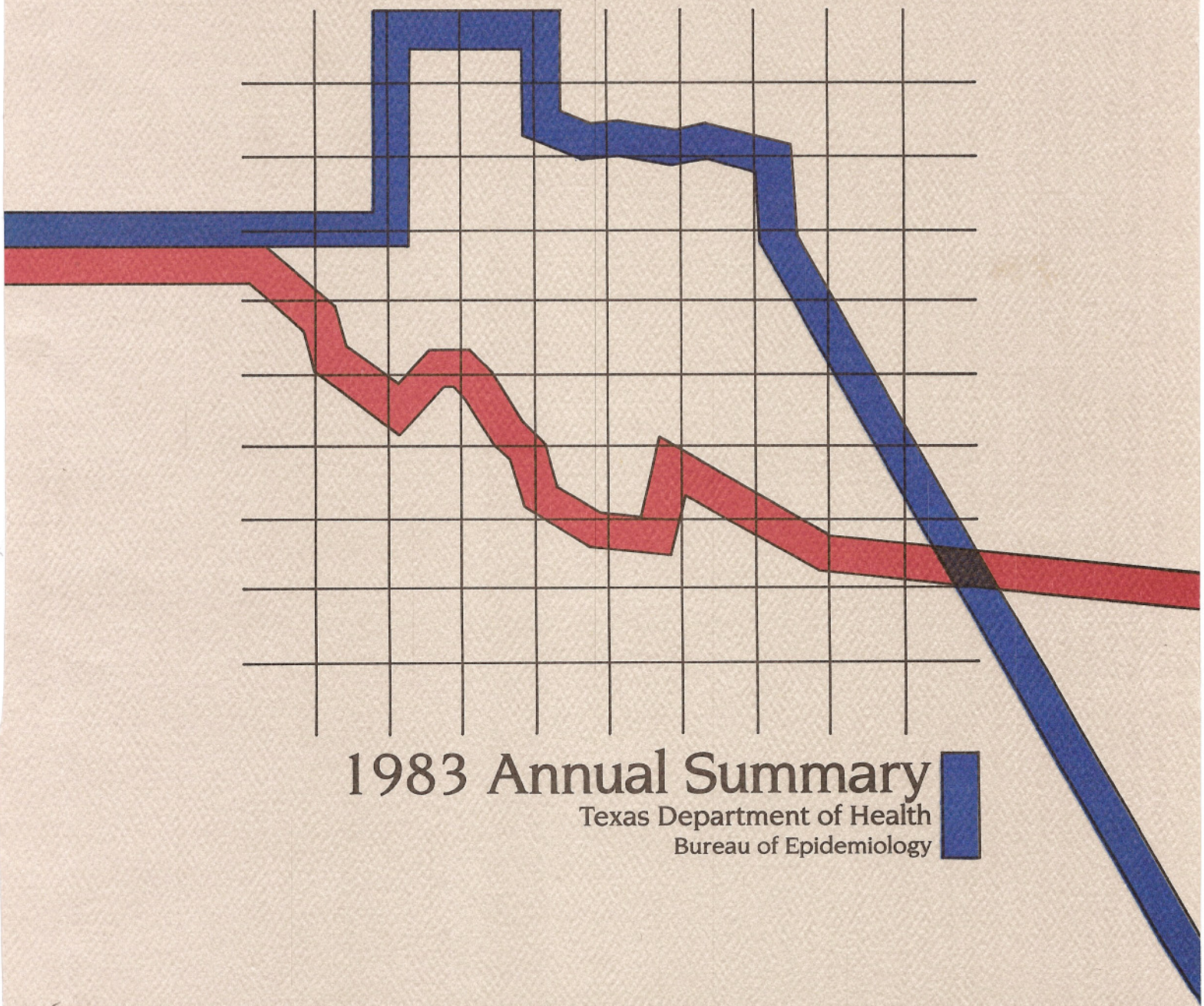
Reported Morbidity and Mortality in Texas



1983 Annual Summary

Texas Department of Health
Bureau of Epidemiology

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Chairman, Texas Board of Health

Robert Bernstein, M.D., F.A.C.P.
Commissioner of Health

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REPORTED MORBIDITY AND MORTALITY IN TEXAS 1983 ANNUAL SUMMARY

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FOREWORD

It is the normal course of events that the incidence of infectious diseases rise and fall even as rainfall, temperature, and economic indicators go up and down. If we are fortunate enough to have control measures which can be applied to specific diseases, we may be able to blunt the upward fluctuations and enhance the downward fluctuations to a significant degree. That this has, in fact, been accomplished is reflected in the 1983 morbidity statistics.

Tuberculosis declined to under 2,000 new cases in Texas for the first time in history. Thus continues a slow, but steady decline which began with the introduction of specific antituberculosis drugs in the 1950's and was given needed impetus by the institution of a statewide tuberculosis control program in 1965.

Measles also reached a new low in incidence; the 37 reported cases in 1983 represented a decrease of 99.96 percent since 86,086 cases were reported in 1958. This spectacular decrease can be attributed to an effective vaccine and dogged determination to find and immunize susceptible children. It should be pointed out, however, that the battle to eradicate measles must continue. We already know, as this report goes to press, that the incidence of measles in 1984 will be significantly higher.

The incidence of a few infectious diseases has risen. There are significant new highs to report in the incidence of aseptic meningitis and Rocky Mountain spotted fever. However, we feel that the new levels reflect greater awareness and more complete reporting rather than true increases in disease incidence. Small increases in the incidence of infectious hepatitis and salmonellosis may be the result of an increase in urban populations.

The addition of Acquired Immune Deficiency Syndrome (AIDS) to the list of reportable diseases in March 1983 marked the official recognition of an important new disease with a case-fatality ratio that, with the exception of human rabies, has not been seen in over fifty years. We are thus constantly reminded that nothing stands still, including the evolution of infectious diseases. They are and will be a hazard in the environment for many years to come. We are far from submitting our final report.

Ron J. Anderson, M.D., Chairman
Texas Board of Health

Robert Bernstein, M.D., F.A.C.P.
Commissioner of Health

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INTRODUCTION

HISTORICAL BACKGROUND

The first State Health Officer was appointed by the Governor of Texas in 1879 at a time when public health work was limited principally to quarantine; this action led to the creation of the Texas Quarantine Department in 1891. The department was reorganized in 1903 as the Department of Public Health and Vital Statistics, and again in 1929 as the State Health Department. In 1910, a year after the first State Board of Health was appointed, public health laws which required the reporting of certain communicable diseases were passed by the Texas State Legislature. In May 1920, the procedures for the reporting and management of communicable diseases in Texas became operative. Since that time, a surveillance system based on the communicable disease reports originating with practicing physicians and forwarded each week from designated reporting agents has served as the primary mechanism for the collection of morbidity data for the Texas Department of Health.

THE REPORTING SYSTEM

The Texas Board of Health, under the legal authority of Article 4419b-1, Texas Civil Statutes, has adopted specific rules and regulations relating to the prevention, reporting, and control of communicable diseases. The Board has designated specific diseases as "reportable" and established the mechanics for reporting communicable diseases, control measures, and the use of quarantine procedures.

The new Texas Communicable Disease Control Act which became effective on September 1, 1983, made some significant changes in the required reporting procedures. Prior to September 1, physicians were the only health professionals required to report cases to the Texas Department of Health. Registered nurses, laboratory directors, school administrators, day-care center directors, nursing home administrators, hospital administrators, and hospital infection control practitioners are now required to report also.

The communicable disease reporting system is coordinated by the Bureau of Epidemiology, Texas Department of Health, and is made up of approximately five-hundred designated reporting agents throughout the state of Texas. These designated agents include appointed city and county Health Officers, local city and county health departments, health districts, state schools, state hospitals, veterans' hospitals, and military installations. The Bureau of Epidemiology supplies report cards, Form C-15 (see Appendix), to reporting agents each week. The cards are then completed and returned to the Bureau of Epidemiology, or reports can be made directly to the central office by means of a toll-free telephone number. Information regarding reportable diseases is also received by the Bureau of Epidemiology through other means including laboratory reports, completed case investigation forms, and death certificates which have been filed with the Bureau of Vital Statistics, Texas Department of Health.

Morbidity data are organized, recorded, and examined on a weekly basis to determine disease trends, including fluctuations in morbidity, seasonal variation, changes in disease distribution, and other aspects of the natural history of endemic and epidemic diseases. These data are then published monthly in *Texas Preventable Disease News* and distributed throughout the state to local health department directors and hospital infection control practitioners, nationwide to other state epidemiologists, and upon request to other health professionals. This publication describes preventable disease control activities on local, state, and national levels, as well as other items of public health interest.

The communicable disease reporting system in Texas is essential to the successful prevention and control of certain communicable diseases which threaten the lives and well-being of the citizens of Texas. Early detection of unusual characteristics or patterns of reportable diseases often provides sufficient evidence to warrant the initiation of preventive measures. In addition to statewide reporting, cooperative efforts in the area of communicable disease control are made with other state health departments and the national Centers for Disease Control in Atlanta, Georgia. These efforts contribute to an effective overall communicable disease prevention and control program for the nation.

OTHER SOURCES OF DATA

Data submitted to the Bureau of Epidemiology through the statewide morbidity reporting system are supplemented by other data collection procedures and surveillance activities of the Bureau of Vital Statistics, the Bureau of Laboratories, the Zoonosis Control Division, the Tuberculosis Services Division, the Venereal Disease Control Division, and the Immunization Division.

The population figures for 1974-1980 used in computing incidence rates for the state are from the Current Population Report, Series P-25, published by the Federal Bureau of the Census. The population figures for 1981-1983 were provided by the Bureau of State Health Planning and Resource Development, Texas Department of Health. The 1983 provisional Texas population figure (15,346,000) reflects an increase of 2.7% over the 1982 state population (14,944,000).

The mortality data which appear in Table III, Appendix, are tabulations provided by the Statistical Services Division, Bureau of Vital Statistics, and may not be identical to the mortality data referred to in the summaries of individual diseases. These small discrepancies may be due in part to the procedures established by the Ninth Revision of the *International Classification of Diseases* whereby the category to which the death is assigned is determined by the information provided on the death certificate.

The completeness of disease reporting by physicians and other health professionals and of the morbidity data published in this report is influenced by the interests and priorities for disease control and surveillance of the various reporting agents. However, the degree of underreporting is thought to remain relatively consistent with a slow but steady trend toward completeness; this allows data comparison over the years.

SELECTED DISEASE SUMMARIES

ACQUIRED IMMUNE DEFICIENCY SYNDROME

On March 19, 1983, the Board of Health added Acquired Immune Deficiency Syndrome (AIDS) to the list of reportable diseases in Texas. This syndrome is characterized by the development of a defect in the immune system which leaves the patient vulnerable to a variety of opportunistic diseases. The case definition developed by the Centers for Disease Control and adopted universally is:

1. Presence of reliably diagnosed disease at least moderately indicative of underlying cellular immunodeficiency, and
2. Absence of known causes of underlying immunodeficiency and of any other reduced resistance reported to be associated with the disease.

The infections associated with AIDS are: *Pneumocystis carinii* pneumonia, *Toxoplasma gondii* encephalitis or disseminated infection, *Cryptosporidium* diarrhea (lasting longer than one month), *Candida* esophagitis, cryptococcal meningitis or disseminated infection, disseminated *Mycobacterium aviumintracellulare*(other than pulmonary or lymphatic), chronic mucocutaneous herpes simplex (lasting longer than one month), histologically evident cytomegalovirus infection of an organ other than liver or lymph nodes, progressive multifocal leukoencephalopathy (papovavirus). Two forms of cancer are also associated: Kaposi's sarcoma (in a person under the age of 60) and primary brain lymphoma limited to the brain.

The first cases were reported simultaneously from Los Angeles and New York in 1981. The majority of these cases was homosexual males. As additional cases were reported, homosexual males continued to account for more than 70% but cases were also occurring among three other distinct groups: heterosexual users of intravenous drugs (17%), recent Haitian immigrants (4%), and hemophiliacs (0.7%). Approximately 6% of the cases could not be assigned to any of these groups considered to be at high risk for acquiring AIDS. These proportions have not changed over time although 3,626 cases had been diagnosed nationwide and 134 cases in Texas through December 1983.

These proportions are not representative of the distribution of cases in individual states. The cases with a history of use of needles for selfinjection are largely restricted to the New York-New Jersey Metropolitan areas. The majority of Haitian cases has also been reported from the New York-New Jersey area and from Florida where most of the Haitian immigrants reside. Therefore, the distribution of cases in Texas is not unusual: 92% homosexual/bisexual males, 3% heterosexual I.V. drug users, and 5% other.

The age distribution of cases in Texas also does not differ from national figures: 20% age 20-29; 55% age 30-39; 17% age 40-49; and 8% age 49 and older. However, the racial/ethnic distribution of Texas cases differs from national totals (see Table 1).

Table 1

Racial/Ethnic Distribution of Reported Cases of AIDS in Texas and the United States and of the General Population of Texas, 1980-1983

Race/Ethnicity	Total Texas Cases	Total U.S. Cases	Total Texas Population
White, not Hispanic	81.7%	57.5%	66%
Black, not Hispanic	9.9	25.7	11
Hispanic	5.6	14.5	23
Other	0.7	0.4	— —
Unknown	2.1	2.0	— —
TOTAL	100%	100%	100%

The case-fatality ratio associated with AIDS is quite high, over 40% for both Texas and the U.S. However, this is a cumulative percentage; few cases survive beyond two years after diagnosis (see Table 2), and there have been no reversals in the immune deficiency. Cases with a rapidly fatal course often cannot be interviewed. If the medical history is not complete, the case cannot be assigned to one of the groups considered at high risk and, therefore, is part of the 6% for whom risk factors are not apparent or are unknown. There are several other much smaller groups of cases that contribute to this 6%: 1) those who have received blood or blood products within five years prior to the onset of illness; 2) prostitutes, 3) spouses or sexual partners of cases; and 4) children born to a mother who is a case or belongs to one of the groups at risk.

Table 2

Reported Cases of AIDS in Texas by Year of Diagnosis, County of Residence, and Number of Deaths 1980 – 1983

Year	Total Cases	County	Number Of Cases	Number Of Deaths
1980	1	Bexar	1	1
1981	6	Harris	6	5
1982	27	Harris	18	12
		Dallas	6	4
		Bexar	2	0
		All others	1	1
1983	100	Harris	49	27
		Dallas	23	7
		Bexar	13	8
		All others	15	7
		TOTAL	134	72

The cause of AIDS is currently unknown, but it seems likely to be an agent present in blood and body secretions. Transmission is thought to be analogous to hepatitis B, occurring mainly through intimate sexual contact and contaminated needles, and less frequently congenitally or by parenteral exposure to blood or blood products. There is

very promising data that a retrovirus belonging to the Human T cell leukemia virus (HTLV) family may be the etiologic agent. However, treatment at this time is still directed at the specific diseases present and at attempts to restore immune function.

AMEBIASIS

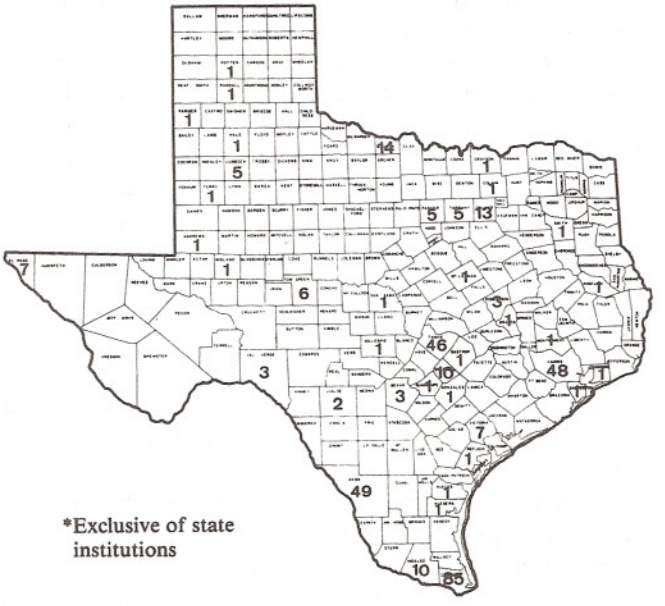
Amebiasis is an infection with the protozoan parasite, *Entamoeba histolytica.* Generally an intestinal infection, and often asymptomatic, symptoms when present can range from mild abdominal discomfort to acute dysentary. Rarely, the trophozoite stage penetrates the intestinal wall and invades other organ systems, with an hepatic abcess being the most common extraintestinal complication.

Infection follows ingestion of the infective *E. histolytica* cysts. Transmission can occur through consumption of fecally contaminated water or foods (e.g. raw vegetables fertilized with human night soil), hand-to-mouth transfer of cysts (from an infected individual or contaminated fomites, as might occur in a day-care environment), or sexual contact (especially among male homosexuals).

A total of 412 cases of amebiasis was reported during 1983, down 16% from 1982. Sixty-seven cases (16% of the total) were reported among residents of state institutions, many of whom had been reported in previous years and may have represented treatment failures or persisting serologic titers rather than new infections. Because of these and other special problems (poor personal hygiene and close person-to-person contact), institutionalized cases will not be included in further analysis.

Figure 1

Reported Cases* of Amebiasis in Texas By County of Residence, 1983



*Exclusive of state institutions

Although the total number of reported cases was down from the previous year, the number of non-institutionalized cases actually increased 14% to 345 cases. Figure 1 shows the geographic distribution of these cases. Large numbers of cases continued to be reported from Webb, Travis, and Harris counties and the Lower Rio Grande Valley, though no outbreaks were reported from these areas. The ten cases in Caldwell County represented an outbreak in an extended family with probable person-to-person transmission.

Of the 345 non-institutionalized cases, 56% were male, and 44% were female, for a 1.25:1 sex ratio. Of the 316 cases for whom race/ethnicity was reported, 29% were reported as White, 66% as Hispanic, 2% as Black, and 3% as Asian/Pacific Islander; ethnicity was not reported for 29 (8% of the total) cases. All age groups were represented among the cases, with children under ten accounting for the largest proportion (95 cases for 27% of the total) of reports. Interestingly, the sex ratio of cases less than 20 years of age was 1:1, whereas for cases over 20 years of age the ratio was approximately 1.6:1, with males predominating.

A large proportion of amebiasis cases in the United States has been asymptomatic or experienced mild illness, due to the general good health of the population and relative avirulence of native *E. histolytica* strains. However, the potential exists for severe, and even fatal illness. Three deaths were recorded among Texas' 1983 cases. Two of the deaths were female Hispanic infants, residents of Harris and Parmer counties, both of whom had malnutrition and significant intestinal and extraintestinal complications. The third fatal case was a 57-year-old White male resident of Travis County, who died of amebic colitis with numerous amebic abcesses of the liver.

ARBOVIRAL INFECTIONS

There were only four cases of arboviral infections in humans reported in Texas residents in 1983. Three of these infections were due to St. Louis Encephalitis (SLE) virus and one was caused by Western Equine Encephalitis (WEE) virus.

ST. LOUIS ENCEPHALITIS

The first human case in 1983 was a 78-year-old, White male in Bell County who had onset of illness in June. His illness was described as encephalitis; he remained hospitalized approximately two months and recovered. The second case also had encephalitis. This was an 18-year-old, Hispanic male from El Paso County who had onset of illness in September. He recovered in approximately two weeks. The third case, from Crosby County, was a 33-year-old, White male, who also had onset of illness in September. His illness was diagnosed as meningitis and lasted only a week.

There were several isolations of SLE virus in the state during 1983. The Harris County Mosquito Control District made 23 isolations from mosquitoes collected between July 12

and August 31. Isolations were made by the state laboratory from mosquitoes collected in Willacy County in April, Hidalgo County in May, and Chambers County in July. Only one of 83 sentinal chickens tested in June and July in Hidalgo County had antibody to SLE virus, but 3 of 39 had antibody when tested in October. Five of 58 chickens in Lubbock County had antibody when tested September. No other SLE virus activity was reported in the state.

WESTERN EQUINE ENCEPHALITIS

The only reported human infection with WEE virus occurred in a 49-year-old, White male in Hale County. He had onset of illness in August and was diagnosed with encephalitis. The illness lasted one week.

Eight equine cases were also reported. The first was in Wise County in June and the second in Castro County in July. Six cases occurred in Lubbock County (adjacent to Hale County) in June (1), July (2), August (2), and September (1). One WEE virus isolation was made in 1983 from a pool of mosquitoes collected in July in Midland County. There was evidence of virus activity in sentinal chicken flocks in Lubbock throughout the late summer and fall; three of 29 had antibody in August, 15 of 58 in September, 12 of 33 in October, and 19 of 42 in November.

OTHER ARBOVIRAL INFECTIONS

The only evidence of Eastern Equine Encephalitis virus activity in Texas in 1983 was in a horse. This case was confirmed serologically by the Texas Department of Health laboratory and occurred in November in Wood County (PHR 7).

No cases of dengue, neither imported nor indigenous, were reported in Texas in 1983.

ASEPTIC MENINGITIS

In 1983, 1175 cases of aseptic meningitis were reported to the Texas Department of Health. This resulted in a 49% increase over the number of cases reported the previous year and an annual incidence rate of 7.66 cases per 100,000 population. This was the highest incidence rate for one year since surveillance of the disease began in 1956.

Enteroviruses are the most common cause of aseptic meningitis, and increased numbers of cases in a particular year usually correspond to increased prevalence of a particular enterovirus type. Coxsackievirus B5 (CB5) was the most common enterovirus isolate reported and represented 31.8% of all enteroviruses isolated by the 18 laboratories that participated in the statewide virus surveillance system in 1983 (see Virus Surveillance, pg. 30). Ninety-two of the 141 (65.2%) CB5 isolates were associated with cases of aseptic meningitis, and CB5 isolates made up 40.7% of all 1983 viral isolates associated with aseptic meningitis identified through this system.

The causative agent was indicated for only 5% of the 1,175 cases of aseptic meningitis reported, yet 59 of the 60 viruses were enteroviruses (see Table 3). Coxsackie B5 was the most common isolate. Echovirus 11 was the second most common isolate and was associated with an outbreak among members of a high school football team in Public Health Region 1 during August 1983. Thirty-eight (71.7%) of 53 football players and three team managers met the case definition, and ECHO 11 was isolated from stool specimens from three players. In addition to the 12 players who were hospitalized, five other residents of the community were hospitalized in July and August with a diagnosis of aseptic meningitis. ECHO 11 was isolated from four of these five patients.

Table 3

Viral Agents Associated with Reported Cases of Aseptic Meningitis and Encephalitis, Texas, 1983

	Aseptic Meningitis		Encephalitis	
Virus	Number	Percent	Number	Percent
Enteroviruses				
Coxsackie A9	3	5%	–	–
B2	3	5	1	2%
B5	20	33	1	2
Echovirus 1	1	2	–	–
7	8	13	1	2
9	6	10	3	7
11	14	23	2	5
24	1	2	–	–
30	1	2	1	2
31	2	3	–	–
Parainfluenza	1	2	–	–
Herpes simplex	–	–	30	73
Varicella zoster	–	–	2	5
	60	100%	41	100%

Enteroviruses are commonly spread via the fecal-oral route, although the respiratory route may be involved with some serotypes. Transmission is facilitated by the type of close contact that occurs in family situations. Of the 1,175 cases reported in 1983, 19 were associated with nine families. In three instances, the cases were all children; two were husband and wife, two were mother and child, and two were father and child. The method of transmission among the football players was thought to be related to the practice of dipping cups by hand into a water cooler rather than filling the cups from the spigot.

The age distribution of cases in 1983 continued to be skewed, the incidence rate decreased as age increased. The incidence rate for infants less than one year of age was 126.9 per 100,000 population in 1983, compared to 7.95 per 100,000 in persons aged 1-34 years and 1.4 per 100,000 in persons over 35 years of age. The rates for individual ages within these groups did not differ significantly. These rates were higher in 1983 than in previous years, reflecting the increased rate overall; however, the trend and the abrupt difference between children less than one and older than one

was consistant with previous years. This was the first time in Texas that the incidence rate for persons over 35 years of age exceeded 1.0 case per 100,000 population.

The morbidity associated with aseptic meningitis is considerable. The number of reported cases is large and represents only those individuals who sought medical attention. Because the headache and other symptoms may be severe and incapacitating, many patients are hospitalized. In the outbreak in PHR 1, 12 of the 38 persons identified were hospitalized. Associated mortality, however, is extremely low; there was only one fatal case (a 44-year-old woman) reported in Texas in 1983. This resulted in a case-fatality ratio of 0.085%.

BOTULISM

Three cases of botulism were reported to the Texas Department of Health during 1983. These included two cases of infant botulism and one case of food-borne botulism.

The reported episode of food-borne botulism involved a 23-year-old, White male from whom type A organisms were identified in stool specimens. The Houston resident became ill in August and recovered from his illness. No contaminated foods were ever documented.

Two cases of infant botulism were reported in Texas during 1983. Both infants experienced the symptoms characteristic of the disease: constipation, difficulty swallowing, poor feeding, lethargy, generalized weakness, a weak cry, and ptosis. Both cases were caused by type A toxin, and both infants recovered from their illnesses.

The first case of infant botulism involved a Hispanic male almost five months old. Although this infant was not a permanent resident of Texas, he was recorded as a Texas case based on criteria established by the Centers for Disease Control. The child had been visiting in Texas for two months and had returned to his permanent home in California less than two weeks before onset of his symptoms early in July 1983. His dietary history revealed that he had been primarily breast-fed for his first three months. During his fourth month, he was started on formula with iron and breast-feedings were decreased such that he was primarily formula-fed during the month before onset of illness.

The second Texas case also occurred in July 1983. The child was a two-week-old, White female resident of Midland, Texas, who was primarily breast-fed but had started on formula two days prior to onset of symptoms. She was initially hospitalized in Midland and transferred to Fort Worth Children's Hospital where the diagnosis of infant botulism was made. She experienced some respiratory difficulty and required intubation, ventilatory support, and tube feedings. The child was treated with antibiotics and progressively improved without further complications. She was released from the hospital after 64 days. Type A toxin was identified in stool specimens submitted to the Bureau of Laboratories, Texas Department of Health.

Epidemiologically, infant botulism differs from the classic food-borne botulism. Infant botulism occurs when *Clostridium botulinum* spores cause an infection in the intestines and produce a toxin which, when absorbed, causes weakness or paralysis in the child. The disease is limited to children under one year of age in whom the illness cannot be traced to any home- or commercially canned foods. The disease is not outbreak associated, and other family members are not affected. Infant botulism is not a common disease, in fact, only eight cases have been reported in Texas since 1976 when the disease was first recognized as a distinct clinical entity.

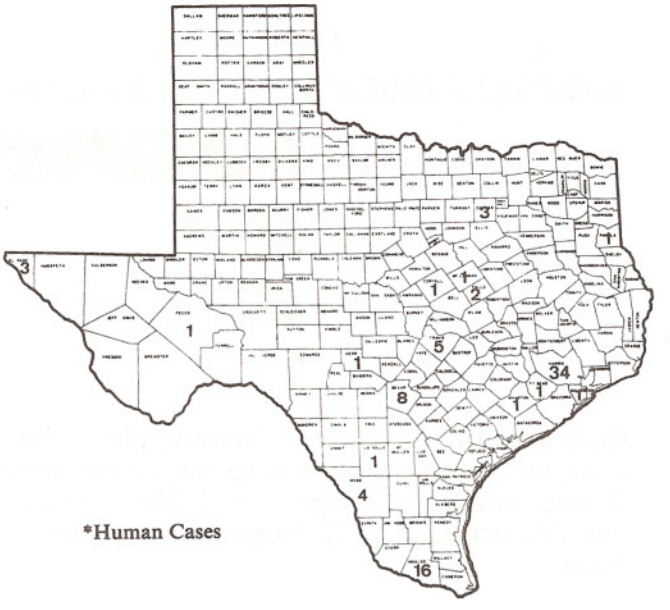
Wound botulism has not been reported in Texas since 1979 when one case occurred.

BRUCELLOSIS

Brucellosis is a zoonosis caused by gram-negative bacilli species of the genus *Brucella.* Human cases are generally associated with one of three *Brucella* species, each of which primarily infects a specific animal species, *Brucella abortus* (cattle), *B. melitensis* (goats), or *B. suis* (pigs). In recent years, most human brucellosis in the United States has been acquired occupationally, with the majority of cases occurring among adult males employed in animal husbandry or the meat-packing industry.

Eighty-four cases (the largest number since 1954) were reported to the Texas Department of Health in 1983. Figure 2 shows the number of cases by county of residence. Only eight cases were associated with occupational exposures, the majority of cases (51%) was female, and ages ranged from 2 to 92 years.

Figure 2
Reported Cases* of Brucellosis in Texas
By County of Residence, 1983



*Human Cases

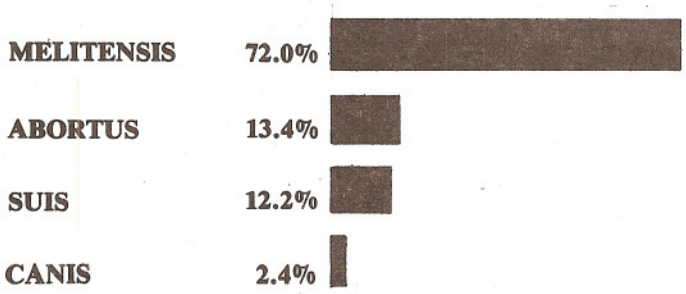
An outbreak of brucellosis in Houston contributed 29 cases to the total. These cases occurred among Hispanic residents who consumed unpasteurized goat's milk cheese obtained from vendors selling door-to-door and from automobiles. The cheese was purchased in Linares, Mexico, and sold illegally in Texas. (Linares, in the Mexican state of Nuevo Leon, is about 80 miles southwest of McAllen, Texas.) During 1982, Mexico recorded a provisional total of 2,382 cases of brucellosis, 432 of which were reported from Nuevo Leon. Although no *Brucellae* were cultured from samples of the cheese, *B. melitensis* was cultured from the blood of 20 cases associated with the outbreak. Nineteen of the cases involved in this outbreak were members of five families. Two cases were pregnant (22 and 26 weeks) at the time of onset of symptoms; one pregnancy resulted in a full-term, live birth, and the other pregnancy outcome was not reported. One Houston case died, though brucellosis was not listed among the causes of death.

Statewide, 55 cases reported consuming dairy products of Mexican origin (principally goat's milk cheese, made from unpasteurized milk to retain its unique taste) prior to onset of symptoms. Ten additional cases had *B. melitensis* isolated from their blood, indicating that the sources of these infections could also be traced to goats or their products. (Brucellosis is seldom reported among goats in Texas.) Three cases were cattle ranchers (one *B. abortus* isolate), three worked in the meat-packing industry (two *B. suis* isolates), one was a cattle inspector with the Texas Animal Health Commission, and one raised cattle and pigs (*B. suis* isolate). No obvious exposure was reported in eleven cases, though two had *B. suis* isolated, and one *B. abortus*, suggesting possible sources of infection.

Forty-four cases were confirmed through isolation of a *Brucella* organism: 36 *B. melitensis,* five *B. suis,* and three *B. abortus,* and 40 were confirmed serologically. During the five-year period 1979-83, 82 of 212 reported cases (39%) have been confirmed by culture; 59 (72%) of these isolates have been *B. melitensis* (Figure 3).

Figure 3

BRUCELLA ISOLATES IN TEXAS, 1979-1983



Cases ranged in age from two to 92 years, with a median age of 32; 55% were in the economically active 20-60 age group. Females outnumbered males 43 to 41. The ethnic distribution of cases included 72 Hispanics, 10 Whites, and 2 Blacks.

Although brucellosis can be a serious, long-term, and debilitating illness, fatal outcomes are rarely reported. During 1983, two Texas cases died, though the role brucellosis played is unclear, and brucellosis was not included among the causes of death in either case. The first death was a 92-year-old, Hispanic female associated with the Houston outbreak. She was unresponsive at the time of hospitalization and underwent surgery for a subdural fluid accumulation. She was recovering uneventfully when she had a cardiac arrest and died. *Brucella melitensis* was identified during routine blood culture examination, and further investigation revealed that she had eaten goat's milk cheese prior to hospitalization. The second fatal case was a 51-year-old, White male resident of Fort Bend County. He had a history of cardiac problems and died of congestive heart failure in a Houston hospital. *Brucella suis* was cultured from this case; however, he had no history of contact with pigs.

CHICKENPOX

Varicella (chickenpox) is usually a mild, self-limited illness of young children. The infection is spread by respiratory secretions or direct contact with vesicle fluid. Virus enters the respiratory tract, multiplies locally or in regional lymph nodes, produces a primary viremia, and is disseminated in the bloodstream to internal organs. Further viral replication takes place followed by a secondary viremia and seeding of the cutaneous tissues (skin). Fever is usually the first sign of illness, followed within a day by a papular rash of the skin and mucous membranes. The total incubation period from exposure to onset of rash is generally 14 to 21 days. The papules become vesicular (blisters) and are accompanied by itching. Natural infections are highly contagious, and multiple infections in a family are the rule.

Cases of chickenpox are reported to the Bureau of Epidemiology, Texas Department of Health, each week by numeric totals by age group. In 1983, a total of 15,031 cases was reported. This not only represented a 36% increase from the 11,050 cases reported in 1982, but was the highest number of cases of chickenpox reported in Texas since surveillance of the disease resumed in 1972. Seventy-two (72) percent of the reported cases occurred between February and May. The distribution of cases by age group is provided in Table V, Appendix.

Six deaths due to varicella occurred in Texas residents during 1983. These individuals ranged in age from six months to 79 years. Two deaths resulted from complications of pneumonia, and three individuals died from disseminated varicella infections. Five of the deaths occurred within a four-week period during the peak months of varicella activity (March and April); one occurred in December.

Chickenpox is equally contagious among hospitalized patients, and the Texas Department of Health is consulted with increasing frequency about hospital exposures. Because of the many immuno-compromised children in hospi-

tals today, prompt attention must be given to strict isolation of cases and administration of varicella-zoster immune globulin (VZIG) to certain exposed patients.

ENCEPHALITIS

There were 159 cases of encephalitis reported in 1983, only two cases more than were reported in 1982. The causative agent was available for 41 cases (26%). (See Table 3 in Aseptic Meningitis, pg. 6.)

Herpes Simplex:

Herpes simplex virus accounted for 30 cases of encephalitis in 1983. This was 73% of the cases for whom an agent was listed and 19% of all cases reported. Nineteen (19) cases died for a case-fatality ratio of 63%. Four cases occurred in children three months of age or younger resulting in death in three of these infants. The incidence rate for children less than one year of age was 1.61 per 100,000 population, almost three times the next highest rate of 0.55 per 100,000 for adults 60-69 years of age. The incidence rates for the other age groups ranged from 0.096 per 100,000 for children between one and four years of age to 0.439 per 100,000 for adults 50-59 years of age; the rates generally increased with age.

Varicella Zoster:

A 71-year-old female and a six-year-old male were the only two cases of encephalitis assocated with varicella zoster virus. Both cases occurred in July, and both recovered.

Enteroviruses:

Enterovirus infections were associated with nine cases of encephalitis: three were ECHO 9, two were ECHO 11, and there was one case each of ECHO 7, ECHO 30, coxsackie B2, and coxsackie B5. This distribution differs from that associated with aseptic meningitis and may reflect pathogenicity of individual serotypes versus prevalence and distribution. Cases ranged in age from one month to 30 years. Two-thirds of the cases were six years of age or younger. All of the cases recovered.

ENTERIC INFECTIONS

SALMONELLOSIS, EXCLUDING TYPHOID FEVER

Salmonellosis is an acute infectious disease commonly manifested by a gastroenteritis with colicky abdominal pain, fever, diarrhea lasting several days, nausea, and sometimes vomiting. Infection is usually limited to acute gastroenteritis but on occasion may develop into enteric fever or rarely a focal infection. A very small percentage of patients may become chronic, asymptomatic carriers for a year or more after the initial infection. Antibiotic therapy of uncomplicated gastroenteritis is usually ineffective and may lengthen the course of the disease (leading possibly to resistant strains) and increase the carrier rate.

Deaths are uncommon except in the very young, very old, or the patient with chronic disease. Four deaths due to salmonellosis were reported in Texas during 1983. These included two elderly patients one of whom died from septicemia, a four-month-old infant who died from meningitis, and a 55-year-old who also suffered from malnutrition.

Salmonella is the most common pathogen in food-borne disease outbreaks in the United States. Although person-to-person transmission and human carriers may play a role in the epidemiology of non-typhoid salmonellosis, the most important vehicle of spread is food. The usual mode of transmission is ingestion of food which has been contaminated by feces of an infected person or animal, or by the consumption of contaminated raw eggs or egg products, dairy products, meats, or poultry. A large number of organisms (one million to one billion) are generally required to produce infection in 50% of the people exposed. The incubation period is usually 12-48 hours or longer. About 20-35% of household contacts to a case become infected.

In 1983, 2838 cases of salmonellosis were reported in Texas. Hispanics who represent only 23% of the general population in Texas accounted for 45% of the cases. Whites accounted for 42% of the cases; Blacks, 11%; and American Indians and Asian/Pacific Islanders 1%. Among cases for whom age was reported, the majority (52%) was under five years of age. The complete distribution of cases by age group is provided in Table V, Appendix.

Incidence rates of salmonellosis in counties with populations over 200,000 and in counties with populations over 70,000 that had rates twice the overall state rate of 18.49 cases per 100,000 are provided in Table 4. The incidence rates in individual counties varied throughout the state due to differences in reporting procedures. El Paso County experienced a three-fold increase from the previous year. An outbreak of 106 cases of multiple antibiotic resistant, antigenic Group B salmonella occurred in El Paso during the summer of 1983, and serological subtyping of 40 specimens identified *Salmonella typhimurium.* Investigation by the El Paso County Health Department revealed no common source for the outbreak; however, six cases were associated with eating at a restaurant in Ciudad Juarez.

Serotypes were reported for 2,116 (75%) of the total cases in Texas during 1983, and there were 108 different serotypes reported by the Bureau of Laboratories, Texas Department of Health. The ten most frequently isolated serotypes accounted for 71% of the total isolations in 1983 and are listed in Table 5. The most common serotype reported was again *S. typhimurium*, representing 29% of the total isolations. Identification of serotypes is helpful in outbreak recognition and investigation. This is especially true if rare serotypes are found, a large number of the same serotype

are found in an area, or a change in the usual geographic distribution of serotypes is identified.

Table 4

Reported Cases and Incidence Rates of Salmonellosis and Shigellosis for Selected Counties in Texas, 1983

County	Population	Salmonellosis Cases	Salmonellosis Rate*	Shigellosis Cases	Shigellosis Rate*
200,000+ population					
Bexar	1,045,419	212	20.28	210	20.09
Cameron	239,893	44	18.34	145	60.44
Dallas	1,634,836	358	21.90	224	13.70
El Paso	532,218	323	60.69	186	34.95
Galveston	204,491	42	20.54	10	4.89
Harris	2,660,357	687	25.82	521	19.58
Hidalgo	327,909	50	15.25	124	37.82
Jefferson	251,152	56	22.30	21	8.36
Lubbock	219,671	51	23.22	63	28.68
Nueces	279,479	44	15.74	45	16.10
Tarrant	908,264	107	11.78	48	5.28
Travis	455,753	95	20.84	78	17.11
70,000-200,000 population+					
Johnson	75,979	28	36.85	4	5.26
Potter	101,153	45	44.48	19	18.78
Victoria	74,043	55	74.28	60	81.03
Webb	113,948	68	59.67	91	79.86

*per 100,000 population

+ with salmonellosis rates greater than twice that of the Texas rate

Table 5

Reported Salmonella Serotypes by Bureau of Laboratories, Texas Department of Health, 1983

Serotype (Species *Enteritidis*)	No. of Isolates	% of Isolates
typhimurium	610	28.8%
newport	289	13.7
javiana	133	6.3
heidelberg	101	4.8
montevideo	101	4.8
infantis	65	3.1
oranienburg	65	3.1
agona	64	3.0
anatum	39	1.8
derby	35	1.7
98 other serotypes	614	29.0
TOTAL	2116	100.1%

SHIGELLOSIS

Shigellosis is an acute bacterial disease characterized by diarrhea, fever, cramps, tenesmus, nausea, and sometimes vomiting. In severe cases, stools may contain blood, mucus, and pus. In 1983, over 50% of the Texas cases were caused by *Shigella sonnei* and over one-third by *Shigella flexneri*. Shigellosis is primarily a disease of children, with 59% of the reported cases occurring in children under the age of ten years. Infection in the adult is frequently sub-clinical, and patients usually recover spontaneously in about a week. On the other hand, people suffering from malnutrition and elderly debilitated persons are especially prone to severe disease and death.

In 1983, a total of 2,206 cases was reported in Texas. As in previous years, cases were equally distributed between the sexes. Hispanics generally account for the most shigellosis, and in 1983, increased to 53% of the total cases from 43.5% in 1982. As in 1982, the largest number of cases occurred in the 1-4 year-old age group, which accounted for 684 (31% of the total). The numbers of cases and incidence rates for shigellosis in representative counties are shown in Table 4.

Transmission of the disease is by the direct or indirect fecal-oral route from a patient or carrier; an asymptomatic or mildly symptomatic child is probably most important in person-to-person transmission. Food, water, and milk-borne transmission may occur as a result of direct fecal contamination. Simultaneous outbreaks of *S. sonnei* gastroenteritis occurred in October 1983 at Texas A & M University in College Station and at Prairie View A & M University in Prairie View. Investigations of both outbreaks found salads to be associated with illness. Both schools received deliveries of produce from the same company during the week preceeding these outbreaks. At Texas A & M, 30 students (eight with culture proven *S. sonnei*) met the case definition, whereas at Prairie View A & M, 47 students (three culture proven) met the case definition.

Laboratory data are available for 52% of the reported cases. For 1983, the Bureau of Laboratories reported the following isolations of *Shigella* species: *S. sonnei* - 60.0%, *S. flexneri* - 35.6%, *S. boydii* - 3.8%, and *S. dysenteriae* 0.7%).

HEMOPHILUS INFLUENZAE MENINGITIS

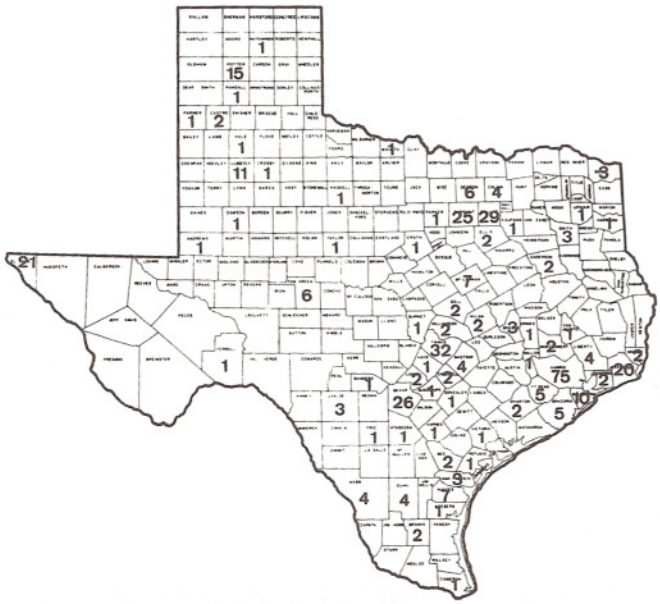
Hemophilus influenzae type b is the most common cause of bacterial meningitis in children under three years of age, both in Texas and in the United States. The disease is characterized by fever, vomiting, irritability, lethargy, bulging fontanelles in infants, and nuchal rigidity and severe headaches in older children and adults. Five to 10% of all cases are fatal. Prompt diagnosis and initiation of appropriate antibiotic therapy are critical since most deaths occur within the first few hours of hospitalization.

The reporting of cases of *H. influenzae* meningitis is not required by law in Texas; however, in 1982 the Texas Department of Health began to encourage the reporting of cases of the disease throughout the state. The effort was successful and has resulted in increased reporting of the disease, thereby allowing more complete epidemiologic data to be collected on cases.

In 1983, 394 cases of *H. influenzae* meningitis were voluntarily reported to the Texas Department of Health from 71 counties across the state, and case investigation forms were completed and submitted on 70% of these cases. As in previous years, the majority of cases occurred in the larger metropolitan areas with 52% of the cases reported from Dallas, Tarrant, Travis, Bexar, El Paso, and Harris counties. The geographic distribution of cases in Texas is provided in Figure 4.

Figure 4

Reported Cases of Hemophilus Influenzae Meningitis in Texas By County of Residence, 1983



The age distribution of cases in Texas was again typical of national reports of *H. influenzae* meningitis: 96% of cases occurred in children under four years of age and 81% in children under two years of age. The proportion of cases in males increased 10% from the 1982 figure and accounted for 58% of the total cases in 1983; females accounted for 42% of the 1983 cases, a decrease of 11% from the 1982 proportion. The race/ethnicity of the 378 cases for whom race/ethnicity was reported included 192 Whites (50.7%), 98 Hispanics (25.9%), 86 Blacks (22.7%), and 3 Asians (0.8%).

The case-fatality ratio decreased from 7.5% in 1982 to 5.8% in 1983. The 23 patients who died as a result of *H. influenzae* meningitis included 7 infants under one year of age, 8 one-year-olds, 6 two-year-olds, one 11-year-old, and one elderly patient, 70 years of age. The decline in the case-fatality ratio may be due to improved reporting of non-fatal cases.

The risk of secondary infections in day-care centers remains a matter of concern to health professionals. A review of the data indicated that in 1983, 56 infants and children reported as having *H. influenzae* meningitis were enrolled in day-care centers at the time of onset. However, no outbreaks were reported in day-care centers in Texas last year.

Antibiotic sensitivity studies revealed that 58 (27%) of the 218 organisms tested in 1983 were resistant to ampicillin. None of the 197 isolates tested were resistant to chloramphenicol. Only twelve organisms were tested for rifampin sensitivity; none were resistant, and only one displayed intermediate sensitivity.

The Texas Department of Health continues to encourage physicians, infection control practitioners, laboratory directors, and other health professionals to report *H. influenzae* meningitis in Texas. As the reporting of the disease continues to improve, a more accurate assessment of trends in Texas can be made.

INFLUENZA AND FLU-LIKE ILLNESS

Influenza is a viral illness characterized by fever, cough, sore throat, chills, and muscle aches. The influenza season in Texas usually occurs from November to April each year. Influenza viruses are spread from person to person through droplets of moisture expelled into the air when a person sneezes, coughs, or talks.

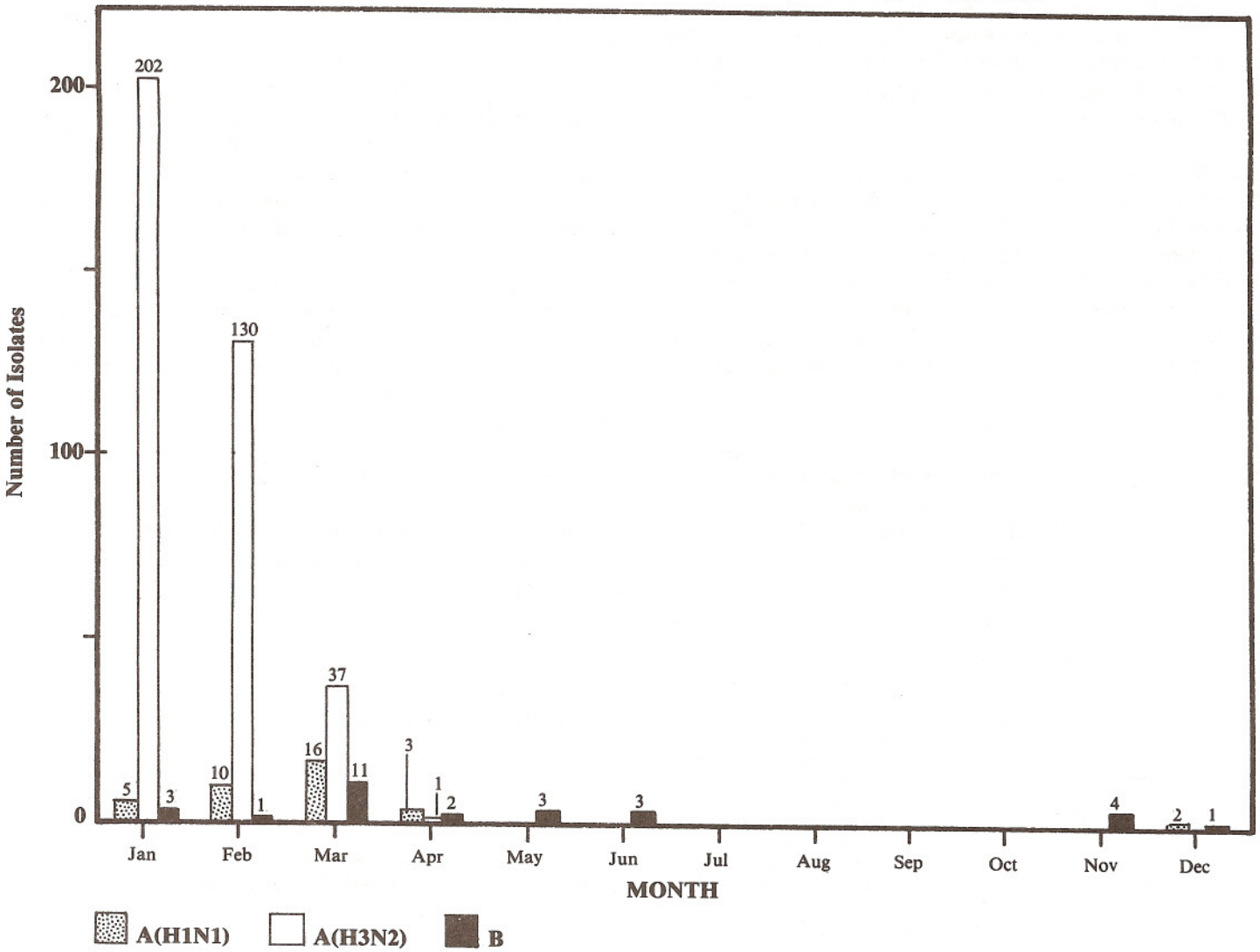
A total of 92,160 cases of influenza and influenza-like illnesses was reported to the Texas Department of Health during 1983. The largest numbers of cases were reported in the months of February (21,537) and March (16,403). The 92,160 cases reflect only a 2% decrease from the 93,736 cases reported in 1982.

Three influenza virus types were present in Texas during 1983. Influenza A(H3N2) viruses circulated from January through April 1983 and represented 85% of the 434 influenza viruses isolated in Texas in 1983. Influenza A(H1N1) and B viruses represented 8.3% and 6.4%, respectively, of the influenza viruses isolated.

Figure 5 shows the temporal distribution of the influenza viruses. Influenza A(H1N1) and B viruses were 3% and 1% of all influenza viruses isolated in January through February 1983. During March through June 1983, A(H1N1) and B viruses were 20% and 24% of all influenza viruses reported. Only A(H1N1) and B viruses were reported in late 1983.

Figure 5

Number and Type of Influenza Viruses By Month, Texas, 1983



MALARIA

Malaria, a parasitic disease usually transmitted through the bite of an infective, female anopheline mosquito, no longer occurs endemically in most temperate zone areas; however, the disease is still a major cause of morbidity in many parts of the tropics and subtropics. Malaria may also be transmitted by the transfusion of blood from infected persons or by use of contaminated syringes.

The four malarial parasites of humans are *Plasmodium falciparum, P. malariae, P. ovale,* and *P. vivax.* Falciparum malaria (malignant tertian) is the most severe infection.

In 1983, there were 54 cases of malaria reported in Texas, one less than in 1982. Fifty-three of the 1983 cases acquired their infection outside the United States: 20 cases were recent immigrants or students from countries where malaria is endemic, and 33 cases (non-immigrants) acquired malaria while on business or vacation. The remaining case acquired his infection by receiving blood platelets from another malaria case.

Africa was the geographic origin of malaria for 16 cases, followed by Central America and Mexico with 16 cases, and India with 11 cases.

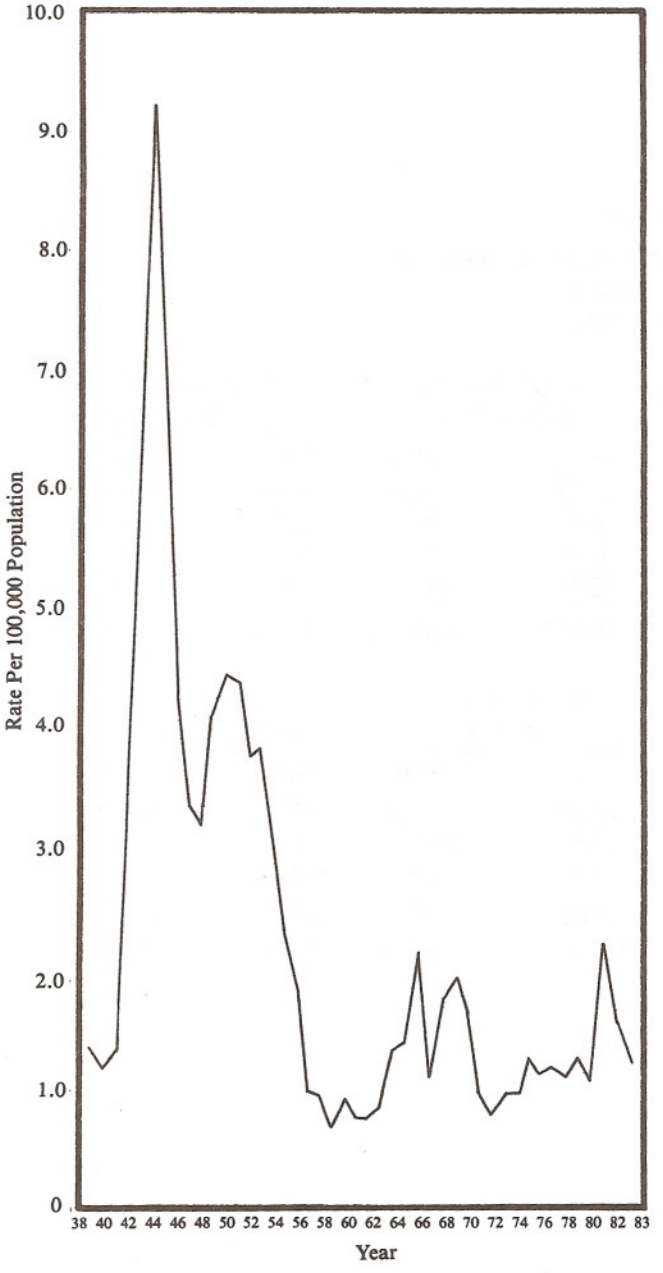
Thirty-eight (38) cases had *P. vivax* infections, eleven cases had *P. falciparum* infections, and one case had a *P. malariae* infection. The species was not determined for four cases.

Thirty-seven cases were male, and 17 were female. The mean age of the cases was 30 years with 80% of the cases forty years of age or younger.

MENINGOCOCCAL INFECTIONS

There were 188 cases of meningococcal infections reported in Texas in 1983 for an annual incidence rate of 1.23 per 100,000 population. This is the second year of decline from a peak of 2.23 per 100,000 in 1981 (see Figure 6). The case-fatality ratio (CFR) for 1983 was 8; this was the lowest ratio in a decade when ratios ranged from a high of 25.7 in 1978 to the previous low of 10.4 in 1981. There has been a general decline in the CFR since 1979 which may be due in part to improved reporting of non-fatal cases. The majority of fatal cases is identified by review of death certificates and this method has not changed.

Figure 6
Reported Cases of Meningococcal Infections In Texas Per 100,000 Population, 1938–1983



All systemic meningococcal infections are included in this category although meningitis and/or septicemia make up the majority of the cases. In 1983, the source of the organism isolated was recorded as cerebrospinal fluid (CSF) (60%), blood (30%), or CSF and blood (10%) for 118 cases. The serotypes of the organism were available for 55% (104) of the cases: 2% serotype A, 71% serotype B, 23% serotype C, 3% serotype W135, and 1% serotype Y. The proportion of organisms that are serotype C increased from 5% in 1980 to 39% in 1981 but has dropped steadily since.

Antibiotic resistance information was available for only a small percentage of the organisms isolated from cases in 1983. None of the 59 tested were resistant to ampicillin, one of 49 was resistant to chloramphenicol, one of 13 was resistant to rifampin, and one of 8 was resistant to sulfadiazine.

The age distribution of cases did not change in 1983, and the majority of cases occurred among children less than one year of age; the incidence rate among this group was 21 cases per 100,000 population. Children aged 1 to 4 years had an annual incidence rate of 4.3 per 100,000 and represented the only other age group with a rate greater than 1.0.

There was no difference in the incidence rates between males and females in the various age groups except for children under one year of age; the incidence rate for males was 25.9 per 100,000 compared to 15.7 per 100,000 for females. Despite the increased incidence there were only four deaths in this age group, two males and two females, for an overall case-fatality ratio of 8.0.

PSITTACOSIS

Psittacosis (ornithosis) is caused by the organism *Chlamydia psittaci* and is primarily a disease of birds. Psittacosis is readily transmitted to man by many species of birds including parrots, parakeets, cockatiels, turkeys, chickens, ducks, pigeons, sea gulls, egrets, and canaries. Persons at particular risk of psittacosis are workers at poultry farms or poultry processing plants, aviaries, or pet shops.

Affected birds may be asymptomatic carriers or may demonstrate a fulminant, rapidly fatal disease. The secretions and droppings of infected birds remain highly infectious even after drying. The disease is transmitted to humans almost always through inhaling aerosolized fresh excreta or dust from dried bird droppings. Person-to-person transmission is rare.

Symptoms of psittacosis include sore throat, fever, myalgia, chills, malaise, weakness, nonproductive cough, photophobia, and headache following an incubation period of 7-14 days.

Seven human cases of psittacosis including one death were reported in Texas during 1983. The cases ranged in age from

Table 6

Number Of Specimens Examined For Rabies In Texas By Laboratory Site And Species Of Animal, 1982

Laboratory Site	Skunk	Fox	Bat	Raccoon	Dog	Cat	Cow	Horse	Other	TOTAL
Arkansas*	1	0	1	0	0	0	0	0	0	2
Austin	996	62	453	330	2002	2419	220	127	863	7472
El Paso	27	3	46	6	119	73	3	0	7	284
Fort Sam Houston*	0	0	0	0	1	7	0	0	4	12
Houston*	93	0	24	0	1	1	0	1	0	120
Louisiana*	0	0	0	0	0	0	0	1	0	1
Nebraska*	0	0	0	0	0	0	0	1	0	1
San Antonio	36	2	82	11	186	226	6	2	78	629
TOTAL	1153	67	606	347	2309	2726	229	132	952	8521

*positives only

Table 7

Laboratory Confirmed Rabies Cases In Texas Domestic and Wild Animals 1983 and 1982

	NUMBER OF CASES		% OF TOTAL DOMESTIC		% OF TOTAL RABIES CASES	
DOMESTIC ANIMALS	1983	1982	1983	1982	1983	1982
Dogs	13	21	15.3%	18.6%	1.8%	2.6%
Cats	27	42	31.8	37.2	3.7	5.3
Cows	25	24	29.4	21.2	3.4	3.0
Horses	20	26	23.5	23.0	2.8	3.3
Total Domestic Animals	85	113	100.0%	100.0%	11.7%	14.2%

	NUMBER OF CASES		% OF TOTAL WILD		% OF TOTAL RABIES CASES	
WILD ANIMALS	1983	1982	1983	1982	1983	1982
Skunks	522	536	81.7%	78.5%	72.1%	67.3%
Bats	89	123	13.9	18.0	12.3	15.5
Foxes	16	13	2.5	1.9	2.2	1.6
Other*	12	11	1.9	1.6	1.7	1.4
Total Wild Animals	639	683	100.0%	100.0%	88.3%	85.8%
TOTAL ALL ANIMALS	724	796				

*Other positives for 1983

5 goats	1 sheep	1 bobcat	1 pig
2 raccoons	1 deer	1 opossum	

23 to 65 years, and included four men and three women. An outbreak of psittacosis involving three cases occurred in Waco (McLennan County, PHR 6) in July; all of these cases involved the same pet store.

A 27-year-old male who cleaned up at the pet shop during June was the first to become ill on July 3. His symptoms included fever up to 104.4°, cough, and headache, and he developed pneumonia. He was treated with ampicillin and tetracycline and recovered. The pet shop owner's father (63 years old) became ill on July 6. He was hospitalized with a cough and fever up to 105.2° and died of pneumonia on July 9 the same day that his wife (58 years old) became ill. She recovered from her illness.

One other unrelated case occurred in Waco in March of 1983. Other cities in Texas reporting one case each were De Soto (Dallas County), San Antonio, and El Paso. These four cases were all associated with pet birds.

RABIES IN ANIMALS

The Texas Department of Health, Bureau of Laboratories, affliated laboratories in Texas, and out of state laboratories examined a total of 8,521 Texas specimens for rabies during 1983 (Table 6) resulting in 724 laboratory confirmed cases of animal rabies, a decrease of 72 (or 9%) from the 796 cases reported in 1982. There were 141 counties in Texas that reported at least one case of animal rabies during 1983 (Figure 7). Wildlife species constituted 88% of the rabies cases and domestic animals almost 12%. The species which accounted for the largest numbers of submissions for rabies examinations were dogs and cats. Of the 2,309 dogs and 2,726 cats submitted for testing in 1983, only 13 dogs and 27 cats were found to be positive for rabies. Compared with the 1982 figures of 21 dogs and 42 cats, these represent decreases of 38% and 36%, respectively.

Skunks continued to be the species most often found to be positive for rabies in 1983. Of the 1,153 skunks' heads submitted for testing, 522 were positive for rabies and represented 72.1% of the total number of animal rabies cases. Table 7 provides the numbers and percentages of confirmed rabies cases each species contributed to the total last year.

Figure 8 illustrates the number of animal rabies cases by month for 1982 and 1983. The highest activity for both years was reported from March through June.

Figure 7

Reported Cases of Animal Rabies in Texas By County of Occurrence, 1983

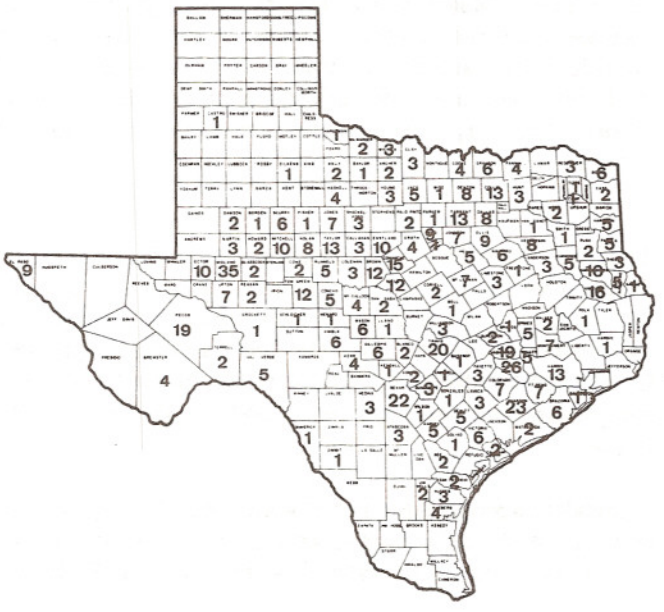
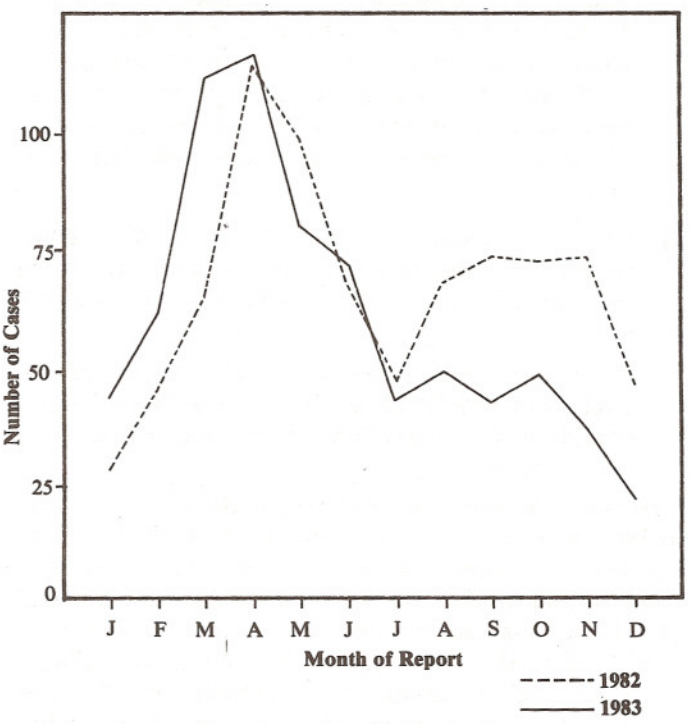


Figure 8

Reported Cases of Animal Rabies in Texas By Month of Report 1982–1983



REYE SYNDROME

Reye syndrome (RS) is a rarely diagnosed, pediatric neurologic disorder, which in recognized cases is noted for its rapid progression and high case-fatality ratio (typically 20-40%). RS usually presents as an uncomplicated viral illness (often influenza or varicella) from which the child appears to be recovering when persistent vomiting and personality changes occur. The child may demonstrate mild irritability, agitation, and disorientation followed by development of coma. RS presents differently in infants, who usually have diarrhea but vomit less frequently, and in whom changes in level of alertness are less evident. Recent evidence suggests that mild cases of RS, without life-threatening consequences, may be more common than previously reported.

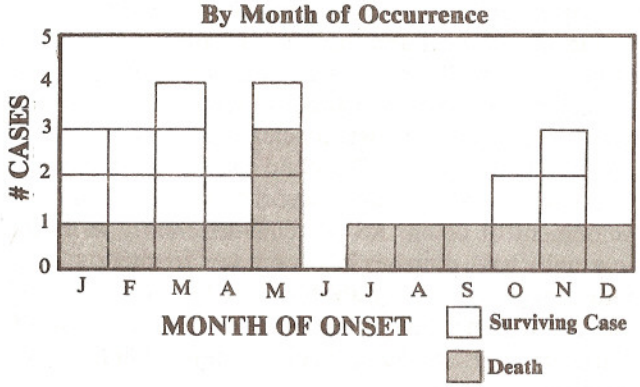
Other signs of RS include fatty metamorphosis of the liver and other organs; increased serum transaminase, prothrombin time and serum ammonia levels; and cerebral edema. Complications include dehydration, acidosis, hypotension, a bleeding tendency, renal insufficiency, pulmonary involvement, gastrointestinal hemorrhage and ulceration, and electrolyte imbalances. Cerebral edema and increased intracranial pressure can lead to severe neurologic damage and death. RS is a medical emergency, and early recognition, hospitalization, and specialized treatment with intensive supportive care are required to stay the progression of mild or early cases (Stages I & II) and improve the outcome in severe cases (Stages IV & V).

Without a known cause, the RS case definition established by the Centers for Disease Control (CDC) for surveillance purposes requires:

1) Acute non-inflammatory encephalopathy documented by the clinical picture of alteration in the level of consciousness and, if available, a record of cerebrospinal fluid containing 8 leukocytes or less per mm^3, or histologic sections of the brain demonstrating cerebral edema without perivascular or meningeal inflammation,
2) Fatty metamorphosis of the liver diagnosed by either biopsy or autopsy or a three-fold or greater rise in the levels of either the SGOT, SGPT, or serum ammonia, and
3) No known more reasonable explanation for the cerebral or hepatic abnormalities. The bilirubin level should be ≤ 3.0 mg/100 ml, to exclude children with other liver diseases.

Reye syndrome was designated a reportable disease in Texas in 1983, and 28 cases were reported, 25 of which met the standard CDC case definition. As in 1982, Texas cases were younger than the U.S. cases reported to the CDC; 60% (15 of 25) were less than five years old in contrast to 40% of CDC's cases. Also, the Texas case-fatality ratio of 52% (13 of 25) was higher than the national level (32%). RS cases occurred throughout the year (Figure 9), but clustered during months when respiratory and varicella (chickenpox) viruses were circulating widely. Cases ranged in age from three months to 16 years, and the ethnic distribution included 17 Whites, 5 Hispanics, and 3 Blacks.

Figure 9
Reported Cases of Reye Syndrome in Texas
By Month of Occurrence



Although the RS-aspirin connection remains controversial, the Surgeon General, CDC, FDA, NIH, American Academy of Pediatrics, and the TDH have recommended that salicylate-containing medications **not** be used to treat children with viral illnesses. In March 1983, the Bureau of Epidemiology and the Influenza Research Center at the Baylor College of Medicine conducted a survey of Houston parents of children who had experienced a recent illness. This survey attempted to measure public knowledge of the suspected RS-salicylate association and determine whether that knowledge influenced parental choice of an antipyretic. Results of the survey indicated that public knowledge of the RS-aspirin association had increased, and that use of aspirin to treat children with viral illnesses had declined. Reasons for these changes were not clearly related to public health education on RS, however, and health care providers must remain aware of the need to continue educational efforts in this area. CDC-directed research is underway to determine the usefulness of additional case-control studies on Reye syndrome and salicylate usage.

RICKETTSIAL DISEASES

ENDEMIC TYPHUS

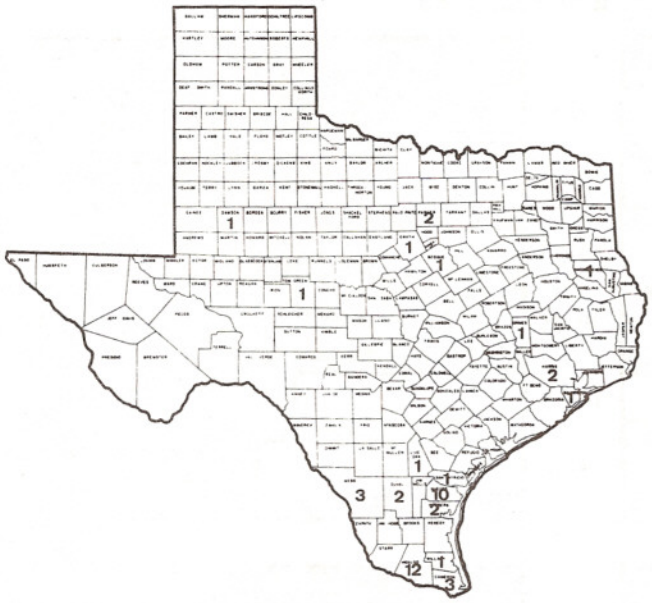
Endemic (murine or flea-borne) typhus is caused by *Rickettsia typhi,* a small, obligate, intracellular coccobacillus, which is usually transmitted by the feces of an infected rat flea. The rat flea defecates on the human host during the feeding process, and the itching associated with the flea bite facilitates the inoculation of infected feces into the bite site through scratching. However, flea bites frequently go unnoticed, and over 75% of reported persons cannot recall any flea bites prior to becoming ill.

In 1983, 46 confirmed cases of murine typhus were reported to the Texas Department of Health. This represents a 12% increase from the 41 cases reported in Texas in 1982. The counties of residence of the cases are presented in Figure 10. As in previous years, the majority of cases resided in south Texas. However, isolated cases were reported from rural areas throughout Texas.

Twenty of the 1983 cases were male, and 26 were female. Twenty-two cases (48%) were forty years of age or older. No seasonal peak of onset of symptoms was noted. Cases had onset of symptoms in every month except September. Only seven persons recalled a recent flea bite before onset of symptoms, and ten reported a rodent problem at their home.

Clinical symptoms were noted with the following frequencies for the 46 cases: fever - 100%; malaise - 74%; headache - 71%; anorexia - 50%; myalgia - 38%; nausea -38%; diar-

Figure 10
Reported Cases of Endemic Typhus in Texas
By County of Residence, 1983



rhea - 24%; and rash - 64%. The associated rash was most frequently observed on the trunk (78%), followed by arms (59%), legs (55%), and face (26%). The rash appeared, on the average, five days after onset of fever, ranging from zero to 14 days. Five cases developed their rash on the same day as the onset of fever. No deaths from murine typhus occurred in 1983.

Treatment data were recorded for 38 of the cases. Twenty-eight were treated with tetracycline alone; three cases were treated with chloramphenicol alone; and three cases were treated with both tetracycline and chloramphenicol. Four cases were treated with antibiotics not recognized as being effective against *Rickettsia typhi* or recovered without treatment. Antibiotic treatment was initiated, on the average, seven days after fever onset.

The diagnosis was confirmed in all 46 cases. A confirmed case was defined as a patient with: (1) a four-fold rise in titer between acute and convalescent sera to typhus group antigen by indirect fluorescent antibody (IFA) or complement fixation (CF) testing or (2) a single high titer of >1:128 by IFA or >1:16 by CF in a clinically compatiable patient.

ROCKY MOUNTAIN SPOTTED FEVER

Rocky Mountain spotted fever (RMSF) is a rickettsial infection caused by *Rickettsia rickettsii*. The organism is primarily a parasite of ticks and is passed through unending generations of ticks by transovarial transmission. Man contracts RMSF either through the bite of an infected tick or by contamination of the skin with crushed tissues or feces of infected ticks. The tick species most commonly associated with human infection in Texas are the Lone Star tick (*Amblyomma americanum*), the dog tick (*Dermacentor variabilis*), and the brown dog tick (*Rhipicephalus sanguineus*).

In 1983, 108 confirmed cases of RMSF were reported in Texas. This was a 69% increase over the 64 cases reported in 1982 and a 140% increase over the 45 cases reported in 1981.

The 1983 incidence rate for RMSF was 0.70 cases per 100,000 Texas residents. The counties of residence of cases are illustrated in Figure 11. The majority of cases in 1983 resided in north central Texas, and Public Health Regions 5 and 7 reported incidence rates of 1.92 per 100,000 and 1.50 per 100,000, respectively. Rocky Mountain spotted fever was responsible for six deaths in 1983 — one each in Fort Bend, Hamilton, Henderson, Johnson, Nueces, and Williamson counties.

Figure 11
Reported Cases of Rocky Mountain
Spotted Fever in Texas
By County of Residence, 1983

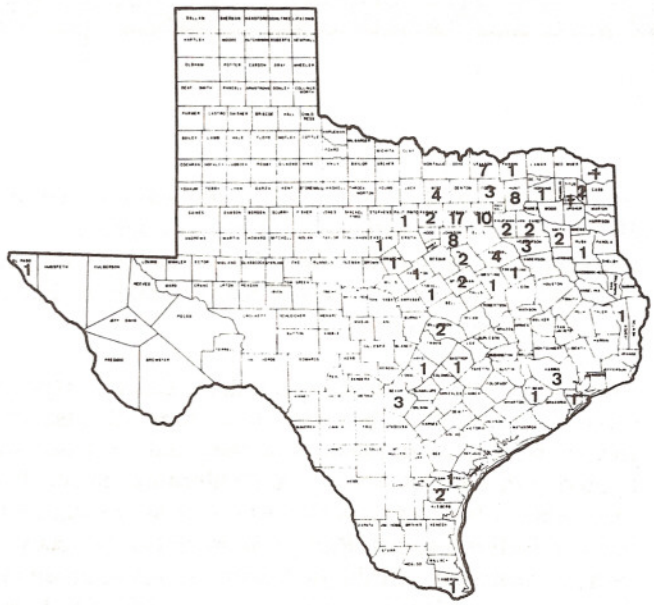


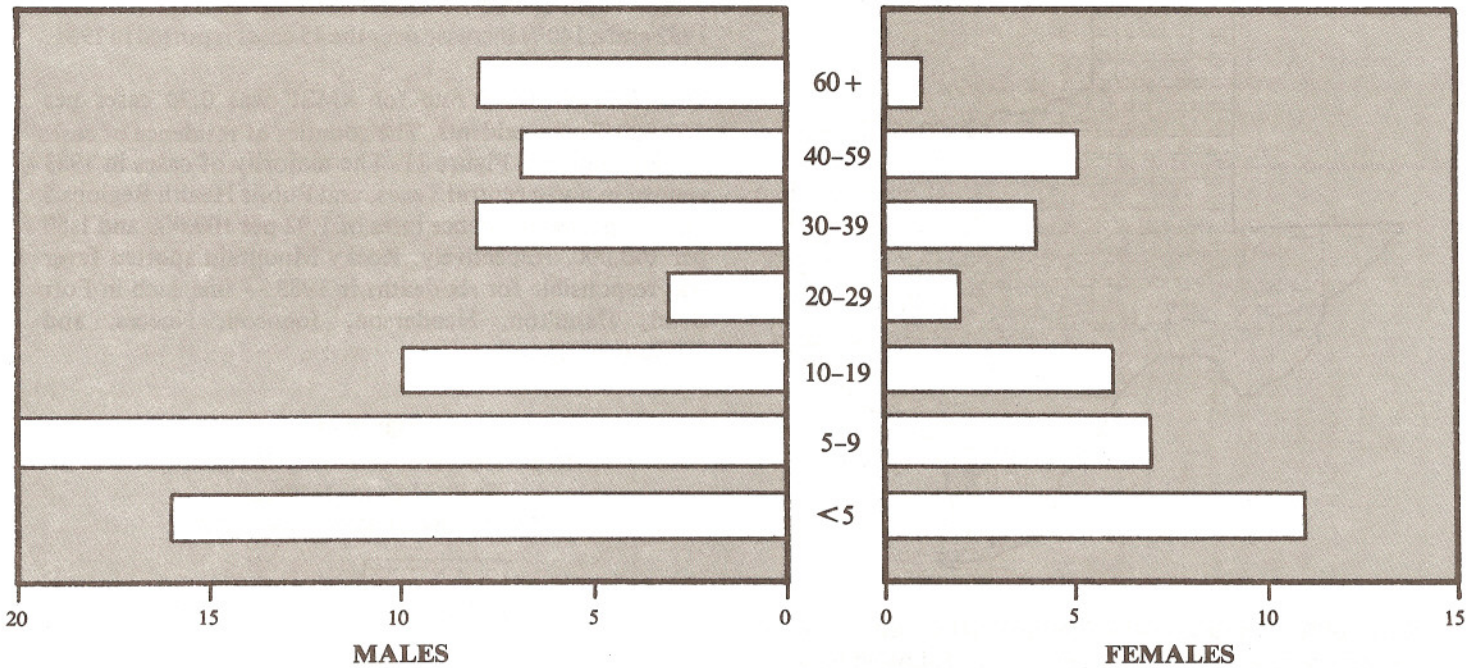
Figure 12 presents the distribution of cases by sex and age group. Seventy-two of the cases were male, and 36 were female. Fifty-four cases (50%) were nine years of age or younger.

At least one case had onset of symptoms during each month of the year. Seventy-one cases had onset of symptoms in the months of April, May, or June. Fifty-three cases had a recent tick attachment before onset of symptoms.

Clinical symptoms were noted with the following frequencies for the 108 cases: fever - 98%; rash - 84%; headache - 65%; myalgia - 50%; malaise - 47%; anorexia - 37%; conjunctivitis - 27%; lymphadenopathy 26%; and photophobia - 25%. The associated rash was most frequently observed on the legs (80%), followed by the arms (79%), and the trunk (75%). A generalized rash appearing on the

Figure 12

Reported Cases of Rocky Mountain Spotted Fever In Texas By Age Group and Sex, 1983



trunk, arms, legs, face, soles, and palms was observed in 31 (34%) of the cases with rash. The rash appeared, on the average, three days after onset of fever, ranging from zero to 17 days. Eighteen cases developed their rash on the same day as the onset of fever.

Treatment data were recorded for all the cases. Forty-seven cases were treated with tetracycline alone; 42 cases were treated with chloramphenicol alone; and 11 cases were treated with both tetracycline and chloramphenicol. Eight cases were either treated with antibiotics not recognized as being effective against *Rickettsia rickettsii* or recovered without treatment. Antibiotic treatment was initiated after the appearance of the rash in 64 of 74 cases who developed a rash and received tetracycline and/or chloramphenicol and for whom the date antibiotic treatment was started is known.

The diagnosis was confirmed in all cases. Seventy-four (68.5%) of the cases were confirmed by the indirect fluorescent antibody test (IFA), 31 (28.7%) were confirmed by acute blood inoculation into test animals (Microtus) and one case (0.9%) was confirmed by complement fixation. Two cases were confirmed by skin biopsy.

The following is a brief description of an investigation dealing with Rocky Mountain spotted fever:

In March 1983, an eight-year-old girl residing in Johnson County, Texas, died of RMSF. Seven additional RMSF cases, who resided near this girl's residence, occurred over the next two months. All eight cases resided in a 4x6 mile area near Burleson (Johnson County) and Mansfield (Tarrant County). This cluster of cases raised the question of whether a large number of unrecognized or unreported RMSF cases had occurred in this area in past years. To address this question, the Texas Department of Health, Fort Worth Department of Public Health, and Tarrant County Health Department carried out a serological survey of children residing in the Burleson and Mansfield communities.

Single serum specimens from 352 of 748 sixth grade students (mean age 12 years) from five schools in Mansfield and Burleson were tested for evidence of a previous RMSF infection. Thirty-two sera (9.1%) had titers $\geq$1:64 using the indirect fluorescent antibody (IFA) method. Eight sera had IFA titers to *Rickettsia rickettsii* of 1:128 or 1:256. Forty-two (11.9%) children had IFA titers of 1:32. Eight of the 32 children with titers $\geq$1:64 experienced an illness with fever and rash or headache within the preceding year. One of these children had a latex agglutination titer to *R. rickettsii* of 1:32 suggesting a recent infection. None of the 32 children had ever been hospitalized for an illness suggestive of RMSF. The study suggests that from 8 to 20% of the sixth graders living in this endemic RMSF area have had prior exposure to *R. rickettsii* which resulted in subclinical or undiagnosed infections. RMSF may involve a much larger population than has been previously suspected. Serious clinical infections requiring treatment and hospitalization may represent only a small fraction of all infections.

STREPTOCOCCAL DISEASES

Group A (beta hemolytic) streptococci cause a variety of diseases, the two most common being streptococcal pharyngitis (strep throat) and streptococcal skin infection (impetigo or pyoderma). Less common streptococcal diseases include scarlet fever, otitis media, mastoiditis, pneumonia, septicemia, and meningitis. Rare, but serious, complications of impetigo and/or streptococcal pharyngitis include acute (poststreptococcal) glomerulonephritis (AGN) and acute rheumatic fever (ARF).

Strep Throat and Scarlet Fever:

Strep throat is one of the most common bacterial infections of childhood and symptoms include an abrupt onset of sore throat, fever, headache, malaise, nausea, and vomiting following an incubation period of two to four days. Physical findings include inflammation of the pharynx, grayish-white exudates of the pharynx or tonsils, and enlarged and tender anterior cervical lymph nodes. The disease is usually spread through contact with saliva or nasal secretions of an infected person, but explosive food-borne outbreaks have been documented following ingestion of contaminated milk or egg products. Strep throat is generally a self-limiting illness with complete recovery in seven to ten days, but on occasion, it may be followed in one to five weeks by ARF or AGN.

There were 38,982 cases of streptococcal sore throat and/or scarlet fever reported to the Texas Department of Health in 1983. This was an 18% decrease from 1982. The distribution of cases by month in 1983 showed the customary seasonal variation with a high of 5,288 cases reported in December and a low of 1,706 cases reported in September.

Scarlet fever (scarlatina) is a form of streptococcal disease characterized by a skin rash. It results from an infection with a strain of group A streptococcus which elaborates any one of at least three immunologically distinct erythrogenic toxins. Clinical characteristics include an abrupt onset of fever, sore throat, malaise, headache, nausea, and vomiting. The rash develops within one to two days and consists of a diffuse flush or erythema with superimposed elevated red punctate lesions. Other signs are circumoral pallor, Pastia's lines in skin folds, and a "strawberry" tongue. The fever usually resolves in three to five days, but it may be weeks before the patient feels completely well. During convalescence, varying degrees of desquamation are often seen. On the trunk and limbs, small flakes of skin are shed ("branny" desquamation), whereas on the hands and feet, thick sheets or casts of epidermis may be lost leaving pink intact skin underneath. Scarlet fever may be followed by the same sequelae as strep throat (i.e., ARF or AGN).

Rheumatic Fever:

Acute rheumatic fever (ARF) is generally a disease of late childhood or adolescence and is characterized by inflammatory processes involving the joints, heart, subcutaneous tissues, and central nervous system. Initial clinical manifestations usually include fever and painful swelling of one or more joints such as the knees, elbows, ankles, or wrists. The pain seems to move from joint to joint. Approximately 40-50% of children with ARF will show signs of carditis with heart murmurs not previously present, cardiac enlargement, congestive heart failure, or pericardial friction rubs. Non-tender subcutaneous nodules near elbows, knees, wrists, or ankles may occur several weeks after onset. A non-pruritic, non-painful erythematous rash (erythema marginatum) is occasionally seen on the trunk or proximal extremities. In a minority of cases, the patient experiences involuntary spasmodic incoordinated movements of the face, head, or extremities (Sydenham's chorea). Repeated attacks of ARF can lead to progressively worse cardiac damage, producing rheumatic heart disease.

For reasons unknown, the incidence of ARF following strep throat infections continues to decline in the United States. There were only 13 cases of rheumatic fever reported to the Texas Department of Health in 1983. The cases were clustered primarily during the spring and summer months, and the cases ranged from 3 to 53 years of age. Seven were male, and six were female.

Streptococcal Outbreaks

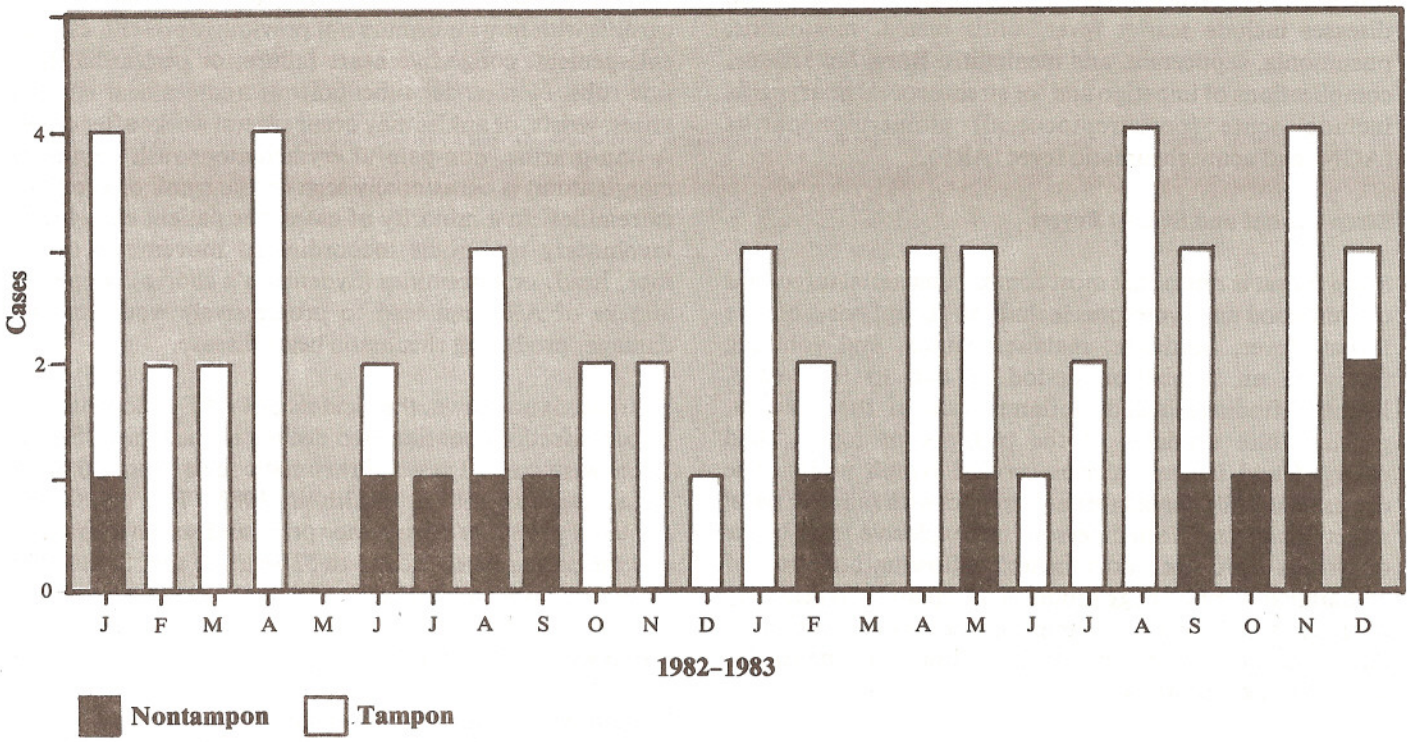
Food-borne streptococcal outbreaks are relatively unusual. In September 1983, approximately 119 persons attended an anniversary party in Bastrop County. Within three days after the party, 91 persons developed symptoms of fever, sore throat, and/or vomiting. Investigation of the outbreak revealed that potato salad was associated with illness. The salad was apparently contaminated with respiratory secretions during preparation and was left unrefrigerated prior to serving.

TOXIC-SHOCK SYNDROME

In 1983, 29 cases of toxic-shock syndrome (TSS) were reported in Texas residents. The number of cases reported was two less than in 1981, the year in which the most cases (31) were reported. All cases occurred in white females. Of the 29 cases reported, 22 (76%) occurred in women using tampons (Figure 13). Onset occurred after one to six days of tampon usage with a median of three days. Tampon brands reportedly used included Playtex,® Tampax,® Kotex,® , and OB.® *Staphylococcus aureus* was isolated from all non-tampon-related cases and 81% of vaginal isolates from tampon-related cases. The seven non-tampon-related cases had *S. aureus* isolated from post-operative sites (4), the vagina (2), and urine (1). The post-operative cases occurred after 1) a cesarean section, 2) removal of a benign breast mass, 3) removal of calcium deposits from the feet, and 4) nasal surgery. The latter case occurred in a 25-year-old who had an uncomplicated submucus resection and bilateral nasal windows. The day following her surgery she developed signs and symptoms of TSS. This case differs

Figure 13

Reported Cases of Toxic Shock Syndrome In Texas By Month of Occurrence, 1982 and 1983



from others previously reported as no nasal packing was used post-operatively.

In 1983, ages of tampon-related cases ranged from 13 to 49 with a mean age of 24 years. Ages of non-tampon-related cases ranged from 8 to 29 with a mean age of 21. Two deaths occurred for a case-fatality ratio of 7%. One death was not related to tampon use and occurred in an eight-year-old who died three days after developing a flu-like illness; *S. aureus* was isolated from her urine. The second death occurred in a 32-year-old who was using tampons at the time of onset. Due to adverse weather conditions (snow and ice) and failure to relate her symptoms to TSS, the patient was not seen in the emergency room until two days after onset at which time she was in cardiac arrest.

Organ systems involved in the 29 TSS cases were: muscular (97%), gastrointestinal (93%), mucous membrane (90%), central nervous system (52%), renal (48%), hepatic (28%), and hematologic (24%). The frequency of involvement of each organ system was similar in 1982 except that the central nervous system was involved three times more frequently in 1983. Besides the involvement of three or more of the above systems, the cases also had fever (>102°F), hypotension (systolic blood pressure <90 mm Hg, syncope, or orthostatic hypotension), and a rash with subsequent desquamation.

TRICHINOSIS

Trichinosis is a parasitic disease caused by *Trichinella spiralis*, an intestinal roundworm, whose larvae can infect skeletal muscles of man and some wild and domestic animals. The infection is transmitted through consumption of raw or inadequately cooked animal flesh that contains viable larval cysts. Humans usually acquire trichinosis by eating infected pork, or other foods containing pork. Pigs become infected by eating raw flesh from infected animals, such as pork scraps in garbage or rats found around the pig pens. Other animals that might have trichinosis include bears and other meat-eating animals, and occasionally human cases are traced to eating the meat of these animals. Human cases of trichinosis often cluster in families or among members of certain ethnic groups who share meals or culinary practices and food preferences. However, no related cases were reported in Texas during 1983.

Trichinosis is not a common disease among commercially marketed pork in the United States, because laws require that: 1) a permit be obtained prior to feeding garbage to swine; 2) all garbage fed to swine must be adequately heated to inactivate any *Trichinella* cysts; and 3) "ready to eat" pork products be precooked. Freezing (5°F or - 15°C) for 20 days prior to preparation and/or thorough cooking (170°F or 77°C) of all portions of the meat will successfully inacti-

vate *Trichinella* cysts. Pork that is properly cooked is gray or white in color, and should be checked by cutting into and examining the thickest part of the meat. Pink or red pork is not cooked adequately to ensure destruction of viable cysts. Pork should not be cooked in microwave ovens, as heating may be incomplete and viable cysts could survive in the resulting "cold spots." One of Texas' 1983 cases reportedly resulted from eating pork cooked in a microwave oven.

Four cases of trichnosis were reported with onset of symptoms during 1983. Three cases were female, aged 16, 31, and 56; two of the women were White and one was Hispanic. The fourth case was a 34-year-old Hispanic male. The cases resided in Dallas, Moore (two cases), and Tarrant counties. Two cases were confirmed serologically (by Bentonite Flocculation test at CDC), one by muscle biopsy, and one by serology and biopsy. All four cases recovered.

Potential exposures are known for three cases, and include: 1) pork sausage obtained from a custom butcher shop and cooked in a microwave oven (Dallas County); 2) employment in a meat market where infected pork could have been mixed with other meat (such as beef hamburger), or where cutting tools and grinders used for pork could be contaminated and subsequently used to prepare other meats (Moore County); and 3) slaughter and home preparation of a pig purchased from a farm suspected of unhygienic hog raising practices (Moore County).

TUBERCULOSIS

The number of cases of tuberculosis reported in Texas decreased slightly in 1983. There were 1,965 cases (12.8 cases per 100,000 population) reported in 1983 compared to 2,045 cases (13.7 cases per 100,000 population) in 1982. This reduction may represent the resumption of the declining trend in tuberculosis morbidity that was interrupted in 1982. Of the 1,965 cases, 53% occurred in the six major metropolitan areas of the state. The city of Houston, alone, accounted for 26% (517) of the total state morbidity.

Tuberculosis is a systemic disease with diverse manifestations. Definitive diagnosis usually requires the demonstration of *Mycobacterium tuberculosis* in tissues or secretions by microscopy and culture. During 1983, 1583 cases were established through positive bacteriologic examinations of sputum and smear. Diagnoses of the remaining cases were based on chest x-rays and other clinical evidence. Although the site of disease involvement is usually the lungs, extrapulmonary tuberculosis represents an almost constant 12% of cases reported annually in Texas and about 15% nationally. Of the 1,965 cases reported in 1983, 252 were extrapulmonary, and 90 cases affected both the lungs and other sites.

In 1983, 71 cases of tuberculosis were reported in children under five years of age. This is a reduction of 16 cases from the number reported in 1982. However, tuberculosis in young children indicates the ineffectiveness of tuberculosis program efforts to interrupt the transmission of infection. Although Houston reported 26% of the state's total morbidity for 1983, they reported 42% of the cases in children under five years of age; 58% of the cases in children five to nine; and 36% of the cases in children 10-14 years of age.

Table 8 shows the morbidity in Texas by age, race, sex, and Hispanic ethnicity. The most significant change in 1983 is in the number of reported cases among Asians or Pacific Islanders. This population group accounted for 191 cases in 1982 but only 147 in 1983. This is probably due to a reduction in the number of Indochinese refugees arriving in Texas.

Table 8

Reported Cases of Tuberculosis in Texas
By Age, Race, Sex, and Hispanic Ethnicity, 1983

Age	Total All Races	White*		Total Other Races		Black		Other Races: American Indian Or Alaskan Native		Other Races: Asian Or Pacific Islander		Other Races: Total	Hispanic	
		M	F	M	F	M	F	M	F	M	F		M	F
0-4 years	71	25	27	8	11	7	9	—	—	1	2	45	21	24
5-9 years	36	16	12	6	2	3	1	—	—	3	1	24	13	11
10-14 years	33	10	12	3	8	3	6	—	—	—	2	17	6	11
15-19 years	63	19	20	13	11	5	7	—	—	8	4	36	18	18
20-24 years	158	64	34	35	25	25	18	1	—	9	7	73	48	25
25-34 years	344	128	75	92	49	72	28	1	—	19	21	139	87	52
35-44 years	269	133	48	60	28	49	19	1	—	10	9	97	66	31
45-54 years	260	134	46	60	20	48	9	—	—	12	11	79	51	28
55-64 years	290	148	55	55	32	44	26	—	—	11	6	101	69	32
65 + years	441	228	113	62	38	55	31	2	1	5	6	155	99	56
TOTAL	1965	905	442	394	224	311	154	5	1	78	69	766	478	288

*Including Hispanic

TULAREMIA

Tularemia is a zoonotic disease with a variety of clinical manifestations. The causative agent, *Francisella tularensis*, is a small gram negative coccobacillus. The organism is distributed throughout the Northern Hemisphere and has been isolated from 100 species of wild animals, at least nine species of domestic animals, and several arthropods. Man can acquire the disease from vectors such as ticks, deerflies, and mosquitoes, by handling infected animal tissues (usually rabbits), by inhalation of infected aerosols, by ingestion of insufficiently cooked meat, or by drinking contaminated water. The tick species involved in Texas are *Dermacentor variabilis* (the American dog tick) and *Amblyomma americanum* (the Lone Star tick).

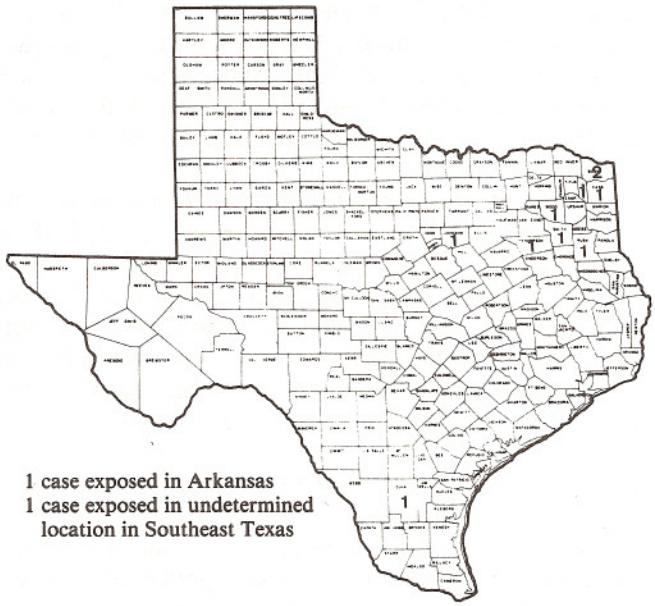
Following exposure, incubation periods range from 2-10 days depending on the virulence of the bacterial strain and size of inoculum. Strains with high virulence for man are often associated with tick-borne tularemia of rabbits. Most infections are characterized by an eschar-forming ulcer at the site of entry of the bacillus, enlargement of the regional lymph nodes, and constitutional reactions of fever, prostration, myalgia, and headache. This type of tularemia is the ulceroglandular form. Other types include the glandular form with lymphadenopathy and fever but no skin ulcer, the typhoidal form with fever and pneumonia but no lymphadenopathy, and rarely, oculoglandular or oropharyngeal tularemia.

Diagnosis of the disease is made by isolation of *F. tularensis* or by serologic testing. Antibody titers begin to rise within eight to ten days of onset. A four-fold rise in titer to $\geq$1:160 is considered diagnostic.

Twelve cases of tularemia with onset during 1983 were reported in Texas, including one death. Six cases were occupationally related (cattle rancher-2, lumber industry-2, surveyor-1, U.S. Army Reserve summer camp-1) and resulted from tick exposures. Three additional cases were also due to tick exposures, and two patients were infected while hunting (rabbit and squirrel). The source of exposure for one case was not reported. Ten of the reported cases were male, and two were female. Ages ranged from 13 to 72 years. Cases occurred primarily in May, June, and July, and most exposures were in Northeast Texas (Figure 14). One case was exposed in Arkansas.

A thirteenth case has been included in the 1983 tularemia statistics. This case had onset of symptoms in late November 1982. Blood cultures were collected, but *F. tularensis* was not identified; during the same time and in the presence of clinical symptoms compatible with legionellosis, the patient's *Legionella* titer rose from <1:64 to 1:256. The culture had been maintained at the original hospital, and was submitted to the TDH laboratory in September 1983. A gram negative rod was identified and the isolate was submitted to the Centers for Disease Control

Figure 14
Reported Cases of Tularemia in Texas
By County of Exposure, 1983



(CDC) for further studies. In late January 1984, the CDC reported *Francisella tularensis*. The patient's exposure may have occurred while he was transferring water from a stock pond to a storage tank.

TYPHOID FEVER

Typhoid fever is an acute febrile disease caused by *Salmonella typhi*. Ingestion of food or water contaminated directly or indirectly with human excreta from a patient with typhoid fever or from a carrier of *S. typhi* is the usual source of infection. A case of typhoid is confirmed by the isolation of *S. typhi* from the blood, feces, urine, or tissues.

Seventy-two (72) cases of typhoid fever were reported in Texas in 1983, a 71% increase over the number reported (42) in 1982. The county of residence of these cases is shown in Figure 15. Although typhoid fever is not typically a seasonal disease, 47 (65%) of the cases had onset of symptoms in July through November.

Forty-four cases occurred in males and 28 cases in females. The cases ranged in age from two to 86 years with a mean of 26 years. Seventy-two percent were 30 years of age or younger.

Thirty-one cases (43%) had exposure outside of the United States and are classified as imported cases. Mexico was the country of exposure for 25 of these cases.

Of the 41 cases that acquired the disease in the United States, ten cases were epidemiologically linked to eating meals at a Trinity University cafeteria in San Antonio. This outbreak began in late October and continued through early November. This cluster of cases probably represents a single

Figure 15
Reported Cases of Typhoid Fever in Texas
By County of Residence, 1983

exposure to *S. typhi* organisms. No *S. typhi* carrier among the 91 food handlers at the university cafeteria was identified.

VACCINE-PREVENTABLE DISEASES

MEASLES

Measles (rubeola) is characterized by fever, conjunctivitis, coryza, bronchitis, Koplik's spots, and a maculopapular rash. It can also cause otitis media, bronchopneumonia, encephalitis, and death. Encephalitis occurs in one of every 2,000 cases, and death, usually due to respiratory and neurologic involvement, can occur in one of every 3,000 cases.

Following the introduction of measles vaccine, a 99% reduction in the incidence of measles was reported nationwide. Control of measles has depended on continuing efforts to vaccinate susceptible individuals and effective outbreak control strategies.

In Texas, intensified efforts to control measles led to a record low number of cases in 1983, 37 cases, were recorded during the year, a 71% reduction in morbidity from the 129 cases reported in 1982. An outbreak of measles at the University of Houston accounted for 86% of the state's morbidity, with 32 of the 37 in 1983; the remaining five cases were from sporadic activity in various areas of the state.

MUMPS

Although mumps is usually self-limited, moderately debilitating manifestations can occur. Meningeal signs and orchitis have been reported in a significant percentage of cases, whereas involvement of other glands and nerve deafness, although serious, are rare.

Since the introduction of the live mumps vaccine, there has been a steady decline in the incidence of mumps nationwide. In Texas, a total of 225 cases of mumps was reported during 1983. This represents a 12% decrease from the 255 cases reported in 1982. Continued decline in mumps incidence can be expected as higher vaccination levels are achieved.

Mumps vaccine or a physician-verified history of mumps illness was required for students through ten years of age during the 1982-83 school year. This requirement included students through eleven years of age during the 1983-84 school year, and by 1990, all students will be included.

PERTUSSIS

Since pertussis in infants is a highly communicable disease frequently associated with complications such as bronchitis and severe upper respiratory infections, and because it has a high case-fatality ratio, vaccination early in infancy is essential. Although use of pertussis vaccine has led to a reduction in the number of cases and deaths from pertussis, the number of cases has remained relatively stable in the last ten years.

In Texas, 95 cases of pertussis, with one death, were reported during 1983. Although this represents an increase of 14 cases over the 79 cases recorded in 1982, an average of 93 cases has prevailed in the state during the ten-year period 1974-83. This slight increase in pertussis morbidity may be attributed to intensified efforts to investigate thoroughly each reported case as well as to several localized outbreaks of pertussis across the state, but not to publicity in 1982 on the risks or pertussis vaccine since vaccine usage and live resident births have increased.

RUBELLA

Symptoms of rubella infection are generally minimal or inapparent in 30-50% of the cases. The common symptoms are fever, rash, lymphadenopathy, and arthralgias or arthritis. Complications of rubella infection are uncommon and occur in adults more often than in children. Arthritis or arthralgias may occur in 30% of adult women; encephalitis may occur in one in 5,000 cases; and hemorrhagic manifestations, such as purpura, may occur in one per 3,000 cases. Rubella infection during early gestation can lead to fetal death, premature delivery, and an array of congenital defects.

In Texas, a total of 117 cases of rubella was reported during 1983 compared to 120 cases in 1982. There was no case of the congenital rubella syndrome—one of the most serious manifestations from infection with rubella virus—reported in 1983. Rubella morbidity has continued to decline since the enactment of school and child-care immunization laws

in 1971. These laws have led to higher vaccination levels and a reduction in rubella morbidity.

TETANUS

Eight cases of tetanus were reported in Texas in 1983, the same number as in 1982. Cases occurred predominantly in the eastern third of the state with a few in the south-central area. One case each occurred in Cameron, Grimes, Hardin, Karnes, Liberty, and Van Zandt counties, and two cases occurred in Harris County.

Tetanus cases usually occur in adults over 50 years of age whose vaccination status is incomplete and in infants under 28 days old who develop tetanus due to infections of the unhealed umbilical cord. In 1983, all but two cases (a five-year-old and 45-year-old) were over 50 years, and no cases of neonatal tetanus were reported. Ages of the cases ranged from 5 to 82 years with a median age of 70 years. Tetanus cases developed after injuries related to gardening (2), stepping on a nail (2), stubbing a toe on a stick (1), surgery to remove a gangrenous extremity in a diabetic (1), and a bunionectomy (1). Symptoms of tetanus occurred in the latter case 33 days post-operative. The patient was 70 years old and recovered.

Vaccination status of the eight cases included three (37.5%) who had a history of at least one previous immunization, two (25%) who had never been vaccinated, and three (37.5%) whose vaccination status was unknown. Of the three who had histories of previous vaccination: the mother of the five-year-old case stated her son had had one DTP vaccination at age 3-4 months; a 45-year-old woman thought she had the primary series in grade school; and a 62-year-old stated she had received one tetanus vaccination prior to surgery two years previously. None of the accounts of previous vaccinations could be verified by health department or hospital records.

Of the eight tetanus cases, 62.5% were White, 25% were Black, and 12.5% were Hispanic. Cases were divided equally between males and females. The case-fatality ratio was 25%. The ages of those who died as a result of tetanus were 71 and 82 years.

VENEREAL DISEASES

During 1983, 89,115 cases of venereal diseases were reported in Texas: 76,903 cases of gonorrhea; 12,210 cases of early and late syphilis; and 2 cases of chancroid. This represents an overall decrease of 3.9% over the previous year and consists of only the number of cases reported in the civilian population. An additional 2,477 cases of gonorrhea and 129 cases of early syphilis were reported in military personnel.

GONORRHEA

The number of cases of gonorrhea reported in Texas decreased from 81,580 in 1982 to 76,903 in 1983, representing a 5.7% decrease. The case rate—501.1 cases per 100,000 population—decreased 8.2% and declined for the fifth consecutive year.

The incidence of gonorrhea correlates with sexual activity and was highest in the younger age groups, with the peak among 20-24 year-olds of both sexes. The overall case rate for males was 653.5 and 353.1 for females. Gonorrhea was reported more often in Blacks than in Whites.

Pelvic inflammatory disease (PID) is a major complication of untreated gonorrhea in women. Since 1978, the Texas Department of Health has undertaken a program directed toward the identification of women with PID. Gonococcal pelvic inflammatory disease (G/PID) results in significant medical problems and is associated with recurrent pelvic infections, ectopic pregnancy, and sterility. The economic costs associated with these conditions are high. The purpose of the G/PID initiative is to identify women with unrecognized G/PID and to assist with the follow-up of the patient and her sexual partners. In 1983, 2061 cases of G/PID were reported in Texas. This was a 13% increase over the 1,819 cases reported in 1982, and represented 7.5% of the total gonorrhea reported in women.

In 1976, the first case of penicillinase-producing *Neisseria gonorrhoeae* (PPNG) was reported in Texas. This strain of the gonococcus, which is resistant to treatment with penicillin, was identified only sporadically until 1980. During those years, cases identified and reported to the Texas Department of Health totaled only 29. However, the incidence began to rise in 1981 and during 1983, there were 203 cases reported, an increase of 6% over 1982. There was broad geographic distribution with cases reported from ten of the twelve Public Health Regions. This paralleled an increase that was occurring nationwide. Improved surveillance, routine testing for penicillin resistance in affiliated laboratories and intensified case investigations have been responsible for some of the increase in reported PPNG.

SYPHILIS

The number of new cases of primary and secondary syphilis declined slightly from the 6,338 cases reported in 1982 to 6,254 cases reported in 1983. Infectious syphilis (primary and secondary stages) decreased from a rate of 42.4 to 40.8 per 100,000. Case rates for syphilis varied widely in different areas of the state. Some of the variation reflects differences in casefinding activity and availability of public clinics, and not true differences in disease incidence. For example, primary and secondary syphilis case rates among the twelve Public Health Regions range from 5.3 per 100,000 in Public Health Region 4 to 64.0 per 100,000 in Public Health Region 11. The number of cases of primary and secondary

syphilis continues to be highest in major urban areas. Over 75% of the state's primary and secondary syphilis cases were reported in six of Texas' most populous counties which comprise only 47% of the state's population.

Forty-nine cases of congenital syphilis were reported in 1983, a decrease of two from the previous year. Of these, 42 were under one year of age, 21 were live births, and 21 were either stillborn or died shortly after birth. It is also significant that 20 (48%) of the 42 mothers who delivered infants with congenital syphilis received no prenatal care.

VIRAL HEPATITIS

Viral hepatitis is a collective term commonly used when referring to any one or all of three major infectious diseases of man: hepatitis type A, hepatitis type B, and non-A, non-B hepatitis. Viral hepatitis is the fourth most frequently reported infectious disease in the United States and the fifth most frequently reported in Texas. There were 6,651 cases reported to the Texas Department of Health during 1983, a 5% increase over the 6,340 cases reported in 1982. Cases are assigned to one of three categories, depending on diagnosis. One category—hepatitis type unspecified—includes both the non-A, non-B hepatitis cases as well as hepatitis cases for which a serologic diagnosis is unavailable.

Each of the three major types of viral hepatitis is caused by a different hepatotropic virus, and the epidemiology of these diseases relates back to the differences in the viruses and their biophysical properties. The hepatitis A virus is an enteric virus with properties similar to other common enteric viruses such as coxsackievirus or echovirus. Hepatitis A virus is transmitted from person to person via the fecal-oral route; the virus is excreted in large quantities in fecal matter, especially prior to symptoms. Hepatitis A is characterized by an abrupt onset of illness following an incubation period of approximately four weeks. Symptoms occur in two phases. The first phase consists of flu-like illness or malaise, anorexia, dark urine, and light-colored stools. The appearance of jaundice shortly thereafter marks the second phase of symptoms and the approximate end of the infectious period. Recovery is complete in generally all cases. A carrier state has not been described for hepatitis A virus.

Hepatitis B virus is completely different from hepatitis A virus. It is a defective virus that synthesizes large quantities of its surface protein. Both the virus and this excess protein (hepatitis B surface antigen, HBsAg) can be found readily in the blood and body fluids of individuals with hepatitis B. The disease is spread from person to person via close intimate or sexual contact or by percutaneous contact with infectious blood, blood products, or body fluids. The incubation period can last from two to six months with a gradual onset of symptoms. Approximately 5%-10% of hepatitis B infections lead to the chronic carrier state which often develops into more serious chronic liver disease.

Currently there have been at least three viruses associated with non-A, non-B hepatitis. In this country, two of these have at least two major epidemiologic characteristics similar to those of hepatitis B. That is, they are spread from person to person via contact with infectious blood and blood products, and the infections they produce may lead to a chronic carrier state in a significant proportion of cases (as many as 10%-40% per year). The incubation period of non-A, non-B hepatitis is somewhat shorter than that of hepatitis B, with an average length of about two months.

Hepatitis A

A total of 3,030 cases of hepatitis A was reported in Texas from 123 counties in 1983 and resulted in a statewide incidence rate of 19.74 cases per 100,000 population. Incidence rates of hepatitis A for selected Texas counties are provided in Table 9. There were seven deaths from hepatitis A, a case-fatality ratio of 0.23%. The ages of the seven deaths ranged from 11 months to 92 years and were evenly distributed within this age range. Over the last ten years, the total number of hepatitis A cases has fluctuated, but the general trend has been a decrease in the incidence rate (Figure 16.)

Age, sex, and race analyses for hepatitis A in 1983 were similar to those of previous years. Of the 3,017 cases for whom sex was reported, 53% were male, and 47% were female. The racial/ethnic distribution of the 2,757 cases for whom this information was provided was 59% White, 34% Hispanic, 6% Black, 0.4% Asian/Pacific Islander, and 0.04% American Indian. Race was not indicated for 273 (9%) of the cases. Cases were distributed equally among males and females within the various ethnic groups except for whites where the distribution of cases was 55% male and 45% female.

Hepatitis A occurs most frequently among children and young adults, although all ages are susceptible. The majority (81%) of cases in Texas last year was under 35 years of age, in each of the three major population groups, 83% of the Whites, 92% of the Hispanics, and 72% of the Blacks.

Of particular interest in 1983 were a nosocomial outbreak of hepatitis A in Dallas County and two food-borne outbreaks, one in Lubbock County and one in Marietta, Oklahoma, which resulted in cases in North Texas. The nosocomial outbreak occurred among patients and staff in a pediatric hospital. A total of 25 cases was reported from two generations of hepatitis A cases. This outbreak was unusual in that hospital-acquired hepatitis A infections are uncommon, and that the majority of cases was infected by a patient who was also a nosocomial case. The two food-borne outbreaks were unrelated, but in both instances, infections were widely disseminated. The outbreak in Marietta, Oklahoma, took place between mid-August through October and resulted in a total of 203 cases, ten of whom were residents of Texas and were, therefore, included in

Table 9

Reported Cases of Viral Hepatitis
In Selected Counties In Texas, 1983

County	Population	Hepatitis A		Hepatitis B		Hepatitis Unspec.	
		Cases	Rates	Cases	Rates	Cases	Rates
Bexar	1045419	265	25.35	51	4.88	21	2.01
Cameron	239893	93	38.77	3	1.25	137	57.11
Collin	176656	30	16.98	10	5.66	7	3.96
Dallas	1634836	789	48.26	277	16.94	320	19.57
El Paso	532218	108	20.29	45	8.46	85	15.97
Harris	2660357	182	6.84	249	9.36	368	13.83
Jefferson	251152	37	14.73	32	12.74	10	3.98
Lubbock	219671	167	76.02	10	4.55	38	17.30
Maverick	38043	29	76.23	0	0.00	5	13.14
Nueces	279479	88	31.49	101	36.14	58	20.75
Palo Pinto	22966	56	243.84	2	8.71	0	0.00
Potter	101153	24	23.73	21	20.76	5	4.94
Tarrant	908264	239	26.31	77	8.48	249	27.41
Taylor	114278	39	34.13	14	12.25	14	12.25
Tom Green	89256	70	78.43	6	6.72	22	24.65
Travis	455753	76	16.68	62	13.60	84	18.43
Val Verde	39752	34	85.53	1	2.52	3	7.55
Webb	113948	38	33.35	10	8.78	271	237.83
TEXAS	15345761	3030	19.74	1234	8.04	2387	15.55

Figure 16

Reported Cases of Viral Hepatitis in Texas
Per 100,000 Population
By Type and Year of Report, 1974–1983

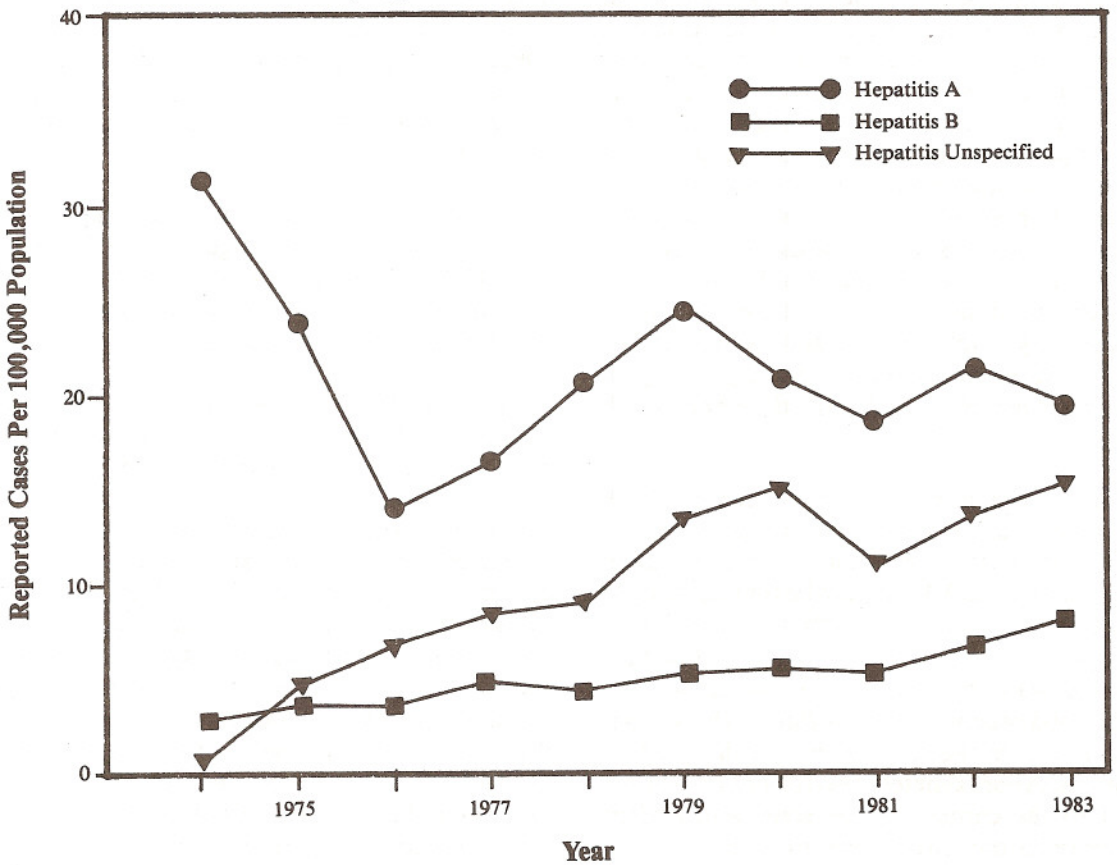
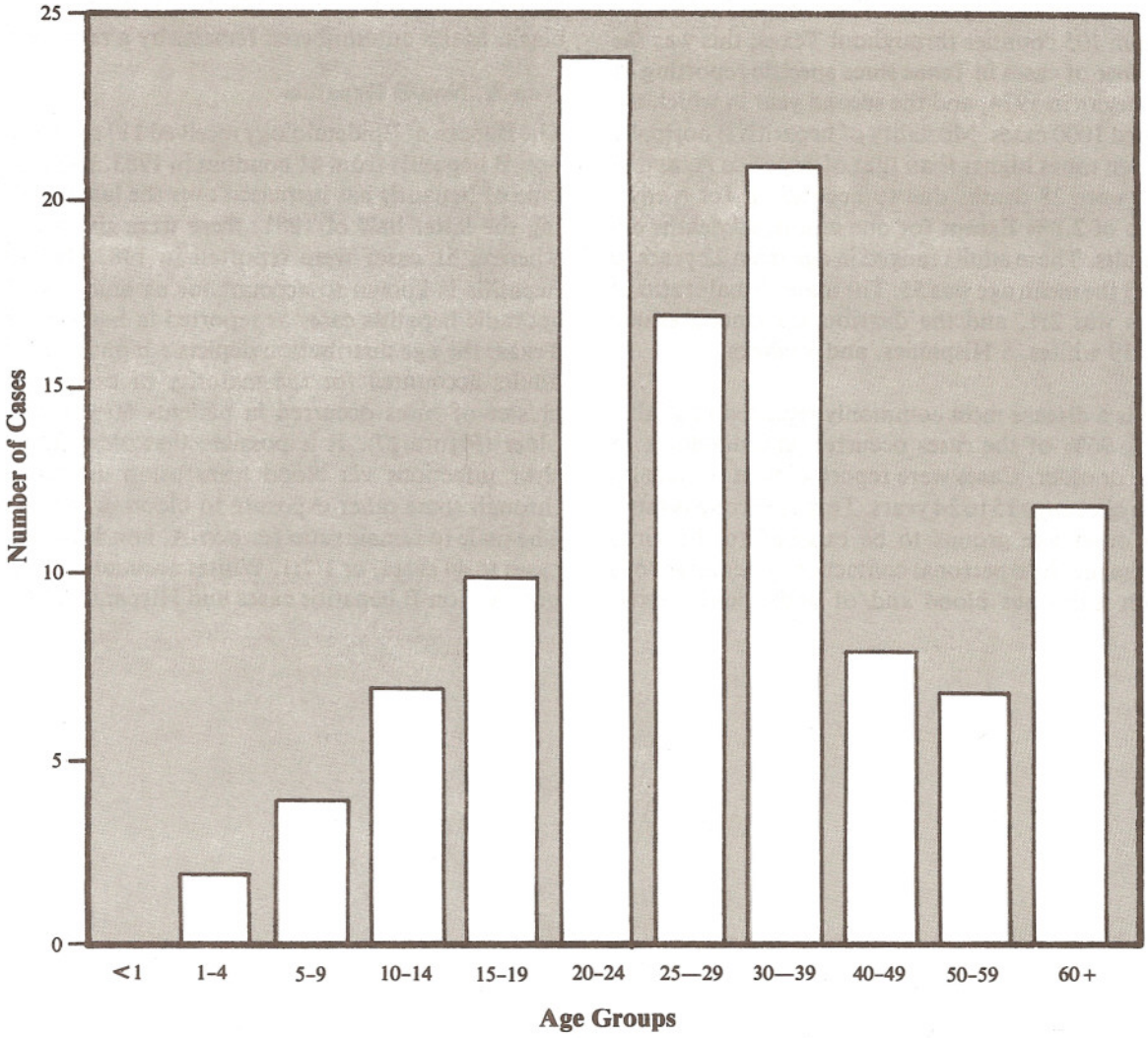


Figure 17

Reported Cases of Non-A, Non-B Hepatitis in Texas By Age Group, 1983



Texas morbidity. Ninety-two percent of the cases had eaten at one drive-in restaurant two to six weeks prior to illness. The index case was a food handler at the restaurant who continued working up until the time he became jaundiced. In addition, 29 of the cases were food handlers at other restaurants in the area. The outbreak in Lubbock took place in October, and a total of 123 cases of hepatitis A was reported. One hundred of the patients were patrons of a popular food-bar restaurant, and eight patients were employees. One cook experienced nausea and vomiting in mid-September but was never jaundiced. Sandwiches with lettuce and tomatoes were strongly associated with illness in the Lubbock outbreak. No single food item could be implicated in the Marietta outbreak.

Hepatitis Type Unspecified

Hepatitis type unspecified generally includes cases clinically diagnosed without laboratory confirmation. In 1983, there were 2,387 cases reported from 126 counties in Texas. Fifteen individuals reported as hepatitis type unspecified died as a result of their illnesses for a case-fatality ratio of 0.63%. Except for one two-year-old child, all deaths were in adults ranging in age from 28 to 84 years; the mean age of these adults was 54 years.

Age, sex, and race data for hepatitis type unspecified were similar to those for hepatitis A. Fifty-seven percent were male, and 43% were female. Of the 2,246 cases for whom race/ethnicity was indicated, 48% were White, 43% Hispanic, 9% Black, 0.04% American Indian, and 0.4% Asian/Pacific Islanders. Race/ethnicity was not reported for 141 (6%) of the total cases of hepatitis type unspecified in 1983. As with hepatitis A, most cases of hepatitis type unspecified are reported among children and young adults. Among whites and blacks, approximately three out of four cases were under 35 years of age (76% and 77% respectively), whereas 91% of the cases among Hispanics were under 35 years of age. During 1983, 24% of the cases of hepatitis type unspecified were reported in counties in the Rio Grande Valley.

Hepatitis B

The incidence of hepatitis B in Texas continued to increase in 1983 as illustrated in Figure 16. There were, 1,234 cases reported from 105 counties throughout Texas; this was the highest number of cases in Texas since specific reporting of hepatitis B began in 1974, and the second year in which the total exceeded 1000 cases. Mortality of hepatitis B normally runs about ten times higher than that of hepatitis A, and in Texas there were 28 deaths due to hepatitis B for a case-fatality ratio of 2.8% Except for one infant, all deaths occurred in adults. These adults ranged in age from 22 years to 89 years, and the mean age was 55. The male/female ratio of adult deaths was 2:1, and the distribution among ethnic groups was 19 whites, 5 Hispanics, and 3 blacks.

Hepatitis B is a disease most commonly reported in adults, and in 1983, 96% of the cases occurred in individuals 15 years of age or older. Cases were reported most frequently (68%) in the age range 15 to 34 years. This age group is more likely than other age groups to be exposed to the virus through sexual or close personal contact or by percutaneous contact with infectious blood and/or body fluids. Sixty-seven percent of cases in Whites were under 35 years of age, 76% in Hispanics, and 75% in Blacks. Over half (54%) of the cases of hepatitis B reported in 1983 were white; Hispanics accounted for 21% of the cases, and 22% were black. Males outnumbered females by a ratio of 1.7:1.

Non-A, Non-B Hepatitis

The Bureau of Epidemiology received 117 reports of non-A, non-B hepatitis from 41 counties in 1983. Reporting of this type of hepatitis has increased over the last two years; during the latter half of 1981, there were six cases reported, whereas 61 cases were reported in 1982. Non-A, non-B hepatitis is known to account for as much as 20% of all sporadic hepatitis cases as reported in hospital surveys. In Texas, the age distribution depicts a biphasic curve; young adults accounted for the majority of cases, and a small cluster of cases occurred in patients 60 years of age and older (Figure 17). It is possible that older adults acquire their infections via blood transfusion during surgery or through some other exposure to blood or blood products. The male to female ratio for non-A, non-B hepatitis was 73 cases to 44 cases, or 1.7:1. Whites accounted for 69% of all non-A, non-B hepatitis cases and Hispanics 22%.

OTHER SURVEILLANCE ACTIVITIES

OTHER SURVEILLANCE ACTIVITIES

VIRUS SURVEILLANCE

The Bureau of Epidemiology coordinates a virus surveillance system incorporating viral isolate information from 18 laboratories located in Austin (1), Dallas (4), Galveston (2), Houston (5), Lubbock (1), San Antonio (4), and Temple (1). Over 4,200 viruses were isolated from human specimens in 1983. Herpes simplex virus (HSV) represented 63% of the total number of isolates.

Table 10 presents the number of viral isolates by month. The seasonal pattern of influenza viruses, rotavirus, and respiratory syncytial virus (RSV) were consistent with their known seasonal prevalence. Enteroviruses were isolated in every month of the year but were prevalent in the summer and early fall. Parainfluenza type 3 viruses were present during the first seven months of 1983 but absent the last five months of the year. In contrast, parainfluenza type 2 viruses were present only during the last three months of 1983.

Figure 18 illustrates the distribution of non-polio enteroviruses by month. Coxsackie B viruses emerged quickly and dominated in late spring and early summer. Seventy-five percent (75%) of the Coxsackie B viruses were B5. Echoviruses dominated in the late summer and fall.

The numbers and types of viral isolates by the age of the patient are presented in Table 11. Characteristically, rotavirus and RSV infections occurred in infants and young children. The majority of cytomegalovirus isolates came from individuals less than one year of age or 20-39 years of age. *Chlamydia trachomatis* isolates in those 20-39 years of age may reflect sexually transmitted infections.

The number of reported HSV isolates is presented in Table 12. Eighty percent of the HSV isolates were from women. The predominance of females probably reflects a greater interest by gynecologists and obstetricians in documenting HSV infections in women. The 20- to 24-year-old age group represented 29% of those with HSV isolates whose age was reported. Ages were unreported for 61% of the patients. An average of 331 HSV isolates was reported each month.

Table 10

Number of Viral Isolates By Month Of Specimen Collection, January 1 - December 31, 1983, Texas

	MONTH												
Virus	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**June**	**July**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**	**Total**
Adenovirus	8	7	10	7	10	4	7	3	7	11	7	4	85
Chlamydia trachomatis	16	7	17	6	10	11	6	9	8	9	14	11	124
Cytomegalovirus	28	26	20	20	23	6	13	9	11	11	19	14	200
Coxsackie A Viruses	0	0	1	0	1	11	5	3	2	4	3	0	30
Coxsackie B Viruses	2	2	11	15	44	62	24	18	5	3	1	1	188
Echoviruses	2	2	2	2	9	33	33	40	28	19	10	5	185
Influenza A(H1N1)	5	10	16	3	0	0	0	0	0	0	0	2	36
Influenza A(H3N2)	202	130	37	1	0	0	0	0	0	0	0	0	370
Influenza B	3	1	11	2	3	3	0	0	0	0	4	1	28
Parainfluenza 1	1	1	1	0	0	0	0	2	0	0	2	2	9
Parainfluenza 2	0	0	0	0	0	0	0	0	0	1	2	3	6
Parainfluenza 3	5	2	6	8	5	1	5	0	0	0	0	0	32
Polioviruses	4	3	0	0	5	12	1	4	2	1	2	6	40
Rotavirus	31	11	11	2	4	1	1	0	2	1	16	51	131
Respiratory Syncytial Virus	33	16	5	5	1	2	0	0	0	1	6	15	84
Varicella/Zoster	1	1	4	2	0	3	1	0	2	0	2	2	18

Figure 18

Non-Polio Enterovirus Isolates By Month, Texas, 1983

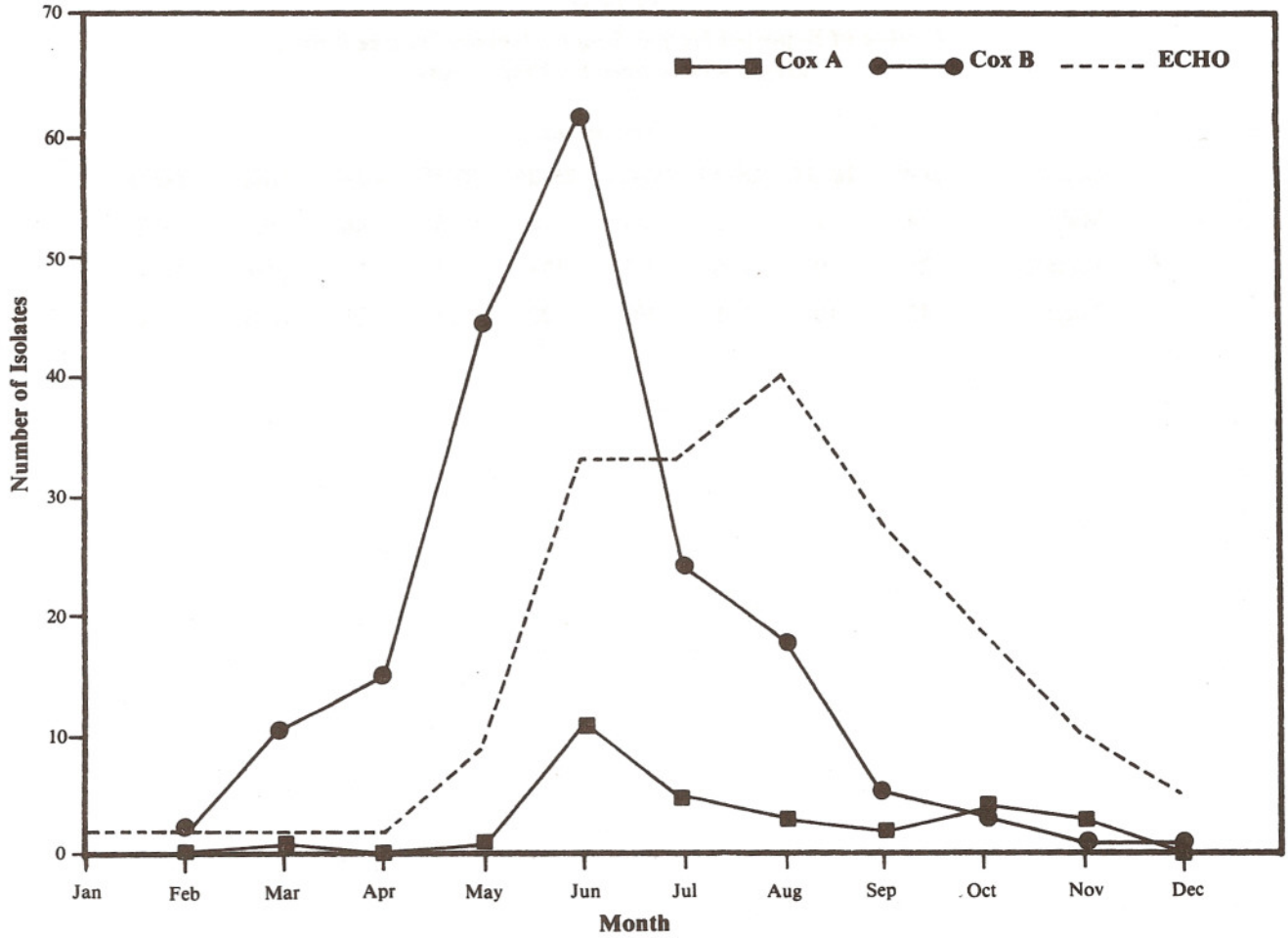


Table 11

Number of Viral Isolates By Age Of Patient, January 1 – December 31, 1983, Texas

	Age In Years								
Virus	**< 1**	**1–4**	**5–9**	**10–19**	**20–39**	**40–59**	**60 +**	**Unk**	**Total**
Adenoviruses	14	16	4	3	9	0	2	37	85
Chlamydia trachomatis	10	3	0	12	50	2	1	46	124
Cytomegalovirus	85	15	2	6	54	13	4	21	200
Coxsackie A Viruses	9	1	4	0	1	0	0	15	30
Coxsackie B Viruses	66	16	8	6	10	3	0	79	188
Echoviruses	42	19	11	22	13	1	1	76	185
Influenza A(H1N1)	0	8	5	8	12	1	0	2	36
Influenza A(H3N2)	29	78	99	42	52	38	16	16	370
Influenza B	2	5	4	4	9	2	1	1	28
Parainfluenza (1)	4	1	0	0	2	0	0	2	9
Parainfluenza (2)	1	1	1	0	2	1	0	0	6
Parainfluenza (3)	15	9	1	0	2	0	1	4	32
Polioviruses	17	4	1	0	0	0	0	18	40
Rotavirus	59	28	3	0	0	0	0	41	131
Respiratory Syncytial Virus	51	17	2	0	1	0	1	12	84
Varicella/Zoster	0	0	0	0	6	4	3	5	18

Table 12

Number of Reported *Herpes Simplex* Isolates By Age & Sex, May 1 – December 31, 1983, Texas

	Age in Years								
Sex	**0–9**	**10–14**	**15–19**	**20–24**	**25–29**	**30–39**	**40+**	**Unk**	**Total**
Male	24	1	9	41	54	46	46	309	530
Female	21	9	106	258	171	167	75	1314	2121
Total	45	10	115	299	225	213	121	1623	2651

APPENDIX

TABLE I

REPORTED CASES OF SELECTED NOTIFIABLE DISEASES IN TEXAS

DISEASE	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974
AMEBIASIS	412	493	604	355	301	210	216	146	129	186
ANTHRAX	0	0	0	0	0	0	0	0	0	0
ASEPTIC MENINGITIS	1175	785	622	432	753	405	315	312	362	228
BOTULISM	3	1	4	0	3	4	1	0	0	2
BRUCELLOSIS	84	27	45	28	28	23	33	77	29	18
CHICKENPOX	15031	11050	10824	9478	7009	6163	8222	8280	9213	7505
CHOLERA	0	0	3	0	0	0	0	0	0	0
CONGENITAL RUBELLA SYNDROME	0	0	1	1	4	2	2	3	1	12
DENGUE	0	2	1	61	0	3	0	0	0	0
DIPHTHERIA	0	1	0	1	0	0	4	1	6	9
ENCEPHALITIS, INFECTIOUS	159	157	91	63	59	47	55	35	82	30[1]
ENCEPHALITIS, ST. LOUIS	3	18	4	68	5	0	9	77	37	**
ENCEPHALITIS, VENEZUELAN EQUINE	0	0	0	0	0	0	0	0	0	0
ENCEPHALITIS, WESTERN EQUINE	1	4	4	0	0	0	7	0	0	0
GONORRHEA [2]	76903	81580	81822	80297	81828	88943	84789	82304	76486	75086
HANSEN'S DISEASE	35	29	33	32	31	28	26	16	17	18
HEPATITIS, TYPE A	3030	3226	2721	2978	3289	2696	2086	1762	2955	3818
HEPATITIS, TYPE B	1234	1043	823	819	685	586	650	497	490	357
HEPATITIS, TYPE UNSPECIFIED	2387	2071	1608	2194	1840	1198	1064	836	573	116
INFLUENZA & FLU-LIKE ILLNESS	92160	93736	143955	99292	86689	99394	67094	132749	92585	118847
LEPTOSPIROSIS	4	18	9	3	8	14	6	6	10	5
MALARIA	54	55	87	115	45	33	27	16	19	9
MEASLES	37	129	851	181	670	1033	2032	265	275	212
MENINGOCOCCAL INFECTIONS	188	238	327	145	166	144	147	140	151	116
MUMPS	225	255	227	212	908	1527	995	1755	4077	3500
PERTUSSIS	95	79	91	82	104	132	75	36	136	99
PLAGUE	0	1	0	0	0	0	0	0	0	0
POLIOMYELITIS, PARALYTIC	0	0	0	0	0	0	3	0	2	0
PSITTACOSIS	7	8	9	8	5	5	6	2	6	58
Q FEVER	1	1	0	2	2	0	1	2	2	0
RABIES IN ANIMALS	724	796	698	945	1195	556	382	329	325	383
RABIES IN MAN	0	0	0	0	1	0	0	1	0	0
RELAPSING FEVER	1	4	1	1	8	0	1	1	0	0
RHEUMATIC FEVER, ACUTE	13	12	18	15	14	25	17	29	22	33
ROCKY MOUNTAIN SPOTTED FEVER	108	64	45	31	22	28	30	29	34	18
RUBELLA	117	120	176	131	212	407	776	267	370	317
SALMONELLOSIS	2838	2506	2612	2456	2198	1199	1045	917	1110	994
SHIGELLOSIS	2206	2173	2299	2162	2299	1865	1565	1304	1447	1126
STREP THROAT, SCARLET FEVER	38982	47473	46072	32113	37526	29433	31595	36385	35861	43817
SYPHILIS, PRIMARY & SECONDARY [2]	6254	6338	5329	3828	3154	2637	2123	2041	1579	1405
TETANUS	8	8	8	13	17	11	16	12	16	4
TRICHINOSIS	4	2	2	6	4	2	11	2	4	4
TUBERCULOSIS	1965	2045	2015	2075	2090	2160	2326	2454	2600	2311
TULAREMIA	13	16	23	12	11	6	11	10	19	8
TYPHOID FEVER	72	42	127	67	67	40	28	18	19	13
TYPHUS FEVER, ENDEMIC	46	41	49	61	59	33	55	58	30	12
TYPHUS FEVER, EPIDEMIC	0	0	0	0	0	0	0	0	0	0
YELLOW FEVER	0	0	0	0	0	0	0	0	0	0

1. Includes arboviral encephalitides
2. Civilian cases only

** not reportable

TABLE II

REPORTED CASES OF SELECTED NOTIFIABLE DISEASES
PER 100,000 POPULATION

DISEASE	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974
AMEBIASIS	2.68	3.30	4.11	2.49	2.25	1.61	1.68	1.16	1.05	1.55
ANTHRAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASEPTIC MENINGITIS	7.66	5.25	4.24	3.04	5.63	3.10	2.45	2.48	2.94	1.90
BOTULISM	0.02	0.01	0.03	0.00	0.02	0.03	0.01	0.00	0.00	0.02
BRUCELLOSIS	0.55	0.18	0.31	0.20	0.21	0.18	0.26	0.61	0.24	0.15
CHICKENPOX	97.95	73.94	73.73	66.61	52.36	47.23	63.93	65.72	74.79	62.45
CHOLERA	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CONGENITAL RUBELLA SYNDROME	0.00	0.00	0.01	0.01	0.03	0.02	0.02	0.02	0.01	0.10
DENGUE	0.00	0.01	0.01	0.43	0.00	0.02	0.00	0.00	0.00	0.00
DIPHTHERIA	0.00	0.01	0.00	0.01	0.00	0.00	0.03	0.01	0.05	0.07
ENCEPHALITIS, INFECTIOUS	1.04	1.05	0.62	0.44	0.44	0.36	0.43	0.28	0.67	0.25[1]
ENCEPHALITIS, ST. LOUIS	0.02	0.12	0.03	0.48	0.04	0.00	0.07	0.61	0.30	**
ENCEPHALITIS, VENEZUELAN EQUINE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ENCEPHALITIS, WESTERN EQUINE	0.01	0.03	0.03	0.00	0.00	0.00	0.05	0.00	0.00	0.00
GONORRHEA[2]	501.13	545.90	557.37	564.32	611.34	681.56	659.32	653.26	620.93	624.83
HANSEN'S DISEASE	0.23	0.19	0.22	0.22	0.23	0.22	0.20	0.13	0.14	0.15
HEPATITIS, TYPE A	19.74	21.59	18.54	20.93	24.57	20.66	16.22	13.99	23.99	31.77
HEPATITIS, TYPE B	8.04	6.98	5.61	5.76	5.12	4.50	5.05	3.94	3.98	2.97
HEPATITIS, TYPE UNSPECIFIED	15.55	13.86	10.95	15.42	13.75	9.18	8.27	6.64	4.65	0.97
INFLUENZA & FLU-LIKE ILLNESS	600.55	627.25	980.62	697.81	647.66	761.64	521.73	1053.65	751.62	988.99
LEPTOSPIROSIS	0.03	0.12	0.06	0.02	0.06	0.11	0.05	0.05	0.08	0.04
MALARIA	0.35	0.37	0.59	0.81	0.34	0.25	0.21	0.13	0.15	0.07
MEASLES	0.24	0.86	5.80	1.27	5.01	7.94	15.80	2.10	2.23	1.76
MENINGOCOCCAL INFECTIONS	1.23	1.59	2.23	1.02	1.24	1.11	1.14	1.11	1.23	0.97
MUMPS	1.47	1.71	1.55	1.49	6.78	11.70	7.74	13.93	33.10	29.13
PERTUSSIS	0.62	0.53	0.62	0.58	0.78	1.01	0.58	0.29	1.10	0.82
PLAGUE	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
POLIOMYELITIS, PARALYTIC	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.02	0.00
PSITTACOSIS	0.05	0.05	0.06	0.06	0.04	0.04	0.05	0.02	0.05	0.48
Q FEVER	0.00	0.01	0.00	0.01	0.02	0.00	0.01	0.02	0.02	0.00
RABIES IN MAN	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00
RELAPSING FEVER	0.01	0.03	0.01	0.01	0.06	0.00	0.01	0.01	0.00	0.00
RHEUMATIC FEVER	0.08	0.08	0.12	0.11	0.10	0.19	0.13	0.23	0.18	0.27
ROCKY MOUNTAIN SPOTTED FEVER	0.70	0.43	0.31	0.22	0.16	0.22	0.23	0.23	0.28	0.15
RUBELLA	0.76	0.80	1.20	0.92	1.58	3.13	6.03	2.12	3.00	2.64
SALMONELLOSIS	18.49	16.77	17.79	17.26	16.42	9.19	8.13	7.28	9.01	8.27
SHIGELLOSIS	14.38	14.54	15.66	15.19	17.18	14.29	12.17	10.35	11.75	9.37
STREP THROAT, SCARLET FEVER	254.02	317.67	313.84	225.69	280.36	225.54	245.68	288.79	291.13	364.63
SYPHILIS, PRIMARY & SECONDARY[2]	40.75	42.41	36.30	26.90	24.30	20.20	16.51	16.20	11.41	11.69
TETANUS	0.05	0.05	0.05	0.09	0.13	0.08	0.12	0.10	0.13	0.03
TRICHINOSIS	0.03	0.01	0.01	0.04	0.03	0.02	0.09	0.02	0.03	0.03
TUBERCULOSIS	12.80	13.68	13.73	14.58	15.61	16.55	18.08	19.48	21.11	19.23
TULAREMIA	0.08	0.11	0.16	0.08	0.08	0.05	0.09	0.08	0.15	0.07
TYPHOID FEVER	0.47	0.28	0.87	0.47	0.50	0.31	0.22	0.14	0.15	0.11
TYPHUS FEVER, ENDEMIC	0.30	0.27	0.33	0.43	0.44	0.25	0.43	0.46	0.24	0.10
TYPHUS FEVER, EPIDEMIC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
YELLOW FEVER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Texas Population (in thousands)	15,346*	14,944	14,680	14,229	13,385	13,050	12,680	12,599	12,318	12,017

1. Includes arboviral encephalitides
2. Civilian cases only

* Provisional
** Not reportable

TABLE III

DEATHS FROM SELECTED NOTIFIABLE DISEASES AND CONDITIONS IN TEXAS[1]

DISEASE/CONDITION	ICD[2]	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974
ACQUIRED IMMUNE DEFICIENCY SYNDROME	279.1	24	0	0	0	0	0	0	0	0	0
AMEBIASIS	006	4	1	2	6	5	2	4	5	3	5
ASEPTIC MENINGITIS	047	1	1	2	2	2	0	0	5	2	1
BOTULISM	005.1	0	0	0	0	0	1	0	0	0	0
BRUCELLOSIS	023	0	0	0	0	0	0	0	1	0	2
CHICKENPOX	052	6	4	5	7	5	7	8	10	5	7
CHILD BATTERING & OTHER MALTREATMENT	E967	40	25	22	15	13	26	41	28	0	0
CONGENITAL RUBELLA SYNDROME	771.0	0	1	0	0	0	0	1	0	4	5
DIPHTHERIA	032	0	0	0	1	0	0	1	1	0	2
ENCEPHALITIS, INFECTIOUS[3]	049	8	12	11	16	9	12	16	12	15	15
GONORRHEA	098	0	0	0	1	1	2	1	0	2	2
GUILLAIN-BARRE SYNDROME	357.0	14	14	8	8	13	18	14	6	14	16
HANSEN'S DISEASE	030	0	1	0	0	0	2	1	1	0	1
HEPATITIS, TYPE A	070.0-070.1	8	10	2	8	8	33	34	42	41	52
HEPATITIS, TYPE B	070.2-070.3	39	23	19	23	14	11	6	5	8	6
HEPATITIS, TYPE UNSPECIFIED	070.4-070.9	27	25	28	30	19	49	63	63	31	43
INFLUENZA	487	67	29	133	70	30	190	64	567	211	110
LEPTOSPIROSIS	100	0	0	1	0	3	0	1	2	0	1
MALARIA	084	0	0	0	0	0	0	0	0	0	0
MEASLES	055	0	0	0	0	1	1	3	0	3	2
MENINGOCOCCAL INFECTIONS	036	12	26	34	24	27	37	25	20	28	22
MUMPS	072	0	0	0	0	0	1	0	2	0	0
MYCOBACTERIA INFECTIONS	031	15	8	9	8	8	6	4	2	5	7
PERTUSSIS	033	1	0	0	0	0	0	1	0	1	1
POLIOMYELITIS, ACUTE	045	0	0	1	0	0	0	0	0	0	0
REYE SYNDROME	331.8	15	7	24	17	19	**	**	**	**	**
RHEUMATIC FEVER, ACUTE	390-391	4	1	6	2	10	5	11	4	8	12
ROCKY MOUNTAIN SPOTTED FEVER	082.0	4	0	1	0	1	0	1	0	3	2
RUBELLA	056	0	0	0	0	0	0	2	1	1	0
SALMONELLOSIS	003	4	3	8	5	2	3	3	1	5	2
SHIGELLOSIS	004	2	0	0	0	1	6	7	3	6	5
ST. LOUIS ENCEPHALITIS	062.3	0	0	0	1	0	0	0	4	3	0
STREP THROAT, SCARLET FEVER	034	0	0	0	1	2	0	4	1	2	0
SUDDEN INFANT DEATH SYNDROME (SIDS)	798.0	334	324	332	323	340	298	293	217	203	175
SYPHILIS, TOTAL	090-097	8	5	13	12	12	15	13	18	26	15
TETANUS, EXCLUDING NEONATAL	037	1	2	4	5	5	4[4]	9[4]	4[4]	8[4]	3[4]
TETANUS, NEONATAL[5]	771.3	0	0	0	0	1	**	**	**	**	**
TRICHINOSIS	124	0	0	0	0	0	0	0	0	0	0
TUBERCULOSIS	010-018	136	119	134	111	112	163	176	211	200	237
TULAREMIA	021	0	0	0	0	1	0	0	1	0	1
TYPHOID FEVER	002.0	0	0	0	1	1	0	0	0	1	0
TYPHUS FEVER, ENDEMIC	081.0	0	0	0	0	0	0	0	0	0	0

1. Source: Statistical Services, Bureau of Vital Statistics
2. Category numbers of the Ninth Revision of the International Classification of Diseases, adapted 1975
3. Exclusive of arboviral encephalitides
4. Includes deaths due to neonatal tetanus
5. Prior to 1979, neonatal tetanus deaths were included in total tetanus deaths

** Data not available

TABLE IV

REPORTED CASES OF SELECTED NOTIFIABLE DISEASES BY MONTH OF REPORT

DISEASE	TOTAL	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
AMEBIASIS	412	30	12	46	54	17	42	36	40	22	48	36	29
ASEPTIC MENINGITIS	1175	10	30	9	18	32	131	267	273	125	87	24	169
BOTULISM	3	0	0	0	0	0	0	0	0	3	0	0	0
BRUCELLOSIS	84	0	0	2	4	9	11	20	13	8	7	4	6
CHICKENPOX	15031	983	2153	2761	3734	2240	1379	295	99	68	143	251	925
ENCEPHALITIS, INFECTIOUS[1]	159	5	5	6	12	9	15	31	18	21	16	6	15
ENCEPHALITIS, ST. LOUIS	3	0	0	0	0	0	0	0	1	1	0	0	1
ENCEPHALITIS, WESTERN EQUINE	1	0	0	0	0	0	0	0	0	0	0	1	0
GONORRHEA [2]	76903	5299	7457	6053	5600	6102	6560	5758	8303	5667	6211	5734	8159
HANSEN'S DISEASE	35	2	0	1	4	4	2	0	5	5	3	5	4
HEPATITIS, TYPE A	3030	232	306	211	264	160	139	171	213	227	503	250	354
HEPATITIS, TYPE B	1234	78	86	94	104	89	108	89	122	91	121	81	171
HEPATITIS, TYPE UNSPECIFIED	2387	146	148	185	197	168	169	187	185	214	280	141	367
LEPTOSPIROSIS	4	0	0	0	0	0	0	0	0	0	2	1	1
MALARIA	54	1	2	1	10	8	3	6	2	2	8	3	8
MEASLES	37	0	0	30	4	0	0	1	0	0	0	0	2
MENINGOCOCCAL INFECTIONS	188	9	27	26	24	17	15	13	7	7	13	10	20
MUMPS	225	23	36	27	17	18	17	6	7	11	24	18	21
PERTUSSIS	95	5	5	5	0	3	3	10	21	15	15	4	9
PSITTACOSIS	7	0	0	0	1	0	1	1	0	3	0	0	1
Q FEVER	1	1	0	0	0	0	0	0	0	0	0	0	0
RHEUMATIC FEVER	13	1	2	0	4	1	1	2	0	0	1	0	1
ROCKY MOUNTAIN SPOTTED FEVER	108	0	0	1	5	9	24	26	20	6	5	4	8
RUBELLA	117	7	14	18	14	15	7	8	2	5	8	6	13
SALMONELLOSIS	2838	116	131	87	124	132	200	363	427	261	391	251	355
SHIGELLOSIS	2206	94	113	72	87	70	117	246	302	276	347	227	255
STREP THROAT, SCARLET FEVER	38982	3707	4741	4275	3859	3181	2522	2420	1762	1706	3081	2440	5288
SYPHILIS, PRIMARY & SECONDARY [2]	6254	377	627	501	469	442	604	452	647	481	556	458	640
TETANUS	8	0	0	0	0	0	0	3	0	3	0	0	2
TRICHINOSIS	4	0	0	0	1	0	0	1	0	0	1	0	1
TUBERCULOSIS	1965	156	166	196	185	158	135	191	178	156	168	132	144
TULAREMIA	13	1	0	0	0	1	1	1	3	2	1	1	2
TYPHOID FEVER	72	1	1	0	6	1	4	8	9	10	10	13	9
TYPHUS FEVER, ENDEMIC	46	0	1	0	3	0	3	8	7	7	4	4	9

1. Exclusive of arboviral encephalitides
2. Civilian cases only

TABLE V

REPORTED CASES OF SELECTED NOTIFIABLE DISEASES BY AGE GROUP

DISEASE	TOTAL	<1	1–4	5–9	10–14	15–19	20–24	25–29	30–39	40–49	50–59	60+	UNK
AMEBIASIS	412	10	44	41	20	28	43	37	71	45	19	25	29
ASEPTIC MENINGITIS	1175	315	121	109	87	95	112	141	91	22	10	15	57
BRUCELLOSIS	84	0	5	6	11	3	9	3	13	13	8	13	0
CHICKENPOX	15031	284	2850	7009	1118	413[1]							3357
ENCEPHALITIS, INFECTIOUS VIRAL[2]	159	17	5	23	9	11	9	11	21	14	12	25	2
ENCEPHALITIS, ST. LOUIS	3	0	0	0	0	1	0	0	1	0	0	1	0
ENCEPHALITIS, WESTERN EQUINE	1	0	0	0	0	0	0	0	1	0	0	0	0
GONORRHEA[3]	76903		55[4]	43	533	16982	29824	16629	10580	1740	393	124	0
HANSEN'S DISEASE	35	0	0	0	1	3	3	5	9	5	4	5	0
HEPATITIS, TYPE A	3030	9	169	462	311	285	506	468	370	128	70	90	162
HEPATITIS, TYPE B	1234	6	7	16	20	95	313	259	231	101	64	84	38
HEPATITIS, TYPE UNSPECIFIED	2387	8	133	404	248	218	408	348	290	101	71	98	60
LEPTOSPIROSIS	4	0	0	0	0	0	1	0	2	0	0	1	0
MALARIA	54	0	3	2	2	8	7	6	12	5	5	3	1
MEASLES	37	1	1	1	0	13	18	1	2	0	0	0	0
MENINGOCOCCAL INFECTIONS	188	52	45	16	9	11	9	5	8	10	9	8	6
MUMPS	225	1	31	101	46	20	6	5	5	1	5	3	1
PERTUSSIS	95	56	26	3	0	1	2	2	5	0	0	0	0
PSITTACOSIS	7	0	0	0	0	0	1	1	1	0	2	2	0
Q FEVER	1	0	0	0	0	0	0	0	1	0	0	0	0
RELAPSING FEVER	1	0	0	0	0	0	0	0	1	0	0	0	0
RHEUMATIC FEVER, ACUTE	13	0	1	3	3	0	1	0	3	1	1	0	0
ROCKY MOUNTAIN SPOTTED FEVER	108	0	28	26	8	8	3	2	12	7	5	9	0
RUBELLA	117	38	33	19	12	2	4	7	1	0	0	0	1
SALMONELLOSIS	2838	708	587	160	95	83	134	118	188	96	92	250	327
SHIGELLOSIS	2206	106	684	314	121	84	163	157	159	62	49	104	203
SYPHILIS, PRIMARY & SECONDARY[3]	6254		0[4]	2	32	747	1843	1534	1487	432	144	33	0
TETANUS	8	0	0	1	0	0	0	0	0	1	1	5	0
TRICHINOSIS	4	0	0	0	0	1	0	0	2	0	1	0	0
TUBERCULOSIS	1965		71[4]	36	33	63	158	183	309	265	275	572	0
TULAREMIA	13	0	0	0	1	1	0	2	0	1	2	6	0
TYPHOID FEVER	72	0	4	5	8	11	10	12	7	5	1	6	3
TYPHUS FEVER, ENDEMIC	46	0	2	2	0	6	1	4	10	1	6	14	0

1. Includes all cases 15 years of age or older
2. Exclusive of arboviral encephalitides
3. Civilian cases only
4. Includes infants under one year of age

TABLE VI

REPORTED CASES OF SELECTED DISEASES BY PUBLIC HEALTH REGION

DISEASE *******	TOTAL *****	1 *	2 *	3 *	4 *	5 *	6 *	7 *	8 *	9 *	10 **	11 **	12 **	MILITARY[1] ********
AMEBIASIS	412	3	7	7	19	26	124	1	155	7	2	54	2	5
ASEPTIC MENINGITIS	1175	67	18	18	48	256	152	27	68	190	20	295	11	5
BRUCELLOSIS	84	0	0	3	0	3	9	1	20	10	0	37	1	0
CHICKENPOX	15031	683	711	208	484	3008	494	1073	3900	1272	577	1934	510	177
ENCEPHALITIS, INFECTIOUS VIRAL[2]	159	4	8	6	13	28	8	5	11	19	16	36	3	2
ENCEPHALITIS, ST. LOUIS	3	0	1	1	0	0	1	0	0	0	0	0	0	0
ENCEPHALITIS, WESTERN EQUINE	1	0	1	0	0	0	0	0	0	0	0	0	0	0
GONORRHEA	79380	1456	1238	2874	1325	23318	5963	3082	2442	3932	3099	27269	905	2477
HANSEN'S DISEASE	35	0	0	0	0	4	1	0	14	2	3	10	1	0
HEPATITIS, TYPE A	3030	50	195	108	189	1245	155	51	277	368	64	245	60	23
HEPATITIS, TYPE B	1234	31	16	45	60	386	89	31	139	60	43	280	22	32
HEPATITIS, TYPE UNSPECIFIED	2387	11	51	86	89	679	121	93	639	62	39	396	96	25
INFLUENZA & FLU-LIKE ILLNESS	92160	6164	4964	34	10241	7633	12755	4928	22895	7651	2210	2902	3188	6595
LEPTOSPIROSIS	4	0	0	1	0	1	0	1	0	0	1	0	0	0
MALARIA	54	1	0	1	0	6	5	0	2	5	0	34	0	0
MEASLES	37	0	1	1	0	1	0	0	1	0	0	33	0	0
MENINGOCOCCAL INFECTIONS	188	3	2	4	1	59	14	9	11	8	14	60	1	2
MUMPS	225	4	7	8	7	38	13	5	44	22	7	65	4	1
PERTUSSIS	95	4	0	0	2	30	22	9	2	7	4	15	0	0
PSITTACOSIS	7	0	0	1	0	1	4	0	0	1	0	0	0	0
Q FEVER	1	1	0	0	0	0	0	0	0	0	0	0	0	0
RELAPSING FEVER	1	0	0	0	1	0	0	0	0	0	0	0	0	0
RHEUMATIC FEVER, ACUTE	13	1	2	1	0	2	1	1	2	3	0	0	0	0
ROCKY MOUNTAIN SPOTTED FEVER	108	0	0	1	2	66	12	14	4	3	1	5	0	0
RUBELLA	117	2	6	4	14	11	10	12	31	2	15	2	7	1
SALMONELLOSIS	2838	80	67	325	64	554	209	88	285	235	89	816	19	7
SHIGELLOSIS	2206	35	99	186	29	311	147	25	492	235	35	580	29	3
STREP THROAT, SCARLET FEVER	38982	1006	2992	449	5185	5436	3410	3329	7804	3528	834	997	1632	2380
SYPHILIS, PRIMARY & SECONDARY	6383	37	63	195	36	1818	631	248	226	339	222	2330	109	129
TETANUS	8	0	0	0	0	0	1	1	1	1	1	3	0	0
TRICHINOSIS	4	2	0	0	0	2	0	0	0	0	0	0	0	0
TUBERCULOSIS	1965	20	21	71	39	386	103	85	235	200	65	717	23	0
TULAREMIA	13	0	0	0	0	3	0	5	2	0	2	1	0	0
TYPHOID FEVER	72	1	1	5	0	10	4	0	17	13	1	18	2	0
TYPHUS FEVER, ENDEMIC	46	0	0	0	1	3	2	0	35	0	1	3	1	0

1. Includes military installations and VA hospitals
2. Exclusive of arboviral encephalitides

Reprint of Annual Summary 1983 from *Texas Preventable Disease News*

	ASEPTIC MENINGITIS	MENINGOCOCCAL INFEC	HEPATITIS: A INFEC	HEPATITIS: B SERUM	HEPATITIS: UNSPEC	IMMUNIZABLE: MEASLES	IMMUNIZABLE: RUBELLA	RICKETTSIAL: ENDEM TYPH	RICKETTSIAL: RMSF	VENEREAL: GC	VENEREAL: P&S SYPH	MISC.: FLU & FLU-LIKE	TUBERCULOSIS
CUMULATIVE FOR THE STATE	POPULATION = 15,345,761												
CUMULATIVE 1983	1,175	188	3,030	1,234	2,387	37	117	46	108	79,380	6,383	92,160	1,965
CUMULATIVE 1982	785	238	3,226	1,043	2,071	129	120	41	64	84,045	6,464	93,736	2,045
CUMULATIVE 1981	622	327	2,721	823	1,608	851	176	50	45	84,681	5,440	143,955	2,015
PUBLIC HEALTH REGION 1	CANYON, TX		PHONE: 806/655-7151			POPULATION = 385,411							
COUNTIES													
ARMSTRONG												5	
BRISCOE				1								64	
CARSON	20									3			
CASTRO			1		1					10	2		
COLLINGSWORTH										1			
DALLAM										4	1		
DEAF SMITH	3		2		1					42	4	389	3
GRAY		1	2		1					26			
HALL			1							3			
HANSFORD	1		1							5		62	2
HARTLEY												57	
HEMPHILL										3			
HUTCHINSON	4				1					16	2		1
LIPSCOMB												6	
MOORE	1		1							13		10	
OCHILTREE										8			
OLDHAM			1										
PARMER			8									100	
POTTER	38	1	24	21	5	2				1,265	27	5,344	12
RANDALL		1	9	9	1					43		40	2
SHERMAN										1			
SWISHER					1					12	1		
WHEELER										1		87	
CUMULATIVE 1983	67	3	50	31	11	2				1,456	37	6,164	20

OTHER COUNTIES: NO COMMUNICABLE DISEASES: 0 OTHER DISEASES ONLY: 0 NOT REPORTING: 2 (Roberts, Donley)

PUBLIC HEALTH REGION 2	LUBBOCK, TX		PHONE: 806/797-4331			POPULATION = 379,488							
COUNTIES													
BAILEY	2									6			
COCHRAN				1									
CROSBY			4								1	3	2
DICKENS			2							4			
FLOYD										2	1		1
GARZA			1	1								336	
HALE			10		10	2				101	8	690	6

	ASEPTIC MENINGITIS	MENINGOCOCCAL INFEC	HEPATITIS: A INFEC	HEPATITIS: B SERUM	HEPATITIS: UNSPEC	IMMUNIZABLE: MEASLES	IMMUNIZABLE: RUBELLA	RICKETTSIAL: ENDEM TYPH	RICKETTSIAL: RMSF	VENEREAL: GC	VENEREAL: P&S SYPH	MISC.: FLU & FLU-LIKE	MISC.: TUBERCULOSIS
PUBLIC HEALTH REGION 2	**LUBBOCK, TX**		**PHONE: 806/797-4331**			**POPULATION = 379,488**				**(CONTINUED FROM PRIOR PAGE)**			
HOCKLEY	1		8	2	1					46	12	19	
LAMB	3			1			2			14		29	1
LUBBOCK	11	2	167	10	38	1	2			1,047	35	3,887	9
LYNN					1					3			
TERRY	1		2	1						14	5		
YOAKUM			1		1					1	1		2
CUMULATIVE 1983	18	2	195	16	51	1	6			1,238	63	4,964	21

OTHER COUNTIES: NO COMMUNICABLE DISEASES: 0 OTHER DISEASES ONLY: 0 NOT REPORTING: 2 (King, Motley)

PUBLIC HEALTH REGION 3	**EL PASO, TX**		**PHONE: 915/779-3531**			**POPULATION = 553,858**							
COUNTIES													
BREWSTER					1					13	3	10	
CULBERSON											1		1
EL PASO	18	4	108	45	85		4		1	2,860	191	5	68
PRESIDIO						1				1		19	2
CUMULATIVE 1983	18	4	108	45	86	1	4		1	2,874	195	34	71

OTHER COUNTIES: NO COMMUNICABLE DISEASES: 0 OTHER DISEASES ONLY: 1 NOT REPORTING: 1 (Jeff Davis)

PUBLIC HEALTH REGION 4	**ABILENE, TX**		**PHONE: 915/673-5231**			**POPULATION = 678,887**							
COUNTIES													
ARCHER										1			
BROWN										65			3
CALLAHAN	1		3									16	1
CHILDRESS			1							2		140	
CLAY					1					2	1		1
COLEMAN			1							2		10	2
COMANCHE			1	2	2				1	3		54	
CONCHO										4		1,333	
COTTLE										8	1	6	
CROCKETT			7		1							17	
EASTLAND				2	1				1	2		5	
FISHER	1									2			
FOARD												146	
HARDEMAN			1	1	1						1	140	
HASKELL			2										
IRION	2												
JACK					1					1			

	ASEPTIC MENINGITIS	MENINGOCOCCAL INFEC	HEPATITIS: A INFEC	HEPATITIS: B SERUM	HEPATITIS: UNSPEC	IMMUNIZABLE: MEASLES	IMMUNIZABLE: RUBELLA	RICKETTSIAL: ENDEM TYPH	RICKETTSIAL: RMSF	VENEREAL: GC	VENEREAL: P&S SYPH	MISC.: FLU & FLU-LIKE	MISC.: TUBERCULOSIS
PUBLIC HEALTH REGION 4	ABILENE, TX		PHONE: 915/673-5231				POPULATION = 678,887			(CONTINUED FROM PRIOR PAGE)			
JONES	3				1					3	1	31	1
KIMBLE										1			
KNOX										1			
MASON			1							1			
MENARD					1					2			
MITCHELL					2								
MONTAGUE				1						3		15	2
NOLAN	1		2		4					10	1	3	1
RUNNELS	1			1	1					1		9	
SCHLEICHER					1								
SCURRY	1									31	1		
SHACKELFORD			1									66	
STEPHENS	1		4		8					2			
STERLING										2		61	
STONEWALL						2				1		91	
SUTTON										2			1
TAYLOR	12	1	39	14	14					288	8	2,065	6
THROCKMORTON				1									
TOM GREEN	24		70	6	22			1		213	2	183	6
WICHITA	1		55	29	26	6				667	19	5,647	11
WILBARGER				1						3		167	4
YOUNG			1	2	2	6				2	1	36	
CUMULATIVE 1983	48	1	189	60	89	14	1	2		1,325	36	10,241	39

OTHER COUNTIES: NO COMMUNICABLE DISEASES: 0 OTHER DISEASES ONLY: 3 NOT REPORTING: 2 (Coke, Kent)

	ASEPTIC MENINGITIS	MENINGOCOCCAL INFEC	HEPATITIS: A INFEC	HEPATITIS: B SERUM	HEPATITIS: UNSPEC	IMMUNIZABLE: MEASLES	IMMUNIZABLE: RUBELLA	RICKETTSIAL: ENDEM TYPH	RICKETTSIAL: RMSF	VENEREAL: GC	VENEREAL: P&S SYPH	MISC.: FLU & FLU-LIKE	MISC.: TUBERCULOSIS
PUBLIC HEALTH REGION 5	ARLINGTON, TX		PHONE: 817/460-3032				POPULATION = 3,481,003						
COUNTIES													
COLLIN	9	3	30	10	7		1		3	216	7	82	2
COOKE	1	1	6	1	1					4	1	708	
DALLAS	131	30	789	277	320		5		10	15,864	1,417	3,230	252
DENTON	6	3	74	6	9					320	10	1,069	8
ELLIS	3		4	2	3					52	7	20	3
ERATH			4		1			1		9		227	1
FANNIN	1		2	1					1	23			2
GRAYSON	1		1	3	66				7	261	9		3
HOOD		1	3							5	1		1
HUNT				2	4				7	50	4	1,100	2
JOHNSON	3		7	1	5				8	79	1	158	3
KAUFMAN	3	1	10	1	10		1		2	43	4	223	4
NAVARRO	3	2			2		1		4	305	27	3	3
PALO PINTO			56	2					1	25			
PARKER	3	1	18	1	1			2	2	15	1		2
ROCKWALL			2	2	1					13	1	4	
SOMERVELL										8			
TARRANT	92	17	239	77	249	1	3		17	6,006	327	809	99

	ASEPTIC MENINGITIS	MENINGOCOCCAL INFEC	HEPATITIS: A INFEC	HEPATITIS: B SERUM	HEPATITIS: UNSPEC	IMMUNIZABLE: MEASLES	IMMUNIZABLE: RUBELLA	RICKETTSIAL: ENDEM TYPH	RICKETTSIAL: RMSF	VENEREAL: GC	VENEREAL: P&S SYPH	MISC.: FLU & FLU-LIKE	TUBERCULOSIS
PUBLIC HEALTH REGION 5	ARLINGTON, TX		PHONE: 817/460-3032			POPULATION = 3,481,003				(CONTINUED FROM PRIOR PAGE)			
WISE									4	20	1		1
CUMULATIVE 1983	256	59	1,245	386	679	1	11	3	66	23,318	1,818	7,633	386
OTHER COUNTIES:	NO COMMUNICABLE DISEASES: 0					OTHER DISEASES ONLY: 0				NOT REPORTING: 0			
PUBLIC HEALTH REGION 6	TEMPLE, TX		PHONE: 817/778-6744			POPULATION = 1,4051,98							
COUNTIES													
BASTROP	5		3	1	2	1		1		23	3	20	
BELL	3	3	6	9	4					392	89	1,655	8
BLANCO										1	1		
BOSQUE							1			9			
BRAZOS	3		4	5	5	1				427	49	1,363	13
BURLESON										11	1	14	1
BURNET	1				1					7	1		
CALDWELL			1							198	9	42	1
CORYELL		1			1			1		41	1	375	4
FALLS				1						19	3		
FAYETTE	1		2							7	2	11	2
FREESTONE								1		42	9		2
GRIMES					1	2	1			63	1	84	2
HAMILTON								1		1		28	
HAYS	1			1	6			1		99	4	142	4
HILL	16			1		2		2		12	3		
LAMPASAS										13	2		1
LEE	1		1		1	1				9	1		1
LEON										6	4		1
LIMESTONE				2	2			1		49	19	1,305	1
LLANO						1				8	1		
MCLENNAN		3	51	3	4			2		863	143	37	9
MADISON			1							15	2	4	
MILAM					1					61	9	1,327	7
MILLS										1			
ROBERTSON	1		1		2					66	5		2
SAN SABA										4			1
TRAVIS	110	5	76	62	84	2				3,457	233	6,348	36
WASHINGTON	1	1			1					17	5		1
WILLIAMSON	9	1	9	4	6			2		42	31		6
CUMULATIVE 1983	152	14	155	89	121	10	2	12		5,963	631	12,755	103
OTHER COUNTIES:	NO COMMUNICABLE DISEASES: 0					OTHER DISEASES ONLY: 0				NOT REPORTING: 0			

	ASEPTIC MENINGITIS	MENINGOCOCCAL INFEC	HEPATITIS: A INFEC	HEPATITIS: B SERUM	HEPATITIS: UNSPEC	IMMUNIZABLE: MEASLES	IMMUNIZABLE: RUBELLA	RICKETTSIAL: ENDEM TYPH	RICKETTSIAL: RMSF	VENEREAL: GC	VENEREAL: P&S SYPH	MISC.: FLU & FLU-LIKE	TUBERCULOSIS
PUBLIC HEALTH REGION 7	**TYLER, TX**		**PHONE: 214/595-3585**			**POPULATION = 866,604**							
COUNTIES													
ANDERSON				1	1					69	15		3
BOWIE	6	1	9	9	4				1	581	16		8
CAMP			1			1			1	17	1	20	
CASS	1		1							116	9		3
CHEROKEE			18	1	13					66	42	52	7
DELTA					1					1			
FRANKLIN				1						2			1
GREGG	4	3	7	5	5	3				580	33	83	9
HARRISON	9			1	1					279	25		10
HENDERSON	1			2	3				3	51	4	473	5
HOPKINS				1					1	21	4		1
LAMAR		1			37	7				211	7	326	4
MARION				1						50	16		2
MORRIS				1					2	26		176	2
PANOLA	1		1	1						76	3	28	1
RAINS					2					8	1	8	
RED RIVER					2					38	2		
RUSK	1		2	1					1	59	14		1
SMITH	1	4	2	1	5	1			2	718	37	3,543	19
TITUS	1			2						11			
UPSHUR			2							44	10	69	4
VAN ZANDT	2		8		19				3	18	4	83	3
WOOD				3						40	5	67	2
CUMULATIVE 1983	27	9	51	31	93	12			14	3,082	248	4,928	85

OTHER COUNTIES: NO COMMUNICABLE DISEASES: 0 OTHER DISEASES ONLY: 0 NOT REPORTING: 0

	ASEPTIC MENINGITIS	MENINGOCOCCAL INFEC	HEPATITIS: A INFEC	HEPATITIS: B SERUM	HEPATITIS: UNSPEC	IMMUNIZABLE: MEASLES	IMMUNIZABLE: RUBELLA	RICKETTSIAL: ENDEM TYPH	RICKETTSIAL: RMSF	VENEREAL: GC	VENEREAL: P&S SYPH	MISC.: FLU & FLU-LIKE	TUBERCULOSIS
PUBLIC HEALTH REGION 8	**HARLINGEN, TX**		**PHONE: 512/423-0130**			**POPULATION = 1,413,993**							
COUNTIES													
ARANSAS				1						11	1		2
BEE	6		2			1				19		113	2
BROOKS	1	1	1	5	3					2	2		
CALHOUN			3	1	1	3				39	1	1,117	1
CAMERON	9	2	93	3	137	7	3		1	318	15	7,563	59
DE WITT										15	6		3
DUVAL			4	1			2			4			7
GOLIAD	1				1					4	1		
GONZALES		1								55	10	20	2
HIDALGO	3	3	4	3	126	7	12			186	20	781	62
JACKSON			3			1				15	2	100	2
JIM HOGG				1	2					3		11	1

	ASEPTIC MENINGITIS	MENINGOCOCCAL INFEC	HEPATITIS: A INFEC	HEPATITIS: B SERUM	HEPATITIS: UNSPEC	IMMUNIZABLE: MEASLES	IMMUNIZABLE: RUBELLA	RICKETTSIAL: ENDEM TYPH	RICKETTSIAL: RMSF	VENEREAL: GC	VENEREAL: P&S SYPH	MISC.: FLU & FLU-LIKE	TUBERCULOSIS
PUBLIC HEALTH REGION 8	**HARLINGEN, TX**		**PHONE: 512/423-0130**				**POPULATION = 1,413,993**			**(CONTINUED FROM PRIOR PAGE)**			
JIM WELLS	3		3	1	2					13	2	8	4
KLEBERG		2	13	1	2		1		1	48	4	937	8
LAVACA										11	6	141	1
LIVE OAK								1		4	2		1
NUECES	32	1	88	101	58		5	11	2	1,278	108	7,874	21
REFUGIO	2				1					9	2	29	3
SAN PATRICIO	3		5	6	4			1	1	37	10	25	9
STARR						1				1	3		1
VICTORIA	7	1	16	4	11		2			271	27	2,992	8
WEBB			38	10	271		4	3		82	3	1,137	32
WILLACY	1			1	19			1		15	1	47	3
ZAPATA			4		1					2			3
CUMULATIVE 1983	68	11	277	139	639	1	31	35	4	2,442	226	22,895	235

OTHER COUNTIES: NO COMMUNICABLE DISEASES: 0 OTHER DISEASES ONLY: 0 NOT REPORTING: 2 (Kenedy, McMullen)

	ASEPTIC MENINGITIS	MENINGOCOCCAL INFEC	HEPATITIS: A INFEC	HEPATITIS: B SERUM	HEPATITIS: UNSPEC	IMMUNIZABLE: MEASLES	IMMUNIZABLE: RUBELLA	RICKETTSIAL: ENDEM TYPH	RICKETTSIAL: RMSF	VENEREAL: GC	VENEREAL: P&S SYPH	MISC.: FLU & FLU-LIKE	TUBERCULOSIS
PUBLIC HEALTH REGION 9	**UVALDE, TX**		**PHONE: 512/278-7173**				**POPULATION = 1,443,279**						
COUNTIES													
ATASCOSA	1	1	2	1	4					5		149	7
BANDERA										3		52	
BEXAR	158	6	265	51	21				3	3,817	310	6,489	141
COMAL	3		19	3	5					17	10	133	4
DIMMIT					7						1	398	3
EDWARDS	1										1	10	
FRIO			1		1		1			5	3	74	3
GILLESPIE	1		2							6		6	1
GUADALUPE	1		1	1	1					26	6		2
KARNES					1					2		298	2
KENDALL	4		3	1						3		6	
KERR				1	1					9	3	3	6
KINNEY										1			1
LA SALLE			1										1
MAVERICK			29		5					2			7
MEDINA	2		3		3					1	1		4
REAL												3	
UVALDE	4		3		3					9	1	29	3
VAL VERDE			34	1	3					24	1		13
WILSON	14		5	1			1			2	1	1	1
ZAVALA	1	1			7						1		1
CUMULATIVE 1983	190	8	368	60	62		2		3	3,932	339	7,651	200

OTHER COUNTIES: NO COMMUNICABLE DISEASES: 0 OTHER DISEASES ONLY: 0 NOT REPORTING: 0

	ASEPTIC MENINGITIS	MENINGOCOCCAL INFEC	HEPATITIS: A INFEC	HEPATITIS: B SERUM	HEPATITIS: UNSPEC	IMMUNIZABLE: MEASLES	IMMUNIZABLE: RUBELLA	RICKETTSIAL: ENDEM TYPH	RICKETTSIAL: RMSF	VENEREAL: GC	VENEREAL: P&S SYPH	MISC.: FLU & FLU-LIKE	MISC.: TUBERCULOSIS
PUBLIC HEALTH REGION 10	NACOGDOCHES, TX	PHONE: 713/560-3058				POPULATION = 683,950							
COUNTIES													
ANGELINA	3		7	1	16	1				274	13	754	8
HARDIN		5	3	3	3	1				102	7		1
HOUSTON	5				1					50	9	27	2
JASPER	1			1					1	65	2	63	1
JEFFERSON	10	3	37	32	10	12				2,114	151	1,086	32
NACOGDOCHES			1	2				1		215	15	10	4
NEWTON		1								9		14	1
ORANGE		4	8	2	3	1				144	12		3
POLK	1				2					14	1		5
SABINE				1						3	1		
SAN AUGUSTINE										24	1		2
SAN JACINTO										18		139	1
SHELBY			8		1					28	1	117	1
TRINITY		1		1	1					22	5		2
TYLER					2					17	4		2
CUMULATIVE 1983	20	14	64	43	39	15	1	1		3,099	222	2,210	65

OTHER COUNTIES: NO COMMUNICABLE DISEASES: 0 OTHER DISEASES ONLY: 0 NOT REPORTING: 0

	ASEPTIC MENINGITIS	MENINGOCOCCAL INFEC	HEPATITIS: A INFEC	HEPATITIS: B SERUM	HEPATITIS: UNSPEC	IMMUNIZABLE: MEASLES	IMMUNIZABLE: RUBELLA	RICKETTSIAL: ENDEM TYPH	RICKETTSIAL: RMSF	VENEREAL: GC	VENEREAL: P&S SYPH	MISC.: FLU & FLU-LIKE	MISC.: TUBERCULOSIS
PUBLIC HEALTH REGION 11	ROSENBERG, TX	PHONE: 713/342-8685				POPULATION = 3,642,976							
COUNTIES													
AUSTIN		1								7	4		
BRAZORIA	6	6	3	2	1					116	20	7	19
CHAMBERS		1	1							16	2		
COLORADO					1					14	8		3
FORT BEND	22		35	11	13				1	118	34	315	25
GALVESTON	11	8	1	2				1	1	978	52		19
HARRIS	247	41	182	249	368	32	1	2	3	25,473	2,121	1,508	568
LIBERTY	2		1	3	2					61	12		1
MATAGORDA			3	5	1					31	14	998	1
MONTGOMERY	6	1	11	4	7	1				203	33		11
WALKER			2							83	10		69
WALLER			1	1	1					104	11	51	
WHARTON	1	2	5	3	2		1			65	9	23	1
CUMULATIVE 1983	295	60	245	280	396	33	2	3	5	27,269	2,330	2,902	717

OTHER COUNTIES: NO COMMUNICABLE DISEASES: 0 OTHER DISEASES ONLY: 0 NOT REPORTING: 0

PUBLIC HEALTH REGION 12 MIDLAND, TX PHONE: POPULATION = 364,329

COUNTIES	ASEPTIC MENINGITIS	MENINGOCCAL INFEC	HEPATITIS: A INFEC	HEPATITIS: B SERUM	HEPATITIS: UNSPEC	IMMUNIZABLE: MEASLES	IMMUNIZABLE: RUBELLA	RICKETTSIAL: ENDEM TYPH	RICKETTSIAL: RMSF	VENEREAL: GC	VENEREAL: P&S SYPH	MISC.: FLU & FLU-LIKE	MISC.: TUBERCULOSIS
ANDREWS			7		1		1			29	2	434	
CRANE			2							3	1		
DAWSON	1		6		1		1			6	2	92	3
ECTOR	1		17	5	84		3	1		434	51	913	8
GAINES	1		7		6					3	1		
HOWARD			1	1	1					4	11	378	2
MARTIN												17	1
MIDLAND	4		17	5	1					393	33	1,041	5
PECOS	3			1						12	1	4	2
REEVES			2	4	1					10	3	264	2
TERRELL										3			
UPTON							2			1			
WARD		1	1	6						5	2	1	
WINKLER	1				1					2	2	44	
CUMULATIVE 1983	11	1	60	22	96		7	1		905	109	3,188	23

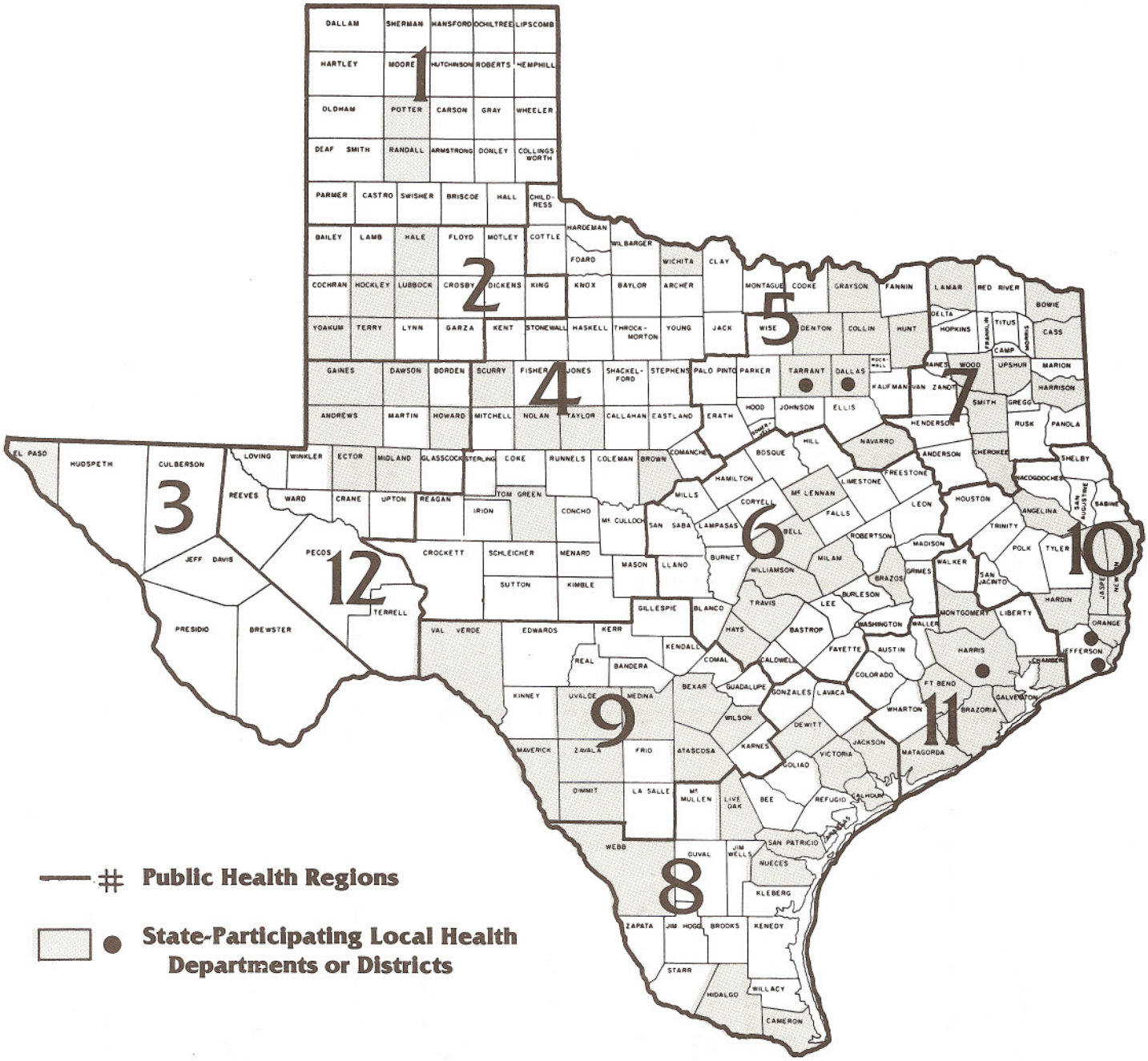
OTHER COUNTIES: NO COMMUNICABLE DISEASES: 0 OTHER DISEASES ONLY: 0 NOT REPORTING: 3 (Glasscock, Borden, Loving)

OTHER REPORTING SOURCES

ARMED FORCES	5	2	21	31	25		1			2,477	129	6,578	
V.A. HOSPITALS			2	1								17	
CUMULATIVE 1983	5	2	23	32	25		1			2,477	129	6,595	

OTHER REPORTABLE DISEASES	1981	CUMULATIVE 1982	1983
ACQUIRED IMMUNE DEFICIENCY SYNDROME	6	27	97
AMEBIASIS	604	493	412
ANTHRAX	0	0	0
BOTULISM	4	1	3
BRUCELLOSIS	45	27	84
CHICKENPOX	10,824	11,050	15,031
CHOLERA	3	0	0
DIPHTHERIA	0	1	0
ENCEPHALITIS, ST. LOUIS	4	18	3
ENCEPHALITIS, WESTERN EQUINE	4	4	1
ENCEPHALITIS, VENEZUELAN EQUINE	0	0	0
ENCEPHALITIS, ALL OTHER	91	157	159
LEPROSY (HANSENS DISEASE)	33	29	35
LEPTOSPIROSIS	9	18	4
MALARIA	2	0	1
MALARIA ACQUIRED OUTSIDE USA	85	55	53
MUMPS	227	255	225
PERTUSSIS	91	79	95
PLAGUE	0	1	0
POLIOMYELITIS, PARALYTIC	0	0	0
PSITTACOSIS	9	8	7
Q FEVER	0	1	1
RABIES IN MAN	0	0	0
RELAPSING FEVER	1	4	1
RHEUMATIC FEVER	18	12	13
RUBELLA CONGENITAL SYNDROME	1	0	0
SALMONELLOSIS	2,612	2,506	2,838
SHIGELLOSIS	2,299	2,173	2,206
STREP THROAT & SCARLET FEVER	46,072	47,473	38,982
REYE SYNDROME	36	22	25
TETANUS	8	8	8
TRICHINOSIS	2	2	4
TULAREMIA	23	16	13
TYPHOID FEVER	127	42	72
TYPHUS, EPIDEMIC	0	0	0
YELLOW FEVER	0	0	0
RABIES IN ANIMALS	698	796	724

Texas Department of Health
Public Health Regions
and
State-Participating Local Health Departments



Associate Commissioner for Community and Rural Health

September 1983

PUBLIC HEALTH REGIONS

PUBLIC HEALTH REGION 1
Henry C. Moritz, M.D., M.P.H.
Regional Director Public Health
Texas Department of Health
P.O. Box 968, WTSU Station
Canyon, Texas 79016
(Location: Old Health Center Bldg.
300 Victory Drive)
806/655-7151
Tex-An 844-2801

PUBLIC HEALTH REGION 2/12
C. R. Allen, Jr., M.D., M.P.H.
Regional Director Public Health
Texas Department of Health
4709 66th Street
Lubbock, Texas 79414
806/797-5280

PUBLIC HEALTH REGION 3
John R. Bradley, M.D.
Regional Director Public Health
Texas Department of Health
P.O. Box 10736
El Paso, Texas 79997
(Location: 2300 E. Yandell, 79903)
915/533-4972

PUBLIC HEALTH REGION 4
Myron J. Woltjen, M.D., M.P.H.
Regional Director Public Health
Texas Department of Health
P.O. Box 2648
Abilene, Texas 79602
(Location: 1290 S. Willis, Suite 100)
915/695-7170
Tex-An 847-7011

PUBLIC HEALTH REGION 5
Hal J. Dewlett, M.D., M.P.H.
Regional Director Public Health
Texas Department of Health
P.O. Box 6229
Arlington, Texas 76011
(Location: 701 Directors Drive
817/460-3032
Tex-An 833-9011

PUBLIC HEALTH REGION 6
Chas. R. Webb, Jr., M.D.
Regional Director Public Health
Texas Department of Health
P.O. Box 190
Temple, Texas 76503
(Location: 2408 S. 37th Street)
817/778-6744
Tex-An 820-2201

PUBLIC HEALTH REGION 7/10
Marietta Crowder, M.D.
Regional Director Public Health
Texas Department of Health
P.O. Box 2501
Tyler, Texas 75710
214/595-3585
Tex-An 830-6011

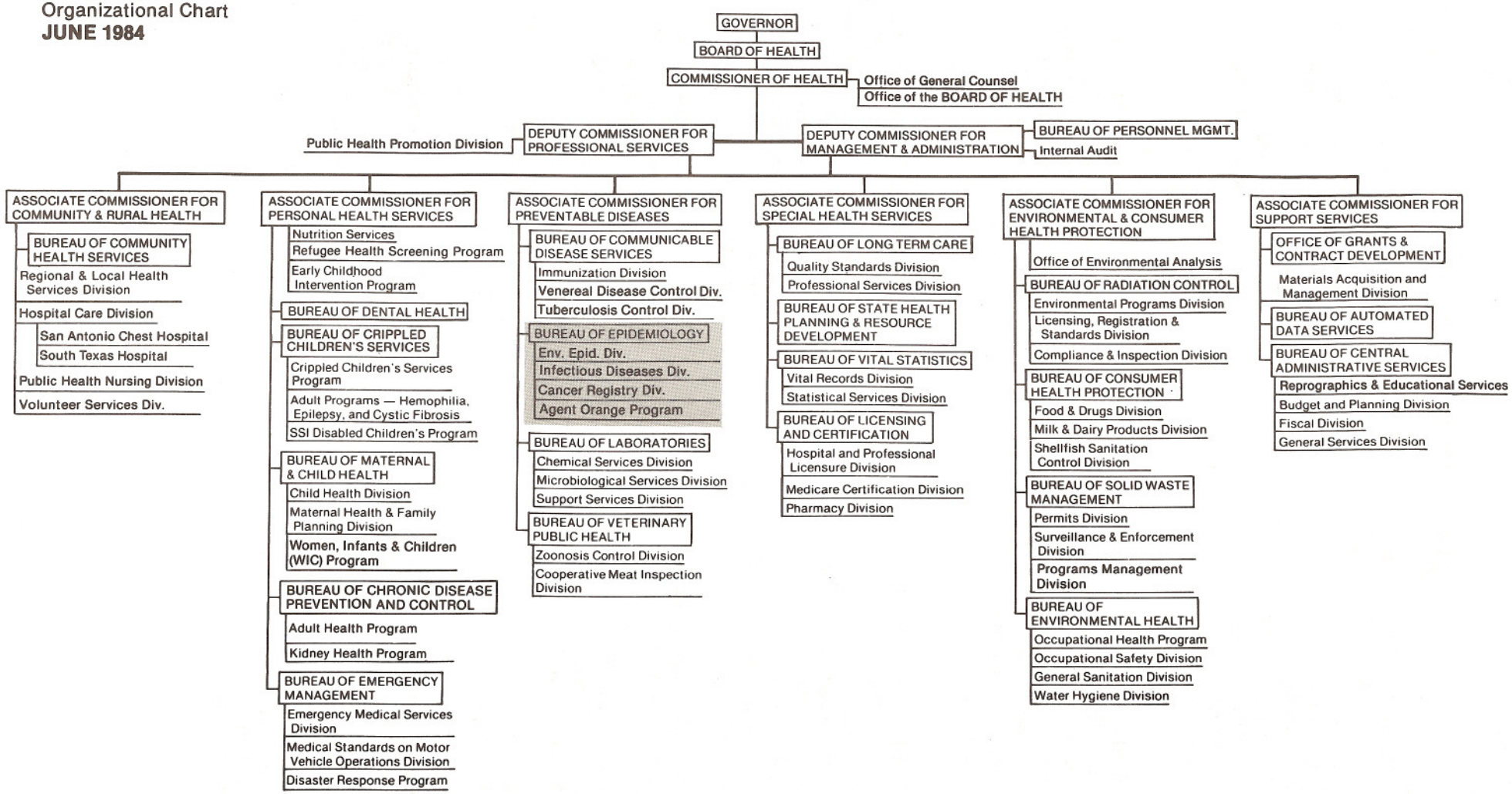
PUBLIC HEALTH REGION 8
Charles B. Marshall, Jr., M.D., M.P.H.
Regional Director Public Health
Texas Department of Health
1401 S. Rangerville Road
Harlingen, Texas 78550
512/423-0130
Tex-An 820-4501

PUBLIC HEALTH REGION 9
Rodger G. Smyth, M.D., M.P.H.
Regional Director Public Health
Texas Department of Health
P.O. Drawer 630
Uvalde, Texas 78801
(Location: Old Memorial Hospital,
Garner Field Road)
512/278-7173
Tex-An 820-4411

PUBLIC HEALTH REGION 11
Nina M. Sisley, M.D., M.P.H.
Regional Director Public Health
Texas Department of Health
1110 Avenue G
Rosenberg, Texas 77471
713/342-8685
Tex-An 851-3000

Texas Department of Health

Organizational Chart
JUNE 1984



NOTIFIABLE DISEASE REPORT FOR WEEK ENDING ______________

OURCE CODE: ________________(Please Leave Blank)

Disease	Date of Onset	Patient Information (Last name, first)	Age	Sex	Race	Type of Diagnosis*
		NAME				
		CITY				
		PHYSICIAN*				
		NAME				
		CITY				
		PHYSICIAN*				
		NAME				
		CITY				
		PHYSICIAN*				
		NAME				
		CITY				
		PHYSICIAN*				
		NAME				
		CITY				
		PHYSICIAN*				
		NAME				
		CITY				
		PHYSICIAN*				
		NAME				
		CITY				
		PHYSICIAN*				
		NAME				
		CITY				
		PHYSICIAN*				
		NAME				
		CITY				
		PHYSICIAN*				
		NAME				
		CITY				
		PHYSICIAN*				
		NAME				
		CITY				
		PHYSICIAN*				

USE THE FOLLOWING CODES:

RACE:

White	1
Hispanic	2
Black	3
American Indian or Alaskan Native	4
Asian or Pacific Islander	5

TYPE OF DIAGNOSIS:

Clinical	1
Serology	2
Culture	3
Biopsy/Smear	4
Other	5

PORT BY NUMBER OF CASES PER AGE GROUP

	<1 yr	1-4	5-9	10-14	15 +	unk	Total
:HICKENPOX							

TIONAL DATA

REPORT BY NUMBER OF CASES

Influenza & Flu-Like Illness ________

Streptococcal Sore Throat ________

Scarlet Fever ________

FORM C-15A (REV. DEC. 1983)

EXAS DEPARTMENT OF HEALTH
JREAU OF EPIDEMIOLOGY
00 WEST 49TH STREET
JSTIN, TX. 78756-3180

FIRST CLASS
U.S. POSTAGE PAID
AUSTIN, TEXAS
PERMIT NUMBER 28

REPORTABLE DISEASES OF TEXAS

By virtue of the authority vested in the Commissioner of Health by Article 4419b-1 of Vernon's Texas Civil Statutes, rules and regulations have been recommended by him and adopted by the State Board of Health as control measures for communicable diseases and for the establishment of methods of procedure for reporting in pursuance of Senate Bill 1064 passed by the 68th Legislature of the state of Texas.

Diseases to be Reported Immediately by Telephone to the Texas Department of Health in Austin

(CALL TOLL-FREE 1-800-252-8239)

- Botulism
- Cholera
- Diphtheria
- Measles
- Plague
- Poliomyelitis, paralytic
- Smallpox
- Yellow Fever

Diseases Reportable by Name

- Acquired immune deficiency syndrome
- Amebiasis
- Anthrax
- Aseptic meningitis
- Botulism
- Brucellosis
- Cholera
- Congenital rubella syndrome
- Diphtheria
- Encephalitis (specify etiology)
- Gonorrhea*
- Hansen's disease
- Hepatitis, viral
  - type A
  - type B
  - non-A, non-B
  - unspecified
- Leptospirosis
- Malaria
- Measles
- Meningococcal infections
- Mumps
- Pertussis
- Plague
- Poliomyelitis, paralytic
- Psittacosis
- Q fever
- Rabies in man
- Relapsing fever
- Reye syndrome
- Rheumatic fever, acute
- Rocky Mountain spotted fever
- Rubella
- Salmonellosis
- Shigellosis
- Smallpox
- Syphilis*
- Tetanus
- Trichinosis
- Tuberculosis*
- Tularemia
- Typhoid fever
- Typhus fever
  - endemic (murine)
  - epidemic
- Yellow fever

Diseases Reportable by Numerical Totals

- Chickenpox
- Influenza & Flu-like Illness
- Streptococcal Sore Throat
- Scarlet Fever

In addition to the requirements of individual case reports, any unusual or group expression of illness, whether related to communicable disease, occupationally caused sickness, or due to an unknown cause, which may be of public health concern, should be reported to the Texas Department of Health in Austin, through the local health authorities, or to the State Epidemiologist directly by the most expeditious means. A toll-free number **1-800-252-8239** is available for reporting these cases to Austin.

*Cases of syphilis and gonorrhea are to be reported on the "Confidential Report of Venereal Disease" form, J-27, and cases of tuberculosis are to be reported on the "Report of Case and Patient Services" form, TB-400.

Your cooperation in securing these reports promptly is greatly appreciated.

Bureau of Epidemiology
Texas Department of Health
1100 West 49th Street
Austin, Texas 78756-3180
(512) 458-7328 or STS 824-9328