EPIDEMIOLOGY IN TEXAS
1999 ANNUAL REPORT

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Front cover:
Colonies of a Runyon Group II Mycobacterium species growing on an agar culture medium. This group of mycobacteria includes M. gordonae, M. scrofulaceum, and M. szulgai. M. scrofulaceum can cause cervical lymphadenitis in children, pulmonary disease, and disseminated disease. It is also a rare cause of conjunctivitis, osteomyelitis, meningitis, and granulomatous hepatitis. M. szulgai produces chronic pulmonary disease very similar to tuberculosis. Other pathologies include cervical adenitis, tenosynovitis, cutaneous infections, and osteomyelitis. M. gordone very rarely causes human disease. However, it is widely distributed in soil and water. It is often isolated as a contaminant.

Front inside:
Typanosoma cruzi trypomastigotes in a peripheral blood smear. This organism causes American Trypanosomiasis (Chagas' disease). This parasite is usually transmitted through the wound of an infected Reduviid bug bite, or through exposed mucus membranes. Chronic infections with this organism can be life-threatening.

Cover and divider page photographs provided by
Texas Department of Health Bureau of Laboratories

Epidemiology in Texas
1999 Annual Report

TDH
TEXAS DEPARTMENT OF HEALTH

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Epidemiology in Texas Annual Report
Mission Statement

To provide health professionals and the public a yearly summary of disease incidence data, outbreak reports, and case narratives that enable them to understand, monitor, and prevent disease and injuries in Texas

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Foreword

As the 20th century comes to a close, it seems appropriate to reflect on the many major public health accomplishments that have occurred in the last 100 years. The "Sanitation Revolution"... safer drinking water, unadulterated foods and drugs, better housing... have all led to major advances in life expectancy and quality throughout the nation. At the foundation of these advances is the work of dedicated epidemiologists and public health professionals seeking to understand the major causes of death and premature disability in the population and using that information to reduce the impact of disease and injury.

While the millennia brought us great advances against communicable diseases, the last years bore witness to both a re-emergence of threats once thought vanquished and an emergence of new, frightful conditions. Add injuries, cancer, birth defects, harmful environmental or occupational exposures to the mixture, and you might imagine that the dawn of the 21st century has become a complex environment in which public health will struggle to make a difference.

The work of public health epidemiologists is hard, sometimes tedious, and almost never as glamourous as portrayed in movies, novels, or television. There are no easy investigations, no instant solutions, and no "magic bullets." Collecting, analyzing and assessing the trends and patterns of common as well as exotic diseases are vital to the public's health. It is from these data that researchers and policy makers can answer scientific questions, forward knowledge, and make policies that improve the health of our country and of Texas. Your epidemiologists find it extremely rewarding.

This "Epidemiology in Texas, 1999 Annual Report" represents some of the more compelling work done by epidemiologists and others at the Texas Department of Health during 1999. The work is done in direct collaboration with staff at local health departments throughout the state and the many health care professionals and institutions who share their experiences and findings.

We hope you find this report useful as we all work together for a healthier Texas in the Year 2000 and beyond.

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Contents

Regional Statistical Summaries

Reported Cases of Selected Diseases

Appendix

REPORTS

Electron micrograph of rotavirus. Rotaviruses cause acute, often febrile gastroenteritis most often in children, but may affect other age groups.

Animal Bites and Attacks

The Zoonosis Control Division tracks severe animal bites and attacks in Texas. For the purpose of reporting, a severe attack is defined as one in which the animal repeatedly bites or vigorously shakes its victim, and the victim or a person intervening has extreme difficulty terminating the attack. A severe bite is defined as a puncture or laceration made by an animal's teeth that breaks the skin, resulting in a degree of trauma that would cause most prudent and reasonable people to seek medical care for treatment of the wound, without consideration of rabies prevention alone. For purposes of this report, the terms "severe bite" and "severe attack" will be used interchangeably.

A total of 684 reports were voluntarily submitted by local health departments, animal control agencies, and emergency health care providers to the Zoonosis Control Division, Texas Department of Health in 1999. Reports were submitted from 83 of Texas' 254 counties. A review of death certificates for the entire state for 1999 revealed no deaths associated with animal attacks.

Animal Characteristics

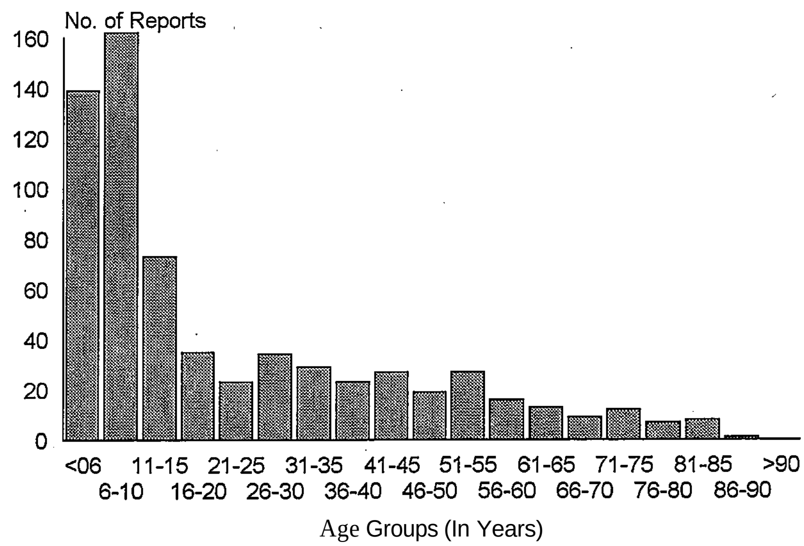
Dogs were involved in 599 of the 684 incidents (88%). Other species included bat (1), cat (69), feral hog (1), ferret (1), fox (1), prairie dog (1), rabbit (1), raccoon (4), rat (3), squirrel (2), wolf (1), and wolf-dog hybrid (1). Slightly over one-third (35%) of biting dogs and cats were vaccinated against rabies.

The tendency of a dog to bite is a product of many factors including genetic predisposition to aggressiveness, maltreatment, late or inadequate socialization to people, quality of care, and behavior of the victim. Nine breeds constituted over 60% of the dogs involved in severe attacks (Table 1). However, since population estimates by breed are not available, it is unknown whether these figures represent breed predisposition to aggressiveness or simply the popularity of these breeds. Small breeds of dogs and cats were infrequently reported since they are seldom capable of inflicting severe wounds.

Victim Characteristics

Bites by canines are a significant source of morbidity in all age groups, but the highest likelihood of severe injury is among the pediatric age group. Children under 11 years of age were more than 4 times as likely to sustain a severe bite than were adolescents and adults (Figure 1) and nearly 4 times more likely to sustain a head injury from a serious attack. While children under 11 years of age accounted for only 45% of the bite victims, they sustained 75% of all head injuries. Injuries to the head and neck are extremely serious because they can result in disfiguring wounds as well as life-threatening injuries involving hemorrhage and cranial trauma.

Figure 1. Victim's Age in Animal Attacks



While the exact proportion of sterilized versus intact animals in the overall canine population in Texas is unknown, a study conducted in 1997 by the Zoonosis Control Division surveyed the reproductive status of almost 25,000 dogs. This sample was drawn both from dogs that were licensed and dogs that were impounded in animal shelters. The study revealed that 2,788 (23%) of male dogs and 3,756 (31%) of female dogs in the sample had been surgically sterilized. A comparison of the sex and reproductive status of dogs involved in severe bites with the study population indicated that neutering males appears to reduce the risk of serious attacks or bites by a factor greater than 2.

Over one-third (37%) of the attacks involved circumstances that provoked the dog to attack. Provocation should be thought of in terms of an animal's innate response to human actions such as teasing, startling, or abusing the animal; handling its puppies or kittens; playing roughly with the animal; or interfering with the animal while it is eating, guarding its territory, fighting with another animal or pursuing a female in estrus.

Zoonosis Control Division (512) 458-7255

Table I - Frequency of Dog Breeds Involved in Severe Attacks or Bites on Humans

Breed	No.	%
Chow	68	12.9
Rottweiler	57	10.8
German Shepherd	41	7.8
Pit Bull	39	7.4
Chow Cross	39	7.4
Labrador Retriever	27	5.1
Blue Heeler	19	3.6
Mixed Breed	18	3.4
Labrador Retriever Cross	17	3.2

Antibiotic Resistant Pathogen Isolate Surveillance

Surveillance System

In 1998 a Board of Health rule change required that all microbiology laboratories in Texas report, at least on a quarterly basis, vancomycin-resistant *Enterococcus* species (MIC≥16 mcg/mL), penicillin-resistant *Streptococcus pneumoniae* (MIC≥0.1 mcg/mL), total numbers of *Enterococcus* species, and *Streptococcus pneumonine* isolated/cultured at their site. Vancoenycin-intermediate resistant *Stnphylococcus aureus* and vancomycin-intermediate resistant coagulase negative *Stnphylococcus* species (MIC≥8 mcg/mL) are to be reported immediately via phone or fax.

This antibiotic resistance surveillance system allows the Texas Department of Health to acquire information critical for future decision making. However, the information generated is limited by the (1) inherent inability to differentiate between pathogen colonization and infection; (2) geographic variability in completeness of reporting; (3) variability in testing methodology; and (4) interfacility variability in routine culturing practices. For example, hospitals with the capacity to test sensitivity — and which routinely actively monitor rates of colonization as compared with infection — are overrepresented in this surveillance system database. According to one recent survey, about 30% of clinical microbiology laboratories sweyed in Texas may not be testing all clinically significant isolates to detect penicillin resistant *Streptococcus pneumoniae.*

Reporting Facilities

For the period January 1, 1999 through December 31, 1999, 119 laboratories mailed or faxed,completed antibiotic resistance reports. The majority of these

Table 1. Distribution of Reports of Vancomycin Resistant Enferococcus Species Isolates*

PHR	Counties in PHR	Reporting Counties/Counties with Hospital	VRE Isolates	ES Isolate	% VRE Isolates	95% CI
1	41	5/28	172	2,358	7	6-8
2	30	5/24	5	1,007	.5	0-1
3	19	8/19	243	7,451	3	3-4
4	23	6/18	46	2,659	2	1-2
5	15	3/13	1	108	1	0-5
6	13	7/12	386	5,874	7	6-7
7	30	6/22	64	4,766	1	1-2
8	28	3/20	249	4,119	6	5-7
9	30	2/20	9	363	2	1-5
10	6	0/3	--	--	--	--
11	19	4/10	27	1,220	2	1-2
State	**254**	**491189**	**1,202**	**29,925**	**4**	**4-4**

*Data from incomplete reports (missing numerator or denominator) were excluded.
PHR - Public Health Region
VRE - Vancomycin Resistant *Enferococcus* species
ES - *Enterococcus* species total number
CI - Confidence Interval

Table 2. Distribution of Reports of Penicillin-Resistant *Streptococcus Pneumoniae* Isolates*

PHR	Counties in PHR	Reporting Counties/Counties with Hospital	PRSP Isolates	SP Isolate	% PRSP Isolates	95% CI
1	41	6/28	203	463	44	39-48
2	30	4/24	43	77	56	44-67
3	19	8/19	203	947	21	19-24
4	23	7/18	98	358	27	23-32
5	15	3/13	5	13	38	14-68
6	13	7/12	177	618	29	25-32
7	30	6/22	274	1006	27	24-30
8	28	3/20	55	245	22	17-28
9	30	2/20	2	88	2	0-8
10	6	0/3	--	--	--	--
11	19	3/10	39	107	36	27-46
State	**254**	**491189**	**1099**	**3922**	**28**	**27-30**

"Data from incomplete reports (missing numerator or denominator) were excluded.
PHR - Public Health Region
PRSP - Penicillin Resistant Streptococcus pneumoniae
SP - Streptococcus pneumoniae
CI - Confidence Interval

Table 3. Distribution of Resistant Bacterial Isolate Reports by Age Group, Bacteria Type, and Sex*

Age Group	VRE Reports Female No.	%	VRE Reports Male No.	%	PRSP Reports Female No.	%	PRSP Reports Male No.	%
0-4	13	1	14	2	150	27	234	35
5-9	4	>1	3	1	65	12	84	12
10-19	8	1	7	1	43	8	38	6
20-29	22	2	23	4	22	4	21	3
30-39	44	5	41	7	36	6	40	6
40-49	75	8	80	13	37	6	43	6
50-59	95	11	89	14	49	9	52	8
60-69	147	16	111	18	38	7	57	8
70-79	223	25	146	23	68	12	72	11
80+	261	30	110	17	48	9	35	5
Total	**892**		**624**		**556**		**676**	

*Data from incomplete reports (missing numerator or denominator) were excluded.
PHR - Public Health Region
PRSP - Penicillin Resistant Streptococcus pneumoniae
SP - Streptococcus *pneumoniae*
CI - Confidence Interval

laboratories were small- to medium-sized city hospital laboratories which served multiple counties; 8 were free standing laboratories. Forty-line of 189 (26%) counties with hospital facilities were represented.

Table 4. Distribution of Resistant Bacterial Isolates by Site of Culture

Site of Culture	% VRE Isolates	Site of culture	% PRSP Isolates
Urine/Foley catheter	37	Sputum	21
Rectal	12	Blood	20
Stool	10	Ear	18
Wound	8	Nose	12
Unspecified	8	Trachea/bronchi/pleura	7
Skin lesion	6	Nasopharynx	6
Blood	5	Sinuses	5
Other	5	Unspecified	4
Other unsterile body fluid	4	Eye	4
Catheter (IV, central line)	3	CSF	2
Abscess	2	Other sterile body fluid	1
Total	**100**	**Total**	**100**

VRE - vancomycin resistant Enterococcus species
PRSP - penicillin resistant Streptococcus pneumoniae

Reports

In the first 2 quarters of 1999, many of the reports received were incomplete and did not include total number of isolates (resistant and nonresistant) and did not indicate whether there were no isolates for a particular species that quarter. Statewide, 4% (95% confidence interval [CI]= 3.8-4.2) of *Enterococcus* species isolates tested were resistant to vancomycin, and 28% (95% CI= 26.6-29.4) of *Streptococcuspneumoniae* isolates were resistant to penicillin (intermediate + resistant totals) during 1999. The distribution of vancomycin resistant *Enterococcus* species (VRE) and penicillin resistant *Streptococcus pneumoniae* (PRSP) isolates by Public Health Region site of the reporting laboratory is shown in Tables 1 and 2. The distribution of resistant isolates by age and sex is shown in Table 3 and the percentages of VRE and PRSP isolates by the anatomic site of the culture are found in Table 4. In 1999 there were no confirmed reports of the isolation of vancomycin-intermediate resistant *Stnphylococcus aureus* and coagulase negative *Staphylococcus* species.

Death Certificate Review

A review of death certificates for this period revealed that 9 deaths were attributed to VRE and none to PRSP. All of the deaths attributed to VRE occurred in elderly patients with severe underlying conditions such as renal failure and cancer.

Summary

These are baseline data regarding antibiotic resistance for the state of Texas. Statewide, 4% of *Enterococcus* species isolates tested were resistant to vancomycin; this proportion is much lower than national estimates based on data from intensive care unit patients (24% in 1998). During 1999, 28% of *Streptococcus pneumonine* isolates were resistant to penicillin (intermediate + resistant totals), a percentage that is higher than the national estimate (24% for 1998). Overall, the cultures from individuals ≥ 60 years of age accounted for most (66%) VRE isolates; the most common (37%) site for VRE isolates was the urine/foley catheter. In contrast, children younger than 5 years of age accounted for approximately one third (31%)of PRSP isolates; sputum was the most common (21%) site.

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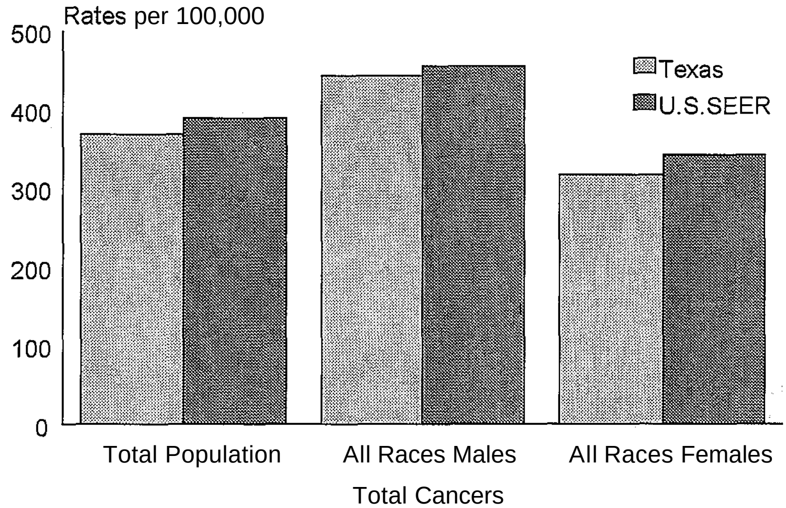
Cancer: An Overview of 1996

Introduction

Cancer remains a serious health problem in Texas. In the year 2000, it is estimated that 75,600 Texans will be diagnosed with cancer and 33,400 will die from the disease. Although overall cancer mortality rates have begun to decline, both in Texas and in the nation, the aging and growth of the Texas population will increase the number of new cases and deaths in the coming years.

The direct health care costs for patients with cancer are in the hundreds of millions of dollars annually. The medical, emotional, and economic costs of cancer are staggering. With the continued growth in population, the aging of the population, the increase in medical treatment expenses, and current trends in cultural and lifestyle behavioral risk factors that are conducive to cancer, these costs are expected to escalate.

Figure 1. Total Cancer Incidence Rates*, Texas vs. US SEER Program, 1996

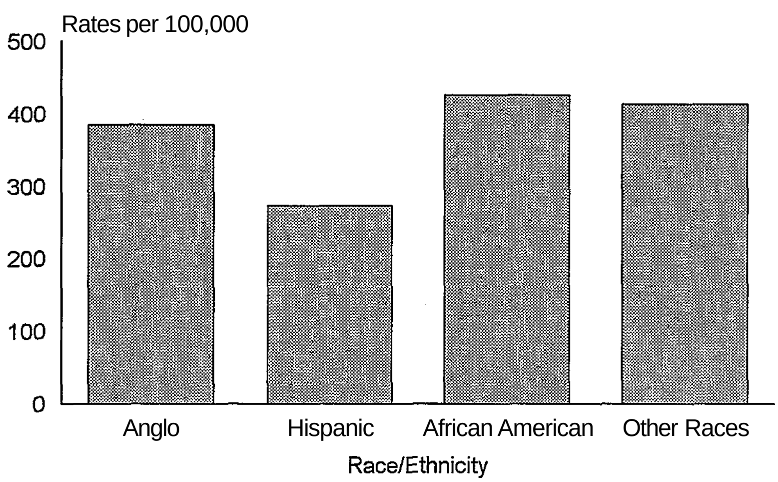


"Rates have been age-adjusted to the 1970 US standard population SEER: Surveillance, Epidemiology, and End Results

The first step in decreasing the burden of cancer in Texas is to define the patterns of cancer incidence and mortality among Texas residents. The Cancer Registry Division (CRD) of the Texas Department of Health (TDH) collects reports of primary malignant neoplasms occurring among state residents. The principal source of case reporting for incidence data is Texas hospitals, with reports also received from radiation and surgical centers.

The Cancer Registry Division routinely publishes information on cancer incidence and mortality among Texas residents. This report highlights cancer incidence data for 1996, the most recent year for which statewide cancer reporting is considered complete.

Figure 2. Total Cancer Incidence Rates* by Race/ Ethnicity, 1996



*Rates have been age-adjusted to the 1970 US standard population

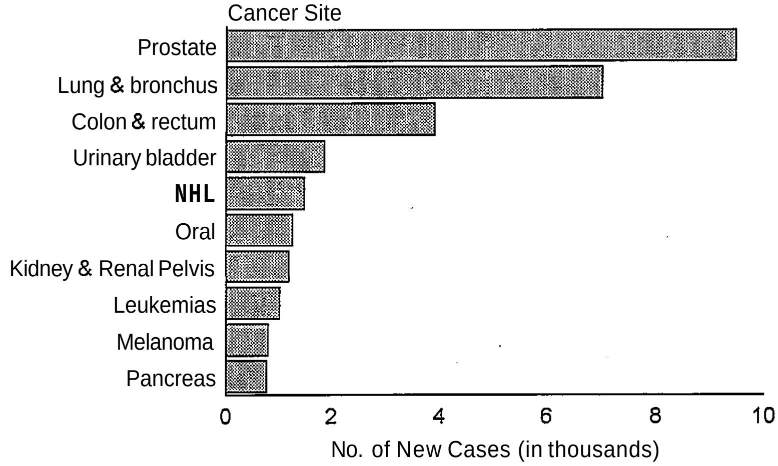
Overall Findings

A total of 69,474 newly diagnosed primary malignant cancers were reported to the CRD in 1996. Males accounted for 52% (36,108) and females for 48% (33,365) of the primary malignant cancer cases.

In 1996 the average annual age-adjusted incidence rate for all cancers was 442.8 cases per 100,000 population for males, which is 40% higher than the overall rate for females (316.8/100,000) (Figure 1). Cancer incidence rates vary widely by race/ethnicity (Figure 2). Incidence rates for total cancers were highest among African Americans (425.2/100,000), followed by Other Races (413.4) and Anglos (384.8). Hispanics had the lowest overall cancer rate, 273.0 cases per 100,000 population. Although cancer rates for most anatomic sites were generally lower among Hispanics, there were some notable exceptions. Hispanic women in Texas had the highest rate of cervical cancer (16.8/100,000), twice that for Anglo women (8.41100,000). Rates of liver cancer also were particularly high among Hispanic males (13.71100,000), over 3 times higher than that for Anglo males (4.3/100,000). Only males in the Other Races category had a higher liver cancer rate (18.8/100,000).

Total cancer incidence increased with age for both males and females. Although the increase began at a slightly younger age in Texas females, it was much more rapid and rose to much higher rates in Texas males. This increase is partly due to the very high rate of prostate cancer in older men. Overall, Texas cancer incidence rates were lower than the national rate based on data from the SEER Program of the National Cancer Institute (Figure 1). This may be due in part to the large Hispanic population in Texas (as compared with the nation), which generally has lower cancer rates than other race/ethnicity groups.

Figure 3. Ten Leading Cancer Sites Among Males, All Races, 1996



Cancer Incidence By Sex

In Texas, as in most of the world, males experience higher overall rates of cancer than do females. For example, lung and bronchus cancer was the second leading cause of cancer incidence in both males and females, but the incidence rate for males (87.9/100,000) was over twice that of females (43.2/100,000). This pattern of higher rates in males was seen for almost all of the cancer sites that were not gender specific.

In addition to lung cancer, which accounted for 19.4% of all cancers in males, other leading types of cancer among Texas males were prostate (26.2%), colon and rectum (10.9%), bladder (5.2%), and non-Hodgkin's lymphoma (NHL) (4.1%) (Figure 3). Among females, breast cancer was the most common type of cancer, accounting for 30.5% of all cancer in females, followed by lung cancer (13.2%) (Figure 4). Other leading types of cancer in females included colon and rectum (11.1%), corpus and uterus NOS (Not Otherwise Specified) (5.0%), and ovary (4.0%). The 5 most common types of cancer accounted for 65.8% and 63.8% of all cancers in males and females, respectively.

Table I. Five Most Common Cancer Sites and Percent of Total Cancers Diagnosed by Race/Ethnicity and Sex, 1996

Male				Female			
Rank	**Cancer Site**	**No.**	**%**	**Rank**	**Cancer Site**	**No.**	**%**
Anglo				**Anglo**			
1	Prostate	7,063	26.3	1	Breast	7,645	31.1
2	Lung & Bronchus	5,458	20.3	2	Lung & Bronchus	3,616	14.7
3	Colon & Rectum	2,910	10.8	3	Colon & Rectum	2,793	11.3
4	Urinary Bladder	1,585	5.9	4	Corpus & Uterus NOS	1,208	4.9
5	Non-Hodgkin's Lymphoma	1,083	4.0	5	Non-Hodgkin's Lymphoma	987	4.0
Total Cancers		**26,823**		**Total Cancers**		**24,621**	
Hispanic				**Hispanic**			
1	Prostate	1,089	22.8	1	Breast	1,370	29.1
2	Lung & Bronchus	643	13.4	2	Colon & Rectum	409	8.7
3	Colon & Rectum	564	11.8	3	Cervix	367	7.8
4	Non-Hodgkin's Lymphoma	260	5.4	4	Lung & Bronchus	300	6.4
5	Kidney & Renal Pelvis	213	4.5	5	Corpus & Uterus NOS	259	5.5
Total Cancers		**4,784**		**Total Cancers**		**4,704**	
African American				**African American**			
1	Prostate	1,124	29.0	1	Breast	993	28.9
2	Lung & Bronchus	848	21.9	2	Colon & Rectum	456	13.3
3	Colon & Rectum	390	10.1	3	Lung & Bronchus	431	12.6
4	Oral Cavity & Pharynx	142	3.7	4	Cervix	169	4.9
5	Larynx	132	3.4	5	Corpus & Uterus NOS	164	4.8
Total Cancers		**3,877**		**Total Cancers**		**3,433**	
Other Races				**Other Races**			
1	Prostate	185	29.6	1	Breast	184	30.3
2	Lung & Bronchus	68	10.9	2	Colon & Rectum	54	8.9
3	Colon & Rectum	59	9.5	3	Lung & Bronchus	48	7.9
4	Oral Cavity & Pharynx	30	4.8	4	Cervix	36	5.9
5	Liver & Intrahepatic Bile Duct	29	4.6	5	Corpus & Uterus NOS	30	4.9
Total Cancers		**624**		**Total Cancers**		**607**	

NOS-Not Otherwise Specified

Table 2. Five Most Common Cancer Sites and Percent of Total Cancers Diagnosed by Age at Diagnosis and Sex, 1996

Male				Female			
Rank	Cancer Site	No.	%	Rank	Cancer Site	No.	%
15 to **34** Years Old				**15** to **34** Years Old			
1	Testis	258	22.8	1	Breast	288	19.8
2	Non-Hodgkin's Lymphoma	128	11.3	2	Cervix	218	15.0
3	Hodgkin's Disease	110	9.7	3	Thyroid	199	13.7
4	Brain & Other CNS	101	8.9	4	Ovary	107	7.4
5	Leukemia	87	7.7	5	Hodgkin's Disease	89	6.1
Total Cancers		**1,132**		Total Cancers		**1,453**	
35 to **44** Years Old				**35** to **44** Years Old			
1	Non-Hodgkin's Lymphoma	205	12.4	1	Breast	1,293	42.9
2	Lung & Bronchus	169	10.3	2	Cervix	305	10.1
3	Colon & Rectum	161	9.8	3	Thyroid	201	6.7
4	Testis	113	6.9	4	Colon & Rectum	164	5.4
5	Oral Cavity & Pharynx	86	5.3	5	Ovary	149	4.9
Total Cancers		**1,647**		Total Cancers		**3,017**	
45 to **54** Years Old				**45** to **54** Years Old			
1	Lung & Bronchus	672	18.0	1	Breast	2,147	45.0
2	Prostate	556	14.9	2	Lung & Bronchus	414	8.7
3	Colon & Rectum	438	11.7	3	Colon & Rectum	358	7.5
4	Oral Cavity & Pharynx	249	6.7	4	Corpus & Uterus NOS	235	4.9
5	Kidney & Renal Pelvis	211	5.7	5	Cervix	221	4.6
Total Cancers		**3,730**		Total Cancers		**4,771**	
55 to **64** Years Old				**55** to **64** Years Old			
1	Prostate	2,159	28.4	1	Breast	2,090	34.3
2	Lung & Bronchus	1,629	21.5	2	Lung & Bronchus	952	15.6
3	Colon & Rectum	791	10.4	3	Colon & Rectum	552	9.0
4	Urinary Bladder	352	4.6	4	Corpus & Uterus NOS	399	6.5
5	Oral Cavity & Pharynx	320	4.2	5	Ovary	273	4.5
Total Cancers		**7,593**		Total Cancers		**6,102**	
65 to **84** Years Old				**65** to **84** Years Old			
1	Prostate	6,190	31.4	1	Breast	3,848	25.7
2	Lung & Bronchus	4,239	21.5	2	Lung & Bronchus	2,648	17.7
3	Colon & Rectum	2,220	11.3	3	Colon & Rectum	1,988	13.3
4	Urinary Bladder	1,107	5.6	4	Corpus & Uterus NOS	756	5.1
5	Non-Hodgkin's Lymphoma	576	2.9	5	Non-Hodgkin's Lymphoma	689	4.6
Total Cancers		**19,688**		Total Cancers		**14,961**	
85+ Years Old				**85+** Years Old			
1	Prostate	522	27.0	1	Colon & Rectum	609	22.0
2	Lung & Bronchus	285	14.7	2	Breast	524	18.9
3	Colon & Rectum	262	13.5	3	Lung & Bronchus	253	9.1
4	Urinary Bladder	143	7.4	4	Pancreas	148	5.3
5	Non-Hodgkin's Lymphoma	81	4.2	5	Non-Hodgkin's Lymphoma	123	4.4
Total Cancers		**1,935**		Total Cancers		**2,772**	

Table does not include skin cancers or miscellaneous neoplasms when they occur among the top 5 cancers

Cancer Incidence By Sex and Race/Ethnicity

The 5 most commonly diagnosed cancers among men and women by race/ethnicity (Anglo, Hispanic, African American, and Other Races) are presented in Table 1. Prostate and breast cancer were the most commonly diagnosed cancers in men and women respectively, regardless of racelethnicity. Similarly, lung and bronchus cancer and colon and rectum cancers were the second and third leading types of cancers in all Texas men. Non-Hodgkin's lymphoma and urinary bladder cancers also were leading cancers among Anglo and Hispanic men. Patterns differed slightly among Anglos and Hispanics, with urinary bladder cancers having a more predominant role in Anglo men and kidney and renal pelvis cancers being more predominant among Hispanic men.

Cancer of the oral cavity and pharynx was the fourth leading cause in African American men and men in the other races category.

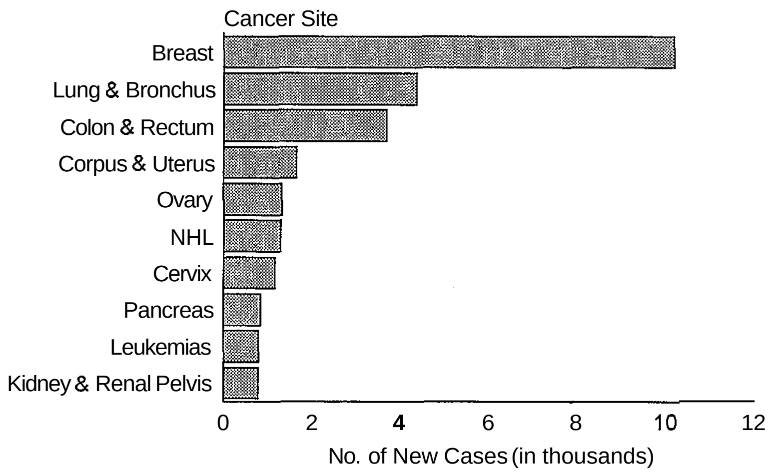
Among Anglo, African American, and women of other races, cancers of the lung and bronchus and colon and rectum were either the second or third leading cancers diagnosed. In contrast, cervical cancer accounted for more total cancers in Hispanic women (7.8%) than did lung and bronchus cancers (6.4%). Cervical cancers also were predominant among women in the Afiican American and Other Races categories (4.9% and 5.9% respectively).

Cancer Incidence By Sex and Age at Diagnosis

The 5 most common cancer sites by sex and age at diagnosis are listed in Table 2. Slightly more than three-fourths of the cancers diagnosed among Texans in 1996 occurred in residents ages 55 years and older. The pattern of cancers diagnosed among younger residents differed from that in older Texans. Among adolescent and young adult men ages 15 to 34 years, testicular cancer was the leading cancer diagnosed. Testicular cancer accounted for 6.9% of cancers reported among men ages 35 to 44 years, making it the fourth most commonly diagnosed cancer in that age group. Prostate cancer became the leading type of cancer diagnosed among Texas men beginning with the 55 to 64 year age group.

With the exception of the oldest age group (≥85 years), breast cancer was the most commonly diagnosed cancer for women 15 years of age or older. Cervical and thyroid cancers were more predominant in women in the younger age groups (15 - 44 years). Among women 85 years of age and older, colon and rectum cancers surpassed both breast and lung and bronchus cancers to become the leading type of cancer diagnosed in that age group.

Figure 4. Ten Leading Cancer Sites Among Females, All Races, 1996



Summary

This report highlights 1996 cancer incidence data received by the Cancer Registry Division and illustrates that the cancer experience for Texas residents varied by sex and race/ethnicity. Overall, incidence rates were higher among males than females. For males and females, the top 3 types of cancer by sex were generally the same regardless of racelethnicity; however, the magnitude of the incidence rates varied considerably. For most cancer sites, incidence rates were considerably lower among Hispanic male and females. A notable exception to this trend was cervical cancer, which was the third leading type of cancer diagnosed among Hispanic feinales, accounting for more newly diagnosed cancers than lung and bronchus cancers in this population. More detailed cancer incidence data is presented in the Cancer Registry Division's complete report, *Cancer in Texas, 1996*. To obtain a copy of this report, contact the Cancer Registry Division at the Texas Department of Health, 1100 West 49th Street, Austin, Texas 78756 or call (512) 458-7523 or toll-free at (800) 252-8059. The *Cancer in Texas, 1995* and *1996* reports also can be accessed through the Cancer Registry Division website at www.tdh.state.tx.us/tcr.

Cancer Registry Division (512) 458-7523

Dengue

Dengue fever results from infection with 1 of 4 closely related dengue serotypes (DEN-1,-2, -3, and -4). This mosquito-borne illness is characterized by fever, headache, joint pain, muscle aches, and rash. The mosquitoes that transmit the dengue virus are *Aedes aegypti* and *Aedes albopictus*. *Aedes* mosquitoes breed in water containers such as flower pots, bird baths, old cans and tires. In Texas, dengue virus transmission generally occurs from July through December.

Due to an *Ae. aegypti* eradication campaign, dengue was uncommon in the 1950s and 1960s. Dengue reemerged after the campaign was terminated in Texas, during the 1980s and first half of the 1990s, there were 3 small outbreaks. In 1980 there were 63 cases of dengue (23 patients acquired their illness in Texas) and in 1986, 17 cases were reported (8 were acquired in Texas). During both the 1980 and 1986 outbreaks, DEN-1 was the only serotype isolated from patients with locally acquired infections. In 1995, 29 dengue cases were identified (7 cases, in residents of Cameron and Hidalgo Counties, were locally acquired); DEN-2 and DEN-4 were isolated from patients with locally acquired illnesses. During the years between these outbreaks, only 10 dengue cases were reported; none were locally acquired. However, between 1995 and 1999, locally acquired cases continued to be reported, indicating that the dengue virus has become established in Texas.

In 1999 another large dengue outbreak occurred. A total of 66 cases were reported in 1999; 62 cases were associated with the outbreak. Of the 66 cases, 32 were in Webb County residents. The remaining cases were in residents of Bexar (2), Cameron (7), Collin (1), Dallas (4), Galveston (2), Harris (1), Hidalgo (10), Nueces (1), Starr (1), Tarrant (1), Travis (2), and Willacy (2) Counties. The dengue patients included 26 males and 40 females aged from 7 through 86 years. Sixty-three (95%) patients were Hispanic. Signs and symptoms included fever (98%), headache (77%), rash (74%), chills (70%), joint/bone pain (68%), anorexia (65%), malaise (53%), nausea/vomiting (48%), myalgias (42%), lumbosacral pain (32%), retro-orbital pain (29%), dysgeusia (21%), and respiratory symptoms (17%). Sixteen patients were hospitalized and there was 1 death due to dengue shock syndrome associated with the outbreak.

Forty-eight of the 66 patients had traveled outside the continental United States during the 2 weeks prior to onset of illness. Two patients had been to Brazil and 1 each had been to Honduras and Puerto Rico. The others with a travel history had been to Mexico. Eighteen (27%) patients acquired their illness as a result of living or traveling in Cameron, Hidalgo, Starr, Webb, or Willacy County, suggesting that dengue is now endemic in 5 South Texas counties.

Infectious Disease Epidemiology and Surveillance Division (512) 458-7676

Escherichia coli O111:H8 Outbreak Among Drill Team Campers

Although rarely identified, *Escherichin coli* O111 has been the second most common pathogenic non-O157 Shiga toxin-producing E. *coli* (STEC) identified in the United States among specimens submitted to the Centers for Disease Control and Prevention (CDC) for serotyping fi-om 1983 through 1998.[1] Only E. *coli* O26 is more commonly identified among non-O157 STEC. These bacteria cause illness in otherwise healthy persons and are characterized by severe abdominal cramping and bloody diarrhea; hemolytic uremic syndrome (HUS) sometimes occurs. STEC are estimated to cause 110,000 illnesses annually in the US, of which 50% may be due to non-O157 serotypes, such as O 111.[2] However, most large STEC outbreaks in North America have resulted fi-om infection with E. *coli* O157:H7.

In June 1999 the Tarrant County Health Department reported to the Texas Department of Health (TDH) that a group of teenagers attending a drill team camp from June 9 through 11 had become ill with nausea, vomiting, severe abdominal cramps, and diarrhea (some of which was bloody). Two young women were hospitalized with hemolytic uremic syndrome (HUS), and two others had appendectomies. Routine stool cultures fi-om 8 ill students failed to yield a pathogen, including E. *coli* O157. Stools were subsequently sent to laboratories at the Texas Department of Health and Centers for Disease Control and Prevention (CDC), where E. *coli* O111:H8 was isolated from two specimens. This report summarizes the investigation of this outbreak.

A cohort study of all students attending the 3-day camp was conducted to identify the source of the outbreak and to collect data describing the epidemiology of this novel pathogen. Illness was defined as either diarrhea ($\geq$ 3 loose stools in any 24-hour period) accompanied by abdominal cramps or bloody diarrhea alone occurring within 14 days after the start of the camp. Campers were interviewed for demographic information, medical histories, symptoms, food and beverage consumption, and exposures during the camp.

Sanitarians conducted a thorough inspection of the cafeteria that served meals to the campers and an environmental inspection of the plumbing system in the dormitory where they resided. Food handlers and other kitchen staff were interviewed about food preparation practices, menus, delivery schedules, and suppliers for food items served to campers. Food handlers also submitted stool specimens and rectal swabs for testing.

Surveillance for non-O157 STEC illnesses in Texas was enhanced through alerts sent to all health departments, hospitals, and clinical laboratories. Alerts about the outbreak were also sent to selected physicians (primarily infectious disease physicians and gastroenterologists). Enhanced statewide surveillance did not find other cases of E. *coli* O111:H8 infection elsewhere in Texas. However, 4 persons were identified with infections from other non-O157 STEC that were unrelated to this outbreak (serotypes O26, O29, O73, and O103).

Of the 650 campers comprising the cohort, 521 (80%) were reached for interview. Of these, 130 (25%) reported at least one symptom of illness; 58 persons (11%) met the case definition. The median age of the 58 ill persons was 16 years, and 95% were female. The median length of illness was 5 days, and 7% were hospitalized; there were no deaths. In addition to diarrhea, which was part of the case definition, 100% of ill persons also reported abdominal cramping; 62% reported nausea; 56%, headache; 38%, vomiting; 37%, bloody diarrhea; and 29%, fever with a median measured temperature of 100°F (n=9).

Statistical analysis indicated that only 2 exposures were significantly and independently associated with illness: consumption of ice fi-om the large trashcan-style lined barrels that the camp provided in the donnitory lobby for filling water bottles (adjusted odds ratio [AOR] 3.35, 95% confidence interval [CI] 1.85-6.32, p=0.0001) and consumption of any salad from the cafeteria salad bar on at least one occasion (AOR 3.50, 95% CI 1.23-8.97, p=0.02).

Inspection of the camp's water systems showed no evidence of plumbing cross-connections or failures that might have led to exposures to contaminated water or waste. Coliform testing of ice fi-om the ice machines used to fill the barrels was negative. Students reported dipping their drink containers as well as arms, hands, and heads, into the ice. They also reported observing floating debris in the ice barrels. Inspection of the cafeteria and kitchen revealed that kitchen staff used potentially unsafe times and temperatures when preparing meals.

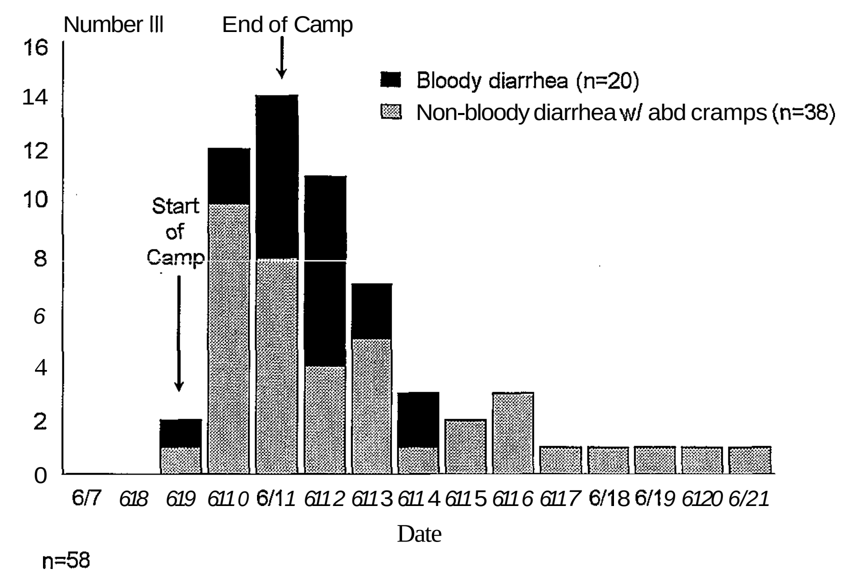
The laboratory investigation yielded E. *coli* O111:H8 from the stool of 2 ill persons. Sweeps of colonies grown fi-om the 2 stool specimens fi-om which E. *coli* O111:H8 was isolated reacted positively when examined with a commercial enzyme immunoassay (EIA) kit for the presence of Shiga toxin. The E. *coli* O111:H8 isolates fiom these specimens contained gene sequences for Shiga toxins 1 and 2 by polymerase chain reaction (PCR). One other stool had detectable Shiga toxin when tested directly with EIA, but STEC were not isolated. E. *coli* O157:H7 was not isolated from any camper, foodhandler, food, or water sample.

This is the largest E. *coli* 0 111:H8 outbreak to be reported in the US. The epidemic curve suggests a point-source outbreak (Figure 1). The most significant risk factor associated with illness was use of ice or ice water from the 3 barrels of ice placed in the dormitory lobby during the camp. The ice barrels were probably a secondary vehicle that facilitated the spread of the bacteria and not the primary exposure that introduced the pathogen to the drill team campers. Although an association was observed with consumption of any salad during the 3 days, that association was statistically weaker than the association with ice consumption. McNemar's tests for agreement between interview responses for 93 campers who were interviewed multiple times showed that case-patients reported eating more salads, andcontrols reported eating fewer salads in later interviews. The observed association of illness with salad consumption may be due to response bias and may not be a valid observation.

Other occurrences of E. *coli* O111 infections have included a household cluster of infections reported in 1990 fi-om Ohio[3] and outbreaks in Australia, Japan, and Europe.[4-8] Despite investigations involving large numbers of persons in well-defined settings, the vehicle of transmission has only been epidemiologically implicated and microbiologically confirmed in one 1995 outbreak in South Australia, which was due to mettwurst, a dried fermented sausage.

Non-O157 STEC are difficult to identify in the laboratory. In this outbreak, a commercially available EIA kit was used to identify stool .specimens containing Shiga toxin when they did not yield E. *coli* O157:H7. Isolates of E. *coli* fiom these specimens, which were found to be producing Shiga toxin, were then serotyped at CDC. Most clinical laboratories do not routinely screen stool specimens from all persons with bloody diarrhea or HUS for other STEC when *E. coli* 0157 is not isolated, therefore the true burden of disease attributable to non-O157 STEC is unknown.

Figure 1. Epi-Curve by Onset of Illness, June 1999



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Escherichia coli O157:H7

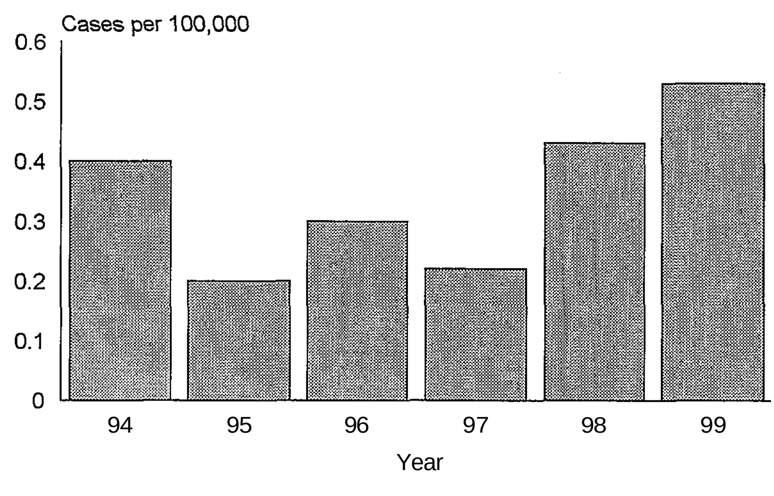
Although only reportable since 1994, cases of *Escherichia coli* (E. *coli)* O157:H7 appear at first glance to be on the rise in Texas, with 105 reported cases. The incidence rate in 1999, however, is only slightly higher at 0.53 cases per 100,000 population than last year's 0.43/100,000. Figure 1 demonstrates incidence rates of reported E. *coli* O157:H7 cases over the past 6 years in Texas. When compared to other foodborne pathogens, the rate of E. *coli* O157:H7 infection is still far less common than that for other foodborne diseases such as *Shigella* spp. (11.41/100,000), *Salmonella* spp. (10.99/100,000), or hepatitis A (12.58/100,000). Like other foodborne pathogens seasonal fluctuations in cases have been observed in Texas. Figure 2 illustrates seasonal variations by monthly average from the past 6 years of data. The number of cases increases in spring and summer; the combination of warm weather, poor food handling practices, and a low infectious dose (10^4 organisms) makes this pathogen very easy to transmit.

Pathogenicity of E. *coli* O157:H7 is due to its ability to secrete shiga-like toxins (SLT). It is important to note that some other serotypes of E. *coli* can produce SLT with subsequent illness similar to E. *coli* O157:H7. (See the associated article entitled E. *coli* 0 111:H8 *Outbreak Among Drill Team Campers* in this report.) SLT producing non-0157 *E. coli* are often confused with normal enteric flora, as they have no known distinct biochemical markers. Although not reportable at this date, in 1999 Texas noted one case each of the following serotypes of SLT producing E. *coli:* O26:H11, 029, 073, 0103, in addition to the 58 case-defined cases of O111:H8. Symptoms of E. *coli* O157:H7 infection (or any SLT producing bacteria) include abdominal cramps, watery diarrhea that may progress to severe bloody diarrhea, vomiting, and little or no fever.' Illness usually resolves within 5 to 10 days without sequelae, but rare complications like hemolytic uremic syndrome (HUS) may lead to death.',' Severe complications most commonly occur in children under 5 years of age and in the elderly.

In 1999 there was one major outbreak attributed to E. *coli* O157:H7 contamination of a Kames County water system. This outbreak was responsible for 25 cases (23.9% total number of cases in Texas). Please refer to the article entitled E. coli O157:H7 *Outbreak in Karnes County* for more information.

Statewide analysis of the 84 culture-confirmed case-patients of E. *coli* O157:H7 that were interviewed revealed that in 24/84 (28.6%) households diarrhea was reported in other household members. Analysis of the onset dates of household members reporting diarrhea revealed that 10124 (41.7%) culture-confirmed cases may have actually been secondary cases. In 10/24 (41.7%) households the culture-confirmed individual was the primary ill person. Only 4/24 (16.7%) households reported concurrent onset dates of illness, indicating a possible point source of contamination. The most commonly reported symptoms in culture-confirmed cases include: 77/105 (73.4%) with diarrhea of which 60/105

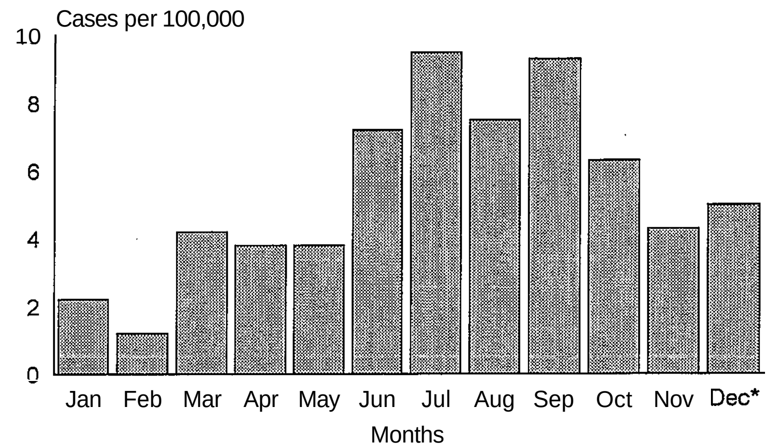
Figure 1. E. *coli* 0 157:H7 Incidence Rates, 1994-1999



(57.2%) became bloody diarrhea. Hospitalization was necessary for 40/105 (38.1%) patients with 10/105 (9.6%) developing HUS and 31105 (2.9%) develophg thrombotic thrombocytopenic purpura. In 1999, 6/105 (5.8%) of all culture confirmed cases resulted in death.

Although consumption of undercooked ground beef is the most commonly associated risk factor of E. *coli* O157:H7 illness, other sources of fecally contaminated foods (ie, alfalfa sprouts, cattle-manure-fertilized produce, inadequately chlorinated water, and unpasteurized milk or fruit juices) can cause illness as well.[1,2,3,4] Additionally, *E. coli* O157:H7 can be transmitted when a person comes into direct contact with an infected person or swallows contaminated water while swimming.[2,3] Preventive measures include pasteurizing fruit juices and dairy products, thoroughly cooking all ground beef until the juices run clear, avoiding cross contamination of ready-to-eat foods with raw meats and their juices, washing organically grown fruits and vegetables, and properly chlorinating potable water.[3]

Figure 2. Seasonal Distribution of E. *coli* O157:H7 Cases



Based on a 6 Year Monthly Case Average, 1994-1999
***Increase due to outbreak in December 1999. Average cases without outbreak data=1.0**

References:
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Escherichia *coli* O157:H7 in Karnes County (Waterborne)

Background

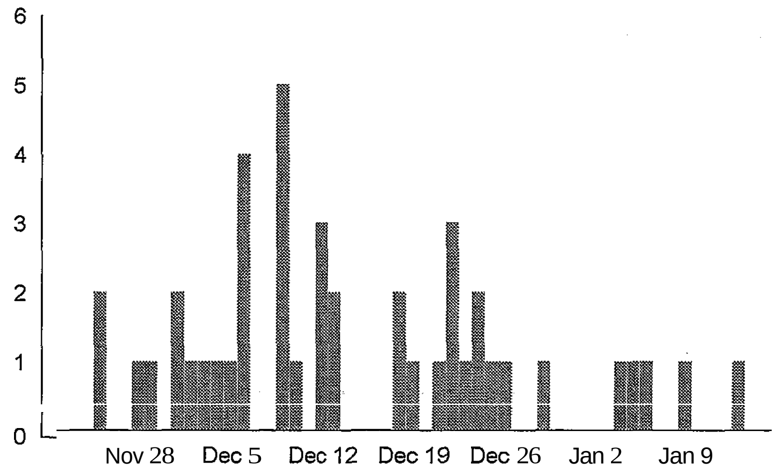
On December 13, 1999, the San Antonio Metropolitan Health District notified the Texas Department of Health (TDH) Infectious Disease Epidemiology and Surveillance Division (IDEAS), about a child hospitalized with bloody diarrhea and reported hearing about other similar cases among Karnes County residents. Staff from Public Health Region 8 increased surveillance for severe and bloody diarrhea in Karnes County residents and confiied additional current and recent cases. Initial interviews failed to identify a single common food exposure that could explain all the cases. As of December 28,1999, *Escherichin coli* O157:H7 had been identified in stools from 5 patients by the TDH laboratory. The patient isolates were indistinguishable by pulsed-field gel electrophoresis (PFGE). TDH initiated a case-control study in early January to identify the vehicle of transmission and delineate other risk factors. Figure 1 shows the epidemic curve for this outbreak.

Methods

In January 2000, TDH conducted 2 studies to determine the cause of the outbreak. In the first, an age-matched case-control study, a case-patient was defined as a Karnes County resident whose illness occurred in the time period of November 25 through December 31, 1999, and included diarrhea (3 or more loose stools in 24 hours) lasting more than 2 days. Case- patients were identified through active surveillance in the community, and by daily queries of local private physician practices and local hospitals. In households where more than one person met the case-patient definition, only the first ill person was interviewed. Case-patients were also identified during the random household interviews when the study team was looking for healthy controls.

Controls were selected through a random telephone dialing process from blocks of numbers provided by the telephone company. If a contacted household had family members who were ill with diarrhea anytime from Thanksgiving through December 31,1999, the household was not selected for controls. Instead, if a household member had diarrhea for greater than 2 days, he/she was eligible to be included as a case-patient and was interviewed as such. Three age-matched controls were selected for each case-patient.

Figure 1 - Epidemic Curve for *E. coli* O157:H7 Cases in Karnes City



Results

Twenty-six patients met the case definition. Three laboratory confirmed cases and one clinical case were excluded from the study because patients either refused to be interviewed or because another case-patient in the same household had an earlier onset date.

Twenty-two case-patients and 66 age-matched controls were enrolled in the study. The mean age of case-patients was 37.6 years as compared with 36.5

years for controls. Fifty-nine percent of the case-patients were female; 74% of controls were female. The difference in mean age and sex distribution between the 2 groups was not statistically significant.

The frequency of symptoms for case-patients is summarized in Table 1. The average number of loose stools per day ranged from 3 to 20 with an average of 7.7 per day per case.

Table 1. Frequency of Symptoms

Symptom	Frequency	%
Fever	10	45
Diarrhea	22	100
Bloody diarrhea	11	50
Vomiting	12	57
Headache	10	45
Abdominal cramps	21	95
Nausea	17	77
Irritability	3	14
Chills	3	14

n=22

No statistically significant differences between cases and controls were found in the preference for consumption of any individual food item or for dining at any named restaurant in the study. Similarly, no statistically significant differences in supermarket preference for grocery shopping were identified.

All case-patients and 46 (70%) controls received their water supply from the city distribution system. This difference was highly significant (OR =1.9 <OR> ∞ with a p value=0.002). Case-patients and controls did not differ in their exposure history to pets, cattle, or other animals. Similarly, travel history did not differ between the 2 groups.

To test the hypothesis that the outbreak was caused by a failure in the water distribution system, TDH conducted a second cohort study comparing residents of Kames County with similar residents in the nearby community of Kenedy. These towns are within 5 miles of each other, and members of both communities shop and eat in the same restaurants and grocery stores. The 2 towns are on different water systems, however, making comparisons possible on that key variable. Kenedy residents were called randomly from a block of telephone numbers provided by the telephone company and asked about demographics, recent illnesses, where they purchase food, and which water system supplied their water. They were also asked about their occupations and whether they had consumed any water from the Kames County water distribution system from November 25 through December 31, 1999.

Data were collected from 74 households in Karnes County and 55 households in Kenedy. The 2 communities experienced very different attack rates for gastroenteritis in December 1999-January 2000. Twenty of the 74 Kames County households (27%) reported one or more members had either vomiting or diarrhea during the study period, compared with only 8 of 55 (15%) Kenedy households. When calculating the individual attack rates for illness in the 2 communities, 29 of 193 people residing in the Kames County households were known to be ill (15%) compared with only 10 of 159 Kenedy residents (6%). Actual illness rates may vary and be underestimated since people frequently do not tell others in their household that they have diarrhea.

Statistical analysis in the Kames County-Kenedy cohort study showed that drinking water from the Karnes County municipal water system was significantly associated with illness in December 1999. The relative risk (RR) associated with the drinking water was 4.63 with 95% confidence intervals (CI) 1.03-23.16 and a p value=0.01. No other exposure had a significantly elevated risk.

Staff from TDH Public Health Region 8 in San Antonio also discovered evidence that the city had a loss of free chlorine in the water distribution system from November 25 through December 9. The Texas Natural Resources Conservation Commission evaluated this report and concluded that there was not enough chlorine in the distribution system to prevent a bacterial outbreak during that time period. This exposure period fits the normal incubation period for

E. coli O157:H7 and lends further credence to the hypothesis that this was a waterborne outbreak.

Conclusion

The evidence suggests that the outbreak of bloody diarrhea due to E. *coli* O157:H7 in Kames County was linked to a failure in the disinfection unit for the city water distribution system. The city installed a new water chlorinator in January 2000 and has been able to maintain a safe free chlorine residual since that time. No new cases have been reported after January 2000.

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Enteroviruses, nonpolio

The enteroviruses are a group of at least 67 recognized virus serotypes including polioviruses, coxsackie A and B viruses, echoviruses, and the numbered enteroviruses. Wild-type polioviruses are no longer a major threat in the United States; however, vaccine strains are fiequently isolated from young children. As a result, polioviruses isolated in 1999 have limited epidemiological significance and will not be included in this report. Infections caused by nonpolio enteroviruses (NPEVs) are associated with a variety of symptoms but, contrary to what the name suggests, are infrequently associated with enteric disease. Although NPEV infections are usually mild or asymptomatic, patients may present with fever and a rash, herpangina, conjunctivitis, and central nervous system symptoms that range fiom aseptic meningitis and encephalitis to paralysis. The disease presentation of NPEV infection is unpredictable because a single enterovirus can cause no symptoms or many different symptoms. Individuals with immune deficiencies such as agammaglobulinemia may develop a chronic meningitis or meningoencephalitis.

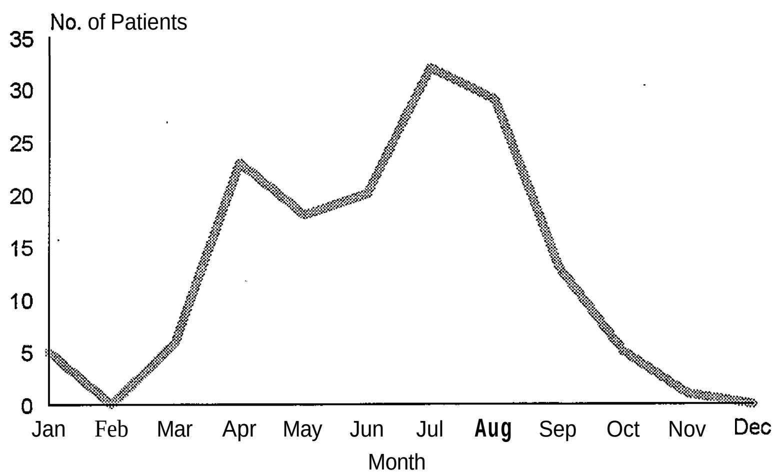
NPEVs are found worldwide, and in Texas's temperate climate NPEVs are isolated primarily in summer and fall. The mode of transmission is mainly by the fecal-oral route. NPEV can be isolated fiom feces, pharyngeal specimens, spinal fluid, blood, urine, vesicle fluid, and conjunctiva. Virus can be recovered fiom the pharynx only during the first week of illness but can be recovered from fecal specimens for a period of at least 3 to 5 weeks. Therefore, a patient can serve as a source of infection long after his/her symptoms have resolved. The incubation period for NPEV infections is usually 1 to 2 weeks, but varies fiom 2 to 35 days.

Viruses are obligate intracellular parasites that require a living host system to grow and replicate. The Viral Isolation Laboratory uses a combination of cell cultures to isolate viruses. The isolates can be identified by serum neutralization or immunofluorescence. Immunofluorescence is used to identify 14 of the NPEVs, including coxsackie virus types A9 and A24; coxsackie virus types B1 through B6; echovirus types 6, 9, 11, and 30; and enterovirus types 70 and 71. For these viruses, the time necessary for serotype identification is generally 2 to 4 days from receipt of the specimen and is primarily dependent upon the speed with which the isolate grows in cell culture. For the NPEV that must be identified by serum neutralization test, the time necessary for serotype identification is generally several weeks, again dependent on the isolate's growth pattern.

The laboratory recovered a total of 175 NPEVs fiom 157 patients whose specimens were collected during 1999. Eleven patients had the same NPEV recovered fiom multiple specimens. The specimens were submitted fiom the following Texas counties: Bell, Bexar, Colorado, Dallas, Galveston, Harris, Lubbock, Nueces, Potter, Tarrant, and Travis.

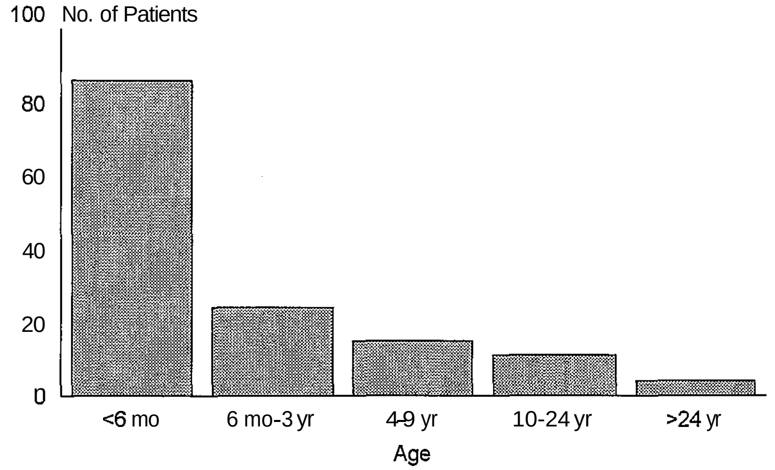
Dates of specimen collection were available for 152 of the 157 patients whose specimens yielded NPEV. NPEVs were recovered from specimens collected

Figure 1. Patients with NPEVs by Month of Specimen Collection



during every month of 1999, except February and December (Figure 1). Of the 157 patients whose specimens yielded an NPEV, 135 (86.0%) had specimens collected in the six month period from April though September 1999. Ages were available for 140 of the 157 patients. Figure 2 shows the age profile of patients whose specimens yielded an NPEV. More than half of the patients (861140) were less than 6 months of age. Sex was indicated for 150 patients: 83 (55.3%) were male and 67 (44.7%) were female.

Figure 2. Age Distribution of Patients with NPEV



Sixteen different NPEVs were isolated from patients whose specimens were collected in 1999. Coxsackie viruses were isolated from 11 patients. The following coxsackie virus types (number of patients) were identified: A9 (5), B3 (2), B4 (2), and B5 (2). Echoviruses were isolated from 141 patients. The following echovirus types (number of patients) were identified: 2 (1), 4 (2), 5 (1), 6 (6), 9 (14), 11 (50), 14 (14), 16 (37), 18 (1), 25 (13), and 30 (2). Enterovirus type 71 was isolated from 5 patients. Echovirus types 11 and 16 were isolated most frequently. Echovirus type 11 (E11) was recovered from 55 specimens collected from 50 patients and echovirus type 16 (E16) was recovered from 38 specimens collected from 37 patients.

Bureau of Laboratories (512) 458-7318

Environmental Health Issues Near Power Plant

In 1994 Austin residents living near the Holly Street Power Plant in the city's southeast side contacted the Texas Department of Health (TDH) regarding several health concerns related to the facility. The Holly Street Power Plant is a city-owned facility that generates electricity for the area. The facility burns natural gas to create steam that drives 4 electricity-generating turbines. Residents' concerns included noise generated by the plant, air pollution, electric and magnetic fields from the plant and nearby power lines, polychlorinated biphenyl (PCB) contamination, groundwater contamination, and fire or explosion hazards. In response, TDH began an assessment of these issues; however, the process was halted in 1995 when the Austin City Council voted to close the plant. Turbine generator Units No. 1 and No. 2 were scheduled for shut down in 1998, followed by closure of the entire plant in 2005.

In January 1999, Austin Energy—the new name for the City's Electric Utility Department as of 1998—made a recommendation to the City Council to keep Units 1 and 2 in good working order for emergency use in the summer months due to electricity demand in the Austin area that exceeded projections. In March 1999, the City Council voted to approve repairs of Units 1 and 2 at the Holly plant so they could be used in peak demand periods if necessary; however, closure of the entire plant remained scheduled for 2005. In light of this decision and the renewed concerns of nearby residents, TDH reinitiated and completed a Public Health Assessment for the facility in 1999. The assessment found that the Holly Street Power Plant currently poses no apparent public health hazard. Plant noise in a small area immediately surrounding the facility could reach levels normally considered unacceptable, though these sound levels have not been associated with adverse health outcomes.

Air Pollution

Since air sampling was not done in the area around the Holly Street Power Plant, the Texas Natural Resource Conservation Commission (TNRCC) used an air dispersion model to predict air quality around the plant. The model predicted that air emissions from burning natural gas at the plant would not pose a threat to public health. In the past, the Holly Street Power Plant periodically burned fuel oil containing 0.2% to 0.3% sulfur by weight. The TNRCC model predicted that on the rare occasions when this fuel was burned (approximately 1%–2% of the time), short-term sulfur dioxide concentrations could have been high enough to aggravate pre-existing respiratory conditions in sensitive individuals. In 1995 Austin Energy voluntarily switched to transportation grade No. 2 fuel oil with a sulfur content of 0.05% by weight. TDH determined that the sulfur dioxide levels that would result from burning this type of fuel would pose no apparent public health hazard. Austin Energy also has agreed to use fuel oil only under emergency conditions.

Electric and Magnetic Fields (EMF)

The Holly Street Power Plant generates electricity for the electrical power grid. However, the plant itself is not a significant source of EMFs in the neighborhood. In addition, EMF readings under power lines on Holly Street would remain approximately the same even if the power plant were shut down. In 1993 the City took magnetic readings under the power lines in the neighborhood around the Holly plant and found that they were similar to magnetic fields measured under other power lines throughout Austin. While there is considerable ambiguity in the scientific literature about the link between adverse health effects and exposure to electric and magnetic fields, removing the plant would not significantly reduce the magnetic fields in the neighborhood unless the power lines also were removed or de-energized. Since 1993 the City moved one of the major power lines from Holly Street to the Town Lake shoreline, which should further reduce EMF levels in the neighborhood.

Noise

Prior to the sound abatement modifications made by Austin Energy beginning in 1994, day/night average noise levels measured near the plant exceeded acceptable levels, according to US Housing and Urban Development Authority (HUD) guidelines. Although noise levels near the plant were below those that can cause physiologic changes or hearing loss in adults, they were well within the range than can interfere with cognitive development in children. Noise level measurements at Metz Elementary School, which is 2 blocks to the northwest of the plant, were in the unacceptable range, although the Holly plant was not the sole source of noise at the school.

From 1994 to 1996, Austin Energy made several sound abatement modifications to the plant, including the enclosure of forced draft fans on top of each of the generator units, enclosure and muffling of approximately 40 other noise sources, and the construction of a 100 foot by 62 foot sound-absorbing wall on the west side of Unit No. 4 (which faces the residential area). In general, these modifications resulted in 50% noise reductions—as perceived by the human ear—when the plant was operating at 220 megawatts (MW). Areas where sound levels are considered unacceptable are now confined to the plant boundaries. When the plant is operating above 400 MW of output, there remains a small area immediately surrounding the facility where noise could reach levels considered normally unacceptable; however, these sound levels have not been associated with adverse health outcomes. In addition to modifications made at the plant, Austin Energy made sound abatement modifications to approximately two-thirds of the 107 homes and businesses in this area.

After the noise abatement measures were completed, the City took noise measurements at Metz Elementary while the plant was operating at a 94 MW power output. Noise levels at Metz were below those associated with adverse effects on cognitive development. Since Austin children begin school during the month of August, one of the peak months for electrical generation, and since the plant often operates above the 400 MW range during this time of the year, TDH recommended that the City measure the noise levels inside Metz Elementary school while the plant is operating at the high range of its power output.

In response to this recommendation, Austin Energy took noise level measurements inside portable classroom 4 at Metz Elementary School on August 9, 1999, with the Holly Power Plant units operating at approximately 496 MW (Unit 1, 73 MW; Unit 2, 90 MW; Unit 3,193 MW; and Unit 4,140 MW). With the air conditioning unit in the classroom turned off, the average sound levels measured inside the classroom were 40.7 decibels, which is below the US Environmental Protection Agency's noise guideline for indoor environments.

Even though sound abatement measures have reduced the noise from the plant, nearby residents are still concerned about noise levels.

Polychlorinated Biphenyls (PCBs)

Polychlorinated biphenyls (PCBs) have been detected in soil and on wall and tubing surfaces at the Holly plant. However, since neighborhood residents are not in contact with areas inside buildings at the plant or on the facility grounds, PCB exposure is very unlikely. Fish taken from Town Lake near the plant in 1985 and 1995 did not indicate PCB contamination.

Groundwater Contamination

Groundwater monitoring data for 11 on-site monitoring wells indicated that benzene, ethylbenzene, toluene, and xylene levels in these wells all were below their respective minimum detection limits (MDLs).

Measured amounts of total petroleum hydrocarbons (TPHs) found in these wells were very low and were detected infrequently. Therefore, it is unlikely that TPHs in the groundwater represent a public health threat. Since residents near the Holly plant are on City water, human exposure to groundwater is unlikely; hence groundwater was eliminated as a possible exposure pathway.

Fire and Spill Hazards

The Holly Street Power Plant stores fuel in above-ground storage tanks. Over the last 25 years the facility has experienced several fuel oil spills ranging in size from 50 gallons in 1992 to as many as 20,000 gallons in 1974. In 1993,200 gallons of fuel oil spilled from an improperly closed section of the fuel oil transfer piping. The spilled fuel ignited and burned for approximately 30 minutes, producing a thick black smoke visible for miles.

An explosion and fire at the plant in 1994 and another fire in 1999 increased residents' safety concerns about the plant, though none of these fires resulted in any injuries to nearby residents. Because the fuel storage tanks are near residences and play areas, a fire in these areas could be a public health hazard. Austin Energy has taken the following measures to minimize risk to the surrounding community:

- Additional fire suppression equipment for the plant is being designed.
- Power supplies to the control systems for Units 3 and 4 have been modified to provide separate redundant backup.
- A root cause investigation of the 1999 fire at the plant resulted in corrective actions to assure that the incident will not occur again.
- Austin Energy recently met for a full day with the Austin Fire Department (AFD) to discuss coordination of emergency response issues. A recent annual inspection by the AFD found no major problems at the Holly plant.

Environmental Epidemiology and Toxicology Division (512) 458-7269

Hazardous Substances Emergency Events Surveillance

Under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR), the Texas Department of Health conducts surveillance of emergency spills and air releases involving hazardous chemicals. These chemical events are considered emergencies because they are uncontrolled, illegal, and in the case of spills, require immediate cleanup. Sources for information about these events include state environmental agencies, local fire department hazardous materials units, hospitals, federal agencies, industry, and other primary responsible parties. Data are collected on emergency events that meet the case definition of an uncontrolled, illegal, or threatened release of hazardous substances or the hazardous by-products of substances. Spills or releases that meet the case definition are of more than 10 pounds or 1 gallon for most chemicals; spills or releases of petroleum fuels and natural gas are not included. Information obtained about these releases is recorded on standardized data collection forms. Some of the information collected include date, time and location of event, substance released, types of injuries, evacuations, and emergency decontaminations.

Table 1. Most Frequently Spilled or Released Chemicals

Rank	Chemical	No.	% of Cases
1	Sulfur dioxide	256	11.9
2	Ammonia	116	5.4
3	Benzene	105	4.9
4	Butadiene	101	4.7
5	Nitric oxide	87	4.1
6	Sulfuric acid	52	2.4
7	Ethylene	39	1.8
8	Sodium hydroxide	34	1.6
9	Hydrogen sulfide	33	1.5
9	Oxides of nitrogen	33	1.5
10	Propylene	32	1.5
Total		**888**	**41.3**

In 1993, the first year of data collection, the 1,260 reported releases that met the case definition were investigated. In 1999, 2,711 reported hazardous substances emergency events met the case definition. The increase in the number of reported spill events from 1993 to present can be attributed to more reporting sources and increased efficiency in the data collection. Of the 2,711 events reported in 1999, 2,351 occurred in fixed facilities, and 360 were transportation-related events. Figure 1 shows the distribution of these events by county. As in previous years, the majority of releases occurred along the Texas Gulf Coast.

Figure 1. Hazardous Substances Emergency Events by County

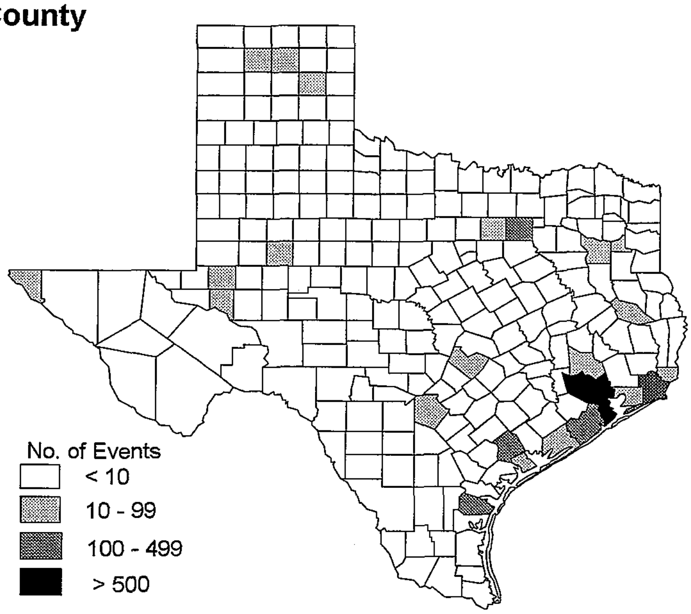
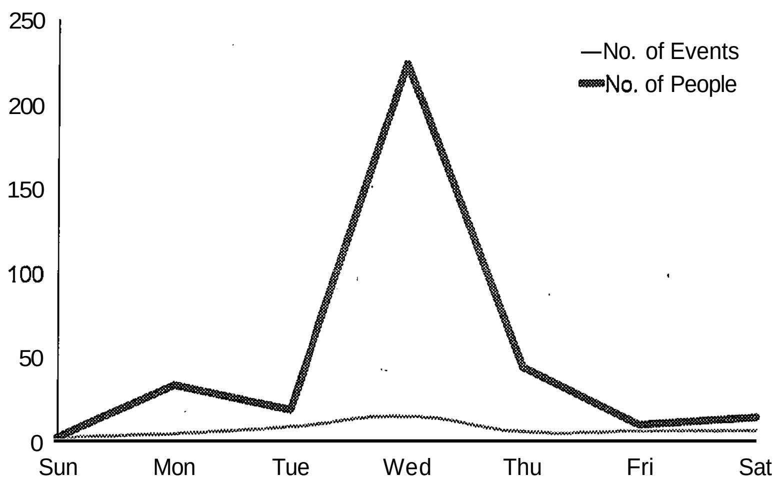


Figure 2. Events Involving Injury by Day of Week



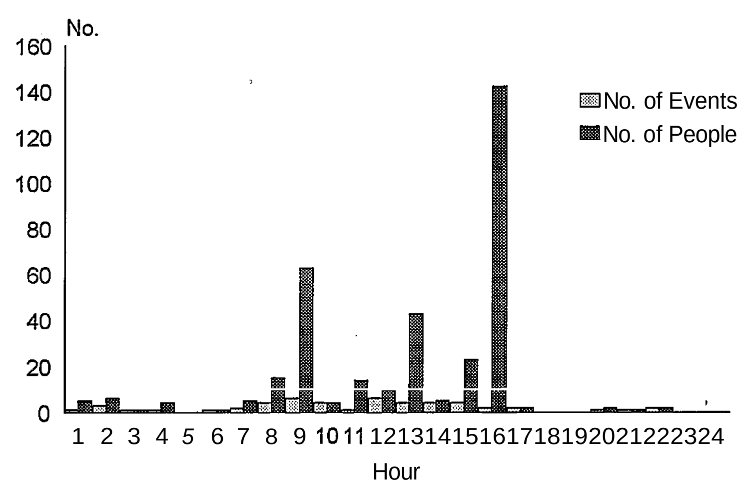
n=50 events involving 348 people

There were 2,801 individual chemicals, multiple chemicals,. or chemical mixtures released in 2,711 events. Almost 99% of releases from both fixed-facility and transportation events involved only 1 chemical or a single mixture of multiple chemicals. Table 1 presents the 10 most frequently spilled or released chemicals that were not part of mixtures or multiple chemical events; these chemicals were involved in approximately 40% of single chemical events. Sulfur dioxide releases accounted for nearly 12% of single chemical events from fixed facilities.

The frequency of hazardous substances releases varied by time of day, day of week, and time of year. Of the 2,711 events, approximately 63% occurred between 6:00 AM and 6:00 PM. Events occurred less frequently on the weekend. The number of events was lowest October through December (654) and highest July through September (707). Figure 2 shows events involving injuries by day of week; there were 50 such events involving 348 people. During 1999, the largest number of events involving injury and the largest number of injuries occurred on Wednesdays. Figure 3 shows injury-related events by hour.

A total of 348 persons were injured during emergency events in 1999. Injuries occurred in 5% of the transportation-related events and 1% of the fixed-facility events. The 1999 data show that 88% of the injured were employees, 7% were the general public, and 5% were emergency responders. Over three quarters (81.9%) of those injured were males. The median age of those injured was 34, with a range of less than 1 to 61 years. Among the 348 persons injured, 20 (6%) were brought to a hospital and admitted; 2 died. Approximately 6% of those injured in fixed-facility events and 8% of those injured in transportation-related events were admitted to hospitals. Fifty-five people categorized as "employees," 20 people categorized as "general public," and 11 people categorized as "responders" were brought to a hospital but not admitted. Table 2 shows the types of injuries sustained in both fixed-facility and transportation events. Overall, respiratory irritation was the most common injury reported. Other

Figure 3. Events Involving Injury by Hour of Day



n=50 events involving 348 people

injuries or symptoms commonly reported included dizziness or other central nervous system problems, eye irritation, and headache. One hundred and forty-one (43%) of those injured sustained their injuries during a single event involving the release of a mix of dichlorobenzene and phosgene. In acute exposures, dichlorobenzene would affect the skin and sensitive tissues like the eyes and nasal membranes. Phosgene, even at lower exposure levels, may cause strong irritation to the skin, eyes, respiratory tract, and other mucous membranes. With higher exposure, phosgene may produce injury to the respiratory system with life-threatening consequences. In combination with phosgene, dichlorobenzene would likely increase the irritational and respiratory effects on exposed persons. The rest of the injuries were associated with exposure to a wide of variety of chemicals.

Evacuation occurred in 103 (3.8%) of the 2,711 reported events. There were more evacuations ordered for fixed-facility events (85) than for transportation events (18). The estiinated number of persons who left their homes, schools, or places of business ranged from 1 to 5,000 per event, with a total of more than 17,853 persons evacuated. Ammonia or anhydrous ammonia releases accounted for approximately 20 (19.4%) events with ordered evacuations, the highest proportion for any chemical release. An estimated 3,760 people were evacuated as a result of releases of ammonia.

In Texas, emergency chemical events are most likely to occur in the Gulf Coast counties and at fixed facilities. Although sulfur dioxide is the most frequently reported chemical released, the most acute injuries occurred during a single release of a mix of dichlorobenzene and phosgene.

The information obtained from the hazardous substances emergency events surveillance system can

Table 2. Distribution of Injuries by Type of Event

	Type of Event					
	Fixed Facility		Transportation		All Events	
Type of Injuries	No. of Injuries	%	No. of Injuries	%	No. of Injuries	%
Chemical burns	3	0.6	2	7.7	5	1.0
Dizziness or other CNS†	70	14.2	0	.0	70	13.5
Eye irritation	47	9.6	1	3.8	48	9.3
Headache	47	9.6	1	3.8	48	9.3
Heat Stress	1	.2	2	7.7	3	.6
Nausea/Vomiting	12	2.4	0	.0	12	2.3
Respiratory irritation	291	59.1	8	30.8	299	57.7
Skin irritation	4	.8	0	.0	4	.8
Thermal burns	4	.8	1	3.8	5	1.0
Trauma	2	.4	10	38.5	12	2.3
Heat problems	1	.2	0	.0	1	.2
Shortness of breath	2	.4	0	.0	2	.4
Other	8	1.6	1	3.8	9	1.7
Total	**492**		**26**		**518**	

The number of injuries is greater than the number of victims, since a victim can have more than 1 injury.
†Central nervous system symptoms or signs

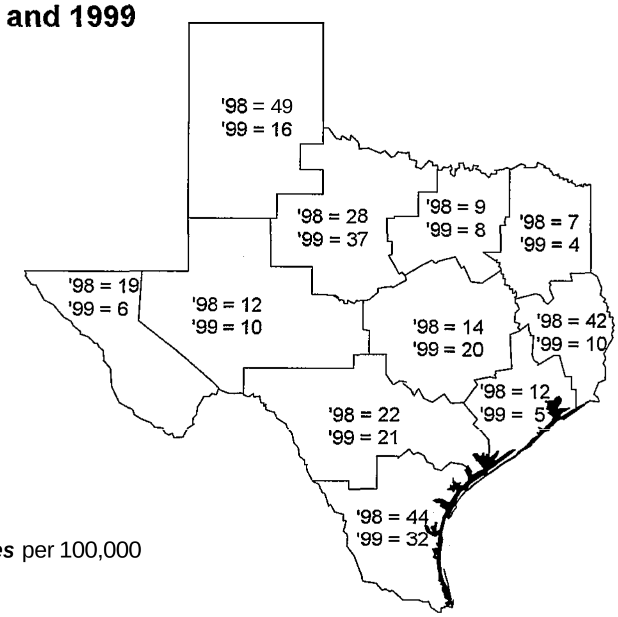
help identify risk factors related to these events and the associated morbidity and mortality. When risk factors are identified, interventions can be instituted to reduce future injuries or deaths. This information can be useful in developing education programs for manufacturers and transporters of hazardous substances as well as for local emergency planning committees, first responders, firefighters, hazardous materials unit, and medical personnel.

Environmental Epidemiology and Toxicology Division (512) 458-7269

Hepatitis A

Hepatitis A is one of the most commonly reported infectious diseases in Texas. The virus is transmitted by the fecal-oral route, through close personal contact, or by ingestion of contaminated food or water. The incubation period is usually 30 days, with a range of 15 to 50 days. Symptoms include fever, malaise, anorexia, nausea, and abdominal discomfort followed in a few days by jaundice. Hepatitis A is believed to be significantly underreported in Texas because many young children have asymptomatic infections, and diagnosis is often clinical rather than laboratory-confirmed. Texas Department of Health (TDH) accepts only anti-HAV-IgM positive reports as definitive cases. Two vaccines are currently in use to prevent hepatitis A infection. The vaccines are available in a 2-dose series, with the booster following in 6 months, and can be used in persons over the age of 2 years. In August 1999, a law was passed requiring all day care attendees and school-aged children who live in the 32 Texas counties within 100 kilometers of the Texas-Mexico border to receive the 2-dose hepatitis A vaccine by August 2000. Even though this law was not yet in effect in 1999, statewide hepatitis A incidence rates fell substantially.

Figure 1. Hepatitis A Rates by Public Health Region, 1998 and 1999



Cases per 100,000

In 1999 there were 2,516 cases of hepatitis A reported from 154 Texas counties. The hepatitis A incidence rate fell from 18 per 100,000 population in 1998 to 12.6 per 100,000 population (a 30% decrease) in 1999. Incidence rates in Public Health Regions 1, 4, 5, 6, and 10 fell 68%, 46%, 76%, 61%, and 72% respectively; Regions 3, 8, 9 and 11 had slight rate reductions. Only Regions 2 and 7 increased their incidence rates in 1999 (Figure 1).

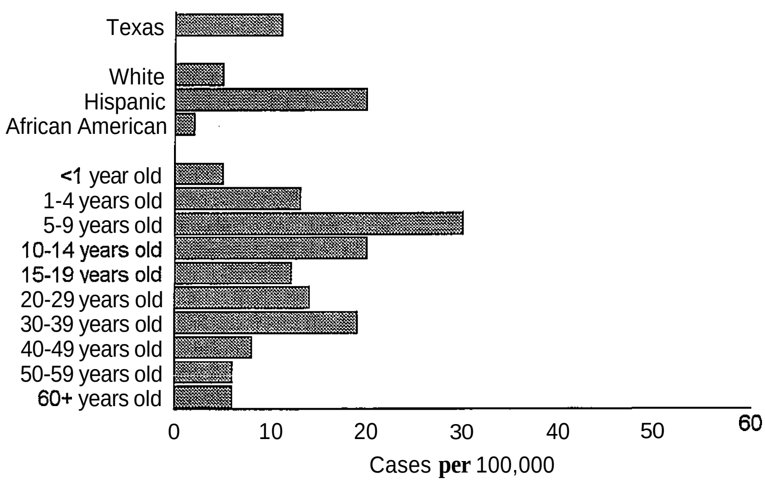
While no significant clusters could be found in Region 7, Region 2 did have a restaurant-associated outbreak in Eastland County.

Statewide, 4 persons (including 2 elderly patients from the Eastland County outbreak) died of their hepatitis A infections in 1999, for a case-fatality rate of 0.2%.

Although the highest number of hepatitis A cases reported in 1999 occurred in ethnic Hispanics (1,185 or 47%), incidence rates for the group fell from 21 per 100,000 population in 1998 to 19.6 per 100,000 (a reduction of 7%). Incidence rates for Whites fell 38% from 8 per 100,000 in 1998 to 5 per 100,000 in 1999, while rates for African Americans fell 71% from 7 per 100,000 to 2 per 100,000.

Hepatitis A incidence rates fell among almost all age groups in 1999 (Figure 2). Rates are usually highest among school-aged children (5- to 9-year-olds); in 1999 the incidence among children aged 5 to 9 fell 41% from 49.8 per 100,000 population in 1998 to 29.5. Only the incidence rates among 30- to 39-year-olds increased slightly (16%) in 1999.

Figure 2. Hepatitis A Rates, by Race/Ethnicity and Age

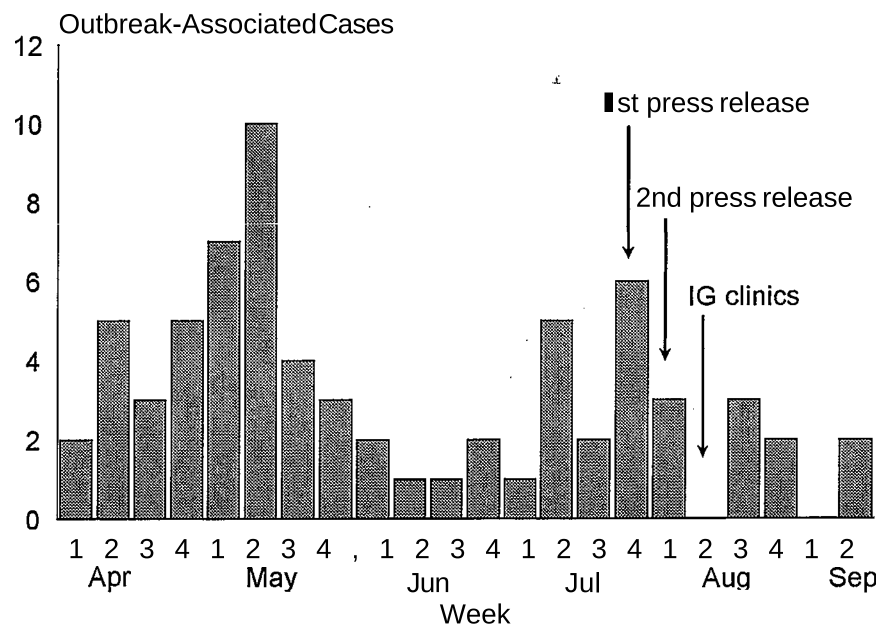


Several restaurant-associated outbreaks of hepatitis A occurred in North Texas in 1999. The most significant of these was noted on April *23* in Eastland County by staff fiom Region 2/3. Most of the early cases were in adults 20 to 39 years of age; however in July, 3 more cases were identified in a local day care center. Immune globulin (IG) was provided to the day care attendees and staff. Also in July, employees from 2 local restaurants were found to be infected. TDH issued press releases recommending that patrons who had eaten at Restaurant A between July 21 and 25, or Restaurant B on July 25 or 26, obtain IG from their physicians. Because cases continued to occur, in August 900 doses of IG were provided for Eastland County residents who were WIC/Medicaid eligible. By early September, a total of *70* outbreak-associated cases had been reported from Eastland, Comanche, and Palo Pinto counties. Figure 3 illustrates the epidemic curve for the Eastland County outbreak. No further outbreak-associated cases were reported after September *2.*

Although routine hepatitis A immunizations for children along the Texas-Mexico border will not be required until August 2000, an analysis of hepatitis A incidence among children aged 5 years or younger showed that the rate in August 1999 had already fallen *37%* fiom the rate in August 1998. This could be a reporting 'artifact, or a reflection of seemingly significant incidence rate reductions in sparsely populated areas where a difference of 1 or 2 cases can dramatically affect rates. Alternatively, it may reflect voluntary immunization of the targeted age-group in these counties. TDH will carefully monitor disease rates in these counties to determine how hepatitis A incidence rates in the border area are affected by this new law in the coming years.

Infectious Disease Epidemiology and Surveillance Division (512) 458-7676

Figure 3. Eastland County Hepatitis A Outbreak Epi-curve



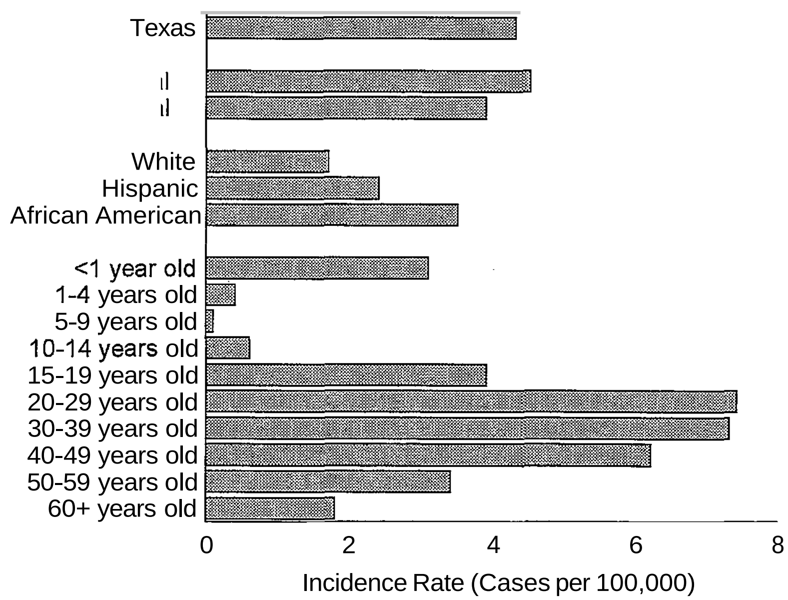
Hepatitis B

Hepatitis B virus (HBV) is a DNA virus of the hepadnaviridae family of viruses and is known to cause acute and chronic hepatitis. HBV is the most common cause of chronic viremia known, with an estimated 200 to 300 million chronic carriers worldwide. Hepatitis B became a vaccine-preventable disease in 1981 when the first hepatitis B vaccine was licensed for use in the United States. The disease has, however, been reportable in Texas since 1971. Until late in 1998, statewide surveillance of hepatitis B was conducted by the Texas Department of Health (TDH) Infectious Disease Epidemiology and Surveillance (IDEAS) Division. The transition of hepatitis B surveillance responsibilities to the Immunization Division was fully implemented in January 1999, and surveillance activities now focus on preventing hepatitis B infection, including perinatal transmission.

Hepatitis B is spread through contact with infected blood, seminal fluid, or vaginal secretions. Transmission can occur through sexual contact with an HBV carrier, percutaneous exposure to contaminated needles, or tattoo or body piercing with contaminated instruments. Perinatal transmission occurs when an infant is exposed to infectious maternal blood during birth. Additionally, 1 in every 4 persons infected with HBV has no identified risk for this disease.' The severity of the disease ranges from asymptomatic infection to fulminant hepatitis. The risk of chronic HBV infection varies inversely with age at infection: 6% to 10% of acute HBV infections among adults result in chronic infection; whereas 70% to 90% of infected newborns if not treated with hepatitis B immune globulin (HBIG) and hepatitis B vaccine at birth, become life-long carriers of HBV and are at risk for chronic liver disease or primary hepatocellular carcinoma later in life.

A total of 864 cases of hepatitis B were reported to TDH from 88 counties in 1999. This number represents a 56% decrease from the 1,960 cases reported in 1998. However, this may not reflect a true decrease in morbidity but rather a different surveillance methodology between the IDEAS and Immunization divisions. Three deaths were reported in 1999 for an overall case fatality rate of 0.01% compared to 2 deaths in 1998. Males had a higher incidence (4.6/100,000) than did females (3.91100,000). Among ethnic/racial groups, African Americans had the highest incidence rate (3.5/100,000). The distribution of hepatitis B cases by age groups is shown in Figure 1. Overall, the highest rates of hepatitis B were reported among persons between the ages of 20 and 40 years, with persons aged 20 through 29 years having the highest rate (7.4/100,000). When rates are looked at within race/ethnicity groups, they differ significantly. The rate among Whites is 3.8/100,000, and the rate among African Americans is 7.5/100,000. However among

Figure 1. Reported Cases of Hepatitis B by Sex, Race/ Ethnicity, and Age



Hispanics, incidence rates were higher for persons ages 30 through 39 years (4.2/100,000) than for persons ages 20 through 29 years '(2.81100,000 Hispanics).

Although there was a dramatic decrease in acute hepatitis B cases from 1998 to 1999, there has not been a consistent trend in the overall incidence of hepatitis B in Texas. A report by the Centers for Disease Control and Prevention (CDC) given at the 10th Symposium on Viral Hepatitis and Liver Disease indicates that the number of new cases of acute HBV Infection in the United States diagnosed annually has decreased over the past decade. Researchers reported that the number of cases of hepatitis B fell 91.7% among injection drug users, 85.7% among homosexual men, and 44.1% among people having high-risk heterosexual sex. This report suggested that the decline in new cases could possibly be due to increased vaccination efforts and safe-sex awareness. The TDH Immunization Division will continue to monitor the number of hepatitis B cases reported to determine the possible impact of hepatitis B vaccination programs in Texas.

Perinatal Hepatitis B

In 1984, the Advisory Committee on Immunization Practices (ACIP), in consultation with the American College of Obstetrics and Gynecology and the American Academy of Pediatrics, recommended that high-risk pregnant women should be tested for hepatitis B surface antigen (HBsAg) early in each pregnancy. This recommendation expanded in 1988 to include prenatal testing for all pregnant women, regardless of risk. Legislation which went into effect on September 1, 1999, requires that pregnant women in Texas be screened for hepatitis B virus (HBV) infection at their first prenatal examination **and** at delivery. This legislation applies to the physician or other person who attends a pregnant woman during gestation or at delivery of her infant. On February 25, 2000, the Texas Board of Health adopted rules implementing this legislation.

Children of HBV-infected mothers are at high risk of becoming infected with HBV perinatally or through person-to-person transmission during the first 5 years of their lives. Hepatitis B infection can be easily identified, and transmission to infants during birth can be prevented. Immunotherapy provided to infants of HBV-infected mothers will prevent 97% of subsequent infections. The risk of HBV transmission during pregnancy varies depending on when the maternal infection is acquired. If HBV is acquired during the first or second trimester, the risk of transmission to the neonate is low (3%). If a woman has acute HBV during the third trimester, the risk to the fetus increases to 78%.[2]

The frequency of HBV infection and patterns of transmission vary among people throughout the world. HBV infection is highly endemic in China, Southeast Asia, eastern Europe, the Central Asian Republics, most of the Middle East, Africa, the Amazon Basin, some Carribean Islands, and the Pacific Islands. HBV during the first 5 years of life occurs often in populations where HBV infection is endemic. Each year, approximately 150,000 infants are born in the United States who have immigrated fiom areas where HBV infection is endemic.[3] Texas perinatal program data show that over 43% of identified HBsAg-positive pregnant women who receive services fiom county and local health departments are of Southeast Asian descent. HBsAg-positive pregnant women receiving perinatal program services in Dallas County are born in over 55 different countries.

CDC uses prevalence data on HBV disease fiom the National Health and Nutritional Examination Survey (NHANES) to calculate the estimated numbers of births to HBsAg-positive women in each state. In 1997, states with the highest expected number of births to HBsAg-positive pregnant women were California, New York, and Texas. The NHANES estimate was applied to 1997 Texas birth data to identify the number of births in each county, by race, that might be expected to occur to HBsAg-positive women. According to NHANES data for 1997, an

Table 1. Estimated Number of Infants Born to HBsAg-Positive Women

County	White	African American	Hispanic	Race Asian Pacific Islander-US born	Asian Pacific Islander-foreign born	Other	Total Expected Births*
Harris	21	56	23	2	239	0	342
Dallas	15	38	14	1	142	1	210
Tarrant	14	16	5	1	83	0	119
Travis	6	6	4	1	45	0	62
Bexar	7	7	13	1	29	0	57
Collin	6	1	1	0	40	0	49
Fort Bend	2	4	1	0	36	0	43
Denton	5	2	1	0	16	0	24
El Paso	2	1	11	0	8	0	23
Jefferson	2	6	0	0	12	0	21
Bell	3	6	[illegible]	1	10	0	20
State Totals	**152**	**193**	**132**	**9**	**774**	**6**	**1265**

*Row totals do not add up due to rounding

estimated 1,265 births to HBsAg-positive women in Texas. These births were expected to occur among ethnic/racial groups as follows: Whites (152), African Americans (193), Hispanics (132), Asian/Pacific Islanders--US born (9), and Asian/Pacific Islanders--foreign born (774). CDC funds 5 sites in Texas to provide perinatal prevention services. These sites are the county projects of Harris, Tarrant, and Dallas and the city projects of Houston and San Antonio. In 1997, however, these perinatal programs in Texas identified 554 births to HBsAg-positive women. Table 1 reports by race the 11 counties with the largest estimated number of infants born to HBsAg-positive women in 1997.

Through increased surveillance efforts and collaboration with local health departments, the TDH perinatal program expects that the number of HBsAg-positive pregnant women identified in Texas will approach the NHANES estimates. When immunization services are provided to affected newborns in a timely manner, the chain of perinatal transmission will be broken.

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3. CDC (1991). Hepatitis B Virus: a comprehensive strategy for eliminating transmission in the United States through universal childhood vaccination: recommendations of the Immunization Practices Advisory Committee (ACIP). MMWR Morbidity Mortality Weekly Report. 40(RR-13).1-17.

Immunization Division (512) 438-7284

Hepatitis C

One of several bloodborne pathogens causing hepatitis, the hepatitis C virus (HCV) is the most common cause of chronic liver disease in the US. The Centers for Disease Control and Prevention (CDC) estimates that approximately 3.8 million (1.8%) Americans have been infected. Of those, 2.7 million (1.2%) are estimated to have persistent infections. The actual number of individuals infected in Texas is unknown. However, 359 cases of acute HCV were reported to the Texas Department of Health (TDH) in 1999. This incidence, which appears to be a 22% decrease in reported cases from the 1998 total of 462, may be due to underreporting and not a reflection of decreasing incidence. As with other types of viral hepatitis, only acute hepatitis C is reportable in Texas, and many acute cases may be missed because they fall outside of the reporting criteria or go unrecognized.

Acute hepatitis C is distinguished from chronic by the following criteria:

- presence of anti-HCV antibodies and a discrete onset of symptoms
- presence of anti-HCV and liver function tests that are elevated 2.5 or more times the upper limits of normal
- presence of anti-HCV and laboratory documentation of conversion from a negative to a positive test for anti-HCV within a 12-month period

Although these criteria appear clear cut, there are many challenges affecting accurate reporting. Laboratory tests for hepatitis C do not distinguish among acute, chronic, or past infections. In addition, because an

Table I - Incidence and Demographics of Acute Hepatitis C, 1998 and 1999

	1998	1999
Counties Reporting	89	90
Incidence Rate* Statewide	2.4	1.8
Incidence Rate* by Race/Ethnicity+		
White	1.2	1.1
Hispanic	2.0	1.7
African American	2.0	1.0
Incidence Rate* by Sex		
Male	2.9	2.3
Female	1.7	1.1
Incidence Rate* by Age Group (years)		
<20	0.3	0.5
20-29	2.1	1.3
30-39	4.4	3.2
40-49	5.3	5.6
50-59	2.1	2.3
60+	1.4	1.7
Case Total	462	359

*Cases per 100,000
+Race/Ethnicity Data was missing from over half of the 1999 reports

Table 2. Positive HCV Test Results: Texas Last Quarter 1999

Geographic Distribution

PHR	Males	Females	Unk	Total Position	%
1	150	49	4	203	4.0
2	129	70	2	201	4.0
3	1,018	701	90	1,809	35.9
4	217	99	4	320	6.4
5	40	35	8	83	1.7
6	282	199	2	483	9.6
7	387	271	41	699	13.9
8	331	238	9	578	11.5
9	110	66	4	180	3.6
10	186	82	18	286	5.7
11	107	58	27	192	3.8
	2,957	1,868	209	5,034	100

Age Distribution

Age in Years	Males	Females	Unk	Total	%
<1	18	10	1	29	0.5
1 to 10	9	5	2	16	0.3
11 to 19	41	35	1	77	1.5
20 to 29	188	153	17	358	6.9
30 to 39	744	462	48	1,254	24.1
40 to 49	1,346	647	50	2,043	39.2
50 to 59	414	250	5	669	12.3
60 to 69	156	133	11	300	5.8
70 to 79	72	76	7	155	3.0
80 to 89	25	30	2	57	1.1
90 to 99	6	3	3	12	0.2
100+	0	1	1	2	.04
Unk	110	64	60	234	4.5
	3,129	1,869	208	5,206	100

172 records without location

Table 3. HCV Prevalence: Texas Last Quarter 1999

Geoaraphic Distribution

PHR	Males	Females	Unk	Total Position	%
1	132	25	2	159	4.2
2	111	27	1	139	3.7
3	873	601	64	1,538	40.6
4	203	68	4	275	7.3
5	31	23	4	56	1.5
6	79	53	2	134	3.5
7	387	271	41	699	18.4
8	243	152	5	400	10.5
9	67	28	0	95	2.5
10	89	32	6	127	3.4
11	104	54	11	169	4.5
	2,319	1,334	140	3,793	100

Age Distribution

Age in Years	Males	Females	Unk	Total	%
<1	12	7	1	20	0.5
1 to 10	8	2	2	12	0.3
11 to 19	37	21	1	59	1.6
20 to 29	158	105	12	275	7.3
30 to 39	545	354	16	915	24.1
40 to 49	1013	501	27	1541	40.6
50 to 59	303	157	5	465	12.3
60 to 69	101	73	7	181	4.8
70 to 79	35	53	2	90	2.4
80 to 89	15	22	2	39	1.0
90 to 99	6	3	0	9	0.2
100+	0	1	0	1	.03
Unk	95	36	55	186	4.9
	2,328	1,335	130	3,793	100

estimated 60% to 70% of persons who contract the virus have no distinct symptoms, the infection may go undiagnosed for many years.

Table 1 compares the incidence of acute hepatitis C in 1998 and 1999 by race/ethnicity, sex, and age. The statewide rate for acute hepatitis C for 1999 of 1.8 cases per 100,000 population decreased from 2.4 cases per 100,000 in 1998. Males had a higher rate of hepatitis C (2.3/100,000) than did females (1.1/100,000). Among ethnic/racial groups, Hispanics had the highest rate (1.7/100,000), with Whites (1.11100,000) and African Americans (1.01100,000) differing only slightly. However, data on race/ethnicity are incomplete; many records fail to record these data or record them as unknown.

Similar to the rate for 1998, the highest 1999 rates among age groups were found for persons 30 to 49 years of age. There appears to be a shift in incidence rates across the ages 20 to 60+. This shift may reflect a cohort effect, whereby the groups of persons at highest risk of contracting hepatitis C, such as persons who have ever injected street drugs, may be an aging population. Other at-risk groups for hepatitis C that may be included in this aging population include persons who have received blood or organ transplants from an infected donor before 1992, when accurate HCV screening was instituted. People who are also at risk are those on long-term kidney dialysis treatment and persons with accidental injuries from percutaneous exposures to needles or other sharp instruments contaminated with blood from an infected person. Although HCV is primarily transmitted through blood exposures, sexual transmission as well as perinatal transmission can occur.

Incidence rates by PHR ranged from 0.4 cases per 100,000 for PHR 6 to 11.7 cases per 100,000 for PHR 1. Most (50) of the cases reported from Hale County (PHR 1) were in inmates at Plainview Prison.

To better understand the infected population in the state of Texas, TDH examined all positive test results (acute and chronic) reported for the last quarter of 1999. Over 5,000 positive reports were submitted to TDH during the 3-month period. Data was analyzed by person (age, race, sex) and place (city, county, PHR). Table 2 presents a summary of those data.

TDH received 5,206 positive HCV reports from October 1 to December 31, 1999. Only 168 (3.2%) of the 5,206 records with a positive laboratory test in the last quarter were from persons classified as having acute hepatitis C. The other 5,038 persons were considered to have chronic hepatitis C. The public health region was not reported on 172 records.

More than one third (39.2%) of persons were 40 to 49 and another 24.1% were 30 to 39 years of age. Men represented 60% of the total number of reports; women, 36%. Gender was reported unknown on 4%. The majority of reports (59.3%) came from 3 PHRs: 3, 7, and 8.

Denominator data on total HCV tests performed were available on 3,793 patients screened for HCV by their physicians. This gives a HCV prevalence of 12.9% for the last quarter in 1999. These data are shown in Table 3 and represent a subset of the total 5,206 positives detailed in Table 2. The overall distributions were unchanged.

Because most (85%) patients with HCV have chronic disease, and because many (65-75%) acute infections are asymptomatic and therefore unrecognized, it is desirable to expand the reporting criteria to include all newly diagnosed (acute and chronic) cases of HCV. This rule amendment will be presented to the Board of Health for consideration in Fiscal Year 2000. Such expanded reporting will help identify those cases which have unknown histories as well as those with an atypical disease course. In addition to widening the reporting criteria, TDH is initiating a series of seroprevalence studies to determine the prevalence of HCV in the state. A registry of all HCV cases in the state of Texas is currently being established. Data will be used to establish HCV testing and counseling centers throughout Texas in Fall 2000 and to determine future resource needs.

Infectious Disease Epidemiology and Surveillance Division (512) 458-7676

HIV/AIDS

The Human Immunodeficiency Virus (HIV) is a human retrovirus that infects and slowly depletes a subgroup of white blood cells called helper T-lymphocytes or CD4+ T lymphocytes. These white blood cells are critical to maintaining an effective immune response. Worldwide, the prevalence of HIV is estimated to be higher than ever, with over 42 million children and adults infected, primarily in sub-Saharan Africa and in other developing countries. The World Health Organization and the Joint United Nations Programme on HIV/AIDS (UNAIDS) estimate that 16,000 children and adults are newly infected each day. No complete count of new HIV infections is available for the United States, but it is estimated that 35,000 to 40,000 new infections occur each year. Half are among individuals under the age of 25.

HIV Transmission

HIV can be transmitted by blood or bodily fluids. Some groups are at higher risk of contracting HIV: youths from 13 through 24 years of age, African Americans, men who have sex with men (MSM), injecting drug users (IDU) and their partners, and heterosexuals who have multiple partners. HIV risk is elevated if either sexual partner has a history of sexually transmitted diseases (STDs). Transmission of HIV can be prevented, in part, by abstaining from high-risk sex (including unprotected oral sex'). Safer sex can be practiced by participating in a monogamous relationship. Latex condom use (with water-based lubricant only) increases the safety of sexual intercourse and prevents transmission of HIV and most STDs although transmission of certain sexually transmitted diseases (ie, genital warts, herpes, scabies) can still occur. Studies have demonstrated a higher rate of transmission of HIV with MSM practicing unprotected anal intercourse when compared with heterosexual vaginal intercourse. Officials with the Centers for Disease Control and Prevention (CDC) emphasize that a much higher prevalence of HIV coinfection exists among persons with any STD than among those without STDs or a history of STDs. HIV transmission is enhanced when other sexually transmitted diseases, (ie, syphilis, gonorrhea, herpes, chlamydia) are present.

Additionally, transmission of HIV can be prevented by avoiding injection of street (illicit) drugs. Intravenous drug-using populations (IDUs) often share needles, cookers, and cotton filters which are contaminated with blood, thus allowing transmission of HIV. The sexual partners of IDU's and bisexual men are also at increased risk of infection with HIV.

Alcohol or drug use (such as crack cocaine) often is associated with riskier sexual practices. Former Surgeon General Antonia Novello stated in a news conference that, "For teens, alcohol use is the best predictor for early sexual activity and failure to use contraception. Alcohol use, more than any other single factor, is responsible for more pregnancies, sexually transmitted diseases, and more HIV infections".[2]

Table I - AIDS Cases Reported by Sex and Race*

Sex/Race	Cases	%**	Cases per 100,000
Males			**23.6**
White	958	41	17.7
African American	772	33	70.4
Hispanic	592	25	19.2
All Others	14	<1	---
Females			**5.2**
White	132	25	2.3
African American	286	54	24.1
Hispanic	107	20	3.6
All Others	4	<1	---
Total Cases	**2,865**		**14.3**

* The category *All Others* includes any racial/ethnic group not listed as well as those cases not specifying race. Therefore, a rate is not calculated.
**Percentages may not total 100% due to rounding.

Monitoring the Course of HIV

In recent years, medical researchers have developed tests that quantify the level of HIV virus circulating in the bloodstream. These tests are referred to as viral load or plasma HIV (RNA) tests. Viral load tests are a sensitive measure of the HIV nucleic acid in the peripheral blood and other body systems. The level of viral nucleic acid has clinical significance: patients with greater than 100,000 HIV RNA copies/mL (plasma level) within 6 months of seroconversion are 10 times more likely to have their infection progress to AIDS during the next 5 years than do those who have fewer than 100,000 copies/mL in the first 6 months.[3] The viral load testing is generally performed to evaluate newly diagnosed disease, to monitor disease status, to establish a baseline value prior to antiretroviral treatment, and to monitor health status during treatment.[4] Viral load testing is also used to diagnose early (acute) HIV infection prior to antibody production.[5]

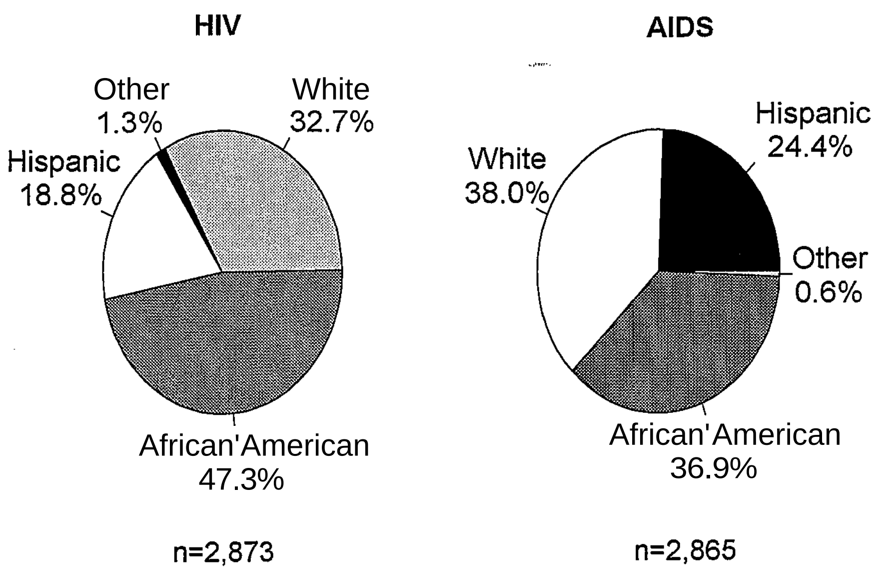
New for Year 2000

In January 2000 the Texas Department of Health began mandatory Viral Load reporting for HIV and AIDS cases. This occurred because the CDC updated the surveillance case definition for HIV in December 1999, to include a detectable viral load as an independent criteria for HIV infection. The HIV reporting law in Texas uses the CDC HIV case definition. Texas implemented the reporting of viral load results on January 1,2000, and these data, in conjunction with the new HIV (not AIDS) reports will eventually provide prevalence data on HIV cases in the State of Texas (all existing cases).

HIV Reporting

The Acquired Immunodeficiency Syndrome (AIDS) is the late-stage sequelae of HIV infection and reflects infections occurring years earlier (generally greater than 10 years). For health professionals to follow the current trend of a disease and develop prevention strategies, prompt identification and reporting of new infection is essential. For this reason, the Texas Board of Health approved revising the reporting rules to require reporting of HIV infections by name. The named HIV reporting system was implemented in January 1999. A total of 2,873 HIV (not AIDS) cases were reported in 1999; these data capture only those cases newly diagnosed since January 1, 1999, not previous positives for HIV. Nor do these HIV data include anonymous tests, unless the individual was subsequently tested by name. Additionally, these HIV cases are strictly HIV infections that have not been diagnosed as AIDS. If an HIV case is subsequently reported as AIDS within the year, it will be counted as an AIDS case only. Of these 2,873 incident cases, 1,986, or

Figure 1. Reported HIV and AIDS Cases by Race/ Ethnicity



69% were males and 31% were female. The highest number of cases were reported fiom the African American racial/ethnic group (47.3%), followed by the White, non-Hispanic (32.7%), and the Hispanic (18.8%) (Figure 1). African American women represented 61% of the cases among females for 1999. Since the HIV data represent more recent infections, the difference between the AIDS ethnic/racial breakdown and the HIV ethniclracial breakdown (Figure 1) demonstrates the segments of the population where new HIV cases are occurring most rapidly.

AIDS case rates have been falling the past several years. However, surveillance reports obtained years. However, surveillance reports obtained January 1994 through June 1997 from 26 states with integrated HIV and AIDS surveillance systems indicate that the incidence of new HIV infections appears to be fairly stable (see below). These surveillance reports accentuate the need for preventive outreach for minorities and youths aged 13 to 24 in whom a large portion of the new HIV cases are occurring. More current information is needed to ascertain areas and populations of increased incidence within Texas. Accurate, prompt HIV reporting will additionally enable preventive and treatment efforts to be directed more effectively.

AIDS

AIDS is a specific group of diseases or conditions that result fiom severe immunosuppression caused by infection with HIV. Late-stage presentation of HIV disease, AIDS, reflects prolonged, severe destruction of vital immune cells that would normally generate an immune response and provide protection in the body. The decline in the number of CD4+ T lymphocyte cells is an indicator of HIV disease progression and results fiom the continuous replication of HIV at all stages of disease in the absence of effective antiretroviral therapy.

The CD4+ T lymphocyte count became an important part of the AIDS surveillance case definition that the CDC revised in 1993. The current AIDS case definition includes all HIV-infected persons with CD4+ T lymphocyte counts fewer than 200/uL of blood or less than 14% of total lymphocytes. Before this change, the case definition relied on a confirmed positive H N antibody test and the identification of one of several indicator diseases that commonly occur among immunocompromised HIV-infected patients. This change in definition resulted in a large number of AIDS cases being reported in 1993 that had not met the earlier case definition (Figure 2).

1999 Texas AIDS/HIV Statistics

According to the Centers for Disease Control and Prevention (CDC), more than 641,086 cases of AIDS have been reported in the United States through the end of 1997. At least 385,000 of these persons with AIDS (PWAs) have died. By the end of December 1999, Texas had 54,881 PWAs reported since the start of the epidemic in the early 1980s. At least 28,777 of these PWAs are deceased. Texas ranked fourth highest in the US, with 2,865 AIDS cases reported in 1999. In 1998, AIDS fell from the fourth to the fifth leading cause of death among Texas males aged 35 to 44, while it remained the fourth leading cause of death among the 25 to 34 age group for males. In 1998, HIV infection ranked ninth among the top 10 causes of deaths for African Americans

Table 2. HIV Cases Reported by Sex and Race*

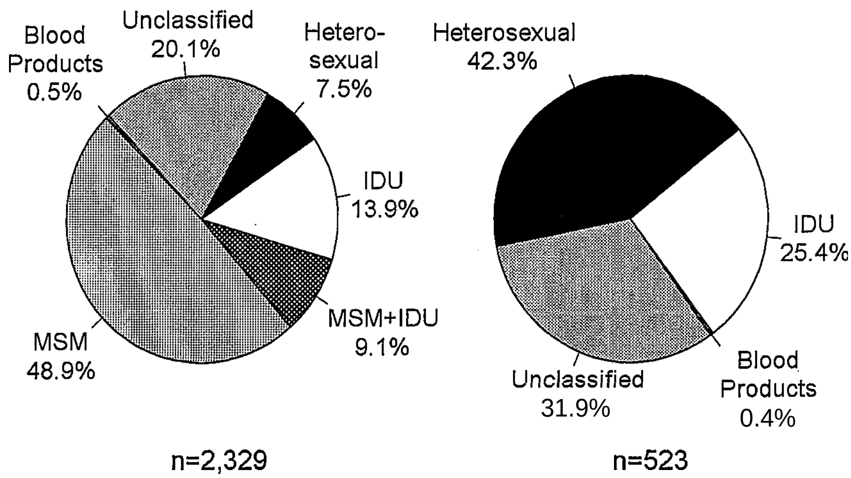
Sex/Race	Cases	%**	Cases per 100,000
Males			**20.1**
White	736	37	13.6
African American	819	41	74.7
Hispanic	404	20	13.1
All Others	27	<1	---
Females			**8.8**
White	203	23	3.6
African American	540	61	45.5
Hispanic	135	15	4.5
All Others	9	<1	---
Total Cases	**2,873**		**14.4**

* The category *All Others* includes any racial/ethnic group not listed as well as those cases not specifying race. Therefore, a rate is not calculated.

**Percentages may not total 100% due to rounding.

(both male and female). HIV/AIDS was not ranked in the top 10 causes of death for other racial/ethnic groups in Texas. The overall rate for Texas in 1999 was 14.3 AIDS cases per 100,000 population (Table 1). For Texas males, the 1999 AIDS rate, (23.6/100,000), remained much higher than the AIDS rate for females (5.2/100,000). The 1999 Texas HIV rate for males was 20.1 cases per 100,000 population, while the HIV rate of 8.8 cases per 100,000 population for females demonstrated the increasing spread of new infections among women (Table 2).

Figure 3. Adult-Adolescent* AIDS Cases Reported by Mode of Exposure and Sex

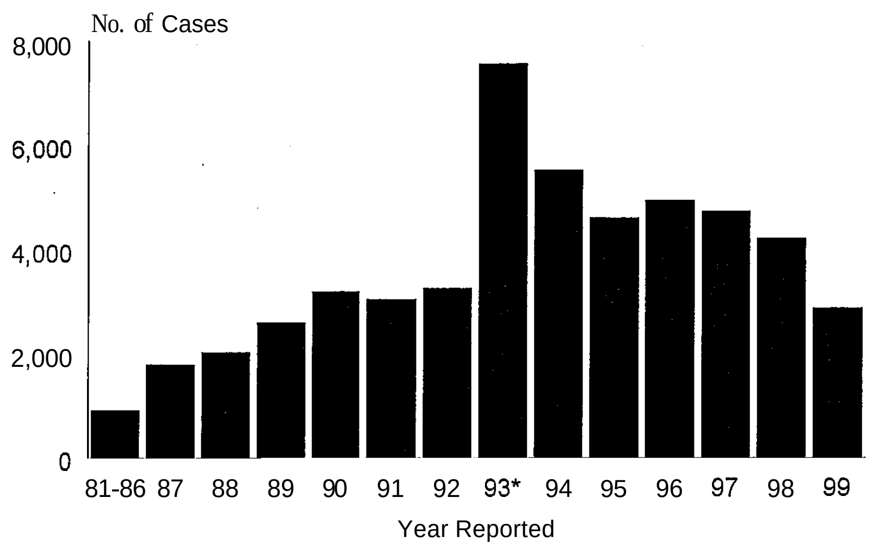


*Age 13 or older at time of diagnosis

The rate of reported AIDS cases in 1999 among Texas' African Americans (46.4/100,000) was more than 4 times higher than the rates for Whites (9.9/100,000) or Hispanics (11.5/100,000) (Table 1). Although the Texas case rate for females was 5.2 AIDS cases per 100,000, the African American female rate was significantly higher: 24.1 cases per 100,000. The rates for Hispanic and the White females were lower: 3.6 cases per 100,000 and 2.3 cases per 100,000, respectively. The Texas African American male population had the highest rate, 70.4 cases per 100,000, followed by Hispanic males at 19.2 cases per 100,000 and White males at 17.7 cases per 100,000.

The HIV data clearly demonstrates the movement of the epidemic further into minority communities. The rate of reported HIV cases in 1999 among African Americans in Texas (59.5/100,000) was more than 6 times higher than 'the rates for Whites (8.5/100,000) or Hispanics (8.9/100,000). Although the Texas case rate for all females was 8.8 HIV cases per 100,000, the rate for African American females was significantly higher at 45.5 cases per 100,000 (Table 2). The rates for Hispanic and the White females were lower: 4.5 cases per 100,000 and 3.6 cases per 100,000, respectively. The Texas African American male population had the highest HIV rate, 74.7 cases per 100,000, followed by White males at 13.6 cases per 100,000 and Hispanic males at 13.1 cases per 100,000.

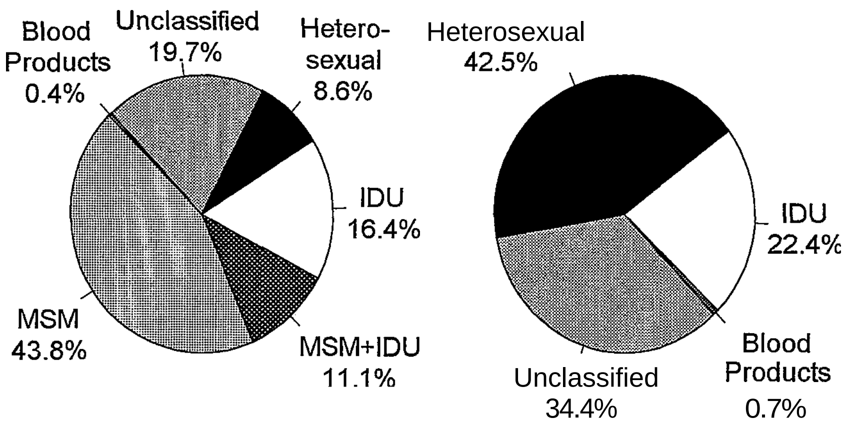
Figure 2. AIDS Cases by Year of Report, 1981-1999



"Expanded AIDS surveillance definition implemented.
[54,881 Cumulative Cases Reported Through 12/31/99.]

Although lower than in previous years, the MSM exposure category constituted close to half (49%) of the 1999 AIDS cases among Texas men (Figure 3). Additionally, injecting drug use was the most likely route of transmission for 14% of men reported with AIDS. The combination of male-to-male sex and IDU constituted 9% of the cases among males, and the heterosexual route of transmission was reported for 8% of men with AIDS. Among women, the exposure category "heterosexual contact" was determined for 42% and the use of injecting drugs was designated as the mode of exposure for 25%. A higher percentage of cases among women (32%) than men (20%) were initially unclassified as to mode of exposure. For both sexes, the percentage of cases that remain unclassified will decrease as the investigations of risk are completed. However, the CDC definition of "Heterosexual Contact" results in heterosexually acquired Infections remaining categorized as "Not Classified". Only those individuals whose risk for HIV infection comes fi-om heterosexual sex with a known HIV infected partner are classified as "Heterosexually Acquired". Those individuals whose risky behavior is heterosexual sex with multiple partners whose HIV status is unknown remain "Not Classified".

Figure 4. Adult-Adolescent* HIV Cases by Mode of Exposure and Sex



Males (n=1,972) **Females (n=868)**

*Age 13 or older at time of diagnosis

For HIV infections, the MSM exposure category constituted less than half (44%) of HIV cases among Texas men (Figure 4). Additionally, injecting drug use was the most likely route of transmission for 16% of men reported with HIV. The combination of MSM sex and IDU constituted 11% of the HIV cases among males, and the heterosexual route of transmission was reported for 9% of men with HIV. Among women, the exposure category "heterosexual contact" was determined for 43% and the use of injecting drugs was designated as the mode of exposure for 22%. As with AIDS cases, a higher percentage of HIV cases among women (34%) than men (20%) were initially unclassified as to mode of exposure (Figure 4). Many of these likely represent heterosexually acquired cases.

Most AIDS cases in Texas continue to be reported fi-om metropolitan areas. The largest number of cases reported in 1999 were from Houston/Harris County (680) followed by Dallas (536), Austin/Travis (247), San Antonio/Bexar (204), Ft.Worth /Tarrant (134), and El Paso (87) cities/counties. Ranking these counties by rate changes the order somewhat. Travis County (Austin) demonstrated the highest rate, (38.2/100,000), followed by Dallas (24.7), Harris (20.8), and Bexar (15.0) counties. The rates for El Paso and Tarrant Counties were 11.5 and 8.9 cases per 100,000 population, respectively. Travis County AIDS rates increased in 1999 to outpace Harris County. Additionally, Bexar County AIDS rates have increased slightly to outrank El Paso County rates for 1999. The Texas Department of Criminal Justice (TDCJ) reported 8.2% of all 1999 AIDS cases (236). In 1999,141 counties, (out of the 254 in Texas), reported at least 1 AIDS case. Although still centered mainly in the metropolitan areas of the state, the HIV epidemic continues to spread to more rural areas, requiring all counties face the challenges of providing prevention education, health care, and services.

Reports of HIV cases in Texas are also pre-don-inantly from metropolitan areas. These case reports may be skewed, however, since some areas of the state were more prepared than other areas, at the start of 1999, to begin reporting HIV cases. The largest number of cases reported in 1999 were from Houston/Harris County (918) followed by Dallas (551), San Antonio/Bexar (153), Ft.Worth/Tarrant (127), Austin/Travis (116), and El Paso (55) cities/counties. Ranking these counties by rate changes the order somewhat. Harris County demonstrated the highest H N rate, (28.1/100,000), followed by Dallas (25.4), Travis (17.9), and Bexar (11.2) counties. The rates for El Paso and Tarrant Counties were 7.3 and 8.4 cases per 100,000 population, respectively. In 1999, 110 counties, (of the 254 in Texas), reported at least one new HIV case. TDCJ reported 13.5% of all 1999 HIV cases (387).

1999: **Where is the AIDS Epidemic Going From Here?**

Since 1997 the United States has been experiencing a decreasing trend in AIDS cases: AIDS cases have decreased by approximately 50%-60% and AIDS deaths have decreased by close to this amount. The decrease in cases and deaths has generally been attributed to the use of highly active antiretroviral therapy (HAART) to suppress viral replication and thus slow'progressionof disease to AIDS.

Although AIDS cases are still declining nationwide, officials warned that the antiretroviral agents may not be able to continue suppression of HIV for extended periods of time. Studies have shown that patients must rigorously adhere to HAART regimens (ie, take 95% of pill doses appropriately) to maintain positive treatment results. Reports of resistance to at least 1 or 2 of the HAART drugs have increased among newly seroconverted patients, and side effects such as lipodystrophy (abnormal fat distribution) and osteoporosis (bone loss) have been reported and limit therapy in some individuals. Other concerns have arisen as well: as the news of the success of the antiretroviral medications spread, a loss of concern over contracting and transmitting the virus to others seemed to pervade certain risk groups. Officials warn that many people are still not accessing the new medications, and risky behaviors appear to be resuming, particularly among young gay men.[6] The ongoing syphilis outbreak in HIV infected and uninfected gay men in Los Angeles gives credence to the fears surrounding complacency.[7]

Consistent with national trends, Texas has experienced a decline in AIDS cases fiom 1997 through 1999; however, this report discusses Texas AIDS in terms of the year the case was reported to TDH, not the year the person was diagnosed with AIDS. From 1996 to 1997, the number of AIDS reports decreased by only about 10%.[8] Approximately 11% fewer AIDS cases were reported in 1998 than in 1997; a preliminary report for 1999 demonstrates a 32% decrease in reported AIDS cases compared with 1998. Because they decrease viral replication, HAART halts, at least temporarily, the decline of CD4+ T lymphocyte counts in people with HIV. Thus, fewer individuals receiving HAART are likely to be counted as AIDS patients in the near future. Other preventive measures have also contributed to a decline in AIDS morbidity: improved preventive education (abstinence, risk assessment, and sexually transmitted disease training) and a shift in treatment guidelines from treatment of symptomatic patients to early treatment of asymptomatic HIV-positive individuals. These advances have increased the importance of motivating persons at risk to seek H N testing and access appropriate treatment in a timely fashion.

AIDS deaths in Texas declined 45% during the first 6 months of 1997 compared with the first 6 months of 1996. This decline was similar to the findings announced in 1997 by CDC. The decline in AIDS deaths was demonstrable across all races. A decrease in deaths was seen in 1998 as well (Table 3). Texas AIDS deaths declined 20% during the first 6 months of 1998 compared with the first 6 months of 1997. Although the 1998 decline in deaths occurred across all races for men, an increase in AIDS-related deaths was seen for African American and Hispanic women in Texas. The 1999 information regarding AIDS deaths demonstrates an increase in deaths among all women and among Hispanic males, when one compares the first 6 months of 1998 to the first 6

Table 3. Texas AIDS Deaths Comparison by Race and Sex*

	January through June 1997 Deaths	January through June 1998 Deaths	January through June 1999 Deaths	% Difference in Deaths(98 to 99)
Males				
White	282	206	175	-15
African American	155	145	145	0
Hispanic	130	96	109	+14
All Others	5	1	1	0
Females				
White	33	17	22	+29
African American	45	49	52	+6
Hispanic	8	15	16	+7
All Others	0	0	0	0
Jan -June Deaths	**658**	**529**	**520**	
Decline in deaths from 1st six months of previous year:	**45%**	**20%**	**2%***	

* 1998 deaths based on AIDS database 01/22/99 and 1999 deaths based on AIDS database 1/20/00.

months of 1999. Deaths among White males have decreased 15%, while deaths among African American males has remained the same for this comparison. Overall, a 2% decline in AIDS deaths occurred in 1999 in Texas, the smallest decrease in deaths in recent years.

Public health efforts to prevent disease hinge on adequate funding and relevant, complete, and timely data to distribute available funds appropriately for prevention and control programs. The early treatment of HIV-infected individuals and the outreach and testing of high risk populations is specially important now that AIDS is decreasing and HIV has not demonstrated a decrease. Although AIDS cases and AIDS deaths overall have declined, the rate amoung the heterosexuals is increasing each year. All facets of the private and public health system can work together to improve outcomes; however, individuals must seriously recognize the consequences of risky behavior. The challenge remains to motivate all people to be tested and to incorporate preventive strategies into their everyday lives.

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8. Due in part to the extensive investigation and data collection on each case, there is a delay in reporting AIDS, so people reported in one year may have been diagnosed with AIDS either during that year or during a prior year.

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Influenza, 1999-2000

Influenza viruses cause acute respiratory illness in persons of all age groups. This viral infection is characterized by fever > 100°F, chills, malaise, fatigue, sore throat, nasal congestion, headache, and muscle aches. These symptoms appear abruptly after an incubation period of 1 to 3 days. Without prescription antiviral medication, the illness runs its course in 3 to 7 days. A small percentage of individuals experience a disease course complicated by bacterial pneumonia. Approximately 20,000 individuals nationwide, primarily those over 64 years of age, die annually fiom complications of influenza.

Two major types of influenza viruses, influenza A and influenza B, cause extensive morbidity and mortality in humans. Influenza viruses are members of the family *Orthomyxoviridae,* a group of pleomorphic, ribonucleic-acid-containing viruses whose prominent characteristics include an envelope that contains the hemagglutinin (H) and neuraminidase (N) proteins. The antigenic properties of these 2 proteins give rise to various subtypes and strains of influenza A viruses and strains of influenza B viruses. Over time new strains of virus appear in response to rising levels of immunity to existing strains. The gradual evolution of new strains within existing subtypes is commonly referred to as antigenic drift. The appearance of a totally new subtype of influenza A virus is referred to as antigenic shift. Of these 2 phenomena, the disease implications of an antigenic shift are most profound and include an influenza pandemic with significant morbidity and mortality. Antigenic drift requires the reformulation of vaccine on an annual basis dependent upon circulating virus types and strains. Antigenic drift is the major obstacle to the development of a truly effective permanent vaccine against the disease.

Influenza viruses typically circulate in the Northern Hemisphere for up to 6 months. The influenza season usually begins in the late fall and continues to the early spring. Short seasons of approximately 8 to 12 weeks are usually dominated by a single virus type. Seasons of 16 to 26 weeks duration often have cocirculation of influenza A and B viruses.

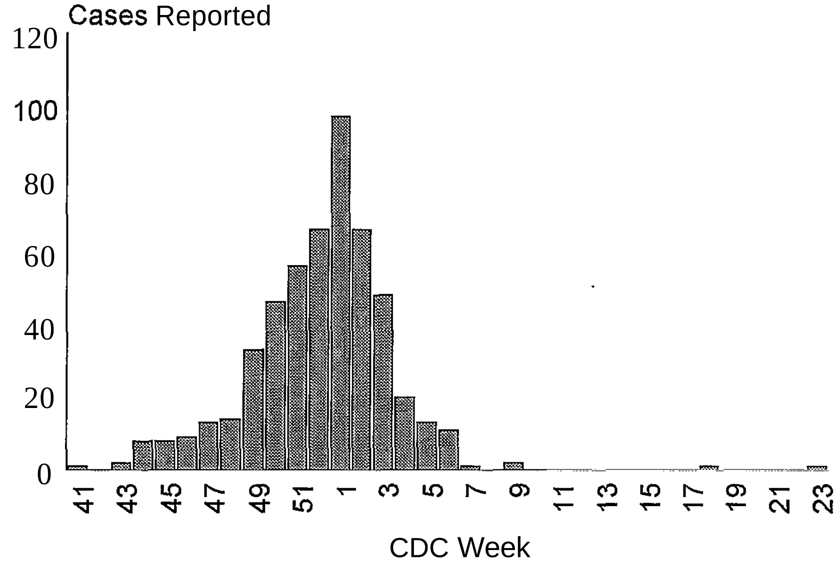
The Infectious Disease Epidemiology and Surveillance Division (IDEAS) coordinates influenza surveillance for the state. In addition to the TDH Laboratory, many sources of information are used to determine the level of influenza activity. These include the Influenza Research Center (IRC) at Baylor College of Medicine, Houston; Scott and White Hospital Laboratory, Temple; local and regional health department clinics, and other laboratories across the state. Each center uses tissue culture methods for virus isolation from clinical specimens followed by subtyping or strain denominations via hemagglutination techniques.

The initial positive influenza culture for the 1999-2000 flu season was identified by the Scott and White laboratory October 14, 1999, on a patient in McLennan County. The first culture, positive case identified by the TDH Laboratory occurred on October 27, 1999, in a Travis County patient. Sporadic cases were reported through mid-December. The peak of the influenza season in Texas occurred fiom mid-December to the end of January 2000 (Figure 1). Approximately 42% (3991961) of specimens submitted during this 6-week period were positive for influenza. The last positive specimen was collected on June 1,2000, fiom a Bell County patient.

Influenza cases occurred in all age groups but reported pediatric cases were disproportionately high due to active surveillance in a public health study investigating influenza in this population. This 5-year study is funded by the National Institutes of Health and administered by the IRC. The major sites for this study are Bell and Travis Counties. The purpose of the study is to determine the number of children who should be vaccinated to dampen an influenza epidemic. The study will end after the

2001-2002 influenza season and should provide valuable information to enhance the public health response to influenza in Texas. Submission of isolates to the Centers for Disease Control and Prevention provide a measure of the relative prevalence of circulating virus type, subtype, and strain compared with other areas of the United States. This practice also provides an opportunity to detect antigenic variants. The TDH laboratory submits the initial positive cultures as well as periodic specimens throughout the flu season to CDC for virologic surveillance. CDC surveillance provides an initial indication of the effectiveness of the annual vaccine against circulating influenza virus.

Figure 1. Influenza Surveillance by CDC Week, 1990-2000



IDEAS confirmed 556 culture-positive influenza specimens (of 1825 total specimens). Of these, 540 were influenza A (H3N2), 6 cultures were influenza A (H1N1), and 10 were influenza B. Specimens from Texas and other areas of the United States confiied a good match between the vaccine and the circulating virus.

There were several interesting aspects of the Texas 1999-2000 influenza season. First, it arrived in Texas early: TDH confirmed 29 cases of influenza by November 24, 1999. It is unusual to recover this number of cases of influenza prior to Thanksgiving. Second, influenza A/Sydney dominated for the third consecutive year. This was the second year that the flu vaccine had protected against this strain. Both events, while not unprecedented, are unusual. A late season (March) group of specimens submitted to the TDH laboratory from El Paso identified influenza A/New Caledonia/20/99-like (H1N1). This strain of influenza is a planned component of the 2000-2001 vaccine and illustrates the importance of surveillance.

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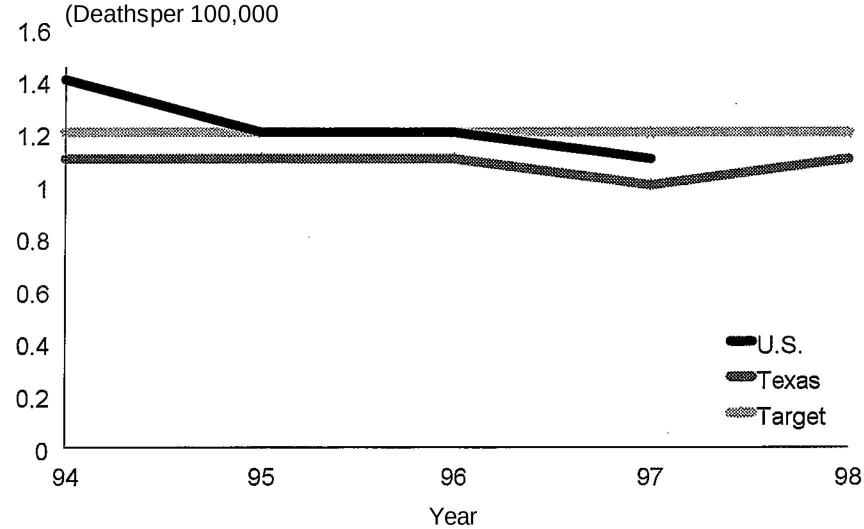
Injury Prevention Objectives: Healthy People 2000

Healthy People 2000: National Health Promotion and Disease Prevention Objectives presents a national prevention strategy aimed at significantly improving the health of the American people. The goals focus on increasing the span of healthy life, reducing health disparities, and achieving access to preventive services for everyone. Selected injury objectives are organized into 8 main injury death categories: overall unintentional injury, motor vehicle crashes, fall-related, drowning, residential fires, homicide, suicide, and firearm-related deaths. Each main objective is also given subobjectives targeting specific ages, genders, and race/ethnicities.

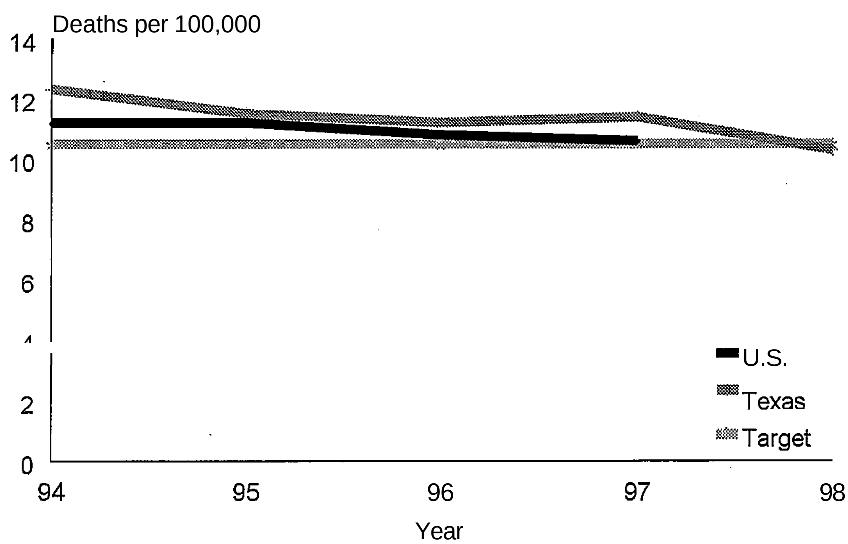
Figure 1. Residential Fire Deaths



Healthy People 2000 Objective: Reduce residential fire deaths to no more than 1.2 per 100,000 people.

The Injury Epidemiology and Surveillance Program examined injury death data for 1994 through 1998. Injury deaths were separated into injury death categories by the use of ICD-9 external cause of injury codes (E codes). The specific E codes were supplied by the Centers for Disease Control and Prevention for each injury death category. The rates were calculated and age-adjusted when appropriate.

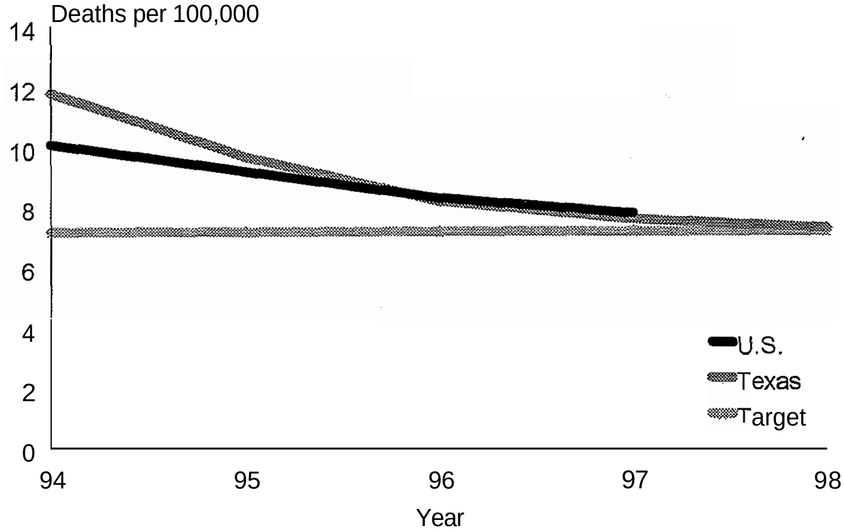
Figure 2. Suicide Deaths



Healthy People 2000 Objective: Reduce suicides to no more than 10.5 per 100,000 people.

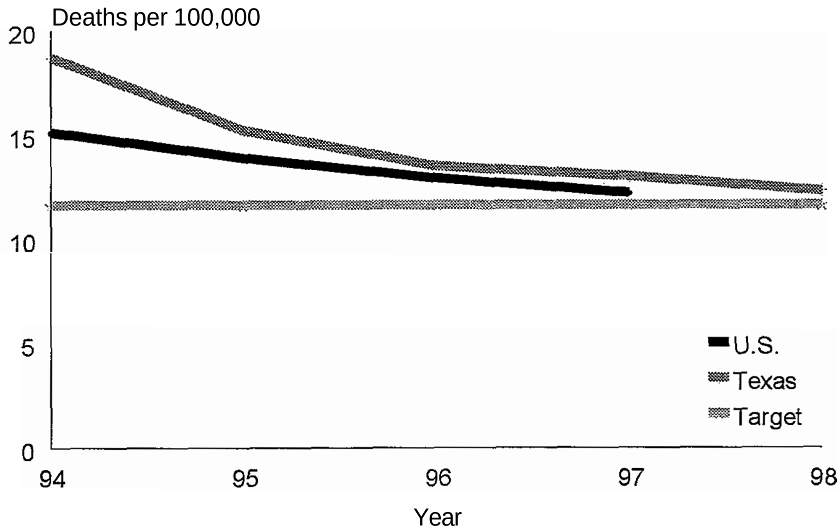
Overall, Texas has made more progress in achieving Healthy People 2000 objectives for preventing intentional injuries (homicides, suicides, and most firearm-related deaths) than objectives for preventing unintentional injury. Texas met the main objectives for residential fires (Figure 1) and suicides (Figure 2). Texas has also nearly met the main objective for homicides (Figure 3) and has made substantial progress toward achieving the objective for preventing firearm-related deaths (Figure 4). The remaining objectives for prevention of total unintentional deaths, motor vehicle crash deaths, fall-related deaths, and drowning have not

Figure 3. Homicide Deaths



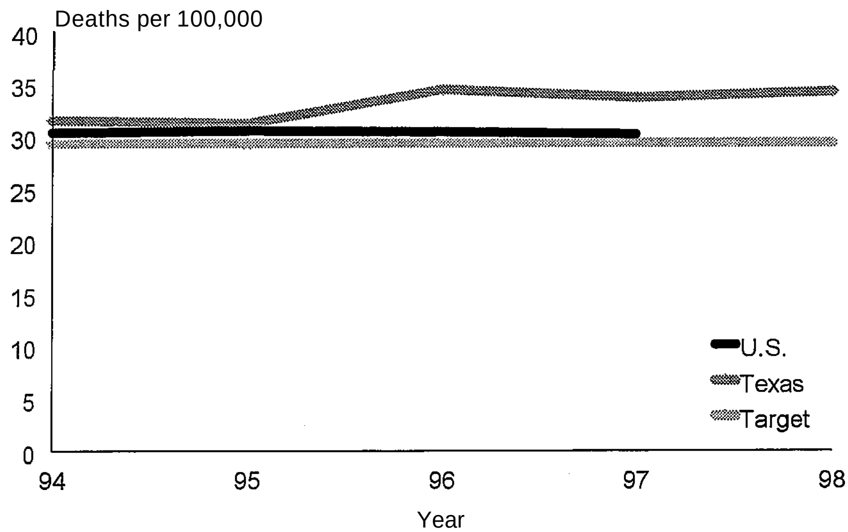
Healthy People 2000 Objective: Reduce homicides to no more than 7.2 per 100,000 people.

Figure 4. Firearm-Related Deaths



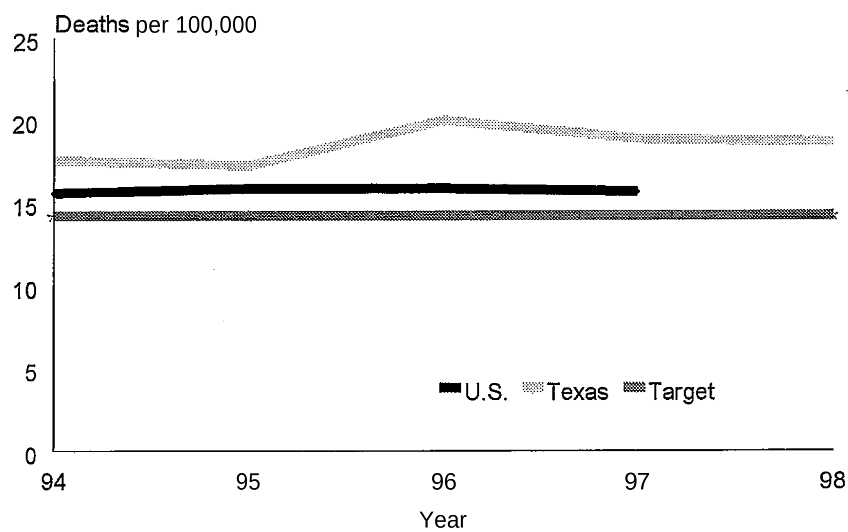
Healthy People 2000 Objective: Reduce firearm-related deaths to no more than 11.6 per 100,000 people from major causes.

Figure 5. Unintentional Injury Deaths



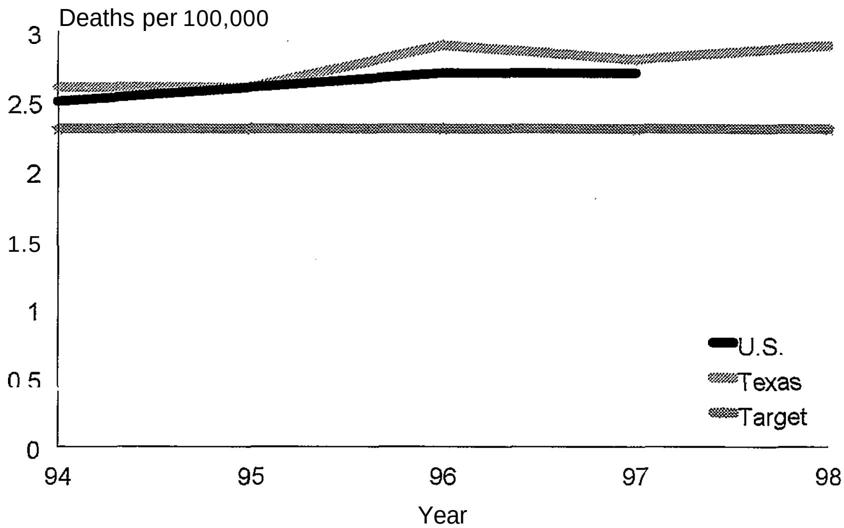
Healthy People 2000 Objective: Reduce deaths caused by unintentional injuries to no more than 29.3 per 100,000 people.

Figure 6. Motor Vehicle Crash Deaths



Healthy People 2000 Objective: Reduce deaths caused by motor vehicle crashes to no more than 14.2 per 100,000 people.

Figure 7. Fall-Related Deaths



Healthy People 2000 Objective: Reduce deaths from falls and fall-related injuries to no more than 2.3 per 100.000 people.

The full report is available on the Injury Epidemiology and Surveillance Program's website: http://www.tdh.state.tx.us/injury. The report provides an overview of the injury health status of the Texas population and is a resource for long range planning and implementation of programs that will improve the health of all Texas residents.

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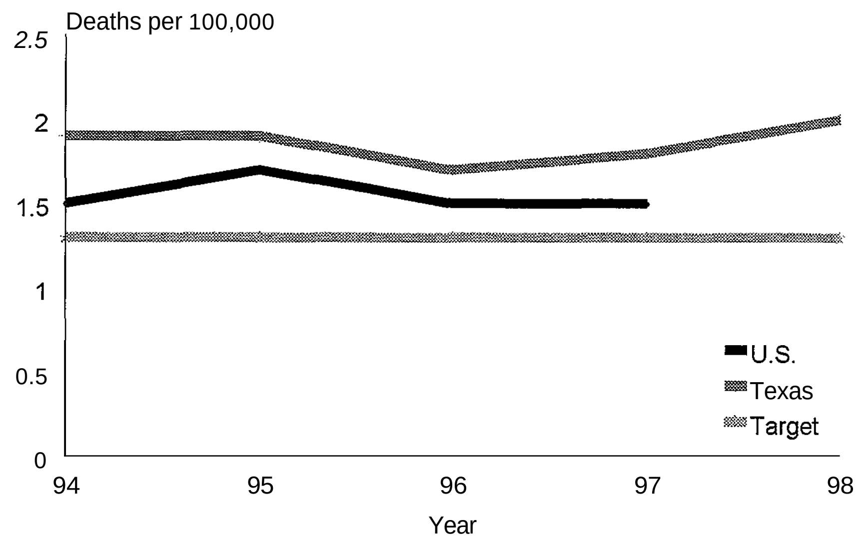
been met nor has any progress been made toward achieving those goals (Figures 5-8). In fact, the rates for these categories in Texas exceed the national rates.

Of the 28 subobjectives, 10 have been met, 7 have had some progress made toward the target, and 11 have not been met nor has steady progress been made. Under the objectives for prevention of motor vehicle crashes, Texas has met the subobjective for prevention of motorcycle-related deaths and is nearing the subobjective for preventing such deaths amoung Mexican American. All of the sub-objectives for homicide have been met except 1 (homicides among children aged 3 and younger). The sub-objective for homicides among Black men aged 15 to 34 and the firearm-related death sub-objective for Blacks have been met and the rates have been cut almost in half since 1994.

Figure 8. Drowning Deaths



Healthy People 2000 Objective: Reduce drowning deaths to no more than 1.3 per 100,000 people.

Lead — Elevated Blood Lead Levels in Adults

Texas Administrative Code 99.1 requires reporting of adult elevated blood lead levels to the Texas Department of Health (TDH). The reporting level for persons 15 years of age or older is 25 micrograms of lead per deciliter of blood or greater. In 1999 the Environmental and Occupational Epidemiology Program (EOEP) received 13,798 blood lead test results for 11,084 workers. EOEP often receives several tests during the year for a specific worker because the US Occupational Safety and Health Administration (OSHA) mandates blood lead testing when workers are exposed to lead. The frequency of blood lead testing as required by OSHA varies according to the worker's blood lead level and with the type of work (construction or general industry) associated with the lead exposure. Table 1 shows the distribution of blood lead levels compared with the number of tests and individuals who had their blood lead tested during 1999.

Laboratories and physicians reported 1,378 elevated blood lead test (>25 μg/dL) results for 506 workers. The number of elevated blood lead results reported for 1999 decreased by 1.5% from 1998, while the number of workers represented in 1999 decreased by 9.2%.

The majority of workers were male (495); 11 were female. Race was not reported for 173 workers. The race profile for the remaining workers (333) was 134 (40.2%) White, 129 (38.7%) Hispanic, 66 (19.9%) African American, 3 (0.9%) American Indian/Alaska Native, and 1 (0.3%) Asian/Pacific Islander.

EOEP conducts follow-up on workers with blood lead levels at or above 25 μg/dL, including the collection of occupation and industry information. If the information is not available in the laboratory report, the laboratory that performed the analysis is contacted for additional information. Follow-up may end at this point since most laboratories do not maintain the submitting company or physician information beyond 60 days. When the clinic or physician is known, they are contacted to obtain the occupation and industry information. The distribution of elevated blood lead levels by industry and occupation is presented in Table 2.

Increased employer and employee awareness of the sources of lead exposure in the workplace and methods for reducing worker exposure are essential for the prevention of occupational lead poisoning. To help employers identify potential lead hazards, TDH offers free workplace consultation. Part of the typical consultation visit is an industrial hygiene inspection that may include measurement of airborne lead levels, observation of work practices to assess exposure risk, and recoinmendations for reducing worker exposures. A workplace consultation is available for employers with workers that have reported blood lead levels of 60 μg/dL or greater and to all employers with workers that have blood lead levels averaging 50 μg/dL over a 6-month period. Consultations are also conducted at the request of companies, regardless of the lead level of workers.

Nonoccupational Lead Exposures

The Texas Occupational Conditions Reporting Act does not require reporting of nonoccupational lead exposures. Whenever a blood lead level above the reportable level is received, however, follow-up is initiated with the physician to determine whether the exposure is occupational or nonoccupational.

In 1999 there were 21 elevated blood lead reports associated with nonoccupational lead exposures. The 2 most frequently reported sources for nonoccupational lead exposures were lead based paint removal (5 cases), and shooting ranges/bullet reloading (3 cases). The blood lead levels associated with lead based paint removal ranged from 31 to 64 μg/dL. The blood lead levels associated with firing ranges and bullet reloading ranged from 25 to 36 μg/dL.

Table I. Distribution of Blood Lead Test Results and Number of Individuals Tested by Blood Lead Level for 1999

Blood Lead Level (Micrograms per Deciliter of Whole Blood)	No. of Tests[1]	No. of Individuals[2]
0 to 24	12,420	10,578
25 to 39	1,186	395
40 to 49	137	75
50 to 59	34	26
60 and above	21	10
TOTAL	**13,798**	**11,084**

[1] The total number of tests received for the year.
[2] The number of individuals for whom reports were received for the year. An individual may have more than 1 blood lead test during the year.

During removal of lead based paint, exposure may occur through inhalation and ingestion. Generally unsafe work practices by the employee—ie, lack of or inadequate personal protective equipment (respirator, protective clothing) and eating, drinking, or smoking with lead contaminated hands—creates an environment for lead exposure. Personal protective equipment reduces an individual's exposure from inhalation, while hand washing before eating, drinking, or smoking will reduce the risk of lead exposure through ingestion. Although professional lead abatement workers receive lead safety training that includes safe work practices, individual homeowners may not be familiar with safe work practices that will minimize their lead exposure during lead based paint removal.

Exposure to lead in a shooting range (indoor and outdoor) and during bullet reloading may occur through inhalation and ingestion. Lead exposure in a shooting range occurs as airborne lead is produced by the combustion of lead-containing primer (the highly explosive material that detonates on percussion by the firing pin and sets off the gunpowder) as well as from the shearing of lead particles as the bullet passes through the chamber and barrel of the weapon. These sources of lead exposure occur close to the breathing zone of the shooter.

The potential lead hazard in indoor shooting ranges is reduced when there is sufficient ventilation. Unfortunately, not all shooting ranges are properly ventilated, personal protective equipment (respirator) may not be used, and the shooter is exposed to lead with every round fired. As the number of rounds fired increases and the frequency with which the shooter engages in this activity increases, the shooter's blood lead level may also increase. The accidental ingestion of lead may occur when the shooter eats, drinks, or smokes before washing his or her hands. Hand washing is the single most important activity an individual can do to reduce lead exposure through ingestion. This applies to individuals who are occupationally exposed to lead as well as those individuals who are exposed to lead through nonoccupational activities.

Table 2. Industry and Occupation for Workers with Elevated Blood Lead Levels for 1999

Industry	Frequency	%
Manufacturing	373	73.9
Construction	59	11.7
Business and Repair Services	30	5.9
Wholesale Trade	25	5.0
Transportation, Communications, Public Utilities	10	2.0
Entertainment and Recreational Services	5	1.0
Public Administration	2	.4
Retail Trade	1	.2
Missing Industry Information	1	2
Occupation	**Frequency**	**%**
Operators, Fabricators, and Laborers	327	65.0
Precision Production, Craft, and Repairers	132	26.0
Managerial and Professional Specialities	18	3.6
Technical, Sales, and Administrative Support	15	3.0
Service Operations	10	2.0
Missing Occupational Information	4	.8

n=506

Patients with elevated blood lead levels who are not occupationally exposed to lead should be asked about nonoccupational activities that may be contributing to the elevated blood lead level. Nonoccupational activities associated with elevated blood lead levels include, but are not limited to, ceramic glazing, stained glass work, target shooting, bullet reloading, radiator repair, melting lead to make fishing/diving weights, remodeling old homes, refinishing antique furniture, distilling alcohol illicitly, restoring old cars, and recycling metals. Items such as ceramic pots, cups, or other containers that are used for cooking, storing, or eating food items on a daily basis may be another source for nonoccupational lead exposure.

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Lead Poisoning in Children

Elevated blood lead levels in children impair mental and physical development. While potential sources of lead in the environment have been reduced dramatically due to regulations banning leaded gasoline and lead-soldered food cans, it is estimated that 890,000 children nationwide still may have elevated blood lead levels. During 1999 in Texas, approximately 3.6% (9,158) of children had elevated blood lead levels. While this may seem like a small number, there are over 180,000 children who may have blood lead levels of concern (10 μg/dL) in the state. This is in part due to continuing exposure to lead from chipping and peeling lead-based paint, imported pottery with leaded glazes, parental occupations and hobbies that involve work with lead, and traditional medicines that contain lead. Children are at greater risk for lead exposure than are adults because children tend to have more hand-to-mouth activity and because their digestive systems absorb a greater portion of the ingested lead.

The Texas Department of Health (TDH) Childhood Lead Surveillance Program (CLSP) began operation on January 1, 1996, when'childhood lead poisoning and blood lead levels of concern in children became reportable conditions in Texas. In this report, as in the reporting regulations, the term "childhood lead poisoning" indicates a finding of blood lead concentrations of 45 μg/dL of blood or greater, in persons younger than 15 years of age. The term "blood lead levels of concern in children" indicates blood lead concentrations of 10 μg/dL or greater in persons younger than 15 years old.

Laboratories and medical providers send reports of blood lead test results to the TDH Surveillance program staff by telephone, mail, fax, and electronically. Only elevated blood lead test results are required by law to be reported, but laboratories have been asked to voluntarily report all blood lead test results. Currently, 29 laboratories located throughout the nation report blood lead results to TDH. Sixty percent of the laboratories (13 of 29) voluntarily report all blood lead test results. Reports fi-om these 13 laboratories account for over 99% of the total reports received. In 1999, CLSP received 282,725 blood lead test results representing 256,475 individual children.

Of the blood lead tests received in 1999, 144,190 (51%) were capillary samples and 115,917 (41%) were venous samples; in 8% of the samples the type was not noted. Upon retesting children whose

Figure I - Pan American Health Organization Border Counties

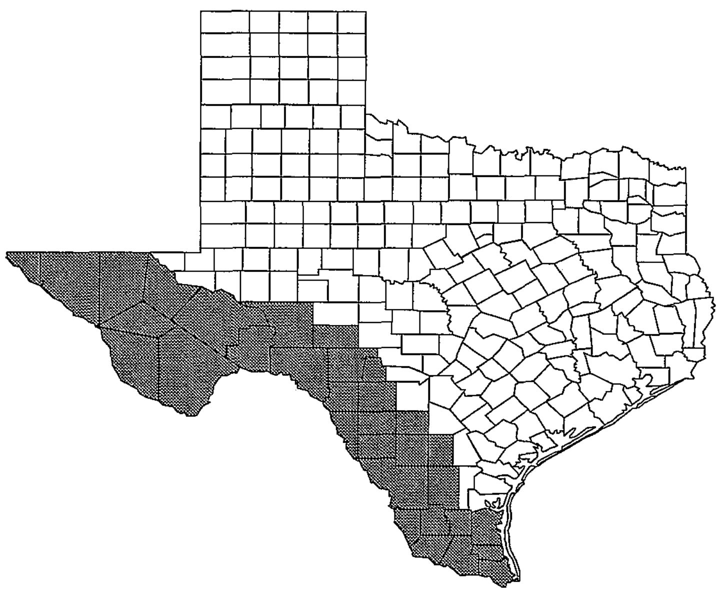

Table 1. Children with Venous Blood Lead Levels by Age (in months) and Lead Level*

Age (Months)	Blood Lead Level (micrograms per deciliter) <10	10-19	20-44	45 - 69	70+	Total
0-11	10,978	95	17	0	0	11,090
12-23	15,380	528	72	0	0	15,980
24-47	18,692	755	98	4	1	19,550
48-71	16,869	433	49	0	0	17,351
72+	39,438	426	49	1	0	39,914
Total	**101,357**	**2,237**	**285**	**5**	**1**	**103,885**

*Based on results of the first venous blood lead test reported

capillary blood lead tests were elevated, 50% had blood lead levels lower than 10 μg/dL. In addition, 42% of these retests were not venous, leading to additional questions of validity due to capillary test contamination. For this reason, the data discussed below is limited to venous blood samples.

Tables 1 through 3 provide a summary of venous sample data (115,917 samples or 41%) collected in 1999. In these tables, only the first blood lead test result for a child is included; results of follow-up tests are not presented. The 115,917 test results represent 103,885 children (Table 1). Elevated levels (10 μg/dL or greater) account for 2,528 (2.4%) of the children reported to the CLSP. While the majority of the children (88%) had only slightly elevated blood lead levels (10 to 19 μg/dL), 291 children had levels (20 μg/dL or greater) that required an environmental investigation and 6 of the 291 children had blood lead levels greater than 45 μg/dL, a level warranting immediate medical attention.

Table 1 shows that, of all the age groups, the number of children with elevated blood lead levels was greatest among children aged 24 to 47 months. Of that age group (19,550 children), 858 (4.4%) had elevated blood lead levels. Children aged 24 to 47 months are highly mobile and may have an increased opportunity to come into contact with lead in their environment. In addition, they still explore their environment by putting nonfood objects such as paint chips or dirt into their mouths, by playing on the floor or the ground, or by chewing on window sills or other painted surfaces. These activities may increase the risk for exposure to lead.

Ninety-three percent of the children in the CLSP database are currently or have previously been enrolled in the Texas Health Steps Medicaid program, which includes blood lead screening at 12 and 24 months of age. Thus, children enrolled in the Texas Health Steps program compared with those who are not, may be tested for lead more often. Children receiving federal assistance, such as Medicaid, are generally considered to be at higher risk for lead poisoning due to the potential for living in older housing with deteriorating lead-based paint. A recent report by the United States General Accounting Office estimates that approximately 77% of the 890,000 children with potentially elevated blood lead levels are currently in or are targeted by a federal assistance program. However, as shown in Table 2, CLSP data indicate that in Texas, non-Medicaid children also are at risk for lead poisoning. Of 2,528 children with elevated levels, 325 (12.9%) are not Medicaid and 2,203 (87.1%) are from the Medicaid program.[1] Four percent of non-Medicaid cases were reported as having an elevated blood lead level as compared with 2.3% of the Medicaid cases.

Over 74,092 (71%) of the children with venous blood lead results did not have race reported. The majority (68%) in the unreported race category had ethnicity reported as Hispanic. As noted previously, children

Table 2. Children with Elevated Venous Blood Lead Levels by Medicaid Status and Lead Level*

Medicaid Status	Blood Lead Level (micrograms per deciliter) 10-19	20-44	45-69	70+	Total
Medicaid	1958	242	2	1	**2,203**
Non-Medicaid	279	43	3	0	**325**

n=2,528
*Based on results of the first venous blood lead test reported

enrolled in Medicaid are required to have a blood lead test. It is likely that the high percentage of Hispanics in this surveillance program simply mirrors that of the Medicaid population, which is nearly 50% Hispanic.

The Pan American Health Organization (PAHO) defines the Border region as encompassing the 32 counties shown in Figure 1. Table 3 indicates that nearly of the 67,072 children from the non-border counties, 862 (2.8%) have elevated blood lead levels; of the 36,740 border county children, 663 (1.8%) have an elevated level. This disparity has been evident for several years and the difference includes all races and ethnicities. This is of particular interest because the percentage of children screened with a blood test is twice as high in the 32 border counties versus the remainder of Texas.

In 1991 the United States Public Health Service set a goal of eliminating childhood lead poisoning in the United States in 20 years. To meet this goal in Texas, the information described above is being used to help target screening and prevention activities so that all children with elevated lead levels will be identified and treated (when appropriate), and the sources of lead exposure eliminated.

References:

1. United States General Accounting Office. Lead Poisoning—Federal health care programs are not effectively reaching at-risk children. Washington: GAO; 1999. Pub. No: GAO/HEHS-99-18.

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Table 3. Children with Elevated Venous Blood Lead Levels by Lead Level in Border and Non-Border Counties"

Medicaid Status	Blood Lead Level (micrograms per deciliter) <10	10 - 19	20 - 44	45 - 69	70+	Total
Border	36,077	593	68	2	0	**36,740**
Non-Border	65,210	1,641	217	3	1	**67,072**

n=103,812**
*Based on results of the first venous blood lead test reported
**73 test results had no county information

Malaria

One hundred and thirteen malaria infections were reported in Texas in 1999, an increase of 45% over the 78 infections reported in 1998. During the 1990s, an annual average of 105 infections were reported, ranging from 45 in 1992 to 141 in 1996. Limited information available on case-patients suggests that 1999-onset infections were acquired by bites from infected mosquitos and imported into Texas from countries and regions where malaria is endemic.

Seventy-nine infections (70%) occurred in males and 34 in females. Sixty-four (57%) case-patients were classified as African American; many of these were Black Africans, not American citizens. Twenty-one were Hispanic, 16 were White, and 11 were Asian/Pacific Islanders; no race/ethnicity information was available for one case-patient. Age at onset was reported for 110 case-patients, ranging from 11 months to 63 years, with a median age of 30 years. Fourteen case-patients were less than 10 years of age; 12 were of African descent, and 1 each were Asian and Hispanic. The youngest, an African American boy about 10 months old, traveled with his family to Nigeria to visit family there, acquired malaria, and was diagnosed upon his return to Texas at 11 months of age. The oldest case-patient, also an African American male, was also infected with malaria in Nigeria while working for a US-based oil company.

Four species of Plasmodium (P.falcipnrum, P. malariae, P. ovale, and P. vivax) infect humans. For 97 cases-patients, the infecting Plasmodium species was reported, including 49 P.fnlcipnrum, 35 P. vivax, 7 P. *malariae*, 4 P. ovale, and 2 mixed infections (1 with P.falciparum and P. ovale, and 1 with P.falciparum and P. vivax).

Information regarding the country or region where infection occurred was available for 107 case-patients. Seventy-three case-patients (68%) were infected in Africa: 41 in Nigeria; 5 in Ghana; 1 patient in either Ghana or Nigeria; 4 in Cameroon; 3 each in Ivory Coast, Ethiopia, and Kenya; 2 in Tanzania; and 1 each in Gambia, Mozambique, Rwanda, and Sudan. Seven additional cases-patients were reported as having been infected in Africa. Twenty case-patients were infected in Latin America: 14 in Honduras; 1 in either Honduras or Mexico; 2 in El Salvador;' and 1 each in Guatemala, Nicaragua, and Peru. Thirteen case-patients were infected in Asia: 9 in India; 1 in India, Cambodia, or Thailand; 2 in South Korea; and 1 in Cambodia. One case-patient was infected in Haiti. No information on country or region where infection occurred was available for 6 case-patients.

In 1999 there were 2 pairs of case-patients; 2 brothers, 14 and 15 years old, acquired malaria in Nigeria, and a husband and wife were infected in Honduras. Two additional malaria infections were acquired in a location that had been malaria fiee. The couple infected in Honduras was vacationing and scuba-diving at Roatan Island and had not used any chemoprophylaxis. Whereas many believe that Roatan is malaria fiee, the Centers for Disease Control and Prevention (CDC) recommends chemoprophylaxis for travelers to that location. For many years the Korean DMZ (the "DeMilitarized Zone" separating North from South Korea) was malaria fiee, but in recent years numerous infections have been acquired by US military personnel stationed there, including 2 Texans in 1999.

In recent years, Nigeria and India have been the countries where the largest numbers of malaria infections reported in Texas have been acquired. However, in 1999 Honduras replaced India as the source country with the second largest number of reported infections. The devastation in Honduras following Hurricane Mitch in 1998 may have influenced the number of Hondurans traveling to the US in search of work or to escape the destruction.

Many malaria infections are recognized in individuals already infected and arriving in Texas for the first time. Infections also occur in Texas residents who have traveled to malaria-endemic areas. The consistent use of effective malaria chemoprophylaxis, insect repellent, and other efforts to limit exposure to mosquitos (especially at night when the *Anopheles* mosquitos that transmit malaria are active and biting) reduce the risk of travelers acquiring malaria. Limited information is available on the use of malaria chemoprophylactic agents by 79 case-patients, 55 of whom were reported as not having used any chemoprophylaxis; this group could have included people from other countries arriving in Texas with malaria. Among the 24 who reported using any antimalarial, at least 13 (54%) reported using something other than what the CDC recommends for the country they had been in when they were infected. The most commonly reported "error" was the use of chloroquine in areas where chloroquine-resistant P. *falciparum* malaria occurs. In 4 cases the patients reported using the CDC-recommended antimalarial, mefloquine/Lariam(R), but still acquired P. *falcipnrum* infections (in Cameroon, Mozambique, Nigeria and Peru). There is no information available regarding whether the recommended regimen, which includes continuing prophylaxis for 4 weeks following departure from malarious areas, was followed correctly. In remote regions of Cambodia and Thailand, P. *falciparum* malaria has developed resistance to mefloquine/Lariam(R), and CDC recommends 100mgs of doxycycline daily for malaria chemoprophylaxis. Limited numbers of mefloqouine-resistant P. *falczparum* malaria infections have been reported from Africa, and resistance to mefloquine may be increasing.

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Measles

Seven cases of measles were confirmed in Texas in 1999, in contrast with 0 cases in 1998, which was the first reported measles-free year in the state. Six of the 1999 cases were directly related to international travel. Because measles is highly contagious prior to rash onset, and diagnosis of sporadic cases is often delayed, there are opportunities for community spread fi-om measles patients, especially to persons traveling in international airports and visiting physician offices or emergency rooms. In the United States in 1999, there were 100 confirmed cases of measles, of which 66 were related to international travel (33 importations and 33 indigenous transmissions linked to imported cases). Of the 34 remaining indigenous cases, 24 were associated with 4 outbreaks. International importation was associated with 7 of 11 measles outbreaks that had 3 or more cases.

Of the 6 cases in Texas related to international travel, 4 were imported cases, and 2 were linked to an imported case (Table 1). Measles was diagnosed in 5-month-old twin boys who had been in Lebanon during their entire exposure period and had returned to the US during their period of communicability. They visited a physician 3 times with symptoms of cough, congestion, and persistent high fever prior to rash onset. After rash onset, the twins were seen at an emergency room, and a serological test for measles was ordered on one child; measles was reported to the local health department after the positive measles IgM result was received. The third imported case occurred in a 16-year-old female with a history of 2 doses of measles-mumps-rubella (MMR) vaccine; she was infected with measles during a visit to El Salvador. Although she returned to the US 1 day prior to her infectious period, she was communicable during a physician visit. The physician ordered a test for measles but did not report the case until it was confirmed by IgM serology. The fourth imported case occurred in a 4-year-old unvaccinated visitor fi-om England who was infectious during her stay in the US. Prior to rash onset, she went to a swimming pool and a restaurant and twice visited a minor emergency facility. At the first clinic visit, tonsillitis was diagnosed but when she returned the next day, following rash onset, measles was diagnosed. The following day she was admitted to a hospital where staff reported suspected measles and ordered appropriate tests. Her infection was confirmed both by measles IgM serology and viral isolation. The viral isolate was genotype D, previously isolated in Italy. Secondary cases occurred in a cousin and an uncle. The 10-year-old cousin had a history of

Table 1. Number of Confirmed Measles Cases in Texas by Year and Epidemiological Classification

Year	Imported*	Indigenous: Contacts of Imported Cases	Indigenous: Not Associated with International Travel	Total
1995	2	2	10**	14
1996	2	0	47***	49
1997	4	2	1	7
1998	0	0	0	0
1999	4	2	1	7

*Exposures occurred in Brazil, El Salvador, England, Germany, Italy, Japan, Lebanon, Mexico, and Switzerland.
**All cases occurred in Bexar County.
***All cases occurred in Harris County.

having received 1 dose of MMR vaccine, and the 33-year-old uncle believed he had received MMR but was unable to locate his vaccination records. Immune globulin (IG) prophylaxis was given to 43 of the uncle's work contacts with an uncertain or negative history of measles or MMR vaccination. The only case of measles with no travel history and no known exposure to measles occurred in a 2-year-old child who had previously received 1 dose of MMR vaccine.

Although the number of measles cases in the US and Texas is at a historic low, and there is evidence of an interruption in endemic transmission, these imported cases highlight the importance of continued vaccination and surveillance. Texas law requires that **suspected** cases of measles be reported immediately to a local health authority or the Texas Department of Health. All suspected cases are investigated to identify and treat susceptible contacts and assure that appropriate confirmatory tests are performed. Prophylaxis for susceptible individuals greater than 1 year of age who are exposed to measles consists of vaccination with MMR within 72 hours of exposure or administration of IG within 6 days.

Immunization Division (512) 458-7284

Meningococcal Disease Surveillance

Meningococcal diseases include all invasive infections caused by the bacteria *Neisseria meningitidis*. The most common presentations are meningitis and/or meningococcemia, but other clinical presentations such as septic arthritis, pneumonitis, or pericarditis may also occur. While meningococcal infections may also be asymptomatic or cause only an upper respiratory infection, only invasive disease is reportable in Texas. Meningococcal infections are co rmed in the laboratory by isolating the organism from a normally sterile body fluid, most often cerebrospinal fluid or blood. One hundred and six cases of invasive meningococcal infection were reported in Texas in 1999 and the clinical presentation was indicated in 49 cases. The majority of patients (25) presented with meningitis; the remainder with meningococcemia. *N. meningitidis* isolates are to be sent to the state lab for serogrouping. Serogrouping was available on 72% (76) of the reported cases: 33 were group C; 20 were group B; 19, group Y; 3, group A; and 1, group Z. While these data are not clinically significant for an individual case, they are epidemiologically important since vaccine is available only for serogroups A, C, Y, and W135. The quadravalent meningococcal vaccine available in the United States is recommended in certain outbreak situations.

While Texas has averaged 219 cases per year during the 5 years 1994 to 1998, reported cases of meningococcal infection in 1999 decreased 45.3% fiom 1998 for reasons that are not clear. The 106 cases reported represent an incidence of 0.53 cases per 100,000 population, compared with an average case rate of 1.15 cases per 100,000 population as determined by active surveillance by the Centers for Disease Control and Prevention. Fifty-one per cent of the reported cases in Texas were in males. The distribution of patients by race/ethnicity was 82% White, 29% Hispanic, and 17% African American. The patients ranged in age fiom younger than 1 month to 102 years of age; over 55% (59) of the cases occurred in children under 18 years of age. Thirteen percent (14 cases) were younger than a year old and 35.8% (38 cases) were younger than 8 years old. There were no outbreaks reported.

Nine patients died fiom meningococcal infections during 1999, for an overall mortality rate of 8.5 per 100 cases. Eight of these were 13 to 41 years old; the 9th was 78 years old. This mortality rate is less than the national average of 12.2 deaths per 100 cases.

Infectious Disease Epidemiology and Surveillance Division (512) 458-7676

Mycobacterium abscessus: A Health-Care-Related Outbreak

Mycobacterium abscessus is a nonpigrnented, rapidly growing species of mycobacteria. This species is a recognized cause of nosocomial (health care related) outbreaks including postinjection abscesses.

On July 23, 1999, staff from Public Health Region 213 reported a cluster of 6 cases of what was believed to be *Mycobacterium chelonae* joint infections. All 6 patients had been treated with intra-articular steroid injections for arthralgias or arthritis by the same family practitioner in Grayson County during the preceding 4 months (April - July).

On August 4, Texas Department of Health (TDH) staff visited the office of the family practitioner, reviewed the procedure for administering intraarticular injections, and requested a listing of all patients billed for intraarticular injections from April 1 to July 31, 1999. Staff also reviewed laboratory records for the last 2 years from 2 local hospitals. A fax alert, sent on September 2 to laboratories in Texas that performed *Mycobacterium* spp. cultures, requested information on isolates from wounds and abscesses positive for *Mycobacterium* spp. after May 1, 1999.

According to the practitioner, 58 patients received intraarticular injections from April 1 through July 31, 1999. Eleven patients were identified as having postinjection infections with onsets from April 1 to September 30, 1999. Nine of these patients had confirmed *Mycobacterium abscessus* infections. One patient had a positive smear for acid fast bacilli; no culture was performed. One patient had a clinical presentation similar to those of the other patients, but a specimen was not obtained for culture. Table 1 describes the age, sex, injection date, injection site, date of first visit to infectious disease specialist, and laboratory tests for the 11 individuals who were identified as case-patients in this cluster. There were 8 females (73%) and 3 males (27%). The mean age was 59 and ranged from 23 to 91 years. Three patients had received injections during the period April 23 through April 26 and 4 during the period June 15 through June 21. No other case-patients were identified through active surveillance of the laboratories.

The physician used the following procedure for intraarticular injections: disinfecting the injection site with a Zephiran®-and-saline-solution-soaked cotton

Table I -Specimen Results for Patients with Postinjection Joint Infections

Age	Sex	Injection Date	Injection Site	1st ID Visit	AFB*	Culture	Culture Date
70	F	4/13	L heel	718	Y	*M. abscessus*	5/12
51	M	4/23	L knee	612	Y	*M. abscessus*	6/2
60	F	4/26	L knee	7/23	Y	*M. abscessus*	7/23
53	F	4/26	R Heel	8/31	Y	Not done	
70	F	4/27	Both knees	7116	Y	*M. abscessus*	7/16
23	F	5/24	L knee	911	Y	*M. abscessus*	9/1
47	F	611	L elbow	6/23	Y	*M. abscessus*	6/25
59	M	6/15	Both heels	7/27	Y	*M. abscessus*	7/27
70	M	6/15	R knee	8/31	Y	*M. abscessus*	9/4
91	F	6121	R shoulder	8/16	Y	*M. abscessus*	8/17
64	F	6/16	R heel	8/27	Not done	Not done	

*AFB = Acid fast bacilli on smear examination.

ball, painting the area with a commercially prepared iodine swab, spraying the site with ethyl cldoride and/or injecting 0.5 mL of Xylocaine 1%, and injecting approximately 0.5 to 1 mL of betamethasone sodium phosphate (a steroid) into the joint.

During the last week of July, the practitioner relocated his practice to an office suite with 3 examination rooms in a nearby building. TDH obtained environmental samples fiom the physician's new and old offices, including cotton swabs soaked in a 1:750 Zephiran® cldoride disinfectant solution, swabs of the inner surfaces of containers used to store the disinfectant swabs, a sealed bottle of distilled water used to dilute the Zephiran®, iodine prep pads, a bottle of Ethyl cldoride spray, and a vial of betamethasone sodium phosphate.

The environmental samples were cultured by the TDH laboratory. A sample was reported as contaminated when all culture media were overgrown by non-acid fast bacteria. An isolate was tested to identify *M. abscessus-chelonae* complex using high performance liquid chromatography. *M. abscessus* was confirmed by a positive reaction in the sodium chloride tolerance test and a negative reaction in the citrate utilization test. Results of the pulsed-field gel electrophoresis analysis were inconclusive. Patient and environmental isolates of *Mycobacterium abscessus* fiom this outbreak were sent fiom the TDH laboratory to the Microbiology Department of the University of Texas Health Center at Tyler for fingerprinting using arbitrarily primed polymerase chain reaction (AP-PCR).

A total of 28 environmental samples fiom the doctor's office were tested. Four samples were culture positive for *M. abscessus:* diluted-Zephiran®-soaked cotton balls taken fiom Examination Rooms 1 and 3, the container with the cotton balls fiom Room 3, diluted-Zephiran' obtained via sterile syringe fiom container with Zephiran®-soaked gauze in Room 2. AP-PCR results demonstrated that the organisms cultured from the clinical specimens and fiom the environmental samples were indistinguishable. *M. abscessus* was not grown fiom the samples of distilled water, commercially prepared iodine swabs, ethyl chloride, Zephiran' concentrate, tap water from the practitioner's old office, or from other environmental specimens that were collected and investigated.

The evidence suggests that there was no intrinsic contamination of the commercial Zephiran® Aqueous 1:750 product with *M. abscessus*. The organism was not cultured fiom a sample of the already-opened product. Contamination probably occurred during or after the dilution process in the practitioner's office.

Zephiran® contains benzalkonium cldoride, a quaternary ammonium compound. These agents are generally inferior to other products in their bactericidal activity, especially against mycobacteria. According to the manufacturer, the product Zephiran® may in fact not be efficacious against mycobacteria. In addition, the bactericidal activity of Zephiran® is markedly reduced in the presence of organic material such as cotton balls and gauze.

The practitioner was asked to do the following:

- Stop using Zephiran® or benzalkonium chloride 1:750 as an antiseptic prior to intraarticular injections.
- Select an alternative and effective antiseptic which is commercially prepared for single use.
- Always follow the manufacturer's instructions whenever an antiseptic is used.
- Observe strict aseptic precautions during administration of intraarticular injections.
- Follow up with all patients who received intraarticular injections fiom April 1 through July 31, 1999 for postinjection *Mycobacterium abscessus* infections.

This study illustrates two very important functions of public health: the necessity of immediately reporting unusual group expressions of disease, and the value of alerting public health officials who were able to intervene and assist a clinician in altering potentially harmful practices.

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Neural Tube Defect Surveillance and Folic Acid Intervention

Neural tube defects (NTDs) are common and serious malformations that originate early in pregnancy. In the United States, approximately 4,000 pregnancies each year are affected by the 2 most common NTDs, spina bifida and anencephaly. In 1992 the Texas Department of Health (TDH), with support from a Centers for Disease Control and Prevention (CDC) cooperative agreement, implemented the Texas Neural Tube Defect Project (TNTDP), a program of NTD surveillance and risk-reduction activities in the 14 counties that border Mexico. The project was initiated in response to an anencephaly cluster identified during 1990-1991 in Brownsville (Cameron County), Texas.' Whether the high anencephaly rate (19.7/10,000 live births) was unique to Cameron County or was characteristic of the entire border was unknown. This report summarizes NTD surveillance rates for the 14 Texas-Mexico border counties for 1993-1998 and presents preliminary results of TNTDP efforts to prevent the recurrence of NTDs by providing folic acid to high-risk women. Findings indicate that the baseline rate along the border is high (13.4/10,000 live births) and largely reflects the rate among Hispanics (13.8). Although a longer period is needed to obtain definitive results, folic acid appears to be effective for reducing the risk for NTD recurrence in Hispanics.

The TNTDP surveillance system involved prospective case finding (International Classification of Diseases, Ninth Revision [ICD-9], codes 740,741, and 742.0, for all gestational ages) using the following data sources: hospitals; birthing centers; ultrasound centers; abortion centers; prenatal clinics; genetics clinics; and birth attendants including lay midwives, certified nurse midwives, and nonhospital physicians. Data on NTD cases were collected by 3 field teams (located in El Paso, Harlingen, and Laredo), abstracted onto standardized forms, and sent to TDH with co rmatory medical records. Denominator data (live birth, death, and fetal death records) were derived from the Bureau of Vital Statistics at TDH; 91% of the resident live births in the border counties were to Hispanic women of Mexican ancestry.

For 1993-1998 NTD surveillance rates include cases at all gestational ages for the 14 Texas-Mexico border counties (Table 1). The surveillance system identified 360 resident NTD-affected births/terminations (cases) not otherwise accompanied by a known trisomy, triploidy, or syndrome (eg, Turner, Meckel, or amniotic band). Of these cases, 324 (90%) occurred in the 4 most populous border counties: Cameron, El Paso, Hidalgo, and Webb. The overall NTD rate in the border counties for 1993-1998 was 13.4 per 10,000 live births (6.1 for anencephaly, 6.3 for spina bifida, and 1.0 for encephalocele) (Table 1). The craniorachischisis (contiguous opening of brain and spinal column, included in anencephaly) rate in the border counties was 0.5.

Of the 360 women identified as having had an NTD-affected pregnancy, 340 (94.4%) were Hispanic. Of the 20 non-Hispanic women, 16 (4.4%) were White, 3 (0.8%) were African-American, and 1 (0.3%) was Asian/Pacific Islander. The rate among Hispanics was 13.8 per 10,000 live births and the rate among non-Hispanic Whites was 8.8 ($p=0.08$). El Paso County (the northwesternmost county) had a significantly lower NTD rate (9.0) than the rest of the border counties combined (15.6; $p < 0.001$). The rate among Hispanics also was significantly lower for El Paso County (8.8) than for the rest of the border counties (16.1) ($p < 0.001$).

Of the NTD-affected pregnancies, 68 (19%) were induced or spontaneously aborted at less than 20 weeks' gestation, 94 (26%) were delivered or induced at 20 through 33 weeks' gestation, and 198 (55%) were delivered at ≥ to 34 weeks' gestation. Excluding fetuses that failed to reach 20 weeks' gestation would have lowered the overall rate to 10.8 per 10,000 live births ($p=0.01$).

A primary objective of TNTDP is preventing recurrence of NTDs by providing folic acid to women who have had an NTD-affected pregnancy. For the folic acid intervention program, all women identified through the surveillance protocol were contacted by telephone, letter, and/or in person. Women whose

Table I - Neural tube defect (NTD) type* and rate† by county of residence – Texas-Mexico border, 1993-1998

County	Anencephaly° No. Cases	Anencephaly° Rate	Spina bifida No. Cases	Spina bifida Rate	All NTDs Total‡	All NTDs Rate	(95% CI**)
Cameron	31	6.7	38	8.2	73	15.8	(12.4-19.8)
El Paso	39	4.3	36	4.0	82	9.0	(7.2-11.2)
Hidalgo	48	6.2	60	7.7	118	15.1	(12.5-18.1)
Webb	28	9.3	19	6.3	51	16.9	(12.6-22.2)
Other 10	17	7.1	17	7.1	36	14.9	(10.5-20.7)
Total	163	6.1	170	6.3	360	13.4.	(12.0-14.8)

* NTD cases exclude the following accompanying conditions: trisomy (3), triploidy (3), Turner (1), Meckel (3), tethered cord (3), and amniotic band syndrome (4).

†Per 10,000 live-born infants.

° Includes craniorachischisis (13) and inencephaly (1).

‡Total includes encephaloceles (27).

** Confidence interval.

index pregnancy was delivered or terminated in 1993 or later and who resided in the study area were asked to enroll in the program. The enrolled women were interviewed and provided preconception, pregnancy, and NTD risk-reduction education and counseling. If a woman used contraception, she was given a multivitamin with 0.4 mg folic acid; if a woman did not use contraception, she was given daily doses consisting of 4.0 mg folic acid-one multivitamin containing 1.0 mg of folic acid and 3, 1.0 mg tablets of folic acid. Women were followed, counseled, and provided folic acid supplements at 1- to 3-month intervals.

As of December 31,1998,264 (73%) of the 360 women were eligible for enrollment in the folic acid intervention program; 96 (27%) women were not eligible for enrollment (moved out of area or had tubal ligations/hysterectomies). Of the 264 eligible women, 95 (36%) refused enrollment, quit, or were lost to follow-up; 17 (6%) consented but were pending enrollment; and 152 (58%) were taking folic acid. Of 65 (34%) eligible women with induced abortions, 22 (34%) refused participation in the folic acid intervention compared with 19 (15%) of 128 ($p=0.004$) who had had natural outcomes (ie, live-born infants, stillbirths, or spontaneous abortions).

Pregnancy outcomes following the index NTD-affected pregnancy were assessed by telephone, letter, and home visits for 1993-1998. Overall, 89% of the women who had a subsequent pregnancy had taken folic acid before conception; of these, 64% had taken the daily 4.0 mg dose; 28%, the 0.4 mg dose; and 8%, a physician-prescribed prenatal vitamin. A pregnancy outcome was documented for 148 pregnancies: 117 (79%) of the pregnancies resulted in non-NTD-affected live births, 24 (16%) in miscarriages or incomplete spontaneous abortions, 6 (4%) in elective abortions, and 1 (1%) in a confirmed recurrent NTD. Five women known to be pregnant were lost to follow-up. None of the 6 elective abortions was NTD-affected. Excluding the 24 miscarriages and 5 pregnancies lost to follow-up, 1 of the remaining 124 pregnancies resulted in a recurrent NTD.

The preliminary results of the folic acid intervention suggest that high-risk women can reduce their risk for subsequent NTD-affected pregnancies. Each woman identified through the TNTDP surveillance protocol was at risk for recurrence and could not have been enrolled in the folic acid intervention program without being identified through surveillance. One fifth of the high-risk women in the program would have been missed if only fetuses at greater than 20 weeks' gestation were included in the surveillance. Why women with induced abortions are less likely to take folic acid than women with natural outcomes is unclear and warrants further study. The woman who had a recurrent NTD-affected baby refused to meet with field staff and never received NTD risk-reduction education, counseling, or folic acid. The 1 NTD recurrence was less than the 3 to 5 that would have been expected based on a 3% to 4% recurrence rate (p=0.18, 0.10 respectively).'

The NTD surveillance data indicate that baseline rates along the border are high and largely reflect the rate among Hispanics. Some of the variability in the rates may be partially explained by the unique cultural and environmental factors along the border. For example, compared with persons living along the rest of the border, El Paso County residents have a higher standard of living and are less likely to be employed as migrant farm workers.' In addition, the overall Texas-Mexico border rate for craniorachischisis was 0.5, a rate significantly higher (p=0.048) than the rate for this defect in the metropolitan Atlanta area (0.1).[3] This suggests that an unknown risk factor may exist, especially in Hidalgo County where 6 (46%) of these rare defects occurred. Findings from the 1993-1998 recurrence period showed that only 9% of El Paso County women who delivered normal live-born infants reported taking periconceptional folic acid (TNTDP, unpublished data, 1999). Although the 9% usage reported for El Paso County is low compared with national reported usage (25%),[4] usage for Cameron County is even lower (3%).

The findings in this report are subject to at least 2 limitations. First, nonresident women who migrated for birth into the United States and either returned to Mexico or to another county were not eligible for the intervention program; further, resident women who moved, were lost to followup, or had tubal ligations/hysterectomies decreased the potential intervention sample size by 40%. Second, some underestimate of cases occurred because of pregnancy outcomes that occurred outside the area. Although a sufficient number of pregnancy outcomes have yet to occur among high-risk women to achieve statistical significance, folic acid appears to reduce the risk for NTD recurrence in Hispanic women. Unlike other US surveillance systems,[5,6] since its inception the TNTDP has included cases at less than 20 weeks' gestational age. These data underscore the importance of a timely and active NTD surveillance system that includes fetuses at less than 20 weeks' gestational age for population-based and individual NTD prevention. They also highlight the need for physicians to educate their high- and low-risk patients about the benefits of folic acid.[7,8]

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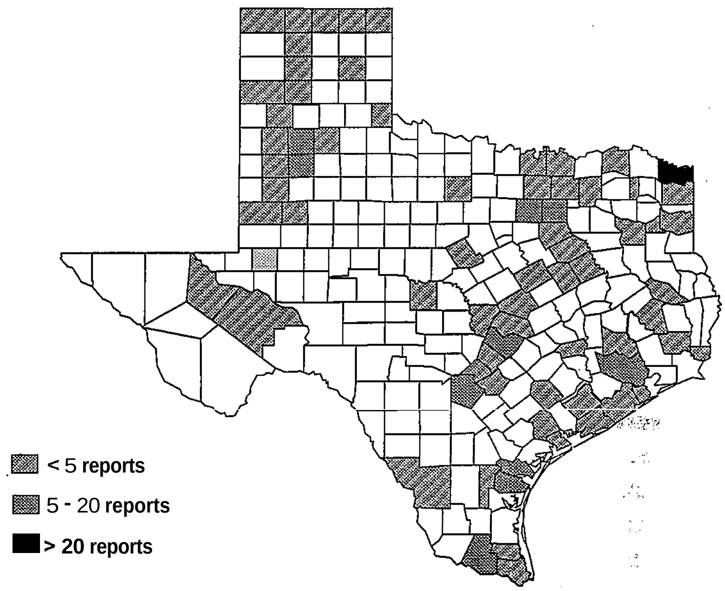
Pesticide Poisoning — Acute Occupational Pesticide Exposure Surveillance

Background

The Environmental Epidemiology and Toxicology Division at the Texas Department of Health (TDH) conducts active surveillance and collects reports of occupation pesticide poisonings throughout the state. Acute occupational pesticide poisoning was made a reportable condition with the passage of the Occupational Conditions Reporting Act in 1985. Since 1986, the Pesticide Exposure Surveillance in Texas (PEST) Program has collected surveillance data to evaluate the extent of this problem within o w state, conduct case follow-up and site investigations, and guide intervention and prevention initiatives in efforts to improve the health of the Texas population.

Figure I. Occupational Pesticide Poisoning Incidents by County of Residence (Confirmed and Non-Confirmed Reports)



In 1999 the PEST Program continued to develop and strengthen collaborative reporting relationships with migrant clinicians, local and regional health departments, and government agencies involved in pesticide management which include the Texas Department of Agriculture (TDA), the Structural Pest Control Board (SPCB), and the Texas Poison Center Network (TPCN). The PEST Program continued to receive data electronically from the Texas Workers' Compensation Commission (TWCC), the TDH Trauma Registry, and the TPCN. The addition of these collaborating sources and heightened electronic reporting is reflected in an increase of almost 300% in the number of occupationally-related pesticide poisoning reports in 1999 (315 reports) compared with 1998 (109 reports). The majority of this increase in case ascertainment was a result of increased reports received from the TPCN, TWCC, TDH Trauma Registry, and local or regional health departments.

In 1999 the surveillance system received 691 reports of pesticide exposures, which included 315 work-related exposures and 376 nonoccupational exposures. Reports indicate that the 315 work-related pesticide exposures occurred in 75 of the 254 Texas counties (Figure 1). One hundred fifty-two (152) were considered confiied occupational pesticide poisoning cases. Reports are considered confiied if enough information is available to determine that a pesticide was used and that the exposure to pesticides caused the resulting symptoms. The remainder of this report focuses on the 152 confirmed occupational cases.

Demographic Distribution

A majority of the 152 confiied occupational pesticide poisoning cases reported in 1999 involved men (70%). This is not surprising since many of the workers who commonly use pesticides (pest control technicians, farm workers, and chemical formulators) are traditionally men. Thirty-six percent of the persons involved in the confiied poisoning reports were White, 7% were African American, and 17% were Hispanic. Seventy-three percent of the

Table 1. Occupational Pesticide Poisonings by Age

Age (in years)	Number	%
<16	0	0
16-20	9	6
21-30	34	22
31-40	32	21
41-50	45	30
51-60	21	14
61+	6	4
Unknown	5	3
Total	**152**	

confirmed reports were from individuals aged 21 to 50 years (Table 1).

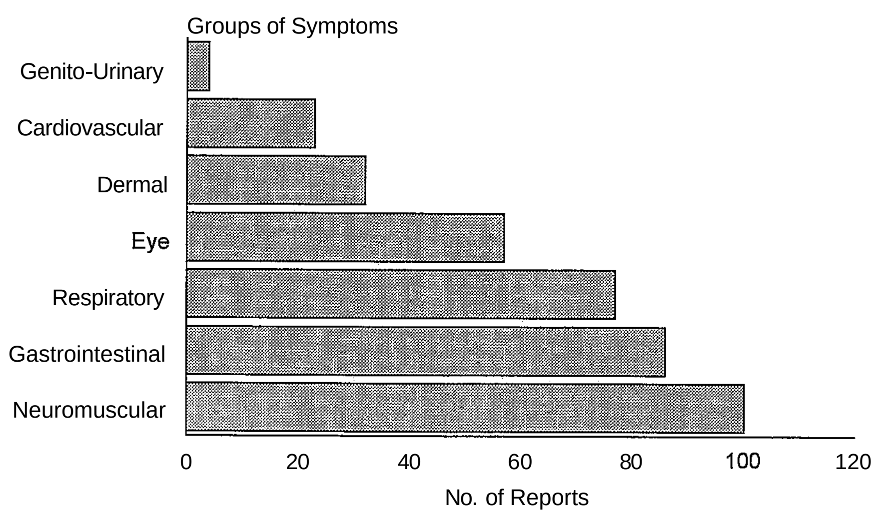
In 1999, 17% of the pesticide poisoning cases occurred in technical, sales, service, and administrative support occupations, 11% in production and repair occupations, 8% in laborer occupations, and 6% in agricultural occupations. In 1996 the US Department of Agriculture estimated the farm and ranch work force in Texas to be 264,000 workers with an additional 500,138 migrant and seasonal farmworkers and their dependents employed in Texas farming in 1990.' Given these numbers and the nature of agricultural work, it was expected that most of the pesticide exposures would have occurred in the agricultural sector. Texas Department of Agriculture representatives indicated that drought conditions over the past several years have killed many crops in Texas. As a result, there has been a reduced need for pesticide use. Regardless, it is most likely that many agriculture-related pesticide exposures are continuing to go unreported.

Reported Poisoning Symptoms

In the 152 confirmed occupational cases, neuromuscular symptoms such as headache, dizziness, confusion, irritability, and twitching muscles were most frequently reported (100 individuals) (Figure 2). Neuromuscular symptoms are common following exposure to organophosphates, due to their cholinesterase inhibiting activity. Cholinesterase is a chemical produced by the body to help regulate signals to the nervous system. When the body wants to send signals through the nervous system, the body releases a chemical known as acetylcholine. In order to stop nerve signals, the acetylcholine must be broken down by the cholinesterase enzyme. Organophosphates are known to decrease the amount of cholinesterase in the body, causing a build up of acetylcholine. This build up of acetylcholine can cause symptoms such as quick, uncontrolled movements, twitching muscles, and muscular weakness, many of which were reported in the cases reported for 1999.

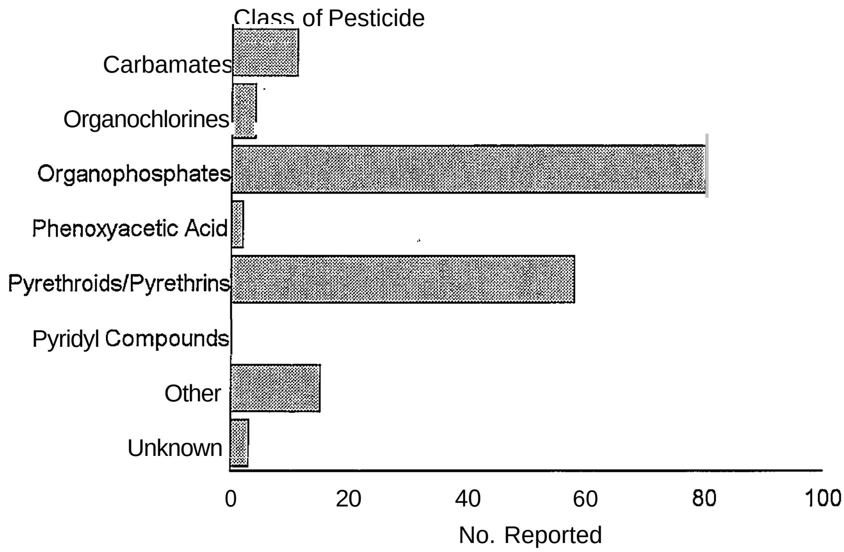
Additional symptoms reported in 1999 reports include gastrointestinal symptoms, such as nausea, vomiting, diarrhea, and stomach cramps, and respiratory symptoms such as nose and throat irritation, shortness of breath, and difficulty breathing. Eighty-six individuals complained of gastrointestinal symptoms, 77 individuals complained of respiratory symptoms, and 57 individuals complained of eye-related symptoms.

Figure 2. Occupational Pesticide Poisoning: Reported Symptoms



n=152

Figure 3. Most Frequently Reported Pesticides



n=152

Commonly Reported Pesticides

Organophosphates were the most commonly reported class of pesticides, accounting for 53% of the cases reported (Figure 3). Organophosphates are most commonly used as insecticides but can also function as herbicides and fungicides. The wide array of formulations and uses make organophosphates ideal for use in the agricultural sector. Thirty-eight percent of the reports noted that pyrethroids and pyrethrins were being used at the time of exposure. These plant-derived pesticides are considered only slightly to moderately toxic to mammals but are commonly combined with other potentially more toxic insecticides to enhance their ability to control insects and are widely used in agriculture, homes, and gardens. In 2% of the cases, the chemicals accounting for the exposures were unknown.

Conclusion

The effectiveness of developing and strengthening collaborative reporting relationships is demonstrated by the increase in occupational pesticide poisoning reports received in 1999, almost tripling the number of reports received in 1998. Although still in its initial stages, the development of electronic reporting relationships from a number of key collaborating agencies involved in pesticide use and management will continue to enhance surveillance and the quality of reports received. By maintaining collaborative relationships with valued reporting sources and merging traditional surveillance strategies with electronic reporting from nontraditional sources, the PEST Program can continue to increase case ascertainment. Data and surveillance information collected using these methods will be valuable in the development of more accurate intervention and prevention programs that will successfidly assist in reducing the incidence of occupationally-related pesticide poisonings in Texas.

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1. United States Department of Agriculture. Texas Agricultural Statistics Survey. Economics Section. January 1998. http://www.io.com/~tass/.

Environmental Epidemiology and Toxicology Division (512) 458-7269

Poison Center Network

The Texas Poison Center Network (TPCN) was established in 1993 through Senate Bill 773 which mandated 6 regional poison centers to provide emergency treatment information and public and professional education regarding poisonings or toxic exposures. This joint effort also includes 2 state agencies: The Commission on State Emergency Communications (CSEC) as the funding and administrative agency responsible for overseeing the telecommunications infrastructure of the TPCN, and the Texas Department of Health (TDH), which disseminates grant funds to each of the 6 centers and is responsible for conducting and disseminating epidemiologic analyses of the data collected and reported by the centers.

The network provides a 24-how toll-free poison emergency telephone number resource for all Texas citizens. By dialing 1-800-POISON-1 (1-800-764-7661) Texans have access to a toxicology referral service staffed by specially trained physicians, pharmacists, nurses, and paramedics. State of the art telephone circuitry means calls are answered promptly and without busy signals. Telecommunication access to 911 databases across the state allows for immediate call conferencing between the poison victim, 911 operators, and poison center personnel. Additionally, network educators work with schools, health care facilities, industries, and families to educate communities about the dangers of unintentional poisonings and methods of prevention.

One of the primary objectives of the TPCN is to expand the concept of poison beyond traditional textbook definitions. A poison can be almost anything: prescription drugs, over-the-counter medications, houseplants, household products, insects, or fertilizers. There are thousands of potentially lethal substances in homes and workplaces. TPCN is working to provide citizens with expert medical advice on how best to deal with this array of substances. TPCN staff is committed to providing the highest quality of services by designing programs that improve outcomes and curb the incidence of exposure to toxic substances.

In 1998 TPCN received nearly a quarter of a million calls (Table 1). Many of these were requests to receive information about a variety of topics related to poisons, including toxicity information for particular substances, information and identification of legal and illegal drugs, and medical treatment information. Most of the calls, however, concerned potentially toxic exposures. Nearly 65% of the calls were to receive treatment advice for a poisoning. The vast majority of these were regarding human exposures to a substance, but poisonings to animals are also handled by the Network; more than 4,000 toxic exposures to animals were reported during 1998.

Table 1. Types of Calls

	No. of Calls	%
Exposure	153,632	64.7
Information:		
Drug	16,559	7.0
Drug ID	21,411	9.0
Environmental	907	0.4
Medical	5,518	2.3
Occupational	102	0.1
Poison	22,720	9.6
Prevention/Safety	4,332	1.8
Teratogenicity	171	0.1
Other	12,077	5.1
Totals	**237,429**	

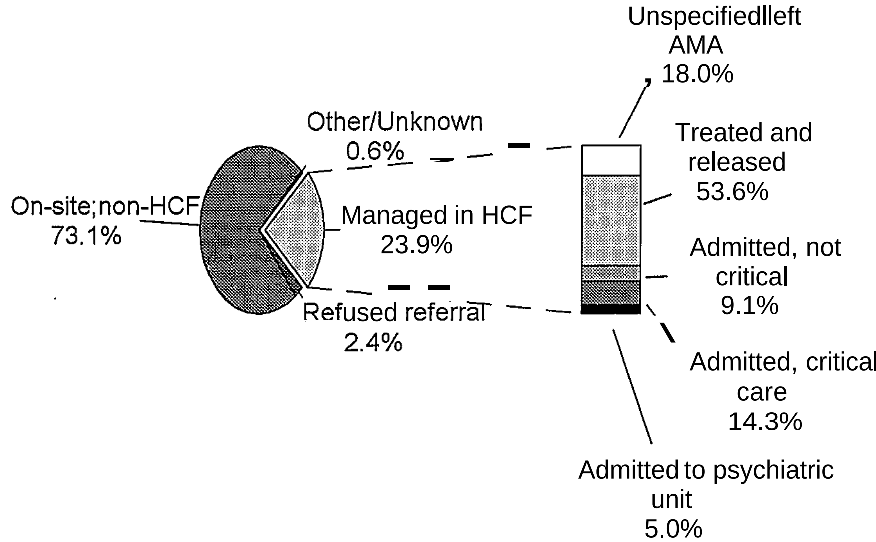
The majority of the 149,424 human exposures occurred to children younger than 6 years of age; children 1 and 2 years of age account for nearly 40% of all exposures reported to TPCN. Most of these childhood poisonings are from substances commonly found in or around the home, such as plants, cosmetics, and household cleaning substances. In more than 95% of the cases these exposures are limited to a minor irritation and have little or no effect upon the child. The effect, on an already strained emergency medical system, however, is great: treatment advice by the poison specialist to the parent or child care provider can help avoid an unnecessary trip to a hospital emergency room or doctor's office, thus saving countless dollars.

The nature and circumstances of poisonings change across the lifespan. Boys account for most of the child poisonings reported to the TPCN, but by the teenage years the majority of the exposures are among females. This proportion continues to increase with age; females account for nearly 65% of the poisonings to people older than 49 years.

Eighty-five percent of all exposures reported to TPCN were unintentional. These most often occur as the result of an improper use of the substance, but also include such things as inadvertently exceeding the dosage of a medication. This commonly occurs when a child care provider does not realize the child has already received the medication at home or from someone else. Nearly 19,000 of the cases reported were considered to be intentional exposures. These cases generally consist of either suicide attempts or efforts to achieve an altered mental state. Unlike other age groups, the majority of teenage exposures were intentional.

The type of exposure substance is generally the same across the age range. Leading categories of toxic substances among teenagers and adults are analgesics (ibuprofen, aspirin, acetaminophen, etc.), insect stings and snake bites, and household cleaning substances. Roughly 3 out of 10 adult toxic exposures involved one of these substances. Exposures to legal and illegal mood altering substances comprise a sizable proportion of calls for all ages. More than 10% of the calls regarding teenager exposure and 14% of all calls for adults through age 49 were concerning antidepressants and sedatives.

Figure 1. Management Site



The Texas Poison Center Network provides a tremendous community service to the citizens of Texas by saving lives and health care dollars. As seen in Figure 1, 24% of the patients using the network were treated at a health care facility. More than 1 of every 4 of these patients required hospitalization. Nearly three fourths of the people calling the poison center about an exposure were treated onsite, generally at home or work. For those patients not already in a health care facility when the call was made, 85% were treated onsite. This professional medical care eliminated costly 911 or ambulance dispatch, or emergency room and office visits. It is estimated that every dollar invested in poison centers saves $6 to $9 in health care costs.

Bureau of Epidemiology (512) 458-7268

Rabies in Animals

Rabies is a viral zoonosis affecting the central nervous system of warm-blooded animals. Transmission occurs when saliva containing rabies virus is introduced into an opening in the skin, usually via the bite (or possibly scratch) of a rabid animal. Though rare, transmission can also occur through contamination of mucous membranes. Animals considered to be high risk for transmitting rabies in Texas include bats, skunks, foxes, coyotes, and raccoons.

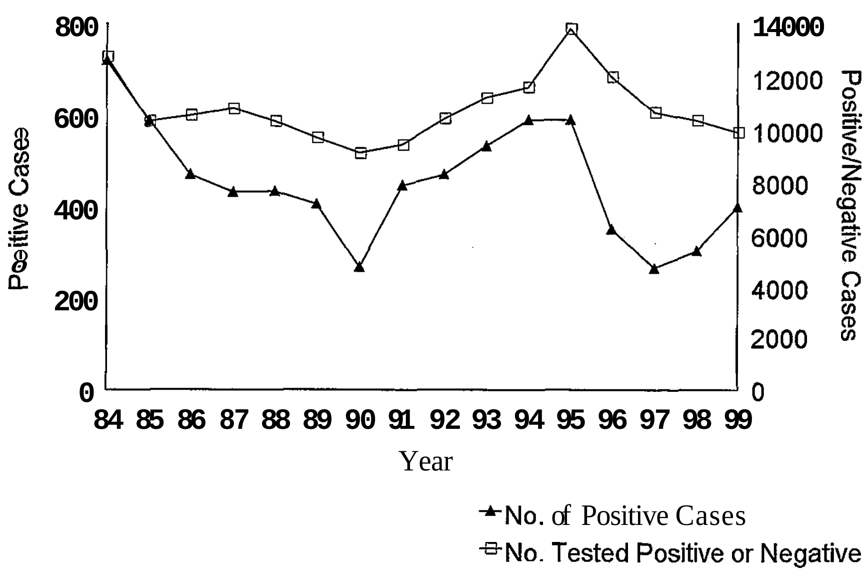
In 1999,400 (4%) of 9,861 animal specimens in Texas that were tested and confiied as positive or negative were positive for rabies. This was a 32% increase over the 303 confirmed cases reported in 1998. In 1999 there were 41 positive rabies cases per 1,000 animals tested; in 1998 there were 29 positive rabies cases per 1,000 animals tested. Yearly totals for 1984 through 1999 are illustrated in Figure 1. November was the month with the highest number of laboratory-confiied rabies cases (48), with skunks (28) being the predominant rabid species reported during that month; April had the second highest number of cases (46), with skunks (20) being the predominant rabid species. Animal rabies was confirmed in 99 of the 254 Texas counties (Figure 2) compared with 95 counties that had reported cases in 1998. Freestone County had the highest number of reported rabies cases per county statewide with 45 cases (43 skunks and 2 cats).

Table I. Confirmed Cases of Rabies in Wild Animal Species: Texas 1998 and 1999

Species	1998	1999
Bats	104	90
Bobcats	5	2
Coyotes	6	2
Foxes	21	56
Raccoons	5	4
Ringtails	1	0
Skunks	116	192
Total	**258**	**346**

Rabid wildlife accounted for 86.5% of the confiied cases throughout the state (Table 1). Skunks were the primary source of positive cases reported in 1999 (48% of all positive cases). In 1999, 192 skunks were positive for rabies compared with 116 (38% of all positive cases) in 1998. Of all skunks tested for rabies, 30% were positive in 1999 and 26% were positive in 1998.

Figure 1. Positive Rabies Cases and Specimens Tested for Rabies: 1984-1999



Bats had the second highest number of confirmed rabies cases with 90 cases (22.5% of all positive cases) in 1999 compared with 104 cases (34% of all positive cases) in 1998. Of all bats tested for rabies, 9% were positive in 1999 compared with 10% in 1998.

In addition to the bats reported via routine surveillance, 46 bats that had died or were euthanized due to illness or injury were submitted to the New York State Department of Health's laboratory for rabies testing as part of a special study. All of these bats were

Table 2. Confirmed Cases of Rabies in Domestic Animal Species: Texas 1998 and 1999

Species	1998	1999
Cats	8	21
Cows	5	8
Dogs	15	13
Goats	4	3
Horses	12	9
Sheep	1	0
Total	**45**	**54**

from Travis County; 1 tested positive and 45 tested negative.

Rabies in domestic animals (13.5% of all positive cases) continued to be a concern because rabid domestic animals are more likely to have contact with humans than are rabid wildlife (Table 2). In 1999 cats represented 21 of the 54 rabies cases in domestic animals; 13 rabid dogs were reported. In 1998 there were more rabid dogs (15 cases) than rabid cats (8 cases) reported.

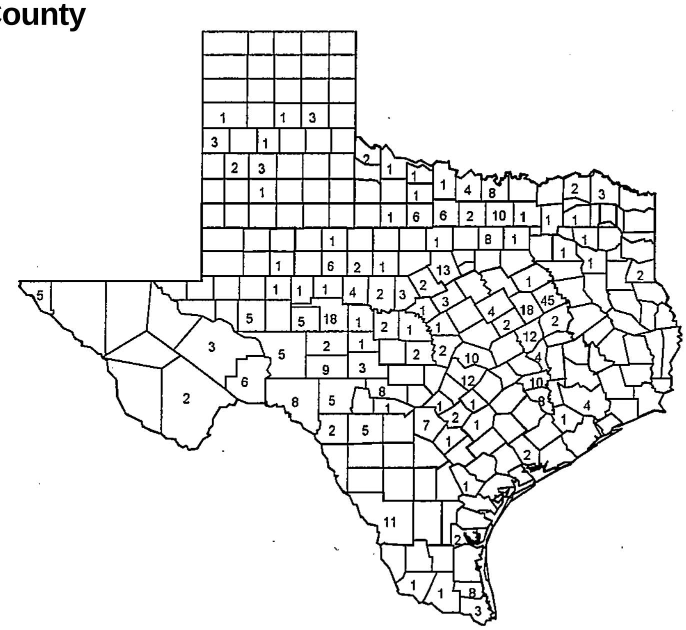
Twenty-one counties, 3 of which had recorded cases of canine rabies in 1999, have been involved in the South Texas canine rabies epizootic since it began in 1988. Of all positive cases statewide in 1999, 10 (2.5%) were the canine variant of rabies virus compared with 5 (2%) in 1998. Forty-nine counties have been involved in the West-Central Texas gray fox rabies epizootic since it began in 1988, '18 of which had recorded cases of gray fox rabies in 1999. Of all positive cases statewide in 1999, 66 (16.5%) were the gray fox variant of rabies virus compared with 36 (12%) in 1998.

In response to the epizootics, the Oral Rabies Vaccination Program (ORVP) for coyotes in South Texas was initiated in February 1995, and the ORVP for gray foxes in West-Central Texas was initiated in January 1996; implementation has continued annually. These programs target the reservoir species for the canine and gray fox variants of rabies virus. Immunization is accomplished by aerial distribution of an edible bait containing oral rabies vaccine. The goals of the ORVP are to create zones of vaccinated coyotes and gray foxes along the leading edges of the epizootics to halt their expansion and, consequently, eliminate the epizootics by restricting the perimeters over time.

In addition to a marked reduction in the number of rabies cases involved in the epizootics since the ORVP began, results from postvaccination surveillance conducted in March 1999 have also demonstrated evidence of a successful program. The baits contain tetracycline as a biomark agent that replaces calcium in the teeth and bones of animals consuming the bait. Of the tested coyotes in the South Texas zone and the tested gray foxes in the West-Central Texas zone, 71% and 52% respectively exhibited evidence of the biomark agent. Additionally, serologic results determined that 89% of the tested coyotes in the South Texas zone and 76% of the tested gray foxes in the West-Central zone showed evidence of an immune response to the vaccine.

Zoonosis Control Division (512) 458-7255

Figure 2. Confirmed Cases of Animal Rabies (all species) by County



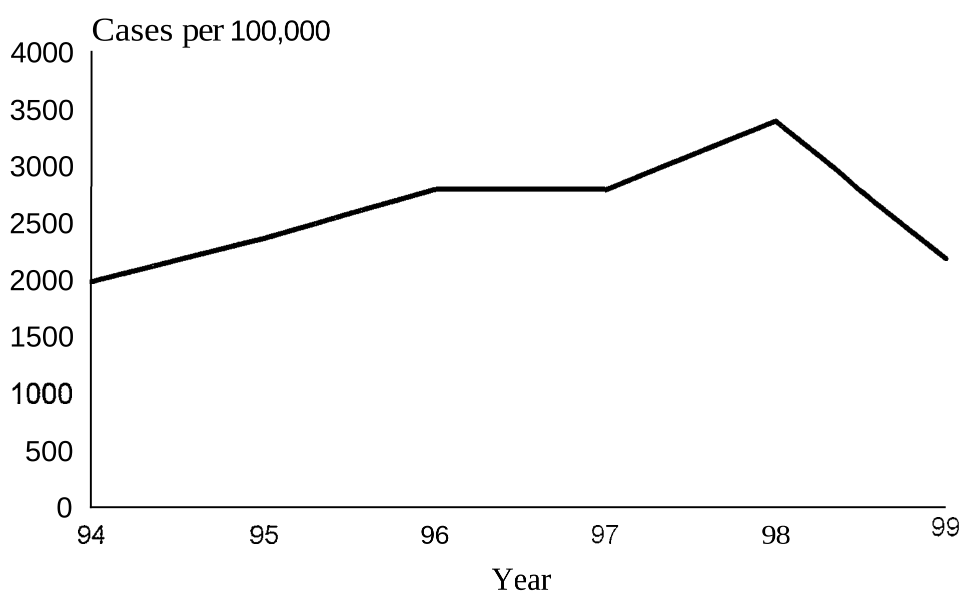
Salmonellosis

According to the Centers for Disease Control and Prevention (CDC), salmonellosis is very underreported even though some 40,000 cases are reported yearly in the US. The United States Department of Agriculture (USDA) estimates that the actual number of Americans made ill by salmonellosis each year is roughly 3.8 million with consequent lost wages and medical costs in the billions of dollars.

Salmonellosis is caused by *Salmonella* bacteria which contaminate foods of animal origin. Improperly cooked poultry, eggs, and other poultry products are responsible for about 50% of common vehicle epidemics. Other associated foods include improperly cooked meats, particularly beef and pork (13%), and unpasteurized dairy products (4%). Cross-contamination can occur when the same utensils that are used for handling uncooked meat or poultry are later used for foods (such as vegetables) that will not be cooked. Salmonellosis may also be transmitted through improper handling of pets, particularly reptiles, and improper cleaning of pet living areas. Secondary cases of salmonellosis are often transmitted person-to-person by the fecal-oral route (eg, by infected food handlers). *Salmonella* infection occurs 6 to 72 hours post-ingestion, and symptoms include diarrhea, abdominal cramping, fever, nausea, vomiting, and headache. Severe infection, which most likely occurs among the very young and the very old, may lead to serious dehydration and, occasionally, death. Less than 1% of case-patients may become chronic carriers and continue to excrete *Salmonella* bacteria for more than a year after infection. Biliary tract disease is a predisposing factor for becoming a chronic carrier.

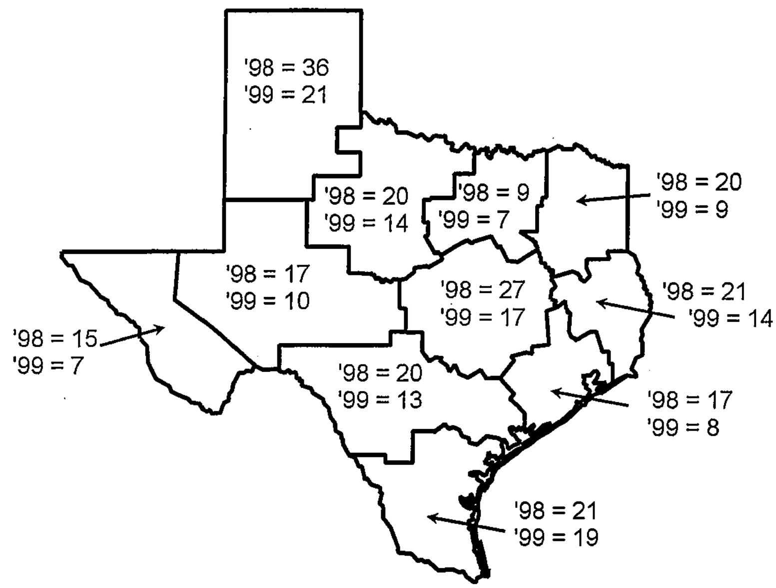
The number of reported salmonellosis cases in Texas fell from 3,401 (17.3 per 100,000 population) in 1998 to 2,198 (11 per 100,000 population) in 1999, ending a five-year upward trend which began in 1994 (Figure 1). Two persons died of salmonellosis in 1999. Of the 724 isolates with reported serotypes, the most common were *S. newpovt* and *S. typhimurium* (113 or 16% each). In addition, 69 (10%) cases were caused by *S. enteritidis* and 65 (9%) by *S. javiana*. Salmonellosis incidence rates decreased in every Public Health Region in 1999 (Figure 2). Most significant were the decreases in Region 4 (54%, from 19.6 in 1998 to 9.1) and Region 6 (53%, from 16.9 in 1998 to 7.9).

Figure 1. Reported Salmonellosis Cases 1994 - 1999



Salmonellosis is a common disease of very young children whose underdeveloped immune systems make them especially vulnerable. The highest salmonellosis incidence rates have traditionally occurred among children less than one year old. While this is still true, incidence rates for children less than 1 year old fell from 233.9 in 1998 to 145.5, a decrease of 38%. All other age groups showed a similar drop in salmonellosis incidence rates (Figure 3).

Figure 2. Salmonellosis Incidence Rate by Public Health Region, 1998 and 1999

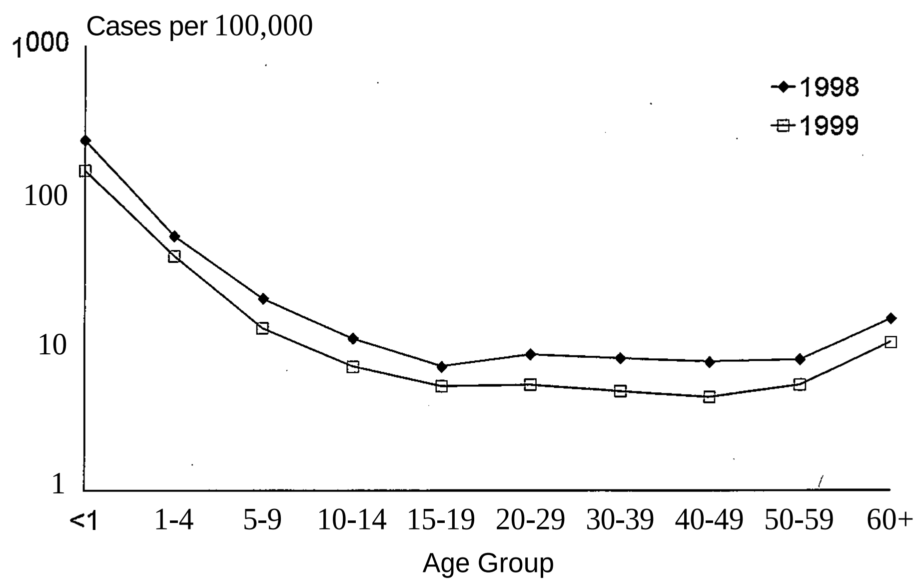


Two small outbreaks of salmonellosis occurred in 1999. From March through August of 1999, a cluster of 22 serologically confirmed cases of *S. hadar* occurred in Potter and Randall Counties (Region 1). Restaurant exposure histories of the case-patients were compared with exposures amounga control group of individuals who had developed any kind of enteric illness (other than *S. hadar*) from January 1,1999 to August 5, 1999, and who had patronized at least 1 local restaurant. Based on the case-control comparison, 2 local restaurants were strongly associated with *S. hadar* cases. No infected foodhandler or related food item from either of the restaurants could be identified. CDC reported that 50% of *S. hadar* infections in the US are related to poultry consumption.

In June 1999 a multistate outbreak of *S. muenchen* was associated with a commercially distributed, unpasteurized orange juice. The juice was traced to a single processor with international distribution. The outbreak was first identified in Washington and Oregon, and an outbreak-related case was defined as an *S. muenchen* infection after June 1 in a person who drank unpasteurized orange juice or whose isolate had a PFGE pattern with no more than one band difference from the Washington outbreak strain. Five Texas patients were identified who had both indistiguishable PFGE patterns and unpasteurized orange juice consumption.[1]

Despite a couple of small outbreaks, salmonellosis rates dropped significantly throughout Texas in 1999. Because salmonellosis is underreported, it is possible that the reduction of rates may be an artifact of poor reporting. It may also reflect a rise in empiric treatment of diarrhea with a drop in laboratory diagnosis. However, 1999 was also the second year following the implementation of Hazard Analysis and

Figure 3. Salmonellosis Incidence Rates by Age, 1998 and 1999



Critical Control Points (HACCP) to reduce microbial contamination of meat and poultry. An Administration Statement by the President's Council on Food Safety stated that as a result of pre-HACCP testing and post-HACCP implementa-tion tests for performance, the Food Safety and Inspection Service was able to report declines in *Salmonella* spp. on broilers by almost 50 percent.[2] As efforts to promote food safety, hygienic practices, and sanitation throughout Texas continue, perhaps further reductions in enteric disease incidence may be anticipated.

References:

1. Centers for Disease Control and Prevention. *Outbreak of Salmonella serotype muenchen infections associated with unpastezirized orange juice – United States and Canada, Jzine 1999.* MMWR 1999: 48(27); 582-585.
2. President's Council on Food Safety. Administration Statement before the Senate Governmental Affairs Committee; Subcommittee on Oversight of Government Management, Restructuring; and The District of Columbia. http://www.fda.gov/ola/l999/foodsafety.html

Infectious Disease Epidemiology and Surveillance Division (512) 458-7676

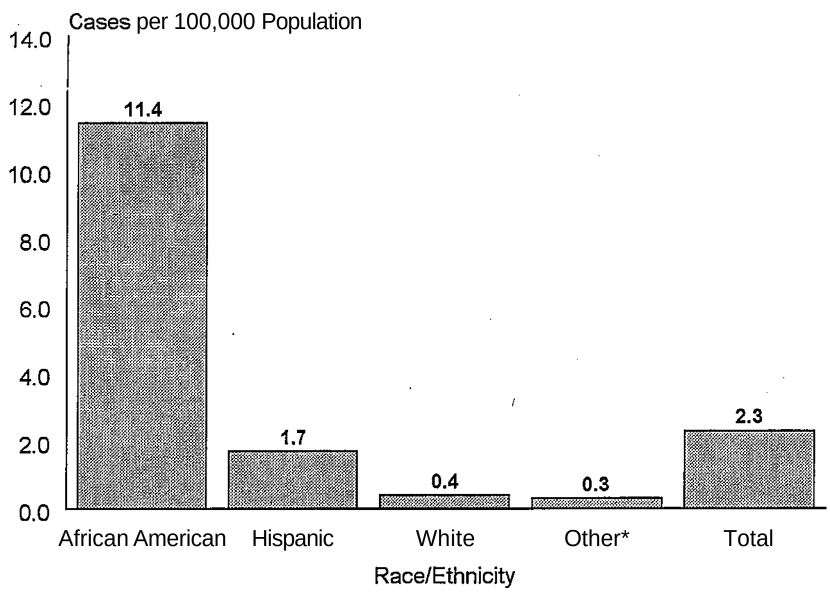
Sexually Transmitted Diseases

Primary and Secondary Syphilis

The spirochete *Treponema pallidum* causes syphilis. Primary and secondary (P&S) syphilis, the acute form of the disease, is characterized by primary lesions (an ulcer or chancre at the site of infection) followed by secondary infection (manifestations that include rash, mucocutaneous lesions, and adenopathy). Untreated P&S syphilis progresses into a chronic disease with long periods of latency. Statewide, 459 cases of P&S syphilis were reported in 1999. This 7% increase from cases reported in 1998 reverses a 7-year downward trend. Still, the number of P&S syphilis cases reported in 1999 was one-tenth the number reported in 1991. More than 25% of P&S patients were from 15 to 24 years of age. Men accounted for 61% of reported cases in 1999; in previous years cases were more equally distributed between sexes. Two major metropolitan counties, Dallas and Harris, accounted for over 50% of all P&S syphilis cases reported.

The overall state rate in 1999 for P&S syphilis was 2.3 cases per 100,000 population. African Americans continued to account for the majority (57%) of P&S syphilis cases reported in Texas in 1999. The rate of P&S syphilis among African Americans was 11.4 cases per 100,000 population. Although less than one-fourth the 1995 rate of 53.2, the rate for African Americans remained extremely high compared with rates for Hispanics (1.7 cases per 100,000 population) and Whites (0.4 cases per 100,000) (Figure 1). Among African American women, those aged 20 to 24 had the highest rate at 29.5 cases per 100,000 population. In contrast, the highest rate for African American men was found among those aged 35 to 39 with 35.4 cases per 100,000. Afi-ican American men also had P&S syphilis rates of at least 20 cases per 100,000 across a wide range of age groups (20 to 24, 25 to 29, 30 to 34, and 40 to 44 years of age) (Figure 2). The extremely high case rate for both sexes indicates that P&S syphilis continues to be a significant problem of among African Americans in Texas.

Figure I - P&S Syphilis Case Rates by Race/Ethnicity



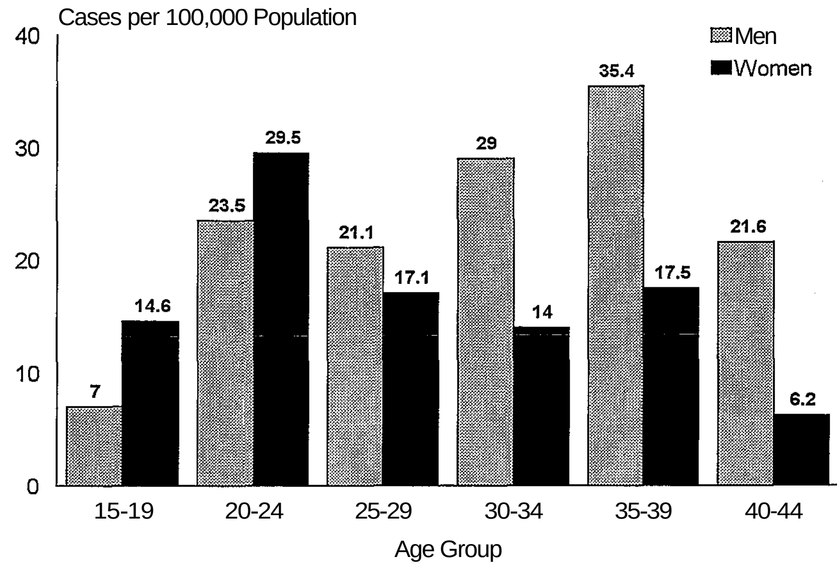
* Excludes cases of unspecified race/ethnicity

Early Latent Syphilis

The early latent stage of syphilis is defined as the first year following secondary syphilis. Untreated cases of more than 1 year's duration or of unknown duration are classified as late latent syphilis. In both early and late latent stages, positive clinical signs are absent, and detection of syphilis relies upon serologic tests. Tertiary syphilis is symptomatic late disease which may include neurologic and cardiovascular sequelae. The late latent and tertiary stages of syphilis are not discussed separately in this article because those individuals contracted the disease many years prior to their cases being diagnosed and reported, and syphilis is not as likely to be transmitted in these late stages. Thus, there are limited public health implications to these diagnoses.

In 1990, slightly over 5,000 cases of P&S and of early latent syphilis were reported with similar rates of 30.4 and

Figure 2. P&S Syphilis Case Rates Among African American by Age Group and Sex



29.9 cases per 100,000 population, respectively (Figure 3). The rate of P&S syphilis steadily declined from 1990 to 1998, however, the early latent syphilis rate increased in 1991 and since then has decreased more slowly than the P&S syphilis rate. This delayed decline of early latent syphilis rates is typical of periods of decreasing syphilis morbidity. Although both P&S syphilis and early latent syphilis cases were considerably lower in 1999 compared with 1990, the number of early latent syphilis cases (1,240) was nearly 3 times the number of P&S syphilis cases. The 1999 overall rate of early latent syphilis was 6.2 cases per 100,000 population. The incidence rates for early latent syphilis by race/ethnicity were as follows: African Americans, 31.8 cases per 100,000; Hispanics, 5.4; Whites, 1.4.

Congenital Syphilis

Congenital syphilis, one of the most serious forms of the disease, may cause abortion, stillbirth, or premature delivery, as well as numerous severe complications in the newborn. In 1999, 92 cases of congenital syphilis were reported, marking the sixth year of decline: the number of congenital syphilis cases in 1999 represented a 7% decrease from 1998. With 47 cases, Harris County had the highest number of congenital cases, a small decline from the 51 cases reported from that county in 1998. Hidalgo County had the second-highest number with 14 cases. Dallas County, with the second-highest in congenital syphilis reports for 1998, dropped from 23 cases in 1998 to only 4 in 1999. Statewide, 52% of congenital cases were among Hispanics, 37% among African Americans, and 10% among Whites. Based on 1998 live birth numbers (1999 birth data was unavailable), the estimated rate of congenital syphilis in 1999 was 30 cases per 100,000 live births.

Total Syphilis

The term 'total syphilis' refers to all reported syphilis cases regardless of the stage of the disease. Included in this total are congenital, P&S, early latent, late latent, and tertiary syphilis. In 1999, 3,647 cases of

Figure 3. Syphilis Case Rates

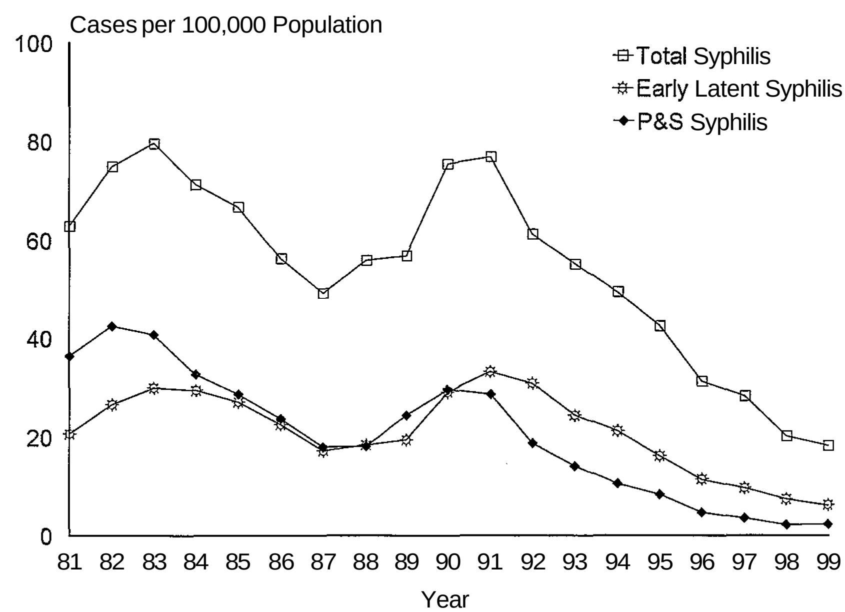
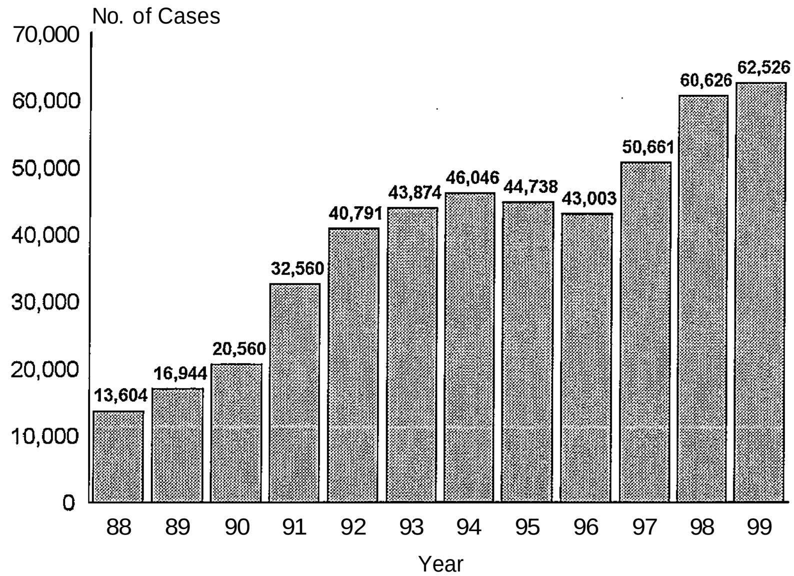
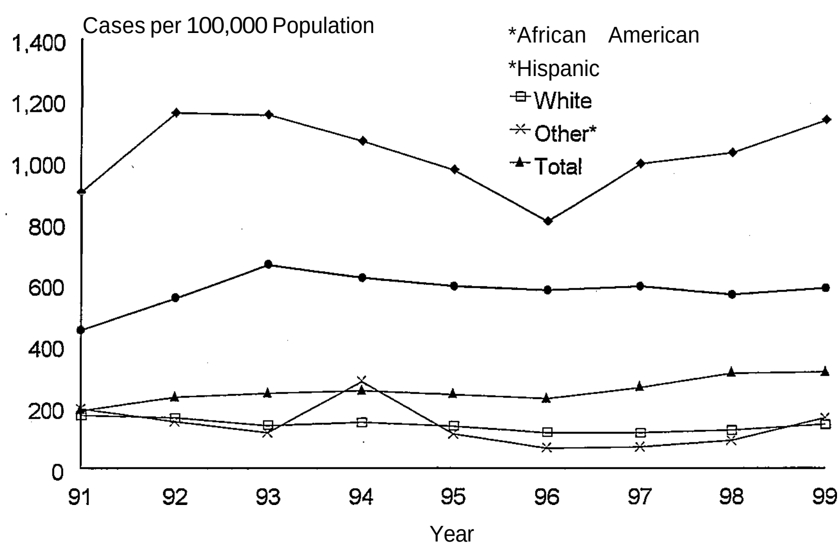


Figure 4. Chlamydia Cases 1988-1999*



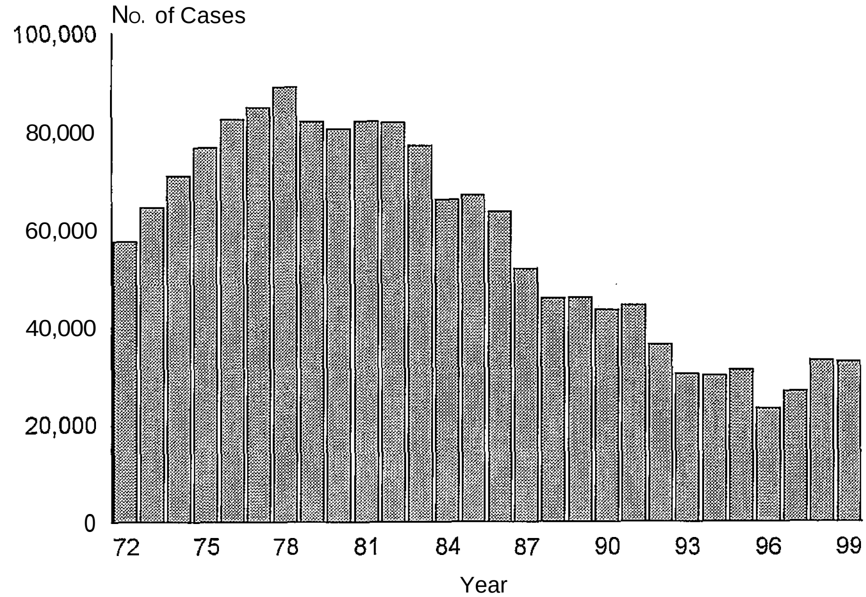
*Chlamydia reporting in Texas began in 1987

Figure 5. Chlamydia Case Rates Among Women by Race/Ethnicity, 1991-1999



• Excludes cases of unspecified race/ethnicity

Figure 6. Gonorrhea Cases, 1972-1999



total syphilis were reported, for a statewide rate of 18.2 cases per 100,000 population. This marks the eighth year of decline in total syphilis numbers, closely paralleling the decreases seen among P&S and early latent syphilis (Figure 3).

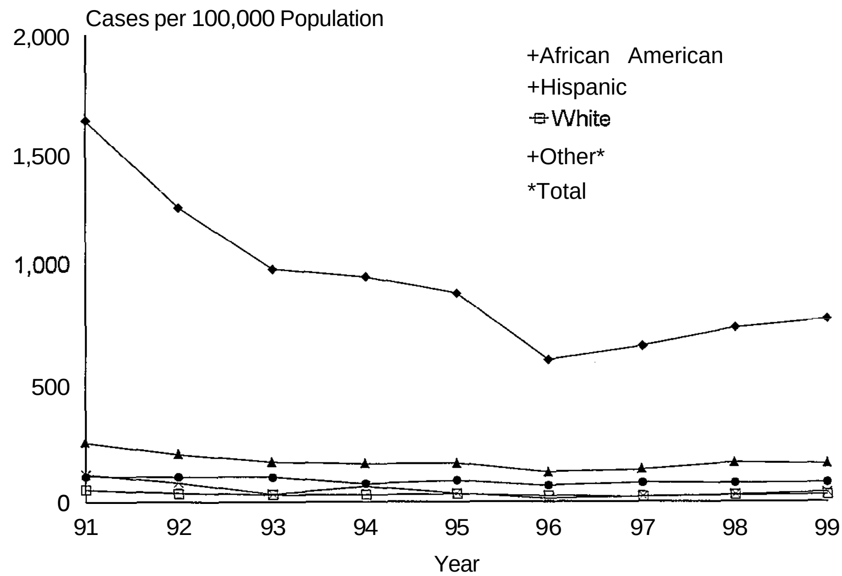
Chlamydia

The bacteria *Chlamydia trachomatis* is one of the most common causes of sexually transmitted infections. Chlamydia infection in women can result in serious complications such as pelvic inflammatory disease and ectopic pregnancy. After chlamydia became reportable in 1987, the number of cases soared, reflecting increased testing but not necessarily increased disease. Reports of chlamydia in 1999 totaled 62,526, a 3% increase from the previous year's total of 60,626 (Figure 4). In 1997 and 1998, Texas experienced much larger increases in chlamydia reports. At the time, these increases were attributed to the statewide implementation of new morbidity surveillance software, Sexually Transmitted Disease Management Information System (STD*MIS), which allowed for more complete capture of morbidity data. The leveling out of chlamydia numbers in 1999, following the establishment of STD*MIS, seems to support that theory.

Statewide the total number of clients screened for chlamydia through public funding decreased from 349,517 in 1998 to 337,832 in 1999; the number of positives resulting from these screenings, however, increased from 23,707 in 1998 to 26,145 in 1999.

Of the total chlamydia cases reported in 1999, 83% were among women. Women are more likely to be screened for chlamydia during clinical exams for family planning, prenatal care, and routine pap smear testing. Because of the increased risk of severe outcomes, including the potential for pelvic inflammatory disease and the possibility of infecting to a newborn child, chlamydia screening programs almost always focus on women. Men are often asymptomatic and therefore do not seek treatment.

Figure 7. Gonorrhea Case Rates by Race/Ethnicity, 1991-1999



* Excludes cases of unspecified race/ethnicity

Given that men make up such a small proportion (17%) of chlamydia cases reported, it is not possible to estimate the true incidence of chlamydia in the Texas population.

Because women accounted for the vast majority of chlamydia reports, rates for each sex should be examined separately. The 1999 case rate for women was 511 cases per 100,000 population with African American women having the highest rate (1,132 cases per 100,000), followed by Hispanic (585) and White women (142) (Figure 5). Men showed a similar racial/ethnic distribution to women but with far lower rates. However, because the majority of individuals with cldamydia are asymptomatic, equal targeting of men for screening and testing would likely result in a higher incidence than was suggested by case reports.

Over 74% of all reported chlamydia patients were 15 to 24 years of age, with over 39,000 cases reported for women aged 15 to 24 alone. The rates for chlamydia among women aged 15 to 19 and 20 to 24 were 2,928 cases and 2,547 cases per 100,000 population, respectively.

Gonorrhea

The bacteria *Neisseria gonorrhoeae* causes gonorrhea. Left untreated, gonorrhea may lead to sterility in men and pelvic inflammatory disease, ectopic pregnancy, and sterility in women. The 32,680 cases of gonorrhea reported in 1999 represent less than a 1% decrease from the number of cases reported in 1998 (Figure 6). As with chlamydia, gonorrhea numbers had increased substantially in both 1997 and 1998 prior to leveling off in 1999; the conversion to STD*MIS surveillance software was likely also responsible for these gonorrhea trends. The 1999 state rate for gonorrhea was 163 cases per 100,000 population, slightly lower than the rate in 1998 (169 cases per 100,000) (Figure 7). The rate among women in 1999 (165 cases per 100,000) was only slightly higher than the rate for men (161 cases per 100,000) and both rates have been nearly the same since 1996.

The gonorrhea rate for African Americans (783 cases per 100,000) was nearly 10 times greater than the rate for Hispanics (83 cases per 100,000) and nearly 25 times higher than the rate for Whites (32 cases per 100,000). African American men had the highest rate of all race/ethnicity-sex groups at 877 cases per 100,000 population. Gonorrhea cases among African Americans aged 15 to 24 accounted for the greatest share of African American cases (64% of those reported); they also represented 35% of all cases reported regardless of race/ethnicity or age.

The highest rate for women was found in those aged 15 to 19 (937 cases per 100,000) followed by those aged 20 to 24 (740 cases per 100,000). Men in these age groups also had higher rates at 450 cases per 100,000 for the 15 to 19 age group and 665 per 100,000 for those 20 to 24. Gonorrhea among young women aged 15 to 24 comprised 72% of all cases in women; young men in this age group accounted for 53% of all gonorrhea cases among men. In 1999, young men and women aged 15 to 19 accounted for 32% of gonorrhea, compared with 30% in 1998 and 27% in 1997.

Statewide the total number of publicly-funded screenings decreased 4% from 350,643 in 1998 to 338,181 in 1999; at the same time the number of positive results from these tests increased 12% from 13,930 in 1998 to 15,611 in 1999.

HIV and STD Epidemiology Division
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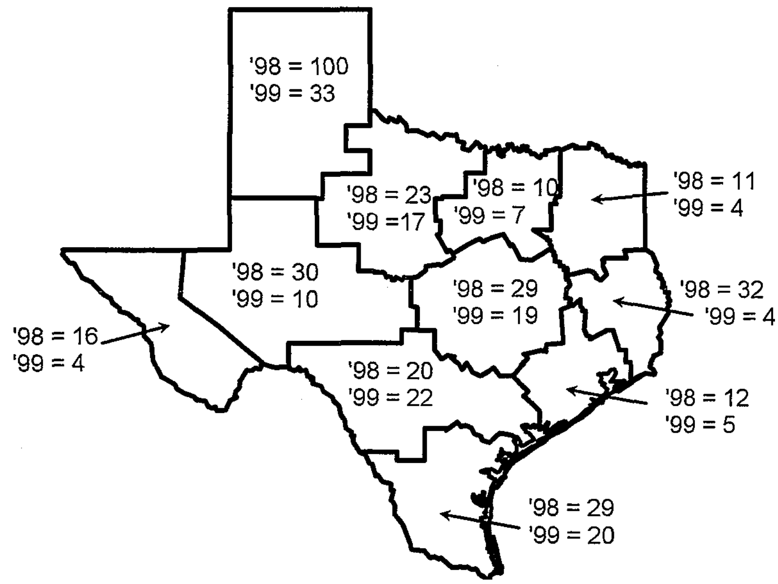
Shigellosis

According to the federal Food and Drug Administration (FDA), approximately 300,000 cases of shigellosis occur in the United States annually. Shigellosis continues to be one of the most frequently reported enteric diseases in Texas.

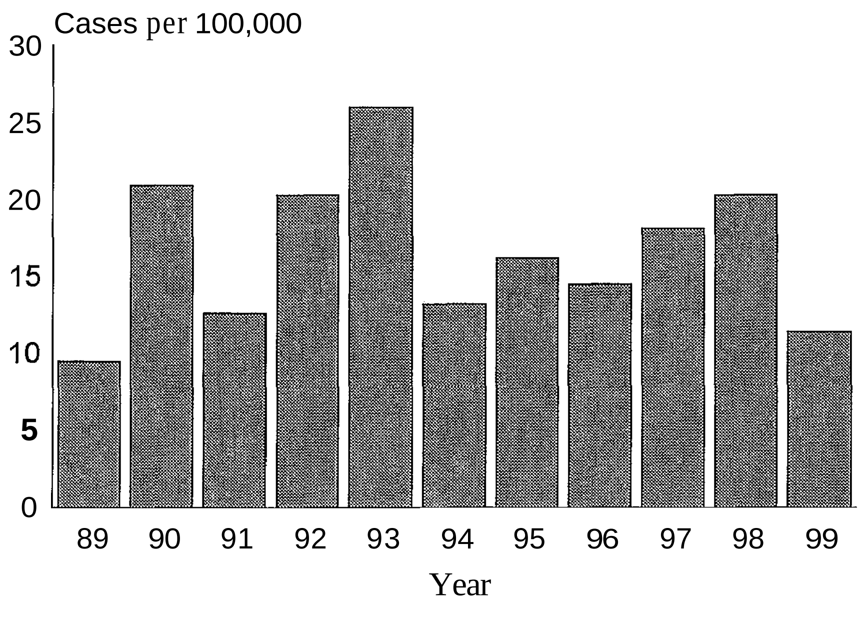
Shigella spp. can cause disease with as few as 10 organisms. Symptoms appear 12 to 50 hours after infection and include mucoid or pus-laden diarrhea, abdominal cramps, fever, nausea, vomiting, and tenesmus. Prevention of shigellosis involves standard sanitary practices such as thorough hand washing after bathroom use or diapering and before food preparation. Since shigellosis spreads easily in group child-care situations, strict handwashing practices as well as the disinfectation of toys and diapering surfaces can considerably reduce the spread of the disease.

Figure 2. Shigellosis Rate per 100,000 Population by Public Health Region, 1998 and 1999



A significant decrease in the number of shigellosis cases occurred in Texas in 1999. In contrast to 1998 in which 3,988 cases (18 per 100,000 population) of shigellosis were reported to the Texas Department of Health (TDH), only 2,281 cases (11.4 per 100,000 population) were reported in 1999. The incidence was the lowest rate observed since 1989 (Figure 1). Health education efforts in North and West Texas, including safe food handling conferences and hand washing instruction, may have been responsible for some of the reduction in cases. Of the 1,602 (70% of total received) isolates that were speciated, the most frequently identified species were *S. sonnei* (81.3%), *S. flexneri* (10.2%), and *S. boydii* (1.7%).

Figure 1. Shigellosis Incidence Rates, 1989-1999



Shigellosis incidence rates fell in all but one of the Texas Public Health Regions in 1999 (Figure 2). Most dramatic was the nearly 68% reduction in the Region 1 incidence rate from 100 per 100,000 in 1998 to 33 per 100,000 in 1999. This decrease in Region 1 incidence may be because Lubbock County, which had several small outbreaks of shigellosis in 1998, fell from 408 cases to only 41 cases in 1999. Only the Region 8 incidence rate increased from 20 in 1998 to 22 in 1999, largely due to Bexar County, which had the greatest number of cases (381) in the state. There were no significant shigellosis outbreaks in 1999, and no deaths from shigellosis.

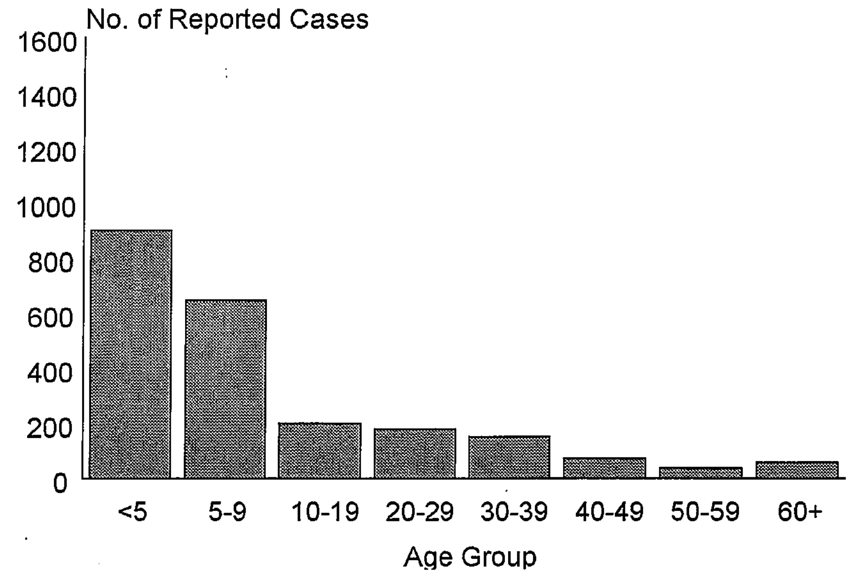
Race and ethnicity were recorded for 1,740 cases (76%). Although the highest incidence occurred in the Hispanic population (16.9/100,000), this is a significant (31%) reduction from the 1998 incidence rate among Hispanics of 24.5. Reductions in the incidence rates for the other race/ethnic groups were even more significant. For African-Americans the 1999 incidence rate fell 44% (from the 1998 rate of 9.9 to 5.5/100,000 population) and for Whites the incidence rate fell 48% (from the 1998 rate of 8.7 to 4.5/ 100,000 population).

Most shigellosis outbreaks occur in day care settings and the majority of cases usually occur among children aged 0 to 5 years. In 1999 the incidence rate per 100,000 population among 0- to 5-year-olds fell 38% from the 1998 rate of 90.1 to 55.7. Figure 3 illustrates the number of reported cases per age group in 1999.

Incidence rates for many enteric diseases decreased in 1999. Although it is possible that the reductions were an artifact of underreporting, with continued health education regarding proper hygenic practices, handwashing, and safe food handing, Texas may look forward to further reductions in incidence of shigellosis as well as other enteric diseases.

Infectious Disease Epidemiology and Surveillance Division (512) 458-7676

Figure 3. Reported Shigellosis Cases by Age Group



Silicosis and Asbestosis Surveillance

Two occupational lung diseases, asbestosis and silicosis, are reportable to the Texas Department of Health as mandated in the Occupational Condition Reporting Law (Texas Administrative Code 99.1.) These 2 diseases were included in this reporting law because they both have a well-understood etiology, predominately result fi-om occupational exposures, and are preventable. Since the inception of the reporting law in 1986, surveillance for both silicosis and asbestosis has grown tremendously. Much of this growth was made possible by the financial assistance from a cooperative agreement with the National Institute for Occupational Safety and Health (NIOSH).

As in most states, Texas law requires that designated professionals, primarily physicians and laboratorians, report specific information regarding certain diseases and other adverse health conditions to the state health department. This type of reporting is known as passive surveillance; that is, the health department receives the report and acts on the information received based on a standard protocol. With passive surveillance, the health department does not employ staff to actively seek out cases. Active surveillance occurs when the health department attempts to identify otherwise unreported cases of a reportable condition, often for the purpose of more complete documentation of the magnitude of the problem and for intervention.

Since reporting started in 1986, Environmental and Occupational Epidemiology Program (EOEP) staff have augmented the required passive reporting of asbestosis and silicosis cases by conducting quarterly reviews of death certificates to identify individuals for whom asbestosis or silicosis was listed as a cause of death. From 1992 through 1997, EOEP was able to conduct active surveillance for silicosis. This active surveillance included annual reminders to physicians and hospitals of the reporting requirement; statewide review of hospital medical records of patients discharged with a diagnosis of silicosis; and initiation of a sentinel provider system for silicosis reporting, with pulmonary and occupational medicine physicians contacted by an EOEP staff member on a quarterly basis to assess newly diagnosed cases of silicosis. Since 1997, active surveillance activity is limited to death certificate review.

Silicosis

Silicosis is a lung disease that results fi-om inhalation of crystalline silica. The relationship between dusty work conditions and occupational lung disease has been described since antiquity, and methods for the prevention of silicosis have been recommended by the US Department of Labor at least since the early 1930s. Unfortunately, this preventable lung condition continues to disable workers today. Workers at high risk of silicosis have historically included miners, quarry workers, foundry workers, and sandblasters. Many employees in these occupations continue to be at high risk today.

In 1999 EOEP received 3 reports of individuals with only reported silica exposure and 22 reports of individuals with confirmed or suspected cases of silicosis. In addition to the 7 reports fi-om medical providers, 18 silicosis cases were identified through death certificate review. Of the 22 individuals with confiied or suspected silicosis, 20 were male and 2

Table 1. Industry for Reported Individuals

No.	Industry
65	Construction
63	Manufacturing
19	Transportation, Communications, and other Public Utilities
17	None Reported
10	Public Administration
9	Home
8	Retail Trade
6	Business and Repair Services
2	Military
2	Farming/Ranching
1	Medical
1	Oil Field
1	Church
204	**Total**

were female (both homemakers). Sixteen (73%) individuals were White, 6 (27%) were African American. There were 2 workers identified as Hispanic. Five workers were sandblasters and 9 workers were employed in construction.

Asbestosis

Like silicosis, asbestosis is a chronic fibrotic lung disease which results from inhalation of a mineral, in this case asbestos fibers, in the workplace. Asbestos has been referred to as the magic mineral because of its heat resistance and fibrous nature. There are literally thousands of uses for asbestos, and the construction industry in the United States has been a major asbestos consumer. Some of the uses include: asbestos cement products (tile, roofing, drain pipes), floor tile, insulation, and fireproofing. Substitute materials have replaced asbestos since 1972, but the process of removing the existing asbestos-containing materials continues to pose a potential hazard.

In 1999, EOEP received reports of suspected or confiied diagnoses of asbestosis in 211 individuals. In addition to the 26 reports from physicians, 8 were obtained through medical record review, and 177 asbestosis cases through death certificate review. Of the 211 individuals reported, 7 had asbestos exposure only and 204 had a suspected or confirmed diagnosis of asbestosis.

Little work exposure information was reported. Because much of the industry information is from death certificates, the workplace listed may not be the site of asbestos exposure but is often where the person was reported (by relatives) to have worked at the time of death. Table 1 lists the industry for 204 reported individuals. Nine individuals were listed as homemakers or reported as never having worked outside the home.

Of the 204 individuals, the majority were male (191 [94%]) and 13 (6%) were female. Those data reveal that 177 (86%) were White, 13 (6%) were African American, and 14 (7%) were unknown. Individuals of Hispanic ethnicity totaled 13 (6%). The age at diagnosis ranged from 47 to 91 years of age (mean age=72).

EOEP occasionally is able to obtain information on other lung conditions or smoking status for individuals with asbestosis. For the asbestosis cases reported during 1999, the workers with asbestosis also had mesothelioma, and 15 had lung cancer. Smoking status was reported for 28 individuals, 15 (54%) of whom were smokers.

Environmental Epidemiology and Toxicology Division (512) 458-7269

Submersions Occurring in Swimming Pools, 1998

The Texas Department of Health received reports of 726 submersions occurring in 1998. Submersion injuries include fatal (drowning) and nonfatal (near-drowning) incidents. In 1998, 59% (431) of all reported submersions were fatal and 38% (276) were nonfatal. Among Texas residents, crude death rates for drowning have been decreasing since 1986 (Figure 1). However, in 1998 the drowning rate of 2.0 per 100,000 population was still slightly higher than the Healthy People 2000 objective of 1.3 deaths per 100,000 population. The greatest number of total submersions (fatal and nonfatal combined) occurred in swimming pools (31%, 2281726) (Figure 2). However a comparison of location of injury between fatal and nonfatal cases, shows more fatal submersions occur at lakes or river/creeks (23%, 99/431 each) than swimming pools (17%, 74/431); whereas, more nonfatal cases occur at swimming pools (53%, 145/276).

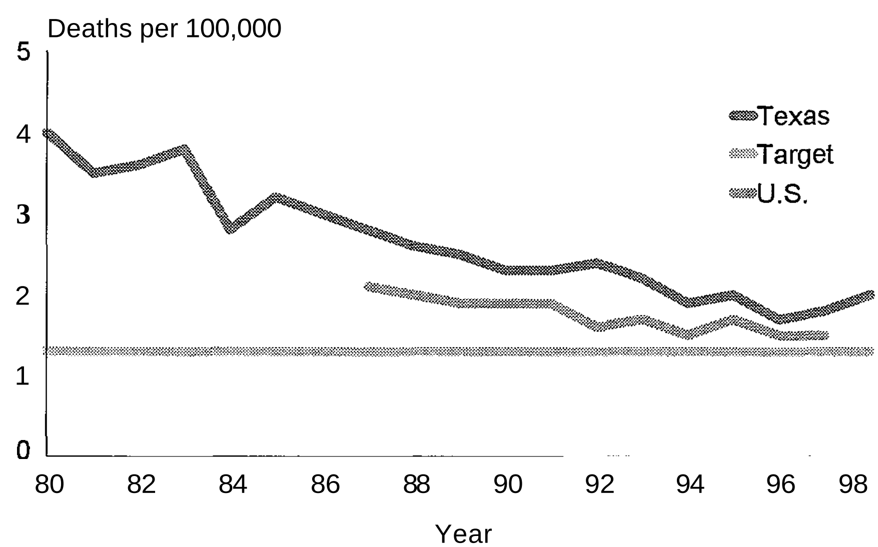
The majority of submersions among males occurred in swimming pools (29%, 1551534) similar to that occurring among females (38%, 73/192). Among submersions occurring in swimming pools, 68% of patients were male and 32% were female. Thirty-two percent of patients who had a submersion in a swimming pool died (741228). Among submersions occurring in swimming pools, Whites experienced the greatest percentage of submersions (46%), followed by Blacks (28%), and Hispanics (22%). However, a comparison of the percentage of submersion by location among each race shows Blacks are more likely to experience a submersion in a pool (51%, 631124) than Whites (33%,105/323), or Hispanics (22%,49/221) (Table 1).

The greatest number of submersions in swimming pools occurred among children less than 5 years of age (50%, 114), followed by children ages 5 to 9 years (5.5%, 40). Fifteen of the children less than 5 years of age died and 11 of the children ages 5 to 9 years died. The 1998 drowning rate for children less than 5 years was 3.2 per 100,000 population for Texas residents which is higher than the Healthy People 2000 objective of 2.3 per 100,000 population (Figure 3).

A private residence (48%, 107/225, [denominator reflects missing data for 3 cases]) was the most fiequent site for a submersion to occur in a swimming pool (24% home residence and 24% another person's private residence). Apartment complex swimming pools were the site for 21% of pool submersions in 1998, followed by public places (20%), and hotel/motel (7%). The leading site for submersions occurring to children less than 2 years of age was the private home residence. However, among children 3 years of age, the leading site was another person's residence, and among children 4 years of age, the leading site was an apartment complex pool.

The monthly distribution for swimming pool-related submersions shows that from January to April of 1998, there were 10 or fewer submersions each month. Beginning in April, the number of submersions steadily increased by month until it

Figure I. Drowning Deaths, 1980-1998



Bureau of Vital Statistics, Texas Department of Health

Figure 2. Submersions by Status and Location, 1998

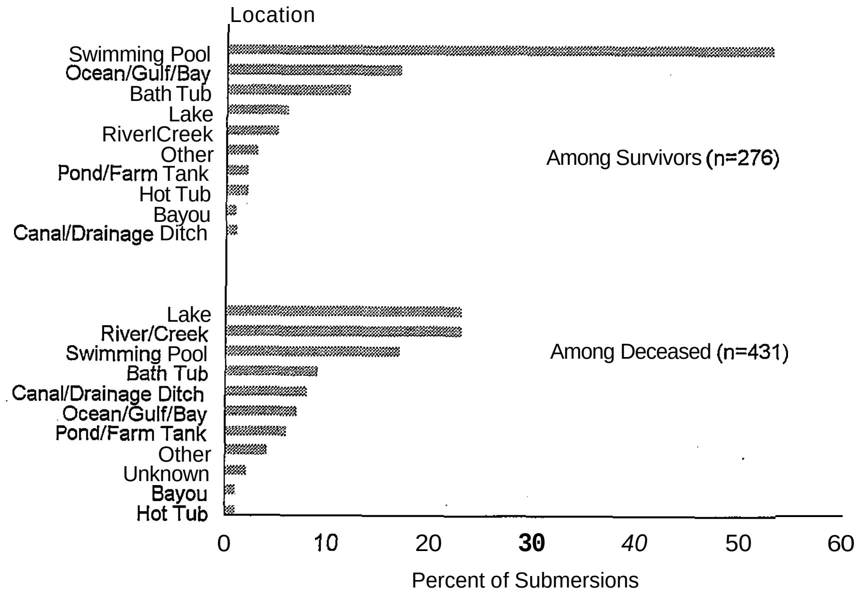


Figure 3. Drowning Among Children, 1980-1998

Bureau of Vital Statistics, Texas Department of Health

Table I - Location of Submersion by Race, 1998

Location	Black %	Hispanic %	White %
Swimming Pool	50.8	22.2	32.5
Bath Tub	8.1	12.2	10.5
Hot Tub	1.6	0.0	2.5
Lake	13.7	14.0	19.8
Pond/Farm Tank	7.3	0.9	5.9
River Creek	5.6	17.6	13.0
Bayou	0.8	1.4	0.6
Ocean/Gulf/Bay	8.1	12.7	10.2
Canal/Drainage Ditch	0.8	13.1	2.2
Other	1.6	5.4	1.2
Unknown	1.6	0.5	1.5

reached a peak in June (n=57). Submersions steadily decreased fiom the peak in June until October, when they were once again fewer than 10 cases per month from October through December, 1998. The greatest number of cases per hour occurred between 3 PM and 10 PM (56%, n=127).

Information regarding the circumstances of the injury were available for 57% of the cases. The data show that 45% of the victims were left unattended by their care givers at the time of the submersion, and 23% fell prior to their submersion. Other circumstances which accounted for less than 8% each were (in descending order) as follows: engaged in horseplay, was a nonswimmer, removed personal flotation device, fell off raft, hit head, dove into shallow water, attended a group swimming party, failed to provide fence around the pool, attempted to rescue another person or animal, had a seizure, and became fatigued.

Injury Epidemiology and Surveillance Program
(512) 458-7266

Tick-borne Diseases

Seventy-two of the 354 possible Lyme disease cases reported to the Texas Department of Health in 1999 met the current CDC's case definition: physician diagnosed erythema migrans (EM) at least 5 cm in diameter or rheumatologic, cardiac, or neurologic manifestations with a positive laboratory test. Forty-five (63%) of the 72 patients were female; ages ranged from 3 to 99 years. Nine persons were hospitalized.

Eleven (15%) of the 72 Lyme disease patients had physician-diagnosed EM; an additional 10 patients had EM that was not witnessed by a physician. Bell's palsy was reported for 8 (11%) patients. Other commonly reported neurologic manifestations included peripheral neuropathies (43 patients), limb weakness (23), sensory impairment (12), and vision impairment (11). Twenty-three (32%) patients had migratory joint pain; 30 (42%) had swollen joints. Only 10 (14%) patients recalled tick exposure prior to onset of their illness; 3 (4%) reported flea bites prior to onset.

Ten cases of Rocky Mountain spotted fever , in residents of Cooke (2), Denton (1), Grayson (1), Guadalupe (1), Jack (1), Nueces (2), Stephens (1), and Tarrant (1) counties, were confirmed in 1999. The ages of the patients ranged from 3 to 57 years; 6 of the patients were male. Onsets of illness were in February (2), March (2), April (1), May (3), June (1), and September (1). Symptoms included fever (10), rash (7), myalgia (7), headache (6), malaise (6), nausea (6), vomiting (6), and anorexia (4). Six patients were hospitalized; 1 died.

One case of human granulocytotropic ehrlichiosis was also reported in 1999. The patient was a 6 year-old male resident of Tarrant County; however, he received a tick bite in Massachusetts. His symptoms, which occurred in July, included fever, chills, malaise, and rash.

Infectious Disease Epidemiology and Surveillance Division (512) 458-7676

Traumatic Brain Injuries, 1997

In 1997, 10,501 traumatic brain injuries (TBI) were reported to the Texas Department of Health (TDH). There were 2,191 TBI cases reported through death certificates sent to the Bureau of Vital Statistics. The Trauma Registry received 8,648 reports, of which 338 were duplicate cases also reported to BVS.

The case definition for TBI includes the International Classification of Diseases, 9th Revision Clinical Modification (ICD-9-CM) codes 800.0-801.9, 803.0-804.9, and 850.0-854.1. These codes include: fractures of the skull; concussions; cerebral lacerations and contusions; subarachnoid, subdural, and extradural hemorrhage; and other intracranial injuries.

Males were twice as likely as females to sustain a TBI, and among all races Whites sustained the largest percentage of TBI (52%), followed by Hispanics (33%), and Blacks (11%). Among all ages (age range: 0-104 years) persons ages 15 to 19 years experienced the greatest number of TBI (n=1430, 13.6%). Twenty-six percent of all persons sustaining a TBI died. Among the survivors, 19% were disabled and 35% made a good recovery. Three percent of all TBI cases were work related. For work related TBI, 44% occurred at an industrial place and 26% occurred on a street or highway.

The leading cause of TBI was motor vehicle traffic-related events (50%) and the second leading cause was falls (20%), followed by assault (12%) (Figure 1). For motor vehicle traffic-related TBI, persons 15 to 19 years of age experienced the highest number of injuries. For fall related events, persons less than 5 years of age experienced the greatest number of injuries. Seventy-five percent of all TBI assault related events occurred among persons 15 to 44 years of age.

For motor vehicle traffic-related TBI, the majority of injured persons are drivers (46%) with passengers representing (30%). The use of protective equipment is known for 36% of all motor vehicle traffic-related events. Approximately 30% of all drivers and 41% of all passengers who sustained a TBI were not using a seat belt and/or air bag at the time of the injury (Table 1). Approximately 55% of pedal cyclists, 23% of motor cycle drivers, and 52% of motorcycle passengers were not wearing a helmet at the time of injury.

For fall related TBI, 28% are caused by falls from one level to another and 24% are caused by falls on the same level from slipping, tripping, or stumbling. Among children less than 5 years of age who were injured by a fall (337), the greatest number fell from one level to another (104), followed by a fall from or out of a building (43), and from other stairs or steps (38). Sixty percent of children less than 5 years of age whose TBI is due to a fall are male and 50% are Hispanic. Among children less than 5 years of age, the highest percentage of fall related TBI occurred

Figure 1. TBI by Age Group and Etiology, 1997

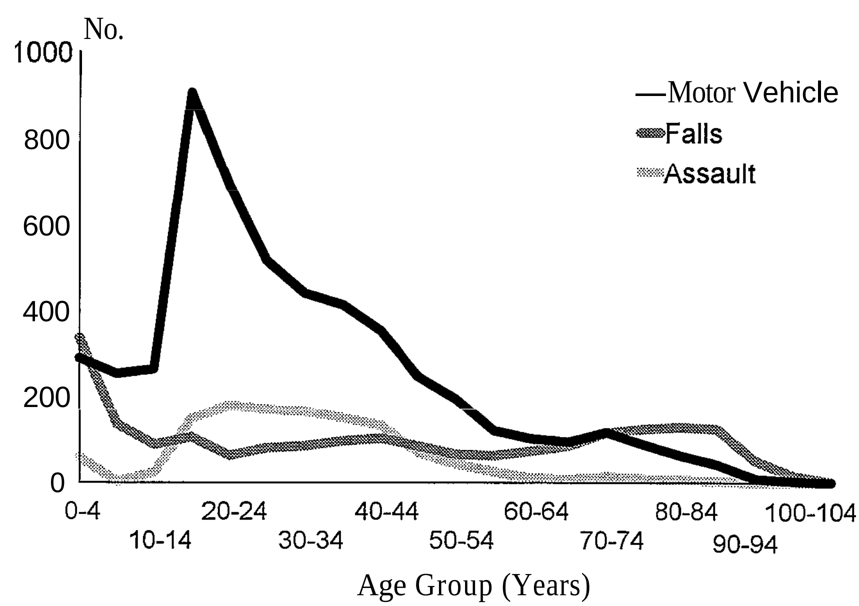


Table I - Use of Protective Equipment in Motor Vehicle Related TBI, 1997

Patient Position		Seat Belt	Air Bag & Seat Belt	Air Bag	% Child Seat	Unknown	Other	Helmet Usage
Driver (n=2416)	29.9	28.0	2.8	1.7	------	36.8	1.2	------
Passenger (n=1555)	40.5	17.5	2.1	0.6	1.8	36.6	1.0	------
Pedal Cyclist (n=123)	54.5	------	------	------	------	36.6	0.8	8.1
Motorcyclist (n=189)	22.8	------	------	------	------	28.0	1.1	48.1
Passenger on Motorcycle (n=21)	52.4	------	------	------	------	19.0	4.8	23.8

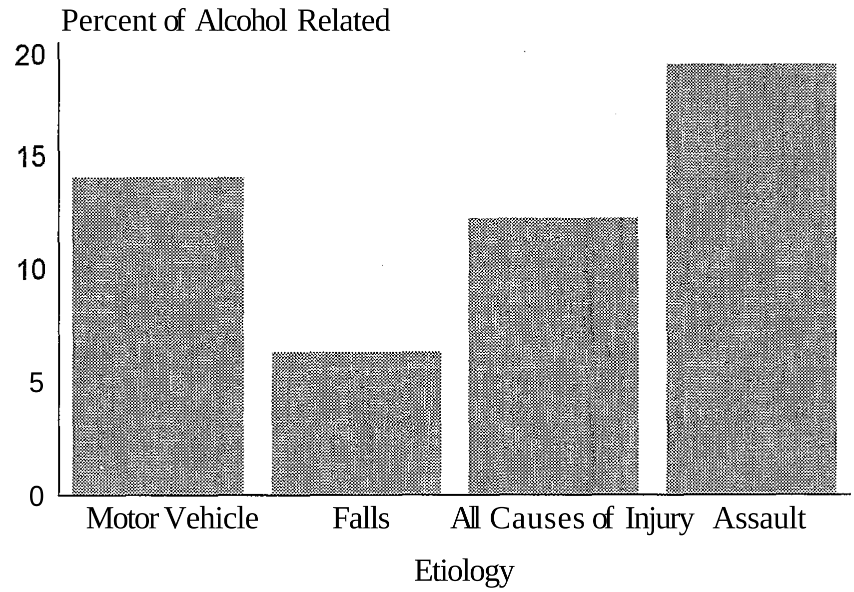
among children less than 1 year of age (35%).

For assault related TBI, Hispanic males experienced the highest number of cases followed by White males and Black males. Approximately 30% of all assault related TBI are caused by personal contact (for example using the hand as a weapon), and 25% are caused by being struck by a blunt or thrown object.

For all causes of TBI, 12% of the patients had consumed alcohol prior to acquiring the injury: 19% of patients who were injured by assault were alcohol related; 14% of patients who were injured by motor vehicle traffic events were alcohol related; and 6% of patients who were injured by falls were alcohol related (Figure 2).

Injury Epidemiology and Surveillance Pvogvam
(512) 458-7266

Figure 2. TBI Alcohol Use by Etiology, 1997



Traumatic Spinal Cord Injuries, 1998

Traumatic spinal cord injury (SCI) is defined as an acute, traumatic lesion of the neural elements in the spinal cord, resulting in temporary or permanent sensory deficit, motor deficit, or bladder/bowel dysfimction. These injuries are particularly devastating due to

- . the permanent nature of such injuries,
- the relatively young age of most victims, and
- the high costs of both acute and long-term care.

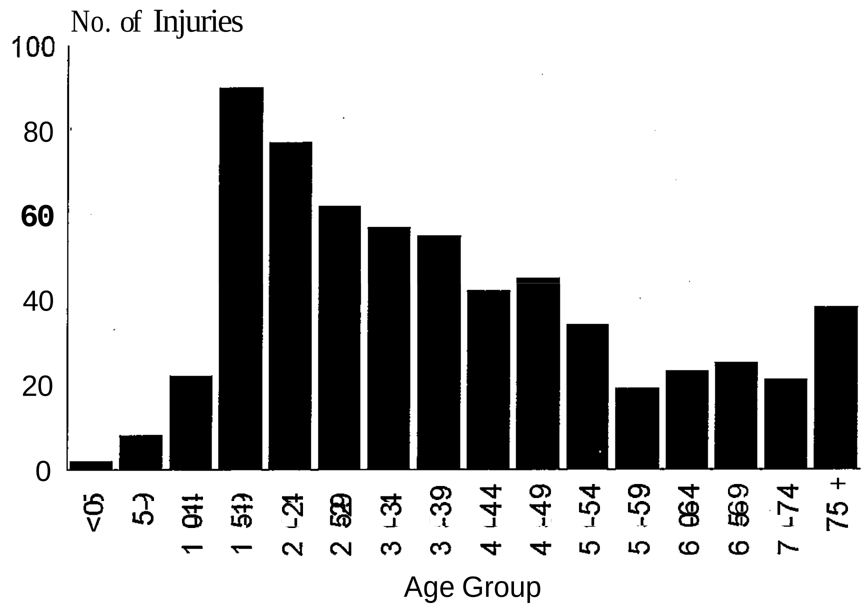
Traumatic spinal cord injuries have been a reportable condition in Texas since 1994. Physicians and hospitals are required to report such injuries to the Texas Department of Health (TDH). Physicians and hospitals may meet their reporting requirements by either sending a paper report or transmitting data electronically to the TDH Trauma Registry. Information collected includes items such as demographic data, etiology, intentionality, level and extent of injury, use of restraints or helmets, and discharge status.

In 1998 there were 627 cases of SCI occurring in Texas and reported to TDH (surveillance reports and death certificate data combined). There were a total of 573 surveillance cases and 88 cases from death certificate data; 34 cases of the total of 627 matched.

Three times as many males as females sustained an SCI in Texas. The racial/ethnic distribution of SCI cases in Texas was 57% White, 28% Hispanic,.12% African American, and 3% other. These data are similar to national data except that nationally the male/female ratio is 4 to 1, and the Hispanic percentage is lower than found in Texas. The condition upon hospital discharge in Texas was 22% good (returning to previous level of function), 15% moderate disability (self-care), 17% severe disability (dependent), 2% vegetative (no higher mental fimction), 21% dead, and 23% unknown.

The age of persons sustaining an SCI ranged fi-om 1 to 98 years. Persons 15 to 19 years of age had the highest percentage of SCIs (14%) (Figure 1). The median age of SCI cases was 34 years. The majority of SCIs occurred among persons aged 15 to 44 years (62%).

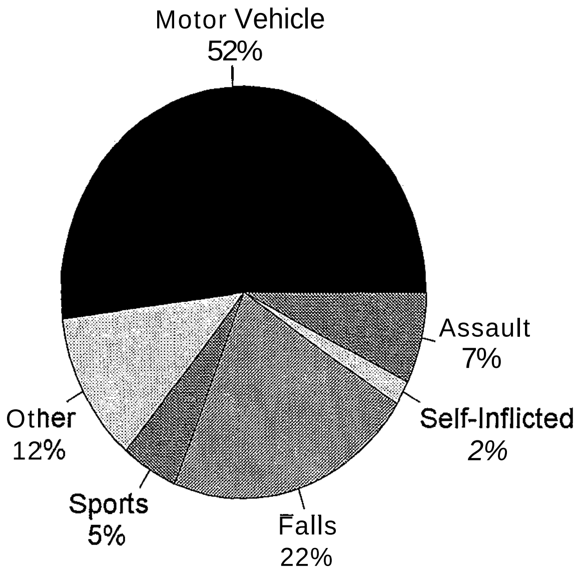
Figure I - Spinal Cord Injuries by Age Group



Ninety-one percent of SCIs occurring in 1998 were unintentionally caused, and 9% were intentionally caused (ie, self-inflicted or assault). As shown in Figure 2, the most fi-equent cause was motor vehicle-related incidents (52%), followed by falls (22%). Forty-four of the 58 intentional injuries were assaults. Firearms were used in 41 of intentional SCIs (34 assaults and 7 self-inflicted cases).

Seventy-three percent of all motor-vehicle related SCIs (239) occurred to persons 15 to 49 years. Persons aged 15 to 19 had the highest percentage of motor-vehicle related SCIs (17%), followed by persons aged 20 to 24 (13%). Twenty-eightpercentofall SCIs caused by falls occurred to persons aged 65 years and older.

Figure 2. Spinal Cord Injuries by Etiology



There were 32 SCI injuries to children younger than 15. Twenty-two of these injuries occurred to children aged 10 to 14. Among the total SCI injuries to children less than 15 years of age, 13 were by motor vehicle, 5 were due to falls, 5 were sports-related injuries, 2 were assault-related injuries, 1 was self-inflicted injury, and 6 were by "other" causes. Fifteen had known protective device use; 13 did not use a protective device.

Motor-vehicle related (MV) incidents were the leading cause of SCIs for all racial/ethnic groups (Figure 3). The second leading cause of SCIs for all racial/ethnic groups was falls. For all causes except assaults, Whites had the highest number of SCIs; Hispanics experienced a higher number of SCIs from assault than any other race/ethnicity.

Motor vehicle cases (excluding those involving motorcycles and bicycles) accounted for 306 (94%) of all motor vehicle-related injuries. Information regarding the use of protective devices in motor vehicle-related SCIs was available for 225 cases. Among these cases, 58% of patients did not use a seat belt and/or air bag at the time of the incident. There were 17 incidents involving motorcyclists and 3 incidents involving bicyclists. Nine motorcyclists and 3 bicyclists were not wearing a helmet at the time of the incident.

Among 248 patients who were tested for blood alcohol level, 34% (84) were found to have a blood alcohol level above the statutory level of intoxication (≥ 100 mg/dL). Eighty-nine percent of patients who were legally intoxicated were male. Sixteen percent who were legally intoxicated were under the legal drinking age of 21 years. Among SCI cases in which the individuals were legally intoxicated, 47 were MV-related incidents, 13 were falls, and 12 were assaults. Nine of the alcohol-related injuries involved firearms.

Information concerning job-related injuries was available for 510 cases. Twenty-six (5%) of these cases were job-related: 7 patients were injured while in a motor vehicle, 13 fell, 5 were struck by falling or moving objects, 1 was an assault, 1 was a self-inflicted injury, and 1 was using machinery.

Figure 3. Spinal Cord Injuries by Cause and Race/ Ethnicity

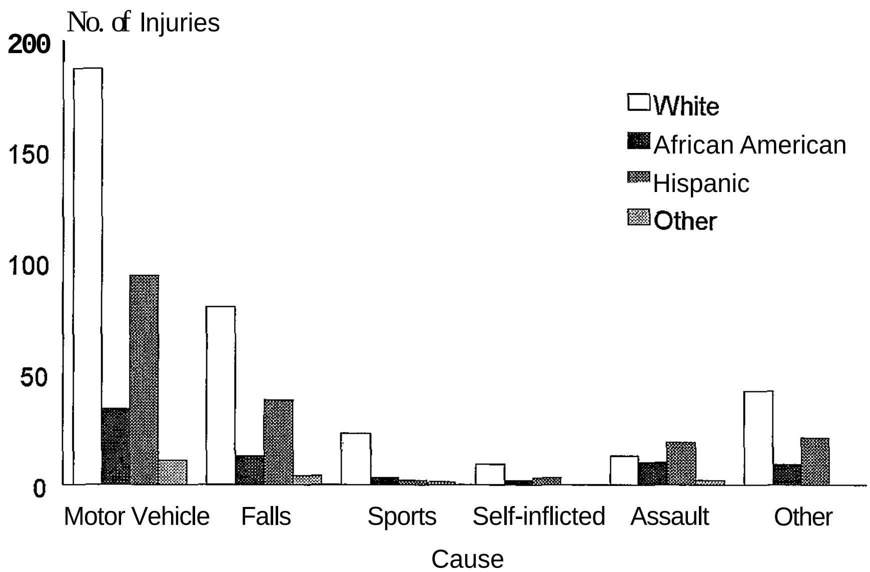
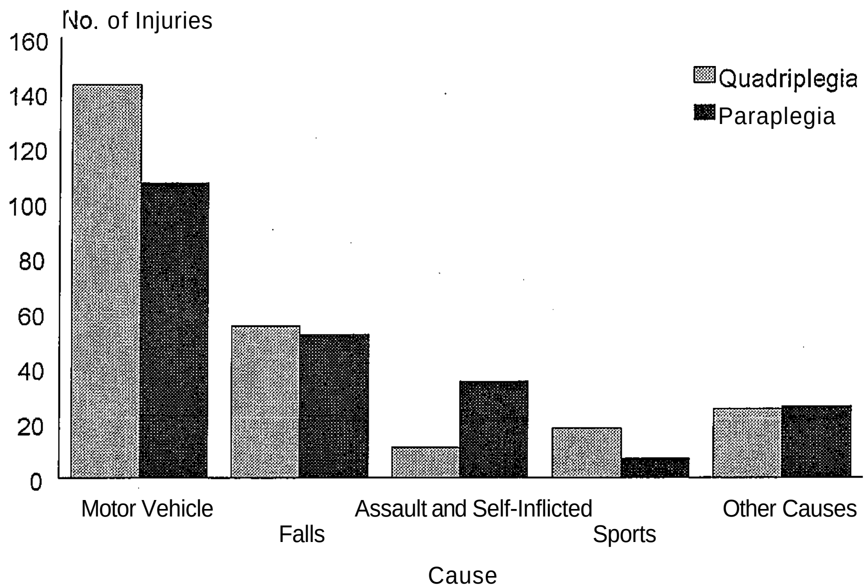


Figure 4 shows the injury level and the extent of neurological impairment of SCI patients. The severity of the SCI refers to both the level of the injury (ie, the injured segment of the spinal cord) and the amount of neurological impairment below the level of the injury. Forty-eight percent of injuries resulted in quadriplegia (ie, injury to the cervical segments of the spinal cord), 44% in paraplegia (injury in the thoracic, lumbar, or sacral segments of the spinal cord), and 8% in injury of unspecified segments. Three times as many quadriplegics died as compared to paraplegics, MV-related incidents and sports incidents resulted in more cases of quadriplegia than paraplegia cases. However, assaults and self-inflicted injuries resulted in more cases of paraplegia than of quadriplegia. Fall injuries resulted in nearly the same number of cases of quadriplegia and paraplegia.

Figure 4. Level of Injury by Cause



Trauma Registry information regarding acute care cost and hospital stay was available for 51% (321) of all SCI cases. The average cost per patient for a traumatic SCI was over $64,000 in acute care costs; this does not include rehabilitation hospital costs nor physician fees. The total cost for those 321 SCI cases with known costs totaled $20.7 million. If the average cost were spread to all SCI patients, the total cost would exceed $40 million. First year costs for a SCI including all hospitalization, equipment procurement and home modifications average more than $220,000 per person.' The average acute care hospital stay for a SCI patient, exclusive of rehabilitation hospital stays, was 13 days; quadriplegic patients averaged 16 days in acute care hospital stays.

References:

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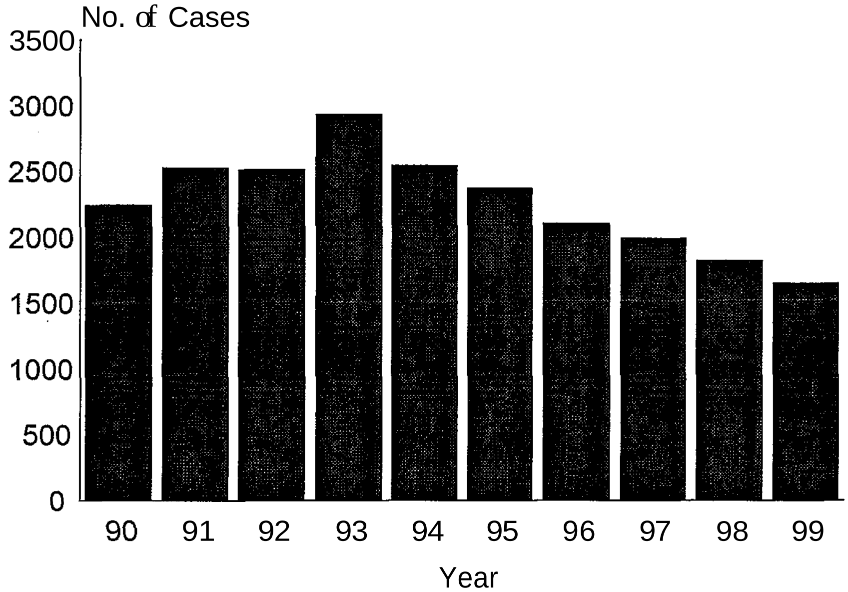
Injury Epidemiology and Surveillance Program
(512)458-7266

Tuberculosis

Tuberculosis is a bacterial disease caused by *Mycobacterium tuberculosis*. These bacteria primarily infect the lungs and are transmitted from person-to-person by inhalation of droplet nuclei containing the bacteria. Patients with pulmonary or laryngeal tuberculosis generate nuclei when they talk, cough, or sneeze. A majority of patients experience pulmonary tuberculosis characterized by fever, night sweats, weight loss, difficulty breathing, and cough.

Figure I. Reported Cases of Tuberculosis, 1990-1999



The initial treatment of tuberculosis involves administration of 4 drugs—isoniazid, rifampin, pyrazinamide, and either ethambutol or streptomycin—until drug susceptibility test results are obtained. Drug susceptibility test results determine the choice of drugs and duration to complete therapy. For patients with drug resistance, therapy may continue for 2 years or longer. In the United States, tuberculosis incidence rates are higher in males, low income racial/ethnic populations, and older age groups. The 7 states reporting the highest incidence rates include Hawaii, California, New York, Alaska, Georgia, Florida, and Texas.

From 1990 through 1999, 22,145 tuberculosis cases were reported in Texas. A total of 1,649 tuberculosis cases were reported in Texas in 1999. The number reported annually ranged from the 1,649 cases reported in 1999 to 2,542 cases reported in 1994 (Figure 1). The 1999 total represents a 9.4% decline from the number of cases reported in 1998 and 893 fewer cases compared with the number of reported cases in 1994. The incidence rate in 1999 was 8.2 cases per 100,000 population.

In 1999 most patients were male (67.3%), and a majority (69.2%) were Hispanic or Afiican American. Incidence rates (cases per 100,000 population) for Whites, Hispanics, and African Americans were 3.2, 14.2, and 19.8 respectively.

The 1,649 cases reported in 1999 ranged in age from 2 months to 112 years, with a median of 44 years. A total of 67 patients were 4 years of age or younger; 13 were less than 1 year of age. A majority (88.1%) of patients 4 years of age or younger were Hispanic or African American. Ten patients were 90 years of age or older.

Over one-thud of the patients (40.1%) were born outside the United States. Only 6.8% of Whites and 11.3% of Afiican Americans were born outside the United States. A higher percentage of Hispanics (58.0%) and Asians (97.0%) were born outside the United States. The most frequent countries of birth for those born outside the United States were Mexico (55.2%), Vietnam (10.4%), India (4.4%), and Honduras (3.7%). Almost half (45.1%) of the foreign-born patients arrived in the United States within the last 5 years; 20.4% arrived within 1 year of diagnosis.

A total of 169 tuberculosis patients were coinfected with human immunodeficiency virus (HIV). A higher percentage (29.9%) of African Americans were coinfected with HIV compared with Whites (22.4%) or Hispanics (11.3%). Similarly, a higher percentage (21.5%) of males were coinfected with HIV coinpared with females (9.6%).

A history of incarceration was reported for 9.0% of the patients, abuse of alcohol or intravenous drug substance abuse for 15.7%, and homelessness for 6.5%. A previous history of tuberculosis was reported for 4.4% of the patients.

A total of 1,304 cases were culture confiied. Of these, 97 patients (7.4%) were infected with *Mycobncterium tuberculosis* resistant to 1 of the 5 first-line drugs (isoniazid, rifampin, pyrazinamide, ethambutol, streptomycin) used in treatment. By comparison, 9.0% of culture confirmed patients reported in 1998 had drug resistant strains. Isoniazid resistance, without resistance to rifampin, was noted in 3.9% of the cases. Rifampin resistance, without isoniazid resistance, was noted in 0.4% of the cases. Any *M. tuberculosis* strain that is resistant to both isoniazid and rifampin is classified as multidrug-resistant tuberculosis (MDR-TB). Sixteen patients in 1998 and 10 in 1999 were identified as having MDR-TB. Multidrug resistance was more common in recurrent cases (13.8%) compared with new cases (5.1%). Resistance to isoniazid or rifampin was noted in 3.5% of the patients born in the United States; 8.7% of the patients born in India, 9.5% of the patients born in Mexico, and 11.1% of the patients born in Vietnam.

Patients with tuberculosis resided in 136 counties throughout the state. A majority (73.0%) resided in only 10 of the 254 counties in Texas. Harris County was the county of residence for 456 patients; 228 patients resided in Dallas County. Annual incidence (cases per 100,000 population) rates for Harris County and Dallas County were 14.0 and 10.5 respectively. Seventeen counties had an annual incidence rate at least twice the state rate of 8.2.

Tuberculosis Elimination Division
(512) 458-7447

Typhus

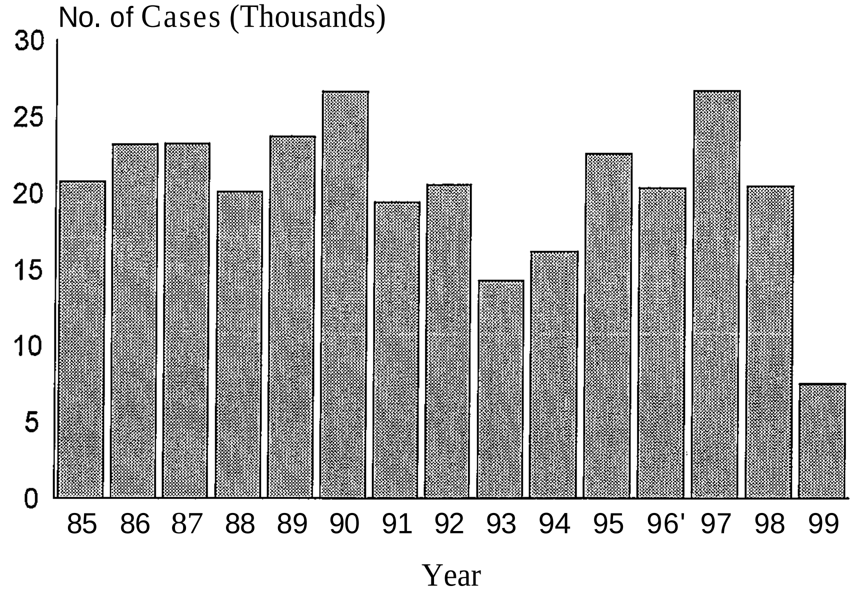
Forty-two cases of flea-borne typhus, caused by Rickettsia *typhi* or *Rickettsia* felis, were confirmed in Texas in 1999. Twenty-four patients were female; 18 were male. Their ages ranged from 3 months to 76 years. As usual, most of the typhus cases occurred in patients who resided in South Texas: 15 in Hidalgo County; 14 in Nueces County; 4 in San Patricio County; 2 in Cameron County; and 1 each in Brooks, Brown, Gregg, Harris, Jim Wells, Kleberg, and Starr Counties. Case investigations were completed for 31 of the cases while 11 patients were lost to follow up. Onsets of illness for these 31 patients occurred in January (2 cases), February (1), March (1), April (2), May (6), June (6), July (3), August (1), September (3), October (2), November (2), and December (2). Symptoms included fever (100% of patients investigated), headache (71%), malaise (48%), nausea and/or vomiting (45%), myalgias (23%), and anorexia (23%). Fourteen (45%) of the 31 persons had a rash. All but 5 of the 31 patients were hospitalized; none of the patients died.

Infectious Disease Epidemiology and *Surveillance* Division *(512)* 458-7676

Varicella

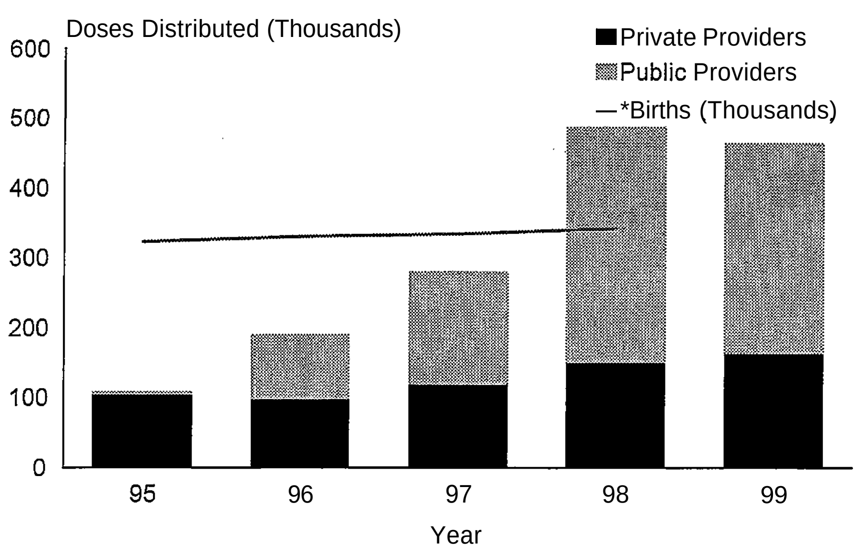
Varicella is a highly contagious, viral disease that affects virtually all people in the United States by adulthood. Primary infection with varicella-zoster virus results in chickenpox which presents as a generalized, pruritic, vesicular rash and may be accompanied by mild fever and systemic symptoms. Complications include bacterial superinfection, viral pneumonia, encephalitis, meningitis, and thrombocytopenia. Chickenpox lesions may be infected by invasive group A streptococci leading to necrotizing fasciitis or toxic shock syndrome.

Figure 2. Reported Cases of Varicella, 1985-1999



Varicella vaccine was licensed in the United States on March 17, 1995, and is recoinmended for all susceptible persons 1 year of age or older unless medically contraindicated. Routine vaccination is recommended at 12 to 18 months of age. Doses of varicella vaccine delivered to public and private providers in Texas reached 82% of the birth cohort in 1997 and exceeded the birth cohort in 1998 and 1999 (Figure 1).

Figure 1. Varicella Vaccine Doses Delivered to Private and Public Providers, 1995-1999



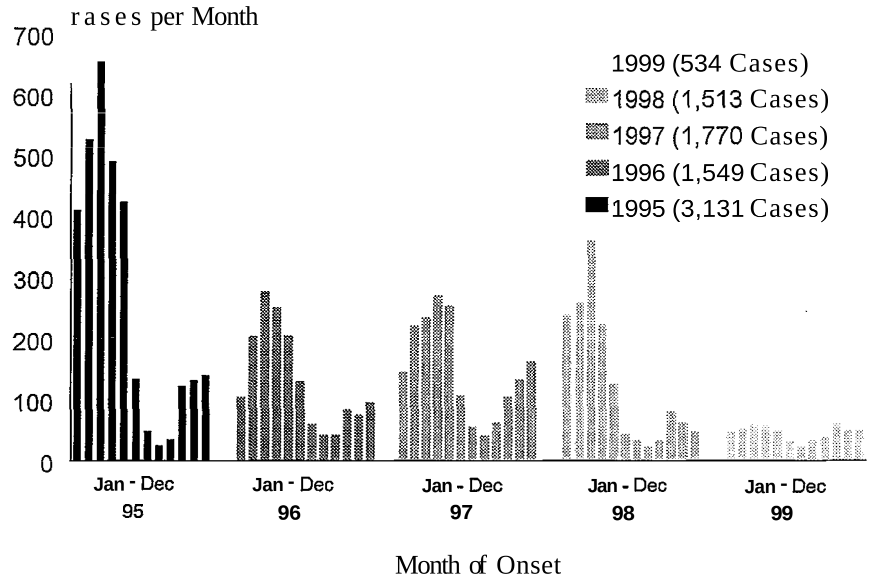
*Birth data not available for 1999 at the time of publication

Chickenpox has been a reportable condition in Texas since 1972. Prior to the introduction of vaccine, the number of cases expected was estimated to equal the birth cohort. Until 1999, the number of cases reported each year through the passive surveillance system averaged about 6% of expected cases. The impact of vaccine on chickenpox morbidity and mortality in Texas was first apparent in 1999 (Figure 2). In 1999, although the number of reporting counties increased slightly, the number of cases reported decreased 64% from the previous year. There was also a significant decline in the number of varicella-related deaths in Texas.

In 1999, no varicella-related deaths were found from review of death certificate data. From 1970 through 1998, an average of 10 varicella-related deaths occurred in Texas each year (range, 2-25). Death reports are obtained by review of death certificate data for codes indicating varicella as an immediate or underlying cause of death.

In 1995 a Varicella Surveillance Project (VSP) was established in Travis County by the Centers for Disease Control and Prevention (CDC). The purpose of this project was to monitor disease trends through active surveillance and epidemiological studies prior to and after licensure of varicella vaccine. Similar projects were established in West Philadelphia, Pennsylvania, and in the Antelope Valley of Los Angeles County, California. The Travis County VSP data show a sharp decrease in the number of chickenpox cases and the number of hospitalizations in 1999 (Figure 3). This decline in incidence has also been apparent in the other VSP areas.

Figure 3. Confirmed Varicella Cases by Month in Travis County, 1995-1999



In 1999 the Travis County VSP confiied 534 cases of chickenpox. A confirmed case was one that met all of the following criteria: the illness met the case definition of chickenpox, the patient resided within Travis County, and an investigation was completed. The number of confirmed cases in 1999 decreased 65% fiom 1998 (1,513) and 83% fiom 1995 (3,131), the first year of the project. In 1999, unlike previous years when incidence increased during the winter and spring, there was no seasonality to disease occurrence in 1999.

The most complete information about the changing epidemiology of varicella in Texas is provided by the detailed case investigation conducted by the Travis County VSP. In each year of the study, most cases of chickenpox occurred in young children, as expected. The mean age each year fiom 1995 to 1999 was 5.2, 5.7, 5.8, 6.4, and 6.4 years, respectively. The modal age group shifted fiom children 3 years of age in 1995, to those 4 years of age in 1996, and 5 years of age in 1997 through 1999. Although the number of cases decreased in all age groups, disease incidence has decreased most rapidly among very young children since the majority of varicella vaccine in Travis County has been administered to children who are 1 year of age. Cases were evenly distributed between the sexes throughout the study period. In 1999, 49% of case-patients were White, 33% were Hispanic, 10% were Black, 1% were Asian/Pacific Islander, and 2% were Other. This distribution was more representative of the county population than the distribution during 1996 through 1998.

Varicella vaccination prior to onset of disease was reported by 108 (20%) of the case-patients in the 1999 Travis County VSP study. Three case-patients were most likely exposed to varicella prior to vaccination, and 105 were classified as breakthrough cases. Although the percentage of case-patients with prior vaccination increased fiom 1998 (7%), the number of breakthrough cases was similar (112). Breakthrough infections were much milder than natural disease. In 1999, case-patients who were not vaccinated prior to exposure were 4 times more likely to have more than 50 chickenpox lesions as compared with vaccinated case-patients (95% CI 2.6-6.3).

In 1999, only 4 of the varicella patients reported to the VSP were hospitalized compared to 8 to 15 cases in the previous study years. The hospitalization rate of confirmed cases in 1999 was 0.7%, which is consistent with the average rate for all years of the study (range, 0.5-1.2). One patient was a 12-day-old premature infant whose mother had rash onset 2 days after the birth. The other 3 previously healthy patients, ages 1 month, 2 years, and 5 years of age, were hospitalized with thrombocytopenia, streptococcus cellulitis, and unspecified cellulitis, respectively.

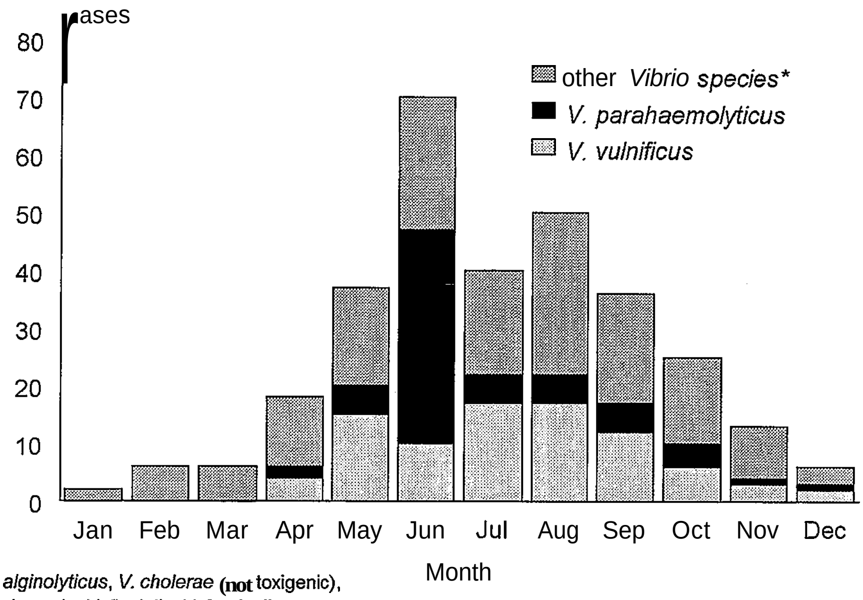
Effective August 1,2000, varicella (chickenpox) vaccination, a history of previous chickenpox illness, or serologic proof of varicella immunity will be required for 2 groups of children attending Texas public and private schools and child-care facilities. Children entering kindergarten and younger children, that is those born on or after September 2, 1994, who are 12 months of age or older will be affected. Older children, those born on or after September 2, 1988, but before September 2, 1994, must meet the requirement by 30 days after their 12th birthday. Students born before September 2, 1988, who lack a reliable history of chickenpox, are strongly encouraged to be vaccinated. Varicella history may be documented by a written statement from a parent or guardian, physician, or school nurse.

***Immunization Division** (512) 458-7284*

Vibriosis

Vibrio bacteria are common organisms of temperate estuaries and saltwater environments. As saltwater organisms, *Vibrio* bacteria are resistant to alkaline environments but are acid sensitive. *Vibrio* spp. die rapidly in solutions below pH 6; therefore, stomach acidity is a key factor in natural resistance to infection. Vibrios require iron to be able to grow. Iron in animal hosts is generally extracted from transferrin. However, in a patient whose liver is impaired, transferrin levels are reduced, thereby increasing the percentage of iron saturation in the blood and potentially leading to exponential growth of this bacteria.' Host immune status therefore plays a key role in susceptibility. Patients with diabetes, liver impairment, iron metabolism abnormalities (hemochromatosis/hemosiderosis), kidney disease, low gastric acid, chronic alcohol abuse, or any illness/medical treatment that results in immune deficiency (eg, cancer, HIV, or steroid use) have a higher risk of developing vibriosis.'-3 Federal surveillance data reports that nationally, 24% of all patients with vibriosis are hospitalized, making it fourth among enteric pathogens in hospitalization rates, after listeriosis (90%), E. *coli* O157:H7 (32%), and yersiniosis (26%).[3]

Figure I - Seasonal Distribution of Vibrio spp. Cases, 1990-1999

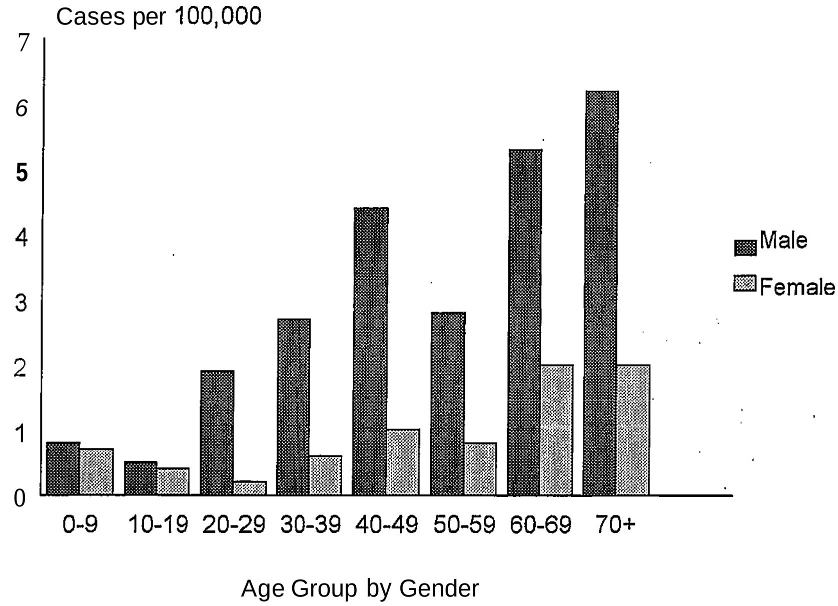


V. alginolyticus, *V. cholerae* (not toxigenic), *V. damsela*, *V. fluvialis*, *V. furnissii*, *V. hollisae*, *V. mimicus*, and unspeciated

Two distinct patterns of disease are seen with vibriosis: gastroenteritis and wound mfections. Gastroenteritis caused by *Vibrio* spp. is usually self-limited in healthy individuals.[4] In contrast, immunocompromised individuals mfected with *V. vulnificus* develop severe infections. Infection in such individuals can be complicated by bacteremia, thrombocytopenia, disseminated intravascular coagulopathy, and hypotension. The mortality rate for septic (ie, bacteremic) individuals is ≥50%; for those who become hypotensive the mortality rate exceeds 90%. Wound infections due to *V. vulnificus* typically present as blisters that may progress to necrotic lesions. In necrotic cases up to 50% require surgical debridement or amputation.[1, 2]

Like many foodborne illnesses, vibriosis exhibits seasonal increases during warmer weather months. This pattern is clearly demonstrated in Texas (Figure 1). Warmer temperatures result in increased concentrations of *Vibrio* spp. in both molluscan shellfish and seawater.[5, 6] Cooler temperatures induce a "cold shock" state in *Vibrio* spp. during which replication halts, and the remaining bacteria become viable but nonculturable (VBNC). Factors inducing this state include changes in light, high/low temperatures, salinity changes, and nutrient deficiency. In *V. vulnificus* the VBNC state is quickly reversed when temperatures are increased. In 1993 the National Shellfish Sanitation Program lowered the temperature holding requirements for oysters not intended for wet storage/depuration to 7.2°C (45°F) until the final sale to the customer.[1, 7]

Figure 2. Vibriosis Incidence Rates, 1990-1999



From 1990 through 1999, 309 laboratory-confirmed cases of vibriosis were reported in Texas. The most commonly identified of the 238 (77%) speciated isolates were *V. vulnificus,* 86 cases (36%); *V. parahaemolyticus* 65 (27%); *V. cholevne* non-01 (not the toxin producing strain of cholera fame), 34 (14%); and *V. fluvialis,* 15 (6%). In 1999, 50 cases of vibriosis were reported in Texas. For the 46 (92%) isolates that were speciated, the most con-mon species mirror those of the last decade: *V. vulnificus* with 15 cases (33%), *V. parahnemolyticus* with 8 (17%), *V. cholerae* non-O1 with 10 cases (22%), and *V. alginolyticus* with 5 (11%). In Texas, gender differences between reported cases were extremely marked (Figure 2). Texas males were 3 times more likely to become ill with vibriosis than were Texas females. This contrasts with 1998 FoodNet data in which males composed slightly more than half (60%) of all cases.[3,4] The gender gap is most pronounced with *V. vulnificus* illness; males were 8 times more likely than females to become ill with this disease. Whether the gender differential is due to dietary, environmental, or other factors is unclear. No conclusions could be drawn about ethnicity as these data are incompletely reported.

The vibriosis incidence rates for the past 10 years show a rising trend ranging from .09 to .32 cases per 100,000 population (mean: .16 cases/100,000). However, it is likely that far more cases occur than are reported. In 1996 an active surveillance system (FoodNet) for 9 foodborne diseases was established in California, Connecticut, Georgia, Maryland, Minnesota, New York, and Oregon. Vibriosis is one of the illnesses for which data are collected.[8] Culture of *Vibrio* spp. requires the use of the selective medium thiosulfate-citrate-bile salts-sucrose agar (TCBS).[5] FoodNet surveillance data indicate that only 20% of stool cultures tested were analyzed for *Vibrio* spp.[9]; the lack of appropriate clinical testing contributes to the underdiagnosis of this condition.

Vibriosis is often associated with consumption of raw or improperly cooked fish, crawfish, shrimp, crabs, clams, or oysters. While investigations have identified many vehicles, the majority of illnesses in the United States have been attributed to the consumption of raw oysters. Since Texas oysters are shipped throughout the United States, they fall under federal regulations that dictate that clusters of vibriosis epidemiologically linked to properly handled molluscan shellfish will lead to closure of the implicated harvesting area. All associated shellfish in distribution will also be recalled.[7] If illnesses are not reported and investigated in a timely manner, the FDA reserves the right to ban all interstate shipments of Texas raw molluscan shellfish.[10] These requirements mean it is essential for public health departments to investigate potential vibriosis cases as soon as possible. Rapid investigation not only serves to reduce the incidence of *Vibrio* spp.-related gastroenteritis nationally, it also ensures that harvesters from areas not associated with illness can continue to market their product.

Preventing vibriosis requires proper food handling techniques: early and proper refrigeration of seafood to <7.2°C (45°F) to inhibit bacterial growth; cooking seafood for 15 minutes at 70°C (158°F) to kill the bacteria; and avoiding cross contamination of prepared foods from either raw seafood or contaminated water.[7] Individuals with conditions that increase their risk for vibriosis should consume only cooked molluscan shellfish and avoid salt water contact if they have open wounds.

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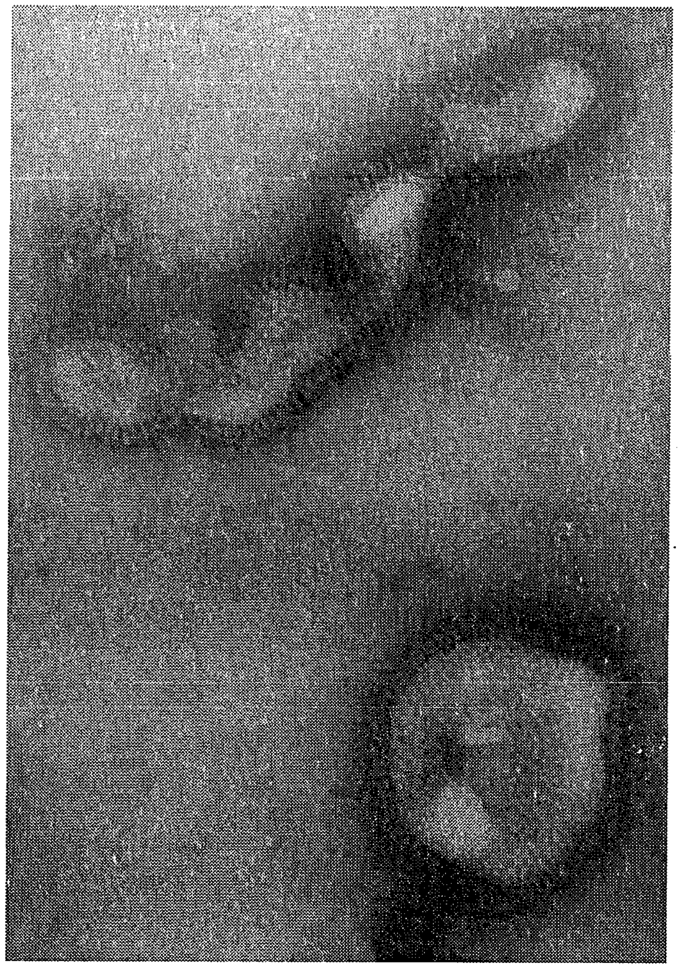
Infectious Disease Epidemiology and Surveillance Division (512) 458-7676

REGIONAL STATISTICAL SUMMARIES



Electron micrograph of influenza virus. Influenza virus causes an acute, highly contagious respiratory infection that, nationwide, is associated with more than 20,000 deaths each year.

REPORTED SELECTED GASTROINTESTINAL DISEASE RATES (CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 1 - 1999

		AMEBIASIS		CAMPYLOBACTERIOSIS		SALMONELLOSIS		SHIGELLOSIS	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
ARMSTRONG	1,977	0	0.0	0	0.0	1	50.6	0	0.0
BAILEY	7,467	0	0.0	2	26.8	2	26.8	4	53.6
BRISCOE	1,916	0	0.0	0	0.0	0	0.0	0	0.0
CARSON	6,436	0	0.0	0	0.0	0	0.0	0	0 0
CASTRO	9,585	0	0.0	1	10.4	3	31.3	1	10.4
CHILDRESS	6,855	0	0 0	3	43.8	0	0 0	2	29.2
COCHRAN	4,826	0	0.0	0	0.0	1	20.7	0	0.0
COLLINGSWORTH	3,394	0	0.0	0	0.0	1	29.5	0	0.0
:F	7,630	0	0.0	2	26.2	4	52.4	14	183.5
DALLAM	5,500	0	0.0	0	0.0	0	0.0	0	0.0
DEAF SMITH	20,166	0	0.0	6	29.8	13	64.5	26	128.9
DICKENS	2,465	0	0.0	0	0.0	2	81.1	2	81.1
DONLEY	3,532	0	0.0	0	0.0	0	0.0	0	0.0
FLOYD	8,809	0	0.0	0	0.0	0	0.0	1	11.4
GARZA	5,302	0	0.0	1	18.9	0	0.0	2	37.7
GRAY	22,683	0	0.0	0	0.0	2	8.8	2	8.8
HA	35,190	0	0.0	0	0.0	8	22.7	2	5.7
HA	3,682	0	0.0	0	0.0	0	0.0	0	0.0
HANSFORD	5,857	0	0.0	0	0.0	0	0.0	1	17.1
HARTLEY	4,877	0	0.0	1	20.5	2	41.0	0	0.0
HEMPHILL	3,660	0	0.0	0	0.0	1	27.3	0	0.0
HOCKLEY	24,555	0	0.0	4	16.3	6	24.4	0	0.0
HUTCHINSON	24,883	0	0.0	0	0.0	11	44.2	15	60.3
KING	381	0	0.0	0	0.0	0	0.0	0	0.0
LAMB	14,663	0	0.0	1	6.8	1	6.8	0	0.0
LIPSCOMB	3,063	0	0.0	0	0.0	0	0.0	0	0.0
LUBBOCK	226,185	0	0.0	39	17.2	36	15.9	41	18.1
LYNN	6,864	0	0.0	0	0.0	1	14.6	0	0.0
MOORE	18,983	0	0.0	1	5.3	2	10.5	3	15.8
MOTLEY	1,438	0	0.0	0	0.0	0	0.0	0	0.0
OCHILTREE	9,110	0	0.0	0	0.0	1	11.0	1	11.0
OLDHAM	2,211	0	0.0	0	0.0	0	0.0	2	90.5
PARMER	10,472	0	0.0	0	0.0	5	47.7	1	9.5
POTTER	106,888	0	0.0	14	13.1	22	20.6	62	58.0
RANDALL	107,723	0	0.0	18	16.7	31	28.8	66	61.3
ROBERTS	1,022	0	0.0	1	97.8	0	0.0	0	0.0
SHERMAN	2,950	0	0.0	0	0.0	1	33.9	0	0.0
SWISHER	8,596	0	0.0	2	23.3	2	23.3	0	0.0
TERRY	13,830	0	0.0	0	0.0	3	21.7	3	21.7
WHEELER	5,396	0	0.0	2	37.1	0	0.0	0	0.0
YOAKUM	9,421	0	0.0	0	0.0	0	0.0	0	0.0
REGIONAL TOTALS	7 K	0	0.0	98	12.7	162	21.0	251	32.6
STATEWIDE TOTALS	19,995,	37	0.2	1,153	5.8	2,198	11.0	281	11.4

REPORTED HEPATITIS RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 1 - 1999

		HEPATITIS A		HEPATITIS B		HEPATITIS C		HEPATITIS UNSPECIFIED	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
ARMSTRONG	1,977	0	0.0	0	0.0	0	0.0	0	0.0
BAILEY	7,467	0	0.0	0	0.0	2	26.8	0	0.0
BRISCOE	1,916	1	52.2	0	0.0	0	0.0	0	0.0
CARSON	6,436	2	31.1	1	15.5	0	0.0	0	0.0
CASTRO	9,585	1	10.4	0	0.0	3	31.3	0	0.0
CHILDRESS	6,855	0	0.0	0	0.0	0	0.0	0	0.0
COCHRAN	4,826	0	0.0	0	0.0	0	0.0	0	0.0
COLLINGSWORTH	3,394	1	29.5	0	0.0	0	0.0	0	0.0
CROSBY	7,630	4	52.4	1	13.1	2	26.2	0	0.0
DALLAM	5,500	0	0.0	0	0.0	0	0.0	0	0.0
DEAF SMITH	20,166	1	5.0	0	0.0	1	5.0	0	0.0
DICKENS	2,465	1	40.6	0	0.0	2	81.1	0	0.0
DONLEY	3,532	0	0.0	0	0.0	0	0.0	0	0.0
FLOYD	8,809	0	0.0	0	0.0	0	0.0	0	0.0
GARZA	5,302	7	132.0	1	18.9	2	37.7	0	0.0
GRAY	22,683	0	0.0	2	8.8	0	0.0	0	0.0
HALE	35,190	2	5.7	3	8.5	33	93.8	0	0.0
HALL	3,682	0	0.0	0	0.0	0	0.0	0	0.0
HANSFORD	5,857	0	0.0	0	0.0	0	0.0	0	0.0
HARTLEY	4,877	0	0.0	0	0.0	0	0.0	0	0.0
HEMPHILL	3,660	1	27.3	0	0.0	0	0.0	0	0.0
HOCKLEY	24,555	1	4.1	4	16.3	3	12.2	0	0.0
HUTCHINSON	24,883	2	8.0	0	0.0	0	0.0	0	0.0
KING	381	0	0.0	0	0.0	0	0.0	0	0.0
LAMB	14,663	6	40.9	0	0.0	4	27.3	0	0.0
LIPSCOMB	3,063	0	0.0	0	0.0	0	0.0	0	0.0
LUBBOCK	226,185	33	14.6	23	10.2	18	8.0	0	0.0
LYNN	6,864	0	0.0	0	0.0	2	29.1	0	0.0
MOORE	18,983	1	5.3	0	0.0	1	5.3	0	0.0
MOTLEY	1,438	0	0.0	0	0.0	0	0.0	0	0.0
OCHILTREE	9,110	0	0.0	0	0.0	0	0.0	0	0.0
OLDHAM	2,211	0	0.0	0	0.0	0	0.0	0	0.0
PARMER	10,472	1	9.5	0	0.0	1	9.5	0	0.0
POTTER	106,888	45	42.1	16	15.0	3	2.8	0	0.0
RANDALL	107,723	4	3.7	5	4.6	2	1.9	0	0.0
ROBERTS	1,022	0	0.0	0	0.0	0	0.0	0	0.0
SHERMAN	2,950	0	0.0	0	0.0	0	0.0	0	0.0
SWISHER	8,596	0	0.0	0	0.0	1	11.6	0	0.0
TERRY	13,830	5	36.2	1	7.2	10	72.3	0	0.0
WHEELER	5,396	1	18.5	0	0.0	0	0.0	0	0.0
YOAKUM	9,421	1	10.6	0	0.0	0	0.0	0	0.0
REGIONAL TOTALS	770,443	121	15.7	57	7.41	90	11.7	0	0.0
STATEWIDE TOTALS	19,995,428	2,516	12.6	864	4.3	359	1.8	2	0.0

REPORTED OTHER SELECTED DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION I - 1999

		ASEPTIC MENINGITIS		CHICKENPOX		ENCEPHALITIS		TUBERCULOSIS	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
ARMSTRONG	1,977	0	0.0	0	0.0	0	0.0	0	0.0
BAILEY	7,467	0	0.0	0	0.0	0	0.0	1	13.4
BRISCOE	1,916	0	0.0	0	0.0	0	0.0	0	0.0
CARSON	6,436	0	0.0	0	0.0	0	0.0	0	0.0
CASTRO	9,585	0	0.0	7	73.0	0	0.0	0	0.0
CHILDRESS	6,855	0	0.0	0	0.0	0	0.0	0	0.0
COCHRAN	4,826	0	0.0	0	0.0	0	0.0	0	0.0
COLLINGSWORTH	3,394	0	0.0	0	0.0	0	0.0	0	0.0
CROSBY	7,630	0	0.0	0	0.0	0	0.0	0	0.0
DALLAM	5,500	0	0.0	0	0.0	0	0.0	2	36.4
DEAF SMITH	20,166	1	5.0	23	114.1	0	0.0	0	0.0
DICKENS	2,465	0	0.0	0	0.0	0	0.0	0	0.0
DONLEY	3,532	0	0.0	0	0.0	0	0.0	0	0.0
FLOYD	8,809	0	0.0	0	0.0	0	0.0	0	0.0
GARZA	5,302	0	0.0	0	0.0	0	0.0	0	0.0
GRAY	22,683	1	4.4	0	0.0	0	0.0	0	0.0
HALE	35,190	0	0.0	0	0.0	0	0.0	2	5.7
HALL	3,682	0	0.0	0	0.0	0	0.0	0	0.0
HANSFORD	5,857	0	0.0	7	119.5	0	0.0	0	0.0
HARTLEY	4,877	0	0.0	0	0.0	0	0.0	0	0.0
HEMPHILL	3,660	0	0.0	0	0.0	0	0.0	0	0.0
HOCKLEY	24,555	1	4.1	3	12.2	0	0.0	1	4.1
HUTCHINSON	24,883	0	0.0	0	0.0	0	0.0	1	4.0
KING	381	0	0.0	0	0.0	0	0.0	0	0.0
LAMB	14,663	0	0.0	0	0.0	0	0.0	0	0.0
LIPSCOMB	3,063	0	0.0	0	0.0	0	0.0	0	0.0
LUBBOCK	226,185	54	23.9	854	377.6	1	0.4	10	4.4
LYNN	6,864	0	0.0	0	0.0	0	0.0	0	0.0
MOORE	18,983	0	0.0	0	0.0	0	0.0	1	5.3
MOTLEY	1,438	0	0.0	0	0.0	0	0.0	0	0.0
OCHILTREE	9,110	0	0.0	0	0.0	0	0.0	1	11.0
OLDHAM	2,211	0	0.0	0	0.0	0	0.0	0	0.0
PARMER	10,472	0	0.0	1	9.5	0	0.0	0	0.0
POTTER	106,888	25	23.4	10	9.4	1	0.9	7	6.5
RANDALL	107,723	13	12.1	0	0.0	0	0.0	1	0.9
ROBERTS	1,022	0	0.0	0	0.0	0	0.0	0	0.0
SHERMAN	2,950	0	0.0	0	0.0	0	0.0	0	0.0
SWISHER	8,596	0	0.0	0	0.0	0	0.0	0	0.0
TERRY	13,830	0	0.0	17	122.9	0	0.0	0	0.0
WHEELER	5,396	0	0.0	0	0.0	0	0.0	0	0.0
YOAKUM	9,421	0	0.0	2	21.2	0	0.0	0	0.0
REGIONAL TOTALS	770,443	95	12.3	924	119.9	2	0.3	27	3.5
STATEWIDE TOTALS	19,995,428	921	4.6	7,473	37.4	27	0.1	1,649	8.2

REPORTED SEXUALLY TRANSMITTED DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 1 - 1999

COUNTY	1999 POP.	CHLAMYDIA CASES	CHLAMYDIA RATES	GONORRHEA CASES	GONORRHEA RATES	P & S SYPHILIS CASES	P & S SYPHILIS RATES
ARMSTRONG	1,977	2	101.2	0	0.0	0	0.0
BAILEY	7,467	31	415.2	10	133.9	0	0.0
BRISCOE	1,916	5	261.0	1	52.2	0	0.0
CARSON	6,436	6	93.2	2	31.1	0	0.0
CASTRO	9,585	41	427.8	12	125.2	0	0.0
CHILDRESS	6,855	18	262.6	5	72.9	0	0.0
COCHRAN	4,826	9	186.5	1	20.7	0	0.0
COLLINGSWORTH	3,394	3	88.4	4	117.9	0	0.0
CROSBY	7,630	31	406.3	16	209.7	0	0.0
DALLAM	5,500	24	436.4	0	0.0	0	0.0
DEAF SMITH	20,166	92	456.2	23	114.1	0	0.0
DICKENS	2,465	9	365.1	3	121.7	0	0.0
DONLEY	3,532	12	339.8	4	113.3	0	0.0
FLOYD	8,809	19	215.7	3	34.1	0	0.0
GARZA	5,302	12	226.3	3	56.6	0	0.0
GRAY	22,683	51	224.8	22	97.0	0	0.0
HALE	35,190	187	531.4	45	127.9	0	0.0
HALL	3,682	8	217.3	2	54.3	0	0.0
HANSFORD	5,857	8	136.6	0	0.0	0	0.0
HARTLEY	4,877	1	20.5	1	20.5	0	0.0
HEMPHILL	3,660	7	191.3	2	54.6	0	0.0
HOCKLEY	24,555	93	378.7	38	154.8	0	0.0
HUTCHINSON	24,883	64	257.2	26	104.5	0	0.0
KING	381	0	0.0	0	0.0	0	0.0
LAMB	14,663	73	497.9	30	204.6	0	0.0
LIPSCOMB	3,063	0	0.0	0	0.0	0	0.0
LUBBOCK	226,185	1,308	578.3	801	354.1	1	0.4
LYNN	6,864	20	291.4	5	72.8	0	0.0
MOORE	18,983	66	347.7	4	21.1	0	0.0
MOTLEY	1,438	0	0.0	0	0.0	0	0.0
OCHILTREE	9,110	17	186.6	0	0.0	0	0.0
OLDHAM	2,211	3	135.7	0	0.0	0	0.0
PARMER	10,472	22	210.1	1	9.5	0	0.0
POTTER	106,888	663	620.3	346	323.7	1	0.9
RANDALL	107,723	195	181.0	68	63.1	0	0.0
ROBERTS	1,022	0	0.0	1	97.8	0	0.0
SHERMAN	2,950	3	101.7	0	0.0	0	0.0
SWISHER	8,596	34	395.5	9	104.7	0	0.0
TERRY	13,830	60	433.8	28	202.5	0	0.0
WHEELER	5,396	6	111.2	1	18.5	0	0.0
YOAKUM	9,421	17	180.4	5	53.1	0	0.0
REGIONAL TOTALS	**770,443**	**3,220**	**417.9**	**1,522**	**197.5**	**2**	**0.3**
STATEWIDE TOTALS	**19,995,428**	**63,526**	**317.7**	**32,680**	**163.4**	**459**	**2.3**

REPORTED AIDS & HIV INFECTION RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 1 - 1999

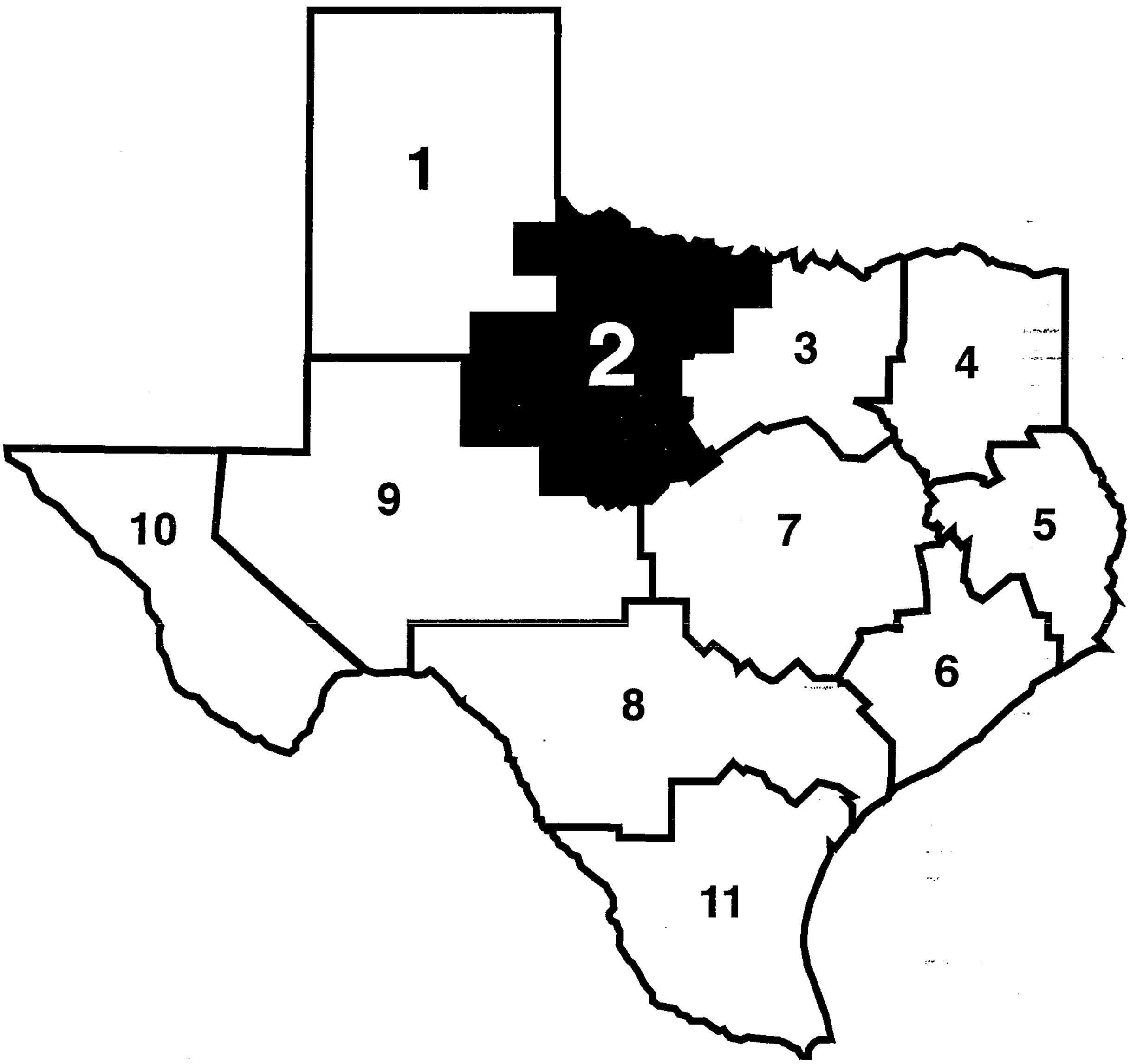
		AIDS		HIV INFECTION	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES
ARMSTRONG	1,977	0	0.0	0	0.0
BAILEY	7,467	0	0.0	0	0.0
BRISCOE	1,916	0	0.0	0	0.0
CARSON	6,436	0	0.0	0	0.0
CASTRO	9,585	0	0.0	0	0.0
CHILDRESS	6,855	0	0.0	0	0.0
COCHRAN	4,826	0	0.0	0	0.0
COLLINGSWORTH	3,394	0	0.0	0	0.0
CROSBY	7,630	0	0.0	0	0.0
DALLAM	5,500	3	54.5	0	0.0
DEAF SMITH	20,166	0	0.0	0	0.0
DICKENS	2,465	0	0.0	0	0.0
DONLEY	3,532	0	0.0	0	0.0
FLOYD	8,809	0	0.0	0	0.0
GARZA	5,302	1	18.9	0	0.0
GRAY	22,683	0	0.0	0	0.0
HALE	35,190	1	2.8	1	2.8
HALL	3,682	0	0.0	0	0.0
HANSFORD	5,857	0	0.0	0	0.0
HARTLEY	4,877	0	0.0	0	0.0
HEMPHILL	3,660	0	0.0	0	0.0
HOCKLEY	24,555	0	0.0	0	0.0
HUTCHINSON	24,883	2	8.0	0	0.0
KING	381	0	0.0	0	0.0
LAMB	14,663	0	0.0	0	0.0
LIPSCOMB	3,063	0	0.0	0	0.0
LUBBOCK	226,185	40	17.7	39	17.2
LYNN	6,864	0	0.0	1	14.6
MOORE	18,983	1	5.3	1	5.3
MOTLEY	1,438	0	0.0	0	0.0
OCHILTREE	9,110	0	0.0	1	11.0
OLDHAM	2,211	0	0.0	0	0.0
PARMER	10,472	0	0.0	0	0.0
POTTER	106,888	20	18.7	7	6.5
RANDALL	107,723	3	2.8	2	1.9
ROBERTS	1,022	0	0.0	0	0.0
SHERMAN	2,950	0	0.0	0	0.0
SWISHER	8,596	0	0.0	0	0.0
TERRY	13,830	0	0.0	0	0.0
WHEELER	5,396	0	0.0	0	0.0
YOAKUM	9,421	1	10.6	0	0.0
REGIONAL TOTALS	770,443	72	9.3	52	6.7
STATEWIDE TOTALS	19,995,428	2,865	14.3	2,873	14.4

REPORTED VACCINE-PREVENTABLEDISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 1 - 1999

		MEASLES		MUMPS		PERTUSSIS		RUBELLA	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
ARMSTRONG	1,977	0	0.0	0	0.0	0	0.0	0	0.0
BAILEY	7,467	0	0.0	0	0.0	0	0.0	0	0.0
BRISCOE	1,916	0	0.0	0	0.0	0	0.0	0	0.0
CARSON	6,436	0	0.0	0	0.0	0	0.0	0	0.0
CASTRO	9,585	0	0.0	0	0.0	0	0.0	0	0.0
CHILDRESS	6,855	0	0.0	0	0.0	0	0.0	0	0.0
COCHRAN	4,826	0	0.0	0	0.0	0	0.0	0	0.0
COLLINGSWORTH	3,394	0	0.0	0	0.0	0	0.0	0	0.0
CROSBY	7,630	0	0.0	0	0.0	0	0.0	0	0.0
DALLAM	5,500	0	0.0	0	0.0	0	0.0	0	0.0
DEAF SMITH	20,166	0	0.0	0	0.0	0	0.0	0	0.0
DICKENS	2,465	0	0.0	0	0.0	0	0.0	0	0.0
DONLEY	3,532	0	0.0	0	0.0	5	141.6	0	0.0
FLOYD	8,809	0	0.0	0	0.0	0	0.0	0	0.0
GARZA	5,302	0	0.0	0	0.0	0	0.0	0	0.0
GRAY	22,683	0	0.0	0	0.0	0	0.0	0	0.0
HALE	35,190	0	0.0	0	0.0	0	0.0	0	0.0
HALL	3,682	0	0.0	0	0.0	0	0.0	0	0.0
HANSFORD	5,857	0	0.0	0	0.0	0	0.0	0	0.0
HARTLEY	4,877	0	0.0	0	0.0	0	0.0	0	0.0
HEMPHILL	3,660	0	0.0	0	0.0	0	0.0	0	0.0
HOCKLEY	24,555	0	0.0	0	0.0	1	4.1	0	0.0
HUTCHINSON	24,883	0	0.0	0	0.0	0	0.0	0	0.0
KING	381	0	0.0	0	0.0	0	0.0	0	0.0
LAMB	14,663	0	0.0	0	0.0	0	0.0	0	0.0
LIPSCOMB	3,063	0	0.0	0	0.0	0	0.0	0	0.0
LUBBOCK	226,185	0	0.0	1	0.4	5	2.2	0	0.0
LYNN	6,864	0	0.0	0	0.0	0	0.0	0	0.0
MOORE	18,983	0	0.0	0	0.0	0	0.0	0	0.0
MOTLEY	1,438	0	0.0	0	0.0	0	0.0	0	0.0
OCHILTREE	9,110	0	0.0	0	0.0	0	0.0	0	0.0
OLDHAM	2,211	0	0.0	0	0.0	0	0.0	0	0.0
PARMER	10,472	0	0.0	0	0.0	0	0.0	0	0.0
POTTER	106,888	0	0.0	1	0.9	1	0.9	0	0.0
RANDALL	107,723	0	0.0	0	0.0	0	0.0	0	0.0
ROBERTS	1,022	0	0.0	0	0.0	0	0.0	0	0.0
SHERMAN	2,950	0	0.0	0	0.0	0	0.0	0	0.0
SWISHER	8,596	0	0.0	0	0.0	0	0.0	0	0.0
TERRY	13,830	0	0.0	0	0.0	0	0.0	0	0.0
WHEELER	5,396	0	0.0	0	0.0	0	0.0	0	0.0
YOAKUM	9,421	0	0.0	0	0.0	0	0.0	0	0.0
REGIONAL TOTALS	**770,443**	**0**	**0.0**	**2**	**0.3**	**12**	**1.6**	**0**	**0.0**
STATEWIDE TOTALS	**19,995 428**	**7**	**0.0**	**35**	**0.2**	**152**	**0.8**	**9**	**0.0**

Public Health Region 2



REPORTED SELECTED GASTROINTESTINAL DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 2 - 1999

		AMEBIASIS		CAMPYLOBACTERIOSIS		SALMONELLOSIS		SHIGELLOSIS	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
ARCHER	8,321	0	0.0	0	0.0	2	24.0	0	0.0
BAYLOR	4,126	0	0.0	0	0.0	2	48.5	0	0.0
BROWN	34,075	0	0.0	0	0.0	0	0.0	0	0.0
CALLAHAN	11,905	0	0.0	0	0.0	3	25.2	0	0.0
CLAY	9,957	0	0.0	0	0.0	0	0.0	0	0.0
COLEMAN	9,246	0	0.0	0	0.0	0	0.0	1	10.8
COMANCHE	13,188	0	0.0	0	0.0	0	0.0	0	0.0
COTTLE	2,135	0	0.0	0	0.0	0	0.0	0	0.0
EASTLAND	17,565	0	0.0	0	0.0	2	11.4	0	0.0
FISHER	4,660	0	0.0	0	0.0	3	64.4	6	128.8
FOARD	1,692	0	0.0	0	0.0	0	0.0	0	0.0
HARDEMAN	5,012	0	0.0	0	0.0	0	0.0	0	0.0
HASKELL	6,557	0	0.0	0	0.0	0	0.0	0	0.0
JACK	6,850	0	0.0	0	0.0	1	14.6	0	0.0
JONES	18,968	0	0.0	0	0.0	4	21.1	2	10.5
KENT	995	0	0.0	0	0.0	0	0.0	0	0.0
KNOX	4,731	0	0.0	1	21.1	4	84.5	1	21.1
MITCHELL	9,128	0	0.0	0	0.0	1	11.0	1	11.0
MONTAGUE	16,074	0	0.0	0	0.0	3	18.7	0	0.0
NOLAN	16,995	0	0.0	0	0.0	3	17.7	7	41.2
RUNNELS	11,423	0	0.0	2	17.5	1	8.8	2	17.5
SCURRY	19,271	0	0.0	1	5.2	1	5.2	1	5.2
SHACKELFORD	3,165	0	0.0	0	0.0	0	0.0	0	0.0
STEPHENS	9,069	0	0.0	0	0.0	0	0.0	0	0.0
STONEWALL	1,951	0	0.0	0	0.0	0	0.0	0	0.0
TAYLOR	124,333	1	0.8	1	0.8	24	19.3	67	53.9
THROCKMORTON	1,809	0	0.0	0	0.0	1	55.3	0	0.0
WICHITA	128,063	0	0.0	3	2.3	21	16.4	1	0.8
WILBARGER	15,300	0	0.0	0	0.0	0	0.0	0	0.0
YOUNG	17,069	0	0.0	0	0.0	1	5.9	1	5.9
REGIONAL TOTALS	533,633	1	0.2	8	1.51	77	14.4	90	16.9
STATEWIDE TOTALS	19,995,428	37	0.2	1,153	5.8	2,198	11.0	2,281	11.4

REPORTED HEPATITIS RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 2 - 1999

		HEPATITIS A		HEPATITIS B		HEPATITIS C		HEPATITIS UNSPECIFIED	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
ARCHER	8,321	1	12.0	0	0.0	0	0.0	0	0.0
BAYLOR	4,126	0	0.0	0	0.0	0	0.0	0	0.0
BROWN	34,075	2	5.9	1	2.9	2	5.9	0	0.0
CALLAHAN	11,905	2	16.8	0	0.0	1	8.4	0	0.0
CLAY	9,957	0	0.0	1	10.0	0	0.0	0	0.0
COLEMAN	9,246	0	0.0	0	0.0	0	0.0	0	0.0
COMANCHE	13,188	3	22.7	0	0.0	0	0.0	0	0.0
COTTLE	2,135	2	93.7	0	0.0	0	0.0	0	0.0
EASTLAND	17,565	77	438.4	1	5.7	0	0.0	0	0.0
FISHER	4,660	0	0.0	0	0.0	1	21.5	0	0.0
FOARD	1,692	0	0.0	0	0.0	0	0.0	0	0.0
HARDEMAN	5,012	0	0.0	0	0.0	0	0.0	0	0.0
HASKELL	6,557	0	0.0	0	0.0	0	0.0	0	0.0
JACK	6,850	3	43.8	0	0.0	0	0.0	0	0.0
JONES	18,968	0	0.0	1	5.3	1	5.3	0	0.0
KENT	995	0	0.0	0	0.0	0	0.0	0	0.0
KNOX	4,731	0	0.0	0	0.0	0	0.0	0	0.0
MITCHELL	9,128	1	11.0	0	0.0	2	21.9	0	0.0
MONTAGUE	16,074	18	112.0	2	12.4	0	0.0	0	0.0
NOLAN	16,995	1	5.9	0	0.0	0	0.0	0	0.0
RUNNELS	11,423	0	0.0	0	0.0	0	0.0	0	0.0
SCURRY	19,271	2	10.4	0	0.0	4	20.8	0	0.0
SHACKELFORD	3,165	2	63.2	0	0.0	1	31.6	0	0.0
STEPHENS	9,069	1	11.0	1	11.0	1	11.0	0	0.0
STONEWALL	1,951	0	0.0	0	0.0	0	0.0	0	0.0
TAYLOR	124,333	66	53.1	10	8.0	8	6.4	0	0.0
THROCKMORTON	1,809	1	55.3	0	0.0	0	0.0	0	0.0
WICHITA	128,063	9	7.0	5	3.9	0	0.0	0	0.0
WILBARGER	15,300	0	0.0	0	0.0	1	6.5	0	0.0
YOUNG	17,069	4	23.4	0	0.0	1	5.9	0	0.0
N/ TC	533,633	195	36.5	22	4.1	23	4.3	0	0.0
STATEWIDE TOTALS	19,995,428	2,516	12.6	864	4.3	359	1.8	2	0.0

REPORTED OTHER SELECTED DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 2 - 1999

		ASEPTIC MENINGITIS		CHICKENPOX		ENCEPHALITIS		TUBERCULOSIS	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
ARCHER	8,321	0	0.0	8	96.1	0	0.0	0	0.0
BAYLOR	4,126	1	24.2	0	0.0	0	0.0	1	24.2
BROWN	34,075	0	0.0	0	0.0	0	0.0	1	2.9
CALLAHAN	11,905	0	0.0	0	0.0	0	0.0	0	0.0
CLAY	9,957	0	0.0	0	0.0	0	0.0	0	0.0
COLEMAN	9,246	0	0.0	0	0.0	0	0.0	0	0.0
COMANCHE	13,188	0	0.0	22	166.8	0	0.0	0	0.0
COTTLE	2,135	0	0.0	0	0.0	0	0.0	0	0.0
EASTLAND	17,565	1	5.7	5	28.5	0	0.0	0	0.0
FISHER	4,660	0	0.0	3	64.4	0	0.0	0	0.0
FOARD	1,692	0	0.0	1	59.1	0	0.0	0	0.0
HARDEMAN	5,012	0	0.0	0	0.0	0	0.0	1	20.0
HASKELL	6,557	0	0.0	0	0.0	0	0.0	1	15.3
JACK	6,850	0	0.0	0	0.0	0	0.0	0	0.0
JONES	18,968	0	0.0	2	10.5	0	0.0	0	0.0
KENT	995	1	100.5	0	0.0	0	0.0	0	0.0
KNOX	4,731	0	0.0	0	0.0	0	0.0	0	0.0
MITCHELL	9,128	0	0.0	0	0.0	0	0.0	1	11.0
MONTAGUE	16,074	0	0.0	23	143.1	0	0.0	0	0.0
NOLAN	16,995	0	0.0	1	5.9	0	0.0	1	5.9
RUNNELS	11,423	0	0.0	0	0.0	0	0.0	0	0.0
SCURRY	19,271	0	0.0	3	15.6	0	0.0	1	5.2
SHACKELFORD	3,165	0	0.0	0	0.0	0	0.0	0	0.0
STEPHENS	9,069	1	11.0	2	22.1	0	0.0	0	0.0
STONEWALL	1,951	0	0.0	0	0.0	0	0.0	0	0.0
TAYLOR	124,333	9	7.2	30	24.1	0	0.0	4	3.2
THROCKMORTON	1,809	0	0.0	0	0.0	0	0.0	0	0.0
WICHITA	128,063	18	14.1	19	14.8	0	0.0	11	8.6
WILBARGER	15,300	1	6.5	0	0.0	0	0.0	1	6.5
YOUNG	17,069	3	17.6	29	169.9	0	0.0	0	0.0
REGIONAL TOTALS	533,633	35	-6.61	148	27.7	0	0.0	23	4.3
STATEWIDE TOTALS	~19,995,428	921	4.6	7,473	37.4	27	0.1	1,649	8.2

REPORTED SEXUALLY TRANSMITTED DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 2 - 1999

COUNTY	1999 POP.	CHLAMYDIA CASES	CHLAMYDIA RATES	GONORRHEA CASES	GONORRHEA RATES	P & S SYPHILIS CASES	P & S SYPHILIS RATES
ARCHER	8,321	4	48.1	0	0.0	0	0.0
BAYLOR	4,126	11	266.6	1	24.2	0	0.0
BROWN	34,075	57	167.3	36	105.6	1	2.9
CALLAHAN	11,905	14	117.6	6	50.4	0	0.0
CLAY	9,957	3	30.1	0	0.0	0	0.0
COLEMAN	9,246	13	140.6	2	21.6	0	0.0
COMANCHE	13,188	21	159.2	3	22.7	0	0.0
COTTLE	2,135	4	187.4	0	0.0	0	0.0
EASTLAND	17,565	17	96.8	6	34.2	0	0.0
FISHER	4,660	5	107.3	1	21.5	0	0.0
FOARD	1,692	0	0.0	0	0.0	0	0.0
HARDEMAN	5,012	6	119.7	2	39.9	0	0.0
HASKELL	6,557	21	320.3	7	106.8	0	0.0
JACK	6,850	11	160.6	1	14.6	0	0.0
JONES	18,968	29	152.9	13	68.5	0	0.0
KENT	995	1	100.5	0	0.0	0	0.0
KNOX	4,731	9	190.2	3	63.4	0	0.0
MITCHELL	9,128	9	98.6	1	11.0	0	0.0
MONTAGUE	16,074	9	56.0	0	0.0	0	0.0
NOLAN	16,995	106	623.7	24	141.2	0	0.0
RUNNELS	11,423	33	288.9	4	35.0	0	0.0
SCURRY	19,271	78	404.8	15	77.8	0	0.0
SHACKELFORD	3,165	1	31.6	0	0.0	0	0.0
STEPHENS	9,069	19	209.5	2	22.1	0	0.0
STONEWALL	1,951	4	205.0	0	0.0	0	0.0
TAYLOR	124,333	542	435.9	284	228.4	0	0.0
THROCKMORTON	1,809	0	0.0	0	0.0	0	0.0
WICHITA	128,063	394	307.7	184	143.7	7	5.5
WILBARGER	15,300	51	333.3	20	130.7	1	6.5
YOUNG	17,069	15	87.9	2	11.7	0	0.0
REGIONAL TOTALS	**533,633**	**1,487**	**278.7**	**617**	**115.61**	**9**	**1.7**
STATEWIDE TOTALS~	**19,995,428**	**62,526**	**312.7**	**32,680**	**163.4**	**459**	**'2.3**

REPORTED AIDS & HIV INFECTION RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 2 - 1999

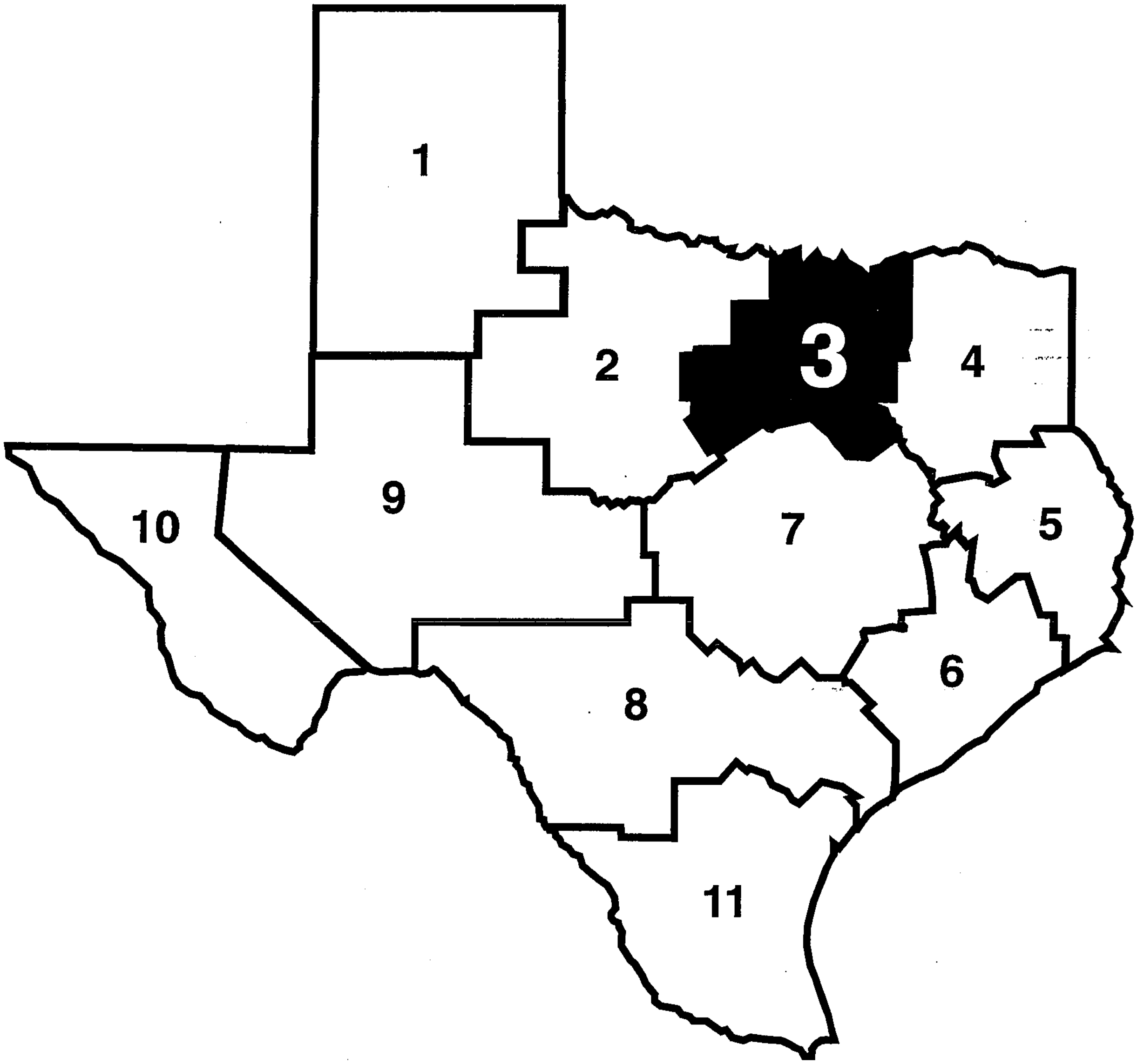
COUNTY	1999 POP.	AIDS CASES	AIDS RATES	HIV INFECTION CASES	HIV INFECTION RATES
ARCHER	8,321	0	0.0	0	0.0
BAYLOR	4,126	0	0.0	0	0.0
BROWN	34,075	1	2.9	2	5.9
CALLAHAN	11,905	0	0.0	0	0.0
CLAY	9,957	0	0.0	0	0.0
COLEMAN	9,246	1	10.8	0	0.0
COMANCHE	13,188	1	7.6	1	7.6
COTTLE	2,135	0	0.0	0	0.0
EASTLAND	17,565	2	11.4	1	5.7
FISHER	4,660	0	0.0	1	21.5
FOARD	1,692	0	0.0	0	0.0
HARDEMAN	5,012	1	20.0	1	20.0
HASKELL	6,557	0	0.0	0	0.0
JACK	6,850	2	29.2	0	0.0
JONES	18,968	0	0.0	0	0.0
KENT	995	0	0.0	0	0.0
KNOX	4,731	0	0.0	0	0.0
MITCHELL	9,128	0	0.0	0	0.0
MONTAGUE	16,074	1	6.2	1	6.2
NOLAN	16,995	1	5.9	0	0.0
RUNNELS	11,423	0	0.0	0	0.0
SCURRY	19,271	0	0.0	0	0.0
SHACKELFORD	3,165	0	0.0	0	0.0
STEPHENS	9,069	0	0.0	0	0.0
STONEWALL	1,951	0	0.0	0	0.0
TAYLOR	124,333	9	7.2	6	4.8
THROCKMORTON	1,809	0	0.0	0	0.0
WICHITA	128,063	13	10.2	15	11.7
WILBARGER	15,300	2	13.1	3	19.6
YOUNG	17,069	0	0.0	0	0.0
REGIONAL TOTALS	**533,633**	**34**	**6.4**	**31**	**5.8**
STATEWIDE TOTALS	**19,995,428**	**2,865**	**14.3**	**2,873**	**14.4**

REPORTED VACCINE-PREVENTABLE DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 2 - 1999

		MEASLES		MUMPS		PERTUSSIS		RUBELLA	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
ARCHER	8,321	0	0.0	0	0.0	0	0.0	0	0.0
BAYLOR	4,126	0	0.0	0	0.0	0	0.0	0	0.0
BROWN	34,075	0	0.0	0	0.0	0	0.0	0	0.0
CALLAHAN	11,905	0	0.0	0	0.0	0	0.0	0	0.0
CLAY	9,957	0	0.0	0	0.0	0	0.0	0	0.0
COLEMAN	9,246	0	0.0	0	0.0	0	0.0	0	0.0
COMANCHE	13,188	0	0.0	0	0.0	0	0.0	0	0.0
COTTLE	2,135	0	0.0	0	0.0	0	0.0	0	0.0
EASTLAND	17,565	0	0.0	0	0.0	0	0.0	0	0.0
FISHER	4,660	0	0.0	0	0.0	0	0.0	0	0.0
FOARD	1,692	0	0.0	0	0.0	0	0.0	0	0.0
HARDEMAN	5,012	0	0.0	0	0.0	0	0.0	0	0.0
HASKELL	6,557	0	0.0	0	0.0	0	0.0	0	0.0
JACK	6,850	0	0.0	0	0.0	0	0.0	0	0.0
JONES	18,968	0	0.0	0	0.0	0	0.0	0	0.0
KENT	995	0	0.0	0	0.0	0	0.0	0	0.0
KNOX	4,731	0	0.0	0	0.0	0	0.0	0	0.0
MITCHELL	9,128	0	0.0	0	0.0	0	0.0	0	0.0
MONTAGUE	16,074	0	0.0	0	0.0	1	6.2	0	0.0
NOLAN	16,995	0	0.0	0	0.0	0	0.0	0	0.0
RUNNELS	11,423	0	0.0	0	0.0	1	8.8	0	0.0
SCURRY	19,271	0	0.0	0	0.0	0	0.0	0	0.0
SHACKELFORD	3,165	0	0.0	0	0.0	0	0.0	0	0.0
STEPHENS	9,069	0	0.0	0	0.0	0	0.0	0	0.0
STONEWALL	1,951	0	0.0	0	0.0	0	0.0	0	0.0
TAYLOR	124,333	0	0.0	0	0.0	0	0.0	0	0.0
THROCKMORTON	1,809	0	0.0	0	0.0	0	0.0	0	0.0
WICHITA	128,063	0	0.0	0	0.0	1	0.8	0	0.0
WILBARGER	15,300	0	0.0	0	0.0	0	0.0	0	0.0
YOUNG	17,069	0	0.0	0	0.0	0	0.0	0	0.0
REGIONAL TOTALS	**533,633**	**0**	**0.0**	**0**	**0.0**	**3**	**0.6**	**0**	**0.0**
STATEWIDE TOTALS	**19,995,428**	**7**	**0.0**	**35**	**0.2**	**152**	**0.8**	**9**	**0.0**

Public Health Region 3



REPORTED SELECTED GASTROINTESTINAL DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 3 - 1999

		AMEBIASIS		CAMPYLOBACTERIOSIS		SALMONELLOSIS		SHIGELLOSIS	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
COLLIN	412,131	0	0.0	11	2.7	36	8.7	32	7.8
COOKE	32,391	0	0.0	0	0.0	1	3.1	5	15.4
DALLAS	2,172,486	0	0.0	115	5.3	142	6.5	223	10.3
DENTON	400,525	0	0.0	8	2.0	41	10.2	17	4.2
ELLIS	118,619	0	0.0	6	5.1	13	11.0	9	7.6
ERATH	30,878	0	0.0	1	3.2	1	3.2	0	0.0
FANNIN	25,844	0	0.0	1	3.9	5	19.3	0	0.0
GRAYSON	97,164	0	0.0	5	5.1	19	19.6	3	3.1
HOOD	41,511	0	0.0	2	4.8	1	2.4	0	0.0
HUNT	72,522	0	0.0	0	0.0	3	4.1	4	5.5
JOHNSON	134,298	0	0.0	3	2.2	8	6.0	4	3.0
KAUFMAN	70,384	0	0.0	1	1.4	6	8.5	7	9.9
NAVARRO	43,829	0	0.0	4	9.1	2	4.6	1	2.3
PALO PINTO	26,872	0	0.0	0	0.0	1	3.7	2	7.4
PARKER	91,916	0	0.0	0	0.0	3	3.3	3	3.3
ROCKWALL	39,410	0	0.0	1	2.5	4	10.1	6	15.2
SOMERVELL	6,391	0	0.0	2	31.3	1	15.6	0	0.0
TARRANT	1,506,790	1	0.1	42	2.8	65	4.3	78	5.2
WISE	42,047	0	0.0	1	2.4	7	16.6	3	7.1
REGIONAL TOTALS	5,366,008	1	0.0	203	3.8	359	6.7	397	7.4
STATEWIDE TOTALS	19,995,428	37	0.2	1,153	5.8	2,198	11.0	2,281	11.4

REPORTED HEPATITIS RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 3 - 1999

		HEPATITIS A		HEPATITIS B		HEPATITIS C		HEPATITIS UNSPECIFIED	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
COLLIN	412,131	30	7.3	30	7.3	7	1.7	0	0.0
COOKE	32,391	11	34.0	0	0.0	0	0.0	0	0.0
DALLAS	2,172,486	75	3.5	219	10.1	6	0.3	0	0.0
DENTON	400,525	53	13.2	5	1.2	0	0.0	0	0.0
ELLIS	118,619	30	25.3	5	4.2	0	0.0	0	0.0
ERATH	30,878	4	13.0	1	3.2	1	3.2	0	0.0
FANNIN	25,844	3	11.6	3	11.6	0	0.0	0	0.0
GRAYSON	97,164	34	35.0	11	11.3	1	1.0	0	0.0
HOOD	41,511	5	12.0	2	4.8	0	0.0	0	0.0
HUNT	72,522	1	1.4	6	8.3	0	0.0	0	0.0
JOHNSON	134,298	9	6.7	7	5.2	0	0.0	0	0.0
KAUFMAN	70,384	10	14.2	5	7.1	0	0.0	0	0.0
NAVARRO	43,829	5	11.4	4	9.1	0	0.0	0	0.0
PALO PINTO	26,872	13	48.4	2	7.4	0	0.0	0	0.0
PARKER	91,916	17	18.5	2	2.2	0	0.0	0	0.0
ROCKWALL	39,410	2	5.1	0	0.0	0	0.0	0	0.0
SOMERVELL	6,391	1	15.6	0	0.0	0	0.0	0	0.0
TARRANT	1,506,790	90	6.0	73	4.8	3	0.2	0	0.0
WISE	42,047	15	35.7	2	4.8	1	2.4	0	0.0
REGIONAL TOTALS	5,366,008	408	7.6	377	7.0	19	0.4	0	0.0
STATEWIDE TOTALS	19,995,428	2,516	12.6	864	4.3	359	1.8	2	0.0

REPORTED OTHER SELECTED DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 3 - 1999

		ASEPTIC MENINGITIS		CHICKENPOX		ENCEPHALITIS		TUBERCULOSIS	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
COLLIN	412,131	7	1.7	165	40.0	0	0.0	7	1.7
COOKE	32,391	1	3.1	0	0.0	0	0.0	0	0.0
DALLAS	2,172,486	154	7.1	1,774	81.7	1	0.0	228	10.5
DENTON	400,525	15	3.7	37	9.2	0	0.0	8	2.0
ELLIS	118,619	6	5.1	60	50.6	0	0.0	3	2.5
ERATH	30,878	0	0.0	14	45.3	2	6.5	1	3.2
FANNIN	25,844	2	7.7	0	0.0	0	0.0	0	0.0
GRAYSON	97,164	9	9.3	32	32.9	0	0.0	4	4.1
HOOD	41,511	1	2.4	29	69.9	0	0.0	2	4.8
HUNT	72,522	0	0.0	7	9.7	0	0.0	4	5.5
JOHNSON	134,298	2	1.5	29	21.6	0	0.0	5	3.7
KAUFMAN	70,384	9	12.8	84	119.3	0	0.0	2	2.8
NAVARRO	43,829	1	2.3	38	86.7	0	0.0	1	2.3
PALO PINTO	26,872	1	3.7	21	78.1	0	0.0	2	7.4
PARKER	91,916	6	6.5	38	41.3	0	0.0	1	1.1
ROCKWALL	39,410	1	2.5	2	5.1	0	0.0	0	0.0
SOMERVELL	6,391	0	0.0	0	0.0	0	0.0	0	0.0
TARRANT	1,506,790	79	5.2	47	3.1	0	0.0	109	7.2
WISE	42,047	0	0.0	0	0.0	0	0.0	2	4.8
REGIONAL TOTALS	5,366,008	294	5.5	2,377	44.3	3	0.1	379	7.1
STATEWIDE TOTALS	19,995,428	921	4.6	7,473	37.4	27	0.1	1,649	8.2

REPORTED SEXUALLY TRANSMITTED DISEASE RATES (CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 3 - 1999

		CHLAMYDIA		GONORRHEA		P & S SYPHILIS	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES
COLLIN	412,131	452	109.7	213	51.7	1	0.2
COOKE	32,391	44	135.8	25	77.2	0	0.0
DALLAS	2,172,486	9,357	430.7	7,471	343.9	144	6.6
DENTON	400,525	496	123.8	147	36.7	1	0.2
ELLIS	118,619	202	170.3	104	87.7	2	1.7
ERATH	30,878	69	223.5	10	32.4	0	0.0
FANNIN	25,844	69	267.0	28	108.3	0	0.0
GRAYSON	97,164	274	282.0	139	143.1	1	1.0
HOOD	41,511	32	77.1	9	21.7	0	0.0
HUNT	72,522	160	220.6	116	160.0	0	0.0
JOHNSON	134,298	142	105.7	58	43.2	0	0.0
KAUFMAN	70,384	136	193.2	79	112.2	0	0.0
NAVARRO	43,829	184	419.8	98	223.6	0	0.0
PALO PINTO	26,872	41	152.6	4	14.9	0	0.0
PARKER	91,916	68	74.0	19	20.7	0	0.0
ROCKWALL	39,410	23	58.4	12	30.4	0	0.0
SOMERVELL	6,391	6	93.9	2	31.3	0	0.0
TARRANT	1,506,790	3,729	247.5	2,783	184.7	20	1.3
WISE	42,047	42	99.9	12	28.5	1	2.4
REGIONAL TOTALS	5,366,008	15,526	289.3	11,329	211.1	170	3.2
STATEWIDE TOTALS~	19,995,428	62,526	312.7	32,680	163.4	459	2.3

REPORTED AIDS & HIV INFECTION RATES (CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 3 - 1999

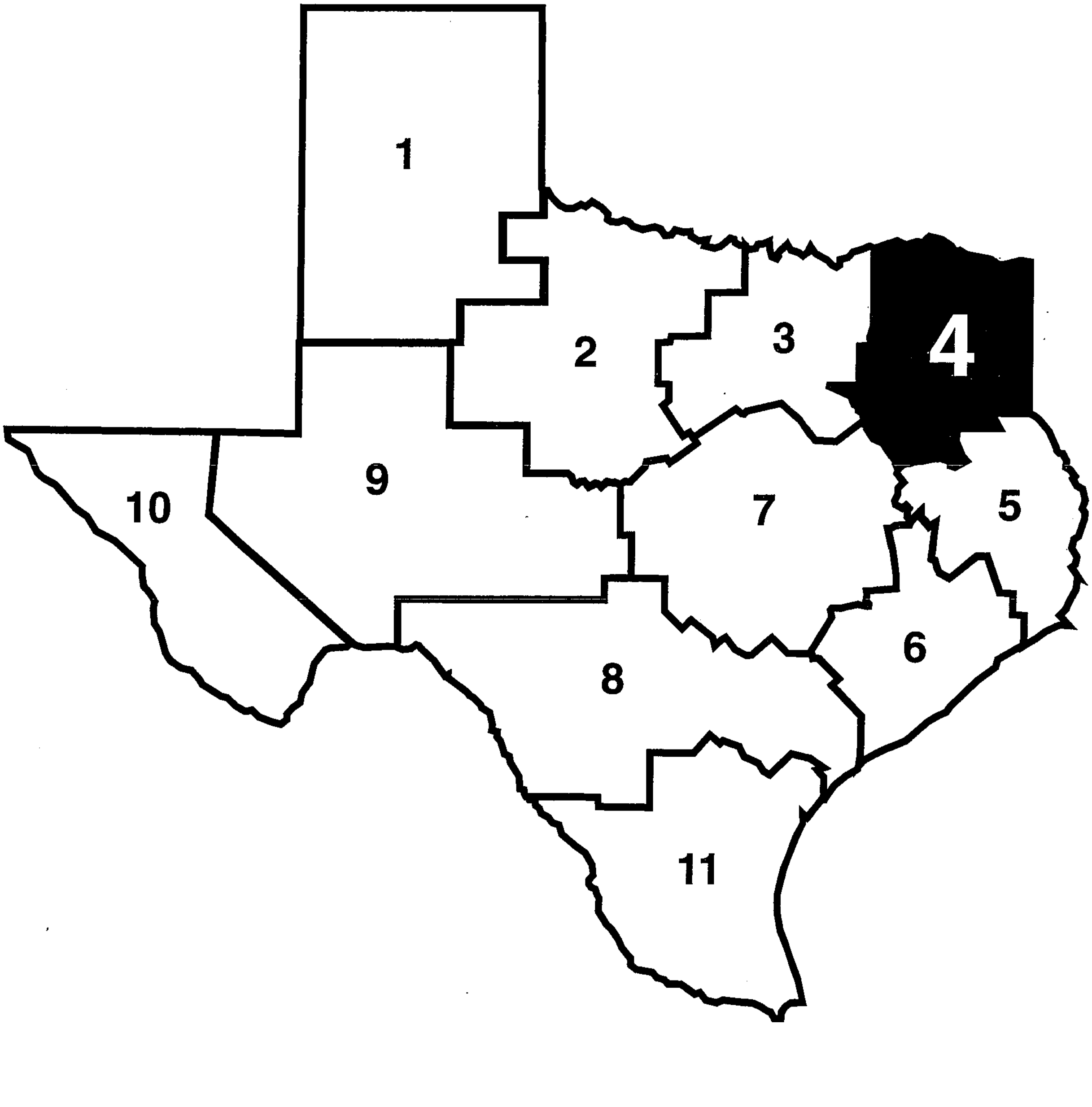
		AIDS		HIV INFECTION	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES
COLLIN	412,131	18	4.4	10	2.4
COOKE	32,391	2	6.2	0	0.0
DALLAS	2,172,486	536	24.7	551	25.4
DENTON	400,525	20	5.0	18	4.5
ELLIS	118,619	7	5.9	5	4.2
ERATH	30,878	1	3.2	0	0.0
FANNIN	25,844	1	3.9	0	0.0
GRAYSON	97,164	9	9.3	10	10.3
HOOD	41,511	3	7.2	2	4.8
HUNT	72,522	4	5.5	2	2.8
JOHNSON	134,298	8	6.0	3	2.2
KAUFMAN	70,384	8	11.4	6	8.5
NAVARRO	43,829	3	6.8	0	0.0
PALO PINTO	26,872	0	0.0	1	3.7
PARKER	91,916	0	0.0	2	2.2
ROCKWALL	39,410	2	5.1	1	2.5
SOMERVELL	6,391	1	15.6	0	0.0
TARRANT	1,506,790	133	8.8	127	8.4
WISE	42,047	4	9.5	4	9.5
REGIONAL TOTALS	5,366,008	760	14.2	742	13.8
STATEWIDE TOTALS	19,995,428	2,865	14.3	2,873	14.4

REPORTED VACCINE-PREVENTABLE DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 3 - 1999

		MEASLES		MUMPS		PERTUSSIS		RUBELLA	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
COLLIN	412,131	0	0.0	2	0.5	5	1.2	0	0.0
COOKE	32,391	0	0.0	0	0.0	1	3.1	0	0.0
DALLAS	2,172,486	0	0.0	11	0.5	24	1.1	2	0.1
DENTON	400,525	0	0.0	0	0.0	0	0.0	0	0.0
ELLIS	118,619	0	0.0	0	0.0	2	1.7	0	0.0
ERATH	30,878	0	0.0	0	0.0	0	0.0	0	0.0
FANNIN	25,844	0	0.0	0	0.0	0	0.0	0	0.0
GRAYSON	97,164	0	0.0	2	2.1	0	0.0	0	0.0
HOOD	41,511	0	0.0	0	0.0	0	0.0	0	0.0
HUNT	72,522	0	0.0	0	0.0	5	6.9	0	0.0
JOHNSON	134,298	0	0.0	1	0.7	2	1.5	0	0.0
KAUFMAN	70,384	0	0.0	2	2.8	3	4.3	0	0.0
NAVARRO	43,829	0	0.0	0	0.0	1	2.3	0	0.0
PALO PINTO	26,872	0	0.0	0	0.0	0	0.0	0	0.0
PARKER	91,916	0	0.0	0	0.0	0	0.0	0	0.0
ROCKWALL	39,410	1	2.5	0	0.0	0	0.0	0	0.0
SOMERVELL	6,391	0	0.0	0	0.0	0	0.0	0	0.0
TARRANT	1,506,790	0	0.0	0	0.0	19	1.3	2	0.1
WISE	42,047	0	0.0	0	0.0	0	0.0	0	0.0
REGIONAL TOTALS	**5,366,008**	**1**	**0.0**	**18**	**0.3**	**62**	**1.2**	**4**	**0.1**
STATEWIDE TOTALS	**19,995,428**	**7**	**0.0**	**35**	**0.2**	**152**	**0.8**	**9**	**0.0**

Public Health Region 4



REPORTED SELECTED GASTROINTESTINAL DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 4 - 1999

		AMEBIASIS		CAMPYLOBACTERIOSIS		SALMONELLOSIS		SHIGELLOSIS	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
ANDERSON	52,173	0	0.0	2	3.8	9	17.3	2	3.8
BOWIE	84,842	0	0.0	6	7.1	5	5.9	1	1.2
CAMP	10,721	0	0.0	0	0.0	1	9.3	0	0.0
CASS	29,898	0	0.0	0	0.0	1	3.3	0	0.0
CHEROKEE	43,788	0	0.0	3	6.9	9	20.6	4	9.1
DELTA	4,844	0	0.0	0	0.0	0	0.0	0	0.0
FRANKLIN	8,124	0	0.0	2	24.6	0	0.0	0	0.0
GREGG	108,145	0	0.0	0	0.0	2	1.8	4	3.7
HARRISON	63,293	0	0.0	0	0.0	3	4.7	0	0.0
HENDERSON	74,837	0	0.0	1	1.3	6	8.0	2	2.7
HOPKINS	29,689	0	0.0	1	3.4	5	16.8	0	0.0
LAMAR	43,888	0	0.0	0	0.0	7	15.9	0	0.0
MARION	10,380	0	0.0	0	0.0	0	0.0	0	0.0
MORRIS	12,846	0	0.0	0	0.0	1	7.8	0	0.0
PANOLA	23,718	0	0.0	0	0.0	1	4.2	0	0.0
RAINS	8,001	0	0.0	0	0.0	0	0.0	0	0.0
RED RIVER	13,815	0	0.0	0	0.0	3	21.7	0	0.0
RUSK	45,951	0	0.0	1	2.2	2	4.4	0	0.0
SMITH	168,355	0	0.0	4	2.4	25	14.8	19	11.3
TITUS	25,353	0	0.0	0	0.0	2	7.9	1	3.9
UPSHUR	33,364	0	0.0	0	0.0	1	3.0	1	3.0
VAN ZANDT	42,850	0	0.0	2	4.7	3	7.0	1	2.3
WOOD	33,002	0	0.0	1	3.0	2	6.1	0	0.0
ONAL TOTALS	971,877	0	0.0	23	2.4	88	9.1	35	3.6
STATEWIDE TOTALS	19,995,428	37	0.2	1,153	5.8	2,198	11.0	2,281	11.4

REPORTED HEPATITIS RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 4 - 1999

		HEPATITIS A		HEPATITIS B		HEPATITIS C		HEPATITIS UNSPECIFIED	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
ANDERSON	52,173	2	3.8	0	0.0	0	0.0	0	0.0
BOWIE	84,842	7	8.3	6	7.1	2	2.4	0	0.0
CAMP	10,721	2	18.7	0	0.0	2	18.7	0	0.0
CASS	29,898	0	0.0	1	3.3	1	3.3	0	0.0
CHEROKEE	43,788	0	0.0	1	2.3	4	9.1	0	0.0
DELTA	4,844	0	0.0	0	0.0	0	0.0	0	0.0
FRANKLIN	8,124	0	0.0	0	0.0	0	0.0	0	0.0
GREGG	108,145	5	4.6	10	9.2	2	1.8	0	0.0
HARRISON	63,293	2	3.2	8	12.6	1	1.6	0	0.0
HENDERSON	74,837	3	4.0	1	1.3	0	0.0	0	0.0
HOPKINS	29,689	4	13.5	4	13.5	0	0.0	0	0.0
LAMAR	43,888	1	2.3	3	6.8	4	9.1	0	0.0
MARION	10,380	0	0.0	0	0.0	0	0.0	0	0.0
MORRIS	12,846	0	0.0	0	0.0	2	15.6	0	0.0
PANOLA	23,718	0	0.0	0	0.0	0	0.0	0	0.0
RAINS	8,001	0	0.0	0	0.0	0	0.0	0	0.0
RED RIVER	13,815	0	0.0	0	0.0	0	0.0	0	0.0
RUSK	45,951	0	0.0	0	0.0	0	0.0	0	0.0
SMITH	168,355	2	1.2	3	1.8	7	4.2	0	0.0
TITUS	25,353	6	23.7	1	3.9	1	3.9	0	0.0
UPSHUR	33,364	0	0.0	1	3.0	1	3.0	0	0.0
VAN ZANDT	42,850	1	2.3	0	0.0	1	2.3	0	0.0
WOOD	33,002	1	3.0	1	3.0	1	3.0	0	0.0
REGIONAL TOTALS	971,877	36	3.7	40	4.1	29	3.0	0	0.0
STATEWIDE TOTALS	19,995,428	2,516	12.6	864	4.3	359	1.8	2	0.0

REPORTED OTHER SELECTED DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 4 - 1999

		ASEPTIC MENINGITIS		CHICKENPOX		ENCEPHALITIS		TUBERCULOSIS	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
ANDERSON	52,173	0	0.0	1	1.9	0	0.0	2	3.8
BOWIE	84,842	10	11.8	0	0.0	0	0.0	8	9.4
CAMP	10,721	0	0.0	0	0.0	0	0.0	1	9.3
CASS	29,898	0	0.0	0	0.0	0	0.0	0	0.0
CHEROKEE	43,788	1	2.3	0	0.0	0	0.0	3	6.9
DELTA	4,844	0	0.0	2	41.3	0	0.0	0	0.0
FRANKLIN	8,124	0	0.0	0	0.0	1	12.3	0	0.0
GREGG	108,145	0	0.0	39	36.1	0	0.0	18	16.6
HARRISON	63,293	0	0.0	71	112.2	0	0.0	4	6.3
HENDERSON	74,837	1	1.3	0	0.0	1	1.3	3	4.0
HOPKINS	29,689	3	10.1	0	0.0	0	0.0	0	0.0
LAMAR	43,888	1	2.3	0	0.0	0	0.0	0	0.0
MARION	10,380	0	0.0	0	0.0	0	0.0	0	0.0
MORRIS	12,846	0	0.0	0	0.0	0	0.0	0	0.0
PANOLA	23,718	0	0.0	0	0.0	0	0.0	2	8.4
RAINS	8,001	1	12.5	0	0.0	0	0.0	1	12.5
RED RIVER	13,815	0	0.0	0	0.0	0	0.0	0	0.0
RUSK	45,951	0	0.0	0	0.0	0	0.0	0	0.0
SMITH	168,355	13	7.7	0	0.0	1	0.6	10	5.9
TITUS	25,353	2	7.9	1	3.9	0	0.0	2	7.9
UPSHUR	33,364	0	0.0	0	0.0	0	0.0	1	3.0
VAN ZANDT	42,850	4	9.3	1	2.3	0	0.0	1	2.3
WOOD	33,002	5	15.2	2	6.1	0	0.0	2	6.1
REGIONAL TOTALS	971,877	41	4.21	117	12.0	3	0.3	58	6.0
STATEWIDE TOTALS	19,995,428	921	4.6	7,473	37.4	27	0.1	1,649	8.2

REPORTED SEXUALLY TRANSMITTED DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 4 - 1999

		CHLAMYDIA		GONORRHEA		P & S SYPHILIS	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES
ANDERSON	52,173	137	262.6	48	92.0	2	3.8
BOWIE	84,842	429	505.6	367	432.6	2	2.4
CAMP	10,721	26	242.5	14	130.6	0	0.0
CASS	29,898	88	294.3	46	153.9	1	3.3
CHEROKEE	43,788	125	285.5	69	157.6	17	38.8
DELTA	4,844	6	123.9	1	20.6	0	0.0
FRANKLIN	8,124	9	110.8	4	49.2	0	0.0
GREGG	108,145	374	345.8	190	175.7	2	1.8
HARRISON	63,293	207	327.1	106	167.5	1	1.6
HENDERSON	74,837	105	140.3	54	72.2	1	1.3
HOPKINS	29,689	46	154.9	17	57.3	0	0.0
LAMAR	43,888	138	314.4	91	207.3	0	0.0
MARION	10,380	26	250.5	13	125.2	0	0.0
MORRIS	12,846	23	179.0	13	101.2	0	0.0
PANOLA	23,718	62	261.4	25	105.4	0	0.0
RAINS	8,001	7	87.5	2	25.0	0	0.0
RED RIVER	13,815	35	253.3	22	159.2	0	0.0
RUSK	45,951	99	215.4	33	71.8	1	2.2
SMITH	168,355	809	480.5	573	340.4	15	8.9
TITUS	25,353	79	311.6	34	134.1	1	3.9
UPSHUR	33,364	48	143.9	30	89.9	0	0.0
VAN ZANDT	42,850	49	114.4	21	49.0	0	0.0
WOOD	33,002	24	72.7	15	45.5	0	0.0
REGIONAL TOTALS	**971,877**	**2,951**	**303.6**	**1,788**	**184.0**	**43**	**4.4**
STATEWII E TOTALS	**:28**	**52,52(**	**312.7**	**32,680**	**163.4**	**459**	**2.3**

REPORTED AIDS & HIV INFECTION RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 4 - 1999

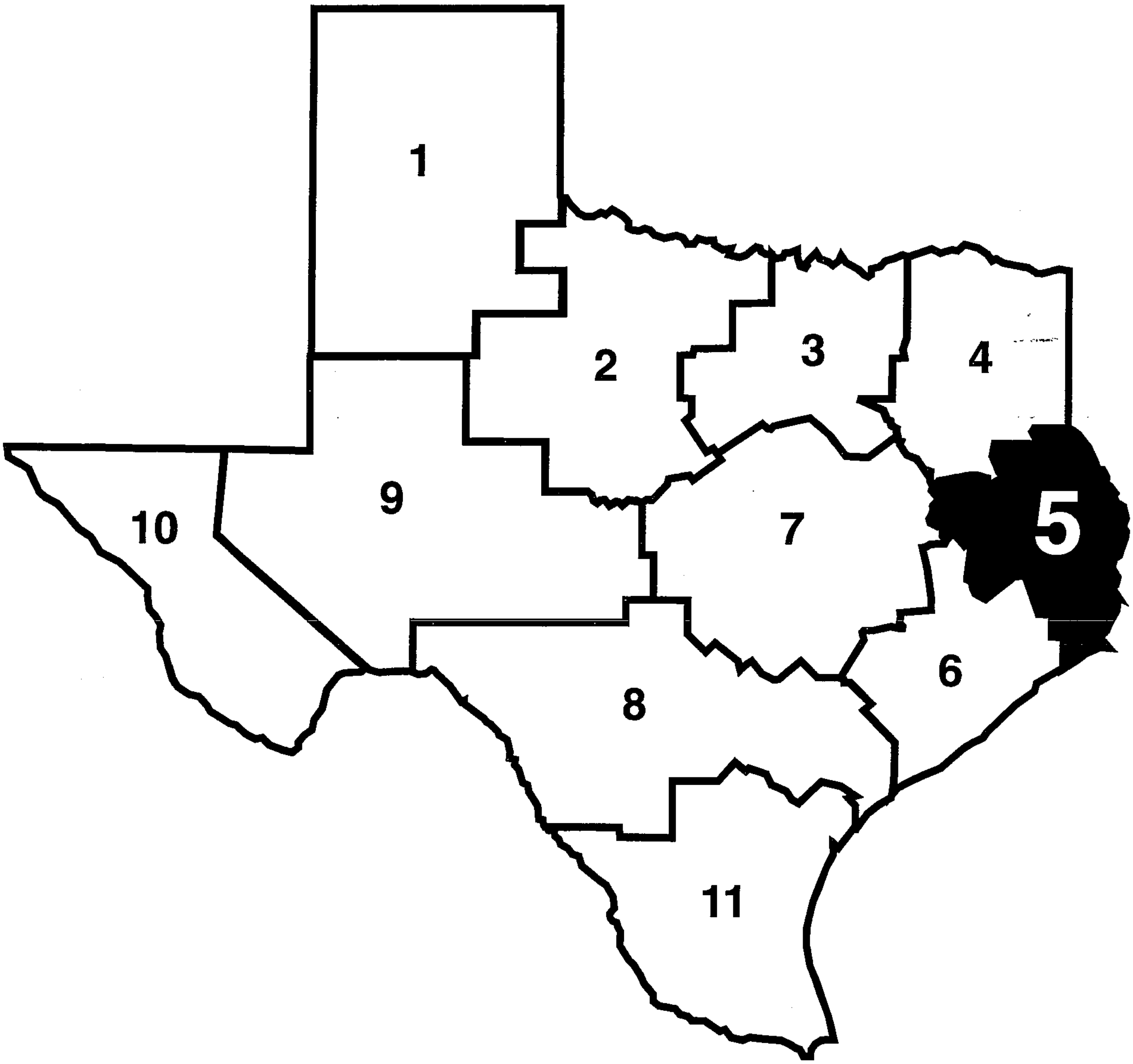
		AIDS		HIV INFECTION	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES
ANDERSON	52,173	7	13.4	10	19.2
BOWIE	84,842	8	9.4	12	14.1
CAMP	10,721	2	18.7	0	0.0
CASS	29,898	2	6.7	2	6.7
CHEROKEE	43,788	6	13.7	3	6.9
DELTA	4,844	0	0.0	0	0.0
FRANKLIN	8,124	0	0.0	0	0.0
GREGG	108,145	18	16.6	12	11.1
HARRISON	63,293	3	4.7	5	7.9
HENDERSON	74,837	9	12.0	5	6.7
HOPKINS	29,689	6	20.2	3	10.1
LAMAR	43,888	6	13.7	10	22.8
MARION	10,380	1	9.6	1	9.6
MORRIS	12,846	0	0.0	0	0.0
PANOLA	23,718	7	29.5	2	8.4
RAINS	8,001	1	12.5	0	0.0
RED RIVER	13,815	1	7.2	1	7.2
RUSK	45,951	2	4.4	6	13.1
SMITH	168,355	18	10.7	18	10.7
TITUS	25,353	4	15.8	5	19.7
UPSHUR	33,364	1	3.0	6	18.0
VAN ZANDT	42,850	3	7.0	1	2.3
WOOD	33,002	4	12.1	0	0.0
REGIONAL TOTALS	971,877	109	11.2	102	10.5
STATEWIDE)TALS	19,995,428	2,865	14.3	2,873	14.4

REPORTED VACCINE-PREVENTABLE DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 4 - 1999

		MEASLES		MUMPS		PERTUSSIS		RUBELLA	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
ANDERSON	52,173	0	0.0	0	0.0	0	0.0	0	0.0
BOWIE	84,842	0	0.0	0	0.0	1	1.2	0	0.0
CAMP	10,721	0	0.0	0	0.0	0	0.0	0	0.0
CASS	29,898	0	0.0	0	0.0	0	0.0	0	0.0
CHEROKEE	43,788	0	0.0	0	0.0	0	0.0	0	0.0
DELTA	4,844	0	0.0	0	0.0	0	0.0	0	0.0
FRANKLIN	8,124	0	0.0	0	0.0	0	0.0	0	0.0
GREGG	108,145	0	0.0	0	0.0	0	0.0	0	0.0
HARRISON	63,293	0	0.0	0	0.0	0	0.0	0	0.0
HENDERSON	74,837	0	0.0	0	0.0	1	1.3	0	0.0
HOPKINS	29,689	0	0.0	0	0.0	0	0.0	0	0.0
LAMAR	43,888	0	0.0	0	0.0	0	0.0	0	0.0
MARION	10,380	0	0.0	0	0.0	0	0.0	0	0.0
MORRIS	12,846	0	0.0	0	0.0	0	0.0	0	0.0
PANOLA	23,718	0	0.0	0	0.0	2	8.4	0	0.0
RAINS	8,001	0	0.0	0	0.0	0	0.0	0	0.0
RED RIVER	13,815	0	0.0	0	0.0	0	0.0	0	0.0
RUSK	45,951	0	0.0	0	0.0	2	4.4	0	0.0
SMITH	168,355	0	0.0	0	0.0	4	2.4	0	0.0
TITUS	25,353	0	0.0	0	0.0	0	0.0	0	0.0
UPSHUR	33,364	0	0.0	0	0.0	1	3.0	0	0.0
VAN ZANDT	42,850	0	0.0	0	0.0	0	0.0	0	0.0
WOOD	33,002	0	0.0	0	0.0	0	0.0	0	0.0
REGIONAL TOTALS	**971,877**	**0**	**0.0**	**0**	**0.0**	**11**	**1.1**	**0**	***0.0***
STATEWIDE TOTALS	**~19,995,428**	**7**	***0.0***	**35**	**0.2**	**152**	**0.8**	**9**	***0.0***

Public Health Region 5



REPORTED SELECTED GASTROINTESTINAL DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 5 - 1999

		AMEBIASIS		CAMPYLOBACTERIOSIS		SALMONELLOSIS		SHIGELLOSIS	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
ANGELINA	74,170	0	0.0	3	4.0	6	8.1	7	9.4
HARDIN	42,625	0	0.0	1	2.3	4	9.4	0	0.0
HOUSTON	22,588	0	0.0	1	4.4	0	0.0	0	0.0
JASPER	31 778	0	0.0	0	0.0	10	31.5	1	3.1
JEFFERSON	236,153	0	0.0	14	5.9	38	16.1	10	4.2
NACOGDOCHES	56,727	0	0.0	0	0.0	6	10.6	5	8.8
NEWTON	14,493	0	0.0	0	0.0	2	13.8	0	0.0
ORANGE	82,022	0	0.0	6	7.3	15	18.3	2	2.4
POLK	37,792	0	0.0	0	0.0	1	2.6	0	0.0
SABINE	10,201	0	0.0	0	0.0	2	19.6	0	0.0
SAN AUGUSTINE	7,974	0	0.0	0	0.0	0	0.0	0	0.0
SAN JACINTO	20,786	0	0.0	0	0.0	3	14.4	0	0.0
SHELBY	21,870	0	0.0	1	4.6	4	18.3	1	4.6
TRINITY	12,763	0	0.0	2	15.7	4	31.3	0	0.0
TYLER	18,559	0	0.0	4	21.6	2	10.8	2	10.8
REGIONAL TOTALS	690,501	0	0.0	32	4.6	97	14.0	28	4.1
STATEWIDE TOTALS	19,995,428	37	0.2	1,153	5.8	2,198	11.0	2,281	11.4

REPORTED HEPATITIS RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 5 - 1999

		HEPATITIS A		HEPATITIS B		HEPATITIS C		HEPATITIS UNSPECIFIED	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
ANGELINA	74,170	38	51.2	1	1.3	11	14.8	0	0.0
HARDIN	42,625	1	2.3	3	7.0	1	2.3	0	0.0
HOUSTON	22,588	1	4.4	0	0.0	0	0.0	0	0.0
JASPER	31,778	1	3.1	0	0.0	0	0.0	0	0.0
JEFFERSON	236,153	22	9.3	15	6.4	14	5.9	0	0.0
NACOGDOCHES	56,727	0	0.0	3	5.3	0	0.0	0	0.0
NEWTON	14,493	0	0.0	0	0.0	0	0.0	0	0.0
ORANGE	82,022	1	1.2	4	4.9	4	4.9	0	0.0
POLK	37,792	4	10.6	0	0.0	1	2.6	0	0.0
SABINE	10,201	0	0.0	0	0.0	2	19.6	0	0.0
SAN AUGUSTINE	7,974	0	0.0	0	0.0	2	25.1	0	0.0
SAN JACINTO	20,786	0	0.0	1	4.8	1	4.8	0	0.0
SHELBY	21,870	1	4.6	1	4.6	2	9.1	0	0.0
TRINITY	12,763	0	0.0	0	0.0	2	15.7	0	0.0
TYLER	18,559	1	5.4	0	0.0	0	0.0	0	0.0
REGIONAL TOTALS	690,501	70	10.1	28	4.1	40	5.8	0	0.0
STATEWIDE TOTALS	19,995,428	2,516	12.6	864	4.3	359	1.8	2	0.0

REPORTED OTHER SELECTED DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 5 - 1999

		ASEPTIC MENINGITIS		CHICKENPOX		ENCEPHALITIS		TUBERCULOSIS	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
ANGELINA	74,170	0	0.0	0	0.0	0	0.0	6	8.1
HARDIN	42,625	2	4.7	3	7.0	0	0.0	1	2.3
HOUSTON	22,588	0	0.0	4	17.7	0	0.0	0	0.0
JASPER	31,778	0	0.0	0	0.0	0	0.0	0	0.0
JEFFERSON	236,153	9	3.8	51	21.6	0	0.0	19	8.0
NACOGDOCHES	56,727	0	0.0	0	0.0	0	0.0	4	7.1
NEWTON	14,493	0	0.0	0	0.0	0	0.0	0	0.0
ORANGE	82,022	2	2.4	40	48.8	1	1.2	5	6.1
POLK	37,792	1	2.6	0	0.0	0	0.0	3	7.9
SABINE	10,201	0	0.0	0	0.0	0	0.0	1	9.8
SAN AUGUSTINE	7 97	[illegible]	0.0	0	0.0	0	0.0	4	
SAN JACINTO	20,786	0	0.0	0	0.0	0	0.0	1	4.8
SHELBY	21,87	2	9.1	0	0.0	0	0.0	3	13.7
TRINITY	12,763	0	0.0	3	23.5	0	0.0	1	7.8
TYLER	18 59	0	0.0	0	0.0	0	0.0	0	0.0
REGIONAL TOTALS	**690,501**	**16**	**2.3**	**101**	**14.6**	1	**0.1**	**48**	**7.0**
STATEWIDE TOTALS	**19,995,428**	**921**	**4.6**	**7,473**	**37.4**	**27**	**0.1**	**1,649**	**8.2**

REPORTED SEXUALLY TRANSMITTED DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 5 - 1999

		CHLAMYDIA		GONORRHEA		P & S SYPHILIS	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES
ANGELINA	74,170	180	242.7	152	204.9	7	9.4
HARDIN	42,625	96	225.2	38	89.1	0	0.0
HOUSTON	22,588	52	230.2	47	208.1	0	0.0
JASPER	31,778	139	437.4	87	273.8	1	3.1
JEFFERSON	236,153	1,036	438.7	1,048	443.8	16	6.8
NACOGDOCHES	56,727	195	343.8	88	155.1	0	0.0
NEWTON	14,493	40	276.0	33	227.7	0	0.0
ORANGE	82,022	163	198.7	89	108.5	1	1.2
POLK	37,792	80	211.7	24	63.5	2	5.3
SABINE	10,201	16	156.8	9	88.2	0	0.0
SAN AUGUSTINE	7,974	20	250.8	14	175.6	0	0.0
SAN JACINTO	20,786	18	86.6	6	28.9	0	0.0
SHELBY	21,870	54	246.9	8	36.6	1	4.6
TRINITY	12,763	13	101.9	14	109.7	0	0.0
TYLER	18,559	28	150.9	7	37.7	0	0.0
REGIONAL TOTALS	690,501	2,130	308.5	1,664	241.0	28	4.1
STATEWIDE TOTALS	19,995,428	62,526	312.7	32,680	163.4	459	2.3

REPORTED AIDS & HIV RATES
CASES PER 100,000 POPULATION

PUBLIC HEALTH REGION 5 - 1999

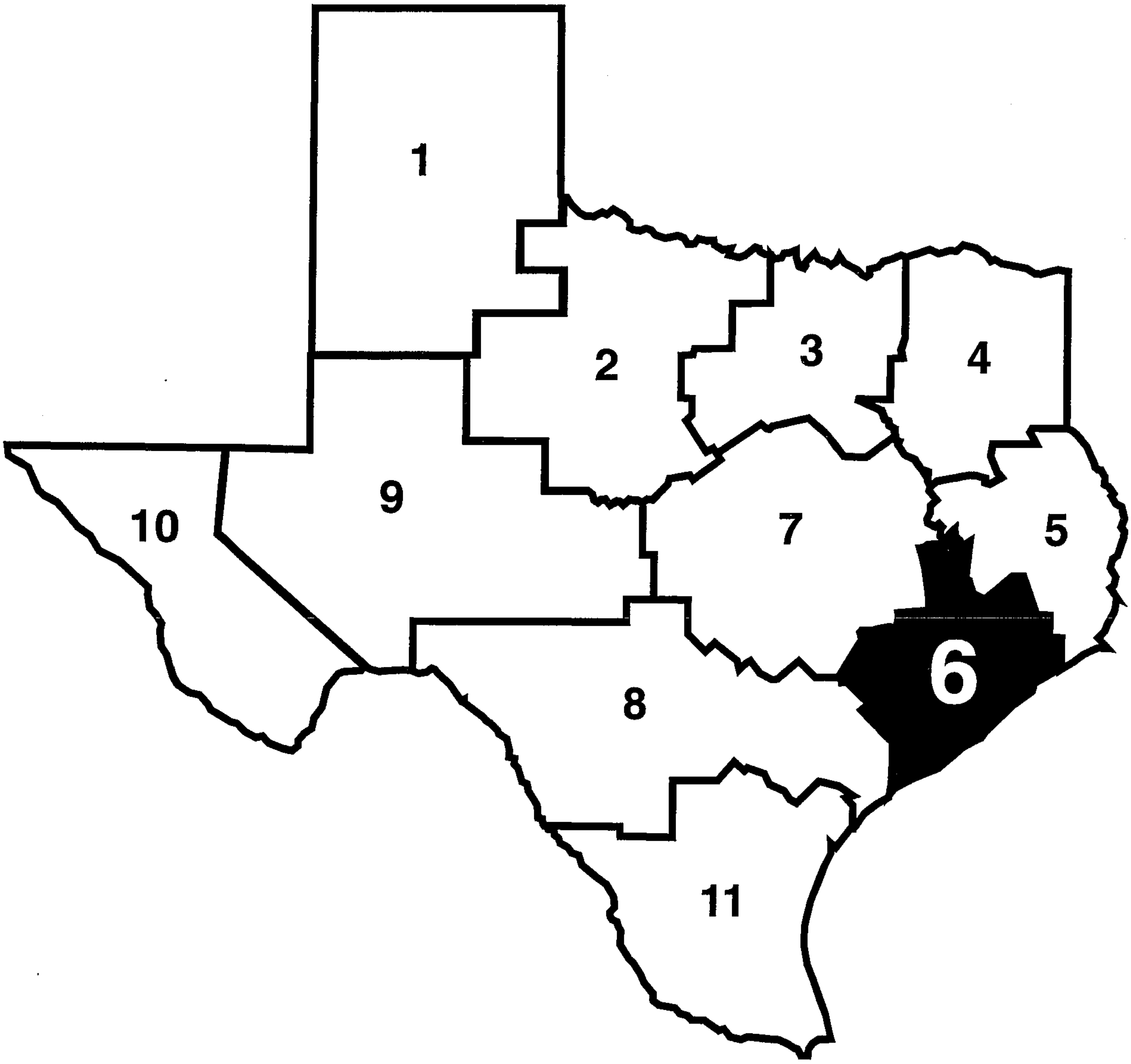
		AIDS		HIV INFECTION	
COUNTY	1999 POP	CASES	RATES	CASES	RATES
ANGELINA	74,170	11	14.8	9	12.1
HARDIN	42,625	1	2.3	0	0.0
HOUSTON	22,588	7	31.0	1	4.4
JASPER	31,778	1	3.1	0	0.0
JEFFERSON	236,153	20	8.5	31	13.1
NACOGDOCHES	56,727	7	12.3	5	8.8
NEWTON	14,493	0	0.0	0	0.0
ORANGE	82,022	5	6.1	3	3.7
POLK	37,792	5	13.2	5	13.2
SABINE	10,201	1	9.8	0	0.0
SAN AUGUSTINE	7,974	1	12.5	0	0.0
SAN JACINTO	20,786	3	14.4	1	4.8
SHELBY	21,870	5	22.9	0	0.0
TRINITY	12,763	3	23.5	2	15.7
TYLER	18,559	0	0.0	0	0.0
REGIONAL TOTALS	**690,501**	**70**	**10.1**	**57**	**8.3**
STATEWIDE TOTALS	**19,995,428**	**2,865**	**14.3**	**2,873**	**14.4**

REPORTED VACCINE-PREVENTABLE DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 5 - 1999

		MEASLES		MUMPS		PERTUSSIS		RUBELLA	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
ANGELINA	74,170	0	0.0	0	0.0	0	0.0	0	0.0
HARDIN	42,625	0	0.0	0	0.0	0	0.0	0	0.0
H[illegible]TON	22,588	0	0.0	0	0.0	0	0.0	0	0.0
[illegible]PER	31,7[illegible]	0	0.0	0	0.0	0	0.0	0	0.0
JEFFERSON	236.153	0	0.0	0	0.0	1	0.4	0	0.0
NACOGDOCHES	56,727	0	0.0	0	0.0	0	0.0	0	0.0
NEWTON	14,493	0	0.0	0	0.0	0	0.0	0	0.0
ORANGE	82,022	0	0.0	0	0.0	0	0.0	0	0.0
POLK	37,792	0	0.0	0	0.0	0	0.0	0	0.0
SABINE	10,201	0	0.0	0	0.0	0	0.0	0	0.0
SAN AUGUSTINE	7 974	0	0.0	0	0.0	0	0.0	0	0.0
S[illegible] JACINTO	20,786	0	0.0	2	9.6	0	0.0	[illegible]	0.0
SHELBY	21,870	0	0.0	0	0.0	0	0.0	0	0.0
TRINITY	12,763	0	0.0	0	0.0	0	0.0	0	0.0
TYLER	18,559	0	0.0	0	0.0	0	0.0	0	0.0
REGIONAL TOTALS	690,501	0	0.0	2	0.3	1	0.1	0	0.0
STATEWIDE TOTALS	19,995,428	7	0.0	35	0.2	152	0.8	9	0.0

Public Health Region 6



REPORTED SELECTED GASTROINTESTINAL DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 6 - 1999

		AMEBIASIS		CAMPYLOBACTERIOSIS		SALMONELLOSIS		SHIGELLOSIS	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
AUSTIN	20,739	0	0.0	1	4.8	6	28.9	0	0.0
BRAZORIA	222,046	0	0.0	4	1.8	23	10.4	15	6.8
CHAMBERS	20,841	0	0.0	0	0.0	4	19.2	1	4.8
COLORADO	18,173	0	0.0	1	5.5	4	22.0	0	0.0
FORT BEND	320,963	0	0.0	13	4.1	42	13.1	27	8.4
GALVESTON	233,547	1	0.4	13	5.6	35	15.0	17	7.3
HARRIS	3,268,099	5	0.2	42	1.3	177	5.4	151	4.6
LIBERTY	59,945	0	0.0	6	10.0	8	13.3	6	10.0
MATAGORDA	38,462	0	0.0	0	0.0	1	2.6	2	5.2
MONTGOMERY	235,384	0	0.0	7	3.0	40	17.0	11	4.7
WALKER	52,256	0	0.0	4	7.7	14	26.8	2	3.8
WALLER	26,037	0	0.0	2	7.7	3	11.5	0	0.0
WHARTON	40,958	0	0.0	0	0.0	3	7.3	0	0.0
REGIONAL TOTALS	4,557,450	6	0.1	93	2.0	360	7.9	232	5.1
STATEWIDE TOTALS~	19,995,428	37	0.2	1,153	5.8	2,198	11.0	2,281	11.4

REPORTED HEPATITIS RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 6 - 1999

		HEPATITIS A		HEPATITIS B		HEPATITIS C		HEPATITIS UNSPECIFIED	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
AUSTIN	20,739	2	9.6	0	0.0	0	0.0	0	0.0
BRAZORIA	222,046	7	3.2	3	1.4	0	0.0	0	0.0
CHAMBERS	20,841	1	4.8	0	0.0	0	0.0	0	0.0
COLORADO	18,173	1	5.5	0	0.0	0	0.0	0	0.0
FORT BEND	320,963	40	12.5	0	0.0	1	0.3	0	0.0
GALVESTON	233,547	17	7.3	18	7.7	2	0.9	0	0.0
HARRIS	3,268,099	98	3.0	54	1.7	4	0.1	1	0.0
LIBERTY	59,945	5	8.3	1	1.7	1	1.7	0	0.0
MATAGORDA	38,462	2	5.2	0	0.0	2	5.2	0	0.0
MONTGOMERY	235,384	32	13.6	0	0.0	2	0.8	0	0.0
WALKER	52,256	5	9.6	5	9.6	1	1.9	0	0.0
WALLER	26,037	1	3.8	0	0.0	1	3.8	0	0.0
WHARTON	40,958	4	9.8	1	2.4	2	4.9	0	0.0
REGIONAL TOTALS	4,557,450	215	4.7	82.	1.8	16	0.4	1	0.0
STATEWIDE TOTALS~	19,995,428	2,516	12.6	864	4.3	359	1.8	2	0.0

REPORTED OTHER SELECTED DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 6 - 1999

		ASEPTIC MENINGITIS		CHICKENPOX		ENCEPHALITIS		TUBERCULOSIS	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
AUSTIN	20,739	1	4.8	0	0.0	0	0.0	1	4.8
BRAZORIA	222,046	1	0.5	5	2.3	0	0.0	12	5.4
CHAMBERS	20,841	2	9.6	1	4.8	0	0.0	0	0.0
COLORADO	18,173	1	5.5	3	16.5	0	0.0	3	16.5
FORT BEND	320,963	12	3.7	0	0.0	0	0.0	13	4.1
GALVESTON	233,547	16	6.9	103	44.1	0	0.0	20	8.6
HARRIS	3,268,099	11	0.3	1,345	41.2	3	0.1	456	14.0
LIBERTY	59,945	0	0.0	0	0.0	1	1.7	4	6.7
MATAGORDA	38,462	0	0.0	0	0.0	0	0.0	9	23.4
MONTGOMERY	235,384	13	5.5	53	22.5	0	0.0	9	3.8
WALKER	52,256	4	7.7	12	23.0	0	0.0	1	1.9
WALLER	26,037	2	7.7	14	53.8	0	0.0	0	0.0
WHARTON	40,958	0	0.0	0	0.0	0	0.0	1	2.4
REGIONAL TOTALS	4,557,450	63	1.41	1,536	33.7	4	0.1	529	11.6
STATEWIDE TOTALS]	19,995,428	921	4.6	7,473	37.4	27	0.1	1,649	8.2

REPORTED SEXUALLY TRANSMITTED DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 6 - 1999

		CHLAMYDIA		GONORRHEA		P & S SYPHILIS	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES
AUSTIN	20,739	27	130.2	16	77.1	0	0.0
BRAZORIA	222,046	303	136.5	111	50.0	3	1.4
[illegible]	20,8	13	62.4	6	28.8	0	0.0
COLORADO	18,173	39	214.6	21	115.6	2	11.0
FORT BEND	320,963	467	145.5	219	68.2	21	6.5
GALVESTON	233,547	681	291.6	618	264.6	1	0.4
HARRIS	3,268,099	10,473	320.5	5,914	181.0	70	2.1
LIBERTY	59,945	118	196.8	63	105.1	0	0.0
MATAGORDA	38,462	95	247.0	28	72.8	10	26.0
MONTGOMERY	235,384	358	152.1	143	60.8	2	0.8
WALKER	52,256	233	445.9	68	130.1	1	1.9
WALLER	26,037	190	729.7	126	483.9	0	0.0
WHARTON	40,958	166	405.3	99	241.7	5	12.2
REGIONAL TOTALS	4,557,450	13,163	288.8	7,432	163.1	115	2.5
STATEWIDE TOTALS	19,995,428	62,526	312.7	32,680	163.4	459	2.3

REPORTED AIDS & HIV INFECTION RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 6 - 1999

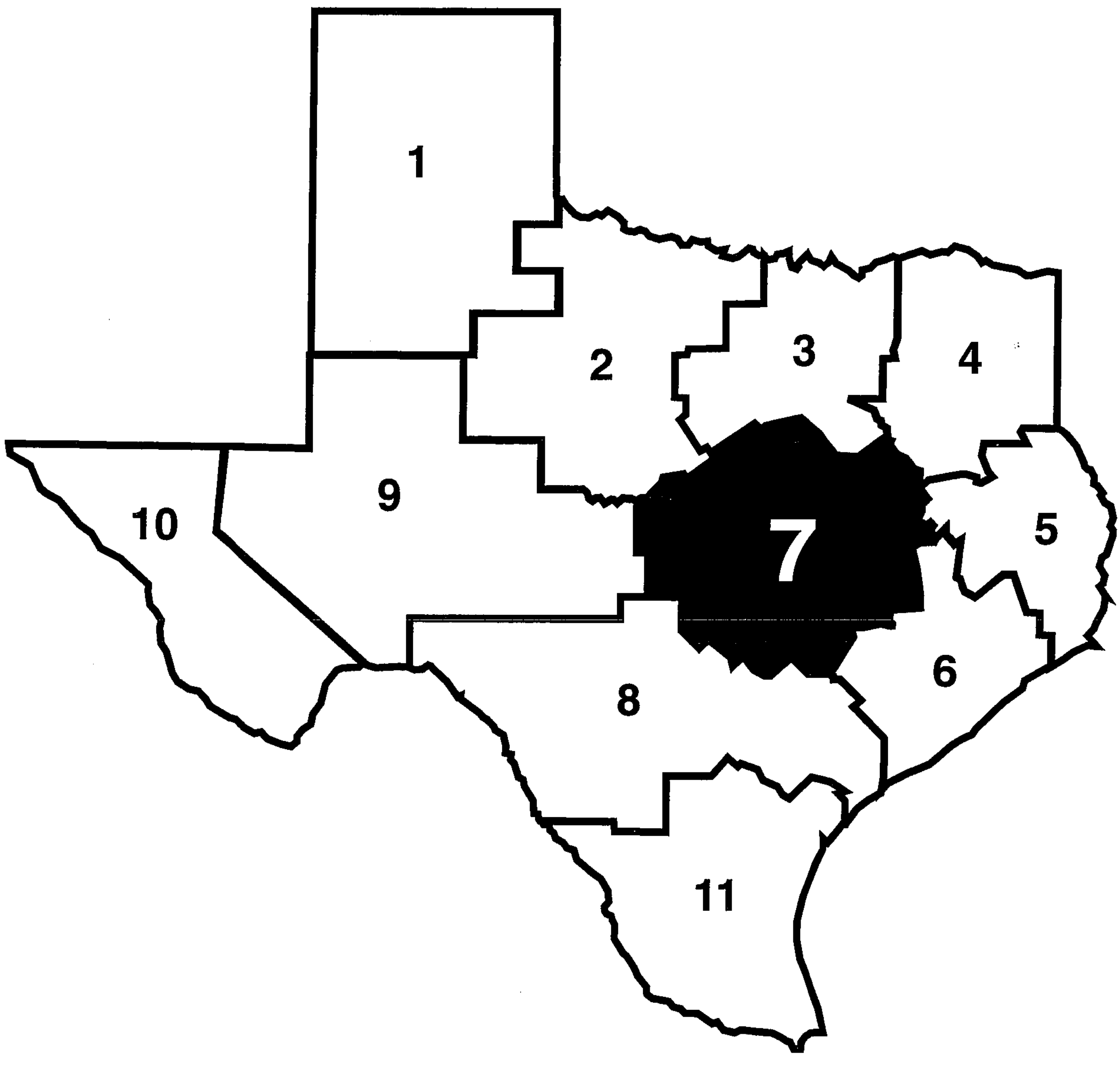
		AIDS		HIV INFECTION	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES
AUSTIN	20,739	1	4.8	0	0.0
BRAZORIA	222,046	8	3.6	2	0.9
CHAMBERS	20,841	0	0.0	0	0.0
COLORADO	18,173	0	0.0	3	16.5
FORT BEND	320,963	13	4.1	21	6.5
GALVESTON	233,547	20	8.6	11	4.7
HARRIS	3,268,099	680	20.8	918	28.1
LIBERTY	59,945	4	6.7	6	10.0
AG(	462	3	7.8	4	10.4
ITG	384	11	4.7	4	1.7
WALKER	**52,256**	0	0.0	3	5.7
WALLER	26,037	1	3.8	0	0.0
WHARTON	**40,958**	5	12.2	3	7.3
REGIONAL TOTALS	**4,557,450**	**746**	**16.4**	**975**	**21.4**
STATEWIDE TOTALS]	**19,995,428**	**2,865**	**14.3**	**2,873**	**14.4**

REPORTED VACCINE-PREVENTABLE DISEASE RATES (CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 6 - 1999

		MEASLES		MUMPS		PERTUSSIS		RUBELLA	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
AUSTIN	20,739	0	0.0	0	0.0	0	0.0	0	0.0
BRAZORIA	222,046	0	0.0	0	0.0	0	0.0	0	0.0
CHAMBERS	20,841	0	0.0	0	0.0	0	0.0	0	0.0
COLORADO	18,173	0	0.0	0	0.0	0	0.0	0	0.0
FORT BEND	320,963	0	0.0	0	0.0	1	0.3	0	0.0
GALVESTON	233,547	0	0.0	0	0.0	1	0.4	0	0.0
HARRIS	3,268,099	0	0.0	2	0.1	16	0.5	0	0.0
LIBERTY	59,945	0	0.0	0	0.0	0	0.0	0	0.0
MATAGORDA	38,462	0	0.0	0	0.0	0	0.0	0	0.0
MONTGOMERY	235,384	0	0.0	0	0.0	1	0.4	0	0.0
WALKER	52,256	0	0.0	0	0.0	0	0.0	0	0.0
WALLER	26,037	0	0.0	0	0.0	0	0.0	0	0.0
WHARTON	40,958	0	0.0	0	0.0	1	2.4	0	0.0
REGIONAL TOTALS	**4,557,450**	**0**	**0.0**	**2**	**0.0**	**20**	**0.4**	**0**	**0.0**
STATEWIDE TOTALS	**19,995,428**	**7**	**0.0**	**35**	**0.2**	**152**	**0.8**	**9**	**0.0**

Public Health Region 7



REPORTED SELECTED GASTROINTESTINAL DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 7 - 1999

		AMEBIASIS		CAMPYLOBACTERIOSIS		SALMONELLOSIS		SHIGELLOSIS	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
BASTROP	53,506	0	0.0	5	9.3	12	22.4	5	9.3
BELL	211,924	0	0.0	25	11.8	33	15.6	68	32.1
BLANCO	7,257	0	0.0	0	0.0	0	0.0	1	13.8
BOSQUE	16,148	0	0.0	1	6.2	2	12.4	1	6.2
BRAZOS	121,438	0	0.0	19	15.6	23	18.9	18	14.8
BURLESON	15,318	0	0.0	0	0.0	8	52.2	0	0.0
BURNET	27,877	0	0.0	1	3.6	2	7.2	1	3.6
CALDWELL	32,039	0	0.0	2	6.2	4	12.5	3	9.4
CORYELL	76,679	0	0.0	2	2.6	9	11.7	20	26.1
FALLS	18,826	0	0.0	6	31.9	0	0.0	3	15.9
FAYETTE	20,350	0	0.0	1	4.9	4	19.7	0	0.0
FREESTONE	17,034	0	0.0	1	5.9	4	23.5	0	0.0
GRIMES	22,783	0	0.0	1	4.4	2	8.8	3	13.2
HAMILTON	7,331	0	0.0	1	13.6	0	0.0	3	40.9
HAYS	86,860	0	0.0	11	12.7	29	33.4	17	19.6
HILL	28,831	0	0.0	1	3.5	1	3.5	0	0.0
LAMPASAS	14,515	0	0.0	0	0.0	3	20.7	0	0.0
LEE	14,749	0	0.0	0	0.0	0	0.0	0	0.0
LEON	15,580	0	0.0	0	0.0	0	0.0	1	6.4
LIMESTONE	21,692	0	0.0	1	4.6	1	4.6	0	0.0
LLANO	12,423	0	0.0	1	8.0	1	8.0	2	16.1
MCLENNAN	192,865	0	0.0	11	5.7	11	5.7	61	31.6
MADISON	11,968	0	0.0	2	16.7	0	0.0	1	8.4
MILAM	23,284	0	0.0	1	4.3	2	8.6	0	0.0
MILLS	4,446	0	0.0	0	0.0	0	0.0	0	0.0
ROBERTSON	16,996	0	0.0	5	29.4	5	29.4	0	0.0
SAN SABA	5,463	0	0.0	0	0.0	1	18.3	1	18.3
TRAVIS	647,366	25	3.9	140	21.6	151	23.3	124	19.2
WASHINGTON	29,154	0	0.0	0	0.0	1	3.4	1	3.4
WILLIAMSON	215,065	0	0.0	20	9.3	26	12.1	47	21.9
REGIONAL TOTALS	1,989,767	25	1.3	258	13.0	35	16.8	381	19.1
STATEWIDE TOTALS	19,995,428	37	0.2	1 153	5.8	2,198	11.0	2,281	11.4

REPORTED HEPATITIS RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 7 - 1999

		HEPATITIS A		HEPATITIS B		HEPATITIS C		HEPATITIS UNSPECIFIED	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
BASTROP	53,506	2	3.7	1	1.9	0	0.0	0	0.0
BELL	211,924	4	1.9	0	0.0	3	1.4	0	0.0
BLANCO	7,257	1	13.8	0	0.0	0	0.0	0	0.0
BOSQUE	16,148	5	31.0	0	0.0	0	0.0	0	0.0
BRAZOS	121,438	10	8.2	3	2.5	3	2.5	0	0.0
BURLESON	15,318	3	19.6	0	0.0	1	6.5	0	0.0
BURNET	27,877	7	25.1	0	0.0	0	0.0	0	0.0
CALDWELL	32,039	4	12.5	1	3.1	0	0.0	0	0.0
CORYELL	76,679	0	0.0	0	0.0	0	0.0	0	0.0
FALLS	18,826	0	0.0	1	5.3	0	0.0	0	0.0
FAYETTE	20,350	3	14.7	0	0.0	0	0.0	0	0.0
FREESTONE	17,034	0	0.0	0	0.0	0	0.0	0	0.0
GRIMES	22,783	0	0.0	2	8.8	0	0.0	0	0.0
HAMILTON	7,331	1	13.6	0	0.0	0	0.0	0	0.0
HAYS	86,860	11	12.7	0	0.0	0	0.0	0	0.0
HILL	28,831	10	34.7	1	3.5	0	0.0	0	0.0
LAMPASAS	14,515	1	6.9	0	0.0	0	0.0	0	0.0
LEE	14,749	0	0.0	0	0.0	0	0.0	0	0.0
LEON	15,580	0	0.0	1	6.4	0	0.0	0	0.0
LIMESTONE	21,692	0	0.0	0	0.0	0	0.0	0	0.0
LLANO	12,423	1	8.0	0	0.0	0	0.0	0	0.0
MCLENNAN	192,865	7	3.6	6	3.1	0	0.0	0	0.0
MADISON	11,968	0	0.0	0	0.0	1	8.4	0	0.0
MILAM	23,284	1	4.3	0	0.0	0	0.0	0	0.0
MILLS	4,446	0	0.0	0	0.0	0	0.0	0	0.0
ROBERTSON	16,996	0	0.0	0	0.0	0	0.0	0	0.0
SAN SABA	5,463	1	18.3	0	0.0	0	0.0	0	0.0
TRAVIS	647,366	286	44.2	22	3.4	2	0.3	0	0.0
WASHINGTON	29,154	1	3.4	2	6.9	2	6.9	0	0.0
WILLIAMSON	215,065	46	21.4	1	0.5	0	0.0	0	0.0
REGIONAL TOTALS	**1,989,767**	**405**	**20.4**	**41**	**2.1**	**12**	**0.6**	**0**	**0.0**
STATEWII TOTALS	**~19,995,428**	**2,516**	**12.6**	**864**	**4.3**	**359**	**1.8**	**2**	**0.0**

REPORTED OTHER SELECTED DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 7 - 1999

		ASEPTIC MENINGITIS		CHICKENPOX		ENCEPHALITIS		TUBERCULOSIS	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
BASTROP	53,506	3	5.6	79	147.6	0	0.0	7	13.1
BELL	211,924	19	9.0	79	37.3	1	0.5	8	3.8
BLANCO	7,257	0	0.0	0	0.0	0	0.0	1	13.8
BOSQUE	16,148	0	0.0	19	117.7	0	0.0	1	6.2
BRAZOS	121,438	13	10.7	40	32.9	0	0.0	9	7.4
BURLESON	15,318	0	0.0	1	6.5	0	0.0	1	6.5
BURNET	27,877	0	0.0	5	17.9	0	0.0	1	3.6
CALDWELL	32,039	0	0.0	3	9.4	0	0.0	4	12.5
CORYELL	76,679	5	6.5	12	15.6	0	0.0	0	0.0
FALLS	18,826	0	0.0	19	100.9	0	0.0	0	0.0
FAYETTE	20,350	0	0.0	9	44.2	0	0.0	1	4.9
FREESTONE	17,034	0	0.0	1	5.9	0	0.0	0	0.0
GRIMES	22,783	0	0.0	0	0.0	0	0.0	2	8.8
HAMILTON	7,331	0	0.0	0	0.0	0	0.0	0	0.0
HAYS	86,860	3	3.5	59	67.9	0	0.0	2	2.3
HILL	28,831	1	3.5	4	13.9	0	0.0	1	3.5
LAMPASAS	14,515	0	0.0	4	27.6	0	0.0	1	6.9
LEE	14,749	0	0.0	7	47.5	0	0.0	0	0.0
LEON	15,580	0	0.0	6	38.5	0	0.0	0	0.0
LIMESTONE	21,692	0	0.0	3	13.8	0	0.0	1	4.6
LLANO	12,423	0	0.0	0	0.0	0	0.0	0	0.0
MCLENNAN	192,865	3	1.6	62	32.1	1	0.5	9	4.7
MADISON	11,968	0	0.0	3	25.1	0	0.0	0	0.0
MILAM	23,284	0	0.0	1	4.3	0	0.0	2	8.6
MILLS	4,446	0	0.0	0	0.0	0	0.0	0	0.0
ROBERTSON	16,996	0	0.0	1	5.9	0	0.0	0	0.0
SAN SABA	5,463	0	0.0	0	0.0	0	0.0	0	0.0
TRAVIS	647,366	36	5.6	710	109.7	1	0.2	72	11.1
WASHINGTON	29,154	0	0.0	0	0.0	0	0.0	3	10.3
WILLIAMSON	215,065	16	7.4	125	58.1	0	0.0	5	2.3
REGIONAL TOTALS	1,989,767	99	5.0	1,252	62.9	3	0.2	131	6.6
STATEWIDE TOTALS	19,995,428	921	4.6	7,473	37.4	27	0.1	1,649	8.2

REPORTED SEXUALLY TRANSMITTED DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 7 - 1999

		CHLAMYDIA		GONORRHEA		P & S SYPHILIS	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES
BASTROP	53,506	109	203.7	55	102.8	0	0.0
BELL	211,924	1,933	912.1	717	338.3	4	19
BLANCO	7,257	9	324.0	0	0.0	0	0.0
BOSQUE	16,148	25	154.8	12	74.3	0	0.0
BRAZOS	121,438	631	519.6	438	360.7	1	0.8
BURLESON	15,318	51	332.9	33	215.4	0	0.0
BURNET	27,877	60	215.2	7	25.1	0	0.0
CALDWELL	32,039	54	168.5	19	59.3	0	0.0
CORYELL	76,679	120	156.5	31	40.4	0	0.0
FALLS	18,826	177	940.2	90	478.1	0	0.0
FAYETTE	20,350	29	142.5	20	98.3	0	0.0
FREESTONE	17,034	31	182.0	11	64.6	0	0.0
GRIMES	22,783	101	443.3	43	188.7	0	0.0
HAMILTON	7,331	18	245.5	2	27.3	0	0.0
HAYS	86,860	546	628.6	133	153.1	0	0.0
HILL	28,831	53	783.8	34	117.9	0	0.0
LAMPASAS	14,515	42	289.4	3	20.7	0	0.0
LEE	14,749	29	196.6	16	108.5	0	0.0
LEON	15,580	16	102.7	9	57.8	0	0.0
LIMESTONE	21,692	70	322.7	43	198.2	0	0.0
LLANO	12,423	14	182.7	2	16.1	0	0.0
MCLENNAN	192,865	1,202	623.2	825	427.8	3	1.6
MADISON	11,968	49	409.4	18	150.4	0	0.0
MILAM	23,284	82	-352.2	45	193.3	0	00
MILLS	4,446	4	90.0	0	0.0	0	0.0
ROBERTSON	16,996	81	476.6	72	-423.6	0	0.0
SAN SABA	5,463	11	201.4	2	36.6	0	0.0
TRAVIS	647,366	2,754	425.4	1,540	237.9	18	2.8
WASHINGTON	29,154	103	353.3	95	-325.9	2	6.9
WILLIAMSON	215,065	355	165.1	119	55.3	0	0.0
REGIONAL TOTALS	1,989,767	8,759	440.2	4,434	222.8	28	1.4
STATEWIDE TOTALS]	19,995,428	62,526	312.7	32,680	163.4	459	23

REPORTED AIDS & HIV INFECTION RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 7 - 1999

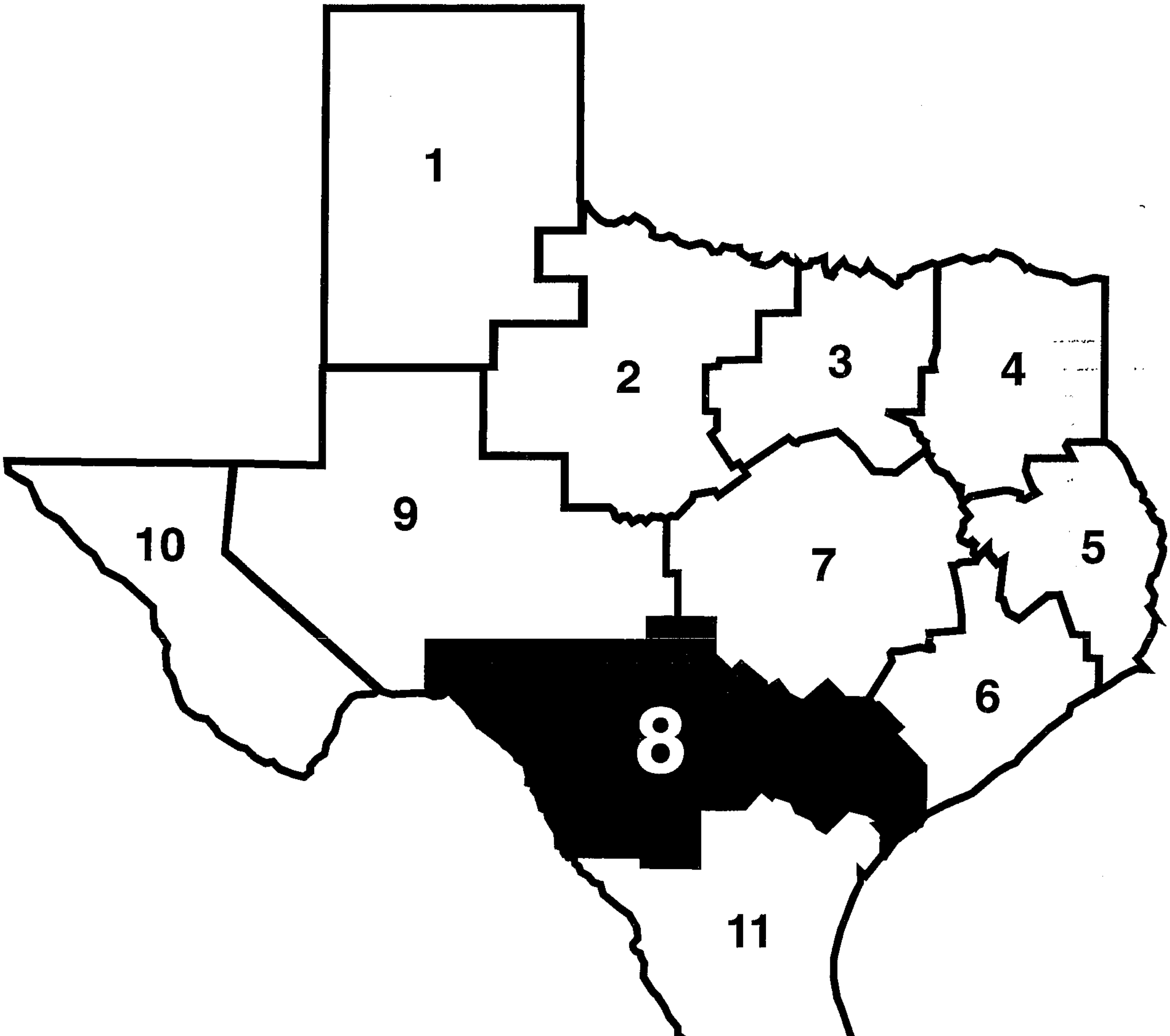
COUNTY	1999 POP.	AIDS CASES	AIDS RATES	HIV INFECTION CASES	HIV INFECTION RATES
BASTROP	53,506	5	9.3	3	5.6
BELL	211,924	20	9.4	11	5.2
BLANCO	7,257	0	0.0	0	0.0
BOSQUE	16,148	1	6.2	1	6.2
BRAZOS	121,438	17	14.0	12	9.9
BURLESON	15,318	4	26.1	1	6.5
BURNET	27,877	2	7.2	0	0.0
CALDWELL	32,039	0	0.0	2	6.2
CORYELL	76,679	5	6.5	3	3.9
FALLS	18,826	1	5.3	3	15.9
FAYETTE	20,350	3	14.7	1	4.9
FREESTONE	17,034	1	5.9	0	0.0
GRIMES	22,783	1	4.4	1	4.4
HAMILTON	7,331	0	0.0	0	0.0
HAYS	86,860	10	11.5	1	1.2
HILL	28,831	1	3.5	0	0.0
LAMPASAS	14,515	1	6.9	0	0.0
LEE	14,749	2	13.6	0	0.0
LEON	15,580	0	0.0	0	0.0
LIMESTONE	21,692	1	4.6	1	4.6
LLANO	12,423	0	0.0	0	0.0
MCLENNAN	192,865	14	7.3	0	0.0
MADISON	11,968	0	0.0	24	200.5
MILAM	23,284	6	25.8	2	8.6
MILLS	4,446	0	0.0	0	0.0
ROBERTSON	16,996	3	17.7	0	0.0
SAN SABA	5,463	0	0.0	0	0.0
TRAVIS	647,366	247	38.2	116	17.9
WASHINGTON	29,154	2	6.9	1	3.4
WILLIAMSON	215,065	12	5.6	4	1.9
REGIONAL TOTALS	1,989,767	359	18.0	187	9.4
STATEWIDE TOTALS	19,995,428	2,865	14.3	2,873	14.4

REPORTED VACCINE-PREVENTABLE DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 7 - 1999

		MEASLES		MUMPS		PERTUSSIS		RUBELLA	
COUNTY	1999 POP.	CASES	RATE	CASES	RATES	CASES	RATES	CASES	RATES
BASTROP	53,506	0	0.0	0	0.0	0	0.0	0	0.0
BELL	211,924	0	0.0	1	0.5	2	0.9	0	0.0
BLANCO	7,257	0	0.0	0	0.0	0	0.0	0	0.0
BOSQUE	16,148	0	0.0	0	0.0	0	0.0	0	0.0
BRAZOS	121,438	0	0.0	0	0.0	1	0.8	0	0.0
BURLESON	15,318	0	0.0	0	0.0	0	0.0	0	0.0
BURNET	27,877	0	0.0	0	0.0	0	0.0	0	0.0
CALDWELL	32,039	0	0.0	0	0.0	0	0.0	0	0.0
CORYELL	76,679	0	0.0	0	0.0	0	0.0	0	0.0
FALLS	18,826	0	0.0	0	0.0	0	0.0	0	0.0
FAYETTE	20,350	0	0.0	0	0.0	0	0.0	0	0.0
FREESTONE	17,034	0	0.0	0	0.0	0	0.0	0	0.0
GRIMES	22,783	0	0.0	0	0.0	0	0.0	0	0.0
HAMILTON	7,331	0	0.0	0	0.0	0	0.0	0	0.0
HAYS	86,860	0	0.0	0	0.0	0	0.0	0	0.0
HILL	28,831	0	0.0	0	0.0	2	6.9	0	0.0
LAMPASAS	14,515	0	0.0	0	0.0	0	0.0	0	0.0
LEE	14,749	0	0.0	0	0.0	0	0.0	0	0.0
LEON	15,580	0	0.0	0	0.0	0	0.0	0	0.0
LIMESTONE	21,692	0	0.0	0	0.0	0	0.0	0	0.0
LLANO	12,423	0	0.0	0	0.0	0	0.0	0	0.0
MCLENNAN	192,865	0	0.0	0	0.0	1	0.5	0	0.0
MADISON	11,968	0	0.0	0	0.0	0	0.0	0	0.0
MILAM	23,284	0	0.0	0	0.0	0	0.0	0	0.0
MILLS	4,446	0	0.0	0	0.0	0	0.0	0	0.0
ROBERTSON	16,996	0	0.0	0	0.0	0	0.0	0	0.0
SAN SABA	5,463	0	0.0	0	0.0	0	0.0	0	0.0
TRAVIS	647,366	3	0.5	1	0.2	12	1.9	2	0.3
WASHINGTON	29,154	0	0.0	0	0.0	0	0.0	0	0.0
WILLIAMSON	215,065	2	0.9	0	0.0	1	0.5	0	0.0
REGIONAL TOTALS	**1,989,767**	**5**	**0.3**	**2**	**0.1**	**19**	**1.0**	**2**	**0.1**
STATEWIDE TOTALS(	**19,995,428**	**7**	**0.0**	**35**	**0.2**	**152**	**0.8**	**9**	**0.0**

Public Health Region *8*



REPORTED SELECTED GASTROINTESTINAL DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 8 - 1999

		AMEBIASIS		CAMPYLOBACTERIOSIS		SALMONELLOSIS		SHIGELLOSIS	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
ATASCOSA	36,915	0	0.0	0	0.0	5	13.5	3	8.1
BANDERA	13,915	0	0.0	2	14.4	3	21.6	2	14.4
BEXAR	1,360,411	0	0.0	162	11.9	159	11.7	381	28.0
CALHOUN	20,099	0	0.0	0	0.0	0	0.0	0	0.0
COMAL	73,767	0	0.0	4	5.4	11	14.9	4	5.4
DEWITT	20,314	0	0.0	0	0.0	5	24.6	0	0.0
DIMMIT	11,251	0	0.0	0	0.0	0	0.0	2	17.8
EDWARDS	2,497	0	0.0	0	0.0	0	0.0	0	0.0
FRIO	16,456	0	0.0	0	0.0	2	12.2	0	0.0
GILLESPIE	19,776	0	0.0	1	5.1	0	0.0	1	5.1
GOLIAD	6,509	0	0.0	1	15.4	0	0.0	0	0.0
GONZALES	18,192	0	0.0	1	5.5	2	11.0	2	11.0
GUADALUPE	84,277	0	0.0	34	40.3	16	19.0	12	14.2
JACKSON	13,204	1	7.6	1	7.6	2	15.1	0	0.0
KARNES	15,715	0	0.0	0	0.0	1	6.4	6	38.2
KENDALL	18,938	0	0.0	1	5.3	2	10.6	0	0.0
KERR	41,958	0	0.0	4	9.5	8	19.1	3	7.2
KINNEY	3,341	0	0.0	0	0.0	1	29.9	2	59.9
LASALLE	6,408	0	0.0	0	0.0	2	31.2	0	0.0
LAVACA	18,055	0	0.0	4	22.2	6	33.2	1	5.5
MAVERICK	44,277	0	0.0	3	6.8	2	4.5	7	15.8
MEDINA	34,164	0	0.0	0	0.0	3	8.8	6	17.6
REAL	2,518	0	0.0	0	0.0	0	0.0	0	0.0
UVALDE	25,872	0	0.0	0	0.0	2	7.7	1	3.9
VAL VERDE	44,190	1	2.3	14	31.7	18	40.7	9	20.4
VICTORIA	80,441	0	0.0	5	6.2	21	26.1	2	2.5
WILSON	29,726	0	0.0	2	6.7	3	10.1	2	6.7
ZAVALA	13,745	0	0.0	0	0.0	1	7.3	2	14.6
REGIONAL TOTALS	**2,076,931**	**2**	**0.1**	**239**	**11.5**	[illegible]	**13.2**	**448**	**21.6**
STATEWIDE TOTALS	**19,995,428**	**37**	**0.2**	**1,153**	**5.8**	**2,198**	**11.0**	**2,281**	**11.0**

REPORTED HEPATITIS RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 8 - 1999

		HEPATITIS A		HEPATITIS B		HEPATITIS C		HEPATITIS UNSPECIFIED	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
ATASCOSA	36,915	3	8.1	0	0.0	6	16.3	0	0.0
BANDERA	13,915	0	0.0	0	0.0	0	0.0	0	0.0
BEXAR	1,360,411	330	24.3	79	5.8	35	2.6	0	0.0
CALHOUN	20,099	1	5.0	0	0.0	0	0.0	0	0.0
COMAL	73,767	11	14.9	4	5.4	4	5.4	0	0.0
DEWITT	20,314	0	0.0	0	0.0	0	0.0	0	0.0
DIMMIT	11,251	14	124.4	0	0.0	0	0.0	0	0.0
EDWARDS	2,497	0	0.0	0	0.0	0	0.0	0	0.0
FRIO	16,456	2	12.2	0	0.0	1	6.1	0	0.0
GILLESPIE	19,776	0	0.0	0	0.0	0	0.0	0	0.0
GOLIAD	6,509	0	0.0	1	15.4	0	0.0	0	0.0
GONZALES	18,192	1	5.5	0	0.0	0	0.0	0	0.0
GUADALUPE	84,277	2	2.4	2	2.4	1	1.2	0	0.0
JACKSON	13,204	1	7.6	1	7.6	0	0.0	0	0.0
KARNES	15,715	0	0.0	1	6.4	0	0.0	0	0.0
KENDALL	18,938	0	0.0	0	0.0	0	0.0	0	0.0
KERR	41,958	5	11.9	0	0.0	0	0.0	0	0.0
KINNEY	3,341	1	29.9	0	0.0	0	0.0	0	0.0
LASALLE	6,408	2	31.2	0	0.0	0	0.0	0	0.0
LAVACA	18,055	0	0.0	0	0.0	0	0.0	0	0.0
MAVERICK	44,277	1	2.3	0	0.0	0	0.0	0	0.0
MEDINA	34,164	0	0.0	1	2.9	1	2.9	0	0.0
REAL	2,518	0	0.0	0	0.0	1	39.7	0	0.0
UVALDE	25,872	4	15.5	1	3.9	3	11.6	0	0.0
VAL VERDE	44,190	10	22.6	1	2.3	3	6.8	0	0.0
VICTORIA	80,441	30	37.3	3	3.7	0	0.0	0	0.0
WILSON	29,726	0	0.0	0	0.0	0	0.0	0	0.0
ZAVALA	13,745	16	116.4	0	0.0	4	29.1	0	0.0
REGIONAL TOTALS	2,076,931	434	20.9	94	4.5	59	2.8	0	0.0
STATEWIDE TOTALS	19,995,428	2,516	12.6	864	4.3	359	1.8	2	1.8

REPORTED OTHER SELECTED DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 8 - 1999

		ASEPTIC MENINGITIS		CHICKENPOX		ENCEPHALITIS		TUBERCULOSIS	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
ATASCOSA	36,915	1	2.7	1	2.7	0	0.0	2	5.4
BANDERA	13,915	0	0.0	3	21.6	0	0.0	1	7.2
BEXAR	1,360,411	147	10.8	2	0.1	1	0.1	93	6.8
CALHOUN	20,099	0	0.0	0	0.0	0	0.0	2	10.0
COMAL	73,767	1	1.4	31	42.0	0	0.0	3	4.1
DEWITT	20,314	0	0.0	11	54.1	0	0.0	2	9.8
DIMMIT	11,251	0	0.0	41	364.4	0	0.0	0	0.0
EDWARDS	2,497	0	0.0	0	0.0	0	0.0	0	0.0
FRIO	16,456	3	18.2	33	200.5	0	0.0	3	18.2
GILLESPIE	19,776	0	0.0	1	5.1	0	0.0	0	0.0
GOLIAD	6,509	0	0.0	1	15.4	0	0.0	0	0.0
GONZALES	18,192	0	0.0	1	5.5	0	0.0	1	5.5
GUADALUPE	84,277	1	1.2	21	24.9	0	0.0	4	4.7
JACKSON	13,204	1	7.6	0	0.0	0	0.0	1	7.6
KARNES	15,715	1	6.4	1	6.4	0	0.0	1	6.4
KENDALL	18,938	1	5.3	1	5.3	0	0.0	0	0.0
KERR	41,958	0	0.0	2	4.8	0	0.0	1	2.4
KINNEY	3,341	0	0.0	0	0.0	0	0.0	1	29.9
LASALLE	6,408	0	0.0	0	0.0	0	0.0	0	0.0
LAVACA	18,055	0	0.0	1	5.5	0	0.0	0	0.0
MAVERICK	44,277	0	0.0	0	0.0	0	0.0	8	18.1
MEDINA	34,164	2	5.9	2	5.9	0	0.0	1	2.9
REAL	2,518	0	0.0	0	0.0	0	0.0	1	39.7
UVALDE	25,872	0	0.0	17	65.7	0	0.0	6	23.2
VAL VERDE	44,190	1	2.3	85	192.4	0	0.0	4	9.1
VICTORIA	80,441	1	1.2	12	14.9	0	0.0	1	1.2
WILSON	29,726	0	0.0	4	13.5	0	0.0	0	0.0
ZAVALA	13,745	0	0.0	3	21.8	0	0.0	1	7.3
REGIONAL TOTALS	2,076,931	160	'7.7	274	13.2	1	0.0	137	6.6
STATEWIDE TOTALS	19,995,428	921	4.6	7,473	37.4	27	-0.1	1,649	8.2

REPORTED SEXUALLY TRANSMITTED DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 8 - 1999

		CHLAMYDIA		GONORRHEA		P & S SYPHILIS	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES
ATASCOSA	36,915	87	235.7	17	46.1	0	0.0
BANDERA	13,915	8	57.5	3	21.6	0	0.0
BEXAR	1,360,411	5,664	416.3	2,055	151.1	30	2.2
CALHOUN	20,099	40	199.0	7	34.8	0	0.0
COMAL	73,767	101	136.9	17	23.0	0	0.0
DEWITT	20,314	64	315.1	14	68.9	0	0.0
DIMMIT	11,251	15	133.3	3	26.7	0	0.0
EDWARDS	2,497	3	120.1	0	0.0	0	0.0
FRIO	16,456	41	249.1	6	36.5	2	12.2
GILLESPIE	19,776	26	131.5	3	15.2	0	0.0
GOLIAD	6,509	3	46.1	2	30.7	0	0.0
GONZALES	18,192	57	313.3	48	263.9	0	0.0
GUADALUPE	84,277	116	137.6	68	80.7	0	0.0
JACKSON	13,204	14	106.0	8	60.6	0	0.0
KARNES	15,715	38	241.8	3	19.1	0	0.0
KENDALL	18,938	16	84.5	0	0.0	0	0.0
KERR	41,958	85	202.6	23	54.8	0	0.0
KINNEY	3,341	5	149.7	1	29.9	0	0.0
LASALLE	6,408	7	109.2	1	15.6	0	0.0
LAVACA	18,055	44	243.7	26	144.0	2	11.1
MAVERICK	44,277	116	262.0	3	6.8	0	0.0
MEDINA	34,164	41	120.0	6	17.6	0	0.0
REAL	2,518	1	39.7	0	0.0	0	0.0
UVALDE	25,872	76	293.8	14	54.1	0	0.0
VAL VERDE	44,190	120	271.6	20	45.3	0	0.0
VICTORIA	80,441	367	456.2	127	157.9	4	5.0
WILSON	29,726	29	97.6	7	23.5	0	0.0
ZAVALA	13,745	13	94.6	3	21.8	0	0.0
REGIONAL TOTALS	2,076,931	7,197	346.5	2,485	119.6	38	1.8
STATEWIDE TOTALS~	19,995,428	62,526	312.7	32,680	263.4	459	163.4

REPORTED AIDS & HIV INFECTION RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 8 - 1999

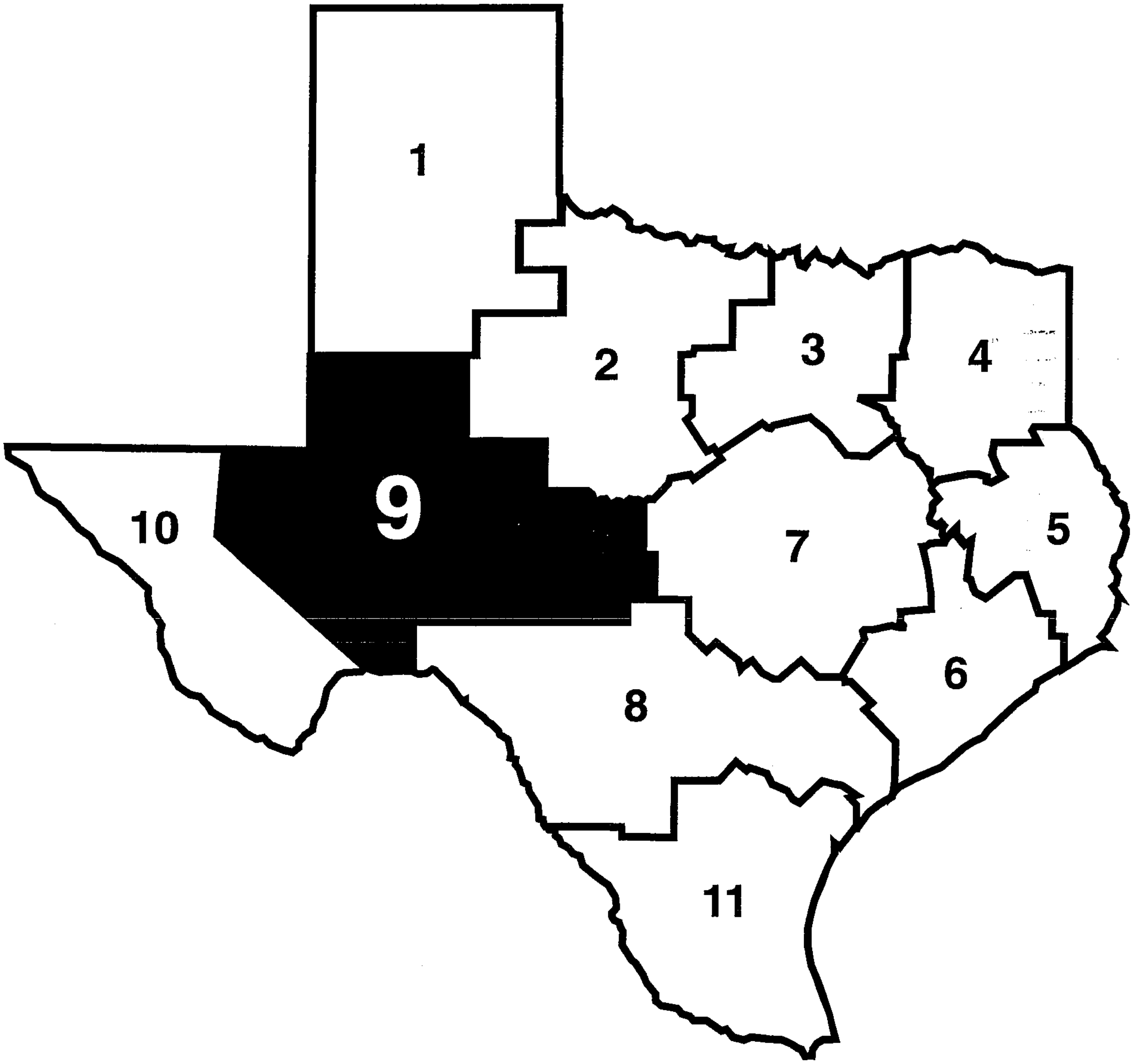
		AIDS		HIV INFECTION	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES
ATASCOSA	36,915	0	0.0	0	0.0
BANDERA	13,915	0	0.0	0	0.0
BEXAR	1,360,411	204	15.0	153	11.2
CALHOUN	20,099	1	5.0	0	0.0
COMAL	73,767	3	4.1	4	5.4
DEWITT	20,314	0	0.0	0	0.0
DIMMIT	11,251	2	17.8	0	0.0
EDWARDS	2,497	1	40.0	0	0.0
FRIO	16,456	0	0.0	0	0.0
GILLESPIE	19,776	0	0.0	0	0.0
GOLIAD	6,509	0	0.0	0	0.0
GONZALES	18,192	0	0.0	2	11.0
GUADALUPE	84,277	1	1.2	4	4.7
JACKSON	13,204	1	7.6	0	0.0
KARNES	15,715	0	0.0	1	6.4
KENDALL	18,938	2	10.6	1	5.3
KERR	41,958	1	2.4	2	4.8
KINNEY	3,341	0	0.0	0	0.0
LASALLE	6,408	2	31.2	0	0.0
LAVACA	18,055	0	0.0	0	0.0
MAVERICK	44,277	3	6.8	3	6.8
MEDINA	34,164	3	8.8	0	0.0
REAL	2,518	0	0.0	0	0.0
UVALDE	25,872	1	3.9	0	0.0
VAL VERDE	44,190	2	4.5	2	4.5
VICTORIA	80,441	1	1.2	2	2.5
WILSON	29,726	2	6.7	0	0.0
ZAVALA	13,745	1	7.3	0	0.0
REGIONAL TOTALS	**2,076,931**	**231**	**11.1**	**174**	**8.4**
STATEWIDE TOTALS	**19,995,428**	**2,865**	**14.3**	**2,873**	**14.4**

REPORTED VACCINE-PREVENTABLE DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 8 - 1999

		MEASLES		MUMPS		PERTUSSIS		RUBELLA	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
ATASCOSA	36,915	0	0.0	0	0.0	0	0.0	0	0.0
BANDERA	13,915	0	0.0	0	0.0	0	0.0	0	0.0
BEXAR	1,360,411	0	0.0	0	0.0	7	0.5	0	0.0
CALHOUN	20,099	0	0.0	0	0.0	1	5.0	0	0.0
COMAL	73,767	0	0.0	0	0.0	0	0.0	0	0.0
DEWITT	20,314	0	0.0	0	0.0	0	0.0	0	0.0
DIMMIT	11,251	0	0.0	0	0.0	0	0.0	0	0.0
EDWARDS	2,497	0	0.0	0	0.0	0	0.0	0	0.0
FRIO	16,456	0	0.0	0	0.0	0	0.0	0	0.0
GILLESPIE	19,776	0	0.0	4	20.2	1	5.1	0	0.0
GOLIAD	6,509	0	0.0	0	0.0	0	0.0	0	0.0
GONZALES	18,192	0	0.0	0	0.0	0	0.0	0	0.0
GUADALUPE	84,277	0	0.0	0	0.0	0	0.0	0	0.0
JACKSON	13,204	0	0.0	0	0.0	0	0.0	0	0.0
KARNES	15,715	0	0.0	0	0.0	0	0.0	0	0.0
KENDALL	18,938	0	0.0	0	0.0	0	0.0	0	0.0
KERR	41,958	0	0.0	0	0.0	1	2.4	0	0.0
KINNEY	3,341	0	0.0	0	0.0	0	0.0	0	0.0
LASALLE	6,408	0	0.0	0	0.0	0	0.0	0	0.0
LAVACA	18,055	0	0.0	0	0.0	0	0.0	0	0.0
MAVERICK	44,277	0	0.0	2	4.5	0	0.0	0	0.0
MEDINA	34,164	1	2.9	0	0.0	0	0.0	0	0.0
REAL	2,518	0	0.0	0	0.0	0	0.0	0	0.0
UVALDE	25,872	0	0.0	0	0.0	0	0.0	0	0.0
VAL VERDE	44,190	0	0.0	0	0.0	1	2.3	0	0.0
VICTORIA	80,441	0	0.0	0	0.0	0	0.0	0	0.0
WILSON	29,726	0	0.0	0	0.0	0	0.0	0	0.0
ZAVALA	13,745	0	0.0	0	0.0	0	0.0	0	0.0
REGIONAL TOTALS	2,076,931	1	0.0	6	0.3	11	0.5	0	-0.0
STATEWIDE T/	19,995,428	7	0.0	35	0.2	152	0.8	9	0.8

Public Health Region 9



REPORTED SELECTED GASTROINTESTINAL DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 9 - 1999

		AMEBIASIS		CAMPYLOBACTERIOSIS		SALMONELLOSIS		SHIGELLOSIS	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
ANDREWS	15,532	0	0.0	0	0.0	1	6.4	0	0.0
BORDEN	817	0	0.0	0	0.0	0	0.0	0	0.0
COKE	3,434	0	0.0	0	0.0	1	29.1	0	0.0
CONCHO	3,296	0	0.0	0	0.0	1	30.3	0	0.0
CRANE	5,146	0	0.0	0	0.0	0	0.0	0	0.0
CROCKETT	4,310	0	0.0	0	0.0	0	0.0	0	0.0
DAWSON	15,790	0	0.0	1	6.3	4	25.3	2	12.7
ECTOR	128,421	0	0.0	4	3.1	18	14.0	7	5.5
GAINES	14,970	0	0.0	1	6.7	3	20.0	0	0.0
GLASSCOCK	1,601	0	0.0	0	0.0	0	0.0	0	0.0
HOWARD	31,921	0	0.0	0	0.0	0	0.0	1	3.1
IRION	1,741	0	0.0	0	0.0	0	0.0	1	57.4
KIMBLE	4,121	0	0.0	0	0.0	0	0.0	1	24.3
LOVING	116	0	0.0	0	0.0	0	0.0	0	0.0
MCCULLOCH	8,876	0	0.0	0	0.0	2	22.5	3	33.8
MARTIN	5,425	0	0.0	0	0.0	0	0.0	0	0.0
MASON	3,288	0	0.0	0	0.0	0	0.0	0	0.0
MENARD	2,292	0	0.0	0	0.0	0	0.0	0	0.0
MIDLAND	127,868	0	0.0	1	0.8	11	8.6	18	14.1
PECOS	17,617	0	0.0	1	5.7	1	5.7	1	5.7
REAGAN	5,148	0	0.0	0	0.0	0	0.0	0	0.0
REEVES	17,050	0	0.0	1	5.9	1	5.9	0	0.0
SCHLEICHER	3,249	0	0.0	0	0.0	1	30.8	0	0.0
STERLING	1,532	0	0.0	0	0.0	1	65.3	0	0.0
SUTTON	4,506	0	0.0	0	0.0	0	0.0	0	0.0
TERRELL	1,522	0	0.0	0	0.0	0	0.0	0	0.0
TOM GREEN	110,054	0	0.0	12	10.9	13	11.8	22	20.0
UPTON	4,817	0	0.0	0	0.0	0	0.0	0	0.0
WARD	13,551	0	0.0	0	0.0	1	7.4	0	0.0
WINKLER	9,047	0	0.0	0	0.0	0	0.0	0	0.0
REGIONAL TOTALS	**567,058**	**0**	**0.0**	**21**	**3.7**	**59**	**10.4**	**56**	**9.9**
STATEWIDE TOTALS	**19,995,428**	**37**	**0.2**	**1,153**	**5.8**	**2,198**	**11.0**	**2,281**	**11.4**

REPORTED HEPATITIS RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 9 - 1999

		HEPATITIS A		HEPATITIS B		HEPATITIS C		HEPATITIS UNSPECIFIED	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
ANDREWS	15,532	1	6.4	0	0.0	1	6.4	0	0.0
BORDEN	817	0	0.0	0	0.0	0	0.0	0	0.0
COKE	3,434	0	0.0	0	0.0	1	29.1	0	0.0
CONCHO	3,296	0	0.0	0	0.0	0	0.0	0	0.0
CRANE	5,146	0	0.0	0	0.0	1	19.4	0	0.0
CROCKETT	4,310	0	0.0	0	0.0	1	23.2	0	0.0
DAWSON	15,790	0	0.0	1	6.3	7	44.3	0	0.0
ECTOR	128,421	6	4.7	6	4.7	1	0.8	0	0.0
GAINES	14,970	3	20.0	1	6.7	1	6.7	0	0.0
GLASSCOCK	1,601	0	0.0	0	0.0	0	0.0	0	0.0
HOWARD	31,921	4	12.5	2	6.3	3	9.4	0	0.0
IRION	1,741	0	0.0	0	0.0	0	0.0	0	0.0
KIMBLE	4,121	1	24.3	0	0.0	0	0.0	0	0.0
LOVING	116	0	0.0	0	0.0	0	0.0	0	0.0
MCCULLOCH	8,876	0	0.0	0	0.0	0	0.0	0	0.0
MARTIN	5,425	3	55.3	0	0.0	0	0.0	0	0.0
MASON	3,288	0	0.0	0	0.0	0	0.0	0	0.0
MENARD	2,292	1	43.6	0	0.0	0	0.0	0	0.0
MIDLAND	127,868	2	1.6	8	6.3	11	8.6	0	0.0
PECOS	17,617	0	0.0	1	5.7	2	11.4	0	0.0
REAGAN	5,148	3	58.3	0	0.0	0	0.0	0	0.0
REEVES	17,050	0	0.0	2	11.7	1	5.9	0	0.0
SCHLEICHER	3,249	0	0.0	0	0.0	0	0.0	0	0.0
STERLING	1,532	0	0.0	0	0.0	0	0.0	0	0.0
SUTTON	4,506	1	22.2	0	0.0	1	22.2	0	0.0
TERRELL	1,522	0	0.0	0	0.0	0	0.0	0	0.0
TOM GREEN	110,054	35	31.8	15	13.6	16	14.5	0	0.0
UPTON	4,817	1	20.8	0	0.0	0	0.0	0	0.0
WARD	13,551	0	0.0	0	0.0	0	0.0	0	0.0
WINKLER	9,047	0	0.0	0	0.0	2	22.1	0	0.0
REGIONAL TOTALS	567,058	61	10.8	36	6.3	49	8.6	0	0.0
STATEWIDE TOTALS	19,995,428	2,516	12.6	864	4.3	359	1.8	2	0.0

REPORTED OTHER SELECTED DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 9 - 1999

		ASEPTIC MENINGITIS		CHICKENPOX		ENCEPHALITIS		TUBERCULOSIS	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
ANDREWS	15,532	0	0.0	0	0.0	0	0.0	0	0.0
BORDEN	817	0	0.0	0	0.0	0	0.0	0	0.0
COKE	3,434	0	0.0	0	0.0	0	0.0	0	0.0
CONCHO	3,296	0	0.0	0	0.0	0	0.0	2	60.7
CRANE	5,146	0	0.0	0	0.0	0	0.0	0	0.0
CROCKETT	4,310	0	0.0	0	0.0	0	0.0	0	0.0
DAWSON	15,790	1	6.3	1	6.3	0	0.0	0	0.0
ECTOR	128,421	0	0.0	38	29.6	0	0.0	10	7.8
GAINES	14,970	0	0.0	2	13.4	0	0.0	0	0.0
GLASSCOCK	1,601	0	0.0	0	0.0	0	0.0	0	0.0
HOWARD	31,921	0	0.0	3	9.4	0	0.0	2	6.3
IRION	1,741	0	0.0	0	0.0	0	0.0	0	0.0
KIMBLE	4,121	1	24.3	23	558.1	0	0.0	0	0.0
LOVING	116	0	0.0	0	0.0	0	0.0	0	0.0
MCCULLOCH	8,876	0	0.0	0	0.0	0	0.0	0	0.0
MARTIN	5,425	0	0.0	0	0.0	0	0.0	1	18.4
MASON	3,288	0	0.0	2	60.8	0	0.0	0	0.0
MENARD	2,292	0	0.0	0	0.0	0	0.0	0	0.0
MIDLAND	127,868	1	0.8	45	35.2	2	1.6	2	1.6
PECOS	17,617	0	0.0	15	85.1	0	0.0	1	5.7
REAGAN	5,148	0	0.0	0	0.0	0	0.0	0	0.0
REEVES	17,050	0	0.0	1	5.9	0	0.0	4	23.5
SCHLEICHER	3,249	0	0.0	0	0.0	0	0.0	0	0.0
STERLING	1,532	0	0.0	0	0.0	0	0.0	0	0.0
SUTTON	4,506	0	0.0	1	22.2	0	0.0	1	22.2
TERRELL	1,522	0	0.0	1	65.7	0	0.0	0	0.0
TOM GREEN	110,054	7	6.4	23	20.9	1	0.9	5	4.5
UPTON	4,817	0	0.0	29	602.0	0	0.0	0	0.0
WARD	13,551	0	0.0	0	0.0	0	0.0	0	0.0
WINKLER	9,047	0	0.0	5	55.3	0	0.0	0	0.0
REGIONAL TOTALS	**567,058**	**10**	**1.8**	**189**	**33.3**	**3**	**0.5**	**28**	**4.9**
STATEWIDE TOTALS	**~19,995,428**	**921**	**4.6**	**7,473**	**37.4**	**27**	**0.1**	**1,649**	**8.2**

REPORTED SEXUALLY TRANSMITTED DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 9 - 1999

		CHLAMYDIA		GONORRHEA		P& S SYPHILIS	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES
ANDREWS	15,532	10	64.4	3	19.3	0	0.0
BORDEN	817	0	0.0	0	0.0	0	0.0
COKE	3,434	57	1659.9	9	262.1	0	0.0
CONCHO	3,296	1	30.3	0	0.0	0	0.0
CRANE	5,146	5	97.2	1	19.4	0	0.0
CROCKETT	4,310	5	116.0	0	0.0	0	0.0
DAWSON	15,790	45	285.0	8	50.7	0	0.0
ECTOR	128,421	273	212.6	102	79.4	1	0.8
GAINES	14,970	27	180.4	8	53.4	0	0.0
GLASSCOCK	1,601	1	62.5	0	0.0	0	0.0
HOWARD	31,921	43	134.7	4	12.5	0	0.0
IRION	1,741	0	0.0	0	0.0	0	0.0
KIMBLE	4,121	10	242.7	2	48.5	0	0.0
LOVING	116	0	0.0	0	0.0	0	0.0
MCCULLOCH	8,876	16	180.3	0	0.0	0	0.0
MARTIN	5,425	7	78.9	2	22.5	0	0.0
MASON	3,288	3	55.3	1	18.4	0	0.0
MENARD	2,292	9	392.7	0	0.0	0	0.0
MIDLAND	127,868	247	193.2	79	61.8	0	0.0
PECOS	17,617	43	244.1	10	56.8	0	0.0
REAGAN	5,148	2	38.9	1	19.4	0	0.0
REEVES	17,050	30	176.0	6	35.2	0	0.0
SCHLEICHER	3,249	2	61.6	1	30.8	0	0.0
STERLING	1,532	0	0.0	0	0.0	0	0.0
SUTTON	4,506	4	88.8	0	0.0	0	0.0
TERRELL	1,522	0	0.0	0	0.0	0	0.0
TOM GREEN	110,054	239	217.2	51	46.3	0	0.0
UPTON	4,817	5	103.8	0	0.0	0	0.0
WARD	13,551	19	140.2	5	36.9	0	0.0
WINKLER	9,047	12	132.6	0	0.0	0	0.0
REGIONAL TOTALS	567,058	1,115	396.6	293	51.7	1	0.2
STATEWIDE TOTALS	19,995,428	62,526	312.7	32,680	163.4	459	2.3

REPORTED AIDS & HIV INFECTION RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 9 - 1999

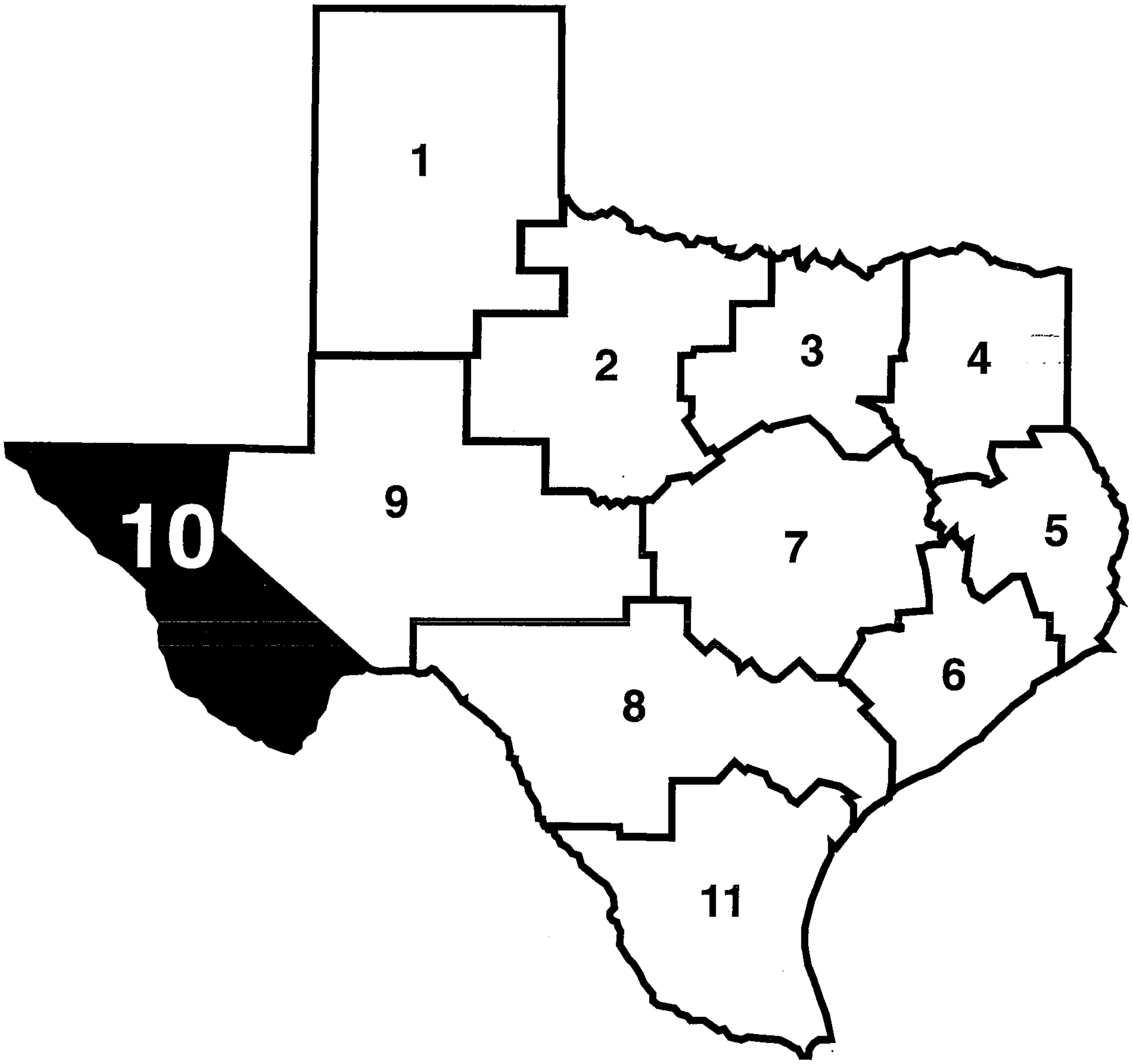
		AIDS		HIV INFECTION	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES
ANDREWS	15,532	1	6.4	0	0.0
BORDEN	817	0	0.0	0	0.0
COKE	3,434	0	0.0	0	0.0
CONCHO	3,296	1	30.3	0	0.0
CRANE	5,146	0	0.0	0	0.0
CROCKETT	4,310	0	0.0	0	0.0
DAWSON	15,790	0	0.0	0	0.0
ECTOR	128,421	7	5.5	5	3.9
GAINES	14,970	0	0.0	0	0.0
GLASSCOCK	1,601	0	0.0	0	0.0
HOWARD	31,921	2	6.3	2	6.3
IRION	1,741	0	0.0	0	0.0
KIMBLE	4,121	0	0.0	0	0.0
LOVING	116	0	0.0	0	0.0
MCCULLOCH	8,876	1	11.3	0	0.0
MARTIN	5,425	0	0.0	0	0.0
MASON	3,288	0	0.0	0	0.0
MENARD	2,292	0	0.0	0	0.0
MIDLAND	127,868	10	7.8	6	4.7
PECOS	17,617	2	11.4	0	0.0
REAGAN	5,148	0	0.0	0	0.0
REEVES	17,050	0	0.0	0	0.0
SCHLEICHER	3,249	0	0.0	0	0.0
STERLING	1,532	0	0.0	0	0.0
SUTTON	4,506	0	0.0	0	0.0
TERRELL	1,522	0	0.0	0	0.0
TOM GREEN	110,054	6	5.5	0	0.0
UPTON	4,817	0	0.0	0	0.0
WARD	13,551	0	0.0	1	7.4
WINKLER	9,047	2	22.1	1	11.1
REGIONAL TOTALS	**567,058**	**32**	**5.6**	**15**	**'2.6**
STATEWIDE TOTALS~	**95,**	**8**	**14.3**	**2,873**	**14.4**

REPORTED VACCINE-PREVENTABLE DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 9 - 1999

		MEASLES		MUMPS		PERTUSSIS		RUBELLA	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
ANDREWS	15,532	0	0.0	0	0.0	0	0.0	0	0.0
BORDEN	817	0	0.0	0	0.0	0	0.0	0	0.0
COKE	3,434	0	0.0	0	0.0	0	0.0	0	0.0
CONCHO	3,296	0	0.0	0	0.0	0	0.0	0	0.0
CRANE	5,146	0	0.0	0	0.0	0	0.0	0	0.0
CROCKETT	4,310	0	0.0	0	0.0	1	23.2	0	0.0
DAWSON	15,790	0	0.0	0	0.0	0	0.0	0	0.0
ECTOR	128,421	0	0.0	0	0.0	2	1.6	0	0.0
GAINES	14,970	0	0.0	0	0.0	0	0.0	0	0.0
GLASSCOCK	1,601	0	0.0	0	0.0	0	0.0	0	0.0
HOWARD	31,921	0	0.0	0	0.0	0	0.0	0	0.0
IRION	1,741	0	0.0	0	0.0	0	0.0	0	0.0
KIMBLE	4,121	0	0.0	0	0.0	0	0.0	0	0.0
LOVING	116	0	0.0	0	0.0	0	0.0	0	0.0
MCCULLOCH	8,876	0	0.0	0	0.0	0	0.0	0	0.0
MARTIN	5,425	0	0.0	0	0.0	0	0.0	0	0.0
MASON	3,288	0	0.0	0	0.0	0	0.0	0	0.0
MENARD	2,292	0	0.0	0	0.0	0	0.0	0	0.0
MIDLAND	127,868	0	0.0	0	0.0	0	0.0	0	0.0
PECOS	17,617	0	0.0	0	0.0	0	0.0	0	0.0
REAGAN	5,148	0	0.0	0	0.0	0	0.0	0	0.0
REEVES	17,050	0	0.0	0	0.0	0	0.0	0	0.0
SCHLEICHER	3,249	0	0.0	0	0.0	0	0.0	0	0.0
STERLING	1,532	0	0.0	0	0.0	0	0.0	0	0.0
SUTTON	4,506	0	0.0	0	0.0	0	0.0	0	0.0
TERRELL	1,522	0	0.0	0	0.0	0	0.0	0	0.0
TOM GREEN	110,054	0	0.0	0	0.0	1	0.9	0	0.0
UPTON	4,817	0	0.0	0	0.0	0	0.0	0	0.0
WARD	13,551	0	0.0	0	0.0	0	0.0	0	0.0
WINKLER	9,047	0	0.0	0	0.0	0	0.0	0	0.0
REGIONAL TOTALS	**567,058**	**0**	**0.0**	**0**	**0.0**	**4**	**0.7**	**0**	**0.0**
STATEWIDE TOTALS	**19,995,428**	**7**	**0.0**	**35**	**0.2**	**152**	**0.8**	**9**	**0.0**

Public Health Region 10



REPORTED SELECTED GASTROINTESTINAL DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 10 - 1999

		AMEBIASIS		CAMPYLOBACTERIOSIS		SALMONELLOSIS		SHIGELLOSIS	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
BREWSTER	10,814	0	0.0	1	0.9	1	9.2	0	0.0
CULBERSON	4,101	0	0.0	1	24.4	1	24.4	0	0.0
EL PASO	755,339	2	0.0	26	3.4	55	7.3	32	4.2
HUDSPETH	3,347	0	0.0	0	0.0	0	0.0	0	0.0
JEFF DAVIS	2,184	0	0.0	0	0.0	0	0.0	0	0.0
PRESIDIO	8,502	0	0.0	0	0.0	1	11.8	0	0.0
REGIONAL TOTALS	**784,287**	**2**	**0.3**	**28**	**3.6**	**58**	**7.4**	**32**	**4.1**
STATEWIDE TOTALS	**19,995,428**	**37**	**0.2**	**1,153**	**5.8**	**2,198**	**11.0**	**2,281**	**11.4**

REPORTED HEPATITIS RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 10 - 1999

		HEPATITIS A		HEPATITIS B		HEPATITIS C		HEPATITIS UNSPECIFIED	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
BREWSTER	10,814	0	0.0	0	0.0	0	0.0	0	0.0
CULBERSON	4,101	0	0.0	1	24.4	0	0.0	0	0.0
EL PASO	755,339	37	0.5	15	2.0	2	0.3	0	0.0
HUDSPETH	3,347	2	6.0	0	0.0	0	0.0	0	0.0
JEFF DAVIS	2,184	0	0.0	0	0.0	0	0.0	0	0.0
PRESIDIO	8,502	0	0.0	0	0.0	0	0.0	0	0.0
REGIONAL TOTALS	**784,287**	**39**	**5.0**	**16**	**2.0**	**2**	**0.3**	**0**	**0.0**
STATEWIDE TOTALS	**19,995,428**	**2,516**	**12.6**	**864**	**4.3**	**359**	**1.8**	**2**	**0.0**

REPORTED OTHER SELECTED DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 10 - 1999

COUNTY	1999 POP.	ASEPTIC MENINGITIS CASE	ASEPTIC MENINGITIS RATE	CHICKENPOX CASE	CHICKENPOX RATE	ENCEPHALITIS CASE	ENCEPHALITIS RATE	TUBERCULOSIS CASE	TUBERCULOSIS RATE
BREWSTER	10,814	0	0.0	1	0.9	0	0.0	0	0.0
CULBERSON	4,101	0	0.0	6	146.3	0	0.0	0	0.0
EL PASO	755,339	35	0.5	100	13.2	0	0.0	61	8.1
HUDSPETH	3,347	0	0.0	0	0.0	0	0.0	0	0.0
JEFF DAVIS	2,184	0	0.0	0	0.0	0	0.0	0	0.0
PRESIDIO	8,502	0	0.0	7	82.3	0	0.0	0	0.0
REGIONAL TOTALS	784,287	35	4.5	114	145	0	0.0	61	-7.8
STATEWIDE TOTALS	~19,995,428	921	4.6	7,473	37.4	27	0.1	1,649	8.2

REPORTED SEXUALLY TRANSMITTED DISEASES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 10 - 1999

COUNTY	1999 POP.	CHLAMYDIA CASES	CHLAMYDIA RATES	GONORRHEA CASES	GONORRHEA RATES	P & S SYPHILIS CASES	P & S SYPHILIS RATES
BREWSTER	10,814	14	12.9	2	18.5	0	0.0
CULBERSON	4,101	5	121.9	1	24.4	0	0.0
EL PASO	755,339	1,896	251.0	155	20.5	9	1.2
HUDSPETH	3,347	0	0.0	0	0.0	0	0.0
JEFF DAVIS	2,184	2	91.6	0	0.0	0	0.0
PRESIDIO	8,502	10	117.6	0	0.0	0	0.0
REGIONAL TOTALS	784,287	1,927	2453	158	20d	9	11
STATEWIDE TOTALS	~19,995,428	62,526	3124	32,680	1634	459	23

REPORTED AIDS & HIV INFECTION RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 10 - 1999

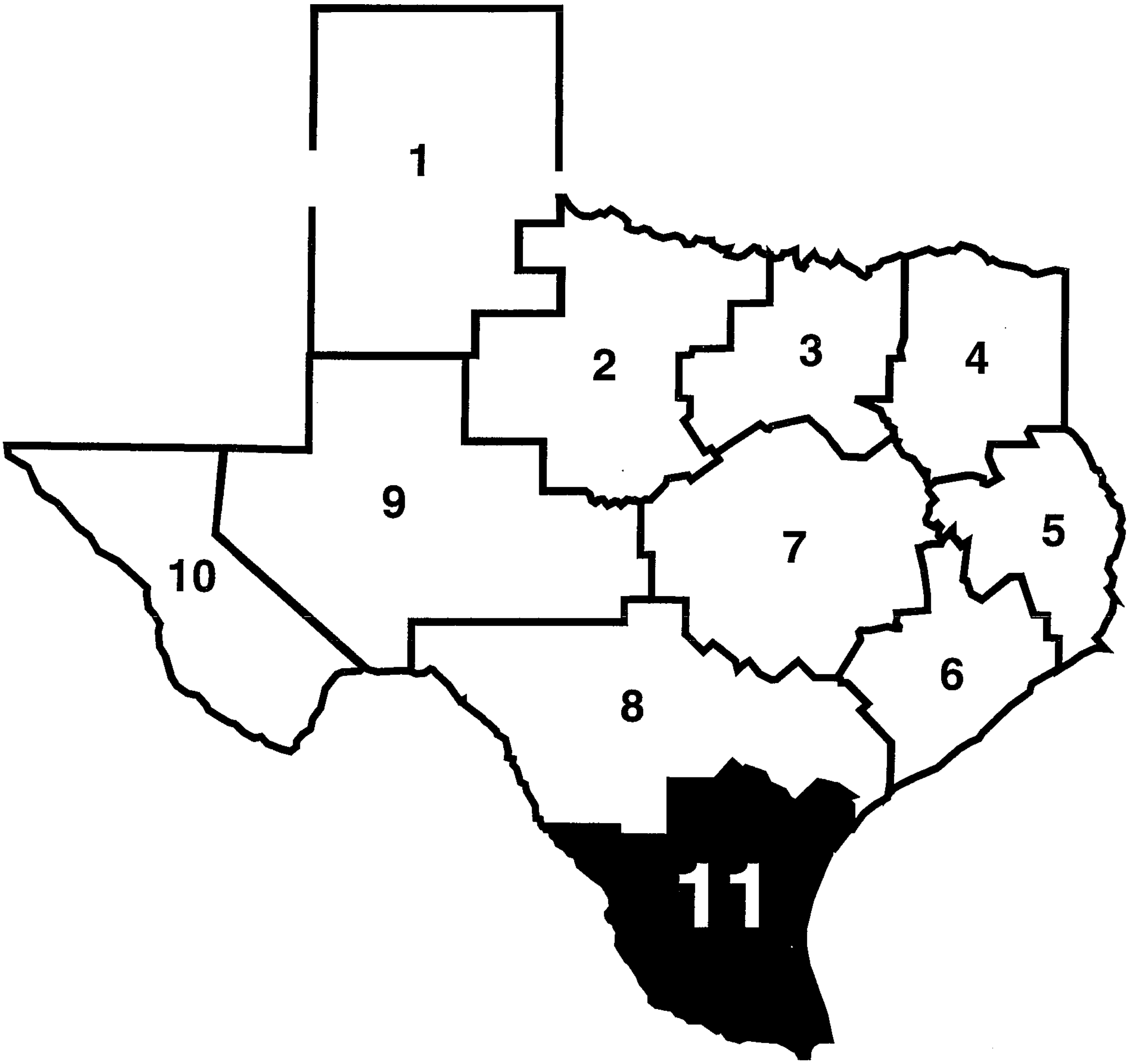
		AIDS		HIV INFECTION	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES
BREWSTER	10,814	0	0.0	0	0.0
CULBERSON	4,101	0	0.0	0	0.0
EL PASO	755,339	87	1.2	55	7.3
HUDSPETH	3,347	0	0.0	0	0.0
JEFF DAVIS	2,184	0	0.0	0	0.0
PRESIDIO	8,502	0	0.0	0	0.0
REGIONAL TOTALS	784,287	87	11.1	55	7.0
STATEWIDE TOTALS	19,995,428	2,865	14.3	2,873	14.4

REPORTED VACCINE-PREVENTABLE DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 10 - 1999

		MEASLES		MUMPS		PERTUSSIS		RUBELLA	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
BREWSTER	10,814	0	0.0	0	0.0	0	0.0	0	0.0
CULBERSON	4,101	0	0.0	0	0.0	0	0.0	0	0.0
EL PASO	755,339	0	0.0	0	0.0	1	0.1	0	0.0
HUDSPETH	3,347	0	0.0	0	0.0	0	0.0	0	0.0
JEFF DAVIS	2,184	0	0.0	0	0.0	0	0.0	0	0.0
PRESIDIO	8,502	0	0.0	0	0.0	0	0.0	0	0.0
REGIONAL TOTALS	784,287	0	0.0	0	0.0	1	0.1	0	0.0
STATEWIDE TOTALS	19,995,428	7	0.0	35	0.2	152	0.8	9	0.0

Public Health Region 11



REPORTED SELECTED GASTROINTESTINAL DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 11 - 1999

		AMEBIASIS		CAMPYLOBACTERIOSIS		SALMONELLOSIS		SHIGELLOSIS	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
ARANSAS	19,610	0	0.0	0	0.0	5	25.5	1	5.1
BEE	29,325	0	0.0	2	6.8	3	10.2	0	0.0
BROOKS	8,959	0	0.0	1	11.2	4	44.6	0	0.0
CAMERON	328,158	0	0.0	28	8.5	48	14.6	77	23.5
DUVAL	14,676	0	0.0	0	0.0	3	20.4	0	0.0
HIDALGO	528,300	0	0.0	46	8.7	109	20.6	102	19.3
JIM HOGG	6,290	0	0.0	0	0.0	1	15.9	0	0.0
JIM WELLS	39,837	0	0.0	2	5.0	7	17.6	3	7.5
KENEDY	520	0	0.0	0	0.0	0	0.0	0	0.0
KLEBERG	32,089	0	0.0	0	0.0	14	43.6	2	6.2
LIVE OAK	10,026	0	0.0	0	0.0	2	19.9	0	0.0
MCMULLEN	866	0	0.0	0	0.0	0	0.0	0	0.0
NUECES	315,965	0	0.0	43	13.6	46	14.6	102	32.3
REFUGIO	8,166	0	0.0	1	12.2	0	0.0	0	0.0
SAN PATRICIO	67,988	0	0.0	9	13.2	16	23.5	15	22.1
STARR	61,722	0	0.0	1	1.6	11	17.8	7	11.3
WEBB	182,195	0	0.0	10	5.5	38	20.9	19	10.4
WILLACY	19,915	0	0.0	2	10.0	16	80.3	3	15.1
ZAPATA	12,866	0	0.0	3	23.3	5	38.9	0	0.0
REGIONAL TOTALS	1,687,473	0	0.0	148	8.8	328	19.4	331	19.6
STATEWIDE TOTALS	19,995,428	37	0.2	1,153	5.8	2,198	11.0	2,281	11.4

REPORTED HEPATITIS RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 11 - 1999

		HEPATITIS A		HEPATITIS B		HEPATITIS C		HEPATITIS UNSPECIFIED	
COUNTY	**1999 POP.**	**CASES**	**RATES**	**CASES**	**RATES**	**CASES**	**RATES**	**CASES**	**RATES**
ARANSAS	19,61[illegible]	1	5.1	0	0.0	0	0.0	0	0.0
BEE	29,325	0	0.0	0	0.0	0	0.0	0	0.0
BR[illegible]	8[illegible]9	0	0.0	0	0.0	1	11.2	0	0.0
C[illegible]	328,158	184	56.1	7	5.2	0	0.0	0	0.0
[illegible]	14,676	2	13.6	0	0.0	0	0.0	0	0.0
[illegible]DALG[illegible]	[illegible]	201	38.0	26	4.9	0	0.0	1	0.2
JIM HOGG	6,290	0	0.0	1	15.9	0	0.0	0	0.0
JIM WELLS	39,837	0	0.0	0	0.0	2	5.0	0	0.0
KENEDY	520	0	0.0	0	0.0	0	0.0	0	0.0
KLEBERG	32,089	1	3.1	0	0.0	3	9.3	0	0.0
LIVE OAK	[illegible]	1	10.0	1	10.0	0	0.0	0	0.0
M[illegible]LLEN	866	0	0.0	0	0.0	0	0.0	0	0.0
NUECES	315,965	20	6.3	14	4.4	8	2.5	0	0.0
REFUGIO	8,166	0	0.0	0	0.0	0	0.0	0	0.0
SAN PATRICIO	67,988	2	2.9	0	0.0	1	1.5	0	0.0
STARR	61,722	10	16.2	4	6.5	0	0.0	0	0.0
WEBB	182,15[illegible]	103	56.5	7	3.8	1	0.5	0	0.0
WILLACY	19,915	3	15.1	1	5.0	0	0.0	0	0.0
ZAPATA	12 866	4	31.1	0	0.0	0	0.0	0	0.0
REGIONAL [illegible]TALS	1,687,473	532	31.5	[illegible]1	4.2	16	0.9	1	0.1
STATEWIDE T[illegible]ALS	19,995,428	2,516	12.6	864	4.3	359	1.8	2	0.0

REPORTED OTHER SELECTED DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 11 - 1999

		ASEPTIC MENINGITIS		CHICKENPOX		ENCEPHALITIS		TUBERCULOSIS	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
ARANSAS	19,610	0	0.0	0	0.0	0	0.0	2	10.2
BEE	29,325	0	0.0	0	0.0	0	0.0	1	3.4
BROOKS	8,959	0	0.0	0	0.0	0	0.0	1	11.2
CAMERON	328,158	6	1.8	120	36.6	3	0.9	59	18.0
DUVAL	676	0	0.0	0	0.0	0	0.0	1	6.8
HIDALGO	528,300	18	3.4	12[illegible]	23.7	4	0.8	75	14.2
JIM HOGG	6.290	0	0.0	0	0.0	0	0.0	1	15.9
JIM WELLS	39,837	0	0.0	1	2.5	0	0.0	2	5.0
KENEDY	520	0	0.0	0	0.0	0	0.0	0	0.0
KLEBERG	32,089	0	0.0	17	53.0	0	0.0	3	9.3
LIVE OAK	10,026	0	0.0	3	29.9	0	0.0	0	0.0
MCMULLEN	866	0	0.0	0	0.0	0	0.0	0	0.0
NUECES	315,965	48	15.2	99	31.3	0	0.0	27	8.5
REFUGIO	8,166	1	12.2	0	0.0	0	0.0	1	12.2
SAN PATRICIO	67,988	0	0.0	16	23.5	0	0.0	1	1.5
STARR	61,722	0	0.0	32	51.8	0	0.0	5	8.1
WEBB	182,195	0	0.0	27	14.8	0	0.0	28	15.4
WILLACY	19,915	0	0.0	1	5.0	0	0.0	3	15.1
ZAPATA	12,8[illegible]6	0	0.0	0	0.0	0	0.0	1	7.8
REGIONAL TOTALS	1,687,473	73	4.3	441	26.1	7	0.4	211	12.5
STATEWIDE TOTALS	~19,995,428	921	4.6	7,473	37.4	27	0.1	1,649	8.2

REPORTED SEXUALLY TRANSMITTED DISEASES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 11 - 1999

		CHLAMYDIA		GONORRHEA		P & S SYPHILIS	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES
ARANSAS	19,610	47	239.7	16	81.6	0	0.0
BEE	29,325	83	283.0	8	27.3	0	0.0
BROOKS	8,959	42	468.8	9	$00.5	0	00
CAMERON	328,158	1,096	334.0	117	35.7	2	06
DUVAL	14,676	26	177.2	2	13.6	0	0.0
HIDALGO	528,300	1,465	277.3	115	21.8	0	00
JIM HOGG	6,290	8	127.2	2	31.8	0	0.0
JIM WELLS	39,837	122	306.2	11	27.6	0	0.0
KENEDY	520	0	0.0	0	0.0	0	0.0
KLEBERG	32,089	176	548.5	35	109.1	0	0.0
LIVE OAK	10,026	11	109.7	2	19.9	0	0.0
MCMULLEN	866	0	0.0	0	0.0	0	0.0
NUECES	315,965	1,133	358.6	524	165.8	1	03
REFUGIO	8,166	10	122.5	4	496	0	00
SAN PATRICIO	67,988	170	250.0	49	'72.1	0	0.0
STARR	61,722	86	139.3	5	8.1	0	0.0
WEBB	182,195	420	230.5	31	17.0	0	00
WILLACY	19,915	78	391.7	10	50.2	0	0.0
ZAPATA	12,866	39	303.1	1	7.8	0	00
REGIONAL TOTALS	1,687,473	5,012	297.0	941	55.8	3	02
STATEWIDE TOTALS	19,995,428	62,526	312.71	32,680	63.4	459	23

REPORTED AIDS & HIV INFECTION RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 11 - 1999

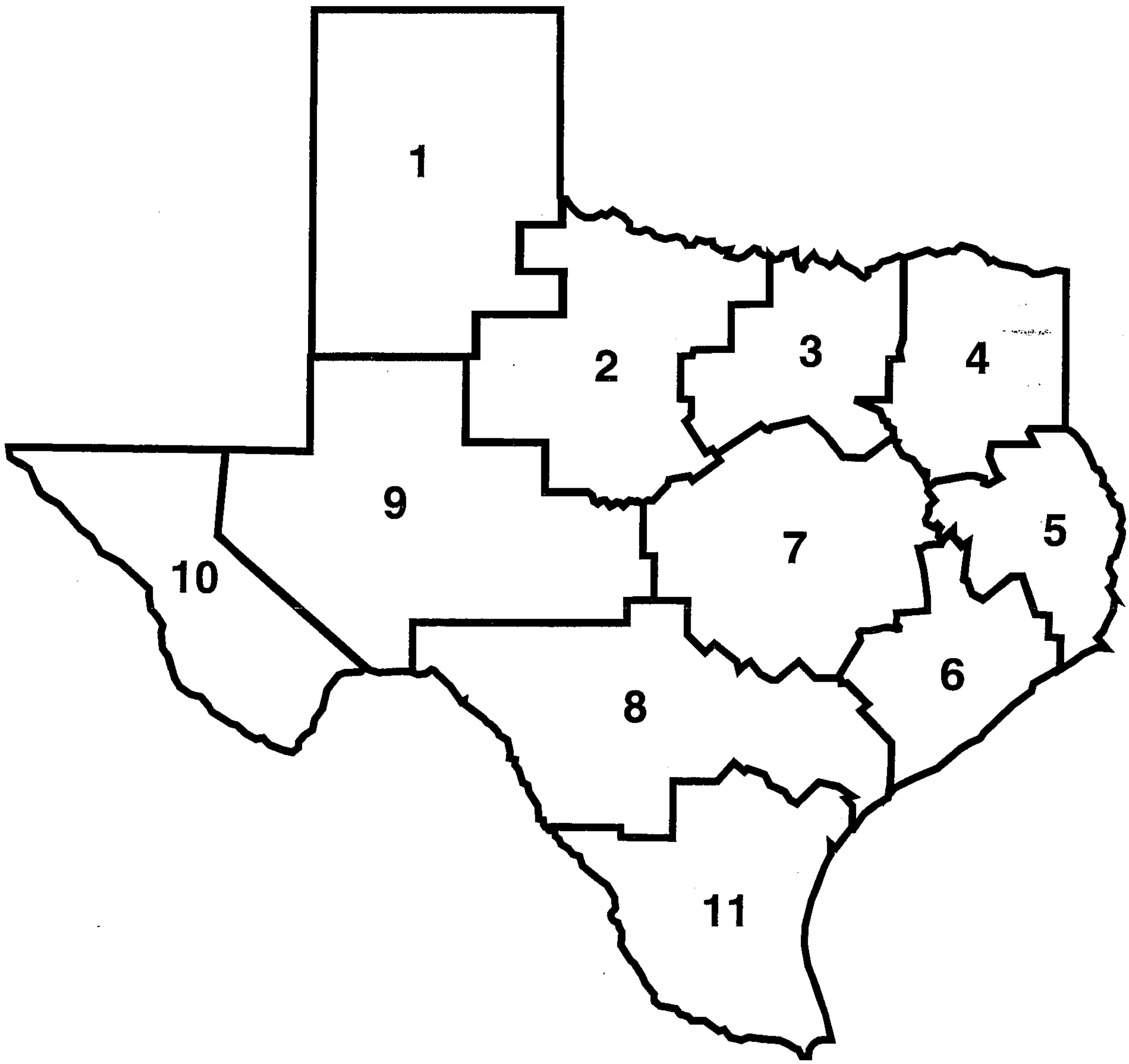
		AIDS		HIV INFECTION	
NTY	1999 POP.	;	RATES	CASES	RATES
ARANSAS	9,610	2	10.2	1	5.1
BEE	29,325	7	23.9	0	0.0
BROOKS	8,959	1	11.2	1	11.2
CAMERON	328,158	25	7.6	16	4.9
DUVAL	14,676	0	0.0	0	0.0
HIDALGO	528,300	30	5.7	25	4.7
JIM HOG	6,290	)	0.0	)	0.0
JIM WELL	39,837	!	2.5	I	2.5
KENEDY	520	)	0.0	)	0.0
KLEBERG	32,089	1	3.1	1	3.1
LIVE OAK	10,026	0	0.0	0	0.0
MCMULLEN	866	0	0.0	0	0.0
NUECES	315,965	41	13.0	28	8.9
REFUGIO	8,166	0	0.0	1	12.2
SAN PATRICIO	67,988	6	8.8	5	7.4
STARR	61,722	2	3.2	1	1.6
WEBB	182,195	11	6.0	15	8.2
WILLACY	,91[illegible]	2	10.0	1	5.0
'ATA	1	0	0.0	0	0.0
REGIONAL TOTALS	1,687,473	129	7.6	96	5.7
STATEWIDE TOTALS	19,995,428	2,865	14.3	2,873	14.4

REPORTED VACCINE-PREVENTABLE DISEASE RATES
(CASES PER 100,000 POPULATION)

PUBLIC HEALTH REGION 11 - 1999

		MEASLES		MUMPS		PERTUSSIS		RUBELLA	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
ARANSAS	19,610	0	0.0	0	0.0	0	0.0	0	0.0
BEE	29,325	0	0.0	0	0.0	0	0.0	0	0.0
BROOKS	8,959	0	0.0	0	0.0	0	0.0	0	0.0
CAMERON	328,158	0	0.0	0	0.0	3	0.9	2	0.6
DUVAL	14,676	0	0.0	0	0.0	0	0.0	0	0.0
HIDALGO	528,300	0	0.0	2	0.4	2	0.4	0	0.0
JIM HOGG	6,290	0	0.0	0	0.0	0	0.0	0	0.0
JIM WELLS	39,837	0	0.0	0	0.0	0	0.0	0	0.0
KENEDY	520	0	0.0	0	0.0	0	0.0	0	0.0
KLEBERG	32,089	0	0.0	0	0.0	0	0.0	0	0.0
LIVE OAK	10,026	0	0.0	0	0.0	0	0.0	0	0.0
MCMULLEN	866	0	0.0	0	0.0	0	0.0	0	0.0
NUECES	315,965	0	0.0	1	0.3	1	0.3	1	0.3
REFUGIO	8,166	0	0.0	0	0.0	1	12.2	0	0.0
SAN PATRICIO	67,988	0	0.0	0	0.0	1	1.5	0	0.0
STARR	61,722	0	0.0	0	0.0	0	0.0	0	0.0
WEBB	182,195	0	0.0	0	0.0	0	0.0	0	0.0
WILLACY	19,915	0	0.0	0	0.0	0	0.0	0	0.0
ZAPATA	12,866	0	0.0	0	0.0	0	0.0	0	0.0
REGIONAL TOTALS	1,687,473	0	0.0	3	0.2	8	0.5	3	0.2
STATEWIDE TOTALS	19,995,428	7	0.0	35	0.2	152	0.8	9	0.0

Texas Department of Criminal Justice



SELECTED DISEASE RATES*
(CASES PER 100,000 POPULATION)

TEXAS DEPARTMENT OF CRIMINAL JUSTICE (TDCJ) - 1999

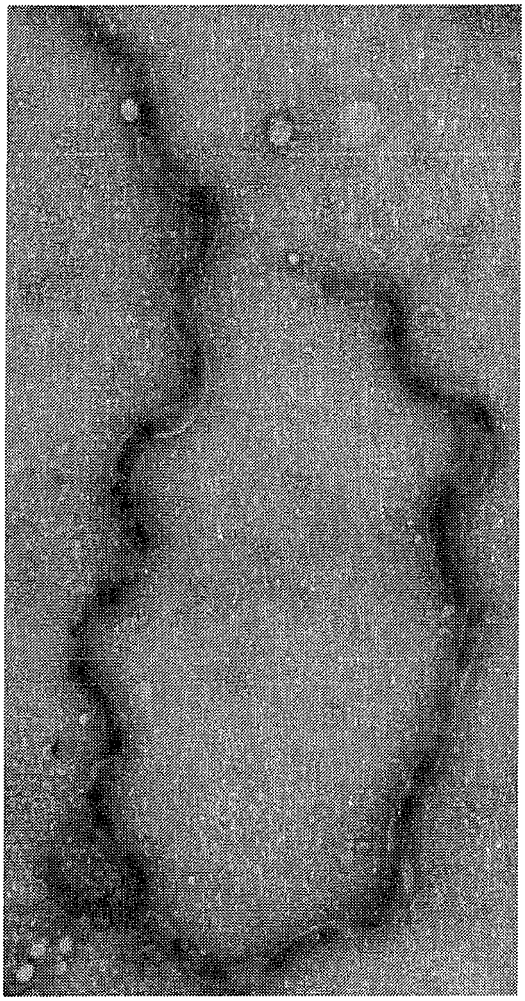
		AIDS		HIV INFECTION		CHLAMYDIA		GONORRHEA	
COUNTY	1999 POP.	CASES	RATES	CASES	RATES	CASES	RATES	CASES	RATES
TDCJ	[illegible] 9	2[illegible]	160.0	3[illegible]	262.4	39	26.4	17	11.5
STATEWIDE TOTALS	19,995,438	2,865	14.3	2,873	14.4	62,526	312.7	32,608	163.1

		P & S SYPHILIS		TUBERCULOSIS	
COUNTY	1999 POP.	[illegible]	RATE	CASES	RATES
TDCJ	147,492	13	8.8	17	11.5
STATEWIDE TOTALS	19,995,438	459	23.0	1,649	8.2

'TDCJ morbidity was separated from other public health regions and TDCJ rates were calculated using the year end TDCJ population. However, the populations of counties that contain TDCJ facilities in the preceding regional breakdowns do not exclude the TDCJ inmate population held in each county. Consequently, the calculated disease rates for these counties may be underestimated.

For all other diseases not presented on this page, reported TDCJ cases, if any, were included in the regional tables by the county in which the TDCJ facility is located.

REPORTED CASES OF SELECTED DISEASES



Electron micrograph of *Borrelia* spirochete. This species causes lyme disease and tick-borne relapsing fever in Texas.

TABLE I
REPORTED SELECTED DISEASES
1990 - 1999

DISEASE	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
AIDS	2,865	4,201	4,720	4,932	4,598	5,513	7,555	3,249	3,035	3,182
AMEBIASIS	37	75	153	130	118	110	86	108	86	139
BOTULISM INFANT	4	5	10	9	0	27	2	1	4	7
BRUCELLOSIS	23	26	19	23	19	29	34	27	36	18
CAMPYLOBACTERIOSIS	1,153	881	981	897	993	997	849	996	810	739
CHICKENPOX	7,473	20,484	26,688	20,332	22,568	16,159	14,291	20,554	19,409	26,636
CHLAMYDIA	62,526	60,626	50,675	43,003	44,738	46,046	43,874	40,791	32,560	20,575
CHOLERA	0	0	1	0	2	4	2	5	3	0
CRUETZFELDT-JAKOB DISEASE	5	13	-	-	-	-	-	-	-	-
CRYPTOSPORIDIOSIS	69	906	43	-	-	-	-	-	-	-
DENGUE FEVER	66	6	10	5	29	1	2	0	2	0
EHRLICHIOSIS	1	2	4	-	-	-	-	-	-	-
ENCEPHALITIS PRIMARY	16	25	44	31	71	54	61	89	121	74
ENCEPHALITIS PI CPOX	0	1	-	-	-	-	-	-	-	-
ENCEPHALITIS PI MUMPS	0	-	-	-	-	-	-	-	-	-
ENCEPHALITIS PI OTHER	11	8	-	-	-	-	-	-	-	-
ENCEPHALITIS EASTERN*	0	-	-	-	-	-	-	-	-	-
ENCEPHALITS ST LOUIS*	0	4	-	-	-	-	-	-	-	-
ENCEPHALITIS WESTERN*	0	-	-	-	-	-	-	-	-	-
ENCEPHALITIS VENEZUELAN EQUINE*	0	-	-	-	-	-	-	-	-	-
ESCHERICHIA COLI 0157:H7	105	85	42	53	38	72	-	-	-	-
GONORRHEA	32,680	32,934	26,611	23,124	30,892	29,757	30,122	36,172	44,181	43,231
HAEMOPHILUS INFLUENZAE INF**	4	3	5	6	40	20	51	42	152	625
HANSENS DISEASE	20	28	24	29	36	31	31	52	38	37
HANTAVIRUS INFECTION	2	0	4	3	2	1	-	-	-	-
HEMOLYTIC UREMIC SYNDROME	18	6	7	7	8	11	-	-	-	-
HEPATITIS A	2,516	3,538	4,511	3,460	3,001	2,877	2,798	1,828	2,663	2,722
HEPATITIS B	864	1,960	1,245	1,258	1,211	1,422	1,354	1,528	1,958	1,789
HEPATITIS C***	359	462	376	205	340	305	384	255	-	-
HEPATITIS D***	1	0	0	3	2	4	1	5	-	-
HEPATITIS E***	2	-	-	-	-	-	-	-	-	-
HEPATITIS NANB	3	1	3	3	7	9	28	26	144	130
HEPATITIS UNSPECIFIED	2	16	31	40	67	86	157	191	260	287
HIV INFECTION	2,873	-	-	-	-	-	-	-	-	-
LEGIONELLOSIS	22	17	32	32	13	15	22	24	23	25
LISTERIOSIS	19	29	37	47	41	64	28	26	52	32
LYME DISEASE	72	32	60	97	77	56	48	113	57	44
MALARIA	113	78	111	141	89	93	48	45	75	80
MEASLES	7	0	7	49	14	17	10	1,097	294	4,409
MENINGITIS ASEPTIC	921	1,576	1,018	927	1,566	970	1,329	1,242	1,275	811
MENINGITIS BACTERIAL/OTHER	548	713	458	510	409	360	262	380	337	345
MENINGOCOCCAL INFECTION	106	176	195	218	253	237	157	111	100	93
MUMPS	35	42	75	44	43	234	231	388	363	470
PERTUSSIS	152	287	233	151	217	160	121	161	143	158
RABIES HUMAN	0	0	1	0	0	1	1	0	1	1
RELAPSING FEVER	1	0	2	1	1	3	0	0	0	0
RUBELLA	9	89	12	8	8	9	22	10	16	99
SALMONELLOSIS	2,198	3,401	2,793	2,800	2,363	1,983	1,924	1,933	2,317	2,315
SHIGELLOSIS	2,281	3,988	3,504	2,757	3,017	2,410	4,581	3,568	2,178	3,550
SPOTTED FEVER GP RICKETTSIOSES	10	3	4	5	6	7	7	1	2	6
STREPTOCOCCAL DISEASE INVASIVE	751	597	167	65	95	82	-	-	-	-
SYPHILIS PRIMARY & SECONDARY	459	430	676	890	1,557	1,913	2,530	3,343	5,012	5,165
TETANUS	6	4	6	3	3	12	7	5	10	7
TUBERCULOSIS	1,649	1,820	1,992	2,103	2,369	2,542	2,392	2,510	2,525	2,242
TYPHOID FEVER	23	29	20	17	21	10	15	23	31	28
TYPHUS MURINE	42	45	72	41	53	9	12	18	22	36
VIBRIO INFECTIONS	50	61	36	24	24	31	17	15	25	25
YERSINIOSIS	20	12	-	-	-	-	-	-	-	-

*For the purposes of this table, encephalitis is split up by etiology. In the regional tables, all etiologies are combined.

** Beginning in 1996, only Haemophilus *influenzae* type b infections were counted. Prior to 1996, all invasive infections due to any type of Haemophilus influenzae were counted.

***Prior to 1992, hepatitis C, D, and E cases were counted as hepatitis NANB.

TABLE II
REPORTED SELECTED DISEASE RATES
(CASES PER 100,000 POPULATION)
1990 - 1999

DISEASE	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
AIDS	14.3	21.0	23.6	24.7	23.0	27.6	37.8	16.2	15.2	15.9
AMEBIASIS	0.2	0.4	0.8	0.7	0.6	0.6	0.4	0.5	0.4	0.7
BOTULISM INFANT	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0
BRUCELLOSIS	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1
CAMPYLOBACTERIOSIS	5.8	4.4	4.9	4.5	5.0	5.0	4.2	5.0	4.1	3.7
CHICKENPOX	37.4	102.4	133.5	101.7	112.9	80.8	71.5	102.8	97.1	133.2
CHLAMYDIA	312.7	303.2	253.4	215.1	223.7	230.3	219.4	0.0	0.0	102.9
CHOLERA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CRUETZFELDT-JAKOB DISEASE	0.0	0.1	-	-	-	-	-	-	-	-
CRYPTOSPORIDIOSIS	0.3	4.5	0.2	-	-	-	-	-	-	-
DENGUE FEVER	0.3	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0
EHRLICHIOSIS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENCEPHALITIS PRIMARY	0.1	0.1	0.2	0.2	0.4	0.3	0.3	0.4	0.6	0.4
ENCEPHALITIS PI CPOX	0.0	0.0	-	-	-	-	-	-	-	-
ENCEPHALITIS PI MUMPS	0.0	-	-	-	-	-	-	-	-	-
ENCEPHALITIS PI OTHER	0.1	0.0	-	-	-	-	-	-	-	-
ENCEPHALITIS EASTERN*	0.0	-	-	-	-	-	-	-	-	-
ENCEPHALITS ST LOUIS*	0.0	0.0	-	-	-	-	-	-	-	-
ENCEPHALITIS WESTERN*	0.0	-	-	-	-	-	-	-	-	-
ENCEPHALITIS VENEZUELAN EQUINE*	0.0	-	-	-	-	-	-	-	-	-
ESCHERICHIA COLI 0157:H7	0.5	0.4	0.2	0.3	0.2	0.4	0.0	0.0	0.0	0.0
GONORRHEA	163.4	164.7	133.1	115.6	0.0	148.8	0.0	0.0	0.0	216.2
HAEMOPHILUS INFLUENZAE INF**	0.0	0.0	0.0	0.0	0.2	0.1	0.3	0.2	0.8	3.1
HANSENS DISEASE	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.2
HANTAVIRUS INFECTION	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-
HEMOLYTIC UREMIC SYNDROME	0.1	0.0	0.0	0.0	0.0	0.1	-	-	-	-
HEPATITIS A	12.6	17.7	22.6	17.3	15.0	14.4	14.0	9.1	13.3	13.6
HEPATITIS B	4.3	9.8	6.2	6.3	6.1	7.1	6.8	7.6	9.8	8.9
HEPATITIS C***	1.8	2.3	1.9	1.0	1.7	1.5	1.9	1.3	-	-
HEPATITIS D***	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-
HEPATITIS E***	0.0	-	-	-	-	-	-	-	-	-
HEPATITIS NANB	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.7	0.7
HEPATITIS UNSPECIFIED	0.0	0.1	0.2	0.2	0.3	0.4	0.8	1.0	1.3	1.4
HIV INFECTION	14.4	-	-	-	-	-	-	-	-	-
LEGIONELLOSIS	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
LISTERIOSIS	0.1	0.1	0.2	0.2	0.2	0.3	0.1	0.1	0.3	0.2
LYME DISEASE	0.4	0.2	0.3	0.5	0.4	0.3	0.2	0.6	0.3	0.2
MALARIA	0.6	0.4	0.6	0.7	0.4	0.5	0.2	0.2	0.4	0.4
MEASLES	0.0	0.0	0.0	0.2	0.1	0.1	0.1	5.5	1.5	22.1
MENINGITIS ASEPTIC	4.6	7.9	5.1	4.6	7.8	4.9	6.6	6.2	6.4	4.1
MENINGITIS BACTERIAL/OTHER	2.7	3.6	2.3	2.6	2.0	1.8	1.3	1.9	1.7	1.7
MENINGOCOCCAL INFECTION	0.5	0.9	1.0	1.1	1.3	1.2	0.8	0.6	0.5	0.5
MUMPS	0.2	0.2	0.4	0.2	0.2	1.2	1.2	1.9	1.8	2.4
PERTUSSIS	0.8	1.4	1.2	0.8	1.1	0.8	0.6	0.8	0.7	0.8
RABIES HUMAN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RELAPSING FEVER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RUBELLA	0.0	0.4	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.5
SALMONELLOSIS	11.0	17.0	14.0	14.0	11.8	9.9	9.6	9.7	11.6	11.6
SHIGELLOSIS	11.4	19.9	17.5	13.8	15.1	12.1	22.9	17.8	10.9	17.8
SPOTTED FEVER GP RICKETTSIOSES	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STREPTOCOCCAL DISEASE INVASIVE	3.8	3.0	0.8	0.3	0.5	0.4	-	-	-	-
SYPHILIS PRIMARY & SECONDARY	2.3	2.2	3.4	4.5	7.8	9.6	12.7	0.0	0.0	25.8
TETANUS	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0
TUBERCULOSIS	8.2	9.1	10.0	10.5	11.8	12.7	0.0	12.6	12.6	11.2
TYPHOID FEVER	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1
TYPHUS MURINE	0.2	0.2	0.4	0.2	0.3	0.0	0.1	0.1	0.1	0.2
VIBRIO INFECTIONS	0.3	0.3	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1
YERSINIOSIS	0.1	0.1	-	-	-	-	-	-	-	-

*For the purposes of this table, encephalitisis split up by etiology. In the regional tables, all etiologies are combined.

** Beginning in 1996, only Haemophilus influenzae type b infections were counted. Prior to 1996, all invasive infections due to any type of Haemophilus influenzae were counted

***Prior to 1992, hepatitis C, D, and E cases were counted as hepatitis NANB.

TABLE III
REPORTED SELECTED DISEASES BY MONTH OF ONSET*
1999

DISEASE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
AIDS	288	231	304	222	307	311	220	276	202	124	170	210
AMEBIASIS	5	3	6	1	1	3	7	1	2	7	1	1
BOTULISM INFANT	0	0	0	2	1	0	0	2	1	0	0	0
BRUCELLOSIS	101	3	4	0	3	2	5		0	1	0	1
CAMPYLOBACTERIOSIS	5	56	81	94	139	166	193	94	60	59	67	55
CHICKENPOX	783	892	1,060	1,361	881	294	171	105	326	418	468	714
CHLAMYDIA	4,289	5,208	5,554	4,142	5,083	5,367	5,079	5,364	5,107	5,813	5,251	6,269
CHOLERA	0	0	0	0	0	0	0	0	0	0	0	0
CRUETZFELDT-JAKOB DISEASE	0	0	1	0	1	0	1	0	1	0	0	0
CRYPTOSPORIDIOSIS	0	3	6	12	4	3	11	12	11	7	3	1
DENGUE FEVER	0	0	0	24	1	2	1	24	8	22	6	1
EHRLICHIOSIS	0	0	0	0	0	0	1	0	0	0	0	0
ENCEPHALITIS PRIMARY	1	1	3	1	1	2	3	1	0	0	0	3
ENCEPHALITIS PI CPOX	0	0	0	0	0	0	0	0	0	0	0	0
ENCEPHALITIS PI MUMPS	0	0	0	0	0	0	0	0	0	0	0	0
ENCEPHALITIS PI OTHER	1	0	4	2	3	1	0	2	0	0	0	0
ENCEPHALITIS EASTERN	0	0	0	0	0	0	0	0	0	0	0	0
ENCEPHALITS ST LOUIS	0	0	0	0	0	0	0	0	0	0	0	0
ENCEPHALITIS WESTERN	0	0	0	0	0	0	0	0	0	0	0	0
ENCEPHALITIS VENEZUELAN EQUINE	0	0	0	0	0	0	0	0	0	0	0	0
ESCHERICHIA COLI 0157:H7	2	3	4	10	6	10	11	10	18	9	3	25
GONORRHEA	2,413	2,522	2,804	2,132	2,610	2,766	2,806	3,113	2,723	2,991	2,700	3,100
HAEMOPHILUS INFLUENZAE INF	1	1	0	0	0	0	2	0	0	0	0	0
HANSENS DISEASE	2	1	4	0	1	2	0	0	3	1	3	3
HANTAVIRUS INFECTION	1	0	0	0	0	0	0	0	0	0	1	0
HEMOLYTIC UREMIC SYNDROME	2	2	0	1	3	3	0	1	2	0	1	2
HEPATITIS A	287	176	351	256	215	216	226	256	185	166	149	121
HEPATITIS B	89	100	97	100	77	60	52	54	60	59	63	53
HEPATITIS C	20	15	20	32	15	22	27	32	42	62	60	31
HEPATITIS D	0	0	0	0	0	0	0	0	0	0	0	0
HEPATITIS E	0	0	0	0	0	0	1	0	0	0	0	0
HEPATITIS NANB	3	0	0	0	0	0	0	0	0	0	0	0
HEPATITIS UNSPECIFIED	0	0	0	0	0	0	0	0	0	0	0	0
HIV INFECTION	21	91	287	213	256	343	265	336	253	198	277	333
LEGIONELLOSIS	5	0	1	0	3	1	4	0	3	1	0	1
LISTERIOSIS	0	1	2	1	3	1	1	1	0	5	1	2
LYME DISEASE	7	1	7	7	5	8	8	7	12	10	4	3
MALARIA	12	4	5	21	5	12	9	21	7	15	7	6
MEASLES	2	0	0	1	0	1	3	0	0	0	0	0
MENINGITIS ASEPTIC	94	49	57	109	95	130	120	109	74	70	30	31
MENINGITIS BACTERIAL/OTHER	58	55	55	37	45	47	39	37	35	43	43	47
MENINGOCOCCAL INFECTION	16	9	14	11	9	12	6	5	4	3	5	12
MUMPS	9	3	3	1	6	3	0	1	2	1	0	6
PERTUSSIS	21	10	15	11	15	16	19	11	18	6	4	6
RABIES HUMAN	0	0	0	0	0	0	0	0	0	0	0	0
RELAPSING FEVER	0	0	0	0	0	0	0	0	1	0	0	0
RUBELLA	2	0	2	0	0	0	2	0	1	2	0	0
SALMONELLOSIS	143	102	106	230	179	262	265	230	272	249	148	96
SHIGELLOSIS	116	118	107	240	195	205	229	240	229	264	209	168
SPOTTED FEVER GP RICKETTSIOSES	1	2	2	0	3	1	0	0	1	0	0	0
STREPTOCOCCAL DISEASE INVASIVE	77	95	79	57	58	43	38	31	43	46	67	117
SYPHILIS PRIMARY & SECONDARY	37	44	33	40	33	40	26	60	42	36	27	41
TETANUS	1	0	0	0	0	1	1	2	0	1	0	0
TUBERCULOSIS	102	111	110	175	110	197	189	120	93	141	101	200
TYPHOID FEVER	2	1	3	4	6	1	6	4	2	1	1	2
TYPHUS MURINE	2	2	1	3	0	7	8	3	4	3	2	2
VIBRIO INFECTIONS	4	1	0	10	9	7	6	10	7	1	2	2
YERSINIOSIS	0	4	0	2	1	3	3	2	1	1	1	2

***Some totals are by month of report rather than by month of onset.**

TABLE IV
REPORTED SELECTED DISEASES BY AGE GROUP
1999

DISEASE	<1	1-4	5-9	10-14	15-19	20-29	30-39	40-49	50-59	60+	UNK
AIDS	2	4	2	3	19	491	1,317	736	213	78	0
AMEBIASIS	4	4	1	2	2	2	9	6	4	1	0
BOTULISM INFANT	0	0	0	0	0	0	0	0	0	0	0
BRUCELLOSIS	1	0	0	2	19	4	4	2	2	2	0
CAMPYLOBACTERIOSIS	103	207	107	55	3	151	153	110	91	108	17
CHICKENPOX	160	992	2,184	187	65	53	16	5	3	2	3,806
CHLAMYDIA	204	18	20	1,413	25,176	29,655	4,575	734	130	81	520
CHOLERA	0	0	0	0	0	0	0	0	0	0	0
CRUETZFELDT-JAKOB DISEASE	0	0	0	0	0	0	0	0	2	3	0
CRYPTOSPORIDIOSIS	3	9	11	2	0	7	20	14	3	0	0
DENGUE FEVER	0	0	2	6	7	12	17	5	8	8	0
EHRLICHIOSIS	0	0	1	0	0	0	0	0	0	0	0
ENCEPHALITIS PRIMARY	1	2	0	2	2	4	1	1	1	2	0
ENCEPHALITIS PI CPOX	0	0	0	1	0	0	0	0	0	0	0
ENCEPHALITIS PI MUMPS	0	0	0	0	0	0	0	0	0	0	0
ENCEPHALITIS PI OTHER	3	1	0	0	0	2	2	0	2	0	0
ENCEPHALITIS EASTERN	0	0	0	0	0	0	0	0	0	0	0
ENCEPHALITS ST LOUIS	0	0	0	0	0	0	0	0	0	0	0
ENCEPHALITIS WESTERN	0	0	0	0	0	0	0	0	0	0	0
ENCEPHALITIS VENEZUELAN EQUINE	0	0	0	0	0	0	0	0	0	0	0
ESCHERICHIA COLI 0157:H7	2	31	14	10	4	7	3	8	7	17	1
GONORRHEA	36	21	29	593	10,577	14,842	4,416	1,514	325	105	222
HAEMOPHILUS INFLUENZAE INF	2	1	0	1	0	0	0	0	0	0	0
HANSENS DISEASE	0	0	0	0	0	7	3	4	3	8	0
HANTAVIRUS INFECTION	0	0	0	0	0	0	0	1	1	0	0
HEMOLYTIC UREMIC SYNDROME	1	8	3	1	0	0	0	0	2	3	0
HEPATITIS A	16	171	466	290	184	419	410	237	116	165	31
HEPATITIS B	2	6	2	10	61	219	239	185	67	47	26
HEPATITIS C	8	3	3	1	11	38	93	118	32	39	12
HEPATITIS D	0	0	0	0	0	0	1	0	0	0	0
HEPATITIS E	0	1	0	0	0	0	0	1	0	0	0
HEPATITIS NANB	0	0	1	1	0	0	0	1	0	0	0
HEPATITIS UNSPECIFIED	0	0	1	0	0	0	0	0	0	0	1
HIV INFECTION	20	7	5	8	112	902	1,132	525	122	39	1
LEGIONELLOSIS	0	0	0	0	0	3	2	2	4	10	1
LISTERIOSIS	3	0	0	0	1	0	3	1	2	7	2
LYME DISEASE	0	1	4	3	3	12	19	12	5	11	2
MALARIA	2	5	7	6	5	26	26	22	10	0	3
MEASLES	2	2	0	1	1	0	1	0	0	0	0
MENINGITIS ASEPTIC	250	69	78	63	58	143	125	59	30	27	18
MENINGITIS BACTERIAL	101	47	22	12	19	43	74	66	53	105	2
MENINGOCOCCAL INFECTION	14	18	7	13	13	11	6	6	4	14	0
MUMPS	1	7	11	3	1	3	5	1	3	0	0
PERTUSSIS	88	10	9	15	6	7	6	6	2	1	2
RABIES HUMAN	0	0	0	0	0	0	0	0	0	0	0
RELAPSING FEVER	0	0	0	1	0	0	0	0	0	0	0
RUBELLA	0	0	0	0	0	7	2	0	0	0	0
SALMONELLOSIS	476	496	197	102	78	155	152	126	103	262	44
SHIGELLOSIS	68	833	646	143	56	179	150	73	37	55	38
SPOTTED FEVER GP RICKETTSIOSES	0	1	2	4	0	0	0	0	3	0	0
STREPTOCOCCAL DISEASE INVASIVE	97	76	25	14	15	47	57	95	83	232	10
SYPHILIS PRIMARY & SECONDARY	0	1	0	0	37	139	146	87	31	18	0
TETANUS	0	0	0	0	0	0	1	0	2	3	0
TYPHOID FEVER	0	1	2	4	3	5	3	3	1	1	0
TYPHUS MURINE	1	1	6	3	5	4	7	3	4	8	0
VIBRIO INFECTIONS	1	2	2	0	1	2	9	11	5	15	2
YERSINIOSIS	6	2	1	1	0	0	1	1	5	3	0
TUBERCULOSIS AGE GROUPS	**< 4**	**5-9**	**10-14**	**15-19**	**20-24**	**5-34**	**35-44**	**45-54**	**55-64**	**65+**	**UNK**
TUBERCULOSIS	67	23	19	47	111	253	344	304	188	293	0

TABLE V
REPORTED SELECTED DISEASE RATES BY AGE GROUP
(CASES PER 100,000 POPULATION)
1999

DISEASE	<1	1-4	5-9	10-14	15-19	20-29	30-39	40-49	50-59	60+
AIDS	0.6	0.3	0.1	0.2	1.2	16.6	40.8	24.8	10.8	2.9
AMEBIASIS	1.2	0.3	0.1	0.1	0.1	0.1	0.3	0.2	0.2	0.0
BOTULISM INFANT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BRUCELLOSIS	0.3	0.0	0.0	0.1	1.2	0.1	0.1	0.1	0.1	0.1
CAMPYLOBACTERIOSIS	31.5	16.0	6.8	3.7	0.2	5.1	4.7	3.7	4.6	4.0
CHICKENPOX	48.9	76.8	138.5	12.6	4.2	1.8	0.5	0.2	0.2	0.1
CHLAMYDIA	62.4	1.4	1.3	95.3	1641.9	1004.1	141.8	24.8	6.6	3.0
CHOLERA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CRUETZFELDT-JAKOB DISEASE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
CRYPTOSPORIDIOSIS	0.9	0.7	0.7	0.1	0.0	0.2	0.6	0.5	0.2	0.0
DENGUE FEVER	0.0	0.0	0.1	0.4	0.5	0.4	0.5	0.2	0.4	0.3
EHRLICHIOSIS	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENCEPHALITIS PRIMARY	0.3	0.2	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1
ENCEPHALITIS PI CPOX	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
ENCEPHALITIS PI MUMPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENCEPHALITIS PI OTHER	0.9	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0
ENCEPHALITIS EASTERN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENCEPHALITS ST LOUIS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENCEPHALITIS WESTERN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENCEPHALITIS VENEZUELAN EQUINE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESCHERICHIA COLI 0157:H7	0.6	2.4	0.9	0.7	0.3	0.2	0.1	0.3	0.4	0.6
GONORRHEA	11.0	1.6	1.8	40.0	689.8	502.5	136.8	51.1	16.5	3.9
HAEMOPHILUS INFLUENZAE INF	0.6	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
HANSENS DISEASE	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.2	0.3
HANTAVIRUS INFECTION	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
HEMOLYTIC UREMIC SYNDROME	0.3	0.6	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.1
HEPATITIS A	4.9	13.2	29.5	19.6	12.0	14.2	12.7	8.0	5.9	6.2
HEPATITIS B	0.6	0.5	0.1	0.7	4.0	7.4	7.4	6.2	3.4	1.8
HEPATITIS C	2.4	0.2	0.2	0.1	0.7	1.3	2.9	4.0	1.6	1.5
HEPATITIS D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HEPATITIS E	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HEPATITIS NANB	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
HEPATITIS UNSPECIFIED	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HIV INFECTION	6.1	0.5	0.3	0.5	7.3	30.5	35.1	17.7	6.2	1.5
LEGIONELLOSIS	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.4
LISTERIOSIS	0.9	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.3
LYME DISEASE	0.0	0.1	0.3	0.2	0.2	0.4	0.6	0.4	0.3	0.4
MALARIA	0.6	0.4	0.4	0.4	0.3	0.9	0.8	0.7	0.5	0.0
MEASLES	0.6	0.2	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
MENINGITIS ASEPTIC	76.4	5.3	4.9	4.2	3.8	4.8	3.9	2.0	1.5	1.0
MENINGITIS BACTERIAL/OTHER	30.9	3.6	1.4	0.8	1.2	1.5	2.3	2.2	2.7	3.9
MENINGOCOCCAL INFECTION	4.3	1.4	0.4	0.9	0.8	0.4	0.2	0.2	0.2	0.5
MUMPS	0.3	0.5	0.7	0.2	0.1	0.1	0.2	0.0	0.2	0.0
PERTUSSIS	26.9	0.8	0.6	1.0	0.4	0.2	0.2	0.2	0.1	0.0
RABIES HUMAN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RELAPSING FEVER	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
RUBELLA	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0
SALMONELLOSIS	145.5	38.4	12.5	6.9	5.1	5.2	4.7	4.3	5.2	9.8
SHIGELLOSIS	20.8	64.5	41.0	9.6	3.7	6.1	4.6	2.5	1.9	2.1
SPOTTED FEVER GP RICKETTSIOSES	0.0	0.1	0.1	0.3	0.0	0.0	0.0	0.0	0.2	0.0
STREPTOCOCCAL DISEASE INVASIVE	29.7	5.9	1.6	0.9	1.0	1.6	1.8	3.2	4.2	8.7
SYPHILIS PRIMARY & SECONDARY	0.0	0.1	0.0	0.0	2.4	4.7	4.5	2.9	1.6	0.7
TETANUS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
TYPHOID FEVER	0.0	0.1	0.1	0.3	0.2	0.2	0.1	0.1	0.1	0.0
TYPHUS MURINE	0.3	0.1	0.4	0.2	0.3	0.1	0.2	0.1	0.2	0.3
VIBRIO INFECTIONS	0.3	0.2	0.1	0.0	0.1	0.1	0.3	0.4	0.3	0.6
YERSINIOSIS	1.8	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.3	0.1
TUBERCULOSIS AGE GROUPS	**< 4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65+**
TUBERCULOSIS	4.1	1.5	1.3	3.1	7.8	8.2	10.5	12.2	12.4	14.7

TABLE VI
REPORTED SELECTED DISEASES BY PUBLIC HEALTH REGION
1999

DISEASE	PHR 1	PHR 2	PHR 3	PHR 4	PHR 5	PHR 6	PHR 7	PHR 8	PHR 9	PHR 10	PHR 11	TDCJ*
AIDS	72	34	760	109	70	746	359	231	32	87	129	236
AMEBIASIS	0	1	1	0	0	6	25	2	0	2	0	-
BOTULISM INFANT	0	0	1	1	0	1	0	0	0	0	1	-
BRUCELLOSIS	0	0	7	0	0	1	0	0	0	1	14	-
CAMPYLOBACTERIOSIS	12	8	203	23	32	93	258	239	21	28	148	-
CHICKENPOX	924	148	2,377	117	101	1,536	1,252	274	189	114	441	-
CHLAMYDIA	3,220	1,487	15,526	2,951	2,130	13,163	8,759	7,197	1,115	1,927	5,012	39
CHOLERA	0	0	0	0	0	0	0	0	0	0	0	-
CRUETZFELDT-JAKOB DISEASE	0	1	0	1	0	2	1	0	0	0	0	-
CRYPTOSPORIDIOSIS	0	1	22	3	1	9	22	2	1	0	8	-
DENGUE FEVER	0	0	6	0	0	3	2	2	0	0	53	-
EHRLICHIOSIS	0	0	1	0	0	0	0	0	0	0	0	-
ENCEPHALITIS PRIMARY	1	0	1	1	1	3	3	1	3	0	2	-
ENCEPHALITIS PI CPOX	0	0	0	0	0	0	0	0	0	0	0	-
ENCEPHALITIS PI MUMPS	0	0	0	0	0	0	0	0	0	0	0	-
ENCEPHALITIS PI OTHER	1	0	2	2	0	1	0	0	0	0	5	-
ENCEPHALITIS EASTERN	0	0	0	0	0	0	0	0	0	0	0	-
ENCEPHALITS ST LOUIS	0	0	0	0	0	0	0	0	0	0	0	-
ENCEPHALITIS WESTERN	0	0	0	0	0	0	0	0	0	0	0	-
ENCEPHALITIS VENEZUELAN EQUINE	0	0	0	0	0	0	0	0	0	0	0	-
ESCHERICHIA COLI 0157:H7	12	4	29	5	3	11	7	29	4	0	1	-
GONORRHEA	1,522	617	11,329	1,788	1,664	7,432	4,434	2,485	293	158	941	17
HAEMOPHILUS INFLUENZAE INF	1	0	2	0	0	0	0	1	0	0	0	-
HANSENS DISEASE	0	0	2	0	2	2	0	6	0	0	8	-
HANTAVIRUS INFECTION	2	0	0	0	0	0	0	0	0	0	0	-
HEMOLYTIC UREMIC SYNDROME	0	1	8	0	0	3	1	4	1	0	0	-
HEPATITIS A	121	195	408	36	70	215	405	434	61	39	532	-
HEPATITIS B	57	22	377	40	28	82	41	94	36	16	71	-
HEPATITIS C	90	23	19	29	40	20	12	59	49	2	16	-
HEPATITIS D	0	0	1	0	0	0	0	0	0	0	0	-
HEPATITIS E	0	0	0	1	0	0	0	0	0	0	1	-
HEPATITIS NANB	1	0	0	0	0	0	2	0	0	0	0	-
HEPATITIS UNSPECIFIED	0	0	0	0	0	1	0	0	0	0	0	-
HIV INFECTION	52	31	742	102	57	975	187	174	15	55	96	387
LEGIONELLOSIS	0	0	6	1	2	9	1	2	1	0	0	-
LISTERIOSIS	0	2	2	1	0	6	2	3	2	0	1	-
LYME DISEASE	1	4	23	10	5	7	12	7	0	0	3	-
MALARIA	1	1	49	0	0	46	10	3	0	0	3	-
MEASLES	0	0	1	0	0	0	5	1	0	0	0	-
MENINGITIS ASEPTIC	95	35	294	41	16	63	99	160	10	35	73	-
MENINGITIS BACTERIAL/OTHER	18	9	180	23	9	152	45	62	11	3	36	-
MENINGOCOCCAL INFECTION	5	7	29	6	5	29	13	6	0	1	5	-
MUMPS	2	0	18	0	2	2	2	6	0	0	3	-
PERTUSSIS	12	3	62	11	1	20	19	11	4	1	8	-
RABIES HUMAN	0	0	0	0	0	0	0	0	0	0	0	-
RELAPSING FEVER	0	0	0	0	0	0	0	1	0	0	0	-
RUBELLA	0	0	4	0	0	0	2	0	0	0	3	-
SALMONELLOSIS	162	77	359	88	97	360	335	275	59	58	328	-
SHIGELLOSIS	251	90	397	35	28	232	381	448	56	32	331	-
SPOTTED FEVER GP RICKETTSIOSES	0	2	5	0	0	0	0	1	0	0	2	-
STREPTOCOCCAL DISEASE INVASIVE	52	35	136	73	78	101	107	81	46	3	39	-
SYPHILIS PRIMARY & SECONDARY	2	9	170	43	28	115	28	38	1	9	3	13
TETANUS	0	1	1	0	0	0	0	2	0	0	2	-
TUBERCULOSIS	27	23	379	58	48	529	131	137	28	61	211	17
TYPHOID FEVER	0	0	4	0	0	10	2	2	2	1	2	-
TYPHUS MURINE	0	1	0	1	0	1	0	0	0	0	39	-
VIBRIO INFECTIONS	0	1	6	0	3	26	2	6	3	0	3	
YERSINIOSIS	0	0	6	3	1	6	2	0	2	0	0	

***In 1999, cases were only reported by TDCJ for AIDS, HIV infection, Chlamydia, Gonorrhea, P & S Syphilis, and Tuberculosis.**

TABLE VII
REPORTED SELECTED DISEASES BY PUBLIC HEALTH REGION
(CASES PER 100,000 POPULATION)
1999

DISEASE	PHR 1	PHR 2	PHR 3	PHR 4	PHR 5	PHR 6	PHR 7	PHR 8	PHR 9	PHR 10	PHR 11	TDCJ*
AIDS	9.3	6.4	14.2	11.2	10.1	16.4	18.0	11.1	5.6	11.1	7.6	160.0
AMEBIASIS	0.0	0.2	0.0	0.0	0.0	0.1	1.3	0.1	0.0	0.3	0.0	-
BOTULISM INFANT	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-
BRUCELLOSIS	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8	-
CAMPYLOBACTERIOSIS	1.6	1.5	3.8	2.4	4.6	2.0	13.0	11.5	3.7	3.6	8.8	-
CHICKENPOX	119.9	27.7	44.3	12.0	14.6	33.7	62.9	13.2	33.3	14.5	26.1	-
CHLAMYDIA	417.9	278.7	289.3	303.6	308.5	288.8	440.2	346.5	196.6	245.7	297.0	26.4
CHOLERA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-
CRUETZFELDT-JAKOB DISEASE	0.0	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	-
CRYPTOSPORIDIOSIS	0.0	0.2	0.4	0.3	0.1	0.2	1.1	0.1	0.2	0.0	0.5	-
DENGUE FEVER	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	3.1	-
EHRLICHIOSIS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-
ENCEPHALITIS PRIMARY	0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.5	0.0	0.1	-
ENCEPHALITIS PI CPOX	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-
ENCEPHALITIS PI MUMPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-
ENCEPHALITIS PI OTHER	0.1	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.3	-
ENCEPHALITIS EASTERN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-
ENCEPHALITS ST LOUIS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-
ENCEPHALITIS WESTERN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-
ENCEPHALITIS VENEZUELAN EQUINE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-
ESCHERICHIA COLI 0157:H7	1.6	0.7	0.5	0.5	0.4	0.2	0.4	1.4	0.7	0.0	0.1	-
GONORRHEA	197.5	115.6	211.1	184.0	241.0	163.1	222.8	119.6	51.7	20.1	55.8	11.5
HAEMOPHILUS INFLUENZAE INF	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-
HANSENS DISEASE	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.5	-
HANTAVIRUS INFECTION	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-
HEMOLYTIC UREMIC SYNDROME	0.0	0.2	0.1	0.0	0.0	0.1	0.1	0.2	0.2	0.0	0.0	-
HEPATITIS A	15.7	36.5	7.6	3.7	10.1	4.7	20.4	20.9	10.8	5.0	31.5	-
HEPATITIS B	7.4	4.1	7.0	4.1	4.1	1.8	2.1	4.5	6.3	2.0	4.2	-
HEPATITIS C	11.7	4.3	0.4	3.0	5.8	0.4	0.6	2.8	8.6	0.3	0.9	-
HEPATITIS D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-
HEPATITIS E	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-
HEPATITIS NANB	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	-
HEPATITIS UNSPECIFIED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-
HIV INFECTION	6.7	5.8	13.8	10.5	8.3	21.4	9.4	8.4	2.6	7.0	5.7	262.4
LEGIONELLOSIS	0.0	0.0	0.1	0.1	0.3	0.2	0.1	0.1	0.2	0.0	0.0	-
LISTERIOSIS	0.0	0.4	0.0	0.1	0.0	0.1	0.1	0.1	0.4	0.0	0.1	-
LYME DISEASE	0.1	0.7	0.4	1.0	0.7	0.2	0.6	0.3	0.0	0.0	0.2	-
MALARIA	0.1	0.2	0.9	0.0	0.0	1.0	0.5	0.1	0.0	0.0	0.2	-
MEASLES	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	-
MENINGITIS ASEPTIC	12.3	6.6	5.5	4.2	2.3	1.4	5.0	7.7	1.8	4.5	4.3	-
MENINGITIS BACTERIAL/OTHER	2.3	1.7	3.4	2.4	1.3	3.3	2.3	3.0	1.9	0.4	2.1	-
MENINGOCOCCAL INFECTION	0.6	1.3	0.5	0.6	0.7	0.6	0.7	0.3	0.0	0.1	0.3	-
MUMPS	0.3	0.0	0.3	0.0	0.3	0.0	0.1	0.3	0.0	0.0	0.2	-
PERTUSSIS	1.6	0.6	1.2	1.1	0.1	0.4	1.0	0.5	0.7	0.1	0.5	-
RABIES HUMAN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-
RELAPSING FEVER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-
RUBELLA	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2	-
SALMONELLOSIS	21.0	14.4	6.7	9.1	14.0	7.9	16.8	13.2	10.4	7.4	19.4	-
SHIGELLOSIS	32.6	16.9	7.4	3.6	4.1	5.1	19.1	21.6	9.9	4.1	19.6	-
SPOTTED FEVER GP RICKETTSIOSES	0.0	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-
STREPTOCOCCAL DISEASE INVASIVE	6.7	6.6	2.5	7.5	11.3	2.2	5.4	3.9	8.1	0.4	2.3	-
SYPHILIS PRIMARY & SECONDARY	0.3	1.7	3.2	4.4	4.1	2.5	1.4	1.8	0.2	1.1	0.2	8.8
TETANUS	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	-
TUBERCULOSIS	3.5	4.3	7.1	6.0	7.0	11.6	6.6	6.6	4.9	7.8	12.5	11.5
TYPHOID FEVER	0.0	0.0	0.1	0.0	0.0	0.2	0.1	0.1	0.4	0.1	0.1	-
TYPHUS MURINE	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	2.3	-
VIBRIO INFECTIONS	0.0	0.2	0.1	0.0	0.4	0.6	0.1	0.3	0.5	0.0	0.2	-
YERSINIOSIS	0.0	0.0	0.1	0.3	0.1	0.1	0.1	0.0	0.4	0.0	0.0	-

***In 1999, cases were only reported by TDCJ for AIDS, HIV Infection, Chlamydia, Gonorrhea, P & S Syphilis, and Tuberculosis.**

APPENDIX

Giardia lamblia ("intestinalis") is the most commonly diagnosed flagellated protozoan of the intestinal tract of patients suffering from diarrhea. Although contaminated food or water may be the source, fecal-oral contact with infected individuals is more common.

Reportable Conditions in Texas

Several Texas *laws* require *specific* information regarding reportable conditions to be provided to the Texas Department of Health (Health & Safety Code, Chapters 81, 84, and 87). Health care providers, hospitals, laboratories, schools, and justices of the peace are required *to* report patients who are suspected of having a *repor*table condition. (Article 97, Title 25, Texas Administrative Code.)

Diseases reportable immediately by telephone to local health departments or the Texas Department of Health by name, age, sex, race/ethnicity, DOB, address, telephone number, disease, date of onset, method of diagnosis, and name, address, and telephone number of physician:

Outbreaks, exotic diseases, and unusual group expressions of illness which may be of public health concern

Botulism, foodborne
Cholera
Meningococcal infections, invasive[1]

Plague
Rabies, human
Viral hemorrhagic fever
Yellow fever

Diphtheria
Haemophilus *influenzae* type b infections, invasive[1]

Measles (rubeola)
Pertussis
Poliomyelitis, acute paralytic

TDH Infectious Disease Epidemiology & Surveillance Division (800) 252-8239

TDH Immunization Division (800) 252-9152

Diseases reportable to local health departments[2] by name, age, sex, *race/ethnicity*, **DOB**, address, telephone number, disease, date of *onset/occurrence*, method of diagnosis, and name, address, and phone number of physician. Report these diseases on a weekly basis except for rubella and tuberculosis which should be reported within one working day. Refer to reverse side for reporting information.

Acquired immune deficiency syndrome (AIDS)[3,6]
Amebiasis
Anthrax
Asbestosis
Botulism (infant)
Brucellosis
Campylobacteriosis
Chancroid[6]
Chlamydia *trachomatis* infection[6]
Creutzfeldt-Jakob disease (CJD)
Cryptosporidiosis
Dengue
Drowning/near drowning
Ehrlichiosis
Encephalitis (specify etiology)

Escherichia coli O157:H7
Gonorrhea[6]
Hansen's disease (leprosy)
Hantavirus infection
Hemolytic uremic syndrome (HUS)
Hepatitis, acute viral (specify type)[4]
Human immunodeficiency virus (HIV) infection[6]
Lead, adult elevated blood
Lead, childhood elevated blood
Legionellosis
Listeriosis
Lyme disease
Malaria
Meningitis (specify type)[5]
Mumps

Pesticide poisoning, acute occupational
Relapsing fever
Rubella
Salmonellosis, including typhoid fever
Shigellosis
Silicosis
Spotted fever group rickettsioses
Streptococcal disease, invasive[1]
Syphilis[6,7]
Tetanus
Trichinosis
Tuberculosis
Typhus
Vibrio infection
Yersiniosis

By number and age group only: Chickenpox

Laboratories are required to report vancomycin-resistant Enterococcus species, vancomycin-resistant Staphylococcus *aureus*, vancomycin-resistant coagulase negative Staphylococcus species, and penicillin-resistant Streptococcus *pneumoniae* directly to the Texas Department of Health. Refer to "Isolate Reporting by Laboratories" on reverse side for more information.

[1]**Includes meningitis, septicemia, cellulitis, epiglottitis, osteomyelitis, pericarditis, and septic arthritis. Laboratories should submit all *Neisseria meningitidis* from normally sterile sites to the Texas Department of Health, Bureau of Laboratories, 1100 W. 49th Street, Austin, TX 78756-3199.**

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[2]**The local or regional health department shall collect reports of diseases and transmit them at weekly intervals to** TDH.

[3]**Reported by physician only once following initial physician diagnosis.**

[4]**Includes types: A, B, C, D (delta), E, unspecified, and non-A, non-B.**

[5]**Includes aseptic/viral, bacterial (specify etiology), fungal, parasitic, and other.**

[6]**Also report date, type, and results of tests, including** CD4 + T **lymphocyte cell count below 200 cells per microliter/percentage < 14%.**

[7]**Also report stage of diagnosis.**

6-101a (05/99)

Disease Reporting

Initial reporting of any reportable disease may be made by calling (800) 705-8868. An EPI-1 (for all conditions except sexually transmitted diseases, including HIV infections and AIDS) or an EPI-4 (Private Provider Initial Morbidity Report) form may also be used to initially report notifiable conditions except:

- outbreaks, exotic diseases, and unusual group expressions of disease. Immediately call your local health department at (800) 705-8868 or the Infectious Disease Epidemiology and Surveillance Division at (800) 252-8239 (press 1) or (512) 458-7218 to report.
- foodborne botulism, cholera, invasive meningococcal infection, plague, rabies in humans, viral hemorrhagic fever, and yellow fever. Immediately call (800) 252-8239 to report.
- diphtheria, invasive *Haemophilus influenzae* type b infection, measles, pertussis, and acute paralytic poliomyelitis. Immediately call (800) 252-9152 to report.
- rubella. Call (800) 252-9152 within one **working** day.
- tuberculosis. Use TB-400 forms to report within one **working** day. Call your regional TDH office to order forms.

In addition to the EPI-4, other forms are available to report

- chancroid, *Chlamydia trachomatis* infection, gonorrhea, and syphilis. Use form STD-27 to report these sexually transmitted diseases. Call your regional TDH office to order forms.
- **HIV/AIDS.** Use CDC 50.42A to report HIV infection or AIDS in persons > 13 years of age. To report HIV infection or AIDS in persons ≤ 13 years of age, use form CDC 54.42B. Call your regional TDH office to order forms.

In addition to an initial report, the following require further medical information for confirmation. Case report forms are available for the following diseases/conditions:

Botulism (infant and foodborne)
Brucellosis
California encephalitis
Dengue
Drowning/near drowning
Eastern equine encephalitis
Ehrlichiosis
Elevated blood lead levels (children)
Escherichia coli O157:H7 infection
Haemophilus influenzae type b infection (invasive)
Hantavirus infection
Hepatitis (acute viral)
Legionellosis
Lyme disease
Malaria
Measles
Meningitis, bacterial
Meningococcal infection (invasive)
Mumps
Occupationally acquired disease*
Pertussis
Relapsing fever
Rubella
Spotted fever group rickettsioses
St. Louis encephalitis
Tetanus
Trichinosis
Typhoid fever
Typhus
Venezuelan equine encephalitis
Vibrio infection
Western equine encephalitis
Yersiniosis

Forms are available and required for food- and waterborne disease outbreaks.

* Including *asbestosis*, elevated blood lead levels in adults, acute pesticide poisoning, and silicosis.

Isolate Reporting by Laboratories

Immediately report isolates of vancomycin-resistant *Staphylococcus aureus* and vancomycin-resistant coagulase negative *Staphylococcus* species by calling ([800] 252-8239) or faxing ([512] 458-7616) the Infectious Disease Epidemiology and Surveillance Division. All isolates of vancomycin-resistant *Staphylococnrs aureus* and vancomycin-resistant coagulase negative *Staphylococcus* species should *be* submitted to the Bureau of Laboratories, 1100 West 49th Street, Austin, Texas 78756-3199.

Isolates of vancomycin-resistant *Enterococcus* species and penicillin-resistant *Streptococcus pneumoniae* should be reported to the Infectious Disease Epidemiology and Surveillance Division on at least a quarterly basis.

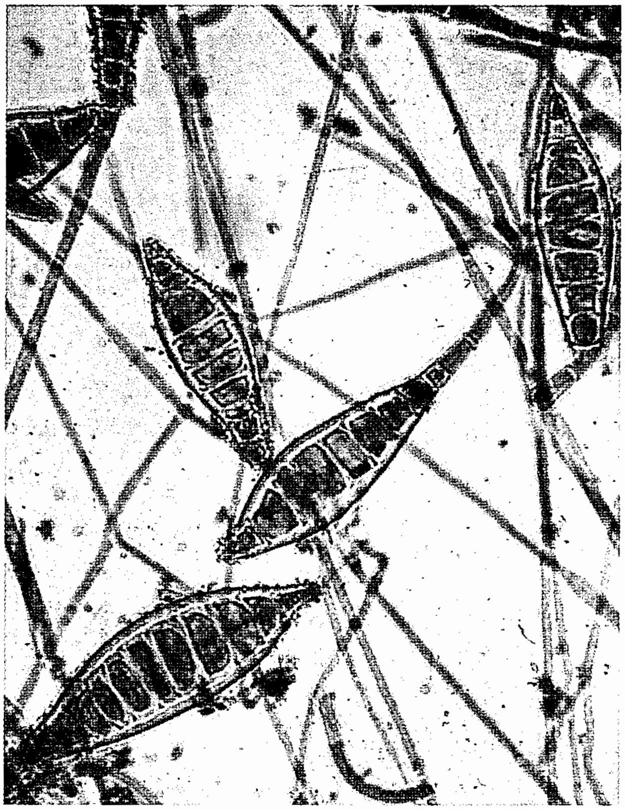
All reports of vancomycin-resistant *Staphylococcus aureus*, vancomycin-resistant coagulase negative *Staphylococcus* species, vancomycin-resistant *Enterococcus*, and penicillin-resistant *Streptococcus pneumoniae* should include patient name, date of birth or age, and sex; city of submitter; anatomic site of culture; and date of culture.

In addition, numeric totals of all isolates of *Enterococcus* species and all isolates of *Streptococcus pneumoniae* should be reported to the Infectious Disease Epidemiology and Surveillance Division no later than the last working day of March, June, September, and December.

Finally, laboratories should submit all *Neisseria meningitidis* isolates from normally sterile sites to the Texas Department of Health, Bureau of Laboratories, 1100 West 49th Street, Austin, TX 78756-3199.

For more information, call the Infectious Disease Epidemiology and Surveillance Division at (800) 252-8239 (press 1).

Back cover:
Macroconidia produced by the fungus *Microsporum canis*.
This organism causes ringworm in humans and other mammals.



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