	3	7.4	2	4.9
BELL	197655	596	301.5	910	460.4	36	18.2	16	8.1
BLANCO	6181	0	0.0	6	97.1	0	0.0	1	16.2
BOSQUE	15320	5	32.6	30	195.8	0	0.0	2	13.1
BRAZOS	122520	277	226.1	455	371.4	40	32.6	14	11.4
BURLESON	14017	42	299.6	22	157.0	2	14.3	4	28.5
BURNET	23395	9	38.5	61	260.7	1	4.3	2	8.5
CALDWELL	27351	10	36.6	47	171.8	1	3.7	5	18.3
CORYELL	65786	49	74.5	161	244.7	3	4.6	4	6.1
FALLS	17915	114	636.3	97	541.4	2	11.2	0	0.0
FAYETTE	20278	10	49.3	37	182.5	1	4.9	1	4.9
FREESTONE	15966	26	162.8	44	275.6	3	18.8	2	12.5
GRIMES	19489	76	390.0	67	343.8	19	97.5	1	5.1
HAMILTON	7673	0	0.0	7	91.2	0	0.0	0	0.0
HAYS	68604	65	94.7	229	333.8	4	5.8	5	7.3
HILL	27578	71	257.5	91	330.0	3	10.9	1	3.6
LAMPASAS	13847	5	36.1	41	296.1	0	0.0	4	28.9
LEE	13214	12	90.8	27	204.3	1	7.6	3	22.7
LEON	13108	7	53.4	25	190.7	2	15.3	2	15.3
LIMESTONE	21252	63	296.4	101	475.2	9	42.3	5	23.5
LLANO	11706	2	17.1	20	170.9	0	0.0	0	0.0
MADISON	11027	19	172.3	26	235.8	3	27.2	0	0.0
MCLENNAN	191601	863	450.4	704	367.4	20	10.4	7	3.7
MILAM	23267	101	434.1	133	571.6	7	30.1	0	0.0
MILLS	4520	1	22.1	6	132.7	0	0.0	0	0.0
ROBERTSON	15930	69	433.1	48	301.3	7	43.9	1	6.3
SAN SABA	5409	1	18.5	15	277.3	0	0.0	1	18.5
TRAVIS	593536	1294	218.0	1595	268.7	87	14.7	122	20.6
WASHINGTON	26645	77	289.0	63	236.4	8	30.0	1	3.8
WILLIAMSON	149916	77	51.4	189	126.1	3	2.0	9	6.0
REGIONAL TOTAL	1785214	3971	222.4	5333	298.7	269	15.1	215	12.0
TEXAS	17615745	35517	201.6	39728	225.5	3316	18.8	2510	14.2



Public Health Region 2

REPORTED CASES OF SELECTED VIRAL DISEASES AND RATES PER 100,000 POPULATION

PUBLIC HEALTH REGION 2 - 1992

		ASEPTIC MENINGITIS		ENCEPHALITIS		INFLUENZA & FLU-LIKE LLNESS		CHICKENPOX	
COUNTY	1992 POP.	CASES	RATE	CASES	RATE	CASES	RATE	CASES	RATE
ARMSTRONG	2047	0	0.0	0	0.0	0	0.0	0	0.0
BAILEY	7237	0	0.0	0	0.0	0	0.0	84	1,160.7
BRISCOE	1990	0	0.0	0	0.0	0	0.0	0	0.0
CARSON	6697	0	0.0	0	0.0	0	0.0	0	0.0
CASTRO	9340	0	0.0	0	0.0	0	0.0	6	64.2
CHILDRESS	5950	0	0.0	0	0.0	0	0.0	0	0.0
COCHRAN	4502	0	0.0	0	0.0	0	0.0	0	0.0
COLLINGSWORTH	3587	0	0.0	0	0.0	0	0.0	0	0.0
CROSBY	7464	2	26.8	1	13.4	0	0.0	6	80.4
DALLAM	5566	0	0.0	0	0.0	0	0.0	6	107.8
DEAF SMITH	19828	0	0.0	0	0.0	9	45.4	8	40.3
DICKENS	2567	0	0.0	0	0.0	0	0.0	0	0.0
DONLEY	3678	0	0.0	0	0.0	0	0.0	0	0.0
FLOYD	8672	0	0.0	0	0.0	0	0.0	5	57.7
GARZA	5234	1	19.1	0	0.0	0	0.0	6	114.6
GRAY	24137	0	0.0	0	0.0	0	0.0	0	0.0
HALE	35536	5	14.1	1	2.8	237	666.9	113	318.0
HALL	3890	0	0.0	0	0.0	0	0.0	0	0.0
HANSFORD	5976	0	0.0	0	0.0	0	0.0	0	0.0
HARTLEY	3675	0	0.0	0	0.0	0	0.0	0	0.0
HEMPHILL	3788	0	0.0	0	0.0	0	0.0	0	0.0
HOCKLEY	24782	2	8.1	0	0.0	0	0.0	4	16.1
HUTCHINSON	26038	0	0.0	0	0.0	0	0.0	2	7.7
KING	364	0	0.0	0	0.0	0	0.0	0	0.0
LAMB	15341	0	0.0	0	0.0	0	0.0	7	45.6
LIPSCOMB	3185	0	0.0	0	0.0	0	0.0	0	0.0
LUBBOCK	225915	34	15.0	I	0.4	670	296.6	210	93.0
LYNN	6892	1	14.5	0	0.0	0	0.0	31	449.8
MOORE	18436	1	5.4	0	0.0	0	0.0	1	5.4
MOTLEY	1534	0	0.0	0	0.0	0	0.0	0	0.0
OCHILTREE	9346	0	0.0	0	0.0	I	10.7	0	0.0
OLDHAM	2313	0	0.0	0	0.0	0	0.0	20	864.7
PARMER	10117	1	9.9	0	0.0	0	0.0	0	0.0
POTTER	99961	8	8.0	1	1.0	4890	4,891.9	100	100.0
RANDALL	92937	11	11.8	4	4.3	1495	1,608.6	15	16.1
ROBERTS	1041	0	0.0	0	0.0	0	0.0	0	0.0
SHERMAN	2921	0	0.0	0	0.0	0	0.0	0	0.0
SWISHER	8235	0	0.0	0	0.0	0	0.0	0	0.0
TERRY	13506	I	7.4	0	0.0	0	0.0	0	0.0
WHEELER	5884	0	0.0	0	0.0	0	0.0	4	68.0
YOAKUM	9047	0	0.0	0	0.0	0	0.0	3	33.2
REGIONAL TOTAL	749158	67	8.9	8	11	7302	974.7	631	84.2
TEXAS	17615745	1242	7.1	89	0.5	155568	883.1	20554	116.7

REPORTED CASES AND RATES OF HEPATITIS PER 100,000 POPULATION

PUBLIC HEALTH REGION 2 - 1992

COUNTY	1992 POP.	HEPATITIS A CASES	HEPATITIS A RATE	HEPATITIS B CASES	HEPATITIS B RATE	HEPATITIS NANB CASES	HEPATITIS NANB RATE	HEPATITIS USPECIFIED CASES	HEPATITIS USPECIFIED RATE
ARMSTRONG	2047	0	0.0	0	0.0	0	0.0	0	0.0
BAILEY	7237	0	0.0	0	0.0	1	13.8	0	0.0
BRISCOE	1990	0	0.0	0	0.0	0	0.0	0	0.0
CARSON	6697	0	0.0	0	0.0	0	0.0	0	0.0
CASTRO	9340	1	10.7	0	0.0	0	0.0	0	0.0
CHILDRESS	5950	0	0.0	0	0.0	0	0.0	0	0.0
COCHRAN	4502	0	0.0	0	0.0	0	0.0	0	0.0
COLLINGSWORTH	3587	0	0.0	0	0.0	0	0.0	0	0.0
CROSBY	7464	0	0.0	0	0.0	0	0.0	0	0.0
DALLAM	5566	0	0.0	0	0.0	0	0.0	0	0.0
DEAF SMITH	19828	3	15.1	0	0.0	0	0.0	0	0.0
DICKENS	2567	0	0.0	0	0.0	0	0.0	0	0.0
DONLEY	3678	1	27.2	0	0.0	0	0.0	0	0.0
FLOYD	8672	0	0.0	0	0.0	0	0.0	0	0.0
GARZA	5234	0	0.0	0	0.0	0	0.0	0	0.0
GRAY	24137	0	0.0	3	12.4	0	0.0	0	0.0
HALE	35536	3	8.4	1	2.8	0	0.0	I	2.8
HALL	3890	0	0.0	0	0.0	0	0.0	0	0.0
HANSFORD	5978	0	0.0	0	0.0	0	0.0	0	0.0
HARTLN	3675	0	0.0	0	0.0	0	0.0	0	0.0
HEMPHILL	3788	0	0.0	0	0.0	0	0.0	0	0.0
HOCKLEY	24782	1	4.0	1	4.0	0	0.0	0	0.0
HUTCHINSON	26038	1	3.8	2	7.7	0	0.0	0	0.0
KING	364	0	0.0	0	0.0	0	0.0	0	0.0
LAMB	15341	1	6.5	0	0.0	0	0.0	0	0.0
LIPSCOMB	3185	0	0.0	0	0.0	0	0.0	0	0.0
LUBBOCK	225915	16	7.1	16	7.1	0	0.0	0	0.0
LYNN	6892	1	14.5	0	0.0	0	0.0	0	0.0
MOORE	18436	0	0.0	0	0.0	0	0.0	0	0.0
MOTLEY	1534	0	0.0	0	0.0	0	0.0	0	0.0
OCHILTREE	9346	0	0.0	0	0.0	0	0.0	0	0.0
OLDHAM	2313	0	0.0	0	0.0	0	0.0	0	0.0
PARMER	10117	0	0.0	1	9.9	0	0.0	0	0.0
POTTER	99961	6	6.0	7	7.0	I	1.0	0	0.0
RANDALL	92937	4	4.3	6	6.5	0	0.0	0	0.0
ROBERTS	1041	0	0.0	0	0.0	0	0.0	0	0.0
SHERMAN	2921	0	0.0	0	0.0	0	0.0	0	0.0
SWISHER	8235	0	0.0	0	0.0	0	0.0	0	0.0
TERRY	13506	8	59.2	0	0.0	0	0.0	0	0.0
WHEELER	5884	2	34.0	0	0.0	0	0.0	0	0.0
YOAKUM	9047	0	0.0	0	0.0	0	0.0	0	0.0
REGIONAL TOTAL	749158	48	6.4	35	4.7	2	0.3	I	0.1
TEXAS	17615745	1628	10.4	1528	8.7	26	0.1	191	1.1

REPORTED CASES OF GASTROINTESTINAL DISEASES AND RATES PER 100,000 POPULATION

PUBLIC HEALTH REGION 2 - 1992

		SALMONELLOSIS		SHIGELLOSIS		CAMPYLOBACTER		AMEBIASIS	
COUNTY	1992 POP.	CASES	RATE	CASES	RATE	CASES	RATE	CASES	RATE
ARMSTRONG	2047	0	0.0	0	0.0	0	0.0	0	0.0
BAILEY	7237	0	0.0	0	0.0	0	0.0	0	0.0
BRISCOE	1990	0	0.0	0	0.0	0	0.0	0	0.0
CARSON	6697	0	0.0	0	0.0	3	44.6	0	0.0
CASTRO'	9340	1	10.7	0	0.0	0	0.0	0	0.0
CHILDRESS	5950	0	0.0	0	0.0	0	0.0	0	0.0
COCHRAN	4502	0	0.0	0	0.0	0	0.0	0	0.0
COLLINGSWORTH	3587	0	0.0	0	0.0	0	0.0	0	0.0
CROSBY	7464	3	40.2	0	0.0	0	0.0	0	0.0
DALLAM	5566	0	0.0	0	0.0	0	0.0	0	0.0
DEAF SMITH	19828	8	40.3	6	30.3	4	20.2	0	0.0
DICKENS	2567	0	0.0	0	0.0	0	0.0	0	0.0
DONLEY	3678	0	0.0	0	0.0	0	0.0	0	0.0
FLOYD	8672	3	34.6	0	0.0	1	11.5	0	0.0
GARZA	5234	3	57.3	0	0.0	0	0.0	0	0.0
GRAY	24137	2	8.3	0	0.0	2	6.3	0	0.0
HALE	35536	4	11.3	2	5.6	0	0.0	0	0.0
HALL	3690	1	25.7	0	0.0	0	0.0	0	0.0
HANSFORD	5978	0	0.0	0	0.0	0	0.0	0	0.0
HARTLEY	3675	0	0.0	0	0.0	0	0.0	0	0.0
HEMPHILL	3788	2	52.8	0	0.0	0	0.0	0	0.0
HOCKLEY	24782	1	4.0	11	44.4	0	0.0	0	0.0
HUTCHINSON	26038	2	7.7	6	23.0	1	3.8	0	0.0
KING	364	0	0.0	0	0.0	0	0.0	0	0.0
LAMB	15341	3	19.6	0	0.0	0	0.0	0	0.0
LIPSCOMB	3185	0	0.0	0	0.0	0	0.0	0	0.0
LUBBOCK	225915	61	27.0	62	27.4	26	11.5	1	0.4
LYNN	6892	2	29.0	1	14.5	0	0.0	0	0.0
MOORE	18436	3	16.3	1	5.4	0	0.0	0	0.0
MOTLEY	1534	0	0.0	1	65.2	0	0.0	0	0.0
OCHILTREE	9346	0	0.0	0	0.0	0	0.0	0	0.0
OLDHAM	2313	0	0.0	0	0.0	1	43.2	0	0.0
PARMER	10117	2	19.8	0	0.0	0	0.0	0	0.0
POTTER	99961	19	19.0	182	162.1	25	25.0	2	2.0
RANDALL	92937	20	21.5	17	18.3	11	11.6	0	0.0
ROBERTS	1041	0	0.0	0	0.0	0	0.0	0	0.0
SHERMAN	2921	0	0.0	0	0.0	0	0.0	0	0.0
SWISHER	6235	0	0.0	2	24.3	0	0.0	0	0.0
TERRY	13506	1	7.4	3	22.2	0	0.0	0	0.0
WHEELER	5804	1	17.0	0	0.0	0	0.0	0	0.0
YOAKUM	9047	0	0.0	0	0.0	1	11.1	0	0.0
REGIONAL TOTAL	749158	142	19.0	294	39.2	75	10.0	3	0.4
TEXAS	17615745	1933	11.0	3568	20.3	996	5.7	108	0.6

REPORTED CASES OF SELECTED VACCINE-PREVENTABLE DISEASES AND RATES PER 100,000 POPULATION

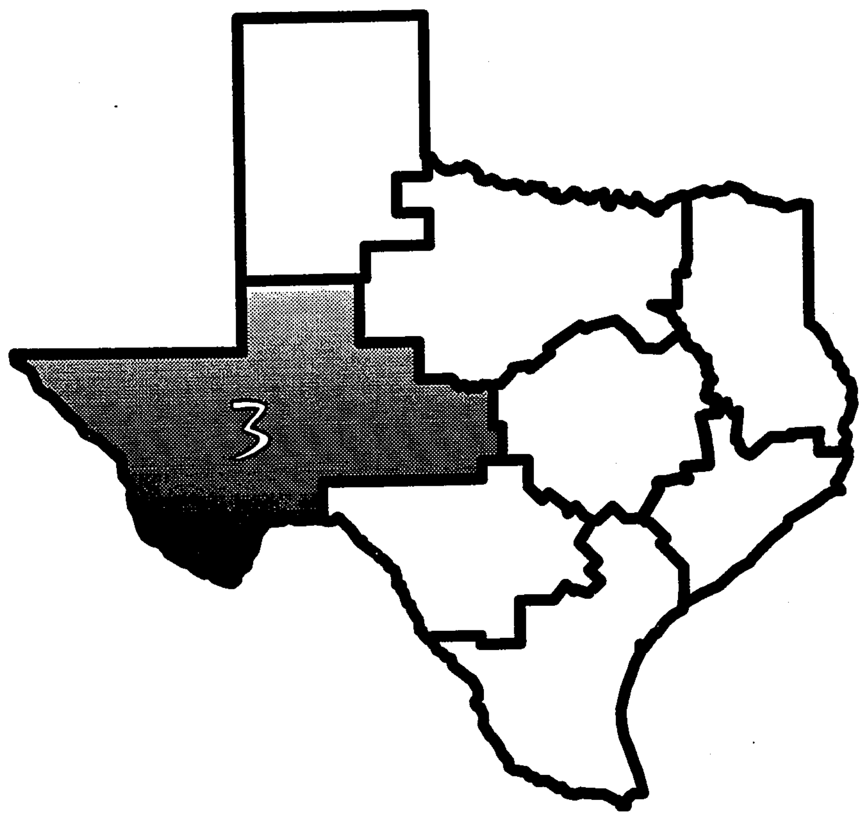
PUBLIC HEALTH REGION 2 - 1992

		MEASLES		MUMPS		PERTUSSIS		RUBELLA	
COUNTY	1992 POP.	CASES	RATE	CASES	RATE	CASES	RATE	CASES	RATE
ARMSTRONG	2047	0	0.0	0	0.0	0	0.0	0	0.0
BAILEY	7237	0	0.0	7	96.7	0	0.0	0	0.0
BRISCOE	1990	0	0.0	0	0.0	0	0.0	0	0.0
CARSON	6697	0	0.0	0	0.0	0	0.0	0	0.0
CASTRO	9340	0	0.0	0	0.0	0	0.0	0	0.0
CHILDRESS	5950	0	0.0	0	0.0	0	0.0	0	0.0
COCHRAN	4502	0	0.0	0	0.0	0	0.0	0	0.0
COLLINGSWORTH	3587	0	0.0	0	0.0	0	0.0	0	0.0
CROSBY	7464	0	0.0	0	0.0	0	0.0	0	0.0
DALLAM	5566	0	0.0	0	0.0	0	0.0	0	0.0
DEAF SMITH	19828	0	0.0	0	0.0	0	0.0	0	0.0
DICKENS	2567	0	0.0	0	0.0	0	0.0	0	0.0
DONLEY	3678	0	0.0	0	0.0	0	0.0	0	0.0
FLOYD	8672	0	0.0	0	0.0	0	0.0	0	0.0
GARZA	5234	0	0.0	0	0.0	0	0.0	0	0.0
GRAY	24137	0	0.0	0	0.0	0	0.0	0	0.0
HALE	35536	0	0.0	4	11.3	0	0.0	0	0.0
HALL	3890	0	0.0	0	0.0	0	0.0	0	0.0
HANSFORD	5978	0	0.0	3	50.2	0	0.0	0	0.0
HARTLEY	3675	0	0.0	0	0.0	0	0.0	0	0.0
HEMPHILL	3788	0	0.0	0	0.0	0	0.0	0	0.0
HOCKLN	24782	0	0.0	0	0.0	0	0.0	0	0.0
HUTCHINSON	26038	0	0.0	0	0.0	0	0.0	0	0.0
KING	364	0	0.0	0	0.0	0	0.0	0	0.0
LAMB	15341	0	0.0	0	0.0	0	0.0	0	0.0
LIPSCOMB	3185	0	0.0	0	0.0	1	31.4	0	0.0
LUBBOCK	225915	2	0.9	16	7.1	3	1.3	0	0.0
LYNN	6892	0	0.0	1	14.5	0	0.0	0	0.0
MOORE	18436	0	0.0	0	0.0	0	0.0	0	0.0
MOTLN	1534	0	0.0	0	0.0	0	0.0	0	0.0
OCHILTREE	9346	0	0.0	1	10.7	0	0.0	0	0.0
OLDHAM	2313	0	0.0	0	0.0	0	0.0	0	0.0
PARMER	10117	0	0.0	0	0.0	1	9.9	0	0.0
POTTER	99961	0	0.0	52	52.0	0	0.0	0	0.0
RANDALL	92937	0	0.0	24	25.8	2	2.2	0	0.0
ROBERTS	1041	0	0.0	0	0.0	0	0.0	0	0.0
SHERMAN	2921	0	0.0	0	0.0	0	0.0	0	0.0
SWISHER	8235	0	0.0	0	0.0	0	0.0	0	0.0
TERRY	13506	0	0.0	1	7.4	0	0.0	0	0.0
WHEELER	5884	0	0.0	0	0.0	0	0.0	0	0.0
YOAKUM	9047	0	0.0	0	0.0	0	0.0	0	0.0
REGIONAL TOTAL	749158	2	0.3	109	14.5	7	0.9	0	0.0
TEXAS	17615745	1097	6.2	388	2.2	161	0.9	9	0.1

REPORTED CASES OF OTHER SELECTED DISEASES AND RATES PER 100,000 POPULATION

PUBLIC HEALTH REGION 2 - 1992

COUNTY	1992 POP.	GONORRHEA CASES	GONORRHEA RATE	CHLAMYDIA CASES	CHLAMYDIA RATE	P&S SYPHILIS CASES	P&S SYPHILIS RATE	TUBERCULOSIS CASES	TUBERCULOSIS RATE
ARMSTRONG	2047	1	48.9	3	146.6	0	0.0	0	0.0
BAILEY	7237	2	27.6	15	207.3	0	0.0	5	69.1
BRISCOE	1990	0	0.0	0	0.0	0	0.0	0	0.0
CARSON	6697	1	14.9	2	29.9	0	0.0	0	0.0
CASTRO	9340	3	32.1	7	74.9	0	0.0	1	10.7
CHILDRESS	5950	7	117.6"	12	201.7	1	16.8	0	0.0
COCHRAN	4502	3	66.6	16	355.4	0	0.0	1	22.2
COLLINGSWORTH	3587	1	27.9	1	27.9	0	0.0	0	0.0
CROSBY	7484	4	53.6	16	214.4	0	0.0	3	40.2
DALLAM	5566	0	0.0	3	53.9	0	0.0	1	18.0
DEAF SMITH	19828	14	70.6	85	428.7	0	0.0	0	0.0
DICKENS	2567	1	39.0	12	467.5	0	0.0	0	0.0
DONLEY	3678	1	27.2	5	135.9	0	0.0	0	0.0
FLOYD	8672	5	57.7	15	173.0	0	0.0	1	11.5
GARZA	5234	2	38.2	15	286.6	0	0.0	0	0.0
GRAY	24137	38	157.4	66	273.4	1	4.1	0	0.0
HALE	35536	69	194.2	166	467.1	3	8.4	3	8.4
HALL	3890	2	51.4	5	128.5	0	0.0	0	0.0
HANSFORD	5978	0	0.0	1	16.7	0	0.0	0	0.0
HARTLEY	3675	1	27.2	2	54.4	0	0.0	0	0.0
HEMPHILL	3788	0	0.0	2	52.8	0	0.0	0	0.0
HOCKLEY	24762	15	60.5	75	302.6	1	4.0	2	8.1
HUTCHINSON	26038	22	84.5	57	218.9	0	0.0	2	7.7
KING	364	0	0.0	0	0.0	0	0.0	0	0.0
LAMB	15341	10	65.2	39	254.2	0	0.0	1	6.5
LIPSCOMB	3185	0	0.0	0	0.0	5	157.0	0	0.0
LUBBOCK	225915	516	228.4	971	429.6	0	0.0	11	4.9
LYNN	6892	3	43.5	14	203.1	0	0.0	2	29.0
MOORE	18436	12	65.1	35	189.8	0	0.0	0	0.0
MOTLEY	1534	2	130.4	3	195.6	0	0.0	0	0.0
OCHILTREE	9346	1	10.7	9	96.3	0	0.0	1	10.7
OLDHAM	2313	0	0.0	0	0.0	0	0.0	0	0.0
PARMER	10117	3	29.7	14	138.4	0	0.0	3	29.7
POTTER	99961	313	313.1	684	684.3	8	8.0	8	8.0
RANDALL	92937	31	33.4	54	58.1	0	0.0	3	3.2
ROBERTS	1041	0	0.0	0	0.0	0	0.0	0	0.0
SHERMAN	2921	0	0.0	1	34.2	0	0.0	0	0.0
SWISHER	8235	4	48.6	26	315.7	0	0.0	1	12.1
TERRY	13506	6	44.4	37	274.0	0	0.0	1	7.4
WHEELER	5884	0	0.0	4	68.0	0	0.0	0	0.0
YOAKUM	9047	3	33.2	9	99.5	0	0.0	0	0.0
REGIONAL TOTAL	749158	1096	146.3	2481	331.2	19	2.5	50	6.7
TEXAS	17615745	35517	201.6	39728	225.5	3316	18.8	2510	14.2



Public Health Region 3

REPORTED CASES OF SELECTED VIRAL DISEASES AND RATES PER 100,000 POPULATION

PUBLIC HEALTH REGION 3 - 1992

		ASEPTIC MENINGITIS		ENCEPHALITIS		INFLUENZA & FLU-LIKE LLNESS		CHICKENPOX	
COUNTY	1992 POP.	CASES	RATE	CASES	RATE	CASES	RATE	CASES	RATE
ANDREWS	14783	1	6.8	0	0.0	0	0.0	0	0.0
BORDEN	805	0	0.0	0	0.0	0	0.0	0	0.0
BREWSTER	8905	0	0.0	0	0.0	1	11.2	3	33.7
COKE	3454	0	0.0	0	0.0	0	0.0	0	0.0
CONCHO	3085	0	0.0	0	0.0	0	0.0	0	0.0
CRANE	4795	0	0.0	0	0.0	0	0.0	0	0.0
CROCKETT	4191	1	23.9	0	0.0	0	0.0	0	0.0
CULBERSON	3540	0	0.0	0	0.0	0	0.0	0	0.0
DAWSON	14650	3	20.5	1	6.8	6	41.0	20	136.5
ECTOR	122433	14	11.4	0	0.0	682	557.0	317	258.9
EL PASO	622966	94	15.1	2	0.3	9350	1,500.9	1045	167.7
GAINES	14558	0	0.0	1	6.9	0	0.0	I	75.6
GLASSCOCK	1498	0	0.0	0	0.0	0	0.0	0	0.0
HOWARD	32890	0	0.0	0	0.0	0	0.0	0	0.0
HUDSPETH	2998	0	0.0	0	0.0	0	0.0	0	0.0
IRION	1669	0	0.0	0	0.0	0	0.0	0	0.0
JEFF DAVIS	1973	0	0.0	0	0.0	0	0.0	0	0.0
KIMBLE	4144	0	0.0	0	0.0	0	0.0	0	0.0
LOVING	111	0	0.0	0	0.0	0	0.0	0	0.0
MARTIN	5104	0	0.0	0	0.0	0	0.0	0	0.0
MASON	3436	0	0.0	0	0.0	0	0.0	0	0.0
MCCULLOCH	8847	0	0.0	0	0.0	0	0.0	0	0.0
MENARD	2278	0	0.0	0	0.0	0	0.0	0	0.0
MIDLAND	111318	14	12.6	0	0.0	624	560.6	131	117.7
PECOS	15171	0	0.0	1	6.6	0	0.0	30	197.7
PRESIDIO	6916	0	0.0	0	0.0	0	0.0	0	0.0
REAGAN	4682	0	0.0	0	0.0	0	0.0	0	0.0
REEVES	16291	0	0.0	0	0.0	0	0.0	0	0.0
SCHLEICHER	3073	0	0.0	0	0.0	0	0.0	0	0.0
STERLING	1481	0	0.0	0	0.0	0	0.0	0	0.0
SUTTON	4253	0	0.0	0	0.0	0	0.0	0	0.0
TERRELL	1434	0	0.0	0	0.0	0	0.0	0	0.0
TOM GREEN	101031	6	5.9	1	1.0	202	199.9	112	110.9
UPTON	4585	0	0.0	0	0.0	9	196.3	2	43.6
WARD	13442	0	0.0	0	0.0	0	0.0	0	0.0
WINKLER	8853	0	0.0	0	0.0	0	0.0	0	0.0
REGIONAL TOTAL	1175643	133	11.3	6	0.5	10874	924.9	1671	142.1
TEXAS	17615745	1242	7.1	89	0.5	155568	883.1	20554	116.7

REPORTED CASES AND RATES OF HEPATITIS PER 100,000 POPULATION

PUBLIC HEALTH REGION 3 - 1992

		HEPATITIS A		HEPATITIS B		HEPATITIS NANB		HEPATITIS UNSPECIFIED	
COUNTY	1992 POP.	CASES	RATE	CASES	RATE	CASES	RATE	CASES	RATE
ANDREWS	14783	2	13.5	2	13.5	0	0.0	0	0.0
BORDEN	805	0	0.0	0	0.0	0	0.0	0	0.0
BREWSTER	8905	0	0.0	0	0.0	0	0.0	0	0.0
COKE	3454	0	0.0	0	0.0	0	0.0	0	0.0
CONCHO	3085	0	0.0	0	0.0	0	0.0	0	0.0
CRANE	4795	0	0.0	0	0.0	0	0.0	0	0.0
CROCKETT	4191	0	0.0	0	0.0	0	0.0	0	0.0
CULBERSON	3540	0	0.0	0	0.0	0	0.0	0	0.0
DAWSON	14650	70	477.8	1	6.8	0	0.0	1	6.8
ECTOR	122433	96	78.4	39	31.9	0	0.0	3	2.5
EL PASO	622966	128	20.5	33	5.3	2	0.3	1	0.2
GAINES	14558	1	6.9	0	0.0	0	0.0	0	0.0
GLASSCOCK	1498	0	0.0	0	0.0	0	0.0	0	0.0
HOWARD	32890	0	0.0	4	12.2	0	0.0	0	0.0
HUDSPETH	2998	0	0.0	0	0.0	0	0.0	0	0.0
IRION	1669	0	0.0	0	0.0	0	0.0	0	0.0
JEFF DAVIS	1973	0	0.0	0	0.0	0	0.0	0	0.0
KIMBLE	4144	0	0.0	0	0.0	0	0.0	0	0.0
LOVING	111	0	0.0	0	0.0	0	0.0	0	0.0
MARTIN	5104	1	19.6	0	0.0	0	0.0	0	0.0
MASON	3436	0	0.0	0	0.0	0	0.0	0	0.0
MCCULLOCH	8847	0	0.0	0	0.0	0	0.0	0	0.0
MENARD	2278	0	0.0	0	0.0	0	0.0	0	0.0
MIDLAND	111318	23	20.7	19	17.1	2	1.8	0	0.0
PECOS	15171	2	13.2	3	19.8	0	0.0	0	0.0
PRESIDIO	6916	0	0.0	0	0.0	0	0.0	0	0.0
REAGAN	4682	0	0.0	0	0.0	0	0.0	0	0.0
REEVES	16291	0	0.0	0	0.0	0	0.0	0	0.0
SCHLEICHER	3073	0	0.0	0	0.0	0	0.0	0	0.0
STERLING	1481	0	0.0	0	0.0	0	0.0	0	0.0
SUTTON	4253	0	0.0	0	0.0	0	0.0	0	0.0
TERRELL	1434	0	0.0	0	0.0	0	0.0	0	0.0
TOM GREEN	101031	4	4.0	4	4.0	0	0.0	0	0.0
UPTON	4585	0	0.0	0	0.0	0	0.0	0	0.0
WARD	13442	0	0.0	2	14.9	0	0.0	0	0.0
WINKLER	8853	1	11.3	1	11.3	0	0.0	0	0.0
REGIONAL TOTAL	1175643	328	27.9	108	9.2	4	0.3	5	0.4
TEXAS	17615745	1828	10.4	1528	8.7	26	0.1	191	1.1

REPORTED CASES OF GASTROINTESTINAL DISEASES AND RATES PER 100,000 POPULATION

PUBLIC HEALTH REGION 3 - 1992

		SALMONELLOSIS		SHIGELLOSIS		CAMPYLOBACTER		AMEBIASIS	
COUNN	1992 POP.	CASES	RATE	CASES	RATE	CASES	RATE	CASES	RATE
ANDREWS	14783	2	13.5	2	13.5	0	0.0	0	0.0
BORDEN	805	0	0.0	0	0.0	0	0.0	0	0.0
BREWSTER	8905	2	22.5	1	11.2	0	0.0	0	0.0
COKE	3454	0	0.0	0	0.0	0	0.0	0	0.0
CONCHO	3085	1	32.4	0	0.0	0	0.0	0	0.0
CRANE	4795	0	0.0	0	0.0	0	0.0	0	0.0
CROCKETT	4191	1	23.9	0	0.0	0	0.0	0	0.0
CULBERSON	3540	0	0.0	0	0.0	0	0.0	0	0.0
DAWSON	14650	2	13.7	2	13.7	0	0.0	0	0.0
ECTOR	122433	41	33.5	144	117.6	0	0.0	1	0.8
EL PASO	622966	106	17.0	52	8.3	38	6.1	11	1.8
GAINES	14558	0	0.0	0	0.0	1	6.9	0	0.0
GLASSCOCK	1498	1	66.8	0	0.0	0	0.0	0	0.0
HOWARD	32890	3	9.1	0	0.0	0	0.0	0	0.0
HUDSPETH	2998	0	0.0	0	0.0	0	0.0	0	0.0
IRION	1669	0	0.0	0	0.0	0	0.0	0	0.0
JEFF DAVIS	1973	0	0.0	0	0.0	0	0.0	0	0.0
KIMBLE	4144	0	0.0	0	0.0	0	0.0	0	0.0
LOVING	111	0	0.0	0	0.0	0	0.0	0	0.0
MARTIN	5104	0	0.0	0	0.0	0	0.0	0	0.0
MASON	3436	0	0.0	0	0.0	0	0.0	0	0.0
MCCULLOCH	8847	0	0.0	0	0.0	0	0.0	0	0.0
MENARD	2278	0	0.0	1	43.9	0	0.0	0	0.0
MIDLAND	111318	18	16.2	25	22.5	0	0.0	0	0.0
PECOS	15171	1	6.6	3	19.8	2	13.2	0	0.0
PRESIDIO	6916	0	0.0	0	0.0	1	14.5	0	0.0
REAGAN	4682	0	0.0	0	0.0	0	0.0	0	0.0
REEVES	16291	0	0.0	3	18.4	0	0.0	0	0.0
SCHLEICHER	3073	0	0.0	0	0.0	0	0.0	0	0.0
STERLING	1481	0	0.0	0	0.0	0	0.0	0	0.0
SUTTON	4253	0	0.0	0	0.0	0	0.0	0	0.0
TERRELL	1434	1	69.7	0	0.0	0	0.0	0	0.0
TOM GREEN	101031	'22	21.8	9	8.9	3	3.0	0	0.0
UPTON	4585	1	21.8	0	0.0	0	0.0	0	0.0
WARD	13442	2	14.9	0	0.0	0	0.0	0	0.0
WINKLER	8853	0	0.0	0	0.0	0	0.0	0	0.0
REGIONAL TOTAL	1175643	204	17.4	242	20.6	45	38	12	10
TEXAS	17615745	1933	11.0	3568	20.3	996	5.7	108	0.6

REPORTED CASES OF SELECTED VACCINE-PREVENTABLE DISEASES AND RATES PER 100,000 POPULATION

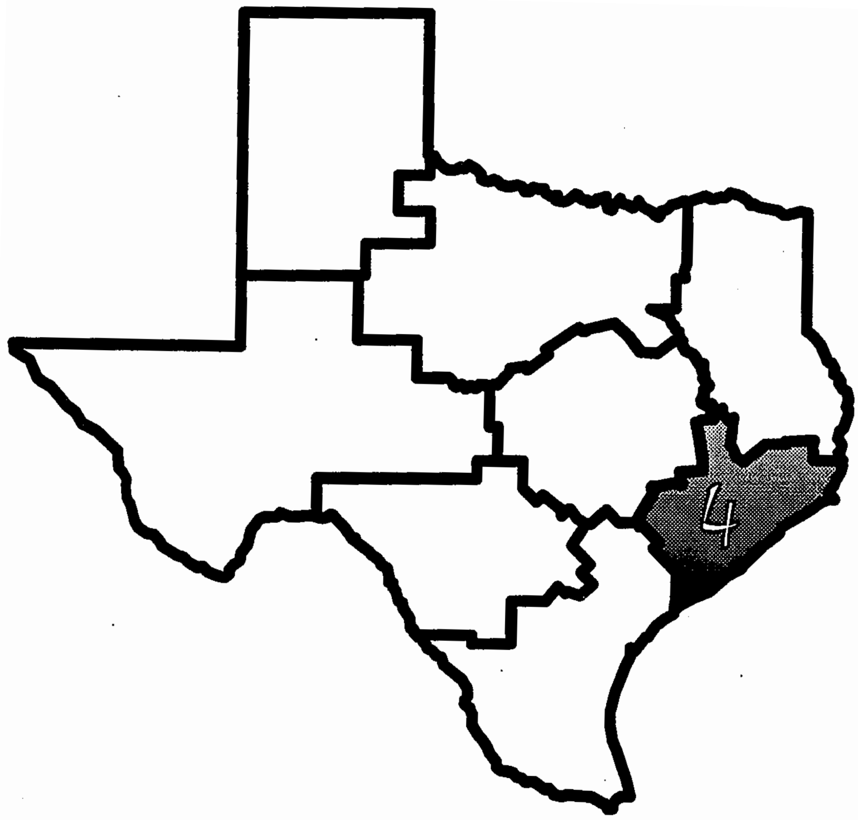
PUBLIC HEALTH REGION 3 - 1992

COUNTY	1992 POP.	MEASLES CASES	MEASLES RATE	MUMPS CASES	MUMPS RATE	PERTUSSIS CASES	PERTUSSIS RATE	RUBELLA CASES	RUBELLA RATE
ANDREWS	14783	0	0.0	1	6.8	0	0.0	0	0.0
BORDEN	805	0	0.0	0	0.0	0	0.0	0	0.0
BREWSTER	8905	0	0.0	0	0.0	0	0.0	0	0.0
COKE	3454	0	0.0	0	0.0	0	0.0	0	0.0
CONCHO	3085	0	0.0	0	0.0	0	0.0	0	0.0
CRANE	4795	0	0.0	0	0.0	0	0.0	0	0.0
CROCKETT	4191	0	0.0	0	0.0	0	0.0	0	0.0
CULBERSON	3540	0	0.0	0	0.0	0	0.0	0	0.0
DAWSON	14650	0	0.0	0	0.0	2	13.7	0	0.0
ECTOR	122433	0	0.0	0	0.0	5	4.1	0	0.0
EL PASO	622966	0	0.0	14	2.2	4	0.6	2	0.3
GAINES	14558	1	6.9	0	0.0	2	13.7	0	0.0
GLASSCOCK	1498	0	0.0	0	0.0	0	0.0	0	0.0
HOWARD	32890	0	0.0	0	0.0	0	0.0	0	0.0
HUDSPETH	2998	0	0.0	0	0.0	0	0.0	0	0.0
IRION	1669	0	0.0	0	0.0	0	0.0	0	0.0
JEFF DAVIS	1973	0	0.0	0	0.0	0	0.0	0	0.0
KIMBLE	4144	0	0.0	0	0.0	0	0.0	0	0.0
LOVING	111	0	0.0	0	0.0	0	0.0	0	0.0
MARTIN	5104	0	0.0	0	0.0	0	0.0	0	0.0
MASON	3436	0	0.0	0	0.0	0	0.0	0	0.0
MCCULLOCH	8847	0	0.0	0	0.0	0	0.0	0	0.0
MENARD	2278	0	0.0	0	0.0	0	0.0	0	0.0
MIDLAND	111318	0	0.0	3	2.7	2	1.8	0	0.0
PECOS	15171	0	0.0	0	0.0	0	0.0	0	0.0
PRESIDIO	6916	0	0.0	0	0.0	0	0.0	0	0.0
REAGAN	4682	0	0.0	0	0.0	0	0.0	0	0.0
R E M S	16291	0	0.0	0	0.0	1	6.1	0	0.0
SCHLEICHER	3073	0	0.0	0	0.0	0	0.0	0	0.0
STERLING	1481	0	0.0	0	0.0	0	0.0	0	0.0
SUTTON	4253	0	0.0	0	0.0	0	0.0	0	0.0
TERRELL	1434	0	0.0	0	0.0	0	0.0	0	0.0
TOM GREEN	101031	0	0.0	0	0.0	1	1.0	0	0.0
UPTON	4585	0	0.0	0	0.0	0	0.0	0	0.0
WARD	13442	0	0.0	0	0.0	2	14.9	0	0.0
WINKLER	8853	0	0.0	0	0.0	0	0.0	0	0.0
REGIONAL TOTAL	1175643	1	0.1	18	1.5	19	1.6	2	0.2
TEXAS	17615745	1097	6.2	388	2.2	161	0.9	9	0.1

REPORTED CASES OF OTHER SELECTED DISEASES AND RATES PER 100,000 POPULATION

PUBLIC HEALTH REGION 3 - 1992

		GONORRHEA		CHLAMYDIA		P&S SYPHLIIS		TUBERCULOSIS	
COUNTY	1992 POP.	CASES	RATE	CASES	RATE	CASES	RATE	CASES	RATE
ANDREWS	14783	12	81.2	8	54.1	0	0.0	0	0.0
BORDEN	805	0	0.0	0	0.0	0	0.0	0	0.0
BREWSTER	8905	6	67.4	25	280.7	1	11.2	0	0.0
COKE	3454	0	0.0	5	144.8	0	0.0	0	0.0
CONCHO	3085	0	0.0	1	32.4	0	0.0	2	64.8
CRANE	4795	1	20.9	6	125.1	0	0.0	0	0.0
CROCKETT	4191	0	0.0	7	167.0	0	0.0	0	0.0
CULBERSON	3540	0	0.0	0	0.0	0	0.0	0	0.0
DAWSON	14650	2	13.7	15	102.4	1	6.8	0	0.0
ECTOR	122433	254	207.5	275	224.6	5	4.1	13	10.6
EL PASO	622966	324	52.0	1629	261.5	13	2.1	106	17.0
GAINES	14558	2	13.7	15	103.0	0	0.0	0	0.0
GLASSCOCK	1498	0	0.0	2	133.5	0	0.0	0	0.0
HOWARD	32890	29	88.2	27	82.1	1	3.0	0	0.0
HUDSPETH	2998	0	0.0	0	0.0	0	0.0	0	0.0
IRION	1669	0	0.0	0	0.0	0	0.0	0	0.0
JEFF DAVIS	1973	2	101.4	1	50.7	0	0.0	0	0.0
KIMBLE	4144	1	24.1	1	24.1	0	0.0	0	0.0
LOVING	111	1	900.9	0	0.0	0	0.0	0	0.0
MARTIN	5104	3	58.8	9	176.3	0	0.0	2	39.2
MASON	3436	0	0.0	1	29.1	0	0.0	0	0.0
MCCULLOCH	8847	0	0.0	10	113.0	0	0.0	0	0.0
MENARD	2278	0	0.0	4	175.6	0	0.0	0	0.0
MIDLAND	111318	154	138.3	202	181.5	6	5.4	9	8.1
PECOS	15171	5	33.0	39	257.1	0	0.0	1	6.6
PRESIDIO	6916	1	14.5	16	231.3	0	0.0	2	28.9
REAGAN	4682	0	0.0	2	42.7	0	0.0	0	0.0
REEVES	16291	3	18.4	10	61.4	1	6.1	1	6.1
SCHLEICHER	3073	0	0.0	6	195.2	0	0.0	0	0.0
STERLING	1481	0	0.0	0	0.0	0	0.0	0	0.0
SUTTON	4253	1	23.5	5	117.6	0	0.0	1	23.5
TERRELL	1434	1	69.7	1	69.7	0	0.0	0	0.0
TOM GREEN	101031	63	62.4	251	248.4	0	0.0	7	6.9
UPTON	4585	1	21.8	17	370.8	0	0.0	0	0.0
WARD	13442	6	44.6	6	44.6	0	0.0	1	7.4
WINKLER	8853	1	11.3	23	259.8	0	0.0	3	33.9
REGIONAL TOTAL	1175643	873	74.3	2619	222.8	28	2.4	148	12.6
TEXAS	17615745	35517	201.6	39728	225.5	3316	18.8	2510	14.2



Public Health Region 4

REPORTED CASES OF SELECTED VIRAL DISEASES AND RATES PER 100,000 POPULATION

PUBLIC HEALTH REGION 4 - 1992

		ASEPTIC MENINGITIS		ENCEPHALITIS		INFLUENZA & FLU-LIKE LLNESS		CHICKENPOX	
COUNTY	1992 POP.	**CASES**	**RATE**	CASES	RATE	CASES	RATE	CASES	RATE
AUSTIN	20203	O	0.0	0	0.0	O	0.0	O	0.0
BRAZORIA	199176	5	2.5	1	0.5	1	0.6	89	44.7
CHAMBERS	20565	0	0.0	0	0.0	0	0.0	41	199.4
COLORADO	18528	0	0.0	0	0.0	O	0.0	0	0.0
FORT BEND	241415	**16**	6.6	3	1.2	0	0.0	62	26.7
GALVESTON	223275	26	11.6	0	0.0	360	161.2	385	172.4
HARDIN	42214	3	7.1	0	0.0	O	0.0	144	341.1
HARRIS	2931867	288	9.8	28	1.0	99167	**3,382.4**	7154	244.0
JEFFERSON	241522	3	1.2	2	0.8	337	139.5	700	289.8
LIBERTY	54133	1	1.8	0	0.0	O	0.0	1	1.8
MATAGORDA	37877	0	0.0	2	5.3	O	0.0	30	79.2
MONTGOMERY	192062	5	2.6	0	0.0	O	0.0	3	1.6
ORANGE	82217	0	0.0	1	1.2	0	0.0	**10**	12.2
WALKER	51443	1	1.9	0	0.0	O	0.0	44	85.5
WALLER	24101	2	8.3	0	0.0	0	0.0	0	0.0
WHARTON	40762	2	4.9	0	0.0	O	0.0	0	0.0
REGIONAL TOTAL	4421360	352	8.0	37	0.8	99865	**2,258.7**	8663	195.9
TEXAS	17615745	1242	7.1	89	0.5	155568	**883.1**	20554	116.7

REPORTED CASES AND RATES OF HEPATITIS PER 100,000 POPULATION

PUBLIC HEALTH REGION 4 - 1992

		HEPATITIS A		HEPATITIS B		HEPATITIS NANB		HEPATITIS UNSPECIFIED	
COUNTY	1992 POP.	CASES	RATE	CASES	RATE	CASES	RATE	CASES	RATE
AUSTIN	20203	0	0.0	0	0.0	0	0.0	0	0.0
BRAZORIA	199176	14	7.0	7	3.5	0	0.0	1	0.5
CHAMBERS	20565	0	0.0	1	4.9	0	0.0	0	0.0
COLORADO	18528	0	0.0	0	0.0	0	0.0	0	0.0
FORT BEND	241415	10	4.1	16	6.6	0	0.0	1	0.4
GALVESTON	223275	21	9.4	22	9.9	5	2.2	0	0.0
HARDIN	42214	0	0.0	4	9.5	0	0.0	0	0.0
HARRIS	2931867	302	10.3	179	6.1	7	0.2	49	1.7
JEFFERSON	241522	16	6.6	29	12.0	0	0.0	0	0.0
LIBERTY	54133	2	3.7	9	16.6	0	0.0	0	0.0
MATAGORDA	37877	5	13.2	3	7.9	0	0.0	0	0.0
MONTGOMERY	192062	11	5.7	1	0.5	0	0.0	0	0.0
ORANGE	82217	2	2.4	4	4.9	0	0.0	1	1.2
WALKER	51443	11	21.4	58	112.7	0	0.0	0	0.0
WALLER	24101	0	0.0	0	0.0	0	0.0	0	0.0
WHARTON	40762	0	0.0	2	4.9	0	0.0	0	0.0
REGIONAL TOTAL	4421360	394	8.9	335	7.6	12	0.3	51	1.2
TEXAS	17615745	1828	10.4	1528	8.7	26	0.1	191	1.1

REPORTED CASES OF GASTROINTESTINAL DISEASES AND RATES PER 100,000 POPULATION

PUBLIC HEALTH REGION 4 - 1992

		SALMONELLOSIS		SHIGELLOSIS		CAMPYLOBACTER		AMEBIASIS	
COUNTY	1992 POP.	CASES	RATE	CASES	RATE	CASES	RATE	CASES	RATE
AUSTIN	20203	0	0.0	0	0.0	0	0.0	0	0.0
BRAZORIA	199176	13	6.5	23	11.5	4	2.0	0	0.0
CHAMBERS	20565	0	0.0	0	0.0	0	0.0	0	0.0
COLORADO	18528	0	0.0	0	0.0	0	0.0	0	0.0
FORT BEND	241415	24	9.9	19	7.9	29	12.0	0	0.0
GALVESTON	223275	36	16.1	40	17.9	16	7.2	0	0.0
HARDIN	42214	0	0.0	0	0.0	0	0.0	0	0.0
HARRIS	2931867	316	10.8	290	9.9	238	8.1	8	03
JEFFERSON	241522	12	5.0	6	2.5	2	0.8	2	08
LIBERTY	54133	3	5.5	6	11.1	1	1.6	0	0.0
MATAGORDA	37877	0	0.0	0	0.0	0	0.0	0	0.0
MONTGOMERY	192062	7	3.6	0	0.0	0	0.0	0	0.0
ORANGE	82217	2	2.4	2	24	0	0.0	0	0.0
WALKER	51443	0	0.0	2	39	0	0.0	1	1.9
WALLER	24101	1	4.1	3	12.4	0	0.0	0	0.0
WHARTON	40762	1	2.5	1	2.5	0	0.0	0	0.0
REGIONAL TOTAL	4421360	415	9.4	392	8.9	291	6.6	11	0.2
TEXAS	17615745	1933	11.0	3568	20.3	996	5.7	106	0.6

REPORTED CASES OF VACCINE-PREVENTABLE DISEASES AND RATES PER 100,000 POPULATION

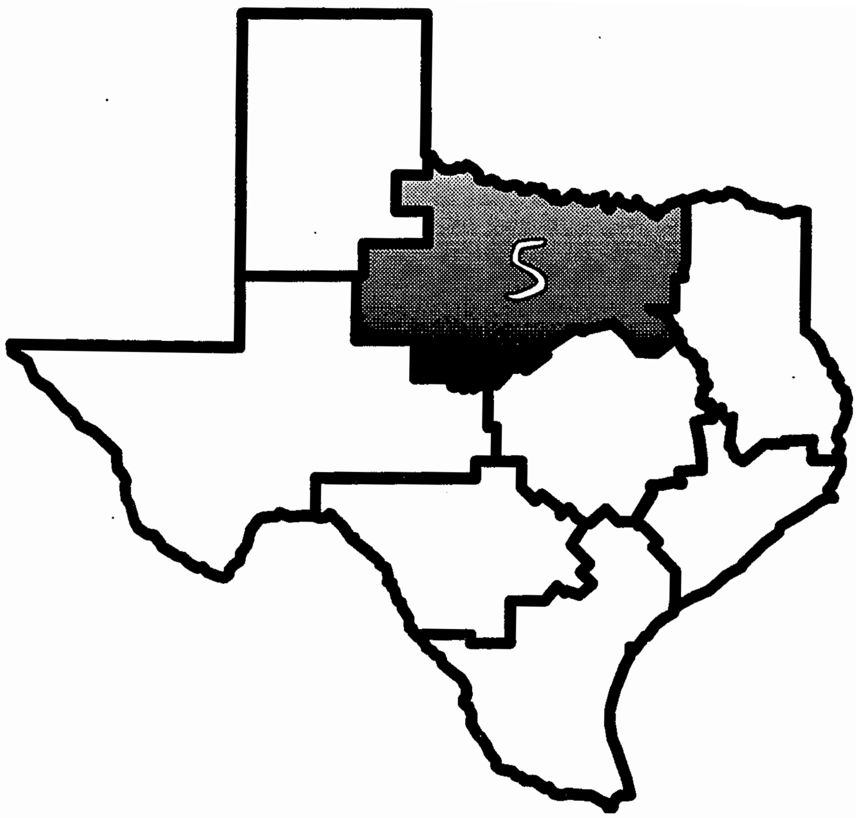
PUBLIC HEALTH REGION 4 - 1992

COUNTY	1992 POP.	MEASLES CASES	MEASLES RATE	MUMPS CASES	MUMPS RATE	PERTUSSIS CASES	PERTUSSIS RATE	RUBELLA CASES	RUBELLA RATE
AUSTIN	20203	0	0.0	0	0.0	0	0.0	0	0.0
BRAZORIA	199176	0	0.0	1	0.5	0	0.0	0	0.0
CHAMBERS	20565	0	0.0	0	0.0	0	0.0	0	0.0
COLORADO	18528	0	0.0	0	0.0	0	0.0	0	0.0
FORT BEND	241415	0	0.0	1	0.4	0	0.0	0	0.0
GALVESTON	223275	3	1.3	5	2.2	4	1.8	0	0.0
HARDIN	42214	0	0.0	0	0.0	0	0.0	0	0.0
HARRIS	2931867	23	0.8	49	1.7	6	0.2	1	0.0
JEFFERSON	241522	0	0.0	0	0.0	0	0.0	0	0.0
LIBERTY	54133	0	0.0	0	0.0	0	0.0	0	0.0
MATAGORDA	37877	0	0.0	0	0.0	0	0.0	0	0.0
MONTGOMERY	192062	0	0.0	0	0.0	0	0.0	0	0.0
ORANGE	82217	0	0.0	0	0.0	0	0.0	0	0.0
WALKER	51443	0	0.0	0	0.0	0	0.0	0	0.0
WALLER	24101	0	0.0	0	0.0	0	0.0	0	0.0
WHARTON	40762	0	0.0	0	0.0	0	0.0	0	0.0
REGIONAL TOTAL	4421360	26	0.6	56	1.3	10	0.2	I	0.0
TEXAS	17615745	1097	6.2	388	2.2	161	0.9	9	0.1

REPORTED CASES OF OTHER SELECTED DISEASES AND RATES PER 100,000 POPULATION

PUBLIC HEALTH REGION 4 - 1992

		GONORRHEA		CHLAMYDIA		P&S SYPHILIS		TUBERCULOSIS	
COUNTY	1992 POP.	CASES	RATE	CASES	RATE	CASES	RATE	CASES	RATE
AUSTIN	20203	7	34.6	12	59.4	6	29.7	0	0.0
BRAZORIA	199176	157	78.8	202	101.4	13	6.5	15	7.5
CHAMBERS	20565	5	24.3	10	48.6	1	4.9	5	24.3
COLORADO	18526	18	97.2	9	48.6	2	10.8	0	0.0
FORT BEND	241415	62	25.7	75	31.1	16	6.6	31	12.8
GALMSTON	223275	831	372.2	1459	653.5	76	34.0	31	13.9
HARDIN	42214	3	7.1	1	2.4	5	11.8	2	4.7
HARRIS	2931867	10046	342.6	8916	304.1	1012	34.5	758	25.9
JEFFERSON	241522	356	147.4	23	9.5	122	50.5	27	11.2
LIBERTY	54133	16	29.6	29	53.6	2	3.7	13	24.0
MATAGORDA	37877	26	68.6	36	95.0	9	23.8	5	13.2
MONTGOMERY	192062	142	73.9	356	185.4	17	8.9	22	11.5
ORANGE	82217	34	41.4	36	43.8	6	7.3	6	7.3
WALKER	51443	67	130.2	62	120.5	4	7.8	2	3.9
WALLER	24101	99	410.8	197	817.4	12	49.8	0	0.0
WHARTON	40762	55	134.9	38	93.2	17	41.7	4	9.8
REGIONAL TOTAL	4421360	11924	269.7	11461	259.2	1367	30.9	962	21.8
TEXAS	17615745	35517	201.6	39728	225.5	3316	18.8	2510	14.2



Public Health Region 5

REPORTED CASES OF SELECTED VIRAL DISEASES AND RATES PER 100,000 POPULATION

PUBLIC HEALTH REGION 5 - 1992

COUNTY	1992 POP.	ASEPTIC MENINGITIS CASES	ASEPTIC MENINGITIS RATE	ENCEPHALITIS CASES	ENCEPHALITIS RATE	INFLUEZA & FLU-LIKE ILLNESS CASES	INFLUEZA & FLU-LIKE ILLNESS RATE	CHICKENPOX CASES	CHICKENPOX RATE
ARCHER	8135	0	0.0	0	0.0	0	0.0	0	0.0
BAYLOR	4384	0	0.0	0	0.0	0	0.0	0	0.0
BROWN	34653	0	0.0	0	0.0	0	0.0	1	2.9
CALLAHAN	12016	0	0.0	0	0.0	0	0.0	0	0.0
CLAY	10146	1	9.9	0	0.0	6	59.1	1	9.9
COLEMAN	9695	0	0.0	0	0.0	0	0.0	2	20.6
COLLIN	284475	16	5.6	0	0.0	9445	3,320.2	813	285.8
COMANCHE	13438	0	0.0	0	0.0	23	171.2	1	7.4
COOKE	31475	0	0.0	0	0.0	0	0.0	1	3.2
COTTLE	2255	0	0.0	0	0.0	0	0.0	2	88.7
DALLAS	1923031	221	11.5	4	0.2	2	0.1	1	0.1
DENTON	291367	12	4.1	3	1.0	37	12.7	309	106.1
EASTLAND	18476	0	0.0	0	0.0	0	0.0	0	0.0
ELLIS	90266	5	5.5	1	1.1	15	16.6	0	0.0
ERATH	28555	0	0.0	0	0.0	0	0.0	0	0.0
FANNIN	25086	0	0.0	0	0.0	0	0.0	0	0.0
FISHER	4857	0	0.0	0	0.0	0	0.0	0	0.0
FOARD	1798	4	222.5	0	0.0	0	0.0	0	0.0
GRAYSON	96502	1	1.0	1	1.0	28	29.0	10	10.4
HARDEMAN	5270	0	0.0	0	0.0	0	0.0	0	0.0
HASKELL	6820	0	0.0	0	0.0	0	0.0	0	0.0
HOOD	30638	1	3.3	0	0.0	0	0.0	0	0.0
HUNT	66221	2	3.0	0	0.0	21	31.7	76	114.8
JACK	7039	0	0.0	0	0.0	0	0.0	0	0.0
JOHNSON	102531	4	3.9	1	1.0	0	0.0	0	0.0
JONES	16604	0	0.0	0	0.0	1	6.0	0	0.0
KAUFMAN	55030	4	7.3	0	0.0	0	0.0	18	32.7
KENT	1019	0	0.0	0	0.0	0	0.0	15	1,472.0
KNOX	4866	0	0.0	0	0.0	0	0.0	0	0.0
MITCHELL	8102	0	0.0	0	0.0	0	0.0	0	0.0
MONTAGUE	17276	0	0.0	0	0.0	0	0.0	0	0.0
NAVARRO	40806	0	0.0	0	0.0	0	0.0	43	105.4
NOLAN	16850	0	0.0	0	0.0	0	0.0	0	0.0
PALO PINTO	25662	0	0.0	0	0.0	0	0.0	0	0.0
PARKER	68743	1	1.5	1	1.5	0	0.0	0	0.0
ROCKWALL	27433	0	0.0	1	3.6	0	0.0	0	0.0
RUNNELS	11402	0	0.0	0	0.0	1	8.8	28	245.6
SCURRY	18917	1	5.3	0	0.0	1	5.3	20	105.7
SHACKELFORD	3327	0	0.0	0	0.0	0	0.0	0	0.0
SOMMERVELL	5586	1	17.9	0	0.0	0	0.0	0	0.0
STEPHENS	9100	0	0.0	0	0.0	2	22.0	0	0.0
STONEWALL	2035	0	0.0	0	0.0	0	0.0	0	0.0
TARRANT	1227625	96	7.8	4	0.3	191	15.6	294	23.9
TAYLOR	122079	3	2.5	0	0.0	1150	942.0	303	248.2
THROCKMORTON	1899	0	0.0	0	0.0	0	0.0	0	0.0
WICHITA	124263	3	2.4	0	0.0	161	129.6	73	58.7
WILBARGER	15256	0	0.0	0	0.0	146	957.0	4	26.2
WISE	36102	1	2.8	0	0.0	0	0.0	0	0.0
YOUNG	18302	1	5.5	0	0.0	2	10.9	1	5.5
REGIONAL TOTAL	4987413	378	7.6	16	0.3	11232	225.2	2016	40.4
TEXAS	17615745	1242	7.1	89	0.5	1155568	883.1	20554	116.7

REPORTED CASES AND RATES OF HEPATITIS PER 100,000 POPULATION

PUBLIC HEALTH REGION 5 - 1992

COUNTY	1992 POP.	HEPATITIS A CASES	HEPATITIS A RATE	HEPATITIS B CASES	HEPATITIS B RATE	HEPATITIS NANB CASES	HEPATITIS NANB RATE	HEPATITIS UNSPECIFIED CASES	HEPATITIS UNSPECIFIED RATE
ARCHER	8135	0	0.0	0	0.0	0	0.0	0	0.0
BAYLOR	4384	0	0.0	0	0.0	0	0.0	0	0.0
BROWN	34653	1	2.9	4	11.5	0	0.0	0	0.0
CALLAHAN	12016	0	0.0	0	0.0	0	00	0	0.0
CLAY	10146	0	0.0	1	9.9	0	0.0	0	0.0
COLEMAN	9695	0	0.0	0	0.0	0	0.0	0	0.0
COLLIN	284475	3	1.1	14	4.9	0	0.0	1	0.4
COMANCHE	13438	0	0.0	0	0.0	0	0.0	0	0.0
COOKE	31475	0	0.0	3	9.5	0	0.0	0	0.0
COTTLE	2255	0	0.0	0	0.0	0	0.0	0	0.0
DALLAS	1923031	158	8.2	320	16.6	3	0.2	53	2.8
DENTON	291367	9	31	15	5.1	0	0.0	3	1.0
EASTLAND	18476	0	0.0	3	16.2	0	0.0	1	5.4
ELLIS	90266	3	3.3	7	7.8	0	0.0	2	2.2
ERATH	28555	1	3.5	1	3.5	0	0.0	0	0.0
FANNIN	25086	0	0.0	0	0.0	0	0.0	0	0.0
FISHER	4857	0	00	0	0.0	0	0.0	0	0.0
FOARD	1798	0	0.0	0	0.0	0	0.0	0	0.0
GRAYSON	96502	3	3.1	4	4.1	0	0.0	0	0.0
HARDEMAN	5270	0	0.0	0	0.0	0	0.0	0	00
HASKELL	6820	0	0.0	2	29.3	0	0.0	0	0.0
HOOD	30638	1	3.3	2	6.5	0	0.0	0	0.0
HUNT	66221	1	1.5	2	3.0	1	1.5	1	1.5
JACK	7039	0	0.0	0	0.0	0	0.0	0	0.0
JOHNSON	102531	6	5.9	8	7.8	0	0.0	0	0.0
JONES	16604	0	0.0	0	0.0	0	0.0	0	0.0
KAUFMAN	55030	4	7.3	5	9.1	0	0.0	2	3.6
KENT	1019	0	0.0	0	0.0	0	0.0	0	0.0
KNOX	4866	2	41.1	0	0.0	0	0.0	0	0.0
MITCHELL	8102	0	0.0	0	0.0	0	0.0	0	0.0
MONTAGUE	17276	0	0.0	1	5.8	0	0.0	0	0.0
NAVARRO	40806	0	0.0	0	0.0	0	0.0	0	0.0
NOLAN	16850	1	5.9	0	0.0	0	0.0	0	0.0
PALO PINTO	25662	6	23.4	9	35.1	0	0.0	0	0.0
PARKER	68743	5	7.3	8	11.6	0	0.0	0	00
ROCKWALL	27433	0	0.0	2	7.3	0	0.0	1	3.6
RUNNELS	11402	1	8.8	0	0.0	1	8.8	0	0.0
SCURRY	18917	0	0.0	2	10.6	0	0.0	0	0.0
SHACKELFORD	3327	0	0.0	0	0.0	0	0.0	0	0.0
SOMMERVELL	5586	0	0.0	0	0.0	0	0.0	0	0.0
STEPHENS	9100	1	11.0	1	11.0	0	0.0	0	00
STONEWALL	2035	0	0.0	0	0.0	0	00	0	0.0
TARRANT	1227625	255	20.8	166	13.5	0	0.0	15	1.2
TAYLOR	122079	7	5.7	4	3.3	0	0.0	0	0.0
THROCKMORTON	1899	0	0.0	0	0.0	0	0.0	0	0.0
WICHITA	124263	3	2.4	13	10.5	0	0.0	0	00
WLBARGER	15256	0	0.0	0	00	0	00	0	0.0
WISE	36102	6	16.6	2	5.5	0	0.0	0	0.0
YOUNG	18302	1	5.5	2	10.9	0	0.0	0	0.0
REGIONAL TOTAL	4987413	478	9.6	601	12.1	5	0.1	79	16
TEXAS	17615745	1828	10.4	1528	87	26	0.1	191	11

REPORTED CASES OF **GASTROINTESTINAL** DISEASES AND RATES PER 100,000 **POPULATION**

PUBUC HEALTH REGION 5 - 1992

COUNTY	1992 POP.	SALMONELLOSIS CASES	SALMONELLOSIS RATE	SHIGELLOSIS CASES	SHIGELLOSIS RATE	CAMPYLOBACTER CASES	CAMPYLOBACTER RATE	AMEBIASIS CASES	AMEBIASIS RATE
ARCHER	8135	1	12.3	2	24.6	1	12.3	0	0.0
BAYLOR	4384	0	0.0	0	0.0	0	0.0	0	0.0
BROWN	34653	10	28.9	2	5.8	0	0.0	0	0.0
CALLAHAN	12016	0	0.0	1	8.3	0	0.0	0	0.0
CLAY	10146	2	19.7	0	0.0	1	9.9	0	0.0
COLEMAN	9695	0	0.0	0	0.0	0	0.0	0	0.0
COLLIN	284475	21	7.4	24	8.4	4	1.4	0	0.0
COMANCHE	13438	0	0.0	0	0.0	0	0.0	0	0.0
COOKE	31475	5	15.9	1	3.2	1	3.2	0	0.0
COTTLE	2255	0	0.0	0	0.0	0	0.0	0	0.0
DALLAS	1923031	192	10.0	257	13.4	119	6.2	8	0.4
DENTON	291367	16	5.5	11	3.8	3	1.0	0	0.0
EASTLAND	18476	0	0.0	1	5.4	0	0.0	0	0.0
ELLIS	90266	5	5.5	3	3.3	1	1.1	5	5.5
ERATH	28555	1	3.5	0	0.0	0	0.0	0	0.0
FANNIN	25086	2	8.0	2	8.0	0	0.0	0	0.0
FISHER	4857	1	20.6	0	0.0	0	0.0	0	0.0
FOARD	1798	0	0.0	0	0.0	0	0.0	0	0.0
GRAYSON	96502	8	8.3	9	9.3	2	2.1	2	2.1
HARDEMAN	5270	0	0.0	1	19.0	0	0.0	0	0.0
HASKELL	6820	0	0.0	0	0.0	0	0.0	0	0.0
HOOD	30638	4	13.1	2	6.5	0	0.0	0	0.0
HUNT	66221	5	7.6	4	6.0	0	0.0	0	0.0
JACK	7039	0	0.0	0	0.0	0	0.0	0	0.0
JOHNSON	102531	3	2.9	1	1.0	1	1.0	1	1.0
JONES	16604	3	18.1	0	0.0	2	12.0	0	0.0
KAUFMAN	55030	3	5.5	3	5.5	3	5.5	0	0.0
KENT	1019	0	0.0	0	0.0	0	0.0	0	0.0
KNOX	4866	0	0.0	0	0.0	0	0.0	0	0.0
MITCHELL	8102	0	0.0	0	0.0	0	0.0	0	0.0
MONTAGUE	17276	0	0.0	0	0.0	1	5.8	0	0.0
NAVARRO	40806	4	9.8	2	4.9	4	9.8	1	2.5
NOLAN	16850	1	5.9	1	5.9	1	5.9	0	0.0
PALO PINTO	25662	0	0.0	4	15.6	2	7.8	0	0.0
PARKER	68743	7	10.2	6	8.7	4	5.8	0	0.0
ROCKWALL	27433	1	3.6	2	7.3	0	0.0	1	3.6
RUNNELS	11402	2	17.5	3	26.3	1	8.8	1	8.8
SCURRY	18917	3	15.9	1	5.3	0	0.0	0	0.0
SHACKELFORD	3327	0	0.0	1	30.1	0	0.0	0	0.0
SOMMERVELL	5586	0	0.0	0	0.0	0	0.0	0	0.0
STEPHENS	9100	0	0.0	0	0.0	0	0.0	0	0.0
STONEWALL	2035	0	0.0	0	0.0	0	0.0	0	0.0
TARRANT	1227625	90	7.3	264	21.5	42	3.4	2	0.2
TAYLOR	122079	8	6.6	22	18.0	11	9.0	9	7.4
THROCKMORTON	1899	0	0.0	0	0.0	0	0.0	0	0.0
WICHITA	124263	16	12.9	2	1.6	6	4.8	0	0.0
WILBARGER	15256	0	0.0	1	6.6	0	0.0	0	0.0
WISE	36102	1	2.8	14	38.8	0	0.0	0	0.0
YOUNG	18302	0	0.0	0	0.0	0	0.0	0	0.0
REGIONAL TOTAL	4987413	415	8.3	647	13.0	210	4.2	30	0.6
TEXAS	17615745	1933	11.0	3568	20.3	996	5.7	108	0.6

REPORTED CASES OF SELECTED VACCINE-PREVENTABLE DISEASES AND RATES PER 100,000 POPULATION

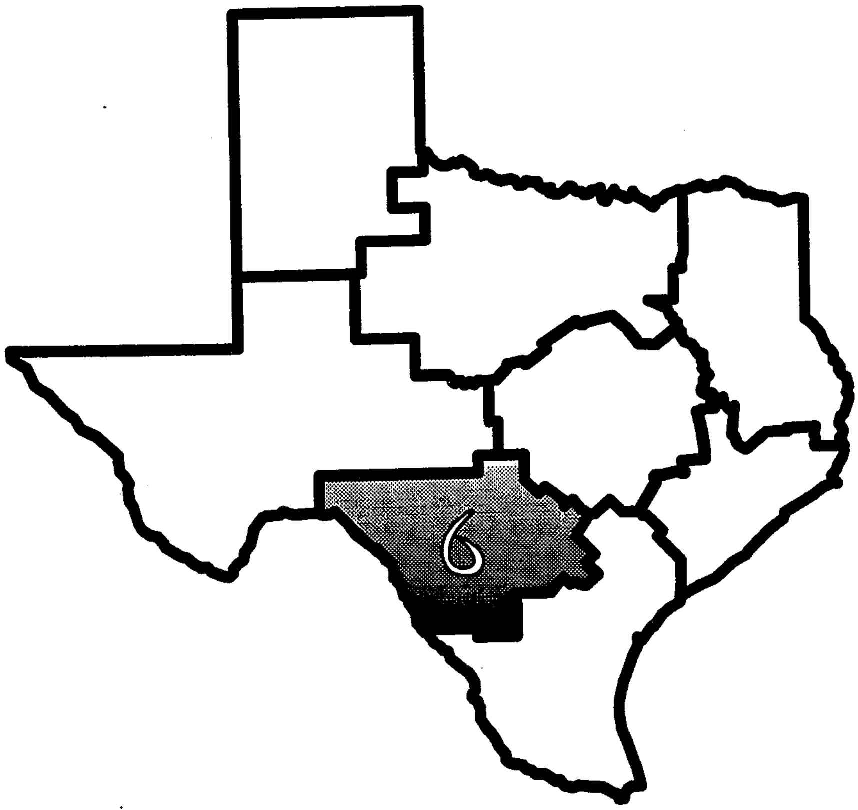
PUBLIC HEALTH REGION 5 - 1992

COUNTY	1992 POP.	MEASLES CASES	MEASLES RATE	MUMPS CASES	MUMPS RATE	PERTUSSIS CASES	PERTUSSIS RATE	RUBELLA CASES	RUBELLA RATE
ARCHER	8135	0	0.0	0	0.0	0	0.0	0	0.0
BAYLOR	4384	0	0.0	0	0.0	0	0.0	0	0.0
BROWN	34653	0	0.0	0	0.0	0	0.0	0	0.0
CALLAHAN	12016	0	0.0	0	0.0	0	0.0	0	0.0
CLAY	10146	0	0.0	0	0.0	0	0.0	0	0.0
COLEMAN	9695	0	0.0	1	10.3	1	10.3	0	0.0
COLLIN	284475	0	0.0	0	0.0	1	0.4	0	0.0
COMANCHE	13438	0	0.0	0	0.0	0	0.0	0	0.0
COOKE	31475	0	0.0	1	3.2	3	9.5	0	0.0
COTTLE	2255	0	0.0	0	0.0	0	0.0	0	0.0
DALLAS	1923031	5	0.3	46	2.4	28	1.5	2	0.1
DENTON	291367	1	0.3	6	2.1	8	2.7	0	0.0
EASTLAND	18476	0	0.0	0	0.0	0	0.0	0	0.0
ELLIS	90266	0	0.0	4	4.4	0	0.0	0	0.0
ERATH	28555	0	0.0	0	0.0	0	0.0	0	0.0
FANNIN	25086	0	0.0	0	0.0	0	0.0	0	0.0
FISHER	4857	0	0.0	0	0.0	0	0.0	0	0.0
FOARD	1798	0	0.0	0	0.0	0	0.0	0	0.0
GRAYSON	96502	0	0.0	0	0.0	1	1.0	0	0.0
HARDEMAN	5270	0	0.0	0	0.0	0	0.0	0	0.0
HASKELL	6820	0	0.0	0	0.0	0	0.0	0	0.0
HOOD	30638	0	0.0	0	0.0	1	3.3	0	0.0
HUNT	66221	0	0.0	1	1.5	0	0.0	0	0.0
JACK	7039	0	0.0	0	0.0	0	0.0	0	0.0
JOHNSON	102531	0	0.0	3	2.9	1	1.0	0	0.0
JONES	16604	0	0.0	16	96.4	0	0.0	0	0.0
KAUFMAN	55030	0	0.0	6	10.9	4	7.3	0	0.0
KENT	1019	0	0.0	0	0.0	0	0.0	0	0.0
KNOX	4666	0	0.0	0	0.0	0	0.0	0	0.0
MITCHELL	8102	0	0.0	0	0.0	0	0.0	0	0.0
MONTAGUE	17276	0	0.0	0	0.0	0	0.0	0	0.0
NAVARRO	40806	0	0.0	0	0.0	0	0.0	0	0.0
NOLAN	16850	0	0.0	0	0.0	0	0.0	0	0.0
PALO PINTO	25662	0	0.0	1	3.9	1	3.9	0	0.0
PARKER	68743	0	0.0	1	1.5	0	0.0	0	0.0
ROCKWALL	27433	0	0.0	2	7.3	0	0.0	0	0.0
RUNNELS	11402	0	0.0	0	0.0	0	0.0	0	0.0
SCURRY	18917	0	0.0	2	10.6	0	0.0	0	0.0
SHACKELFORD	3327	0	0.0	0	0.0	0	0.0	0	0.0
SOMMERMLL	5586	0	0.0	0	0.0	1	17.9	0	0.0
STEPHENS	9100	0	0.0	0	0.0	1	11.0	0	0.0
STONEWALL	2035	0	0.0	0	0.0	0	0.0	0	0.0
TARRANT	1227625	2	0.2	9	0.7	32	2.6	1	0.1
TAYLOR	122079	0	0.0	3	2.5	1	0.8	0	0.0
THROCKMORTON	1899	0	0.0	0	0.0	0	0.0	0	0.0
WICHITA	124263	0	0.0	6	4.8	1	0.8	0	0.0
WILBARGER	15256	0	0.0	0	0.0	0	0.0	0	0.0
WISE	36102	0	0.0	0	0.0	0	0.0	0	0.0
YOUNG	18302	0	0.0	1	5.5	0	0.0	0	0.0
REGIONAL TOTAL	4987413	8	0.2	109	2.2	85	1.7	3	0.1
TEXAS	17615745	1097	6.2	388	2.2	161	0.9	9	0.1

REPORTED CASES OF OTHER SELECTED DISEASES AND RATES PER 100,000 POPULATION

PUBLIC HEALTH REGION 5 - 1992

COUNTY	1992 POP.	GONORRHEA CASES	GONORRHEA RATE	CHLAMYDIA CASES	CHLAMYDIA RATE	P&S SYPHILIS CASES	P&S SYPHILIS RATE	TUBERCULOSIS CASES	TUBERCULOSIS RATE
ARCHER	8135	3	36.9	7	86.0	0	0.0	1	12.3
BAYLOR	4384	0	0.0	1	22.8	0	0.0	0	0.0
BROWN	34653	21	60.6	134	386.7	0	0.0	3	8.7
CALLAHAN	12016	2	16.6	8	66.6	0	0.0	0	0.0
CLAY	10146	0	0.0	5	49.3	0	0.0	0	0.0
COLEMAN	9695	3	30.9	16	165.0	0	0.0	0	0.0
COLLIN	284475	150	52.7	387	136.0	4	1.4	6	2.1
COMANCHE	13438	5	37.2	17	126.5	0	0.0	0	0.0
COOKE	31475	26	82.6	67	212.9	8	25.4	2	6.4
COTTLE	2255	9	399.1	14	620.8	0	0.0	0	0.0
DALLAS	1923031	7769	404.0	3566	185.4	679	35.3	303	15.8
DENTON	291367	142	487	445	152.7	7	2.4	4	1.4
EASTLAND	18476	4	21.6	3	16.2	0	0.0	3	16.2
ELLIS	90266	59	65.4	92	101.9	26	28.8	3	3.3
ERATH	28555	8	28.0	30	105.1	0	0.0	I	3.5
FANNIN	25086	24	95.7	68	271.1	0	0.0	I	4.0
FISHER	4857	2	41.2	18	370.6	0	0.0	0	0.0
FOARD	1798	0	0.0	0	0.0	0	0.0	0	0.0
GRAYSON	96502	136	140.9	180	186.5	10	10.4	4	4.1
HARDEMAN	5270	1	19.0	3	56.9	0	0.0	1	19.0
HASKELL	6820	3	44.0	12	176.0	0	0.0	0	0.0
HOOD	30638	5	16.3	32	104.4	0	0.0	1	3.3
HUNT	66221	72	108.7	79	119.3	4	6.0	2	3.0
JACK	7039	0	0.0	4	56.8	0	0.0	0	0.0
JOHNSON	102531	34	33.2	79	77.0	2	2.0	4	3.9
JONES	16604	17	102.4	15	90.3	1	6.0	1	6.0
KAUFMAN	55030	51	92.7	95	172.6	13	23.6	1	1.8
KENT	1019	0	0.0	I	98.1	0	0.0	0	0.0
KNOX	4866	4	82.2	3	61.7	0	0.0	0	0.0
MITCHELL	8102	2	24.7	19	234.5	0	0.0	1	12.3
MONTAGUE	17276	1	5.8	8	46.3	1	5.8	0	0.0
NAVARRO	40806	126	308.8	126	308.8	36	88.2	6	14.7
NOLAN	16850	24	142.4	79	468.8	0	0.0	0	0.0
PALO PINTO	25662	4	15.6	37	144.2	0	0.0	0	0.0
PARKER	68743	8	11.6	47	68.4	0	0.0	I	1.5
ROCKWALL	27433	5	18.2	7	25.5	0	0.0	1	3.6
RUNNELS	11402	4	35.1	21	184.2	0	0.0	I	8.8
SCURRY	18917	15	79.3	65	343.6	0	0.0	1	5.3
SHACKELFORD	3327	2	60.1	4	120.2	0	0.0	0	0.0
SOMMERMLL	5586	2	35.8	4	71.6	1	17.9	0	0.0
STEPHENS	9100	2	22.0	6	65.9	0	0.0	0	0.0
STONEWALL	2035	0	0.0	2	98.3	0	0.0	1	49.1
TARRANT	1227625	3312	269.8	1385	112.8	326	26.6	115	9.4
TAYLOR	122079	275	225.3	360	294.9	11	9.0	5	4.1
THROCKMORTON	1899	0	0.0	2	105.3	0	0.0	0	0.0
WICHITA	124263	236	189.9	333	268.0	27	21.7	8	6.4
WILBARGER	15256	14	91.8	30	196.6	4	26.2	2	13.1
WISE	36102	2	5.5	6	16.6	0	0.0	1	2.8
YOUNG	18302	3	16.4	17	92.9	0	0.0	1	5.5
REGIONAL TOTAL	4987413	12591	252.5	7939	159.2	1160	23.3	485	9.7
TEXAS	17615745	35517	201.6	39728	225.5	3316	18.8	2510	14.2



Public Health Region 6

REPORTED CASES OF SELECTED VIRAL DISEASES AND RATES PER 100,000 POPULATION

PUBLIC HEALTH REGION 6 - 1992

		ASEPTIC MENINGITIS		ENCEPHALITIS		INFLUENZA & FLU-LIKE ILLNESS		CHICKENPOX	
COUNTY	1992 POP.	CASES	RATE	CASES	RATE	CASES	RATE	CASES	RATE
ATASCOSA	31798	1	3.1	0	0.0	64	201.3	5	15.7
BANDERA	11041	0	0.0	0	0.0	0	0.0	0	0.0
BEXAR	1225595	92	7.5	1	0.1	2659	217.0	747	61.0
COMAL	54582	1	1.8	0	0.0	27	49.5	60	110.0
DIMMIT	10761	0	0.0	0	0.0	0	0.0	0	0.0
EDWARDS	2325	0	0.0	0	0.0	0	0.0	0	0.0
FRIO	13923	0	0.0	0	0.0	0	0.0	0	0.0
GILLESPIE	17591	1	5.7	1	5.7	0	0.0	1	5.7
GUADALUPE	67939	3	4.4	0	0.0	0	0.0	39	57.4
KARNES	12757	0	0.0	0	0.0	0	0.0	0	0.0
KENDALL	15271	0	0.0	0	0.0	0	0.0	0	0.0
KERR	37268	0	0.0	0	0.0	0	0.0	12	32.2
KINNEY	3169	0	0.0	0	0.0	0	0.0	0	0.0
LA SALLE	5412	0	0.0	0	0.0	0	0.0	0	0.0
MAVERICK	38043	4	10.5	0	0.0	42	110.4	193	507.3
MEDINA	28363	0	0.0	0	0.0	0	0.0	0	0.0
REAL	2447	0	0.0	0	0.0	0	0.0	0	0.0
UVALDE	24065	0	0.0	0	0.0	204	847.7	265	1,101.2
VAL VERDE	40224	6	14.9	0	0.0	136	338.1	19	47.2
WILSON	23884	3	12.6	0	0.0	53	221.9	12	50.2
ZAVALA	12571	0	0.0	0	0.0	0	0.0	22	175.0
REGIONAL TOTAL	1679009	111	6.6	2	0.1	3185	189.7	1375	81.9
TEXAS	17615745	1242	7.1	89	0.5	155568	883.1	20554	116.7

REPORTED CASES AND RATES OF HEPATITIS PER 100,000 POPULATION

PUBLIC HEALTH REGION 6 - 1992

		HEPATITIS A		HEPATITIS B		HEPATITIS NANB		HEPATITIS UNSPECIFIED	
COUNTY	1992 POP.	CASES	RATE	CASES	RATE	CASES	RATE	CASES	RATE
ATASCOSA	31798	5	15.7	0	0.0	0	0.0	0	0.0
BANDERA	11041	0	0.0	1	9.1	0	0.0	0	0.0
BEXAR	1225595	223	18.2	118	9.6	0	0.0	0	0.0
COMAL	54562	6	11.0	1	1.8	0	0.0	0	0.0
DIMMIT	10761	0	0.0	0	0.0	0	0.0	0	0.0
EDWARDS	2325	0	0.0	0	0.0	0	0.0	0	0.0
FRIO	13923	0	0.0	0	0.0	0	0.0	0	0.0
GILLESPIE	17591	1	5.7	0	0.0	0	0.0	0	0.0
GUADALUPE	67939	6	8.8	6	8.8	0	0.0	0	0.0
KARNES	12757	0	0.0	0	0.0	0	0.0	0	0.0
KENDALL	15271	1	6.5	1	6.5	0	0.0	0	0.0
KERR	37268	0	0.0	0	0.0	0	0.0	0	0.0
KINNEY	3169	0	0.0	0	0.0	0	0.0	0	0.0
LA SALLE	5412	0	0.0	0	0.0	0	0.0	0	0.0
MAVERICK	38043	17	44.7	1	2.6	0	0.0	1	2.6
MEDINA	28363	1	3.5	3	10.6	0	0.0	0	0.0
REAL	2447	0	0.0	0	0.0	0	0.0	0	0.0
UVALDE	24065	1	4.2	2	8.3	0	0.0	1	4.2
VAL VERDE	40224	0	0.0	4	9.9	0	0.0	0	0.0
WILSON	23884	0	0.0	0	0.0	0	0.0	0	0.0
ZAVALA	12571	0	0.0	0	0.0	0	0.0	0	0.0
REGIONAL TOTAL	1679009	261	15.5	137	8.2	0	0.0	2	0.1
TEXAS	17615745	1828	10.4	1528	8.7	26	0.1	191	1.1

REPORTED CASES OF GASTROINTESTINAL DISEASES AND RATES PER 100,000 POPULATION

PUBLIC HEALTH REGION 6 - 1992

		SALMONELLOSIS		SHIGELLOSIS		CAMPYLOBACTER		AMEBIASIS	
COUNTY	1992 POP.	CASES	RATE	CASES	RATE	CASES	RATE	CASES	RATE
ATASCOSA	31798	0	0.0	3	9.4	0	0.0	0	0.0
BANDERA	11041	1	9.1	2	18.1	1	9.1	0	0.0
BEXAR	1225595	104	8.5	323	26.4	145	11.8	0	0.0
COMAL	54562	6	14.7	12	22.0	2	3.7	0	0.0
DIMMIT	10761	0	0.0	0	0.0	0	0.0	0	0.0
EDWARDS	2325	0	0.0	1	43.0	0	0.0	0	0.0
FRIO	13923	1	7.2	1	7.2	0	0.0	0	0.0
GILLESPIE	17591	0	0.0	2	11.4	0	0.0	0	0.0
GUADALUPE	67939	5	7.4	6	8.8	3	4.4	0	0.0
KARNES	12757	0	0.0	2	15.7	0	0.0	0	0.0
KENDALL	15271	0	0.0	2	13.1	0	0.0	0	0.0
KERR	37268	2	5.4	47	126.1	0	0.0	0	0.0
KINNEY	3169	0	0.0	0	0.0	0	0.0	0	0.0
LA SALLE	5412	0	0.0	0	0.0	0	0.0	0	0.0
MAVERICK	38043	4	10.5	12	31.5	0	0.0	0	0.0
MEDINA	28363	0	0.0	0	0.0	0	0.0	0	0.0
REAL	2447	0	0.0	0	0.0	0	0.0	0	0.0
UVALDE	24065	9	37.4	22	91.4	0	0.0	0	0.0
VAL MRDE	40224	12	29.8	22	54.7	6	14.9	0	0.0
WILSON	23884	4	16.7	0	0.0	1	4.2	0	0.0
ZAVALA	12571	1	8.0	1	8.0	0	0.0	0	0.0
REGIONAL TOTAL	1679009	151	9.0	458	27.3	158	9.4	0	0.0
TEXAS	17615745	1933	11.0	3568	20.3	996	5.7	108	0.6

REPORTED CASES OF SELECTED VACCINE-PREVENTABLE DISEASES AND RATES PER 100,000 POPULATION

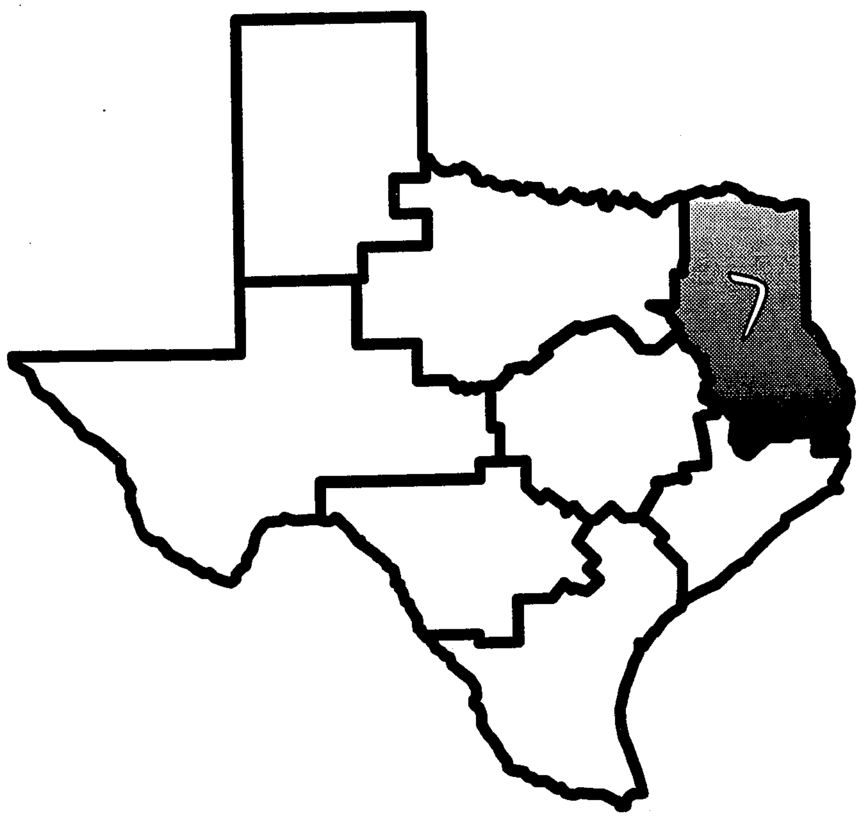
PUBLIC HEALTH REGION 6 - 1992

		MEASLES		MUMPS		PERTUSSIS		RUBELLA	
COUNTY	1992 POP.	CASES	RATE	CASES	RATE	CASES	RATE	CASES	RATE
ATASCOSA	31798	0	0.0	1	3.1	0	0.0	0	0.0
BANDERA	11041	0	0.0	0	0.0	0	0.0	0	0.0
BEXAR	1225595	4	0.3	1	0.1	6	0.5	0	0.0
COMAL	54562	3	5.5	0	0.0	0	0.0	0	0.0
DIMMIT	10761	0	0.0	0	0.0	0	0.0	1	9.3
EDWARDS	2325	0	0.0	0	0.0	0	0.0	0	0.0
FRIO	13923	0	0.0	0	0.0	0	0.0	0	0.0
GILLESPIE	17591	0	0.0	0	0.0	0	0.0	0	0.0
GUADALUPE	67939	0	0.0	0	0.0	0	0.0	0	0.0
KARNES	12757	0	0.0	1	7.8	0	0.0	0	0.0
KENDALL	15271	0	0.0	1	6.5	0	0.0	0	0.0
KERR	37268	0	0.0	1	2.7	0	0.0	0	0.0
KINNEY	3189	0	0.0	0	0.0	0	0.0	0	0.0
LA SALLE	5412	0	0.0	0	0.0	0	0.0	0	0.0
MAVERICK	38043	1	2.6	5	13.1	0	0.0	1	2.6
MEDINA	28363	0	0.0	1	3.5	0	0.0	0	0.0
REAL	2447	0	0.0	0	0.0	0	0.0	0	0.0
UVALDE	24065	0	0.0	1	4.2	0	0.0	0	0.0
VAL MRDE	40224	2	5.0	3	7.5	0	0.0	0	0.0
WILSON	23884	0	0.0	0	0.0	0	0.0	0	0.0
ZAVALA	12571	0	0.0	0	0.0	0	0.0	0	0.0
REGIONAL TOTAL	1679009	10	0.6	15	0.9	6	0.4	2	0.1
TEXAS	17615745	1097	6.2	388	2.2	161	0.9	10	0.1

REPORTED CASES OF OTHER SELECTED DISEASES AND RATES PER 100,000 POPULATION

PUBLIC HEALTH REGION 6 - 1992

		GONORRHEA		CHLAMYDIA		P&S SYPHILIS		TUBERCULOSIS	
COUNTY	1992 POP.	CASES	RATE	CASES	RATE	CASES	RATE	CASES	RATE
ATASCOSA	31798	2	6.3	5	15.7	0	0.0	3	9.4
BANDERA	11041	0	0.0	2	18.1	0	0.0	0	0.0
BEXAR	1225595	1668	136.1	3349	273.3	108	8.8	131	10.7
COMAL	54562	17	31.2	44	80.6	1	1.8	4	7.3
DIMMIT	10761	0	0.0	23	213.7	0	0.0	2'	18.6
EDWARDS	2325	0	0.0	1	43.0	0	0.0	0	0.0
FRIO	13923	4	28.7	37	265.7	3	21.5	2	14.4
GILLESPIE	17591	2	11.4	0	0.0	0	0.0	3	17.1
GUADALUPE	67939	23	33.9	55	81.0	0	0.0	7	10.3
KARNES	12757	9	70.5	31	243.0	0	0.0	0	0.0
KENDALL	15271	0	0.0	1	6.5	0	0.0	1	6.5
KERR	37268	20	53.7	36	96.6	1	2.7	3	8.0
KINNEY	3169	0	0.0	0	0.0	0	0.0	0	0.0
LA SALLE	5412	0	0.0	2	37.0	0	0.0	2	37.0
MAVERICK	38043	3	7.9	8	21.0	0	0.0	14	36.8
MEDINA	28363	1	3.5	55	193.9	0	0.0	2	7.1
REAL	2447	0	0.0	1	40.9	0	0.0	0	0.0
UVALDE	24065	6	24.9	56	232.7	0	0.0	3	12.5
VAL MRDE	40224	10	24.9	125	310.8	0	0.0	4	9.9
WILSON	23884	7	29.3	35	146.5	0	0.0	0	0.0
ZAVALA	12571	0	0.0	19	151.1	0	0.0	0	0.0
REGIONAL TOTAL	1679009	1772	105.5	3885	231.4	113	6.7	181	10.8
TEXAS	17615745	35517	201.6	39728	225.5	3316	18.8	2510	14.2



Public Health Region 7

REPORTED CASES OF SELECTED VIRAL DISEASES AND RATES PER 100,000 POPULATION

PUBLIC HEALTH REGION 7 - 1992

		ASEPTIC MENINGITIS		ENCEPHALITIS		INFLUENZA & FLU-LIKE ILLNESS		CHICKENPOX	
COUNTY	1992 POP.	CASES	RATE	CASES	RATE	CASES	RATE	CASES	RATE
ANDERSON	48551	0	0.0	0	0.0	271	558.2	0	0.0
ANGELINA	71449	0	0.0	0	0.0	0	0.0	5	7.0
BOWIE	83093	4	4.8	1	1.2	2	2.4	77	92.7
CAMP	10092	0	0.0	0	0.0	0	0.0	0	0.0
CASS	30392	0	0.0	1	3.3	0	0.0	0	0.0
CHEROKEE	41753	0	0.0	0	0.0	16	38.3	89	213.2
DELTA	4859	0	0.0	0	0.0	0	0.0	18	370.4
FRANKLIN	7917	0	0.0	0	0.0	0	0.0	1	12.6
GREGG	106901	1	0.9	0	0.0	0	0.0	13	12.2
HARRISON	58843	6	10.2	0	0.0	405	688.3	9	15.3
HENDERSON	60826	1	1.6	0	0.0	8	13.2	14	23.0
HOPKINS	29284	2	6.8	0	0.0	0	0.0	0	0.0
HOUSTON	21549	2	9.3	0	0.0	10	46.4	5	23.2
JASPER	31703	1	3.2	0	0.0	429	1,353.2	99	312.3
LAMAR	44651	0	0.0	0	0.0	0	0.0	0	0.0
MARION	10126	0	0.0	0	0.0	0	0.0	0	0.0
MORRIS	13336	0	0.0	0	0.0	1	7.5	2	15.0
NACOGDOCHES	55092	1	1.8	0	0.0	0	0.0	64	116.2
NEWTON	13874	0	0.0	0	0.0	8	57.7	114	821.7
PANOLA	22491	1	4.4	0	0.0	0	0.0	0	0.0
POLK	31416	1	3.2	1	3.2	1	3.2	0	0.0
RAINS	6928	1	14.4	0	0.0	0	0.0	0	0.0
RED RIVER	14379	1	7.0	0	0.0	0	0.0	0	0.0
RUSK	44560	0	0.0	0	0.0	0	0.0	0	0.0
SABINE	9697	0	0.0	0	0.0	0	0.0	0	0.0
SAN AUGUSTINE	8017	0	0.0	0	0.0	0	0.0	0	0.0
SAN JACINTO	17068	0	0.0	0	0.0	0	0.0	0	0.0
SHELBY	22279	0	0.0	2	9.0	0	0.0	9	40.4
SMITH	155088	7	4.5	1	0.6	553	356.6	337	217.3
TITUS	24598	2	8.1	0	0.0	0	0.0	0	0.0
TRINITY	11666	2	17.1	0	0.0	0	0.0	9	77.1
TYLER	16955	1	5.9	0	0.0	47	277.2	2	11.8
UPSHUR	32074	1	3.1	0	0.0	7	21.8	1	3.1
VAN ZANDT	38907	1	2.6	0	0.0	74	190.2	19	48.8
WOOD	30028	0	0.0	0	0.0	673	2,241.2	84	313.0
REGIONAL TOTAL	1230442	36	2.9	6	0.5	2505	203.6	981	79.7
TEXAS	17615745	1242	7.1	89	0.5	155568	883.1	20554	116.7

REPORTED CASES AND RATES OF HEPATITIS PER 100,000 POPULATION

PUBLIC HEALTH REGION 7 - 1992

		HEPATITIS A		HEPATITIS B		HEPATITIS NANB		HEPATITIS UNSPECIFIED	
COUNTY	1992 POP.	CASES	RATE	CASES	RATE	CASES	RATE	CASES	RATE
ANDERSON	48551	3	6.2	8	16.5	0	0.0	0	0.0
ANGELINA	71449	0	0.0	4	5.6	0	0.0	0	0.0
BOWIE	83093	1	1.2	4	4.8	0	0.0	2	2.4
CAMP	10092	0	0.0	0	0.0	0	0.0	0	0.0
CASS	30392	0	0.0	1	3.3	0	0.0	0	0.0
CHEROKEE	41753	0	0.0	4	9.6	0	0.0	0	0.0
DELTA	4859	0	0.0	0	0.0	0	0.0	0	0.0
FRANKLIN	7917	1	12.6	1	12.6	0	0.0	0	0.0
GREGG	106901	2	1.9	6	5.6	0	0.0	0	0.0
HARRISON	58843	0	0.0	2	3.4	1	1.7	0	0.0
HENDERSON	60826	1	1.6	0	0.0	0	0.0	1	1.6
HOPKINS	29284	0	0.0	1	3.4	0	0.0	0	0.0
HOUSTON	21549	0	0.0	3	13.9	0	0.0	0	0.0
JASPER	31703	1	3.2	5	15.8	0	0.0	0	0.0
LAMAR	44651	1	2.2	1	2.2	0	0.0	0	0.0
MARION	10126	0	0.0	0	0.0	0	0.0	1	9.9
MORRIS	13336	0	0.0	1	7.5	0	0.0	0	0.0
NACOGDOCHES	55092	6	10.9	7	12.7	0	0.0	0	0.0
NEWTON	13874	1	7.2	2	14.4	0	0.0	0	0.0
PANOLA	22491	0	0.0	1	4.4	0	0.0	0	0.0
POLK	31416	2	6.4	3	9.5	0	0.0	0	0.0
RAINS	6928	0	0.0	0	0.0	0	0.0	0	0.0
RED RIVER	14379	0	0.0	4	27.8	0	0.0	0	0.0
RUSK	44560	0	0.0	3	6.7	0	0.0	0	0.0
SABINE	9697	0	0.0	2	20.6	0	0.0	0	0.0
SAN AUGUSTINE	8017	0	0.0	0	0.0	0	0.0	0	0.0
SAN JACINTO	17068	1	5.9	1	5.9	0	0.0	0	0.0
SHELBY	22279	0	0.0	1	4.5	0	0.0	0	0.0
SMITH	155088	11	7.1	13	8.4	0	0.0	0	0.0
TITUS	24598	0	0.0	0	0.0	0	0.0	0	0.0
TRINITY	11666	0	0.0	1	8.6	0	0.0	0	0.0
TYLER	16955	0	0.0	1	5.9	0	0.0	0	0.0
UPSHUR	32074	1	3.1	3	9.4	0	0.0	0	0.0
VAN ZANDT	38907	0	0.0	8	20.6	0	0.0	3	7.7
WOOD	30028	0	0.0	1	3.3	0	0.0	0	0.0
REGIONAL TOTAL	1230442	32	2.6	92	7.5	1	0.1	7	0.6
TEXAS	17615745	1828	10.4	1528	8.7	26	0.1	191	1.1

REPORTED CASES OF GASTROINTESTINAL DISEASES AND RATES PER 100,000 POPULATION

PUBLIC HEALTH REGION 7 - 1992

		SALMONELLOSIS		SHIGELLOSIS		CAMPYLOBACTER		AMEBIASIS	
COUNTY	1992 POP.	CASES	RATE	CASES	RATE	CASES	RATE	CASES	RATE
ANDERSON	48551	5	10.3	3	6.2	5	10.3	0	0.0
ANGELINA	71449	5	7.0	0	0.0	1	1.4	0	0.0
BOWIE	83093	12	14.4	7	8.4	1	1.2	0	0.0
CAMP	10092	2	19.8	0	0.0	0	0.0	0	0.0
CASS	30392	3	9.9	0	0.0	0	0.0	0	0.0
CHEROKEE	41753	0	0.0	3	7.2	3	7.2	0	0.0
DELTA	4859	0	0.0	0	0.0	0	0.0	0	0.0
FRANKLIN	7917	0	0.0	0	0.0	0	0.0	0	0.0
GREGG	106901	18	16.8	18	16.8	1	0.9	1	0.9
HARRISON	58843	7	11.9	0	0.0	0	0.0	0	0.0
HENDERSON	60826	0	0.0	0	0.0	0	0.0	0	0.0
HOPKINS	29284	6	20.5	1	3.4	0	0.0	1	3.4
HOUSTON	21549	3	13.9	1	4.6	0	0.0	0	0.0
JASPER	31703	5	15.8	3	9.5	0	0.0	0	0.0
LAMAR	44651	1	2.2	11	24.6	0	0.0	0	0.0
MARION	10128	0	0.0	0	0.0	0	0.0	0	0.0
MORRIS	13336	1	7.5	1	7.5	0	0.0	0	0.0
NACOGDOCHES	55092	16	29.0	2	3.6	18	32.7	1	1.8
NEWTON	13874	3	21.6	4	28.8	0	0.0	0	0.0
PANOLA	22491	0	0.0	0	0.0	0	0.0	0	0.0
POLK	31416	1	3.2	1	3.2	0	0.0	0	0.0
RAINS	6928	0	0.0	0	0.0	0	0.0	0	0.0
RED RIVER	14379	3	20.9	0	0.0	0	0.0	0	0.0
RUSK	44560	1	2.2	1	2.2	0	0.0	0	0.0
SABINE	9697	0	0.0	0	0.0	0	0.0	0	0.0
SAN AUGUSTINE	8017	1	12.5	0	0.0	1	12.5	0	0.0
SAN JACINTO	17068	2	11.7	0	0.0	0	0.0	0	0.0
SHELBY	22279	0	0.0	0	0.0	0	0.0	0	0.0
SMITH	155088	28	18.1	17	11.0	3	1.9	1	0.6
TITUS	24598	5	20.3	0	0.0	0	0.0	0	0.0
TRINITY	11666	0	0.0	0	0.0	0	0.0	0	0.0
TYLER	16955	0	0.0	0	0.0	1	5B	0	0.0
UPSHUR	32074	3	9.4	1	3.1	0	0.0	0	0.0
VAN ZANDT	38907	1	2.6	1	2.6	1	2.6	0	0.0
WOOD	30028	4	13.3	1	3.3	1	3.3	0	0.0
REGIONAL TOTAL	1230442	136	11.1	76	6.2	36	2.9	4	0.3
TEXAS	17615745	1933	11.0	3568	20.3	996	5.7	108	0.6

REPORTED CASES OF SELECTED VACCINE-PREVENTABLE DISEASES AND RATES PER 100,000 POPULATION

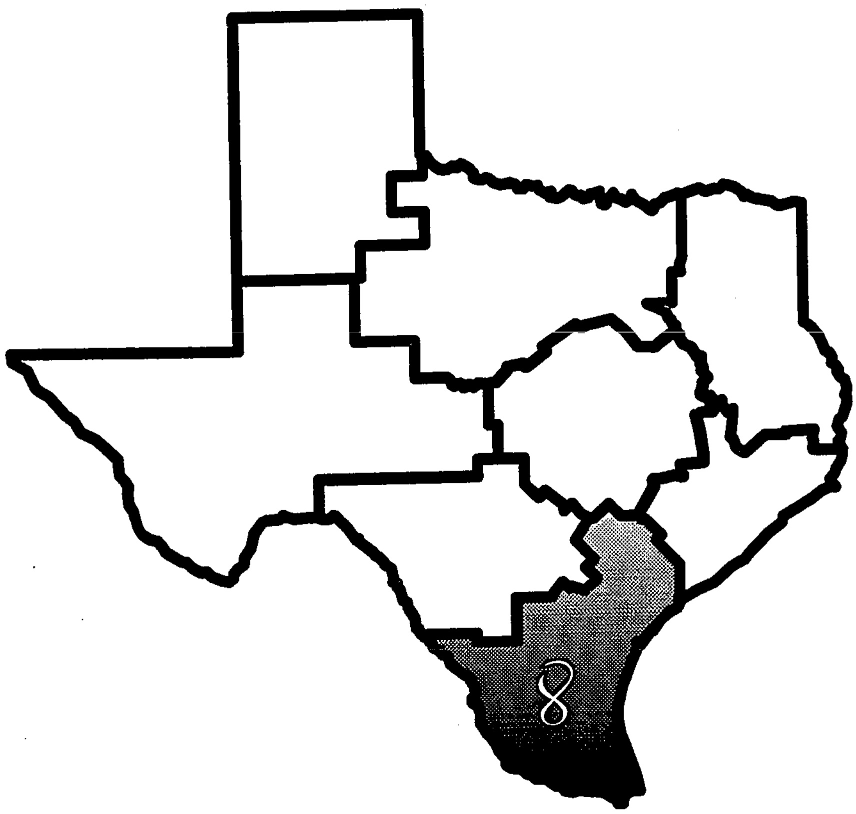
PUBLIC HEALTH REGION 7 - 1992

		MEASLES		MUMPS		PERTUSSIS		RUBELLA	
COUNTY	**1992 POP.**	CASES	RATE	CASES	RATE	CASES	RATE	CASES	RATE
ANDERSON	48551	0	0.0	0	0.0	0	0.0	0	0.0
ANGELINA	71449	0	0.0	3	4.2	0	0.0	0	0.0
BOWIE	83093	0	0.0	0	0.0	2	2.4	0	0.0
CAMP	10092	0	0.0	0	0.0	0	0.0	0	0.0
CASS	30392	0	0.0	0	0.0	0	0.0	0	0.0
CHEROKEE	41753	0	0.0	1	2.4	0	0.0	0	0.0
DELTA	4859	0	0.0	0	0.0	0	0.0	0	0.0
FRANKLIN	7917	0	0.0	0	0.0	0	0.0	0	0.0
GREGG	106901	0	0.0	0	0.0	1	0.9	0	0.0
HARRISON	58843	0	0.0	1	1.7	0	0.0	0	0.0
HENDERSON	60826	0	0.0	1	1.6	0	0.0	0	0.0
HOPKINS	29284	0	0.0	0	0.0	0	0.0	0	0.0
HOUSTON	21549	0	0.0	0	0.0	0	0.0	0	0.0
JASPER	31703	0	0.0	0	0.0	0	0.0	0	0.0
LAMAR	44651	0	0.0	0	0.0	0	0.0	0	0.0
MARION	10126	0	0.0	0	0.0	0	0.0	0	0.0
MORRIS	13336	0	0.0	0	0.0	0	0.0	0	0.0
NACOGDOCHES	55092	0	0.0	2	3.6	0	0.0	0	0.0
NEWTON	13874	0	0.0	0	0.0	0	0.0	0	0.0
PANOLA	22491	0	0.0	0	0.0	0	0.0	0	0.0
POLK	31416	0	0.0	0	0.0	0	0.0	0	0.0
RAINS	6928	0	0.0	0	0.0	1	14.4	0	0.0
RED RIVER	14379	0	0.0	0	0.0	0	0.0	0	0.0
RUSK	44560	0	0.0	0	0.0	0	0.0	0	0.0
SABINE	9697	0	0.0	0	0.0	0	0.0	0	0.0
SAN AUGUSTINE	8017	0	0.0	0	0.0	0	0.0	0	0.0
SAN JACINTO	17068	0	0.0	0	0.0	0	0.0	0	0.0
SHELBY	22279	0	0.0	0	0.0	1	4.5	0	0.0
SMITH	155088	0	0.0	3	1.9	3	1.9	0	0.0
TITUS	24598	0	0.0	0	0.0	0	0.0	0	0.0
TRINITY	11666	0	0.0	0	0.0	0	0.0	0	0.0
TYLER	16955	0	0.0	0	0.0	0	0.0	0	0.0
UPSHUR	32074	0	0.0	0	0.0	0	0.0	0	0.0
VAN ZANDT	38907	0	0.0	1	2.6	0	0.0	0	0.0
WOOD	30028	0	0.0	1	3.3	1	3.3	0	0.0
REGIONAL TOTAL	1230442	0	0.0	13	1.1	9	0.7	0	0.0
TEXAS	17615745	1097	6.2	386	2.2	161	0.9	10	0.1

REPORTED CASES OF OTHER SELECTED DISEASES AND RATES PER 100,000 POPULATION

PUBLIC HEALTH REGION 7 - 1992

COUNTY	1992 POP.	GONORRHEA CASES	GONORRHEA RATE	CHLAMYDIA CASES	CHLAMYDIA RATE	P&S SYPHILIS CASES	P&S SYPHILIS RATE	TUBERCULOSIS CASES.	TUBERCULOSIS RATE
ANDERSON	48551	52	107.1	73	150.4	4	8.2	1	2.1
ANGELINA	71449	209	292.5	229	320.5	25	35.0	7	9.8
BOWIE	83093	339	408.0	401	482.6	47	56.6	9	10.8
CAMP	10092	1	9.9	3	29.7	0	0.0	3	29.7
CASS	30392	22	72.4	52	171.1	9	29.6	2	6.6
CHEROKEE	41753	38	91.0'	53	126.9	5	12.0	10	24.0
DELTA	4859	0	0.0	0	0.0	0	0.0	0	0.0
FRANKLIN	7917	1	12.6	271	3,423.0	0	0.0	0	0.0
GREGG	106901	87	81.4	196	183.3	28	26.2	7	6.5
HARRISON	58843	292	496.2	0	0.0	6	10.2	6	10.2
HENDERSON	60826	19	31.2	64	105.2	4	6.6	10	16.4
HOPKINS	29284	15	51.2	41	140.0	2	6.8	1	3.4
HOUSTON	21549	39	181.0	106	491.9	39	181.0	4	18.6
JASPER	31703	106	334.4	81	255.5	5	15.8	2	6.3
LAMAR	44651	155	347.1	162	362.8	9	20.2	6	13.4
MARION	10126	18	177.8	35	345.6	9	88.9	0	0.0
MORRIS	13336	14	105.0	33	247.5	0	0.0	2	15.0
NACOGDOCHES	55092	65	118.0	170	308.6	32	58.1	6	10.9
NEWTON	13874	29	209.0	35	252.3	0	0.0	3	21.6
PANOLA	22491	34	151.2	69	306.8	1	4.4	2	8.9
POLK	31416	17	54.1	80	254.6	2	6.4	2	6.4
RAINS	6928	0	0.0	1	14.4	0	0.0	0	0.0
RED RIVER	14379	22	153.0	30	208.6	0	0.0	3	20.9
RUSK	44560	13	29.2	61	136.9	8	18.0	1	2.2
SABINE	9697	19	195.9	5	51.6	0	0.0	0	0.0
SAN AUGUSTINE	8017	1	12.5	8	99.8	1	12.5	0	0.0
SAN JACINTO	17068	3	17.6	16	93.7	0	0.0	5	29.3
SHELBY	22279	18	80.6	38	170.6	4	18.0	7	31.4
SMITH	155088	595	383.7	722	465.5	43	27.7	12	7.7
TITUS	24598	22	89.4	44	178.9	9	36.6	5	20.3
TRINITY	11666	4	34.3	7	60.0	0	0.0	0	0.0
TYLER	16955	32	188.7	33	194.6	1	5.9	1	5.9
UPSHUR	32074	21	65.5	42	130.9	4	12.5	3	9.4
VAN ZANDT	38907	7	18.0	35	90.0	1	2.6	4	10.3
WOOD	30028	17	56.6	17	56.6	3	10.0	1	3.3
REGIONAL TOTAL	1230442	2326	189.0	3213	261.1	301	24.5	125	10.2
TEXAS	17615745	35517	201.6	39728	225.5	3316	18.8	2510	14.2



Public Health Region 8

REPORTED CASES OF SELECTED VIRAL DISEASES AND RATES PER 100,000 POPULATION

PUBLIC HEALTH REGION 8 - 1992

		ASEPTIC MENINGITIS		ENCEPHALITIS		INFLUENZA & FLU-LIKE ILLNESS		CHICKENPOX	
COUNTY	1992 POP.	CASES	RATE	CASES	RATE	CASES	RATE	CASES	RATE
ARANSAS	18237	0	0.0	0	0.0	0	0.0	0	0.0
BEE	25820	0	0.0	0	0.0	0	0.0	5	19.4
BROOKS	8439	0	0.0	0	0.0	8	94.8	4	47.4
CALHOUN	19567	0	0.0	0	0.0	7	35.8	17	86.9
CAMERON	273260	6	2.2	0	0.0	5178	1,894.9	1044	382.1
DEWITT	18997	0	0.0	0	0.0	0	0.0	130	684.3
DUVAL	13289	0	0.0	0	0.0	0	0.0	0	0.0
GOLIAD	6131	0	0.0	0	0.0	0	0.0	0	0.0
GONZALES	17567	0	0.0	1	5.7	0	0.0	25	142.3
HIDALGO	408450	9	2.2	0	0.0	0	0.0	33	8.1
JACKSON	13231	0	0.0	0	0.0	0	0.0	1	7.6
JIM HOGG	5332	0	0.0	0	0.0	0	0.0	0	0.0
JIM WELLS	38648	0	0.0	0	0.0	0	0.0	0	0.0
KENEDY	480	0	0.0	0	0.0	0	0.0	0	0.0
KLEBERG	31097	0	0.0	0	0.0	0	0.0	1	3.2
LAVACA	18775	0	0.0	0	0.0	0	0.0	9	47.9
LIVE OAK	9706	0	0.0	0	0.0	0	0.0	0	0.0
MCMULLEN	831	0	0.0	0	0.0	0	0.0	0	0.0
NUECES	300700	25	8.3	1	0.3	12402	4,124.4	712	236.8
REFUGIO	8086	0	0.0	0	0.0	0	0.0	0	0.0
SAN PATRICIO	60799	6	9.9	1	1.6	0	0.0	6	9.9
STARR	43833	1	2.3	0	0.0	0	0.0	0	0.0
VICTORIA	76372	2	2.6	2	2.6	397	519.8	175	229.1
WEBB	141628	2	1.4	0	0.0	0	0.0	28	19.7
WILLACY	18333	0	0.0	0	0.0	0	0.0	49	267.3
ZAPATA	9772	0	0.0	0	0.0	0	0.0	0	0.0
REGIONAL TOTAL	1587506	51	3.2	5	0.3	17992	1,133.4	2239	141.0
TEXAS	17615745	1242	7.1	89	0.5	155568	883.1	20554	116.7

REPORTED CASES AND RATES OF HEPATITIS PER 100,000 POPULATION

PUBLIC HEALTH REGION 8 - 1992

		HEPATITIS A		HEPATITIS B		HEPATITIS NANB		HEPATITIS UNSPECIFIED	
COUNTY	1992 POP.	CASES	RATE	CASES	RATE	CASES	RATE	CASES	RATE
ARANSAS	18237	0	0.0	3	16.5	0	0.0	0	0.0
BEE	25820	1	3.9	2	7.7	0	0.0	0	0.0
BROOKS	8439	2	23.7	0	0.0	0	0.0	0	0.0
CALHOUN	19567	1	5.1	1	5.1	0	0.0	0	0.0
CAMERON	273260	31	11.3	14	5.1	0	0.0	17	6.2
DEWITT	18997	3	15.8	0	0.0	0	0.0	0	0.0
DUVAL	13289	2	15.1	0	0.0	0	0.0	0	0.0
GOLIAD	6131	0	0.0	0	0.0	0	0.0	0	0.0
GONZALES	17567	0	0.0	1	5.7	0	0.0	0	0.0
HIDALGO	408450	13	3.2	1	0.2	0	0.0	1	0.2
JACKSON	13231	0	0.0	0	0.0	0	0.0	0	0.0
JIM HOGG	5332	1	18.8	0	0.0	0	0.0	0	0.0
JIM WELLS	38648	0	0.0	1	2.6	0	0.0	0	0.0
KENEDY	480	0	0.0	0	0.0	0	0.0	0	0.0
KLEBERG	31097	6	19.3	2	6.4	0	0.0	0	0.0
IAVACA	18775	1	5.3	1	5.3	0	0.0	0	0.0
LIVE OAK	9706	0	0.0	0	0.0	0	0.0	0	0.0
MCMULLEN	831	0	0.0	0	0.0	0	0.0	0	0.0
NUECES	300700	10	3.3	22	7.3	0	0.0	4	1.3
REFUGIO	8086	0	0.0	0	0.0	0	0.0	0	0.0
SAN PATRICIO	60799	3	4.9	9	14.8	0	0.0	5	8.2
STARR	43633	7	16.0	1	2.3	0	0.0	1	2.3
VICTORIA	76372	100	130.9	10	13.1	0	0.0	0	0.0
WEBB	141828	21	14.8	5	3.5	0	0.0	0	0.0
WILIACY	18333	3	16.4	0	0.0	0	0.0	3	16.4
ZAPATA	9772	1	10.2	0	0.0	0	0.0	0	0.0
REGIONAL TOTAL	1587506	206	13.0	73	4.6	0	0.0	31	2.0
TEXAS	17615745	1828	10.4	1528	8.7	26	0.1	191	1.1

REPORTED CASES OF GASTROINTESTINAL DISEASES AND RATES PER 100,000 POPULATION

PUBLIC HEALTH REGION 8 - 1992

COUNTY	1992 POP.	SALMONELLOSIS CASES	SALMONELLOSIS RATE	SHIGELLOSIS CASES	SHIGELLOSIS RATE	CAMPYLOBACTER CASES	CAMPYLOBACTER RATE	AMEBIASIS CASES	AMEBIASIS RATE
ARANSAS	18237	3	16.5	0	0.0	1	5.5	0	0.0
BEE	25820	2	7.7	0	0.0	0	0.0	0	0.0
BROOKS	8439	1	11.8	0	0.0	0	0.0	0	0.0
CALHOUN	19567	2	10.2	1	5.1	0	0.0	0	0.0
CAMERON	273260	35	12.8	50	18.3	8	2.9	27	9.9
DEWITT	18997	2	10.5	0	0.0	0	0.0	0	0.0
DUVAL	13289	1	7.5	1	7.5	0	0.0	0	0.0
GOLIAD	6131	1	16.3	0	0.0	0	0.0	0	0.0
GONZALES	17567	1	5.7	0	0.0	0	0.0	0	0.0
HIDALGO	408450	42	10.3	36	8.8	1	0.2	0	0.0
JACKSON	13231	0	0.0	1	7.6	0	0.0	0	0.0
JIM HOGG	5332	0	0.0	0	0.0	0	0.0	0	0.0
JIM WELLS	38648	3	7.8	0	0.0	0	0.0	0	0.0
KENEDY	480	0	0.0	0	0.0	0	0.0	0	0.0
KLEBERG	31097	14	45.0	9	28.9	1	3.2	0	0.0
LAVACA	18775	3	16.0	1	5.3	0	0.0	0	0.0
LIVE OAK	9706	0	0.0	0	0.0	0	0.0	0	0.0
MCMULLEN	831	0	0.0	0	0.0	0	0.0	0	0.0
NUECES	300700	51	17.0	73	24.3	18	6.0	3	1.0
REFUGIO	8086	0	0.0	0	0.0	0	0.0	0	0.0
SAN PATRICIO	60799	18	29.6	22	36.2	2	3.3	0	0.0
STARR	43633	0	0.0	0	0.0	0	0.0	0	0.0
VICTORIA	76372	42	55.0	88	115.2	5	6.5	0	0.0
WEBB	141828	31	21.9	31	21.9	0	0.0	0	0.0
WILLACY	18333	1	5.5	0	0.0	0	0.0	0	0.0
ZAPATA	9772	0	0.0	0	0.0	0	0.0	0	0.0
REGIONAL TOTAL	1587506	253	15.9	313	19.7	36	2.3	30	1.9
TEXAS	17615745	1933	11.0	3568	20.3	996	5.7	108	0.6

REPORTED CASES OF SELECTED VACCINE-PREVENTABLE DISEASES PER 100,000 POPULATION

PUBLIC HEALTH REGION 8 - 1992

		MEASLES		MUMPS		PERTUSSIS		RUBELLA	
COUNTY	1992 POP.	CASES	RATE	CASES	RATE	CASES	RATE	CASES	RATE
ARANSAS	18237	14	76.8	0	0.0	0	0.0	0	0.0
BEE	25820	13	50.3	0	0.0	0	0.0	0	0.0
BROOKS	8439	24	284.4	0	0.0	0	0.0	0	0.0
CALHOUN	19567	1	5.1	0	0.0	1	5.1	0	0.0
CAMERON	273260	31	11.3	30	11.0	0	0.0	1	0.4
DEWITT	18997	0	0.0	0	0.0	0	0.0	0	0.0
DUVAL	13289	17	127.9	0	0.0	0	0.0	0	0.0
GOLIAD	6131	1	16.3	0	0.0	0	0.0	0	0.0
GONZALES	17567	0	0.0	0	0.0	0	0.0	0	0.0
HIDALGO	408450	440	107.7	0	0.0	1	0.2	0	0.0
JACKSON	13231	0	0.0	0	0.0	0	0.0	0	0.0
JIM HOGG	5332	3	56.3	0	0.0	0	0.0	0	0.0
JIM WELLS	38648	64	165.6	0	0.0	0	0.0	0	0.0
KENEDY	480	1	208.3	0	0.0	0	0.0	0	0.0
KLEBERG	31097	42	135.1	0	0.0	0	0.0	0	0.0
LAVACA	18775	1	5.3	0	0.0	0	0.0	0	0.0
LIVE OAK	9706	3	30.9	0	0.0	0	0.0	0	0.0
MCMULLEN	831	0	0.0	0	0.0	0	0.0	0	0.0
NUECES	300700	280	93.1	5	1.7	1	0.3	0	0.0
REFUGIO	8086	2	24.7	0	0.0	0	0.0	0	0.0
SAN PATRICIO	60799	76	125.0	3	4.9	0	0.0	0	0.0
STARR	43633	9	20.6	0	0.0	0	0.0	0	0.0
VICTORIA	76372	6	7.9	4	5.2	0	0.0	0	0.0
WEBB	141828	11	7.8	1	0.7	0	0.0	0	0.0
WILLACY	18333	1	5.5	0	0.0	0	0.0	0	0.0
ZAPATA	9772	0	0.0	0	0.0	0	0.0	0	0.0
REGIONAL TOTAL	1587506	1040	65.5	43	2.7	3	0.2	1	0.1
TEXAS	17615745	1097	6.2	388	2.2	161	0.9	9	0.1

REPORTED CASES OF OTHER SELECTED DISEASES PER 100,000 POPULATION

PUBLIC HEALTH REGION 8 - 1992

COUNTY	1992 POP.	GONORRHEA CASES	GONORRHEA RATE	CHLAMYDIA CASES	CHLAMYDIA RATE	P/S SYPHILIS CASES	P/S SYPHILIS RATE	TUBERCULOSIS CASES	TUBERCULOSIS RATE
ARANSAS	18237	8	43.9	25	137.1	0	0.0	5	27.4
BEE	25820	12	46.5	98	379.6	2	7.7	3	11.6
BROOKS	8439	0	0.0	6	71.1	0	0.0	0	0.0
CALHOUN	19587	1	5.1	3	15.3	0	0.0	3	15.3
CAMERON	273280	49	17.9	766	280.3	4	1.5	99	36.2
DEWITT	18997	13	68.4	3	15.8	1	5.3	2	10.5
DUVAL	13289	0	0.0	8	60.2	0	0.0	2	15.1
GOLIAD	6131	2	32.6	8	130.5	0	0.0	0	0.0
GONZALES	17567	25	142.3	57	324.5	1	5.7	1	5.7
HIDALGO	408450	62	15.2	884	216.4	9	2.2	103	25.2
JACKSON	13231	11	83.1	13	98.3	0	0.0	0	0.0
JIM HOGG	5332	1	18.8	2	37.5	0	0.0	0	0.0
JIM WELLS	38648	10	25.9	55	142.3	0	0.0	4	10.3
KENEDY	480	0	0.0	0	0.0	0	0.0	0	0.0
KLEBERG	31097	4	12.9	29	93.3	1	3.2	4	12.9
LAVACA	18775	18	95.9	15	79.9	0	0.0	0	0.0
LIVE OAK	9706	0	0.0	9	92.7	0	0.0	1	10.3
MCMULLEN	831	0	0.0	1	120.3	0	0.0	0	0.0
NUECES	300700	426	141.7	444	147.7	24	8.0	46	15.3
REFUGIO	8086	3	37.1	3	37.1	0	0.0	1	12.4
SAN PATRICIO	60799	21	34.5	62	102.0	1	1.6	7	11.5
STARR	43633	0	0.0	0	0.0	0	0.0	10	22.9
VICTORIA	76372	214	280.2	164	214.7	6	7.9	1	1.3
WEBB	141828	26	18.3	76	53.6	10	7.1	40	28.2
WILLACY	18333	4	21.8	11	60.0	0	0.0	11	60.0
ZAPATA	9772	0	0.0	0	0.0	0	0.0	1	10.2
REGIONAL TOTAL	1587506	910	57.3	2742	172.7	59	3.7	344	21.7
TEXAS	17615745	35517	201.6	39728	225.5	3316	18.8	2510	14.2

Appendix

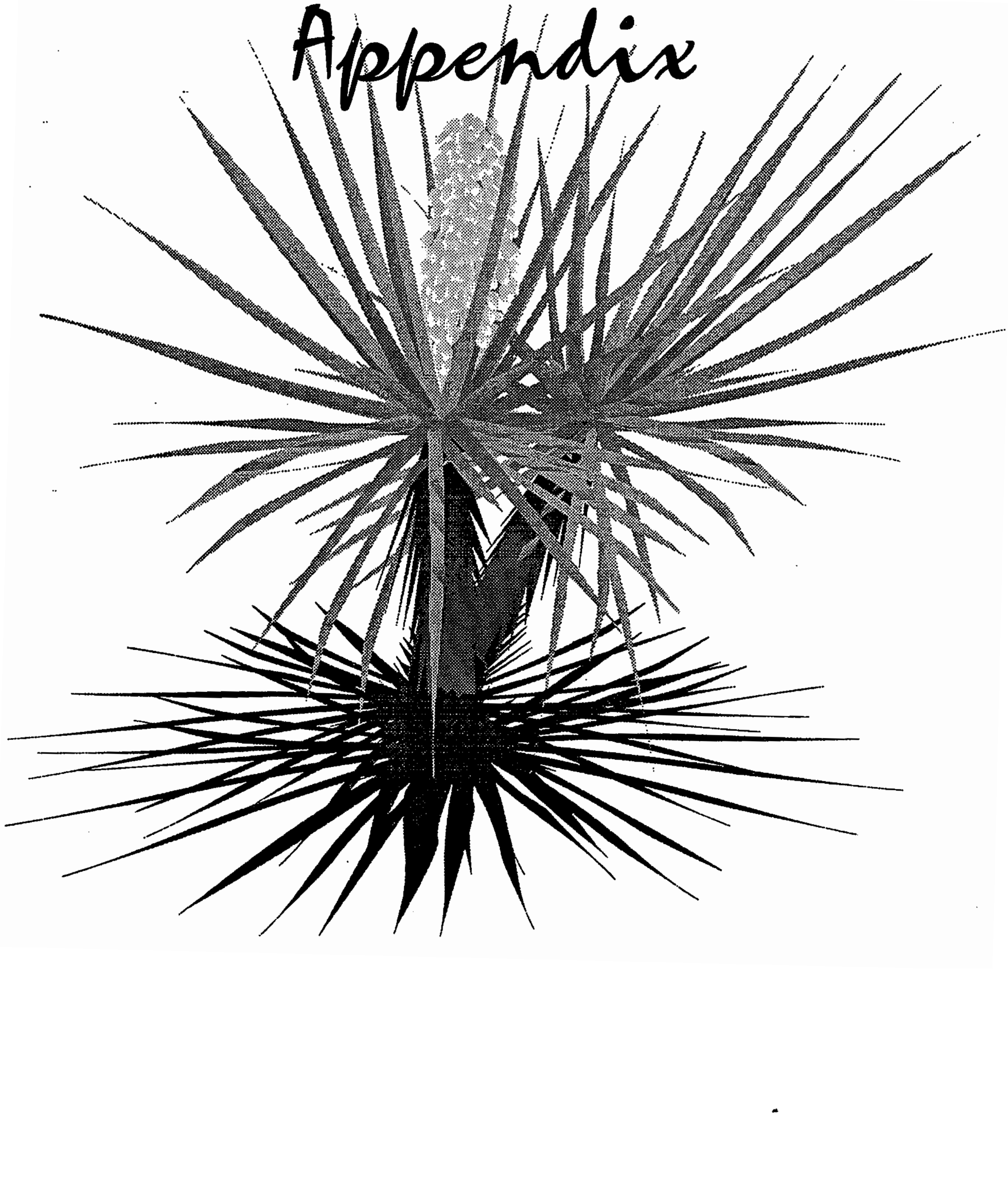


TABLE I

REPORTED CASES OF SELECTED DISEASES IN TEXAS
1982 - 1992

DISEASE	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982
AMEBIASIS	108	86	139	159	252	290	394	279	356	412	493
BOTULISM	1	4	7	4	4	4	5	4	9	3	1
BRUCELLOSIS	27	36	18	23	22	51	18	47	26	84	27
CAMPYLOBACTERIOSIS	996	810	739	625	745	780	803	666	198	-	-
CHICKENPOX	20554	19409	26636	23722	20085	23228	23221	20758	16124	15031	11050
CHOLERA	5	3	0	0	1	0	0	0	0	0	0
COCCIDIOIDOMYCOSIS	68	42	52	46	56	45	50	21	4	-	-
DENGUE	0	2	0	2	0	0	17	1	0	0	2
ENCEPHALITIS	89	121	74	60	74	118	191	144	114	163	179
GONORRHEA	35517	43282	43231	45786	45639	51688	63376	66728	65802	76903	81580
HANSEN'S DISEASE		38	37	25	35	31	29	28	31	35	29
H. INFLUENZAE INFECTIONS		152	625	797	843	747	647	554	524	394	439
HEPATITIS A	1828	2663	2722	3211	2739	1886	2137	2565	2605	3030	3226
HEPATITIS B	1528	1958	1789	1853	1654	1487	1500	1513	1544	1234	1043
HEPATITIS NANB	26	144	130	236	149	161	205	178	144	-	-
HEPATITIS UNSPECIFIED	191	260	287	530	576	599	854	1290	1695	2387	2071
HISTOPLASMOSIS	79	66	142	106	133	71	77	44	10		
INFLUENZA/FLU-LIKE ILLNESS	155568	386911	314372	134604	109871	62192	83524	96164	176900	92160	93736
LEGIONELLOSIS	24	23	25	50	20	38	41	29	27		
LEPTOSPIROSIS	5	0	1	0	0	1	6	6	4	4	18
LISTERIOSIS	26	52	32	40	45	42	28	-	-	-	-
LYME DISEASE	113	57	44	82	25	33	9	-	-	-	-
MALARIA	45	75	80	79	73	56	84	93	77	54	55
MEASLES	1097	294	4409	3313	286	452	398	450	642	37	129
MENINGITIS, ASEPTIC	1242	1275	811	836	675	758	1383	989	645	1175	785
MENINGITIS, OTHER/BACTERIAL	380	337	345	371	385	354	533	423	301		
MENINGOCOCCAL INFECTIONS	111	100	93	93	98	126	138	132	180	188	238
MUMPS	388	363	470	551	327	338	239	321	219	225	255
PERTUSSIS	161	143	158	366	158	111	112	379	60	95	79
PSITTACOSIS	1	4	2	1	2	2	4	1	9	7	8
REYE SYNDROME	2	0	4	5	8	9	8	13	17	25	-
RMSF	1	2	6	19	22	22	21	33	53	108	64
RUBELLA	10	16	99	64	30	5	78	52	75	117	120
SALMONELLOSIS	1933	2317	2315	2277	2334	2803	2445	2442	2339	2838	2506
SHIGELLOSIS	3568	2178	3550	1654	2826	2087	2454	1718	1659	2206	2173
SYPHILIS, PRIMARY/SECONDARY	3316	4970	5165	4267	3124	3071	3967	4610	5136	6254	6338
TETANUS	5	10	7	5	6	5	12	9	10	8	8
TOXIC SHOCK SYNDROME	1	14	9	15	29	21	18	27	22	29	31
TRICHINOSIS	0	1	0	0	0	0	2	3	13	4	2
TUBERCULOSIS	2510	2525	2242	1915	1901	1757	1890	1891	1762	1965	2045
TULAREMIA	0	3	3	1	3	5	8	8	9	13	16
TYPHOID FEVER	23	31	28	20	3	36	28	32	30	72	42
TYPHUS FEVER, MURINE	18	22	36	30	30	34	52	25	37	46	41
VIBRIO INFECTIONS	15	25	25	17	27	20					

TABLE II

REPORTED CASES OF SELECTED DISEASES IN TEXAS PER 100,000 POPULATION
1982 - 1992

DISEASE	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982
AMEBIASIS	.6	.5	.8	.9	1.5	1.7	2.4	1.7	2.3	2.7	3.4
BOTULISM	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0
BRUCELLOSIS	.2	.2	.1	.1	.1	.3	.1	.3	.2	.6	.2
CAMPYLOBACTERIOSIS	5.7	4.7	4.4	3.6	4.3	4.6	4.8	4.1	1.3	-	-
CHICKENPOX	116.7	112.5	156.8	135.8	116.3	162.3	138.6	128.7	102.7	98.0	73.9
CHOLERA	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
COCCIDIOIDOMYCOSIS	.4	.2	.3	.3	.3	.3	.3	.1	.0	-	-
DENGUE	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0
ENCEPHALITIS	.5	.7	.4	.3	.4	.7	1.1	.9	.7	1.0	1.1
GONORRHEA	201.6	250.8	254.5	262.1	264.3	303.6	378.3	413.7	419.1	501.1	545.9
HANSEN'S DISEASE	.3	.2	.2	.1	.2	.2	.2	.2	.2	.2	.2
H. INFLUENZAE INFECTIONS	.2	.9	3.7	4.6	4.9	4.4	3.9	3.4	3.3	-	-
HEPATITIS A	10.4	15.4	16.0	18.4	15.9	11.1	12.8	15.9	16.6	19.7	21.6
HEPATITIS B	8.7	11.3	10.5	10.6	9.6	8.7	9.0	9.4	9.8	8.0	7.0
HEPATITIS NANB	.1	.8	.8	1.4	.9	1.0	1.2	1.1	.9	-	-
HEPATITIS UNSPECIFIED	1.1	1.5	1.7	3.0	3.3	3.5	5.1	8.0	10.8	15.6	13.9
HISTOPLASMOSIS	.4	.4	.8	.6	.8	.4	.5	.3	.1	-	-
INFLUENZA/FLU-LIKE ILLNESS	883.1	2241.7	1850.7	770.5	636.3	365.3	498.5	596.2	1126.7	600.6	627.3
LEGIONELLOSIS	.1	.1	.1	.3	.1	.2	.2	.2	.2	-	-
LEPTOSPIROSIS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1
LISTERIOSIS	.1	.3	.2	.2	.3	.3	.2	-	-	-	-
LYME DISEASE	.6	.3	.3	.5	.1	.2	.1	-	-	-	-
MALARIA	.3	.4									
MEASLES	6.2	1.7	26.0	19.0	1.7	2.7	2.4	2.8	4.1	.2	.9
MENINGITIS, ASEPTIC	7.1	7.4	4.8	4.8	3.9	4.5	8.3	6.1	4.1	7.7	5.3
MENINGITIS, OTHER/BACTERIAL	2.2	2.0	2.0	2.1	2.2	2.1	3.2	2.6	1.9	-	-
MENINGOCOCCAL INFECTIONS	.6	.6	.5	.5	.6	.7	.8	.8	1.2	1.2	1.6
MUMPS	2.2	2.1	2.8	3.2	1.9	2.0	1.4	2.0	1.4	1.5	1.7
PERTUSSIS	.9	.8	.9	2.1	.9	.7	.7	2.4	.4	.6	.5
PSITTACOSIS	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1	.1
REYE SYNDROME	.0	.0	.0	.0	.1	.1	.1	.1	.1	-	-
RMSF	.0	.0	.0	.1	.1	.1	.1	.2	.3	.7	.4
RUBELLA	.1	.1	.6	.4	.2	.0	.5	.3	.5	.8	.8
SALMONELLOSIS	11.0	13.4	13.6	13.0	13.5	16.5	14.6	15.1	14.9	18.5	16.8
SHIGELLOSIS	20.3	12.6	20.9	9.5	16.4	12.3	14.7	10.7	10.6	14.4	14.5
SYPHILIS, PRIMARY/SECONDARY	18.8	28.8	30.4	24.4	18.1	18.0	23.7	28.6	32.7	40.8	42.4
TETANUS	.0	.1	.0	.0	.0	.1	.1	.2	.1	-	-
TOXIC SHOCK SYNDROME	.0	.1	.1	.1	.2	.0	.1	.1	.1	.1	.1
TRICHINOSIS	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0
TUBERCULOSIS	14.2	14.6	13.2	11.0	11.0	10.3	11.3	11.7	11.2	12.8	13.7
TULAREMIA	.0	.0	.0	.0	.0	.0	.1	.1	.1	.1	.1
TYPHOID FEVER	.1	.2	.2	.1	.2	.2	.2	.2	.2	.5	.3
NPHUS FEVER, MURINE	.1	.1	.2	.2	.2	.2	.3	.2	.2	.3	.3
VIBRIO INFECTIONS	.1	.1	.1	.1	.2	.1					

1992 ESTIMATED TEXAS POPULATION = 17,615,745

TABLE III

REPORTED CASES OF SELECTED DISEASES BY MONTH OF ONSET
TEXAS, 1992

DISEASE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
AMEBIASIS	10	9	9	9	15	8	12	6	8	7	2	13
BOTULISM	0	0	0	1	0	0	0	0	0	0	0	0
BRUCELLOSIS	1	1	4	1	2	4	3	4	2	3	1	1
CAMPYLOBACTERIOSIS	62	41	50	77	124	135	133	109	74	66	72	53
CHICKENPOX □	454	1916	2730	2168	3417	1367	1270	903	1192	647	816	3674
CHOLERA	0	0	0	2	2	0	0	0	1	0	0	0
COCCIDIOIDOMYCOSIS	6	9	9	7	1	4	4	8	4	7	3	6
DENGUE	0	0	0	0	0	0	0	0	0	0	0	0
ENCEPHALITIS	4	3	5	6	6	9	10	12	13	6	8	7
GONORRHEA □	2618	2768	2987	3130	3405	2875	3268	2927	2994	2956	2981	2664
HANSEN'S DISEASE	11	5	7	3	4	2	12	1	1	2	2	2
H. INFLUENZAE INFECTIONS	3	7	4	3	3	3	3	3	4	3	1	5
HEPATITIS A	148	126	141	152	134	118	155	170	182	196	158	148
HEPATITIS B	144	147	160	194	149	108	108	128	114	105	98	73
HEPATITIS NANB	0	1	3	6	2	3	2	1	1	2	2	3
HEPATITIS UNSPECIFIED	21	9	15	20	17	16	21	22	14	15	14	7
HISTOPLASMOSIS	7	6	7	6	16	9	3	6	7	2	3	7
INFLUENZA/FLU-LIKE ILLNESS □	4736	10873	7695	2970	4264	3071	813	1489	1310	3892	18164	96291
LEGIONELLOSIS	2	1	5	5	0	1	1	3	0	2	1	3
LEPTOSPIROSIS	0	0	0	0	0	1	0	4	0	0	0	0
LISTERIOSIS	0	4	5	3	0	2	2	6	2	2	0	0
LYME DISEASE	7	1	11	16	16	23	12	7	5	8	3	4
MALARIA	0	4	4	5	5	4	7	7	3	2	3	1
MEASLES	183	272	122	168	161	115	40	13	17	0	4	2
MENINGITIS, ASEPTIC	55	49	86	135	158	157	176	154	99	76	60	37
MENINGITIS, OTHER/BACTERIAL	35	26	41	39	45	40	13	31	26	24	26	34
MENINGOCOCCAL INFECTIONS	14	12	10	15	8	8	10	5	5	1	7	16
MUMPS	35	62	42	50	43	22	16	17	29	30	28	14
PERTUSSIS	14	16	5	14	19	28	28	16	7	4	6	4
PSITTACOSIS	0	1	0	0	0	0	0	0	0	0	0	0
REYE SYNDROME	0	0	0	0	0	0	0	0	1	0	0	1
RMSF	0	0	0	0	0	1	0	0	0	0	0	0
RUBELLA	1	1	3	1	0	1	0	0	1	0	0	2
SALMONELLOSIS	101	88	123	129	144	181	225	256	225	188	162	111
SHIGELLOSIS	104	92	131	143	668	312	375	323	308	384	360	368
SYPHILIS,PRIMARY/SECONDARY □	241	261	320	348	240	309	259	306	296	285	177	274
TETANUS	0	0	1	1	0	1	0	1	0	1	0	0
TOXIC SHOCK SYNDROME	0	1	0	0	0	0	0	0	0	0	0	0
TRICHINOSIS	0	0	0	0	0	0	0	0	0	0	0	0
TUBERCULOSIS □	85	152	190	212	168	210	243	252	252	256	210	280
TULAREMIA	0	0	0	0	0	0	0	0	0	0	0	0
TYPHOID FEVER	2	1	2	1	0	2	4	4	3	2	1	1
TYPHUS FEVER. MURINE	2	0	2	1	4	2	3	2	0	0	1	1
VIBRIO INFECTIONS	1	0	0	2	1	2	2	1	2	2	2	0

□ TOTALS ARE BY MONTH OF REPORT RATHER THAN MONTH OF ONSET

TABLE IV

REPORTED CASES OF SELECTED DISEASES BY AGE GROUP TEXAS, 1992

DISEASE	< 1	1 4	5-9	10-14	15-19	20-29	30-39	40-49	50-59	60 +	UNK
AMEBIASIS	2	4	14	5	2	19	32	10	12	7	1
BOTULISM	1	0	0	0	0	0	0	0	0	0	0
BRUCELLOSIS	0	1	2	1	2	3	6	5	2	5	0
CAMPYLOBACTERIOSIS	76	146	55	44	49	211	181	103	44	57	30
CHOLERA	0	0	0	0	0	0	0	2	3	0	0
COCCIDIOIDOMYCOSIS	0	1	0	0	3	11	16	7	10	8	12
DENGUE	0	0	0	0	0	0	0	0	0	0	0
ENCEPHALITIS	8	3	8	6	7	14	9	10	10	14	0
GONORRHEA		65		687	10952	16516	5533		1762		2
HANSEN'S DISEASE	0	0	1	1	1	4	9	12	4	19	1
H. INFLUENZAE INFECTIONS	21	8	5	2	0	2	0	1	0	0	0
HEPATITIS A	15	127	407	244	131	381	253	101	42	73	54
HEPATITIS B	15	14	11	17	111	508	420	193	67	91	81
HEPATITIS NANB	0	1	1	4	0	7	4	2	1	5	1
HEPATITIS UNSPECIFIED	1	7	35	16	11	40	43	22	8	4	4
HISTOPLASMOSIS	1	0	0	0	1	8	11	19	10	13	5
LEGIONELLOSIS	0	0	0	0	0	0	5	3	3	12	1
LEPTOSPIROSIS	0	1	3	0	0	1	0	0	0	0	0
LISTERIOSIS	2	0	0	0	2	1	6	1	1	12	1
LYME DISEASE	0	1	5	8	5	9	30	28	14	12	1
MALARIA	0	6	4	1	3	7	12	7	2	2	1
MEASLES	370	422	82	42	53	90	29	7	1	1	0
MENINGITIS, ASEPTIC	286	128	165	91	75	214	164	51	18	28	22
MENINGITIS, OTHER/BACTERIAL	111	29	11	9	7	47	49	36	27	53	1
MENINGOCOCCAL INFECTIONS	20	28	14	4	20	6	2	6	5	6	0
MUMPS	7	54	107	81	75	32	16	11	5	0	0
PERTUSSIS	117	28	7	3	1	1	4	0	0	0	0
PSITTACOSIS	0	0	0	0	0	0	0	0	0	1	0
REYE SYNDROME	0	1	1	0	0	0	0	0	0	0	0
RMSF	0	0	0	0	0	0	0	0	0	0	1
RUBELLA	2	1	1	0	0	2	4	0	0	0	0
SALMONELLOSIS	449	385	123	83	63	185	159	97	66	188	135
SHIGELLOSIS	95	1022	844	171	148	404	261	91	53	88	391
'PHIL PRIMARY/SECONDARY		2		36	436	1332	986		524		0
TETANUS	0	0	0	0	0	1	0	1	0	3	0
TOXIC SHOCK SYNDROME	0	0	0	0	0	0	0	0	0	1	0
TRICHINOSIS	0	0	0	0	0	0	0	0	0	0	0
TULAREMIA	0	0	0	0	0	0	0	0	0	0	0
TYPHOID FEVER	0	2	5	4	4	2	3	3	0	0	0
TYPHUS FEVER, MURINE	0	1	2	0	1	0	3	5	3	3	0
VIBRIO INFECTIONS	0	0	0	0	1	0	2	3	1	8	0

TABLE V

REPORTED CASES OF SELECTED DISEASES PER 100,000 POPULATION BY AGEGROUP TEXAS, 1992

DISEASE	< 1	1-4	5-9	10-14	15-19	20-29	30-39	40-49	50-59	60 +	UNK
AMEBIASIS	.7	.3	.9	.4	.2	.7	1.0	.4	.8	.4	-
BOTULISM	.3	.0	.0	.0	.0	.0	.0	.0	.0	.0	-
BRUCELLOSIS	.0	.1	.1	.1	.2	.1	.2	.2	.1	.3	-
CAMPYLOBACTERIOSIS	25.1	12.1	3.7	3.1	3.8	7.9	5.8	4.5	3.0	3.2	-
CHOLERA	.0	.0	.0	.0	.0	.0	.0	.1	.2	.0	-
COCCIDIOIDOMYCOSIS	.0	.1	.0	.0	.2	.4	.5	.3	.7	.4	-
DENGUE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	-
ENCEPHALITIS	2.6	.2	.5	.4	.5	.5	.3	.4	.7	.8	-
GONORRHEA		2.2		49.1	858.0	617.3	176.7		28.7		-
HANSEN'S DISEASE	.0	.0	.1	.1	.1	.1	.3	.5	.3	1.1	-
H. INFLUENZAE INFECTIONS	4.9	.7	.3	.1	.0	.1	.0	.0	.0	.0	-
HEPATITIS A	4.9	10.5	27.3	17.4	10.3	14.2	8.1	4.4	2.9	4.1	-
HEPATITIS B	4.9	1.2	.7	1.2	8.7	19.0	13.4	8.4	4.6	5.1	-
HEPATITIS NANB	.0	.1	.1	.3	.0	.3	.1	.1	.1	.3	-
HEPATITIS UNSPECIFIED	.3	.6	2.3	1.1	.9	1.5	1.4	10.0	.6	.2	-
HISTOPLASMOSIS	.3	.0	.0	.0	.1	.3	.4	.8	.7	.7	-
LEGIONELLOSIS	.0	.0	.0	.0	.0	.0	.2	.1	.2	.7	-
LEPTOSPIROSIS	.0	.1	.2	.0	.0	.1	.0	.0	.0	.0	-
LISTERIOSIS	.7	.0	.0	.0	.2	.1	.2	.0	.1	.7	-
LYME DISEASE	.0	.1	.3	.6	.4	.3	10.0	1.2	10.0	.7	-
MALARIA	.0	.5	.3	.1	.2	.3	.4	.3	.1	.1	-
MEASLES	122.0	35.0	5.5	3.0	4.2	3.4	.9	.3	.1	.1	-
MENINGITIS, ASEPTIC	94.3	10.6	11.1	6.5	5.9	8.0	5.2	2.2	1.2	1.6	-
MENINGITIS, OTHER/BACTERIAL	36.6	2.4	.7	.6	.5	1.8	1.6	1.6	1.9	3.0	-
MENINGOCOCCAL INFECTIONS	6.6	2.3	.9	.3	1.6	.2	.1	.3	.3	.3	-
MUMPS	2.3	4.5	7.2	5.8	5.9	1.2	.5	.5	.3	.0	-
PERTUSSIS	38.6	2.3	.5	.2	.1	.1	.1	.0	.0	.0	-
PSITTACOSIS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	-
REYE SYNDROME	.0	.1	.1	.0	.0	.0	.0	.0	.0	.0	-
RMSF	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	-
RUBELLA	.7	.1	.1	.0	.0	.1	.1	.0	.0	.0	-
SALMONELLOSIS	148.0	32.0	8.2	5.9	4.9	6.9	5.1	4.2	4.6	10.5	-
SHIGELLOSIS	31.3	84.9	56.6	12.2	11.6	15.1	8.3	4.0	3.7	4.9	-
SYPHILIS, PRIMARY/SECONDARY		.1		2.6	34.2	49.8	31.5		8.5		-
TETANUS	.0	.0	.0	.0	.0	.1	.0	.0	.0	.2	-
TOXIC SHOCK SYNDROME	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	-
TRICHINOSIS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	-
TULAREMIA	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	-
TYPHOID FEVER	.0	.2	.3	.3	.3	.1	.1	.1	.0	.0	-
TYPHUS FEVER, MURINE	.0	.1	.1	.0	.1	.0	.1	.2	.2	.2	-
VIBRIO INFECTIONS	.0	.0	.0	.0	.1	.0	.1	.1	.1	.4	-

TABLE VI

REPORTED CASES OF SELECTED DISEASES BY PUBLIC HEALTH REGIONS TEXAS, 1992

DISEASE	TOTAL 1992	PHR 1	PHR 2	PHR 3	PHR4	PHR 5	PHR 6	PHR 7	PHR 8
AMEBIASIS	108	18	3	12	11	30	0	4	30
BOTULISM	1	0	0	1	0	0	0	0	0
BRUCELLOSIS	27	5	0	2	2	4	5	0	9
CAMPYLOBACTERIOSIS	996	145	75	45	291	210	158	36	36
CHICKENPOX	20554	2978	631	1671	8663	2016	1375	981	2239
COCCIDIOIDOMYCOSIS	68	5	6	15	8	3	14	1	16
DENGUE	0	0	0	0	0	0	0	0	0
ENCEPHALITIS	89	9	8	6	37	16	2	6	5
GONORRHEA	35517	3971	1096	873	11924	12591	1772	2326	910
HANSEN'S DISEASE	52	0	0	0	24	8	2	1	17
H. INFLUENZAE INFECTIONS	42	8	2	4	11	8	3	6	0
HEPATITIS A	1828	81	48	328	394	478	261	32	206
HEPATITIS B	1528	143	37	108	335	603	137	92	73
HEPATITIS NANB	26	2	2	4	12	5	0	1	0
HEPATITIS UNSPECIFIED	191	14	1	5	52	79	2	7	31
HISTOPLASMOSIS	79	21	0	1	16	25	10	5	1
INFLUENZA/FLU-LIKE ILLNESS	155568	2613	7302	10874	99865	11232	3185	2505	17992
LEGIONELLOSIS	24	5	1	1	10	2	2	0	3
LEPTOSPIROSIS	5	0	0	0	0	4	0	0	1
LISTERIOSIS	26	4	0	0	7	7	5	1	2
LYME DISEASE	113	16	2	4	16	56	3	13	3
MALARIA	45	1	0	1	15	21	0	6	1
MEASLES	1097	10	2	1	26	8	10	0	1040
MENINGITIS, ASEPTIC	1242	114	67	133	352	378	111	36	51
MENINGITIS, OTHER/BACTERIAL	380	79	11	20	130	77	19	24	20
MENINGOCOCCAL INFECTIONS	111	16	2	3	38	33	1	13	5
MUMPS	388	25	109	18	56	109	15	13	43
PERTUSSIS	161	22	7	19	10	85	6	9	3
PSITTACOSIS	1	0	0	0	0	1	0	0	0
RABIES (HUMAN)	2	0	0	0	0	0	0	0	0
RMSF	1	1	0	0	0	0	0	0	0
RUBELLA	10	1	0	2	1	3	1	0	1
SALMONELLOSIS	1933	217	142	204	415	415	151	136	253
SHIGELLOSIS	3568	1146	294	242	392	647	458	76	313
SYPHILIS, PRIMARY/SECONDARY	3316	269	19	28	1367	1160	113	301	59
TETANUS	5	0	0	0	0	3	0	2	0
TOXIC SHOCK SYNDROME	1	0	1	0	0	0	0	0	0
TUBERCULOSIS	2510	215	50	148	962	485	181	125	344
TULAREMIA	0	0	0	0	0	0	0	0	0
TYPHOID FEVER	23	1	2	0	9	6	1	1	3
TYPHUS FEVER, ENDEMIC	18	0	0	0	0	1	1	0	16
VIBRIO INFECTIONS	15	2	1	0	9	1	1	0	1

TABLE VII

REPORTED CASES OF SELECTED DISEASES PER 100,000 POPULATION BY PUBLIC HEALTH REGIONS TEXAS, 1992

DISEASE	TOTAL 1992	PHR 1	PHR 2	PHR 3	PHR 4	PHR 5	PHR 6	PHR 7	PHR 8
AMEBIASIS	.6	1.0	.4	1.0	.2	.6	.0	.3	1.9
BOTULISM	.0	.0	.0	.1	.0	.0	.0	.0	.0
BRUCELLOSIS	.2	.3	.0	.2	.0	.1	.3	.0	.6
CAMPYLOBACTERIOSIS	5.7	8.1	10.0	3.8	6.6	4.2	9.4	2.9	2.3
CHICKENPOX	116.7	166.8	84.2	142.1	195.9	40.4	81.9	79.7	141.0
COCCIDIOIDOMYCOSIS	.4	.3	.8	1.3	.2	.1	.8	.1	1.0
DENGUE	.0	.0	.0	.0	.0	.0	.0	.0	.0
ENCEPHALITIS	.5	.5	1.1	.5	.8	.3	.1	.5	.3
GONORRHEA	201.6	222.4	146.3	74.3	269.7	252.5	105.5	189.0	57.3
HANSEN'S DISEASE	.3	.0	.0	.0	.5	.2	.1	.1	1.1
H. INFLUENZAE INFECTIONS	.2	.4	.3	.3	.2	.2	.2	.5	.0
HEPATITIS A	10.4	4.5	6.4	27.9	8.9	9.6	15.5	2.6	13.0
HEPATITIS B	8.7	8.0	4.9	9.2	7.6	12.1	8.2	7.5	4.6
HEPATITIS NANB	.1	.1	.3	.3	.3	.1	.0	.1	.0
HEPATITIS UNSPECIFIED	1.4	.8	.1	.4	1.2	1.6	.1	.6	2.0
HISTOPLASMOSIS	.4	1.2	.0	.1	.4	.5	.6	.4	.1
INFLUENZA/FLU-LIKE ILLNESS	883.1	146.4	974.7	924.9	2258.7	225.2	189.7	203.6	1133.4
LEGIONELLOSIS	.1	.3	.1	.1	.2	.0	.1	.0	.2
LEPTOSPIROSIS	.0	.0	.0	.0	.0	.1	.0	.0	.1
LISTERIOSIS	.1	.2	.0	.0	.2	.1	.3	.1	.1
LYME DISEASE	.6	.9	.3	.3	.4	1.1	.2	1.1	.2
MALARIA	.3	.1	.0	.1	.3	.4	.0	.5	.1
MEASLES	6.2	.6	.3	.1	.6	.2	.6	.0	65.5
MENINGITIS, ASEPTIC	7.1	6.4	8.9	11.3	8.0	7.6	6.6	2.9	3.2
MENINGITIS, OTHER/BACTERIAL	2.2	4.4	1.5	1.7	2.9	1.5	1.1	2.0	1.3
MENINGOCOCCAL INFECTIONS	.6	.9	.3	.3	.9	.7	.1	1.1	.3
MUMPS	2.2	1.4	14.5	1.5	1.3	2.2	.9	1.1	2.7
PERTUSSIS	.9	1.2	.9	1.6	.2	1.7	.4	.7	.2
PSITTACOSIS	.0	.0	.0	.0	.0	.0	.0	.0	.0
RABIES (HUMAN)	.0	.0	.0	.0	.0	.0	.0	.0	.0
RMSF	.0	.1	.0	.0	.0	.0	.0	.0	.0
RUBELLA	.1	.1	.0	.2	.0	.1	.1	.0	.1
SALMONELLOSIS	11.0	12.2	19.0	17.4	9.4	8.3	9.0	11.1	15.9
SHIGELLOSIS	20.3	64.2	39.2	20.6	8.9	13.0	27.3	6.2	19.7
SYPHILIS, PRIMARY/SECONDARY	18.8	15.1	2.5	2.4	30.9	23.3	6.7	24.5	3.7
TETANUS	.0	.0	.0	.0	.0	.1	.0	.2	.0
TOXIC SHOCK SYNDROME	.0	.0	.1	.0	.0	.0	.0	.0	.0
TUBERCULOSIS	14.2	12.0	6.7	12.6	21.8	9.7	10.8	10.2	21.7
TULAREMIA	.0	.0	.0	.0	.0	.0	.0	.0	.0
TYPHOID FEVER	.1	.1	.3	.0	.2	.1	.1	.1	.2
TYPHUS FEVER. ENDEMIC	.1	.0	.0	.0	.0	.0	.1	.0	1.0
VIBRIO INFECTIONS	.1	.1	.1	.0	.2	.0	.1	.0	.1

REPORTABLE DISEASES IN TEXAS

The Communicable Disease Prevention and Control Act (Texas Civil Statutes, Articles **4419b-1)** requires physicians, dentists, and veterinarians to report, after the first professional encounter, each patient examined who is suspected of having a reportable disease. Also required to report are certain individuals from hospitals, laboratories, and schools. Detailed rules on the reporting of notifiable diseases and conditions and the duties of local **health authorities** may be found in Article 97, **Title** 25, Texas Adminstrative Code.

DISEASES REPORTABLE IMMEDIATELY BY .TELEPHONE

BY NAME, CITY, AGE, SEX, RACWETHNICITY, DISEASE, TYPE OF DIAGNOSIS, DATE OF ONSET, AND PHYSICIAN:

To the Infectious Diseases Program,
Texas Department of Health, in Austin
(CALL TOLL-FREE 1-800-252-8239)

Botulism (adult)
Cholera
Plague
Rabies in Man
Yellow Fever

To the Immunization Division,
Texas Department of Health, in Austin
(CALL TOLL-FREE **1-800-252-9152)**

Diphtheria
Measles
Pertussis
Polio, paralytic
Rubella

All of the other diseases listed below are to be reported to your local health authority, who will in turn report them to the Texas Department of **Health.**[1]

DISEASES REPORTABLE ON A WEEKLY BASIS

BY NAME, CITY, AGE, SEX, RACWETHNICITY, DISEASE, TYPE OF DIAGNOSIS, DATE OF ONSET, AND PHYSICIAN:

Acquired Immune Deficiency Syndrome (AIDS)
Acute Occupational Pesticide Poisoning[2]
Amebiasis
Anthrax
Asbestosis2
Botulism (infant)
Brucellosis
Campylobacteriosis
Chlamydia trachomatis infections (laboratory confirmed **only)**[3]
Coccidioidomycosis
Dengue
Elevated Blood Lead in Adults (blood lead ≥40 **mcg/dl** in persons ≥15 years **of age)**[2]
Encephalitis (specify etiology)
Gonorrhea[3]
Haemophilus influenzae Infections **(systemic)**[4]
Hansen's disease (leprosy)

Hepatitis, Viral
- **Type A**
- **Type B**
- Type D (delta agent)
- Non-A, Non-B
- **Unspecified**

Histoplasmosis
Legionellosis
Leptospirosis
Listeria Infections
Lyme Disease
Malaria
Meningitis
- **Aseptic/Viral**
- Bacterial (specify etiology)
- Fungal
- Other

Meningococcal Infections
Mumps
Psittacosis

Q Fever
Reye Syndrome
Rocky Mountain Spotted Fever
Rubella, Congenital Syndrome
Salmonellosis
Shigellosis
Silicosis[2]
Syphilis[3]
Tetanus
Toxic Shock Syndrome
Trichinosis
Tuberculosis[5]
Tularemia
Typhoid Fever
Typhus Fever
- Endemic (murine)
- Epidemic

Vibrio Infections (specify species)
Viral Hemorrhagic Fever

BY NUMBER ONLY:

Influenza & Flu-like Illnesses

BY NUMBER AND AGE GROUP ONLY:

Chickenpox

BY NUMBER, AGE GROUP, AND SEX ONLY:

Human **Immunodeficiency** Virus (HIV) Infections[6]

In addition to the requirements of individual case reports, any unusual outbreak of disease of public health concern shall be reported to the Texas Department of Health in Austin through the local health authority or to the State Epidemiologist directly by the most expeditious means.

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[1] The local health authority or regional director shall collect reports of disease and transmit them at **weekly** intervals to the Texas Department of Health. Transmittal may be by telephone, mail, or electronic transmission.

[2] The Occupational Disease Reporting Act, Article **5182c,** Texas Civil Statutes, requires physicians and directors of laboratories to report these occupationally related diseases to the Texas Department of Health.

[3] **Syphilis,** gonorrhea, and laboratory-confirmed Chlamydia trachomatis infections are reportable in accordance with Sections 97.132, 97.134, and 97.135 of 25 TAC. **Form** STD-27, 'Confidential Report of Sexually Transmitted Disease," shall be used to report these sexually transmitted diseases.

[4] **Includes** meningitis, septicemia, cellulitis, epiglottitis osteomyelitis, **pericarditis,** septic **arthritis,** and pneumonia.

[5] **Report** tuberculosis on **form** TB-400, 'Report of Case and Patient Services.'

[6] **Reported** by physician only once per case, following initial physician diagnosis.

6-101a (5-88)

Bureau of Communicable Disease Control
Bureau of Epidemiology
Bureau of HIV/STD Control

Texas Department of Health
1100 West 49th Street
Austin, Texas 78756