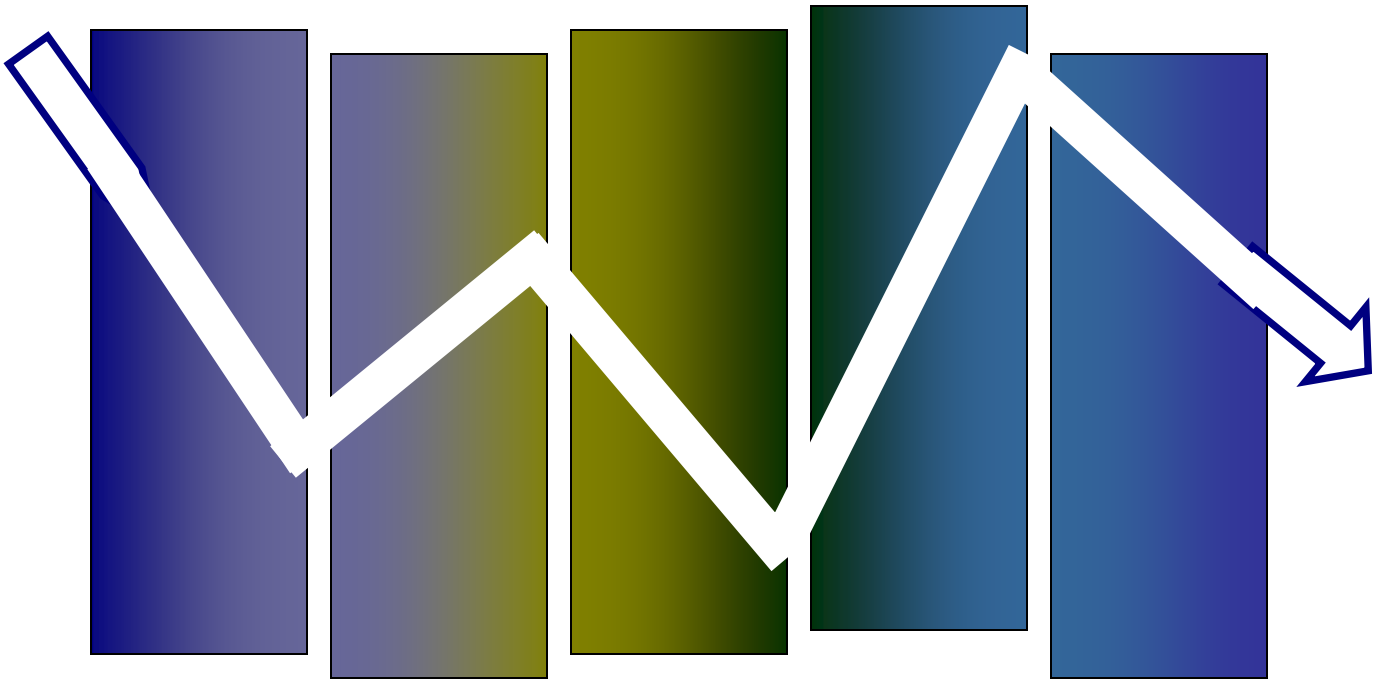
TARRANT COUNTY, TEXAS



REPORTABLE DISEASES

TRENDS

2000 - 2004

Tarrant County Public Health

Tarrant County
Reportable Disease Trends
2000 - 2004

TARRANT COUNTY
PUBLIC HEALTH

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Contents

Contents

List of Tables

List of Figures

Overview

Introduction

The Tarrant County Reportable Diseases Trends report presents the historic trends of the incidences for the most frequently reported diseases for the years 2000 through 2004 in Tarrant County. Trend, as it is used in this report, signifies a long-term movement or change in the frequency of diseases. For the first time, Tarrant County Public Health reports trends in the reportable diseases captured through our ongoing surveillance activities. This report provides the trends for the total number of reported cases and rates by gender, race/ethnicity, age group, and other factors of interest such as geographical distribution of the disease in sub-county areas and trends in risk factors, if applicable. The diseases included in this report, selected among the 63 reportable diseases[1], are:

- **Bacterial Diseases**: Bacterial meningitis, Streptococcal diseases (Group A Streptococcal diseases, Group B and other Streptococcal diseases), Tuberculosis
- **Environmental Disease**: Lead Poisoning in Children
- **Gastroenteric Diseases**: Campylobacteriosis, *Escherichia coli* Infection, Salmonellosis, Shigellosis
- **Sexually Transmitted Diseases**: HIV & AIDS, Chlamydia, Gonorrhea, Early Syphilis
- **Vaccine-Preventable Diseases**: Pertussis, Varicella
- **Viral Diseases**: Viral meningitis, Acute Hepatitis A, Acute Hepatitis B, Hepatitis C, West Nile Virus.

The objectives of this report are to describe and present the overall trends for reportable diseases in Tarrant County to public health officials and the general public and to recognize emerging patterns in major reportable diseases. This information is useful in understanding our community's health and strengthening planning efforts to improve the health of Tarrant County residents.

Helpful Tips in Understanding the Report

Analysis and comparison of the trends of reportable diseases are based on the frequency and incidence rate of each disease. The incidence rate represents the number of new cases per 100,000 population per year. For a few diseases, which are not acute symptomatic

[1] The list of reportable diseases is available at http://www.tarrantcounty.com/ehealth/lib/ehealth/Reportable_Diseases.pdf

illnesses, the newly-diagnosed case rates are used for the analysis. The newly-diagnosed incidence rate represents the number of new cases diagnosed each year per 100,000 population. Incidence rates are an essential public health measure; however the interpretation of these rates should be made with caution. Rates based on numbers of 20 or less are not recommended for reliable comparisons because such rates can fluctuate widely each year. Finally, to protect the confidentiality of patients, the frequency of diseases is not stated in tables when the number of cases is less than three.

Discrepancies in reported cases may be due to changes in the reporting rules during the last five years. Furthermore, the incidences of diseases may not always have been completely captured during the recent rapid developments and transition of data management systems.

For certain gastro-enteric and viral diseases, limited information on demographic characteristics was available. Only when sufficient data were available, population trends were analyzed by region, sex, race/ethnicity, age group, and risk behaviors. It is important to note that diseases showing positive trends may reflect not only actual increases in disease incidences, but also enhanced surveillance and/or better reporting from health care providers or the public.

Sub-county level maps are presented in this report for selected diseases that show important or interesting geographical differences. Cities in the county are categorized into the following 5 or 6 different groups on the maps.

- **Fort Worth**
- **Cities in Northeast:** Colleyville, Grapevine, Haltom City, Keller, North Richland Hills, Richland Hills, Southlake, Watauga, Westworth Village
- **H.E.B.[2]*:** Bedford, Euless, Hurst
- **Arlington and cities in Southeast:** Arlington, Pantego, Dalworthington Gardens, Kennedale, Mansfield, Grand Prairie (Split City)
- **Cities in Northwest:** Azle, Blue Mound, Pelican Bay, River Oaks, Saginaw, Sansom Park, White Settlement, Haslet, Lake Worth, Lakeside
- **Cities in Southwest:** Benbrook Crowley, Forest Hill, Edgecliff Village, Everman, Burleson (Split City)

[2] H.E.B. area is combined in the group "Cities in Northeast" if the number of cases in the area is not sufficient to report by itself.

Acknowledgements

Tarrant County Public Health thanks many surveillance teams in the divisions of Epidemiology and Health Information, Tuberculosis Elimination, and Adult Health Services for their active surveillance and data management.

TCPH also thanks Texas Department of State Health Services divisions of Environmental & Injury Epidemiology and Toxicology, Infectious Disease Control, and Zoonosis Control for providing data.

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Summary Findings

- Bacterial diseases
  - Overall incidence rates of Bacterial meningitis and Streptococcal diseases did not show consistent tendencies and fluctuated every year.
  - The incidence rate of Tuberculosis during the last five years was stable ranging from 6.6 to 7.7 cases per 100,000.
- Environmental diseases
  - Lead poisoning in children age 15 and younger declined significantly in 2001, but increased again in 2002. The rate was stable from 2002 through 2004 at 73.5 to 74.6. A downward trend was observed among Hispanics and Blacks, but there has been a slight increase in Other races/ethnicities since 2002.
- Gastroenteric diseases
  - Campylobacteriosis, *E. coli*, Salmonellosis, and Shigellosis had consistent increases from 2001, reaching peak rates in 2003, and then substantially decreasing in 2004.
- Sexually transmitted diseases
  - HIV and AIDS declined markedly during 2000 and 2001, but displayed a gradual upward trend in 2003. Both HIV and AIDS decreased again in 2004. There was a substantial decrease in the newly-diagnosed case rate among Blacks in 2004.
  - There was an increase in Chlamydia cases, whereas early Syphilis declined during the last three years.
- Vaccine preventable diseases
  - Overall incidence rates of Pertussis and Varicella had upward trends during the 2000-2004 five-year period.
- Viral diseases
  - Overall incidence rates of acute Hepatitis A and acute Hepatitis B have declined during the last three years.

Meningitis, Bacterial

Bacterial meningitis is an infection of the membrane surrounding the brain and spinal cord. It can be fatal and often causes severe physical impairment, such as deafness or brain injury.

The overall incidence rate of bacterial meningitis over the last five years does not show a consistent trend but fluctuates each year. During the years 2000-2004 the highest rate of the infection was reported in 2003, and was substantially higher than the average (1.9 cases/100,000).

Variations in the rates of the infection in males are similar to those of the total population. Except for 2000 and 2004, higher incidence rates were observed in males than in females (Figure 1).

Concerning race/ethnicity, most cases were reported in Whites and Blacks. The incidence rate among Hispanics demonstrated a decreasing trend from 1.4 per 100,000 in 2000 to nearly zero in 2004.

Table 1
Bacterial Meningitis
Rate per 100,000 (Number of Cases)

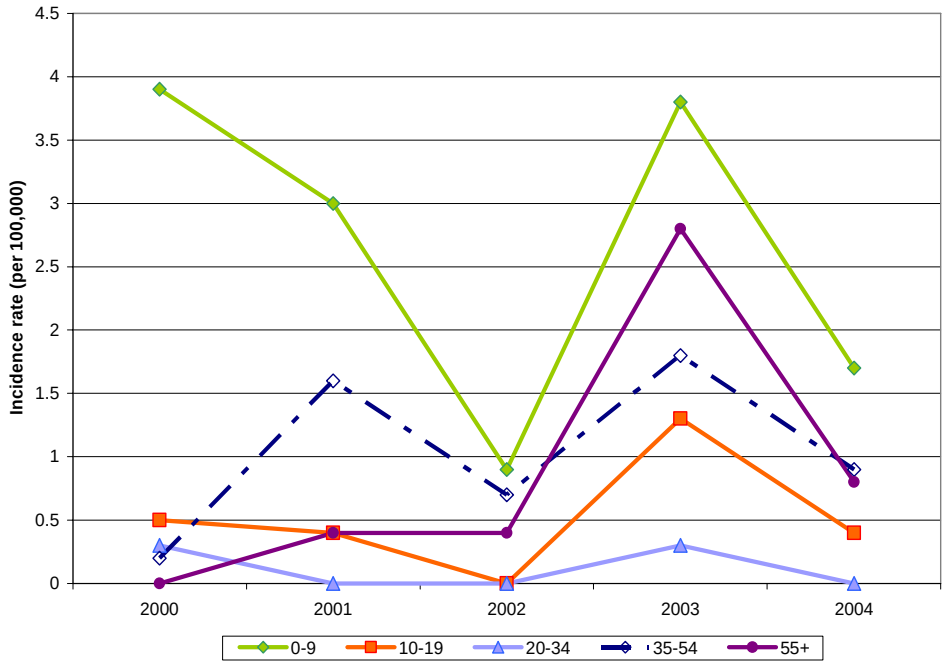
	2000	2001	2002	2003	2004
Total	0.8 (12)	1.1 (16)	0.4 (6)	1.9 (28)	0.7 (11)
Bacterial Meningitis by Gender Rate per 100,000					
Male	0.7	1.5	0.5	2.3	0.7
Female	1.0	0.5	@	1.2	0.8
Bacterial Meningitis by Race/Ethnicity Rate per 100,000					
White	0.8	0.5	0.6	1.8	0.4
Black	0.0	2.6	0.0	1.5	1.5
Hispanic	1.4	1.3	0.0	@	@
Other	0.0	@	0.0	@	0.0
Bacterial Meningitis by Age Rate per 100,000					
0 – 9	3.9	3.0	@	3.8	1.7
10 – 19	@	@	0.0	1.3	@
20 – 34	@	0.0	0.0	@	0.0
35 – 54	@	1.6	0.7	1.8	0.9
≥ 55	0.0	@	@	2.8	@

@ indicates numerator too small for rate calculation
* Data Source: Epidemiology and Health Information, TCPH

The highest rate of bacterial meningitis was observed among children age 0-9. Observed rates during the five year period show a downward trend in young children in spite of a high incidence rate in 2003. Rates among adults age 35 or older, however display a general increase (Figure 2).

Figure 1. The Frequency and Incidence Rate of Bacterial Meningitis in Tarrant County, 2000-2004

Figure 2. The Incidence Rate of Bacterial Meningitis by Age in Tarrant County, 2000-2004



Streptococcal Diseases

- **Group A Streptococcal Diseases**

Generally, Group A *Streptococcus* (GAS) infections are asymptomatic or develop relatively mild illnesses such as "strep throat," or impetigo, however on rare occasions these bacteria can cause other severe and even life-threatening diseases.

During 2000 through 2004, a total of 155 cases of streptococcal diseases caused by GAS were confirmed in Tarrant County (average 31 cases/year). The overall incidence rate of GAS infection decreased from 2000 to 2004, although a high number of the infections were reported in 2003 (Figure 3).

Higher incidence rates were observed in males than females over the five-year period, yet no substantial difference in trends of incidence rates by gender was present.

The highest occurrence of GAS infections was observed among children age 0-9 years and adults 55 and older (Figure 4). The observation of rates over the five years shows overall downward trends in both these age groups (0-9 years and ≥55 years) and stability in other age groups.

Table 2
Group A Streptococcal Diseases
Rate per 100,000 (Number of Cases)

	2000	2001	2002	2003	2004
Total	3.5 (51)	2.6 (38)	0.9 (14)	2.7 (41)	0.7 (11)
Group A Streptococcal Diseases by Gender Rate per 100,000					
Male	3.6	3.1	0.7	2.8	0.7
Female	3.3	1.9	0.3	2.5	0.6
Group A Streptococcal Diseases by Race/Ethnicity Rate per 100,000					
White	2.9	3.1	@	2.2	0.5
Black	@	@	0.0	2.0	0.0
Hispanic	4.9	2.0	@	1.5	@
Other	0.0	4.3	@	@	@
Group A Streptococcal Diseases by Age Rate per 100,000					
0 – 9	12.2	3.8	@	4.2	1.7
10 – 19	@	@	@	1.3	@
20 – 34	0.0	0.9	@	0.9	0.0
35 – 54	3.0	2.2	0.9	2.7	0.9
≥ 55	4.0	5.6	1.7	5.2	@

@ indicates numerator too small for rate calculation
* Data Source: Epidemiology and Health Information Division, TCPH

Figure 3. The Frequency and Incidence Rate of Group A Streptococcal Disease in Tarrant County, 2000-2004

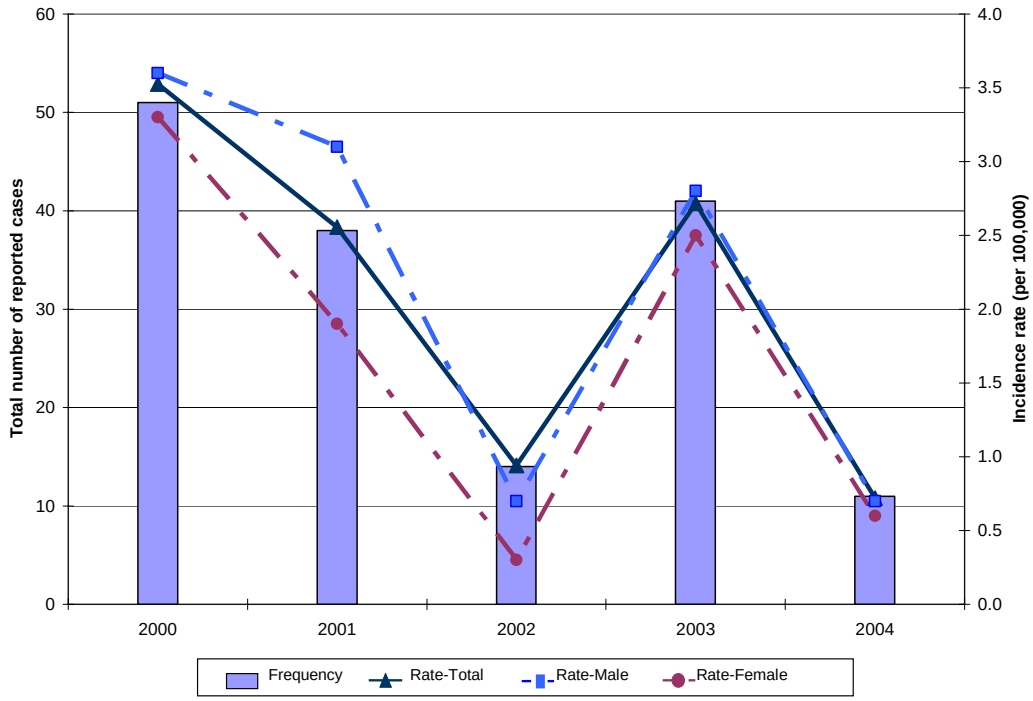
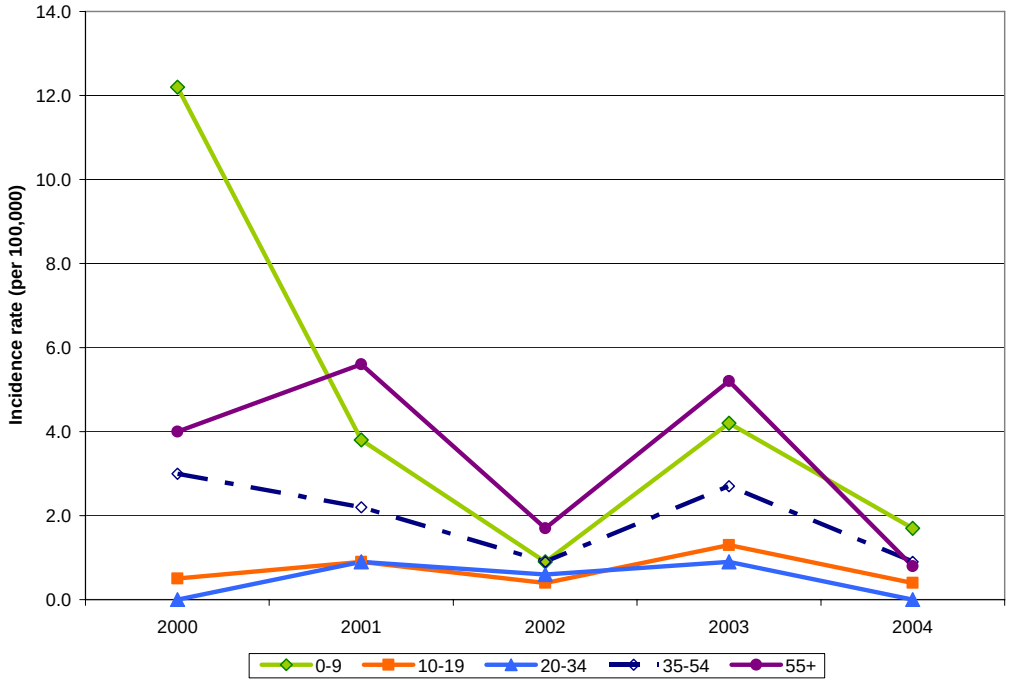


Figure 4. The Incidence Rate of Group A Streptococcal Disease by Age in Tarrant County, 2000-2004



Streptococcal Diseases

- **Group B and Other Streptococcal Diseases**

A total of 252 cases of streptococcal disease caused by other than Group A were reported in Tarrant County from 2000 to 2004 for an average of 50.4 cases/year. Apart from a significantly high incidence rate in 2000, this infection displays no considerable variation in trends for the remaining period (Figure 5).

Unlike Group A Streptococcal disease, the incidence rates of Non-Group A Streptococcal infection was higher in females from 2001 to 2003.

Higher incidence rates were reported among children age 0-9 years and adults, 55 or older, however the ranges of incidence rates of different age groups were not significantly different (Figure 6). The substantially high incidence rate among children (0-9 years) in 2000 was an exceptional phenomenon due to an outbreak.

Table 3
Non-Group A Streptococcal Diseases
Rate per 100,000 (Number of Cases)

	2000	2001	2002	2003	2004
Total	7.2 (104)	2.2 (33)	1.7 (25)	3.6 (55)	2.3 (35)
Non-Group A Streptococcal Diseases by Gender Rate per 100,000					
Male	7.4	2.2	1.4	2.1	2.5
Female	6.8	2.3	2.0	5.1	1.9
Non-Group A Streptococcal Diseases by Race/Ethnicity Rate per 100,000					
White	6.5	1.9	1.0	2.3	2.1
Black	8.5	4.1	2.1	5.0	3.0
Hispanic	7.7	2.3	2.3	1.5	0.9
Other	@	@	@	@	@
Non-Group A Streptococcal Diseases by Age Rate per 100,000					
0 – 9	30.4	2.1	@	5.5	4.6
10 – 19	0.0	@	@	2.2	@
20 – 34	0.9	2.3	0.9	1.7	0.9
35 – 54	2.8	2.0	0.7	3.5	1.3
≥ 55	8.4	4.3	1.7	6.0	5.0

@ indicates numerator too small for rate calculation
* Data Source: Epidemiology and Health Information Division, TCPH

Figure 5. The Frequency and Incidence Rate of Non-Group A Streptococcal Disease in Tarrant County, 2000-2004

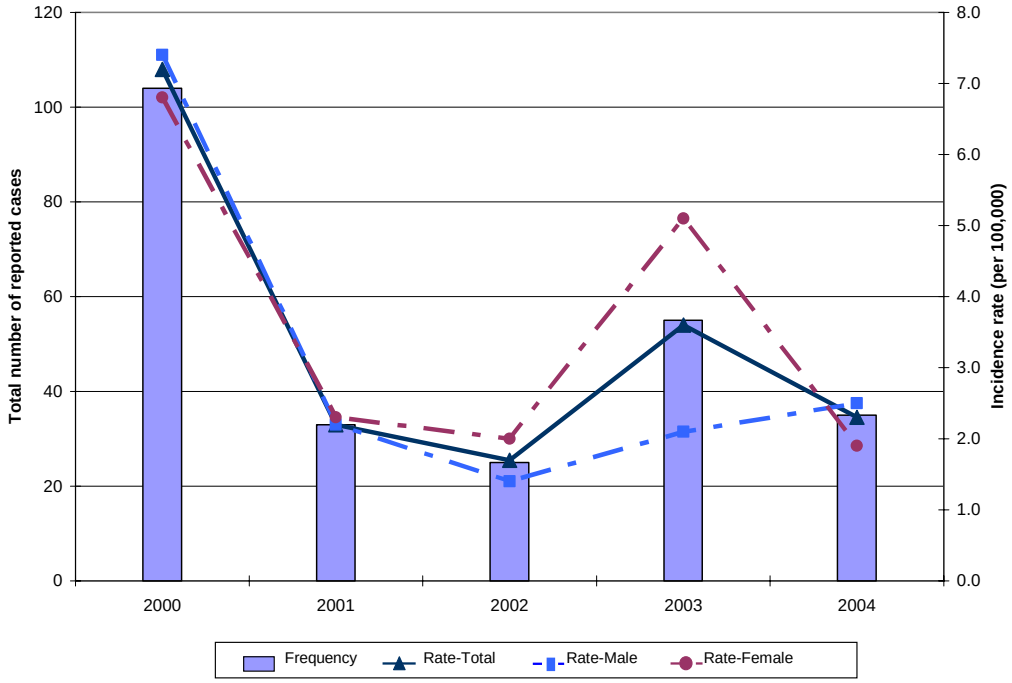
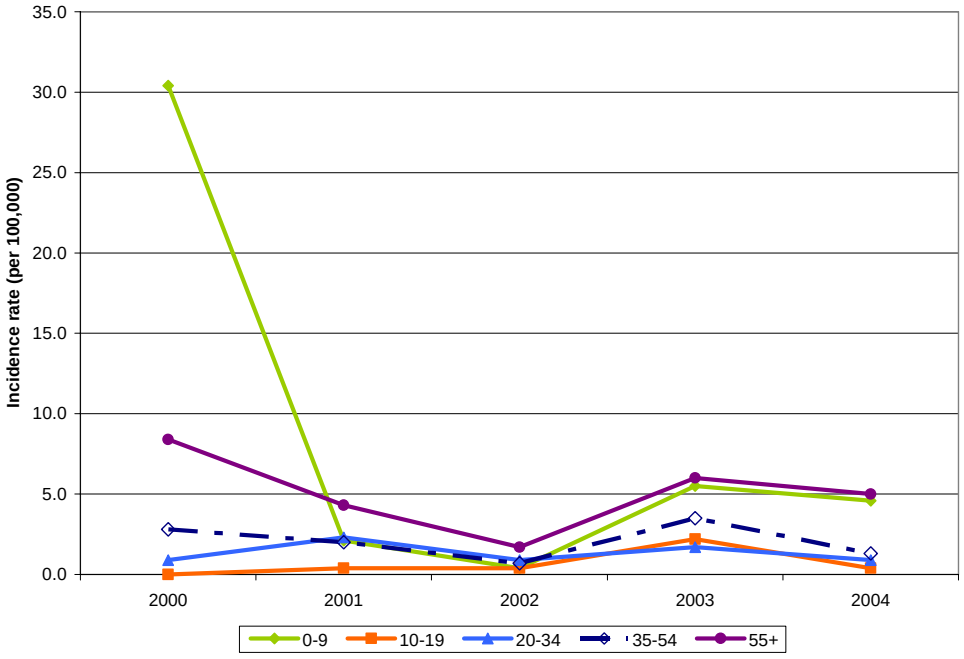


Figure 6. The Incidence Rate of Non-Group A Streptococcal Disease by Age in Tarrant County, 2000-2004



- ***Streptococcus pneumoniae* Disease in Children**

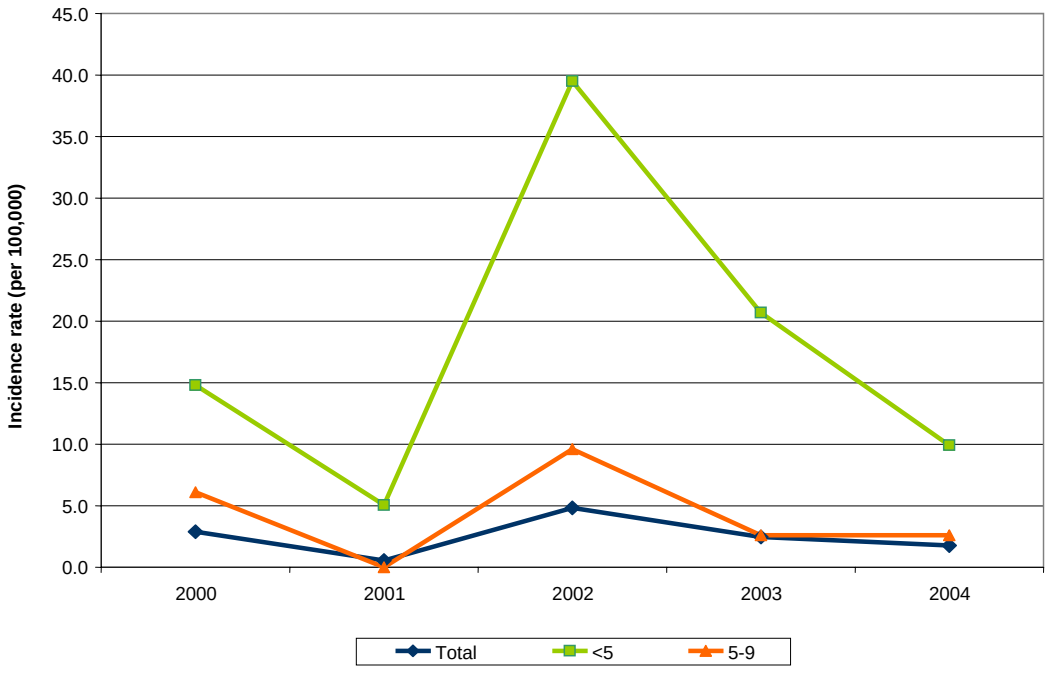
Pneumonia caused by *Streptococcus pneumoniae* in young children has a significant public health importance worldwide. Due to use of the new conjugate vaccine for children and improved HIV therapy, the incidence among young adults and young children is decreasing in the United States. The incidence rate in young children under 5 years in Tarrant County increased from 14.8 per 100,000 in 2000 to 39.5 in 2002, and then decreased significantly to 9.9 in 2004. The overall observed incidence rates among children 5 to 9 years, and adolescents age 10 to 14 years, displayed downward trends over the five years (Figure 7).

Table 4
***Streptococcus pneumoniae* Infection**
Rate per 100,000 (Number of Cases))

	2000	2001	2002	2003	2004
Total	2.9 (42)	0.5 (8)	4.8 (72)	2.5 (37)	1.8 (27)
***Streptococcus pneumoniae* Infection in Children by Age** **Rate per 100,000**					
< 5	14.8	5.1	39.5	20.7	9.9
5 - 9	6.1	0.0	9.6	2.6	2.6
10 - 14	2.7	0.0	0.0	0.0	@

@ indicates numerator too small for rate calculation
* Data Source: Epidemiology and Health Information Division, TCPH

Figure 7. The Incidence Rate of *Streptococcus pneumoniae* Disease in Young Children in Tarrant County, 2000-2004



Tuberculosis

Table 5 Tuberculosis Rate per 100,000 (Number of Cases)					
	2000	2001	2002	2003	2004
Total	6.6 (95)	7.3 (109)	7.3 (108)	7.7 (116)	7.3 (112)
Tuberculosis by Gender Rate per 100,000					
Male	7.3	10.7	8.3	6.3	7.9
Female	5.9	4.0	6.3	9.1	6.7
Tuberculosis by Race/Ethnicity Rate per 100,000					
White	2.3	1.4	2.7	2.0	2.0
Black	14.4	15.9	20.0	25.1	17.3
Hispanic	10.2	6.9	10.6	9.0	11.3
Other	27.9	20.1	15.7	24.6	27.6
Tuberculosis by Age Rate per 100,000					
0 – 9	3.5	5.1	2.6	4.7	3.8
10 – 19	3.7	2.7	1.8	4.0	2.2
20 – 34	6.5	5.2	8.2	7.8	8.4
35 – 54	7.1	10.5	9.4	7.7	8.7
≥ 55	11.5	11.1	11.6	13.5	11.1
@ indicates numerator too small for rate calculation * Data Source: TB Controls, TCPH					

Tuberculosis (TB) is a serious infection of the respiratory system caused by *Mycobacterium tuberculosis.* While TB incidence is continuing to decline among industrialized countries worldwide, the emergence of multiple drug resistance TB (MDR-TB) defined as resistance to at least isoniazid and rifampin has slowed the decline in the past two decades. In the US, MDR-TB occurs mostly among HIV-infected individuals and foreign-born persons.

The TB incidence rate in Tarrant County was stable during the last five years, ranging from 6.6 to 7.7 cases per 100,000 population.

For 200-2004, in general TB incidence rates in males were higher than those in females, except for the year 2003. The incidence rate in males decreased during 2001 and 2003 and then increased again in 2004. In contrast, the incidence rate among females continually increased from 2001 to 2003 and then decreased in 2004 (Figure 8).

Concerning race/ethnicity, the TB incidence rates in Whites and Hispanics did not vary significantly over the years. The rate in Blacks showed a continuous upward trend until 2003, whereas the rate in Other races/ethnicities decreased from 27.9 per 100,000 in 2000 to 15.7 in 2002 and then increased to 27.6 in 2004 (Figure 9). TB incidence rates among different age groups displayed no substantial changes during the last five years (Figure 10). Figure 11 shows the trend of major risk factors for TB infection. During the five-year period, those who were foreign-born remained at higher risk for the infection in Tarrant County. Trends in TB rates in the major cities show that beginning in 2003, there is a decrease in Fort Worth and a rise in Arlington and cities in the Southeast (Figure 12).

Figure 8. The Frequency and Incidence Rate of Tuberculosis in Tarrant County, 2000-2004

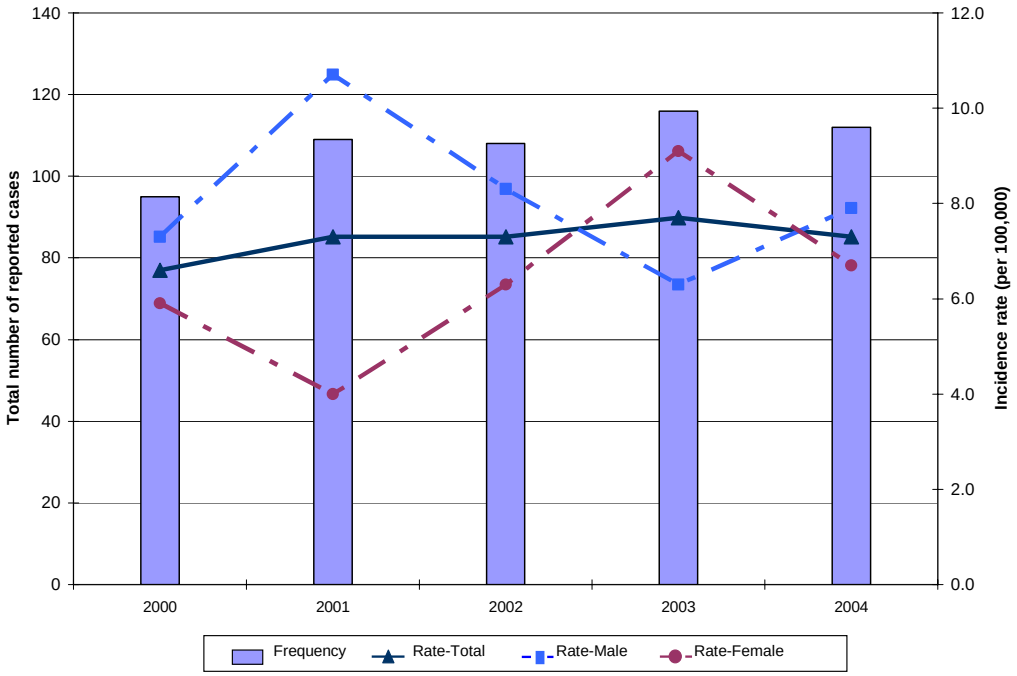


Figure 9. The Incidence Rate of Tuberculosis by Race/Ethnicity in Tarrant County, 2000-2004

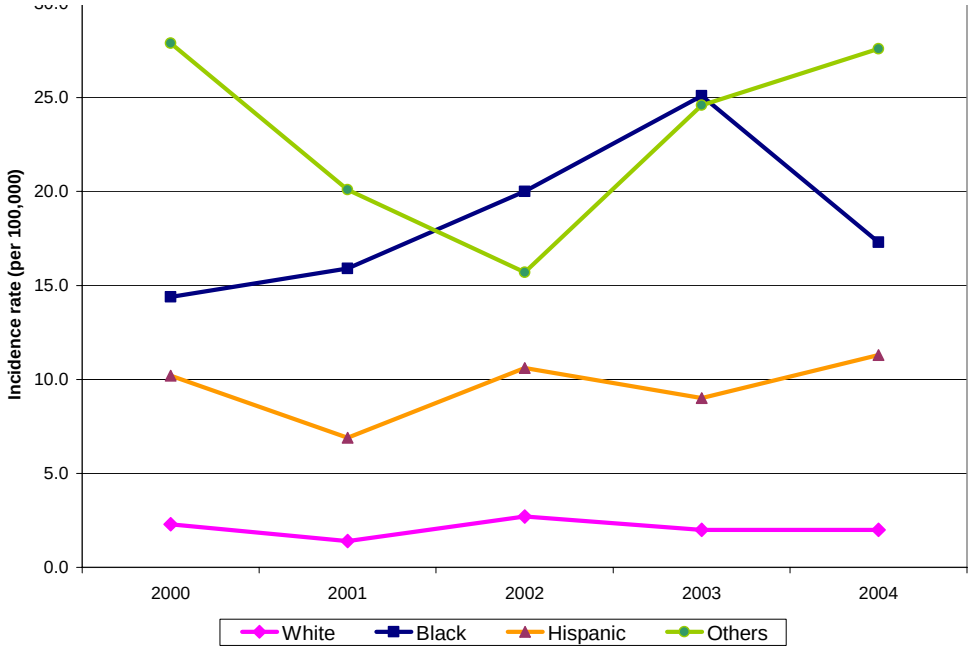


Figure 10. The Incidence Rate of Tuberculosis by Age
in Tarrant County, 2000-2004

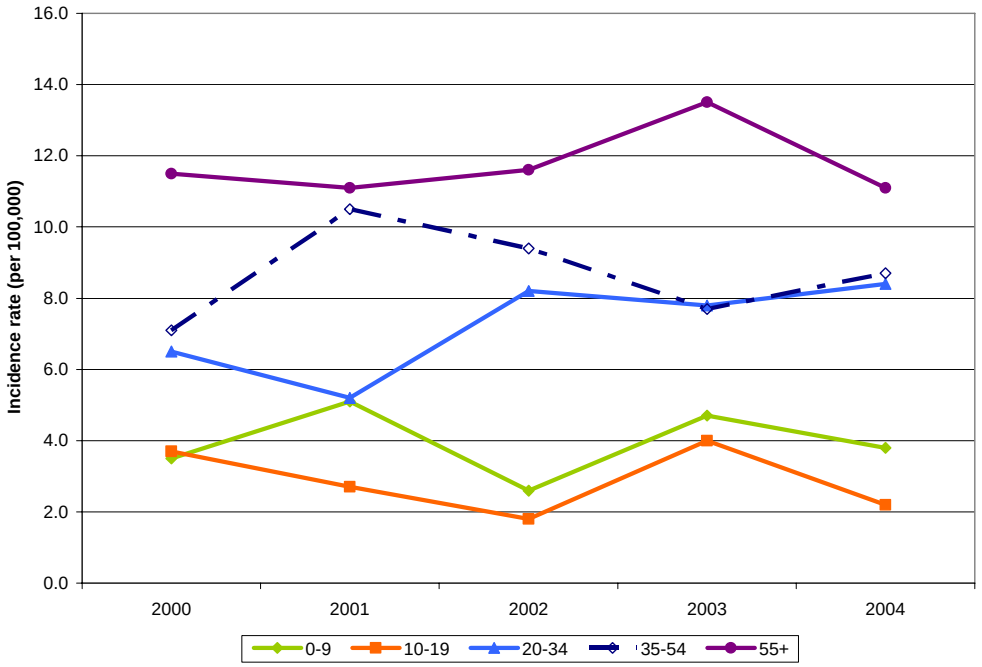


Figure 11. The Trend of Risk Factors of Tuberculosis
in Tarrant County, 2000-2004

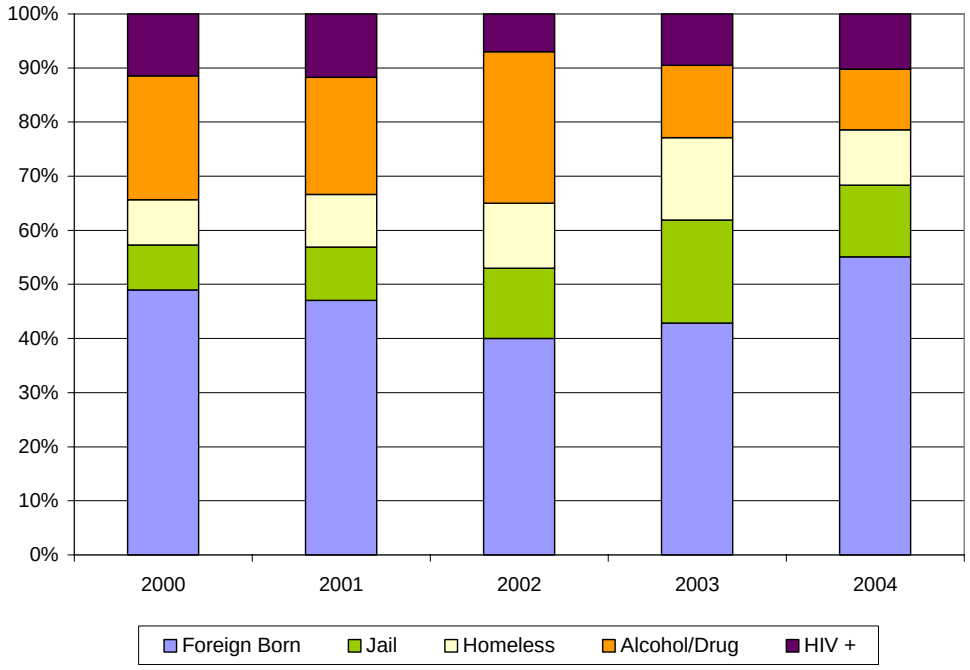
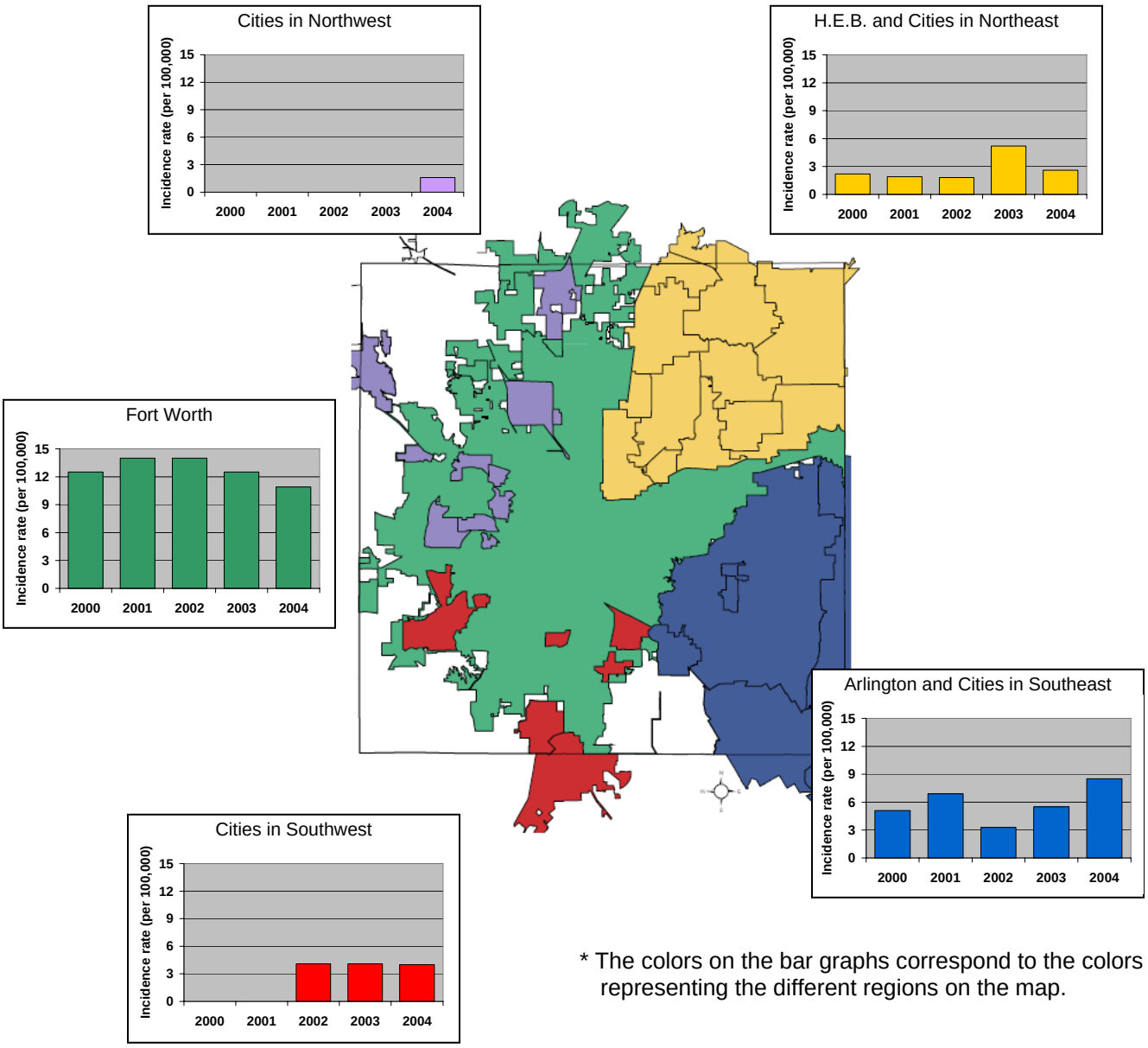


Figure 12. The Trends of Tuberculosis in Major Cities
in Tarrant County, 2000-2004



* The colors on the bar graphs correspond to the colors representing the different regions on the map.

Lead Poisoning in Children

Table 6 Lead Poisoning in Children* Rate per 100,000** (Number of Cases)					
	2000	2001	2002	2003	2004
Total	82.7 (301)	61.7 (230)	73.7 (274)	74.6 (280)	73.5 (278)
Lead Poisoning in Children* by Gender Rate per 100,000**					
Male	91.0	61.5	73.8	77.9	79.3
Female	74.1	61.9	73.5	71.2	66.9
Lead Poisoning in Children* by Race/Ethnicity Rate per 100,000**					
White	10.3	10.3	11.4	14.1	7.4
Black	131.3	81.9	62.2	39.6	43.0
Hispanic	169.0	127.3	170.1	146.4	143.1
Other	@	35.0	@	17.0	22.1
Lead Poisoning in Children* by Age Rate per 100,000**					
< 2	248.5	203.3	263.8	226.5	238.1
2 – 6	132.4	94.0	100.5	117.8	116.8
7 – 15	16.7	10.6	13.5	14.9	11.0

*Lead Poisoning in Children ≤15 years old: Blood Lead Level ≥ 10 µg/d
**Rates are reported for population ≤ 15 of age

@ indicates numerator too small for rate calculation
* Data Source: Environ. & Injury Epidemiology and Toxicology, Texas DSHS

Lead entering the bloodstream by ingestion or inhalation can damage the brain and the nervous system. Young children are at the greatest risk because their nervous systems and brains are still developing.

In children, blood lead levels of 10 µg/d or greater is defined as elevated and a precursor of lead toxicity and lead poisoning.

The newly-diagnosed case rate of lead poisoning in children age 15 and younger was stable from 2002 through 2004, after a significant decrease in 2001.

The trends of lead poisoning in both genders are similar to that of the total population. Generally higher rates were observed in boys than in girls (Figure 13).

Most cases were reported in Hispanic children, whose rates ranged from 127.3 cases per 100,000 in 2001 to 170.1 cases/100,000 in 2002, and a slight decrease was observed during 2002 to 2004. A substantial downward trend is shown among Black children, declining from 131.3 cases/100,000 in 2000 to 39.6 cases/100,000 in 2003 (Figure 14).

Small children younger than two years of age had the greatest risk of lead poisoning, having the highest rate of more than 200 cases/100,000.

The highest incidences of lead poisoning in children occurred in Fort Worth throughout the five year period (Figure 15).

Figure 13. The Frequency and Incidence Rate of Lead Poisoning in Children in Tarrant County, 2000-2004

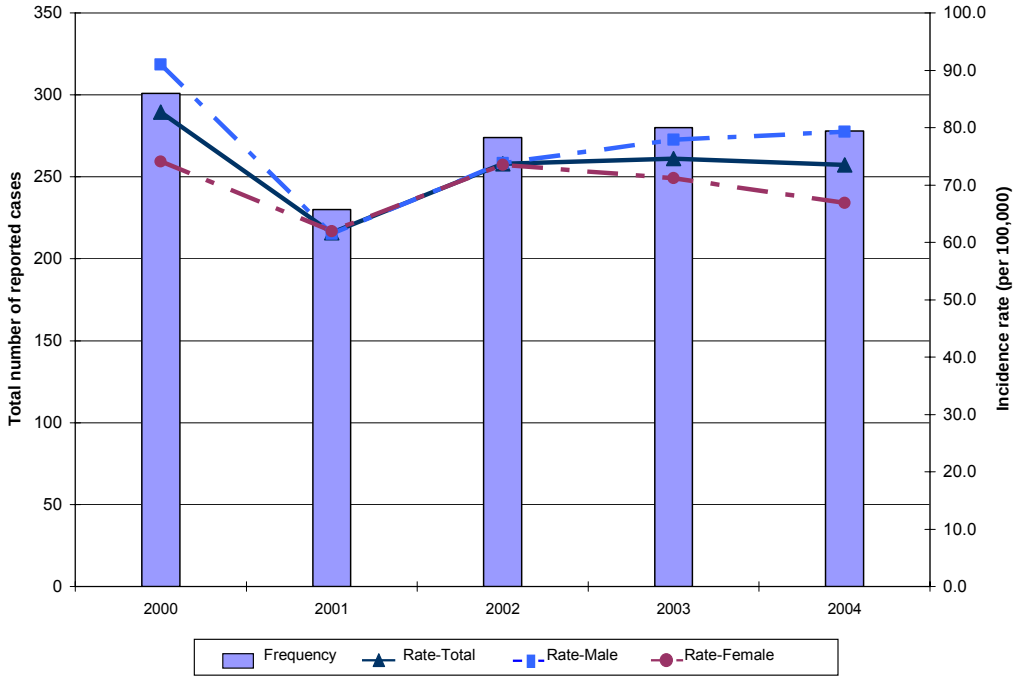


Figure 14. The Incidence Rate of Lead Poisoning in Children by Race/Ethnicity in Tarrant County, 2000-2004

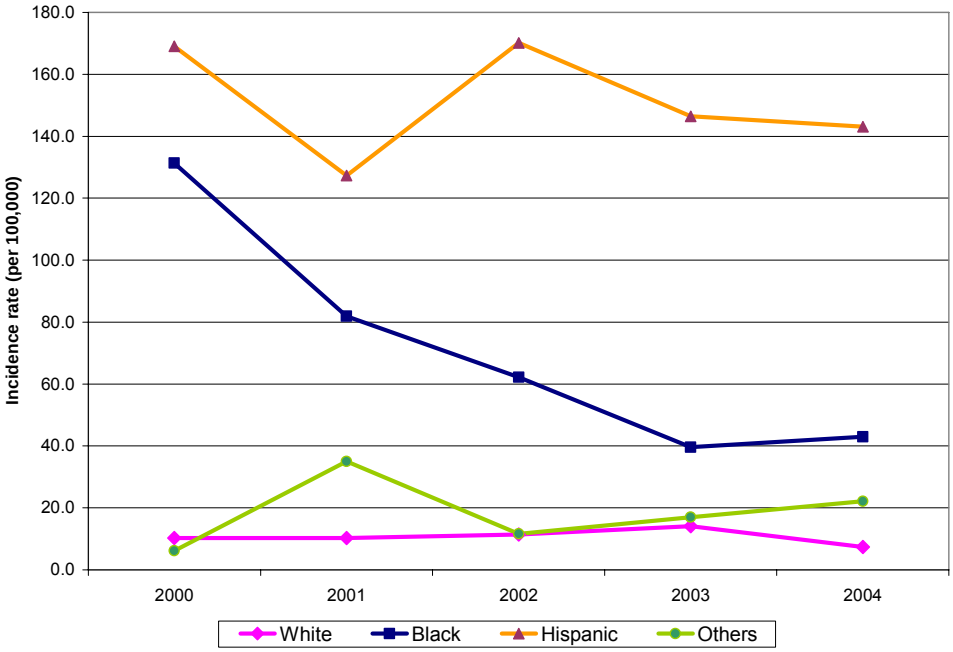
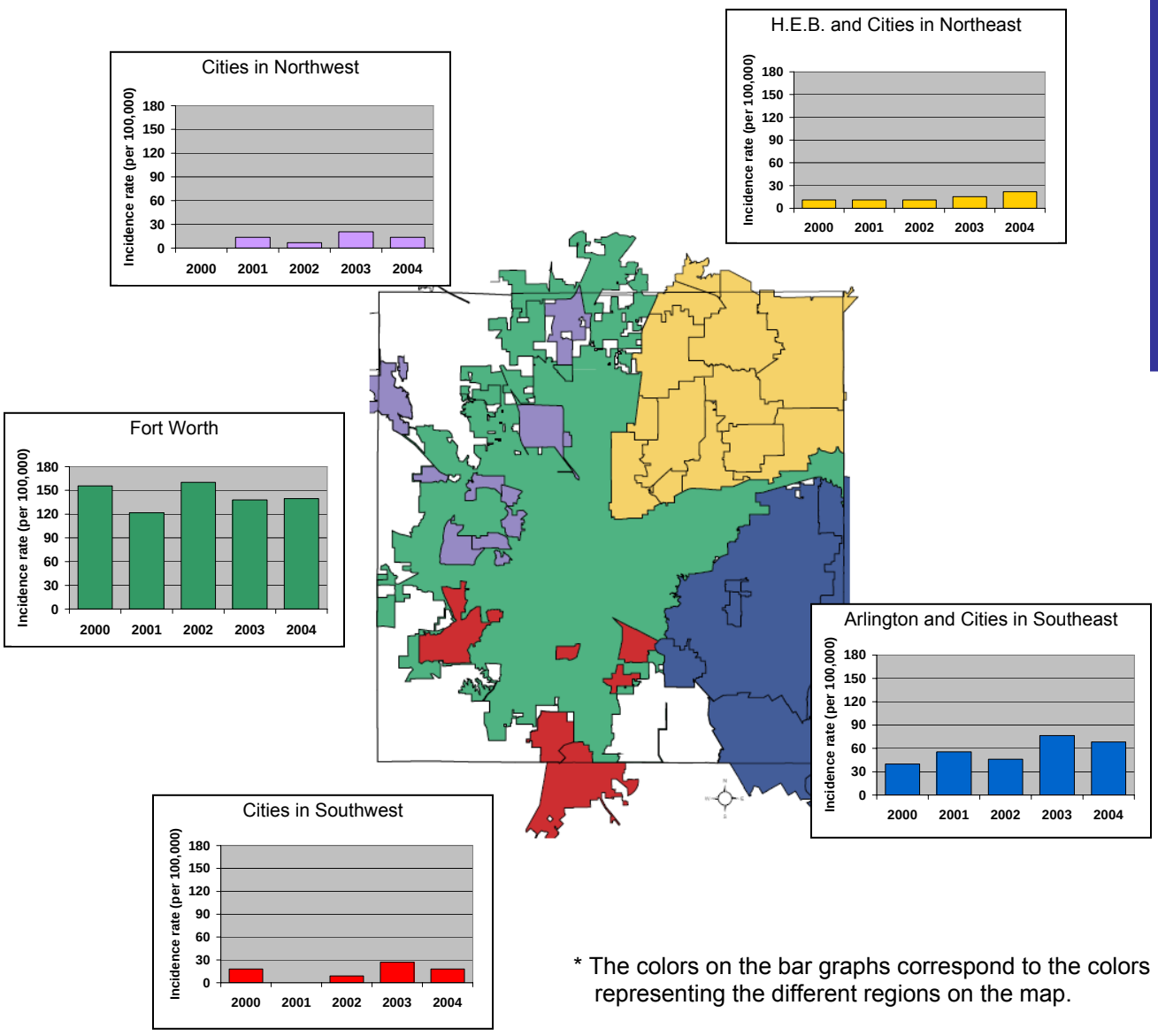


Figure 15. The Trends of Lead Poisoning in Children in Major Cities in Tarrant County, 2000-2004



* The colors on the bar graphs correspond to the colors representing the different regions on the map.

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THE TARRANT COUNTY PUBLIC HEALTH DEPARTMENT DOES NOT GUARANTEE THE CORRECTNESS OR ACCURACY OF ANY FEATURES ON THIS MAP. TARRANT COUNTY ASSUMES NO RESPONSIBILITY IN CONNECTION THEREWITH.

Campylobacteriosis

Campylobacteriosis is an acute bacterial enteric (digestive tract) disease. The incidence rate of the infection ranged from 2.0 cases/100,000 in 2001 to 7.4 in 2003. A significant increase of the disease was noticed in 2003, reaching its peak incidence rate at 7.4. This increase was attributed to the pervasive condition of the enteric diseases within the county in that same year.

Males reported higher incidence rates than females. The pattern for the trends in both genders is similar, but the increase which occurred in 2003 was much higher in males compared to that of females (Figure 16).

Race/ethnicity information on cases of Campylobacteriosis is not reliable because the gastroentric disease reports from laboratories often lack complete information on race/ethnicity.

The highest rate of Campylobacteriosis was reported among children age 0-9 years, and an upward trend of the infection was observed in youth age 10-19 in recent years.

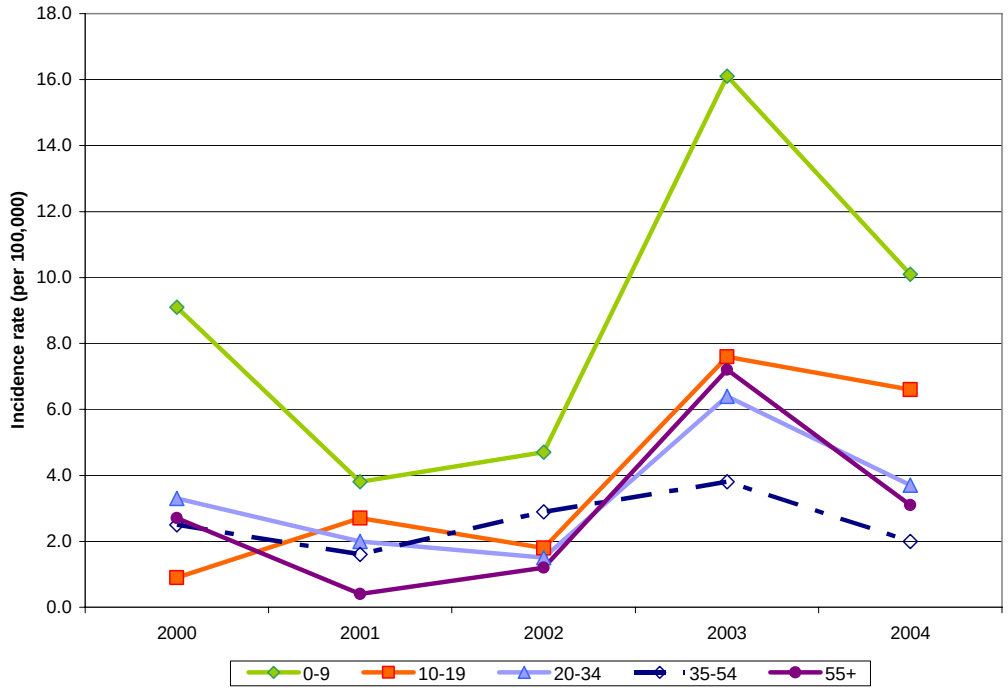
Table 7
Campylobacteriosis
Rate per 100,000 (Number of Cases)

	2000	2001	2002	2003	2004
Total	3.5 (51)	2.0 (30)	2.6 (38)	7.4 (112)	4.5 (59)
Campylobacteriosis by Gender Rate per 100,000					
Male	4.2	2.2	2.7	8.8	5.0
Female	2.9	@	2.0	5.9	4.0
Campylobacteriosis by Race/Ethnicity Rate per 100,000					
White	2.9	1.6	1.4	2.5	3.0
Black	2.7	@	@	1.5	3.0
Hispanic	3.5	3.6	0.0	9.6	8.0
Other	0.0	@	11.4	4.1	6.6
Campylobacteriosis by Age Rate per 100,000					
0 – 9	9.1	3.8	4.7	16.1	10.1
10 – 19	@	2.7	1.8	7.6	6.6
20 – 34	3.3	2.0	1.5	6.4	3.7
35 – 54	2.5	1.6	2.9	3.8	2.0
≥ 55	2.7	@	1.2	7.2	3.1

@ indicates numerator too small for rate calculation
* Data Source: Epidemiology and Health Information, TCPH

Figure 16. The Frequency and Incidence Rate of Campylobacteriosis in Tarrant County, 2000-2004

Figure 17. The Incidence Rate of Campylobacteriosis by Age in Tarrant County, 2000-2004



Escherichia coli Infection

The reported number of *E. coli* 0157: H7 infections in Tarrant County varied during the last five years, ranged from 6 cases (incidence rate 0.4/100,000) in 2001 to 29 cases (incidence rate 1.9/100,000) in 2003. After a slight decrease (2000 to 2001), there was a gradual increase, reaching the peak rate in 2003, then dropping sharply in 2004 (Figure 18). A similar trend was seen in both genders.

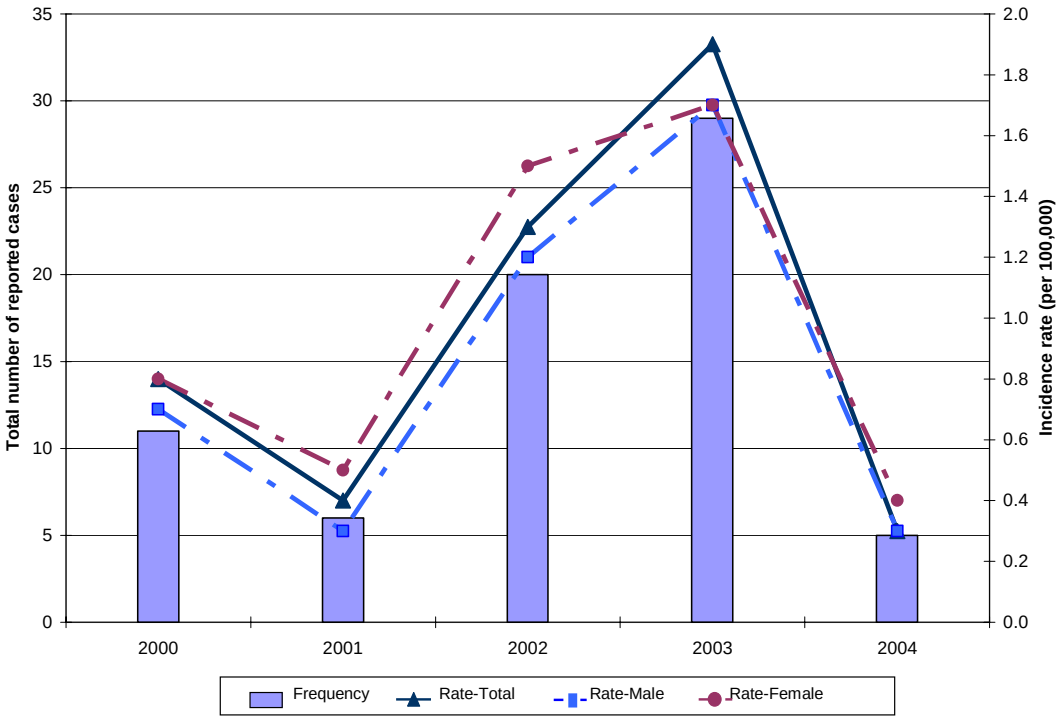
The highest rate of *E. coli* infection was reported in children age 0-9 years, however due to the small number of cases reported no definitive statement can be drawn from the changes in the incidence rates of different age groups.

Table 8
***E. coli* Infection**
Rate per 100,000 (Number of Cases)

	2000	2001	2002	2003	2004
Total	0.8 (11)	0.4 (6)	1.3 (20)	1.9 (29)	0.3 (5)
***E. coli* Infection by Gender** **Rate per 100,000**					
Male	0.7	@	1.2	1.7	@
Female	0.8	0.5	1.5	1.7	0.4
***E. coli* Infection by Age** **Rate per 100,000**					
0 – 9	0.0	@	3.8	3.0	@
10 – 19	2.3	@	2.7	2.7	0.0
20 – 34	@	@	0.0	2.0	0.0
35 – 54	@	0.0	0.9	@	0.7
≥ 55	1.3	@	@	2.8	@

E. coli Infection race/ethnicity data is not included in the table due to its unreliability.
@ indicates numerator too small for rate calculation.
* Data Source: Epidemiology and Health Information, TCPH

Figure 18. The Frequency and Incidence Rate of *E. coli* Infection in Tarrant County, 2000-2004



Salmonellosis

Salmonellosis is a bacterial disease commonly manifested by acute enterocolitis. Similar to other gastroenteric diseases, during the last five years the incidence rates of salmonellosis displayed a range of 6.7 cases/100,000 to 23.7. After a decrease from 10.9 in 2000 to 6.7 in 2001, the salmonellosis infection rate increased gradually from 2001 through 2003, reaching the peak rate of 23.7 in 2003, and then substantially decreased to 9.1 in 2004. There was no difference in the trends of the infection between the gender groups (Figure 19).

The incidence rates among different race/ethnicity groups were not included in this report because of its unreliability, due to a large proportion of incomplete reporting from laboratories.

Table 9
Salmonellosis
Rate per 100,000 (Number of Cases)

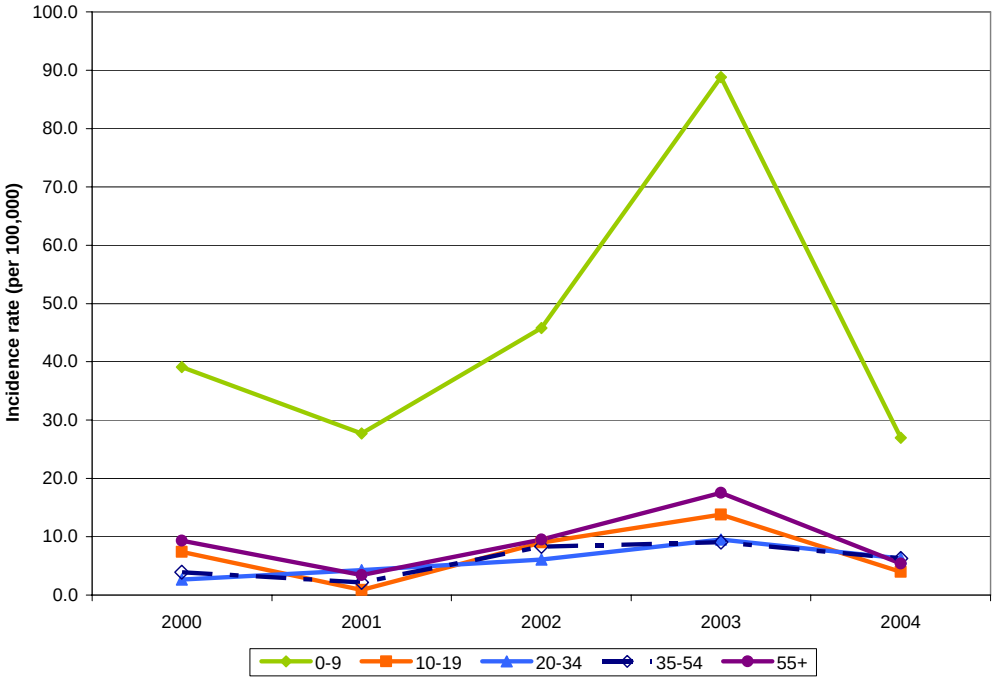
	2000	2001	2002	2003	2004
Total	10.9 (158)	6.7 (100)	15.0 (224)	23.7 (358)	9.1 (140)
Salmonellosis by Gender Rate per 100,000					
Male	11.17	5.6	14.0	24.8	8.8
Female	10.68	6.3	14.8	19.6	8.7
Salmonellosis by Age Rate per 100,000					
0 – 9	39.1	27.7	45.8	88.8	27.0
10 – 19	7.4	@	9.0	13.8	4.0
20 – 34	2.7	4.3	6.1	9.5	6.3
35 – 54	3.9	2.2	8.3	9.1	6.3
≥ 55	9.3	3.4	9.5	17.5	5.4

Salmonellosis race/ethnicity data is not included in the table due to its unreliability.
@ indicates numerator too small for rate calculation.
* Data Source: Epidemiology and Health Information, TCPH

The age group 0-9 had the highest rate of the infection, reaching the top rate of 88.8 cases/100,000 in the year 2003. The rates of the other age groups were relatively low compared to the 0-9 age group (Figure 20).

Figure 19. The Frequency and Incidence Rate of Salmonellosis in Tarrant County, 2000-2004

Figure 20. The Incidence Rate of Salmonellosis by Age in Tarrant County, 2000-2004



Shigellosis

The total number of annual reported shigellosis infections in Tarrant County during the last five years displayed a similar trend with the other gastro-enteric diseases. The incidence rates of shigellosis ranged from 3.1 cases/100,000 in 2001 to 22.1 cases/100,000 in 2003. As shown in Figure 21, the infection rate decreased from 17.6 (2000) to 3.1 (2001), substantially increased from 5.7 (2002) to 22.1 (2003), and decreased to the rate of 12.9 (2004).

There was no major difference in the trends of the infection between the gender groups, but the last two consecutive years showed a higher incidence in females than that in males (Figure 21).

Table 10
Shigellosis
Rate per 100,000 (Number of Cases)

	2000	2001	2002	2003	2004
Total	17.6 (254)	3.1 (46)	5.7 (85)	22.1 (333)	12.9 (198)
Shigellosis by Gender Rate per 100,000					
Male	17.9	3.1	6.2	19.1	11.1
Female	17.3	2.3	4.9	22.7	14.4
Shigellosis by Age Rate per 100,000					
0 – 9	87.3	14.1	21.8	98.5	60.3
10 – 19	8.7	@	1.3	12.4	3.5
20 – 34	6.8	0.9	0.9	13.0	8.9
35 – 54	1.6	1.1	2.7	4.4	2.4
≥ 55	1.3	1.7	@	3.2	1.5

Shigellosis race/ethnicity data is not included in the table due to its unreliability.
@ indicates numerator too small for rate calculation.
* Data Source: Epidemiology and Health Information, TCPH

The incidence rates among different race/ethnicity groups were not included in this report because of the incomplete information reported from the laboratories.

The highest rate of this infection occurred among children age 0-9, and shigellosis infection was reported predominantly from this age group. The rates in other age groups were relatively low compared to the age group 0-9 (Figure 22).

Figure 21. The Frequency and Incidence Rate of Shigellosis in Tarrant County, 2000-2004

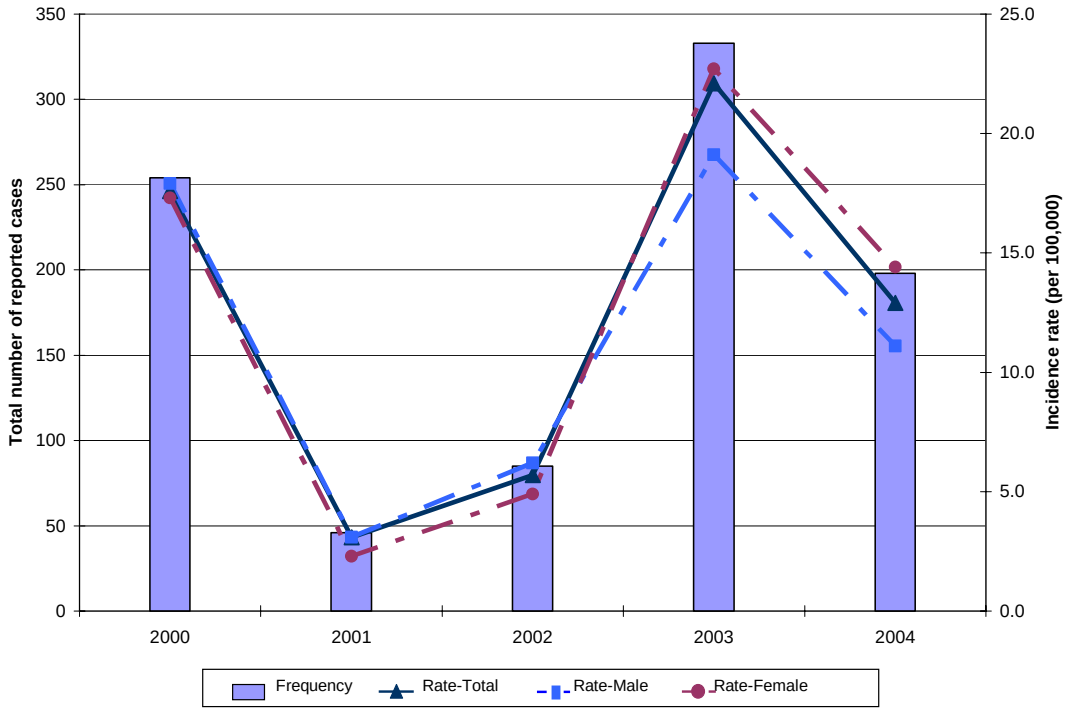
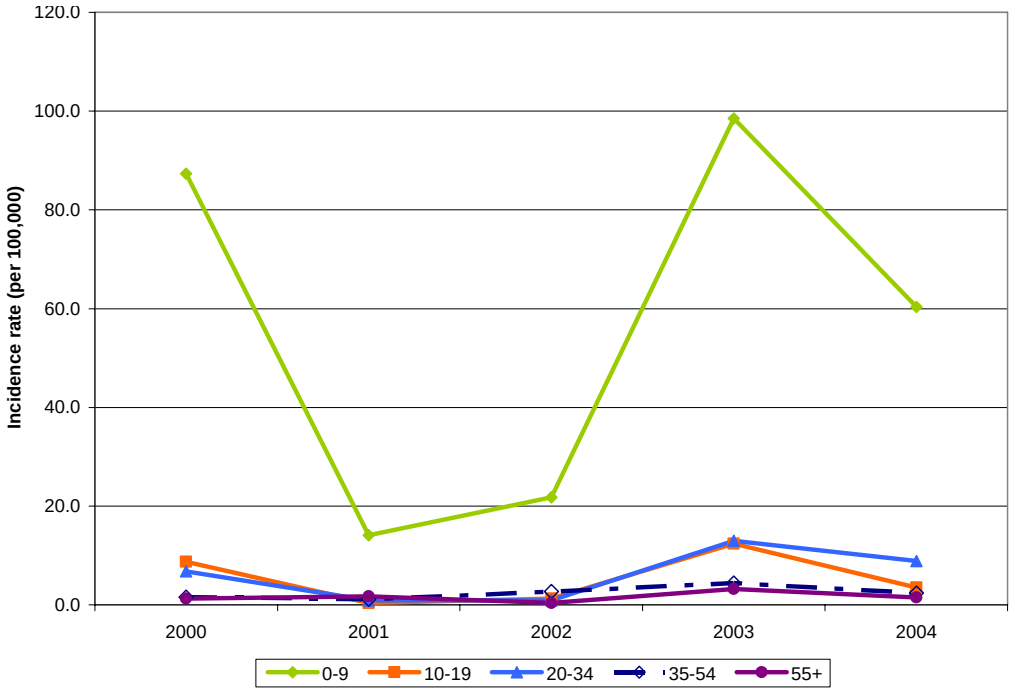


Figure 22. The Incidence Rate of Shigellosis by Age in Tarrant County, 2000-2004



HIV & AIDS

- **HIV**

Human Immunodeficiency Virus (HIV) is a viral infection transmitted through blood and body fluids contact. HIV attacks the immune system of infected individuals causing them to develop several opportunistic infections and cancers. Infected individuals eventually progress to develop Acquired Immunodeficiency Syndrome (AIDS) within a few months to several years. The increasing availability of effective HIV drug therapy has reduced the development of clinical AIDS in most industrialized countries.

Table 11
HIV
Rate per 100,000 (Number of Cases)

	2000	2001	2002	2003	2004
Total	24.9 (360)	12.9 (192)	16.1 (240)	25.4 (383)	17.3 (265)
HIV by Gender Rate per 100,000					
Male	36.2	17.5	23.7	38.6	25.3
Female	13.8	8.4	8.7	12.4	9.5
HIV by Race/Ethnicity Rate per 100,000					
White	18.9	9.3	10.5	16.1	11.1
Black	80.8	41.0	51.7	69.9	55.3
Hispanic	11.9	7.8	9.3	18.8	11.9
Other	@	@	19.9	5.5	10.5
HIV by Age Rate per 100,000					
0 – 9	1.7	2.1	2.1	1.3	0.0
10 – 19	6.0	2.7	4.0	8.0	@
20 – 34	57.9	17.9	30.6	48.9	38.0
35 – 54	32.0	15.6	25.0	33.0	26.4
≥ 55	3.1	2.6	3.7	6.8	3.8

@ indicates numerator too small for rate calculation.
* Data Source: Epidemiology and Health Information, TCPH

In Tarrant County, the overall case rate of HIV ranged from 12.9 to 25.4 cases/100,000. The HIV infection rate increased gradually from 2001 through 2003, after a dramatic decrease from 24.9 cases/100,000 in 2000 to 12.9 in 2001. The rate of HIV infection reached the peak of 25.4 in 2003, and then substantially decreased to 17.3 in 2004 (Figure 23).

It is observed that the case rate of the infection in males is much higher than in females. The major risk factors of the HIV infection are male-to-male sex, injection drug use, and unsafe heterosexual practice (e.g. having multi-partners or/and unprotected sex with infected partners). In spite of public education, males who had male-to-male sex among newly diagnosed HIV patients were still increasing from 2001 to 2003. The increasing trend of acquiring HIV in the heterosexual group is also noteworthy (Figure 24). The HIV infection case rate was markedly higher in the Black population than the rest of the racial/ethnic groups, ranging from 41.0 cases/100.000 (2001) to 81.8 (2000). After a major decrease in 2001, the rate in Blacks began to climb steadily until 2003, slightly decreasing in 2004 (Figure 25). Among the age groups, the newly-diagnosed HIV rate was the highest in adults aged 20-34 followed by adults aged 35-54 (Figure 27).

- **AIDS**

Table 12 AIDS Rate per 100,000 (Number of Cases)					
	2000	2001	2002	2003	2004
Total	13.4 (194)	9.5 (141)	11.6 (172)	14.4 (218)	7.3 (112)
AIDS by Gender Rate per 100,000					
Male	21.1	13.7	16.9	19.0	10.9
Female	5.9	5.3	6.3	7.4	3.8
AIDS by Race/Ethnicity Rate per 100,000					
White	10.0	6.4	7.2	9.7	4.5
Black	36.7	33.3	29.7	42.2	18.8
Hispanic	10.9	5.2	14.2	12.4	8.0
Other	@	@	5.7	5.5	6.6
AIDS by Age Rate per 100,000					
0 – 9	@	0.0	0.0	0.0	0.0
10 – 19	0.0	@	2.2	2.2	@
20 – 34	20.7	11.5	19.2	19.1	10.1
35 – 54	25.8	19.4	20.1	30.1	14.4
≥ 55	4.9	2.6	4.6	4.4	3.1

@ indicates numerator too small for rate calculation.
* Data Source: Epidemiology and Health Information, TCPH

Overall the case rate of AIDS ranged from 7.3 to 14.4 cases/100,000. After a decrease from 13.4 cases/ 100,000 in 2000 to 9.5 in 2001, the AIDS infection rate increased gradually from 2001 through 2003, reaching the peak rate of 14.4 in 2003, and then substantially decreased to 7.3 in 2004. Due to better treatments of the HIV infection, a smaller portion of the HIV patients advance to the AIDS stage, stabilizing the overall trends of AIDS. It is noteworthy, however that the case rate of AIDS infection did not decrease until 2003 in spite of concentrated efforts in public education (Figure 23). Males had a higher infection rate because of their behavioral risks, such as having sex with another male or injection drug use.

The AIDS infection case rates were much higher in the Black population than the rest; but this group showed a downward trend except in 2003. A dramatic decrease in Blacks from 42.2 cases/100,000 in 2003 to 18.8 in 2004 made the rate difference in 2004 between Blacks and other race/ethnic groups much smaller than the previous four years. It is also noteworthy that the case rate in Other is gradually increasing (Figure 26). Among the age group, the newly-diagnosed AIDS rate was the highest in adults age 35-54 followed by adults age 20-34 (Figure 28).

Figure 23. The Frequency and Newly-Diagnosed Case Rate of HIV & AIDS in Tarrant County, 2000-2004

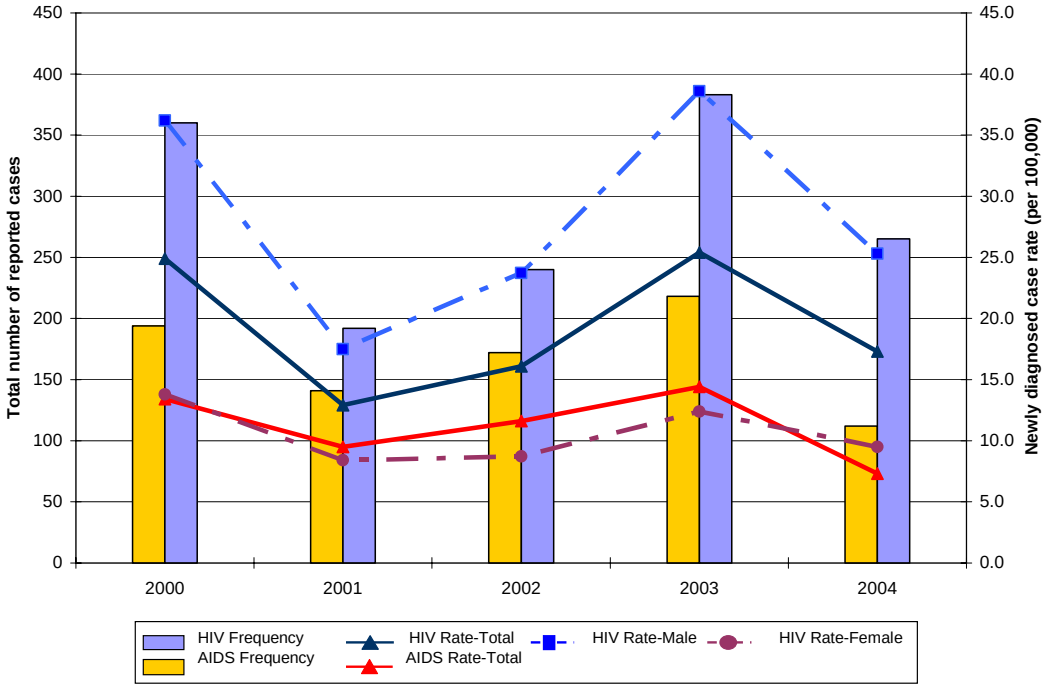


Figure 24. The Trends of Risk Factors of HIV in Tarrant County, 2000-2004

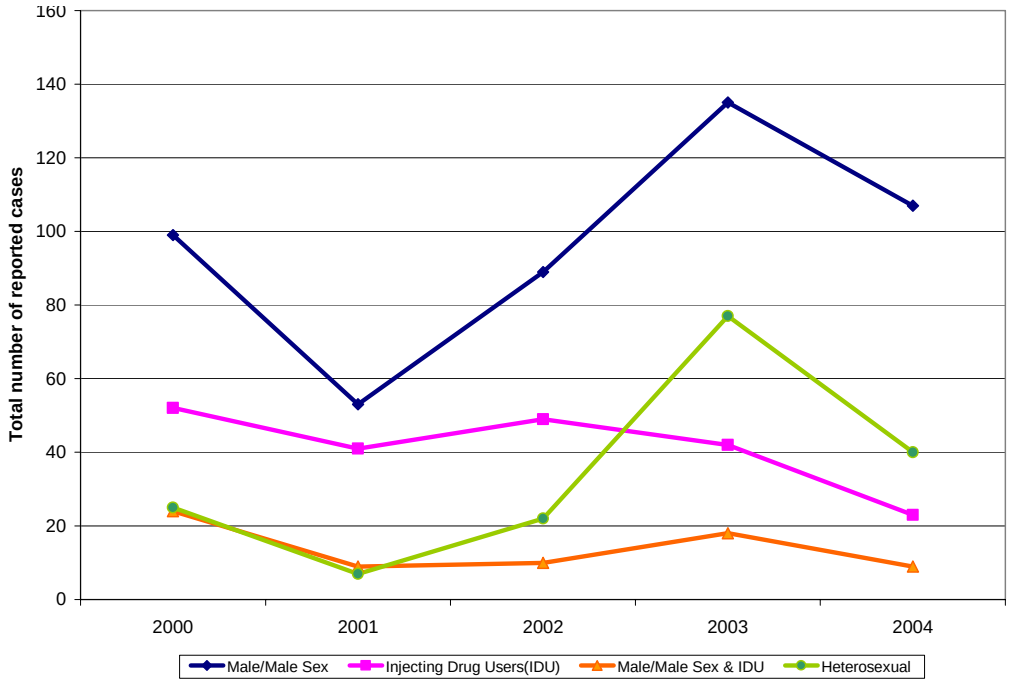


Figure 25. The Newly-Diagnosed Case Rate of HIV by Race/Ethnicity in Tarrant County, 2000-2004

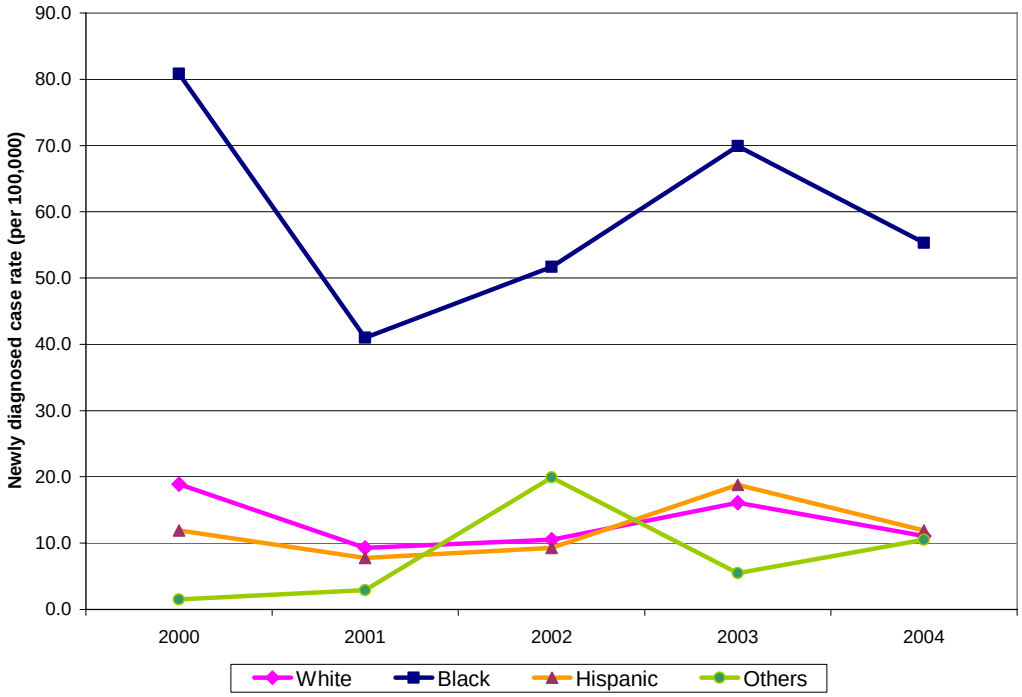


Figure 26. The Newly-Diagnosed Case Rate of AIDS by Race/Ethnicity in Tarrant County, 2000-2004

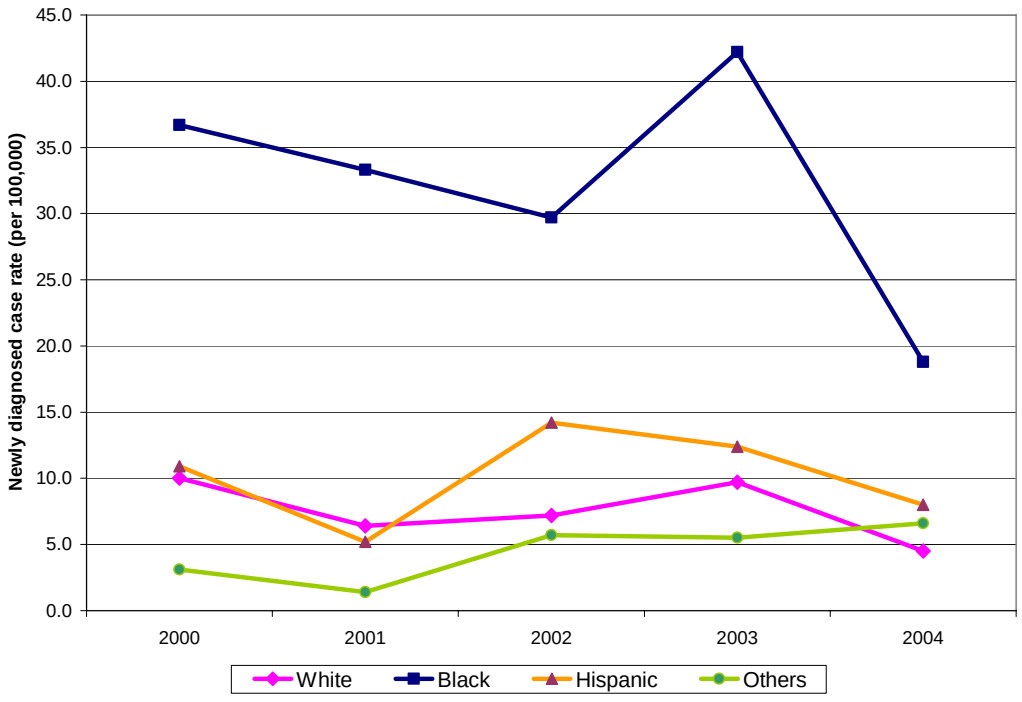


Figure 27. Newly-Diagnosed Case Rates of HIV by Age
in Tarrant County, 2000-2004

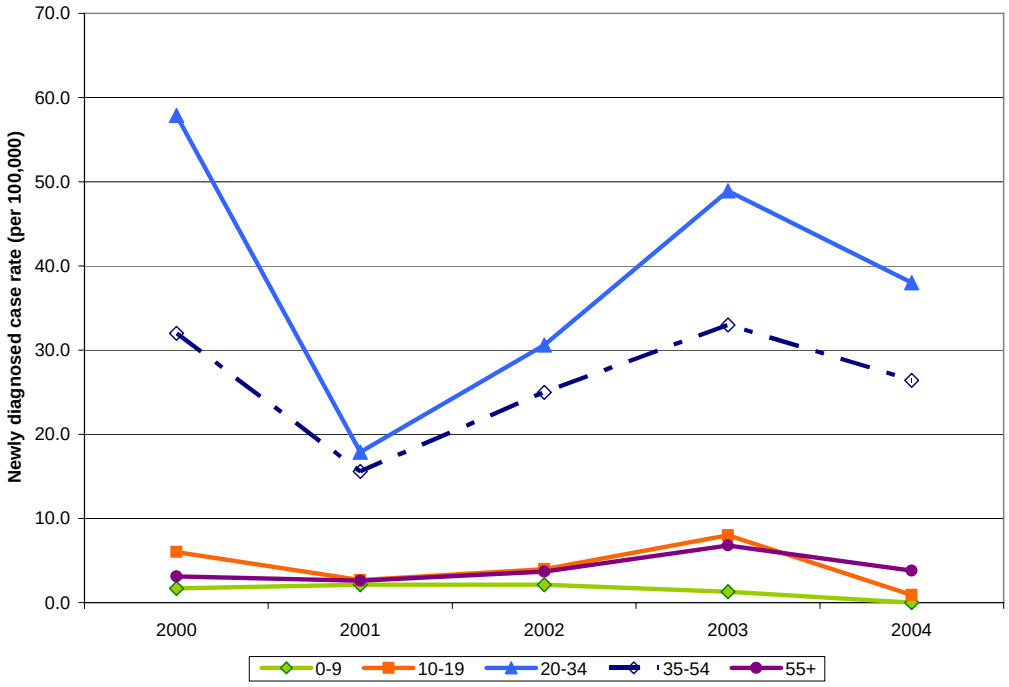


Figure 28. Newly-Diagnosed Case Rates of AIDS by Age
in Tarrant County, 2000-2004

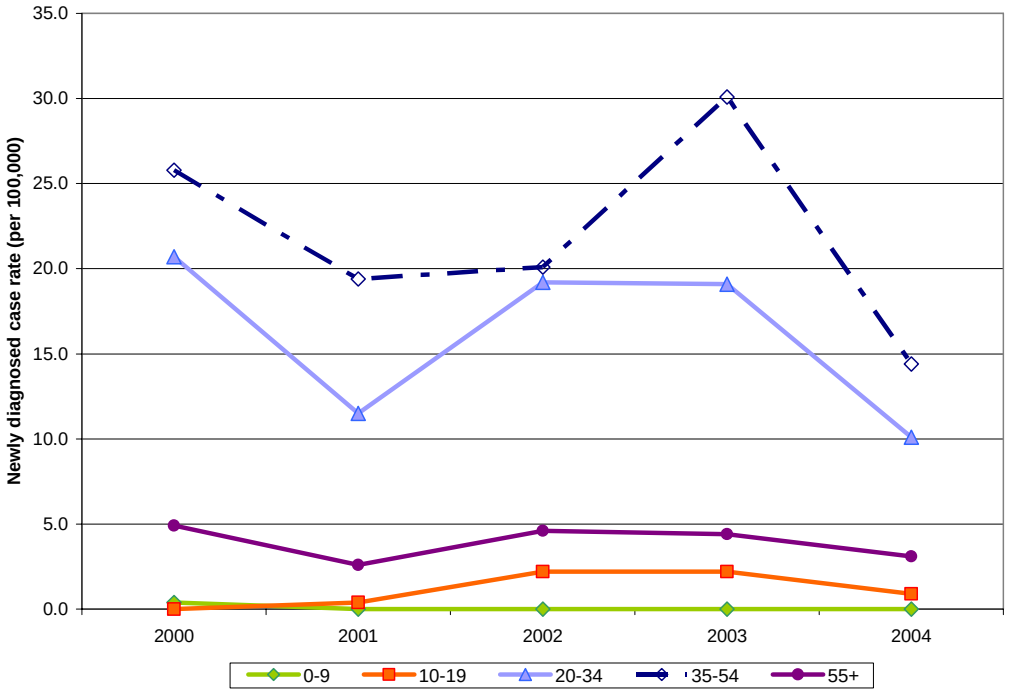
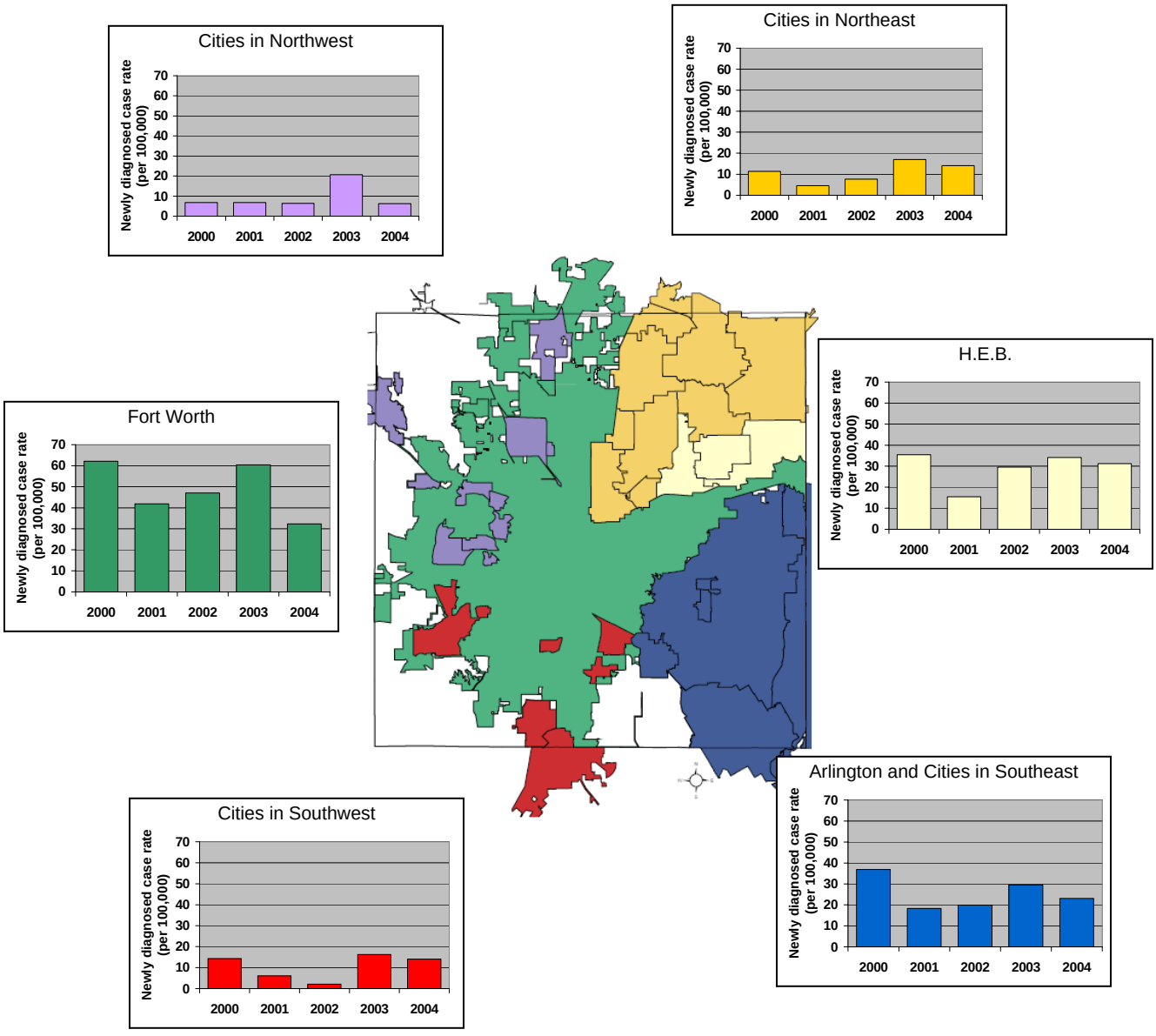


Figure 29. The Trends of HIV & AIDS in Major Cities in Tarrant County, 2000-2004



* The colors on the bar graphs correspond to the colors representing the different regions on the map.

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THE TARRANT COUNTY PUBLIC HEALTH DEPARTMENT DOES NOT GUARANTEE THE CORRECTNESS OR ACCURACY OF ANY FEATURES ON THIS MAP. TARRANT COUNTY ASSUMES NO RESPONSIBILITY IN CONNECTION THEREWITH.

Chlamydia

Chlamydia is a common sexually transmitted genital infection, caused by *Chlamydia trachomatis*. The overall trend in rate for newly-diagnosed chlamydia was stable at 265.3 cases/100,000 to 283.2 from 2000 through 2002, and then significantly increased to 302.3 cases/100,000 in 2003 followed by a slight increase in 2004 (Figure 30).

The majority of chlamydia cases were females and chlamydia rates in females were much higher, up to five times, than that of males. Chlamydia is asymptomatic in 70% of infected women. Women are usually diagnosed through screening tests when they present with other issues such as contraception, other STDs and well women exams. The chlamydia rate in males was stable through the five-year period; whereas the rate in females increased between 2002 and 2004.

The rate of newly-diagnosed chlamydia was highest in Blacks and showed an upward trend. Generally, an increasing trend was observed among all race/ethnicity groups (Figure 31).

The highest chlamydia infection rate occurred among the age group of 10-19, followed closely by the age group 20-34.

Table 13
Chlamydia
Rate per 100,000 (Number of Cases)

	2000	2001	2002	2003	2004
Total	283.2 (4,095)	271.7 (4,039)	265.3 (3,950)	302.3 (4,564)	306.3 (4,689)
Chlamydia by Gender Rate per 100,000					
Male	120.8	114.7	108.8	110.7	109.6
Female	441.1	425.2	418.0	490.3	500.0
Chlamydia by Race/Ethnicity Rate per 100,000					
White	66.2	165.5	73.1	81.6	117.4
Black	749.4	684.3	761.0	798.7	959.8
Hispanic	273.4	298.1	357.8	364.3	387.4
Other	54.2	38.8	67.0	61.6	126.4
Chlamydia by Age Rate per 100,000					
0 – 9	2.6	1.7	1.7	5.9	3.0
10 – 19	790.6	726.3	658.2	786.9	788.7
20 – 34	645.9	633.7	657.3	728.7	764.6
35 – 54	32.5	36.6	36.2	44.5	46.8
≥ 55	19.1	6.0	26.5	5.6	5.0

* Data Source: Adult Health Services, TCPH

Figure 30. The Frequency and Newly-Diagnosed Case Rate of Chlamydia in Tarrant County, 2000-2004

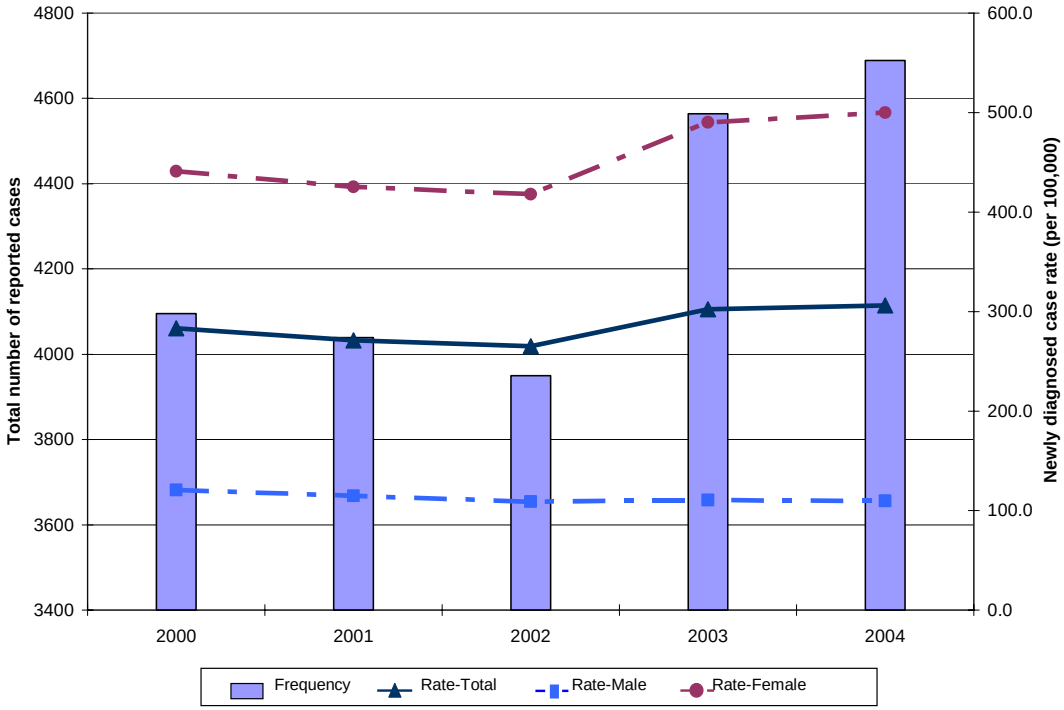
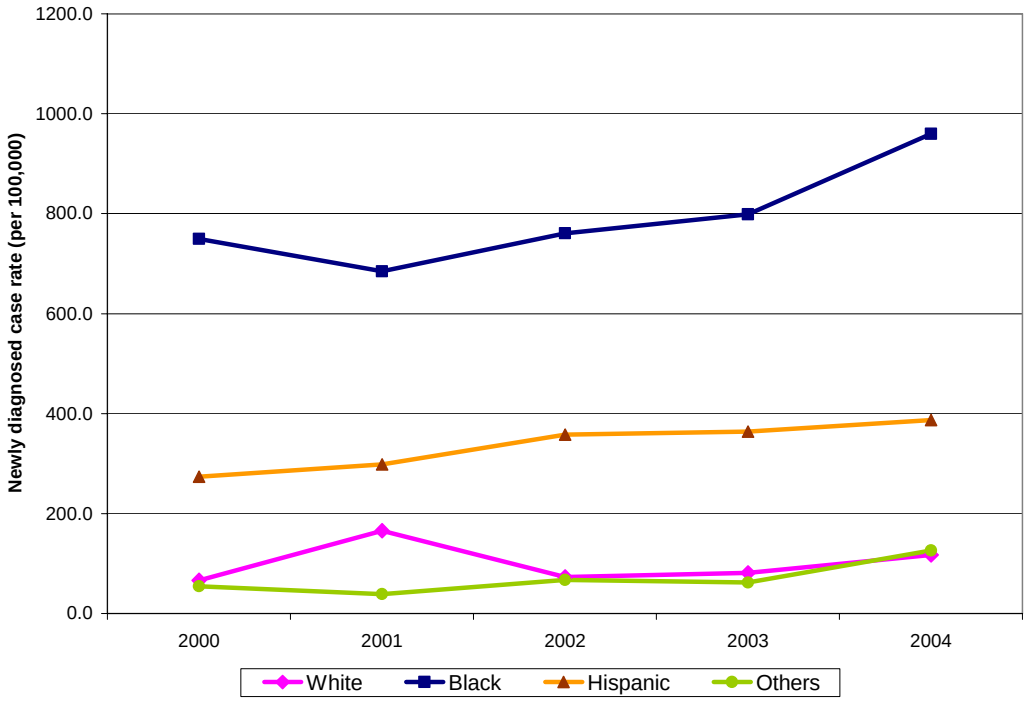


Figure 31. Newly-Diagnosed Case Rates of Chlamydia by Race/Ethnicity in Tarrant County, 2000-2004



Gonorrhea

Gonorrhea is a serious sexually transmitted disease caused by *Neisseria gonorrhoeae*. During the last five years, the rate of newly-diagnosed gonorrhea infections in Tarrant County decreased steadily from 187.7 cases/100,000 in 2000 to 132.1 in 2002, and then slightly increased to 146.4 in 2004.

The rate of gonorrhea was higher in males than in females in 2000, however the decrease in the rate from 2000 to 2002 was greater in males than in females, resulting in a higher infection rate for females since 2001 (Figure 32).

The gonorrhea incidence rate was markedly higher in Blacks compared to other race/ethnicity groups. The overall incidence rate from this group decreased significantly from 852.5 cases/100,000 in 2000 to 626.4 in 2002, but displayed an upward trend since 2002. An overall decrease in gonorrhea infection was observed in Hispanics during the period, whereas the rate in Whites remained stable (Figure 33).

Table 14
Gonorrhea
Rate per 100,000 (Number of Cases)

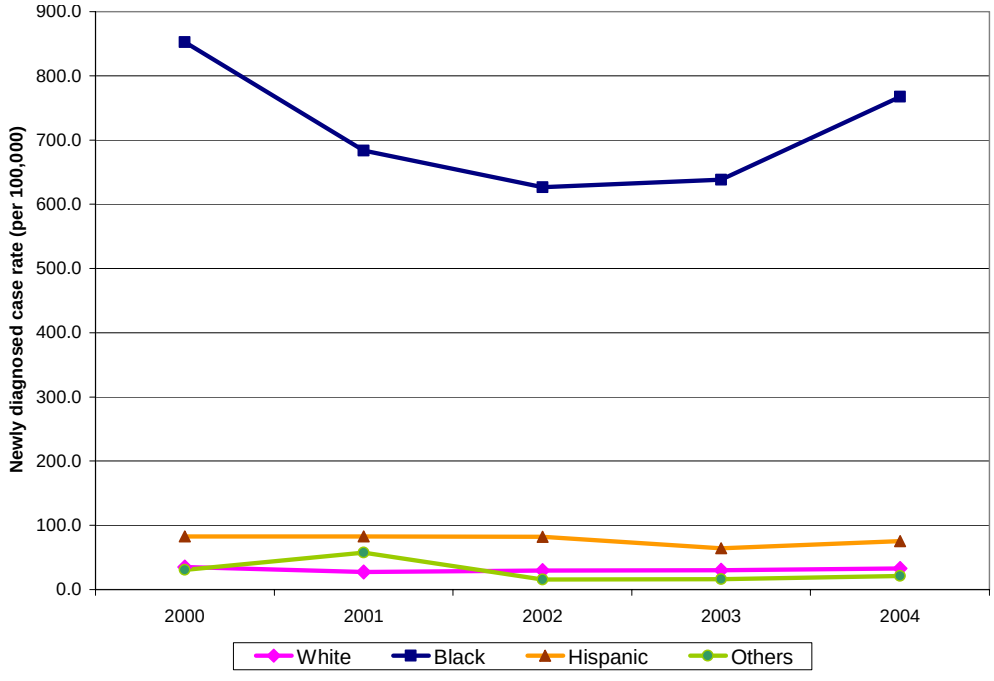
	2000	2001	2002	2003	2004
Total	187.7 (2,714)	151.1 (2,246)	132.1 (1,966)	137.6 (2.077)	146.4 (2,241)
Gonorrhea by Gender Rate per 100,000					
Male	192.7	150.1	127.6	136.2	142.4
Female	181.7	151.6	136.2	138.5	150.4
Gonorrhea by Race/Ethnicity Rate per 100,000					
White	32.5	27.4	29.7	30.3	32.9
Black	852.5	683.8	626.4	638.4	767.2
Hispanic	82.7	82.6	82.4	64.2	75.3
Other	31.0	57.5	15.7	16.4	21.1
Gonorrhea by Age Rate per 100,000					
0 – 9	2.2	3.4	3.0	@	@
10 – 19	391.4	338.1	285.3	315.0	309.4
20 – 34	421.0	343.2	311.0	313.3	357.5
35 – 54	91.8	60.7	50.2	56.4	58.1
≥ 55	15.1	6.0	13.3	6.0	9.6

@ indicates numerator too small for rate calculation.
* Data Source: Adult Health Services, TCPH

The majority of gonorrhea cases were in teenagers and young adults. The rate of the newly-diagnosed gonorrhea cases was the highest for the age group 20-34, followed by the age group 10-19. The yearly trends of the infection for these age groups were the same as in the total population.

Figure 32. The Frequency and Newly-Diagnosed Case Rate of Gonorrhea in Tarrant County, 2000-2004

Figure 33. Newly-Diagnosed Case Rates of Gonorrhea by Race/Ethnicity in Tarrant County, 2000-2004



Early Syphilis

Early syphilis, comprised of primary, secondary, and early latent syphilis is of special public health interest because the disease is treatable if detected in these stages.

The incidence rate of early syphilis remained stable at 6.5 cases /100,000 to 6.7 during 2000 and 2001, increasing significantly to 14.9 in 2002, then decreased constantly to 7.3 in 2004 (Figure 34).

Generally the trends of the infection in males and females were similar until 2003. In 2004, the rate in males was relatively constant from the previous year, but the rate in females decreased continuously (Figure 34).

The incidences of early syphilis were reported predominantly in Blacks; the rate for the group was 25.0 cases/100,000 in 2000, dramatically increased to 69.1 in 2003, and then decreased continuously to 30.1 in 2004. The incidence rate in Hispanics, which was consistently the second highest, showed a steady downward trend since 2002 and was the lowest among all groups in 2004 (Figure 35).

Table 15
Early Syphilis*
Rate per 100,000 (Number of Cases)

	2000	2001	2002	2003	2004
Total	6.7 (97)	6.5 (97)	14.9 (222)	10.3 (155)	7.3 (112)
Early Syphilis* by Gender Rate per 100,000					
Male	7.5	6.7	16.3	10.0	10.4
Female	5.9	6.4	13.6	10.5	4.3
Early Syphilis* by Race/Ethnicity Rate per 100,000					
White	3.2	2.7	5.3	3.2	4.3
Black	25.0	30.3	69.1	50.8	30.1
Hispanic	7.0	4.2	11.6	7.1	2.7
Other	1.5	0.0	4.3	@	3.9
Early Syphilis* by Age Rate per 100,000					
0 – 9	0.0	0.0	0.0	0.0	0.0
10 – 19	4.6	2.7	9.0	8.4	3.5
20 – 34	11.8	13.0	23.6	20.5	15.0
35 – 54	10.1	9.8	23.4	13.3	9.6
≥ 55	1.3	@	6.6	2.0	3.1

* Early syphilis includes primary, secondary, and early latent syphilis.

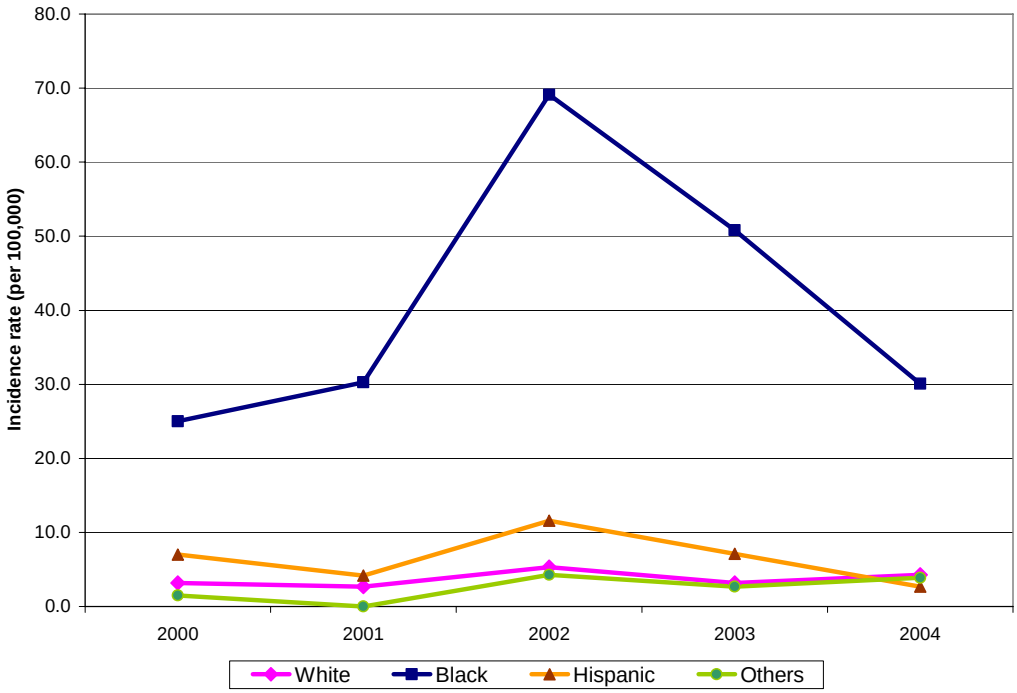
@ indicates numerator too small for rate calculation.

* Data Source: Adult Health Services, TCPH

Age distribution of early syphilis showed the highest rates among those age 20-34 followed by 35-54 during the five-year period.

Figure 34. The Frequency and Incidence Rate of Early Syphilis in Tarrant County, 2000-2004

Figure 35. The Incidence Rate of Early Syphilis by Race/Ethnicity in Tarrant County, 2000-2004



Pertussis

Pertussis, or "whooping cough" caused by a bacterium *Bordetella pertussis*, is a highly contagious disease involving the respiratory tract. Although it can occur at any age, young children are at greatest risk.

The overall incidence rate of pertussis showed an upward trend from 1.0 case/100,000 in 2000 to 6.3 in 2004. A sudden surge of the disease occurred in 2002 not only in children but also in adolescents and adults (Figure 36).

There was an overall increase in incidence rates for both genders and all race/ethnicity groups. An unusually high rate in Other races/ ethnicities in 2003 might be due to misclassification of ethnic groups. Unusually, during that year, no cases were reported in Hispanics.

Pertussis predominantly invaded young children under the age of 5, and the incidence rate in this group displayed a significant increase from 9.6 in 2000 to 41.9 in 2004. It is noteworthy to mention that the reported cases of pertussis in older children, adolescents, and adults were also increasing. This increase might be attributed to the decrease in vaccine protection over time (Figure 37).

Table 16
Pertussis
Rate per 100,000 (Number of Cases)

	2000	2001	2002	2003	2004
Total	1.0 (15)	1.4 (21)	4.1 (61)	5.0 (76)	6.3 (96)
Pertussis by Gender Rate per 100,000					
Male	1.3	1.2	3.4	6.1	6.2
Female	0.8	1.6	4.8	3.8	6.2
Pertussis by Race/Ethnicity Rate per 100,000					
White	0.7	0.7	3.6	3.5	5.5
Black	2.1	1.5	3.1	2.5	5.9
Hispanic	1.8	3.9	0.0	5.6	8.0
Other	0.0	0.0	25.6	@	6.6
Pertussis by Age Rate per 100,000					
0 – 4	9.6	16.1	18.5	39.8	41.9
5 – 9	0.0	0.0	2.6	4.4	20.8
10 – 14	3.6	0.0	4.3	4.3	9.3
15 – 19	0.0	0.0	@	2.8	5.5
20 – 34	0.0	0.0	1.2	0.9	@
35 – 54	0.0	@	1.8	2.4	@
≥ 55	0.0	0.0	@	@	@

@ indicates numerator too small for rate calculation.
* Data Source: Epidemiology and Health Information, TCPH

Figure 36. The Frequency and Incidence Rate of Pertussis
in Tarrant County, 2000-2004

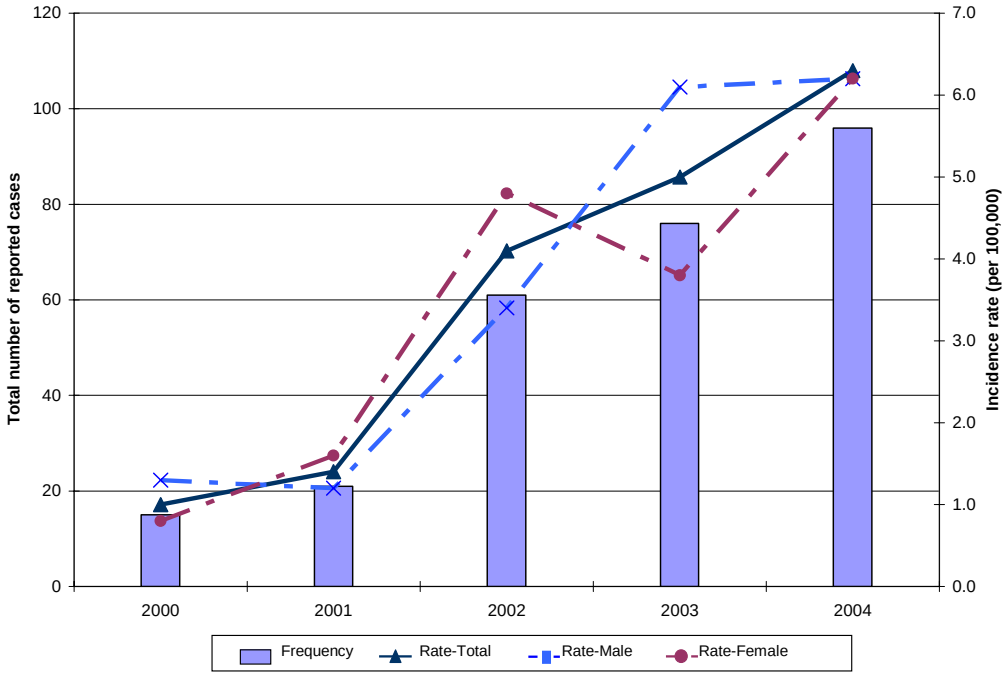
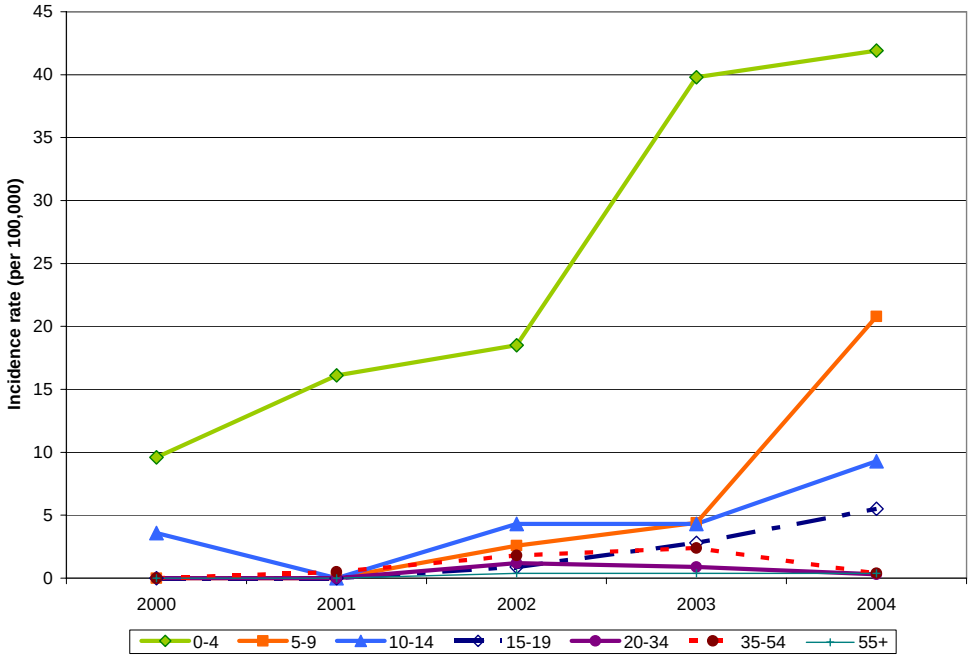


Figure 37. The Incidence Rate of Pertussis by Age
in Tarrant County, 2000-2004



Varicella

Varicella, commonly known as chickenpox, is a communicable disease caused by the varicella-zoster virus, resulting in a blister-like rash, itching, tiredness and fever. The incidence rate climbed from 3.3 cases/100,000 in 2000 and to 17.4 in 2001, decreased to 9.4 in 2002, and continually increased to the highest level of 27.8 in 2004 (Figure 38).

The incidences of the infection were distributed almost equally in males and females. The highest incidence rate of varicella was in Hispanics, reaching 42.7 cases/100,000 in 2004. The trends of the infection rates were similar for all race/ethnicity groups.

Regarding age, the incidence rate was highest in children age 5 to 9, and the rate in this group showed an upward trend (Figure 39). The reported cases of varicella in adolescents were increasing as well.

This increase may be attributed to the decrease in vaccine protection over time. A recent study reported that the effectiveness of varicella vaccine decreases significantly after one year, although it reduces severity and duration of most cases of breakthrough disease.

Table 17
Varicella
Rate per 100,000 (Number of Cases)

	2000	2001	2002	2003	2004
Total	3.3 (48)	17.4 (259)	9.4 (140)	23.6 (357)	27.8 (426)
Varicella by Gender Rate per 100,000					
Male	-	20.2	9.35	24.6	28.9
Female	-	14.7	9.46	22.2	25.0
Varicella by Race/Ethnicity Rate per 100,000					
White	-	13.1	8.6	19.6	22.3
Black	-	18.5	8.7	23.6	18.3
Hispanic	-	27.8	11.6	28.4	42.7
Other	-	25.9	5.7	@	26.3
Varicella by Age Rate per 100,000					
0 – 4	-	61.7	3.4	60.6	51.0
5 – 9	-	128.7	81.9	177.6	249.2
10 – 14	-	19.8	18.1	47.7	55.1
15 – 19	-	@	@	8.4	2.7
20 – 34	-	2.0	0.0	3.8	1.4
35 – 54	-	0.7	@	@	@
≥ 55	-	@	0.0	0.0	@

Demographic information for Varicella cases were reportable starting the year 2001 in Tarrant County.

@ indicates numerator too small for rate calculation.
* Data Source: Epidemiology and Health Information, TCPH

Figure 38. The Frequency and Incidence Rate of Varicella
in Tarrant County, 2000-2004

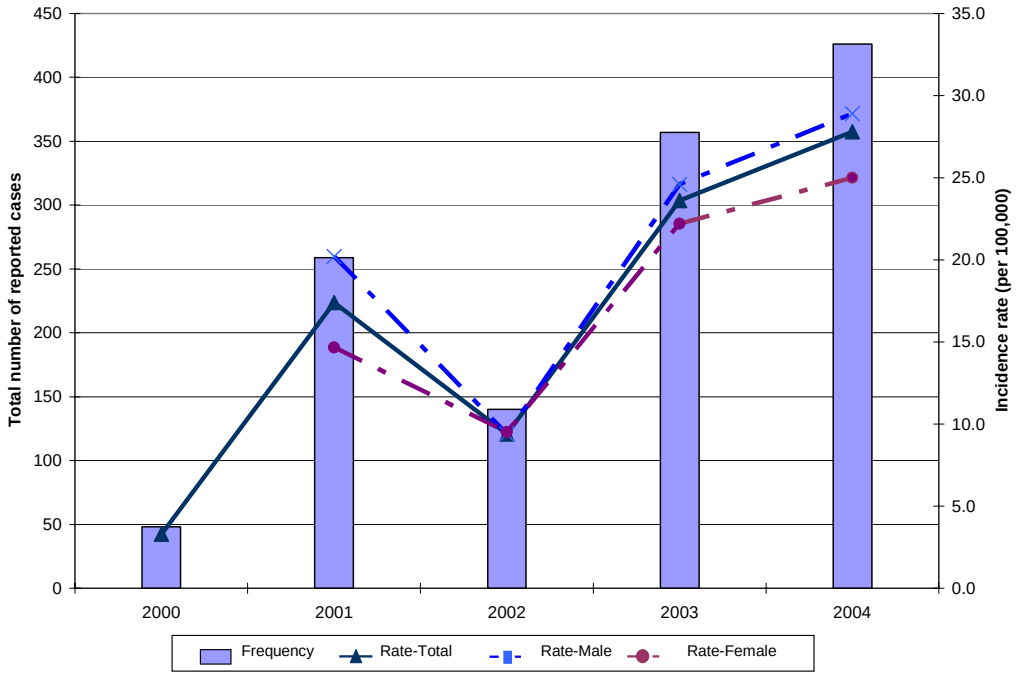
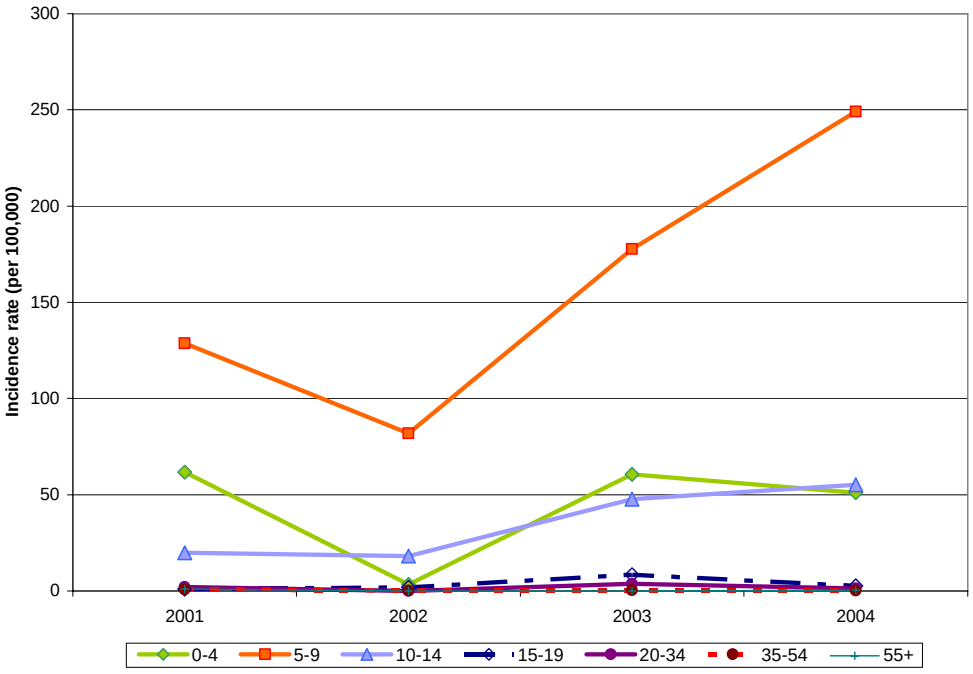


Figure 39. The Incidence Rate of Varicella by Age
in Tarrant County, 2000-2004



Meningitis, Viral

Viral meningitis is a relatively common but rarely fatal infection of the fluid in the spinal cord and the fluid that surrounds the brain. The total cases of viral meningitis reported in Tarrant County during 2000 and 2004 ranged between 170 in 2002 and 352 cases in 2004. A significant increase of the disease was noticed in 2003, reaching its peak incidence rate at 29.1 cases/100,000 (Figure 40).

The cases of viral meningitis infection were almost equally distributed in both genders, and the trends were similar (Figure 40). Regarding race/ethnicity, the highest incidence rates of the infection were among Hispanics and Blacks. There was a noticeable increase among all groups in 2003, and the infection rates in Blacks and Other races/ethnicities continuously climbed in 2004.

The disease is most prevalent in children, followed by adults age 20-34. Although it may not be significant, the recent upward trend in adults 35-54 and 55 and older was also noticed.

Table 18
Meningitis, Viral
Rate per 100,000 (Number of Cases)

	2000	2001	2002	2003	2004
Total	16.8 (243)	20.4 (304)	11.4 (170)	29.1 (440)	23.0 (352)
Viral Meningitis by Gender Rate per 100,000					
Male	16.3	21.4	13.0	29.5	22.4
Female	17.3	19.3	9.6	28.7	22.8
Viral Meningitis by Race/Ethnicity Rate per 100,000					
White	15.3	18.0	9.9	21.6	19.8
Black	17.0	26.2	11.8	22.6	37.5
Hispanic	20.0	23.8	15.5	31.8	19.9
Other	6.2	11.5	@	9.6	19.7
Viral Meningitis by Age Rate per 100,000					
0 – 9	48.2	67.3	24.0	82.8	61.6
10 – 19	14.3	15.2	7.6	18.7	14.9
20 – 34	16.5	17.3	8.7	33.3	22.2
35 – 54	8.1	8.5	6.5	14.8	14.6
≥ 55	4.4	5.6	3.3	8.4	10.0

@ indicates numerator too small for rate calculation.
* Data Source: Epidemiology and Health Information, TCPH

Figure 40. The Frequency and Incidence Rate of Viral Meningitis
in Tarrant County, 2000-2004

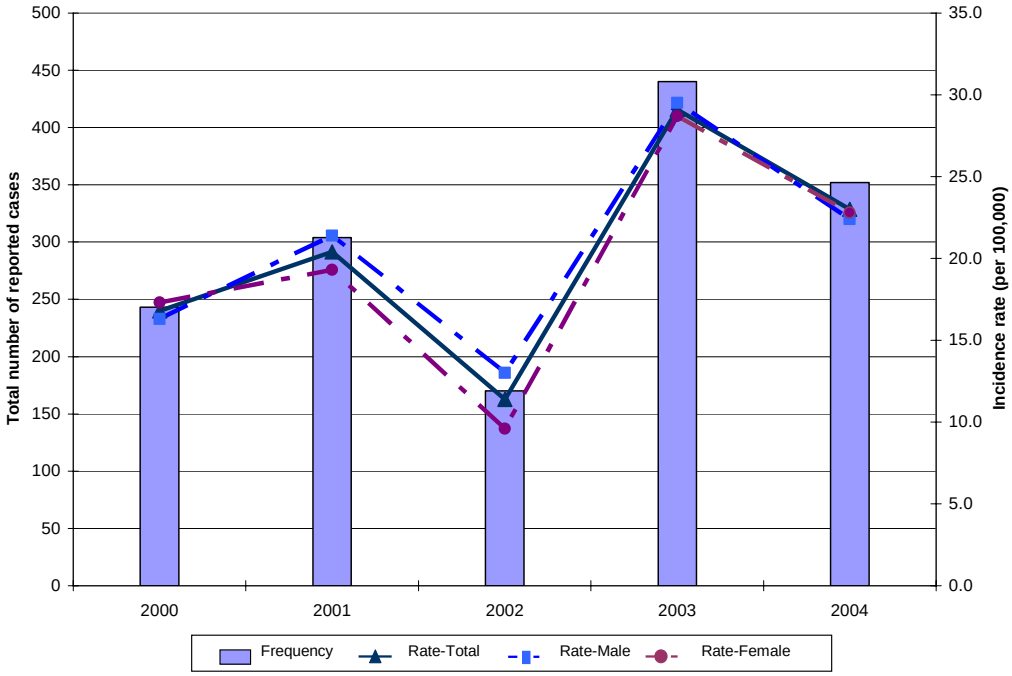
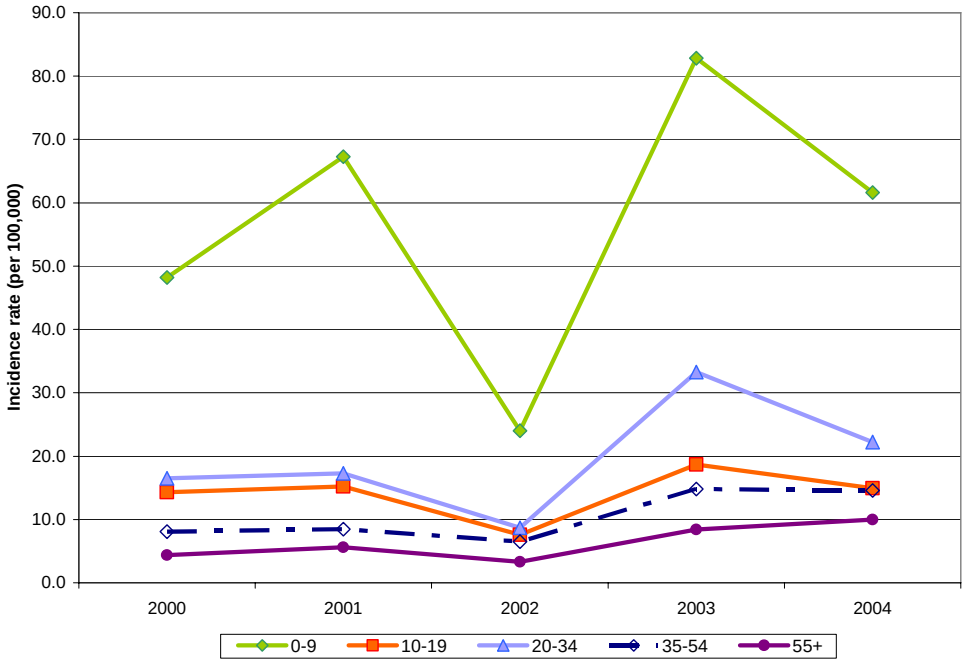


Figure 41. The Incidence Rate of Viral Meningitis by Age
in Tarrant County, 2000-2004



Hepatitis A

Acute hepatitis A is a viral liver disease caused by the Hepatitis A virus (HAV). The HAV infection can affect anybody and is transmitted from person to person by fecal-oral route.

Overall incidence rate of HAV infection showed a downward trend during the last five years, possibly due to wide administration of hepatitis A vaccine in the late 1990s. The incidence rate of HAV decreased by 73.4% from 9.4 cases/100,000 in 2000 to 2.5 in 2004, although there was an increase in 2003 (Figure 42).

In both genders the general trends of the infection were downward except for an increase in 2003. The incidence rate of HAV in females was higher than in males in 2000, but a significant decrease in females occurred in 2001 and 2002, resulting in a lower incidence rate for females. In 2004 the rate of infection in males was at its lowest during the five-year period at 2.0 cases/100,000.

Table 19
Acute Hepatitis A
Rate per 100,000 (Number of Cases)

	2000	2001	2002	2003	2004
Total	9.4 (136)	7.7 (115)	4.0 (60)	6.4 (96)	2.5 (39)
Hepatitis A by Gender Rate per 100,000					
Male	8.9	9.4	5.2	7.1	2.0
Female	9.9	6.1	2.5	5.4	3.0
Hepatitis A by Race/Ethnicity Rate per 100,000					
White	2.1	3.7	-	-	2.0
Black	3.7	22.1	-	-	@
Hispanic	22.4	8.8	-	-	3.0
Other	4.6	15.8	-	-	3.9
Hepatitis A by Age Rate per 100,000					
0 – 9	19.1	10.7	4.3	3.8	0.0
10 – 19	16.6	8.9	2.2	2.7	4.8
20 – 34	7.7	10.1	5.0	4.3	2.6
35 – 54	4.6	5.6	4.2	6.6	1.3
≥ 55	4.0	3.9	3.7	14.3	4.6

Hepatitis A race/ethnicity data 2002-2003 is not included in the table due to its unreliability.

@ indicates numerator too small for rate calculation.
* Data Source: Epidemiology and Health Information, TCPH

Among children and adolescents the infection rate has been decreasing. There was a substantial number of HAV cases reported in adults 55 years and older in 2003 (Figure 43).

Figure 42. The Frequency and Incidence Rate of Acute Hepatitis A in Tarrant County, 2000-2004

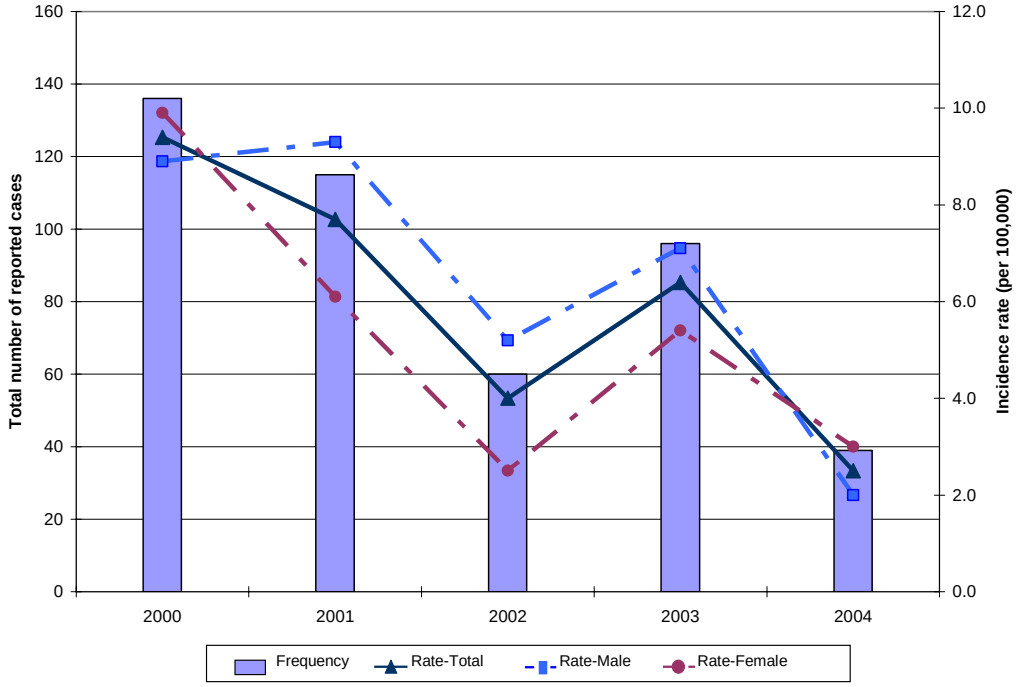
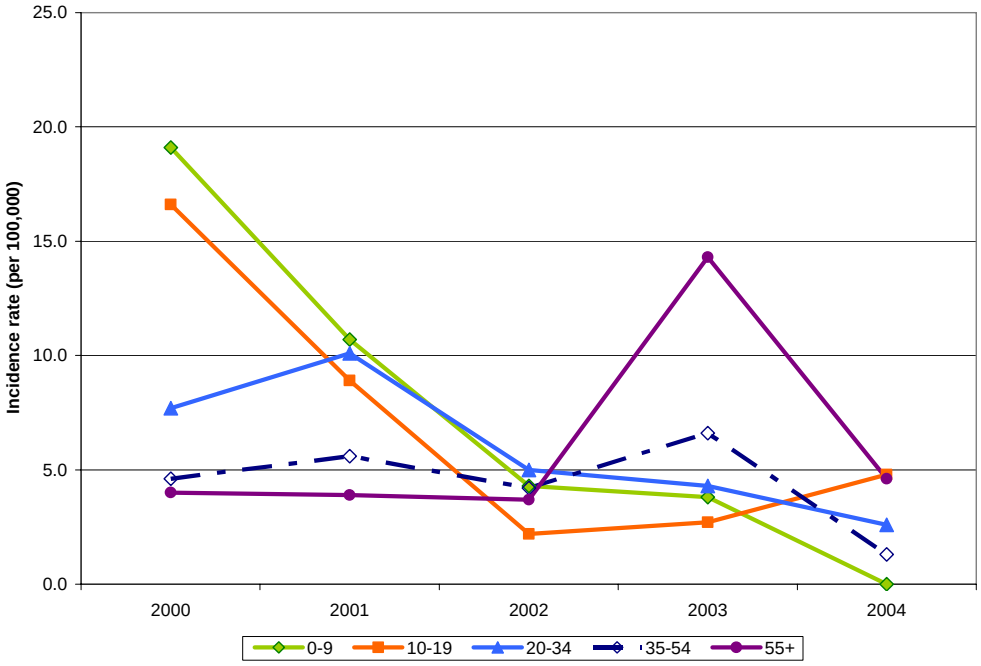


Figure 43. The Incidence Rate of Acute Hepatitis A by Age in Tarrant County, 2000-2004



Hepatitis B

Acute hepatitis B is a serious liver infection caused by the hepatitis B virus (HBV), and it is transmitted by blood and body fluids contact. HBV infection can be either acute or chronic; only acute illness is a reportable condition in Texas.

During the last five years, the incidence rate of acute HBV infection ranged from 1.8 cases/100,000 to 7.9. After a decrease from 4.5 in 2000 to 2.3 in 2001, the acute hepatitis B infection rate increased sharply to 7.9 in 2003, and then constantly declined to 1.8 in 2004. There was no major difference in the trends of the infection between gender groups (Figure 44).

Table 20
Acute Hepatitis B
Rate per 100,000 (Number of Cases)

	2000	2001	2002	2003	2004
Total	4.5 (65)	2.3 (34)	7.9 (118)	5.6 (84)	1.8 (28)
Acute Hepatitis B by Gender Rate per 100,000					
Male	5.2	3.1	6.8	5.7	2.0
Female	3.8	1.5	8.9	5.4	1.7
Acute Hepatitis B by Age Rate per 100,000					
0 - 9	@	0.0	0.0	0.0	0.0
10 – 19	3.7	@	0.9	@	0.0
20 - 34	6.8	3.5	9.6	7.8	2.9
35 - 54	5.3	3.8	13.6	9.1	2.0
≥ 55	3.5	1.3	7.9	6.0	3.1

Acute Hepatitis B race/ethnicity data is not included in the table due to its unreliability.

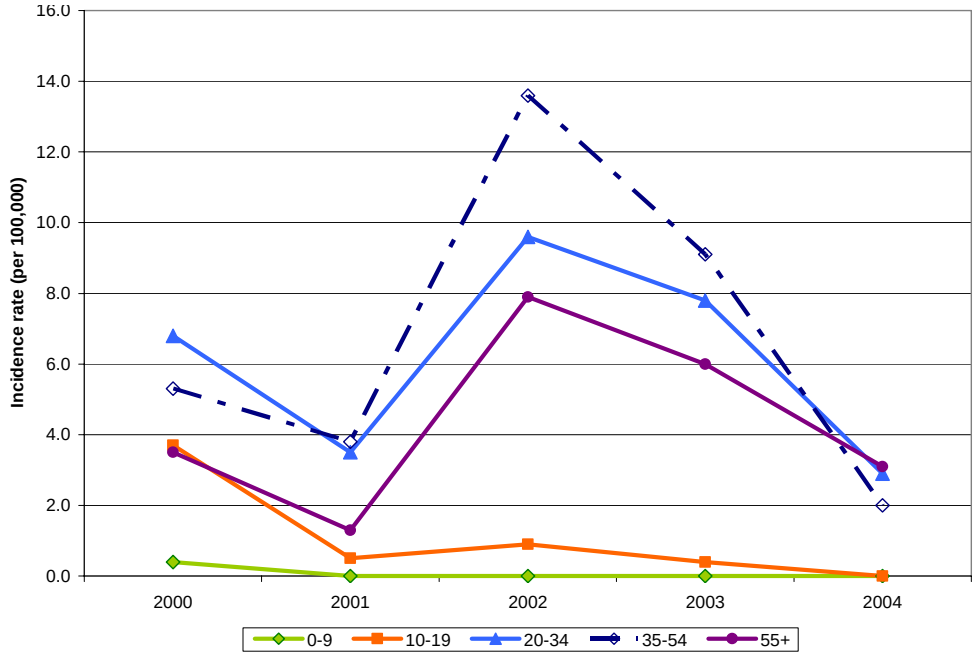
@ indicates numerator too small for rate calculation.
* Data Source: Infectious Disease Control Unit, TX DSHS

The incidence rates among different race/ethnicity groups were not included in this report because of its unreliability due to a large proportion of incomplete reporting from laboratories.

The acute HBV cases were reported predominately among unvaccinated adults (Figure 45). Hepatitis B vaccination in children and adolescents has become routine.

Figure 44. The Frequency and Incidence Rate of Acute Hepatitis B in Tarrant County, 2000-2004

Figure 45. The Incidence Rate of Acute Hepatitis B by Age in Tarrant County, 2000-2004



Hepatitis C

Hepatitis C virus (HCV) infection, the most common blood-borne viral illness, is transmitted through contact with the blood of an infected person. HCV became reportable in Texas Jan. 1, 2005. Most reported cases are chronic because a majority of cases in the early stages are asymptomatic and only discovered through screening for other reasons.

The overall incidence rate of acute HCV fluctuates each year. After a decrease from 2.0 cases/100,000 in 2000 to 0.7 in 2001, the infection reached the peak rate of 2.8 in 2002, and then substantially decreased to 0.2 in 2003 (Figure 46). Trends for the genders followed the pattern of the total population; higher incidence rates were observed in males except for in 2003 (Figure 46). The highest incidence rate occurred in adults 40-59 during 2000 and 2002 (Figure 48).

Chronic HCV rates increased gradually from 2001 through 2003, peaking at 156.7 cases/ 100,000 and then substantially decreasing to 69.4 in 2004. Overall trends of the infection for the gender groups followed the population, although the incidence in males was higher than in females (Figure 47). Adults 40-49 years had the highest rate, followed by 50-59 years (Figure 49).

Table 21
Acute Hepatitis C
Rate per 100,000 (Number of Cases)

	2000	2001	2002	2003	2004
Total	2.0 (29)	0.7 (11)	2.8 (41)	0.2 (3)	0.8 (12)
Acute Hepatitis C by Gender Rate per 100,000					
Male	2.5	1.0	3.5	@	1.1
Female	1.5	0.5	2.0	@	0.5
Acute Hepatitis C by Age Rate per 100,000					
0 - 9	0.0	@	0.0	0.0	0.0
10 - 19	0.0	0.0	0.0	@	0.0
20 - 39	1.7	0.8	4.7	@	1.5
40 - 59	5.2	1.3	4.8	0.0	0.7
≥ 60	@	@	0.0	0.0	@

Table 22
Chronic Hepatitis C
Rate per 100,000 (Number of Cases)

	2000	2001	2002	2003	2004
Total	93.0 (1345)	65.7 (977)	108.4 (1614)	156.7 (2366)	69.4 (1062)
Chronic Hepatitis C by Gender Rate per 100,000					
Male	110.5	76.8	123.0	161.9	77.4
Female	71.2	52.7	91.7	121.2	58.4
Chronic Hepatitis C by Age Rate per 100,000					
0 - 9	2.6	5.5	8.1	6.7	2.1
10 - 19	9.2	7.6	6.3	8.3	4.8
20 - 29	36.0	26.8	46.2	80.1	33.5
30 - 39	136.1	76.6	124.1	182.2	80.8
40 - 49	269.5	185.2	303.9	419.7	181.8
50 - 59	132.6	110.1	212.5	317.7	140.4
≥ 60	69.3	58.4	70.4	97.2	48.2

Hepatitis C race/ethnicity data is not included in the table due to its unreliability.

@ indicates numerator too small for rate calculation
* Data Source: Infectious Disease Control Unit, TX DSHS

Figure 46. The Frequency and Incidence Rate of Acute Hepatitis C in Tarrant County, 2000-2004

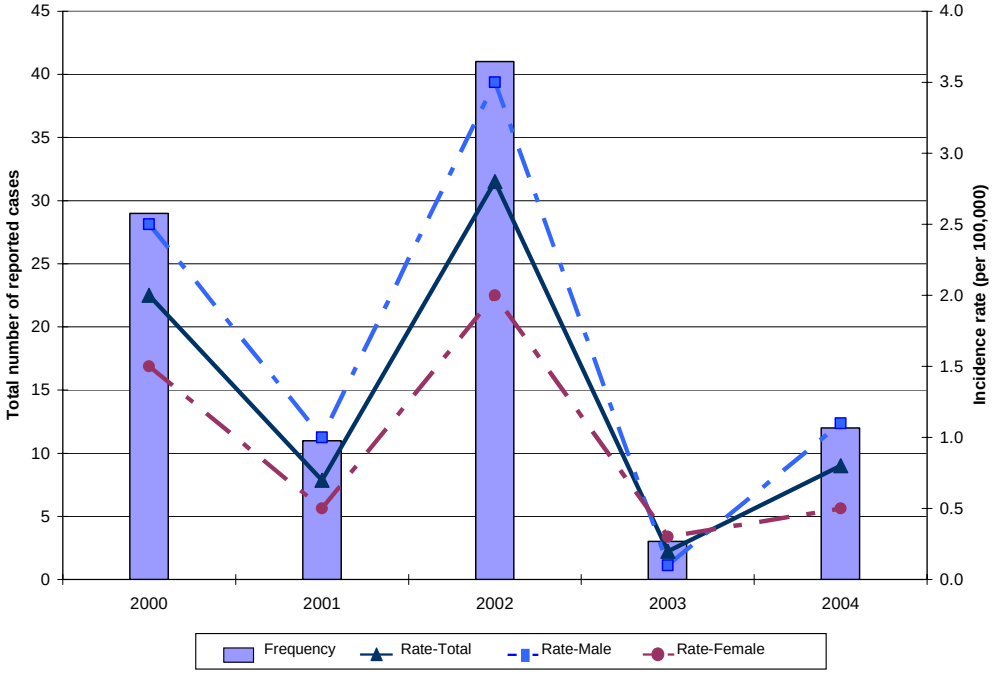


Figure 47. The Frequency and Incidence Rate of Chronic Hepatitis C in Tarrant County, 2000-2004

Figure 48. The Incidence Rate of Acute Hepatitis C by Age in Tarrant County, 2000-2004

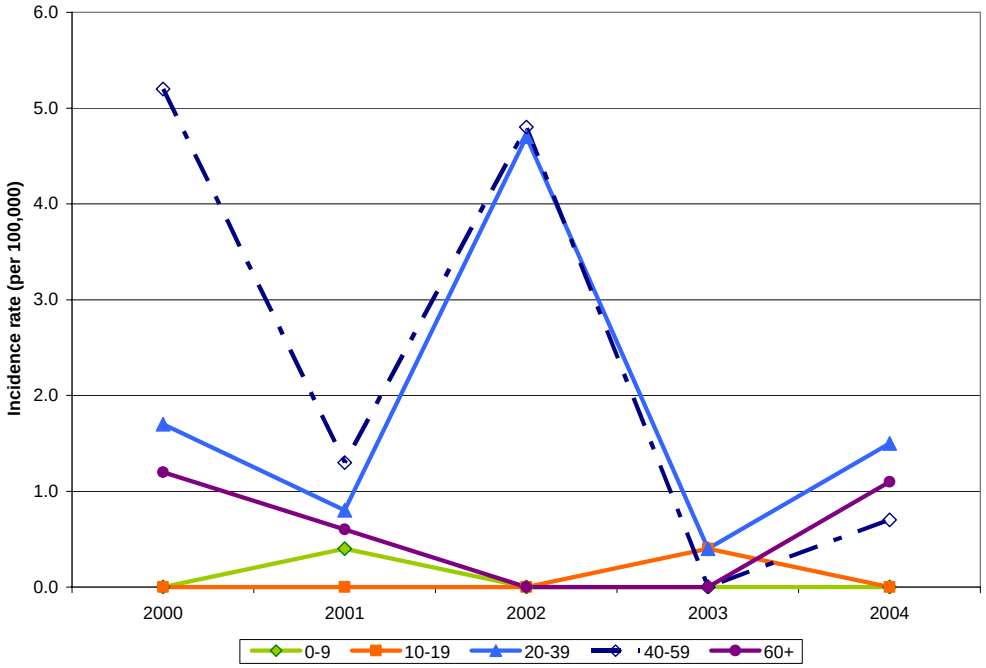
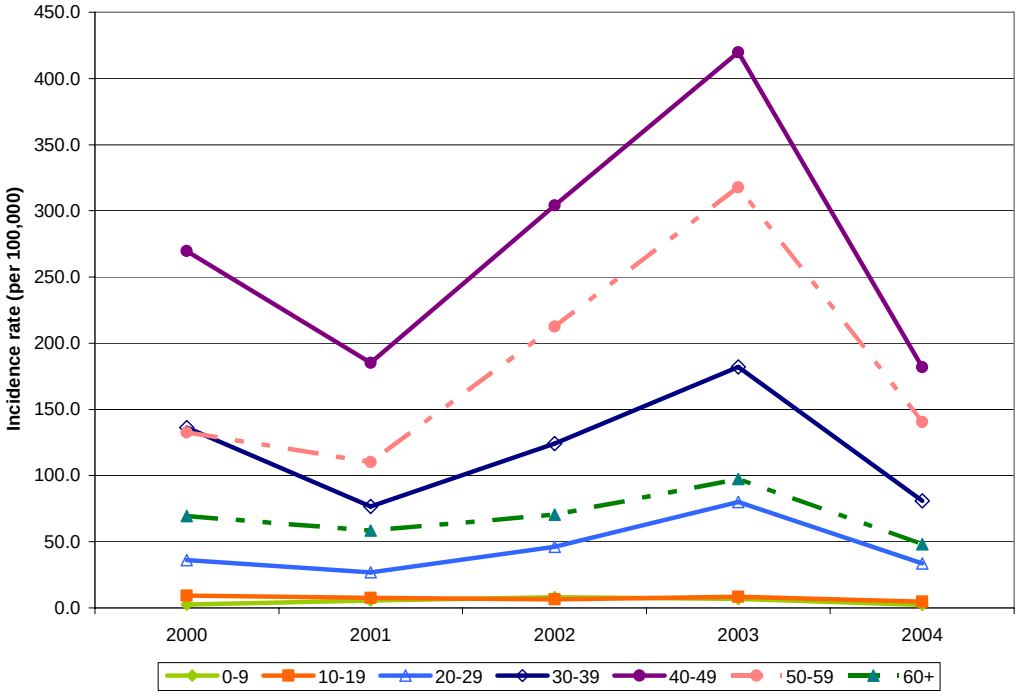


Figure 49. The Incidence Rate of Chronic Hepatitis C by Age in Tarrant County, 2000-2004



West Nile Virus

Table 23 West Nile Virus Number of Cases			
Sample Type	**2002**	**2003**	**2004**
Bird	5	17	0
Human WNF[1]	0	0	0
Human WNND[2]	5	22	5
Mosquito	3	120	20
Horse	46	19	0
Other	5	22	5
Total	59	178	25

1. WNF = West Nile Fever
2. WNND = West Nile Neuroinvasive Disease

* Data Source: Zoonosis Control Division, TX DSHS

W

West Nile virus, transmitted by mosquitos, can cause a seasonal epidemic illness in the summer and early fall. The symptoms of West Nile infection can be mild to severe; mild, flu-like illness is often called West Nile fever (WNF), and more severe forms of disease are West Nile Neuroinvasive Disease (WNND), such as encephalitis or meningitis. West Nile virus first appeared in Texas in 2002, and became a reportable condition ever since.

Five human WNNDs were reported in 2002, substantially increasing to 22 cases in 2003, and declining to five cases in 2004. There was no confirmed human WNF cases in Tarrant County during the last three years. Some of the decline of the West Nile virus activity can be attributed to an aggressive mosquito control program throughout the county and greater public awareness. All West Nile samples submitted to the North Texas Regional Laboratory at TCPH are also screened for the more serious St. Louis Encephalitis (SLE). No suspected cases of SLE have been found from this screening between 2002 and 2004.

Data Sources

Population

U. S. Census 2000

Texas Department of State Health Services (http://soupfin.tdh.state.tx.us/people.htm)

North Central Texas Council of Governments (http://www.nctcog.org/ris/population/index.html)

Reported Diseases

Tarrant County Public Health
- Epidemiology and Health Information
- TB Controls
- Adult Health Services

Texas Department of State Health Services
- Environmental & Injury Epidemiology and Toxicology
- Infectious Disease Control
- Zoonosis Control

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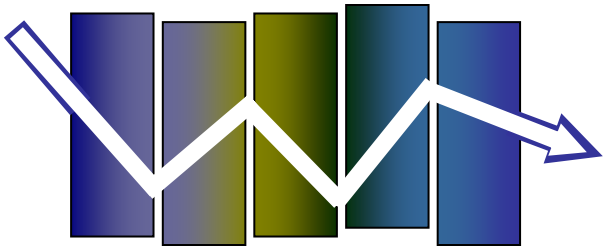

REPORTABLE DISEASES TRENDS
2000-2004

Tarrant County Public Health

For More Information:

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1101 S. Main Street, Fort Worth, TX 76104
(817) 321-5350
http://health.tarrantcounty.com