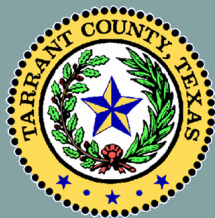


Communicable Diseases Tarrant County 2016

Pertussis
Syphilis
Campylobacter **Streptococcus Pneumoniae**
Chlamydia **Gonorrhea**
Shigella **Human Immunodeficiency Virus**
Chickenpox **Salmonella**
Group B Streptococcus



**TARRANT COUNTY
PUBLIC HEALTH**

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Communicable Diseases Tarrant County, 2016



Tarrant County Public Health

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Suggested Citation

Communicable Diseases, Tarrant County, 2016. Tarrant County Public Health, September 2017

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Reportable Diseases in Tarrant County

Several Texas laws (Health & Safety Code, chapter 81, 84, and 87) require specific information regarding notifiable conditions to be provided to the local health department. Tarrant County Public Health is the designated health department for reporting notifiable conditions in the county. **Health care providers, hospitals, laboratories, schools, and others are required to report patients who are suspected of having a notifiable condition** (chapter 97, Title 25, Texas Administrative Code).

All notifiable conditions in Tarrant County, as well as Texas, for 2016 are listed in Table 1. In addition to these, any outbreak, exotic diseases, and unusual group expressions of disease must be reported. All diseases must be reported by **name, age, gender, race/ethnicity, date of birth, address, telephone number, disease, date of onset, method of diagnosis, and name, address, and telephone number of physician.**

Background Information for Statistical Summaries

The frequency and incidence rate of communicable diseases are presented overall, by gender, by race/ethnicity, by age group, and by ZIP code. Incidence rates are calculated as follows:

- Numerator – 2016 incidence of disease in Tarrant County
- Denominator – 2016 Tarrant County population at risk (2011-2015 five-year population estimates used for rates by ZIP code)
- Rate – per 100,000 population

Incidence rate is an essential and valuable public health measure. However, rates based on numbers less than 20 cases are not recommended for reliable comparison because such rates fluctuate dramatically and differ considerably, even when differences are not meaningful. Therefore rates for less than 20 cases are not provided in this report. Also, conditions with less than five cases are not presented to protect confidentiality. Even when a specific demographic category has more than five cases, the number may be suppressed in order to prevent inadvertent disclosure through subtraction.

Notifiable Conditions

Table 1. Notifiable conditions, Tarrant County, 2016

A – I	Cases	I – Y	Cases
Acquired immune deficiency syndrome (AIDS)	34	Influenza-associated pediatric mortality	0
Amebiasis	7	Influenza, Novel	0
Amebic meningitis and encephalitis	0	Legionellosis	20
Anaplasmosis	0	Leishmaniasis	0
Anthrax	0	Listeriosis	<5
Arbovirus infection		Lyme disease	5
Chikungunya virus	<5	Malaria	24
West Nile Virus (fever/neuroinvasive)	15/29	Measles (rubeola)	0
Zika virus*	29	Meningococcal infections, invasive (Neisseria meningitidis)	<5
Other arbovirus*	<5	Multidrug-resistant Acinetobacter (MDR-A)†	70
Ascariasis	0	Mumps	16
Babesiosis	0	Paragonimiasis	0
Botulism (adult and infant)	0	Pertussis	337
Brucellosis	<5	Plague (Yersinia pestis)	0
Campylobacteriosis	207	Poliomyelitis, acute paralytic	0
Carbapenem resistant Enterobacteriaceae (CRE)†	23	Poliovirus infection, non-paralytic	0
Chagas disease	0	Prion disease such as Creutzfeldt-Jakob disease (CJD)	<5
Chancroid	0	Q fever	0
Chickenpox (varicella)	121	Rabies, human	0
<i>Chlamydia trachomatis</i> infection	8,655	Rubella (including congenital)	0
Coronavirus, novel	0	Salmonellosis, including typhoid fever	337
Cryptosporidiosis	45	Shiga toxin-producing <i>Escherichia coli</i>	55
Cyclosporiasis	10	Shigellosis	301
Cysticercosis	0	Smallpox	0
Diphtheria	0	Spotted fever group rickettsioses	<5
Echinococcosis	0	Staphylococcus aureus, VISA and VRSA†	0
Ehrlichiosis	<5	Streptococcal disease (group A, B; <i>S. pneumo</i>), invasive	321
Fascioliasis	0	Syphilis – primary and secondary stages	125
Gonorrhea	2,937	Syphilis – all other stages	379
<i>Haemophilus influenzae</i> , invasive	17	<i>Taenia solium</i> and undifferentiated <i>Taenia</i> infection	0
Hansen’s disease (leprosy)	0	Tetanus	0
Hantavirus infection	0	Trichinosis	0
Hemolytic uremic syndrome (HUS)	<5	Trichuriasis	0
Hepatitis A	<5	Tuberculosis	62
Hepatitis B (acute)	9	Tularemia	0
Hepatitis B, perinatal	0	Typhoid fever (salmonella typhi)	<5
Hepatitis B, prenatal or at delivery	0	Typhus	6
Hepatitis C (acute)	<5	Vibrio infection, including cholera	5
Hepatitis E (acute)	0	Viral hemorrhagic fever, including Ebola	0
Hookworm (ancylostomiasis)	0	Yellow fever	0
Human immunodeficiency virus (HIV), acute infection	248	Yersiniosis	<5
RED indicates immediately reportable conditions; BLUE indicates reportable within one working day; all others are reportable within one week			
<p><i>Note: This table represents communicable conditions that were reportable in 2016; Less than five cases not shown to protect confidentiality</i></p> <p><i>*All Zika cases were travel-related; **Other arboviral infections include neuroinvasive and non-neuroinvasive California serogroup including Cache Valley, Eastern Equine (EEE), Dengue, Powassan, St. Louis Encephalitis, and Western Equine (WEE)</i></p> <p><i>† 2016 MDRO data is provisional at the time of this report</i></p> <p><i>Data source: Tarrant County Public Health</i></p>			

Communicable Diseases in Tarrant County

Table 2. Leading communicable diseases overall and by gender, Tarrant County, 2016

Rank	Overall n (rate)	Female n (rate)	Male n (rate)
1	Chlamydia 8,655 (433.6)	Chlamydia 6,009 (591.7)	Chlamydia 2,646 (269.8)
2	Gonorrhea 2,937 (147.1)	Gonorrhea 1,267 (124.8)	Gonorrhea 1,670 (170.3)
3	Syphilis (All Stages) 504 (25.2)	Pertussis 187 (18.4)	Syphilis (All Stages) 413 (42.1)
4	Salmonellosis/Pertussis 337 (16.9)	Salmonellosis 172 (16.9)	HIV 209 (21.3)
5	Shigellosis 301 (15.1)	Shigellosis 164 (16.1)	Salmonellosis 164 (16.7)
6	HIV 248 (12.4)	Campylobacteriosis 98 (9.6)	Pertussis 150 (15.3)
7	Campylobacteriosis 207 (10.4)	Syphilis (All Stages) 91 (9.0)	Shigellosis 137 (14.0)
8	<i>S. pneumoniae</i> , inv 156 (7.8)	<i>S. pneumoniae</i> , inv 87 (8.6)	Campylobacteriosis 109 (11.1)
9	Group B Strep 131 (6.6)	Varicella (Chickenpox) 62 (6.1)	Group B Strep 73 (7.4)
10	Varicella (Chickenpox) 121 (6.1)	Group B Strep 57 (5.6)	<i>S. pneumoniae</i> , inv 69 (7.0)

n = number of cases; rate per 100,000 population

Data source: Tarrant County Public Health

Table 3. Leading communicable diseases by race/ethnicity, Tarrant County, 2016[†]

Rank	Hispanic n (rate)	Non-Hispanic Black n (rate)	Non-Hispanic White n (rate)	Other/Multiracial n (rate)
1	Chlamydia 1,069 (175.2)	Chlamydia 2,149 (699.7)	Chlamydia 1,186 (129.2)	Chlamydia 347 (215.8)
2	Gonorrhea 264 (43.3)	Gonorrhea 1,143 (372.1)	Gonorrhea 485 (52.8)	Gonorrhea 96 (59.7)
3	Syphilis (All Stages) 129 (21.1)	Syphilis (All Stages) 230 (74.9)	Pertussis 181 (19.7)	Salmonellosis 19 (@)
4	Shigellosis 116 (19.0)	HIV 136 (44.3)	Salmonellosis 179 (19.5)	Syphilis (All Stages) 18 (@)
5	Pertussis 115 (18.8)	Shigellosis 67 (21.8)	Syphilis (All Stages) 126 (13.7)	Tuberculosis 15 (@)
6	Salmonellosis 75 (12.3)	<i>S. pneumoniae</i> , inv 36 (11.7)	Campylobacteriosis 103 (11.2)	HIV 13 (@)
7	Campylobacteriosis 70 (11.5)	Salmonellosis 31 (10.1)	Shigellosis 101 (11.0)	Pertussis 12 (@)
8	HIV 52 (8.5)	Group B Strep 25 (8.1)	<i>S. pneumoniae</i> , inv 76 (8.3)	Varicella (Chickenpox) 11 (@)
9	Varicella (Chickenpox) 32 (5.2)	Pertussis 24 (7.8)	Group B Strep 60 (6.5)	Campylobac/Shigellosis 6 (@)
10	Group B Strep --- (4.8)	Campylobacteriosis 21 (6.8)	HIV 46 (5.0)	---

n = number of cases; rate per 100,000 population; @ = rate unstable for less than 20 cases

[†]Rankings for race/ethnicity should be interpreted with caution due to missing data: Race/ethnicity data are missing for 45% of chlamydia cases, 32% of gonorrhea cases, 16% of varicella cases, and 14% of *S. pneumoniae*, invasive cases

Selected case counts not reported to protect confidentiality and prevent inadvertent disclosure

Data source: Tarrant County Public Health

Table 4. Leading communicable diseases by age group, Tarrant County, 2016

Rank	0 to 14 n (rate)	15 to 24 n (rate)	25 to 44 n (rate)	45 to 64 n (rate)	65+ n (rate)
1	Pertussis 229 (51.2)	Chlamydia 5,517 (1882.6)	Chlamydia 2,899 (511.9)	Chlamydia 192 (39.5)	<i>S. pneumoniae</i> , inv 56 (27.4)
2	Shigellosis 223 (49.9)	Gonorrhea 1,577 (538.1)	Gonorrhea 1,184 (209.1)	Gonorrhea 156 (32.1)	Grp B Strep/Salmonell 42 (20.5)
3	Salmonellosis 167 (37.4)	Syphilis (All Stages) 159 (54.3)	Syphilis (All Stages) 258 (45.6)	Syphilis (All Stages) 77 (15.9)	MDR-Acinetobacter [†] 31 (15.2)
4	Varicella (Chickenpox) 83 (18.6)	HIV 74 (25.3)	HIV 132 (23.3)	<i>S. pneumoniae</i> , inv 56 (11.5)	Campylobacteriosis 25 (12.2)
5	Campylobacteriosis 78 (17.5)	Pertussis 62 (21.2)	Salmonellosis 58 (10.2)	Salmonellosis 49 (10.1)	Group A Strep 12 (@)
6	Chlamydia 41 (9.2)	Salmonellosis 21 (7.2)	Campylobacteriosis 44 (7.8)	Group B Strep 48 (9.9)	CR-Enter [†] /WNNND 11 (@)
7	<i>E.coli</i> , STEC/ <i>S.pneumoniae</i> 24 (5.4)	Campylobacteriosis 13 (@)	Shigellosis 41 (7.2)	Campylobacteriosis 47 (9.7)	Cryptosporidiosis / TB 10 (@)
8	Group B Strep 23 (5.1)	Shigellosis 10 (@)	Pertussis 27 (4.8)	HIV --- (8.0)	<i>E. coli</i> , STEC 9 (@)
9	Gonorrhea 15 (@)	Varicella (Chickenpox) 9 (@)	AIDS / TB 21 (3.7)	MDR-Acinetobacter [†] 32 (6.6)	Shigellosis 7 (@)
10	Cryptosporidiosis 11 (@)	<i>E. coli</i> , STEC 7 (@)	Varicella (Chickenpox) 18 (@)	Shigellosis 20 (4.1)	Chlamydia 6 (@)

n = number of cases; rate per 100,000 population; @ = rate unstable for less than 20 cases

Selected case counts not reported to protect confidentiality and prevent inadvertent disclosure

E. coli STEC - Shiga toxin-producing *Escherichia coli*; MDR = Multidrug-Resistant; CR = Carbapenum-Resistant; WNNND = West Nile Neuroinvasive Disease

[†] 2016 MDRO data is provisional at the time of this report

Data source: Tarrant County Public Health

Disease Specific Information and Definitions

Following are disease specific information, statistical summary tables, and ZIP code maps for the 10 leading communicable diseases overall for Tarrant County in 2016. Information pertaining to causative agent, signs and symptoms, modes of transmission, incubation period and period of communicability was obtained from the Centers for Disease Control and Prevention (www.cdc.gov). Definitions are as follows:

- **Causative Agent:** bacteria, virus, parasite, fungus or prion which can cause disease state
- **Signs/Symptoms:** physical manifestations which may result from infection with a causative agent
- **Mode(s) of Transmission:** mechanisms by which the causative agent spreads among human populations
- **Incubation Period:** time interval from infection with a causative agent until the demonstration of signs or symptoms
- **Period of Communicability:** time period during which a causative agent may be transmitted directly or indirectly from a person to another person

1. Chlamydia

- **Causative Agent:** (bacterial) *Chlamydia trachomatis*
- **Signs/Symptoms:** Men - discharge, urethral itching, burning urination; 1-25% of infected men do not exhibit symptoms. Women - discharge with swelling; up to 70% of infected women do not exhibit symptoms. Infants born to infected women may develop eye or pneumonic infections. Complications for both men and women include infertility and for women, increased risk of HIV infection.
- **Mode(s) of Transmission:** Perinatally or sexually transmitted infection
- **Incubation Period:** 7-14 days or longer
- **Period of Communicability:** Infected individuals are assumed to be infectious

SUMMARY: CHLAMYDIA				5-Year Trend (2012-2016)			
Number of cases	8,655						
Incidence rate (per 100,000 population)	433.6						
Change from 5-year average incidence	- 1.1%						
Gender	Number	(Percent)	Rate	Age (in years)			
Female	6,009	(69.4)	591.7	Mean	24		
Male	2,646	(30.6)	269.8	Median	22		
Unknown	0			Min-Max	0-77		
Race/Ethnicity	Number	(Percent)	Rate	Age Group	Number	(Percent)	Rate
Hispanic	1,069	(22.5)	175.2	0-14	41	(0.5)	9.2
Non-Hispanic Black	2,149	(45.2)	699.7	15-24	5,517	(63.7)	1,882.6
Non-Hispanic White	1,186	(25.0)	129.2	25-44	2,899	(33.5)	511.9
Other/Multiracial	347	(7.3)	215.8	45-64	192	(2.2)	39.5
Unknown	3,904			65+	6	(0.1)	@

@ = rate unstable for less than 20 cases

Bold = highest incidence rate in each demographic category

Data source: Tarrant County Public Health

Figure 1. Chlamydia cases by month, Tarrant County, 2016

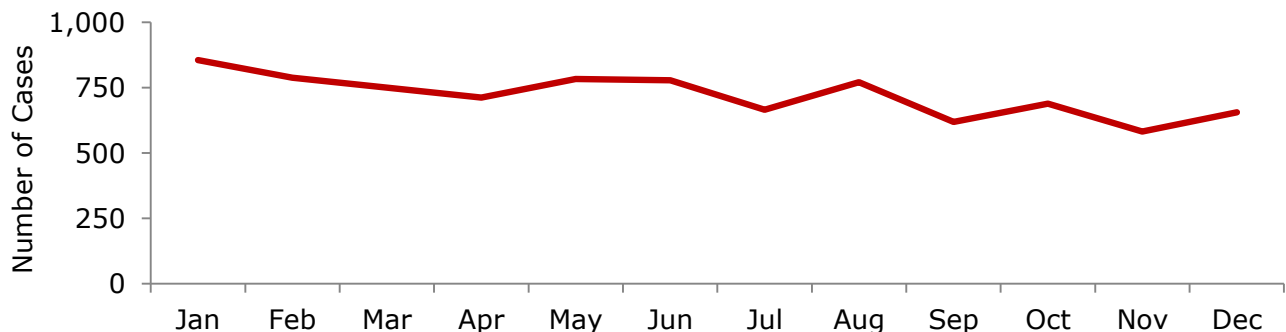
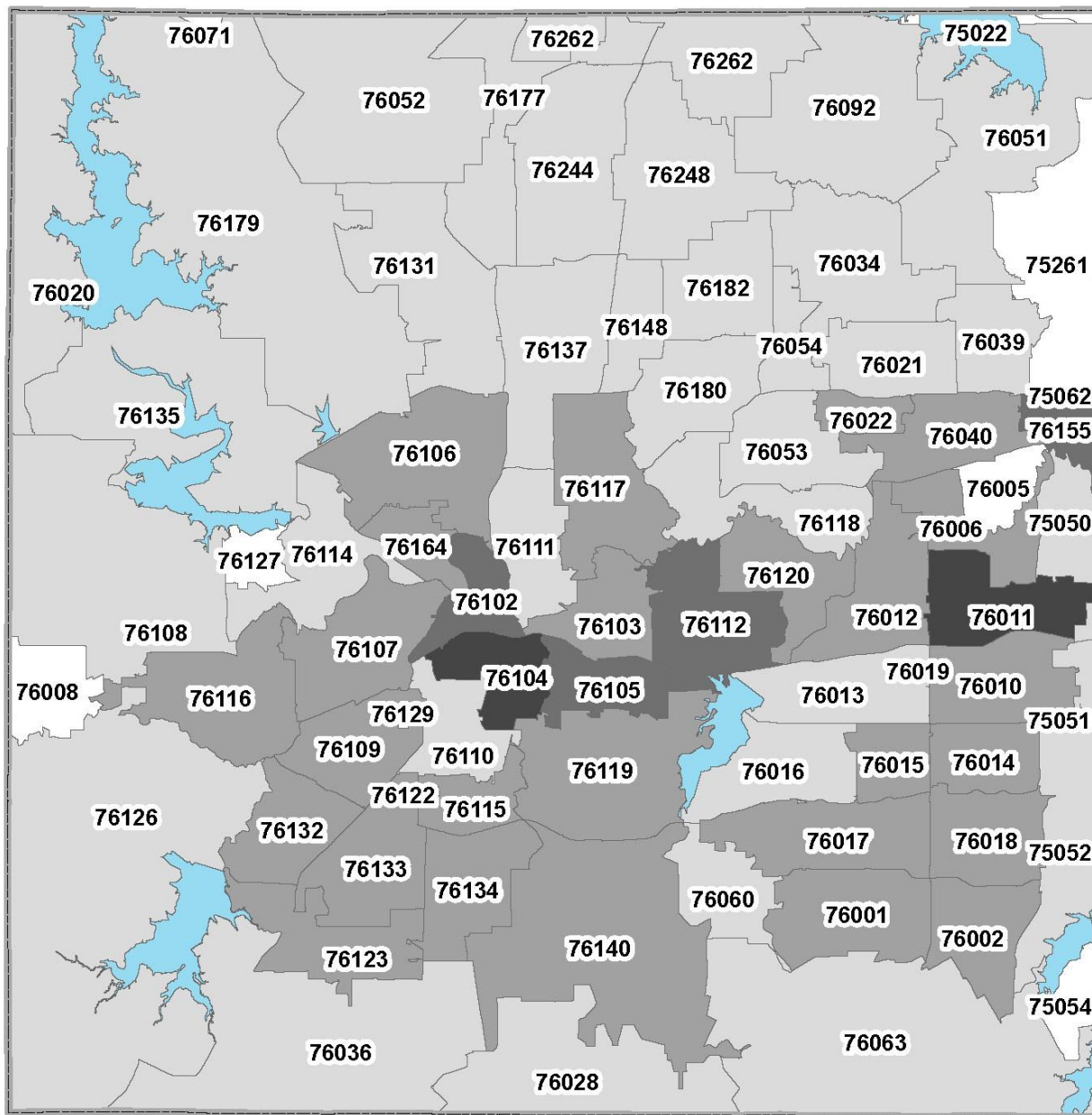


Figure 2. Geographic distribution of chlamydia by ZIP code, Tarrant County, 2016



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Rate per 100,000 population

- 11.7 - 417.6
- 417.7 - 735.9
- 736.0 - 1,005.3
- 1,005.4 - 2,187.8
- No or Excluded Data
- County Boundary



2. Gonorrhea

- **Causative Agent:** (bacterial) *Neisseria gonorrhoeae*
- **Signs/Symptoms:** Men - discharge, urethral itching, burning urination; very few of infected men do not exhibit symptoms. Women - discharge and vaginal bleeding after intercourse; most women do not exhibit symptoms. Infants born to infected women may develop eye infections.
- **Mode(s) of Transmission:** Perinatally or sexually transmitted infection
- **Incubation Period:** 1-14 days or longer
- **Period of Communicability:** Infected individuals are assumed to be infectious

SUMMARY: GONORRHEA				5-Year Trend (2012-2016)			
Number of cases			2,937				
Incidence rate (per 100,000 population)			147.1				
Change from 5-year average incidence			+ 13.4				
Gender	Number	(Percent)	Rate	Age (in years)			
Female	1,267	(43.1)	124.8	Mean	26		
Male	1,670	(56.9)	170.3	Median	24		
Unknown	0			Min-Max	9-70		
Race/Ethnicity	Number	(Percent)	Rate	Age Group	Number	(Percent)	Rate
Hispanic	264	(13.3)	43.3	0-14	15	(0.5)	@
Non-Hispanic Black	1,143	(57.5)	372.1	15-24	1,577	(53.7)	538.1
Non-Hispanic White	485	(24.4)	52.8	25-44	1,184	(40.3)	209.1
Other/Multiracial	96	(4.8)	59.7	45-64	156	(5.3)	32.1
Unknown	949			65+	5	(0.2)	@

@ = rate unstable for less than 20 cases

Bold = highest incidence rate in each demographic category

Data source: Tarrant County Public Health

Figure 3. Gonorrhea cases by month, Tarrant County, 2016

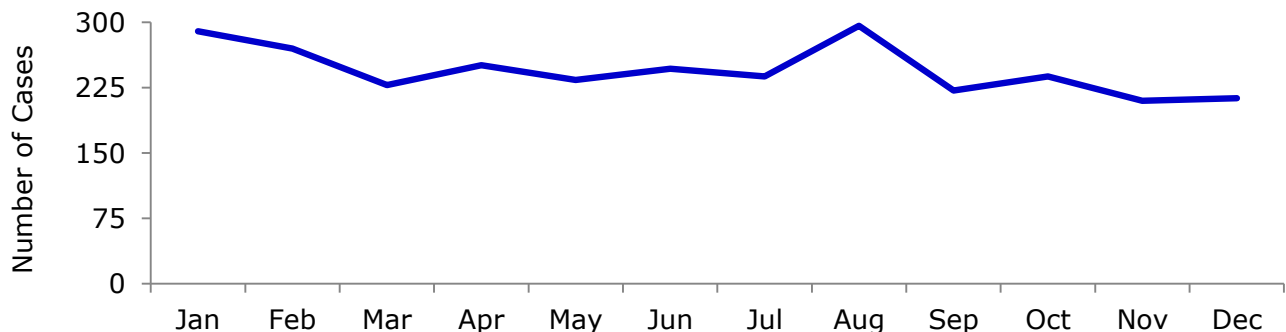
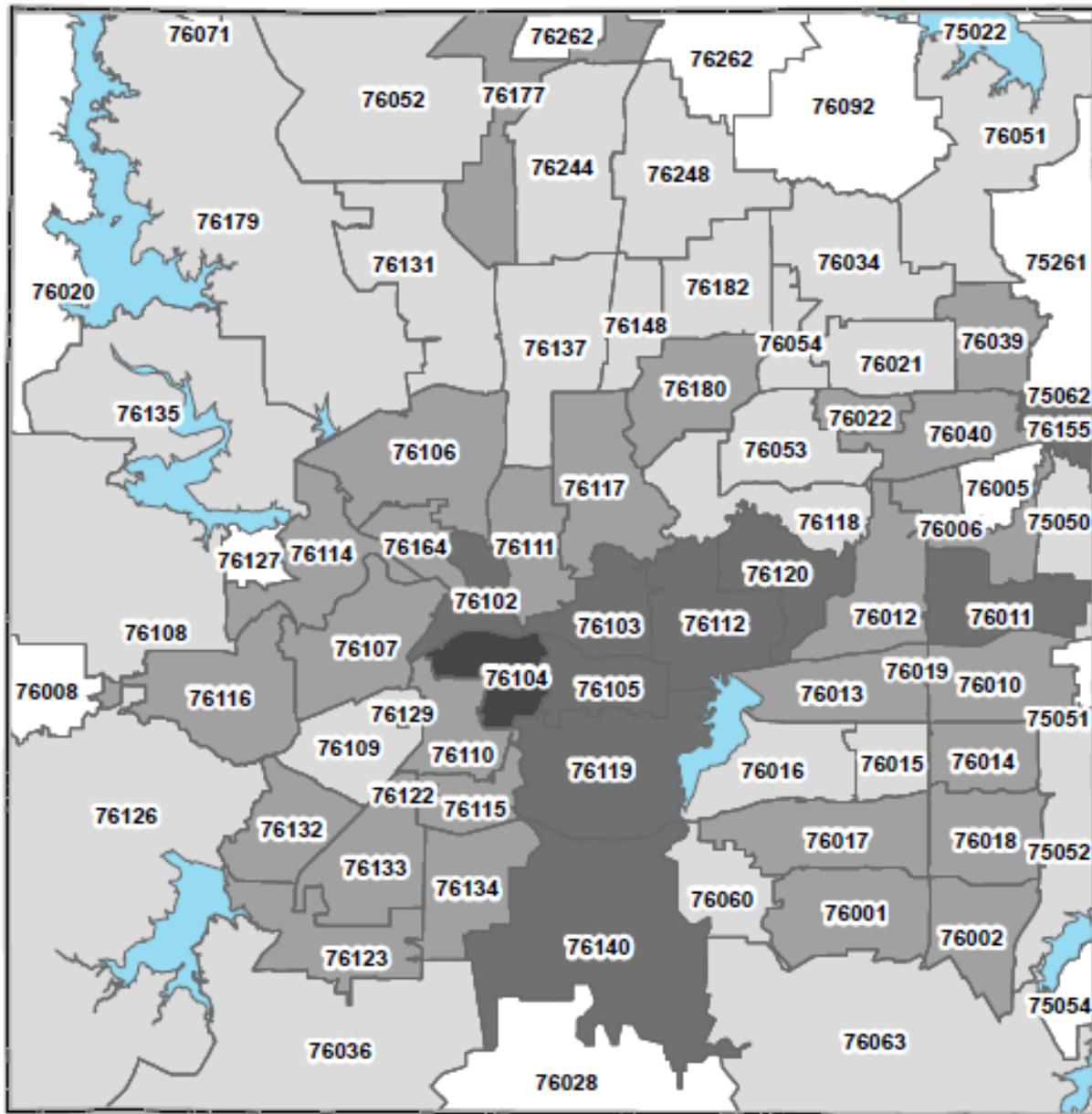
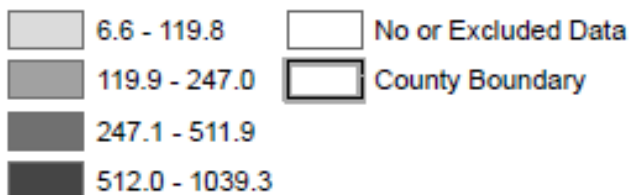


Figure 4. Geographic distribution of gonorrhea by ZIP code, Tarrant County, 2016



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Rate per 100,000



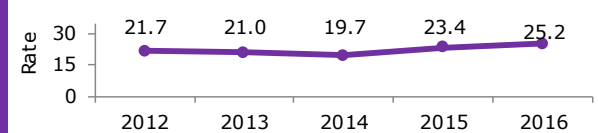
3. Syphilis

- **Causative Agent:** (bacterial) *Treponema pallidum*
- **Signs/Symptoms:** Primary lesion which may or may not be visible appearing approximately 3 weeks after infection (primary syphilis) followed by a secondary disease phase lasting 2 weeks to 12 months characterized by a rash on the palms of the hands and soles of the feet (secondary syphilis). Untreated individuals will proceed to a tertiary phase (late syphilis) which may involve reoccurring lesions, central nervous system disease, and meningitis. Infants born to infected women (congenital syphilis) may die due to preterm birth and/ or low birthweight.
- **Mode(s) of Transmission:** Perinatally, sexually, or blood transmitted infection
- **Incubation Period:** 10 days to 3 months, usually 3 weeks
- **Period of Communicability:** Period involving lesions, typically within the first year of infection

SUMMARY: SYPHILIS (ALL STAGES)

Number of cases	504
Incidence rate (per 100,000 population)	25.2
Change from 5-year average incidence	+ 13.5

5-Year Trend (2012-2016)



Gender	Number	(Percent)	Rate	Age (in years)		
Female	91	(18.1)	9.0	Mean	32	
Male	413	(81.9)	42.1	Median	28	
Unknown	0			Min-Max	0-76	

Race/Ethnicity	Number	(Percent)	Rate	Age Group	Number	(Percent)	Rate
Hispanic	129	(25.6)	21.1	0-14	-	(-)	@
Non-Hispanic Black	230	(45.7)	74.9	15-24	159	(31.5)	54.3
Non-Hispanic White	126	(25.0)	13.7	25-44	258	(51.2)	45.6
Other/Multiracial	18	(3.6)	@	45-64	77	(15.3)	15.9
Unknown	1			65+	-	(-)	@

Select cases not reported to protect confidentiality and prevent inadvertent disclosure; @ = rate unstable for less than 20 cases

Bold = highest incidence rate in each demographic category

Data source: Tarrant County Public Health

Figure 5. Syphilis cases (all stages) by month, Tarrant County, 2016

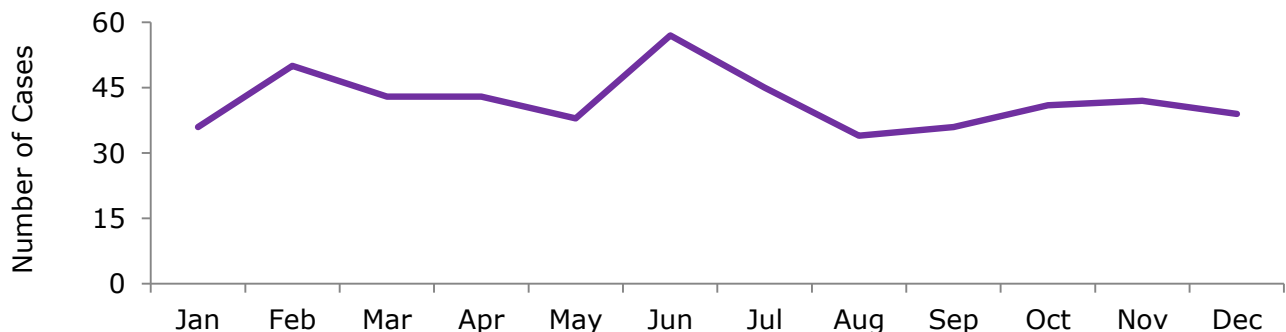
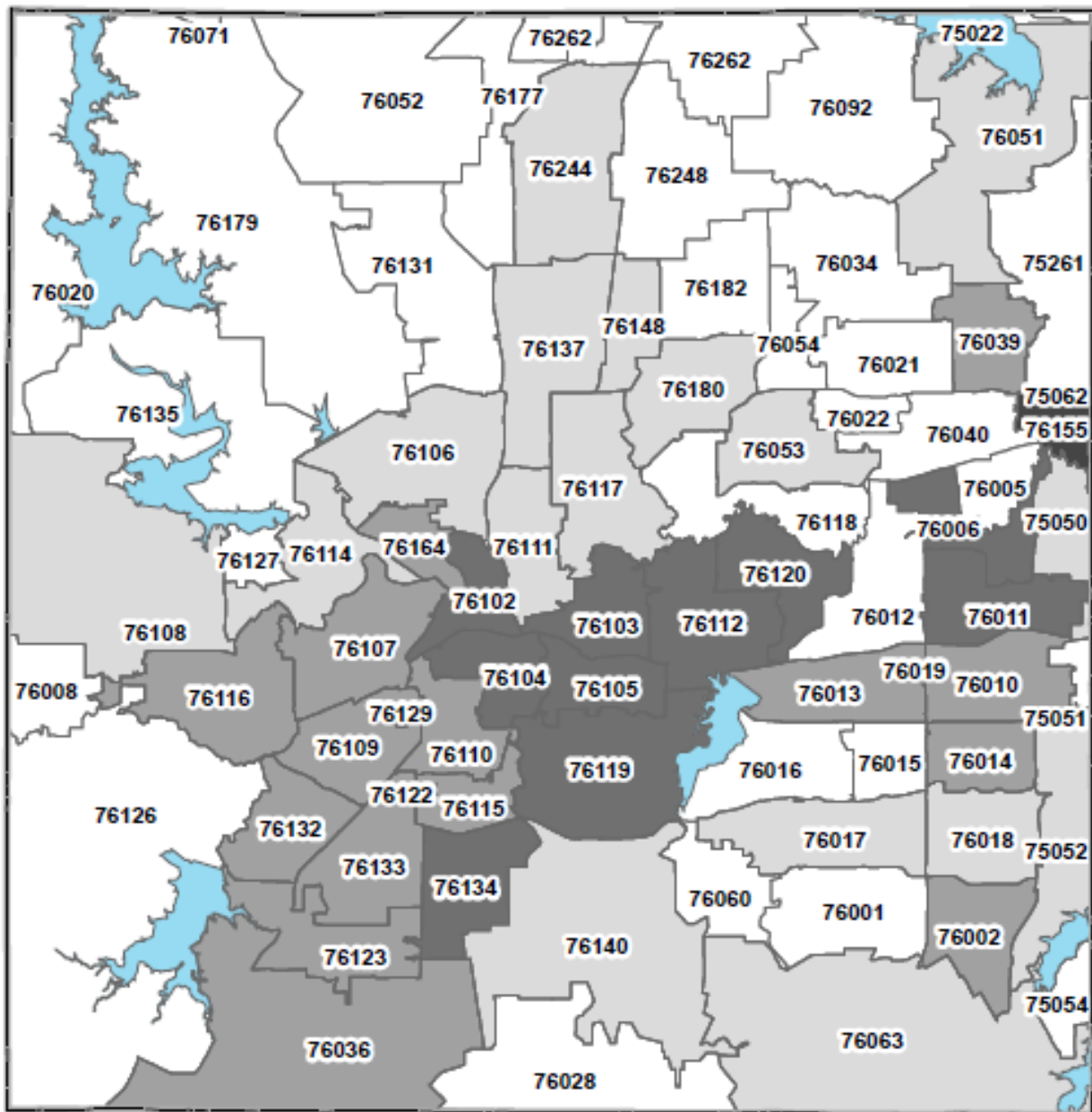


Figure 6. Geographic distribution of syphilis (all stages) by ZIP code, Tarrant County, 2016



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Rate per 100,000

- 8.6 - 24.0
- 24.1 - 46.0
- 46.1 - 96.0
- 96.1 - 170.6
- No or Excluded Data
- County Boundary



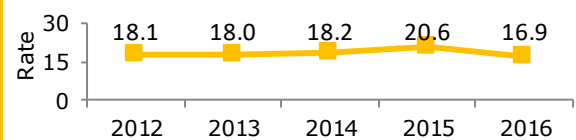
4. Salmonellosis

- **Causative Agent:** (bacterial) *Salmonella* species
- **Signs/Symptoms:** Fever, headache, abdominal pain, diarrhea, possibly vomiting. Some people do not present with any symptoms.
- **Mode(s) of Transmission:** Ingestion of the bacteria in food derived from infected animals or contaminated by feces of an infected animal or person.
- **Incubation Period:** 6 hours to 5 days, usually 1-2 days
- **Period of Communicability:** While signs/symptoms are present; those infected may carry and transmit the bacteria for weeks up to a year after becoming infected.

SUMMARY: SALMONELLOSIS

5-Year Trend (2012-2016)

Number of cases	337
Incidence rate (per 100,000 population)	16.9
Change from 5-year average incidence	- 10.2



Gender	Number	(Percent)	Rate	Age (in years)		
Female	172	(51.0)	16.9	Mean	25	
Male	164	(48.7)	16.7	Median	15	
Unknown	1			Min-Max	0-88	

Race/Ethnicity	Number	(Percent)	Rate	Age Group	Number	(Percent)	Rate
Hispanic	75	(22.3)	12.3	0-14	167	(49.6)	37.4
Non-Hispanic Black	31	(9.2)	10.1	15-24	21	(6.2)	7.2
Non-Hispanic White	179	(53.1)	19.5	25-44	58	(17.2)	10.2
Other/Multiracial	19	(5.6)	@	45-64	49	(14.5)	10.1
Unknown	33			65+	42	(12.5)	20.5

@ = rate unstable for less than 20 cases

Bold = highest incidence rate in each demographic category

Data source: Tarrant County Public Health

Figure 7. Salmonellosis cases by month, Tarrant County, 2016

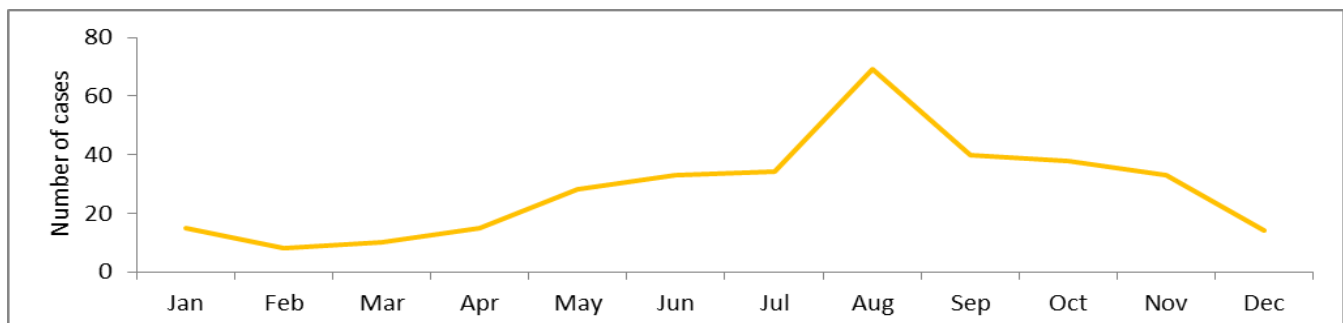
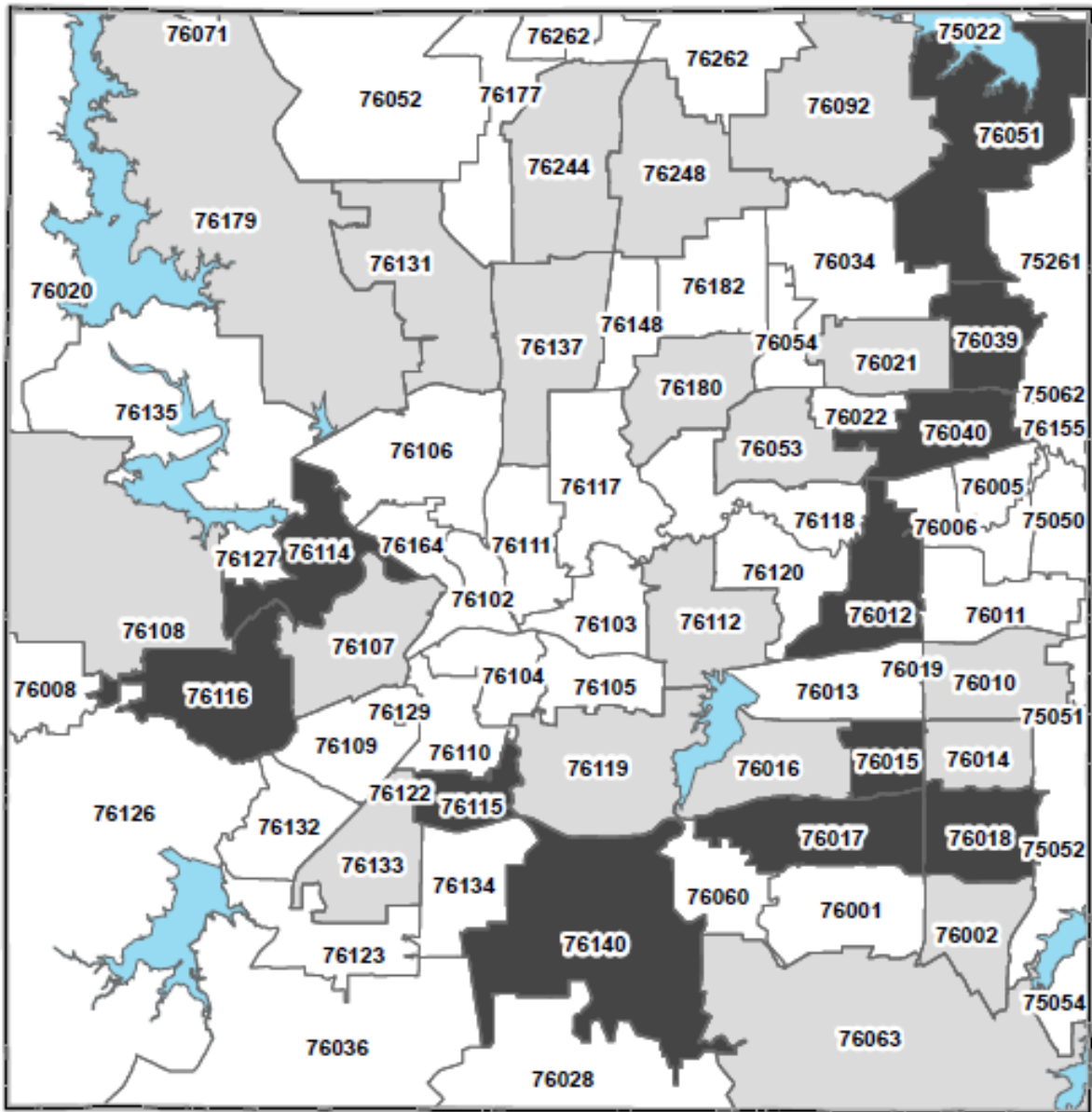


Figure 8. Geographic distribution of salmonellosis by ZIP code, Tarrant County, 2016



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Rate per 100,000

- 13.0 - 21.0
- 21.1 - 33.2
- No or Excluded Data
- County Boundary



4. Pertussis (Whooping Cough)

- **Causative Agent:** (bacterial) *Bordetella pertussis*
- **Signs/Symptoms:** Early symptoms are cold-like and include runny nose, low-grade fever, with an occasional mild cough. After 1 to 2 weeks, severe coughing can begin and continue for weeks. Coughing can be violent and rapid until the air is gone from the lungs and the person is forced to inhale with a loud "whooping" sound.
- **Mode(s) of Transmission:** Direct contact with discharges from respiratory mucous membranes of infected persons by the airborne route, usually via droplets.
- **Incubation Period:** 6-20 days, average 9-10 days
- **Period of Communicability:** Highly communicable during the early phase of illness (first 2 weeks); Communicability decreases in about 3 weeks, despite persisting cough.

SUMMARY: PERTUSSIS (WHOOPING COUGH)				5-Year Trend (2012-2016)			
Number of cases			337				
Incidence rate (per 100,000 population)			16.9				
Change from 5-year average incidence			- 17.4%				
Gender	Number	(Percent)	Rate	Age (in years)			
Female	187	(55.5)	18.4	Mean	13		
Male	150	(44.5)	15.3	Median	10		
Unknown	0			Min-Max	0-70		
Race/Ethnicity	Number	(Percent)	Rate	Age Group	Number	(Percent)	Rate
Hispanic	115	(34.1)	18.8	0-14	229	(68.0)	51.2
Non-Hispanic Black	24	(7.1)	7.8	15-24	62	(18.4)	21.2
Non-Hispanic White	181	(53.7)	19.7	25-44	27	(8.0)	4.8
Other/Multiracial	12	(3.6)	@	45-64	-	(-)	@
Unknown	5			65+	-	(-)	@

Select cases not reported to protect confidentiality and prevent inadvertent disclosure

@ = rate unstable for less than 20 cases

Bold = highest incidence rate in each demographic category

Data source: Tarrant County Public Health

Figure 9. Pertussis cases by month, Tarrant County, 2016

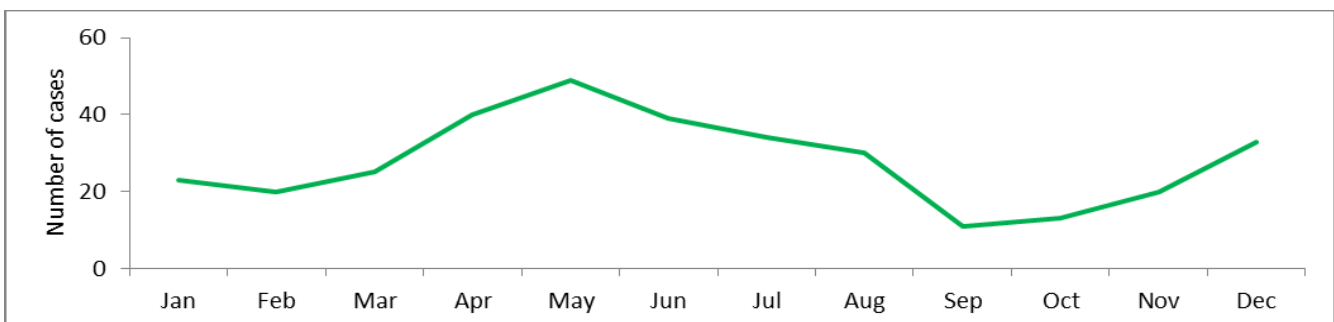
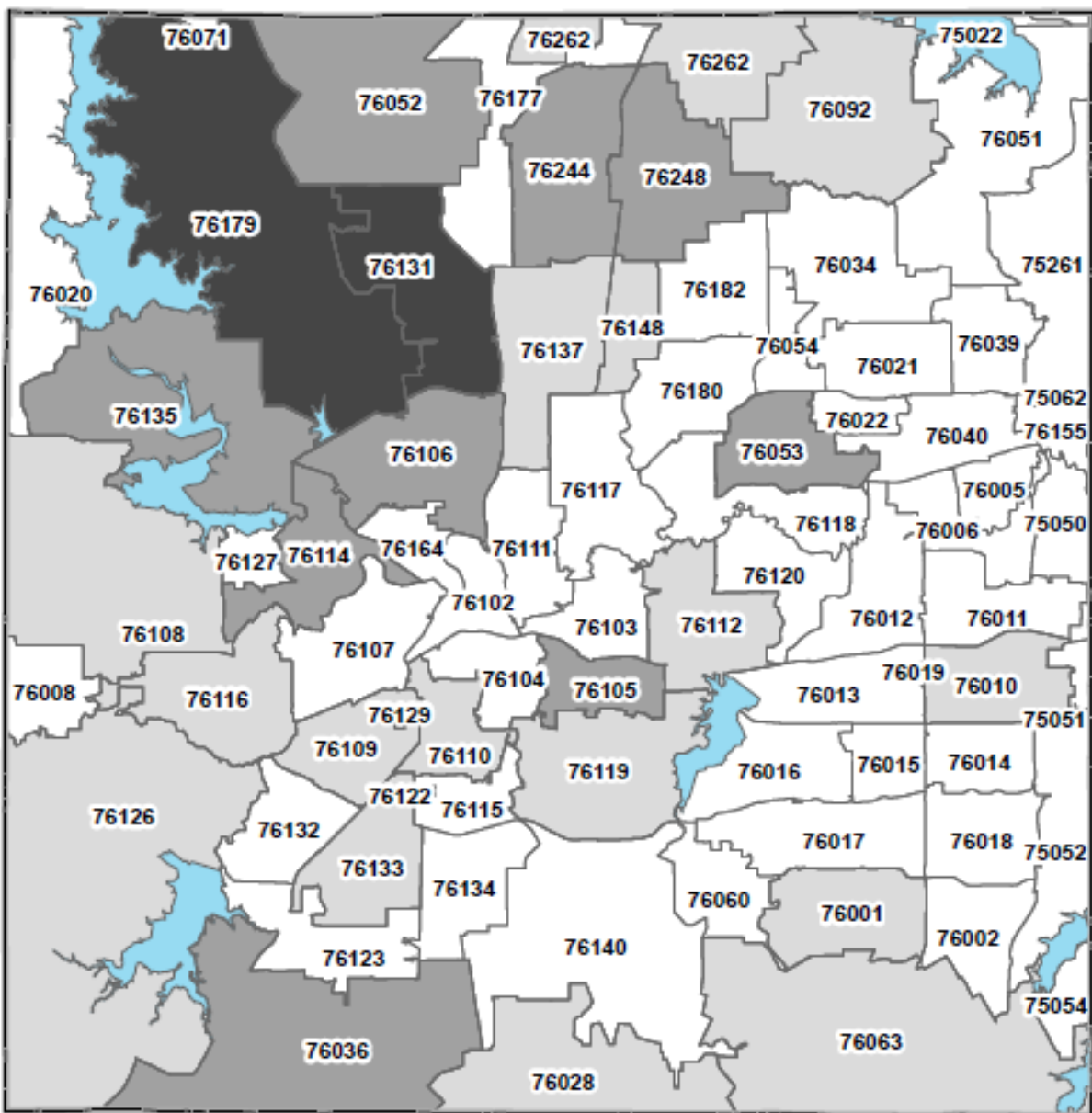
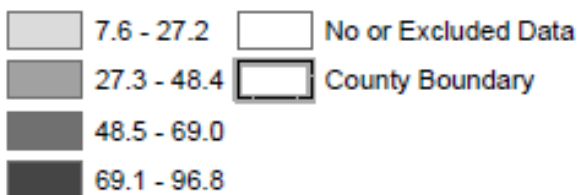


Figure 10. Geographic distribution of pertussis by ZIP code, Tarrant County, 2016



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Rate per 100,000



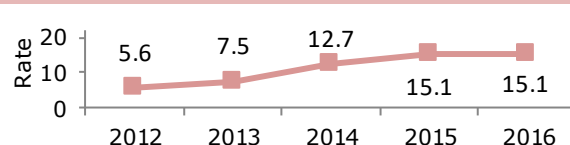
5. Shigellosis

- **Causative Agent:** (bacterial) *Shigella species*
- **Signs/Symptoms:** Diarrhea (typically bloody), fever, abdominal pain, vomiting. Some people do not present with any symptoms.
- **Mode(s) of Transmission:** Direct fecal-oral contact or ingestion of food or water contamination with feces of an infected individual.
- **Incubation Period:** 12-96 hours, usually 1-3 days
- **Period of Communicability:** While signs/symptoms are present; those infected may carry and transmit the bacteria for up to four weeks after becoming infected.

SUMMARY: SHIGELLOSIS

5-Year Trend (2012-2016)

Number of cases	301
Incidence rate (per 100,000 population)	15.1
Change from 5-year average incidence	+ 34.8%



Gender	Number	(Percent)	Rate	Age (in years)			
Female	164	(54.5)	16.1	Mean	14		
Male	137	(45.5)	14.0	Median	7		
Unknown	0			Min-Max	0-72		
Race/Ethnicity	Number	(Percent)	Rate	Age Group	Number	(Percent)	Rate
Hispanic	116	(38.5)	19.0	0-14	223	(74.1)	49.9
Non-Hispanic Black	67	(22.3)	21.8	15-24	10	(3.3)	@
Non-Hispanic White	101	(33.6)	11.0	25-44	41	(13.6)	7.2
Other/Multiracial	6	(2.0)	@	45-64	20	(6.6)	4.1
Unknown	11			65+	7	(2.3)	@

@ = rate unstable for less than 20 cases

Bold = highest incidence rate in each demographic category

Data source: Tarrant County Public Health

Figure 11. Shigellosis cases by month, Tarrant County, 2016

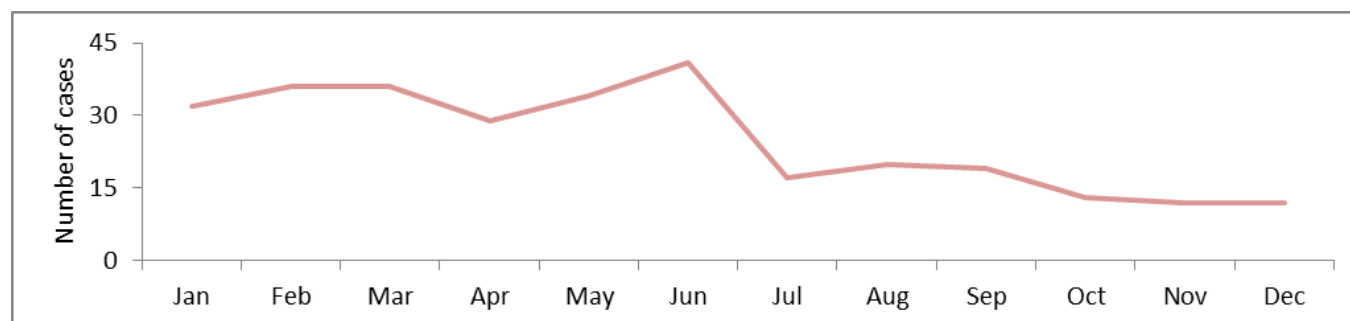
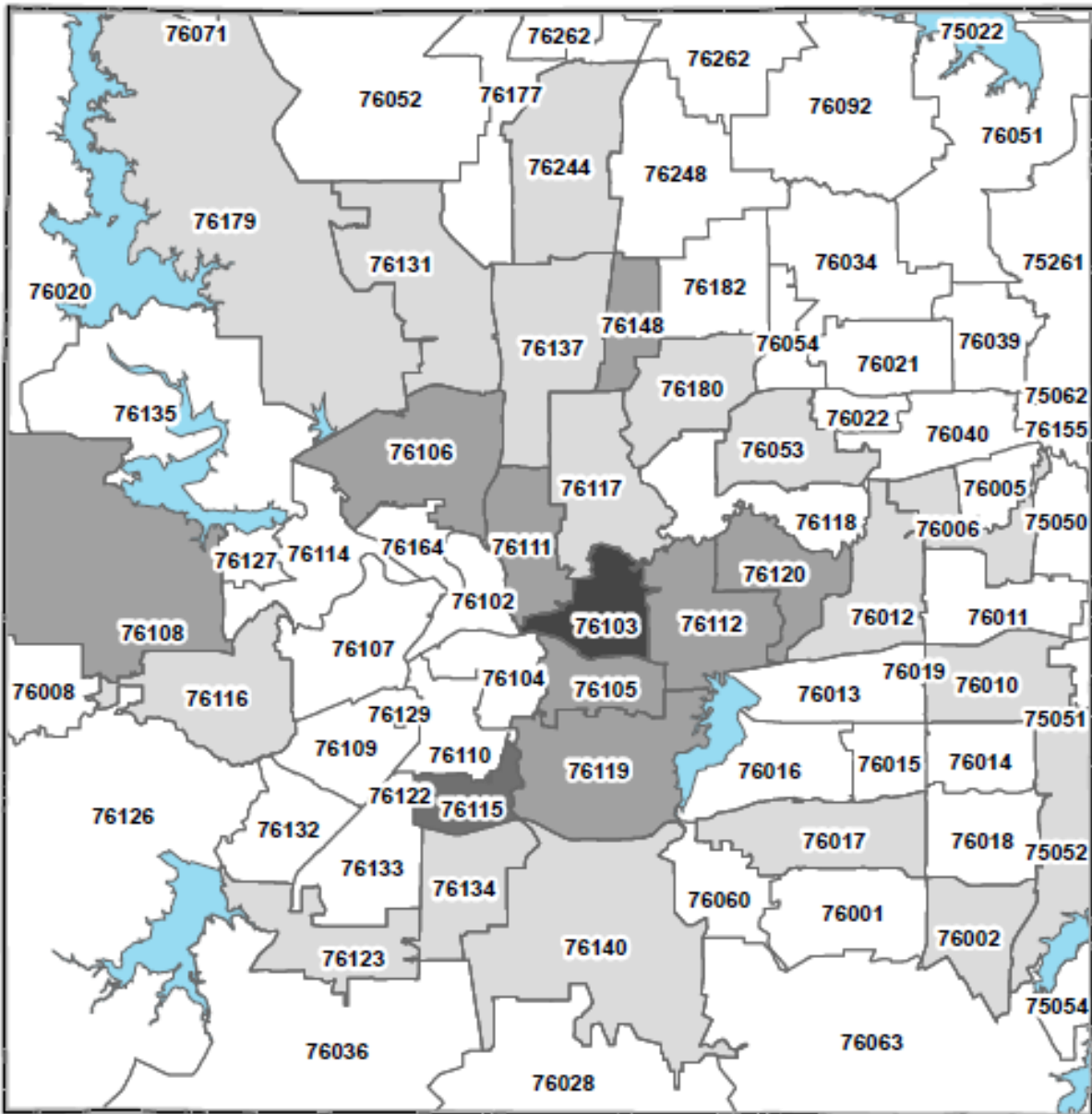
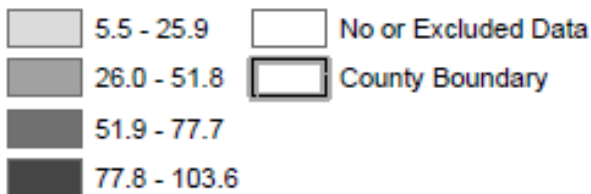


Figure 12. Geographic distribution of shigellosis by ZIP code, Tarrant County, 2016



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Rate per 100,000



6. Human Immunodeficiency Virus (HIV)

- **Causative Agent:** (viral) Human Immunodeficiency Virus (HIV)
- **Signs/Symptoms:** Several weeks after infection flu-like symptoms of chills, body aches, fatigue and possibly fever lasting 1-2 weeks. Symptoms may not appear again for possibly years and may involve infections and cancers resulting from HIV induced immune deficiencies. HIV infection will result in AIDS in over 90% of individuals.
- **Mode(s) of Transmission:** Perinatally, sexually or blood transmitted infection; breastfeeding may also transmit the infection
- **Incubation Period:** Variable
- **Period of Communicability:** Begins early after infection; risk of transmission most likely highest within the first few months after infection

SUMMARY: HIV				5-Year Trend (2012-2016)			
Number of cases	248						
Incidence rate (per 100,000 population)	12.4						
Change from 5-year average incidence	+ 18.5%						
Gender	Number	(Percent)	Rate	Age (in years)			
Female	39	(15.7)	3.8	Mean	32		
Male	209	(84.3)	21.3	Median	29		
Unknown	0			Min-Max	15-70		
Race/Ethnicity	Number	(Percent)	Rate	Age Group	Number	(Percent)	Rate
Hispanic	52	(21.1)	8.5	0-14	0	(0.0)	0.0
Non-Hispanic Black	136	(55.1)	44.3	15-24	74	(29.8)	25.3
Non-Hispanic White	46	(18.6)	5.0	25-44	132	(53.2)	23.3
Other/Multiracial	13	(5.3)	@	45-64	-	(-)	8.0
Unknown	1			65+	-	(-)	@

Select cases not reported to protect confidentiality and prevent inadvertent disclosure; @ = rate unstable for less than 20 cases

Bold = highest incidence rate in each demographic category

Data source: Tarrant County Public Health

Figure 13. HIV cases by month, Tarrant County, 2016

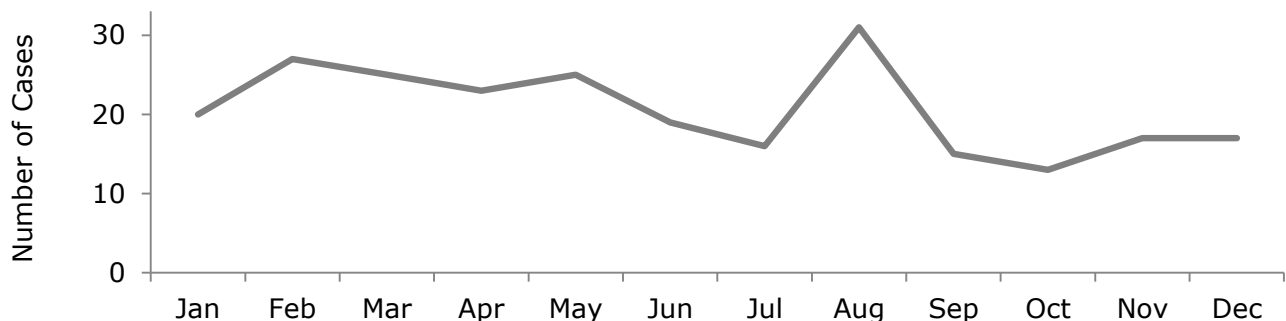
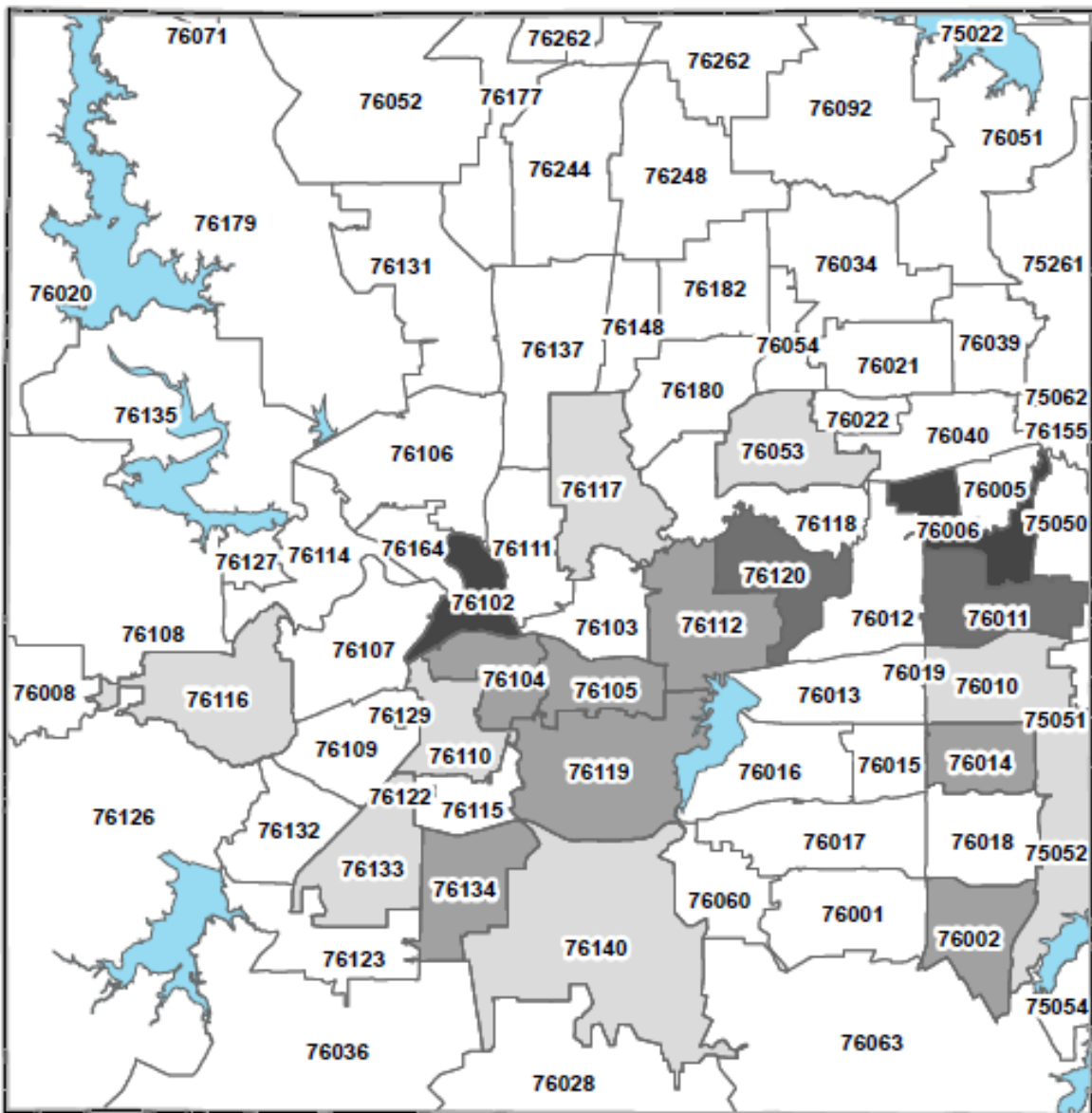
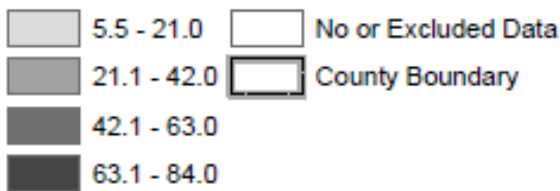


Figure 14. Geographic distribution of HIV by ZIP code, Tarrant County, 2016



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Rate per 100,000



7. Campylobacteriosis

- **Causative Agent:** (bacterial) *Campylobacter* species
- **Signs/Symptoms:** Diarrhea (frequently bloody), fever, abdominal pain, vomiting. Many people do not present with any symptoms.
- **Mode(s) of Transmission:** Ingestion of the bacteria in food derived from infected animals (typically poultry) or food or water contaminated by feces of an infected animal. Contact with infected animals, especially puppies and kittens.
- **Incubation Period:** 1-10 days, usually 2-5 days
- **Period of Communicability:** While signs/symptoms are present; those infected may carry and transmit the bacteria for 2-7 weeks after becoming infected.

SUMMARY: CAMPYLOBACTERIOSIS				5-Year Trend (2012-2016)			
Number of cases	207						
Incidence rate (per 100,000 population)	10.4						
Change from 5-year average incidence	-4.9%						
Gender	Number	(Percent)	Rate	Age (in years)			
Female	98	(47.3)	9.6	Mean	31		
Male	109	(52.7)	11.1	Median	31		
Unknown	0			Min-Max	0-93		
Race/Ethnicity	Number	(Percent)	Rate	Age Group	Number	(Percent)	Rate
Hispanic	70	(33.8)	11.5	0-14	78	(37.7)	17.5
Non-Hispanic Black	21	(10.1)	6.8	15-24	13	(6.3)	@
Non-Hispanic White	103	(49.8)	11.2	25-44	44	(21.3)	7.8
Other/Multiracial	6	(2.9)	@	45-64	47	(22.7)	9.7
Unknown	7			65+	25	(12.1)	12.2

@ = rate unstable for less than 20 cases

Bold = highest incidence rate in each demographic category

Data source: Tarrant County Public Health

Figure 15. Campylobacteriosis cases by month, Tarrant County, 2016

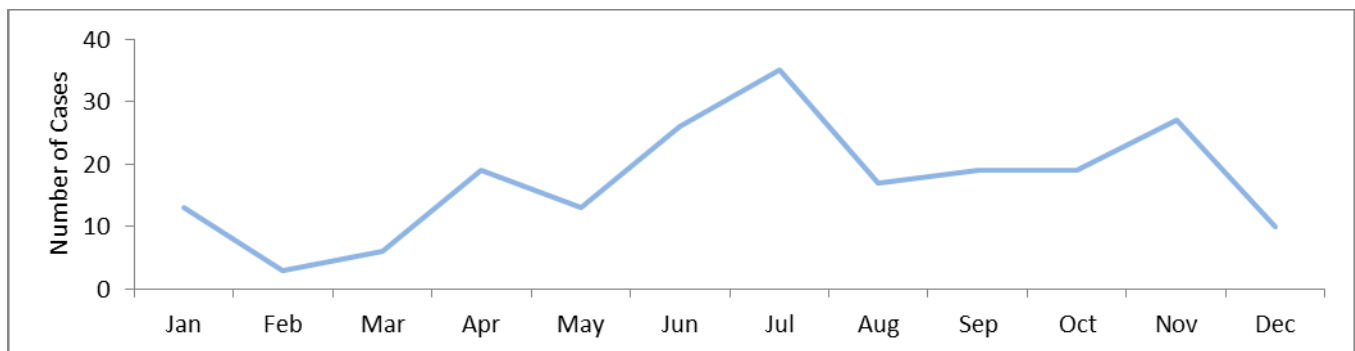
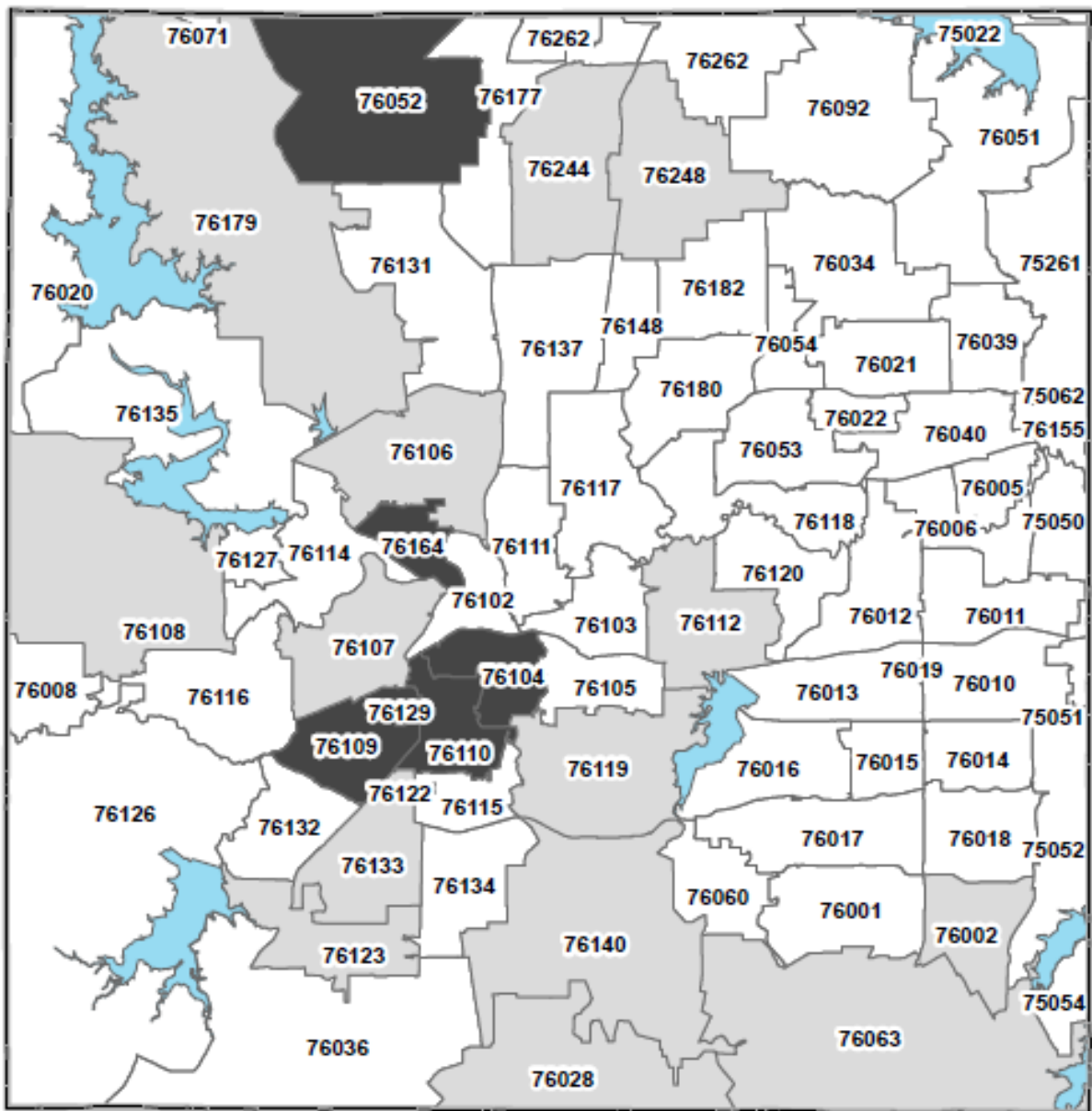
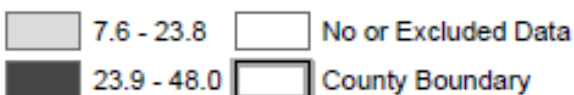


Figure 16. Geographic distribution of campylobacteriosis by ZIP code, Tarrant County, 2016



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Rate per 100,000



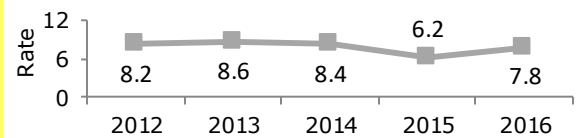
8. *Streptococcus pneumoniae* (invasive)

- **Causative Agent:** (bacterial) *Streptococcus pneumoniae*
- **Signs/Symptoms:** Bacterial infection of the blood, cerebral spinal fluid, or other normally sterile body fluid which may have originated from an infection ranging from a mild ear infection to severe pneumonia. Many people carry these bacteria in their nose and throat, not presenting with signs or symptoms.
- **Mode(s) of Transmission:** Contact with respiratory droplets of infected individuals
- **Incubation Period:** 1-3 days
- **Period of Communicability:** 10-21 days

SUMMARY: STREP PNEUMO (INVASIVE)

Number of cases	156
Incidence rate (per 100,000 population)	7.8
Change from 5-year average incidence	- 0.5%

5-Year Trend (2012-2016)



Gender	Number	(Percent)	Rate	Age (in years)		
Female	87	(55.8)	8.6	Mean	51	
Male	69	(44.2)	7.0	Median	58.5	
Unknown	0			Min-Max	0-93	

Race/Ethnicity	Number	(Percent)	Rate	Age Group	Number	(Percent)	Rate
Hispanic	-	(-)	3.4	0-14	24	(15.4)	5.4
Non-Hispanic Black	36	(23.1)	11.7	15-24	-	(-)	@
Non-Hispanic White	76	(48.7)	8.3	25-44	-	(-)	@
Other/Multiracial	-	(-)	@	45-64	56	(35.9)	11.5
Unknown	21			65+	56	(35.9)	27.4

Select case counts not reported to protect confidentiality and prevent inadvertent disclosure

@ = rate unstable for less than 20 cases

Bold = highest incidence rate in each demographic category

Data source: Tarrant County Public Health

Figure 17. *Streptococcus pneumoniae* (invasive) cases by month, Tarrant County, 2016

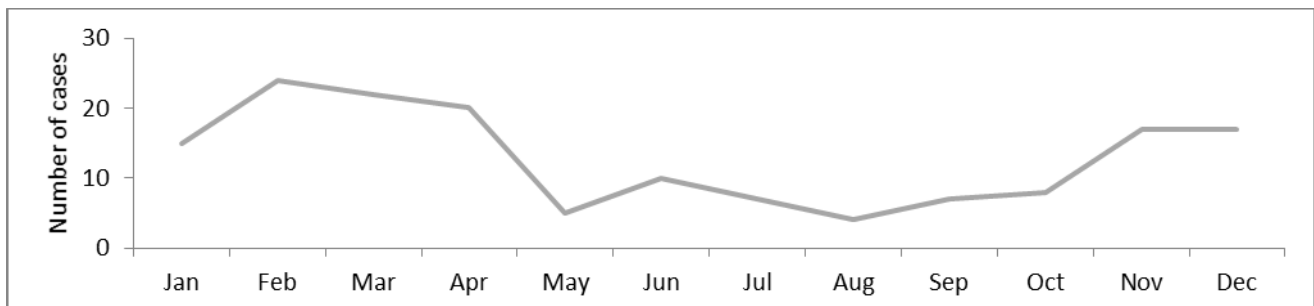
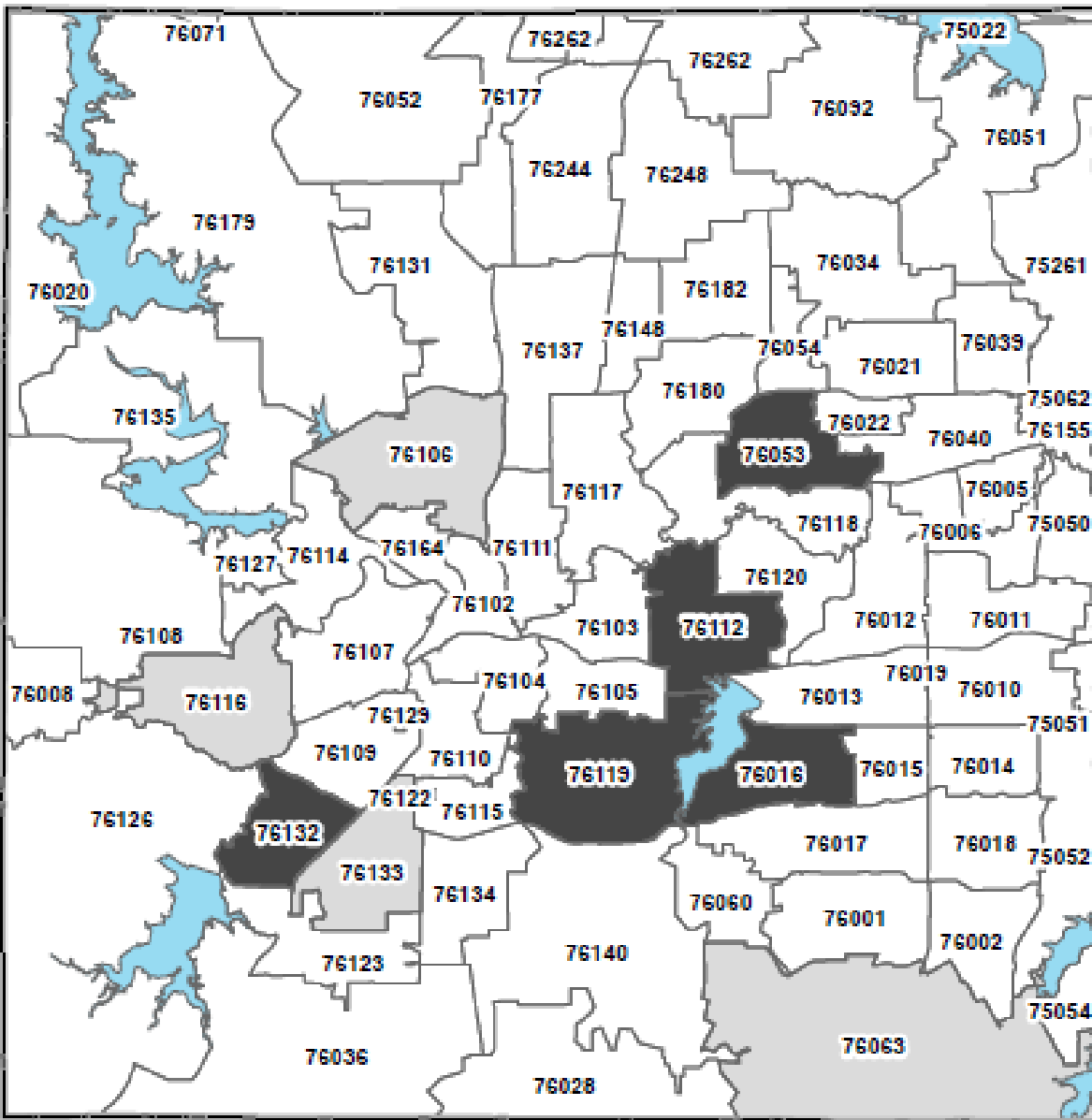


Figure 18. Geographic distribution of *Streptococcus pneumoniae* (invasive) by ZIP code, Tarrant County, 2016



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Rate per 100,000

- | | | | |
|---|-------------|---|---------------------|
|  | 9.1 - 15.0 |  | No or Excluded Data |
|  | 15.1 - 20.1 |  | County Boundary |



9. Group B Streptococcus

- **Causative Agent:** (bacterial) *Streptococcus agalactiae* or group B *Streptococcus*
- **Signs/Symptoms:** Among newborns symptoms include fever, difficulty feeding, irritability, lethargy, difficulty breathing, blueish color to skin; Among adults, symptoms vary depending on the part of the body infected (blood, lung, skin/soft tissue, bone/joint).
- **Mode(s) of Transmission:** From mother to baby during labor and birth; Mode of transmission between adults is unknown (group B strep bacteria are common in the gastrointestinal tract)
- **Incubation Period:** Less than 7 days for neonates; Unknown for infants, children, and adults
- **Period of Communicability:** Unknown; An estimated 10-30% of women are carriers

SUMMARY: GROUP B STREP (INVASIVE)				5-Year Trend (2012-2016)			
Number of cases	131						
Incidence rate (per 100,000 population)	6.6						
Change from 5-year average incidence	+ 15.8%						
Gender	Number	(Percent)	Rate	Age (in years)			
Female	57	(43.5)	5.6	Mean	49		
Male	73	(55.7)	7.4	Median	56		
Unknown	1			Min-Max	0-90		
Race/Ethnicity	Number	(Percent)	Rate	Age Group	Number	(Percent)	Rate
Hispanic	-	(-)	4.8	0-14	23	(17.6)	5.1
Non-Hispanic Black	25	(19.1)	8.1	15-24	-	(-)	@
Non-Hispanic White	60	(45.8)	6.5	25-44	-	(-)	@
Other/Multiracial	-	(-)	@	45-64	48	(36.6)	9.9
Unknown	14			65+	42	(32.1)	20.5

Select cases not reported to protect confidentiality and prevent inadvertent disclosure

@ = rate unstable for less than 20 cases

Bold = highest incidence rate in each demographic category

Data source: Tarrant County Public Health

Figure 19. Group B strep cases by month, Tarrant County, 2016

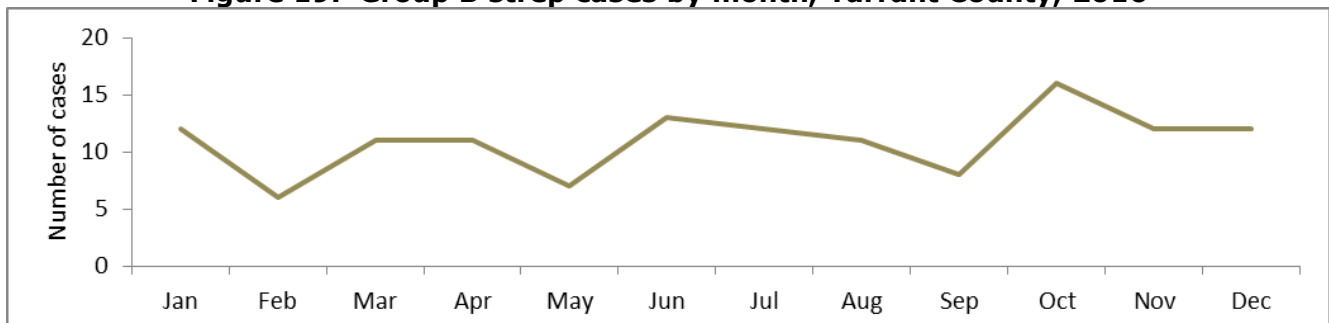
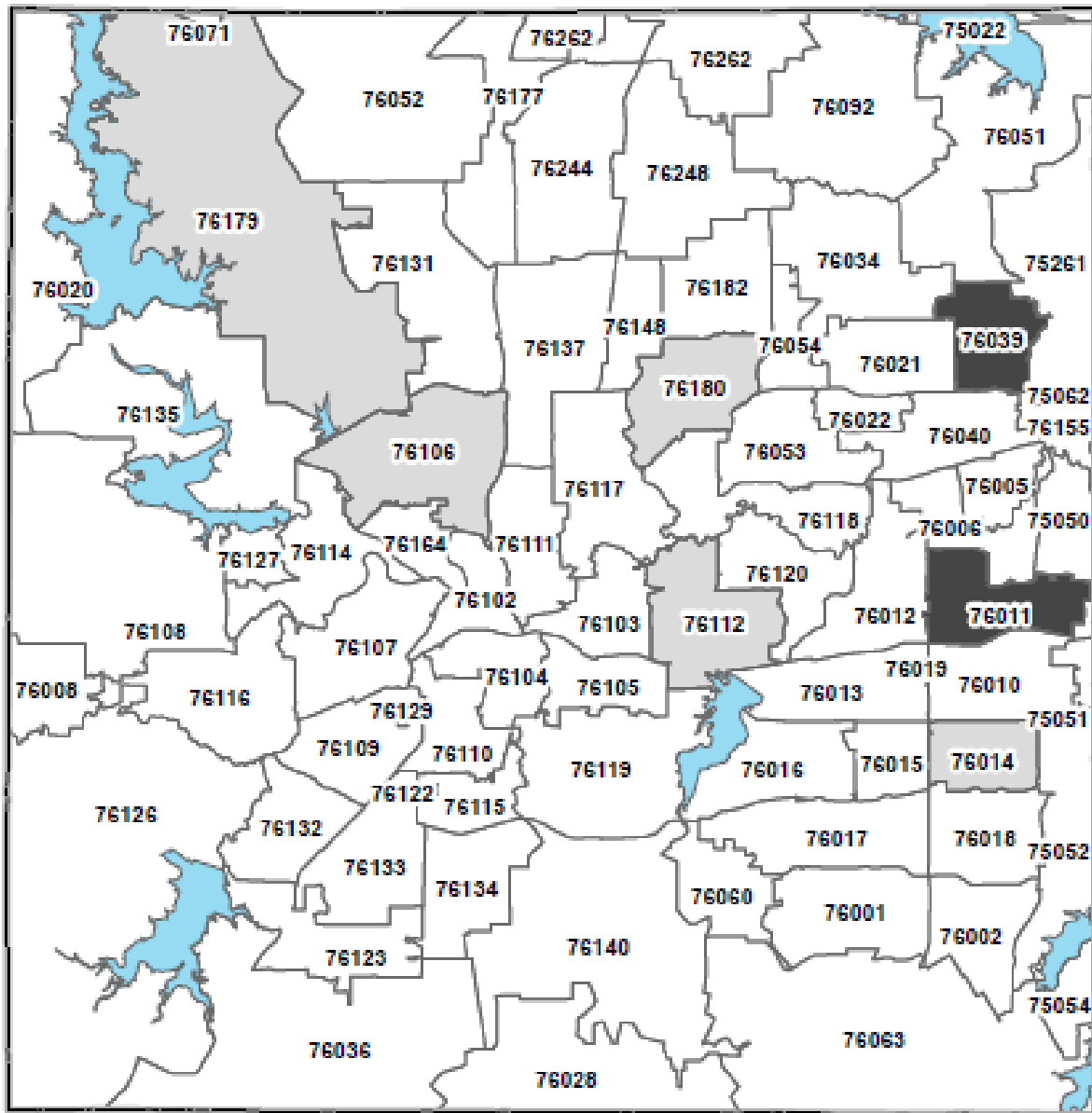


Figure 20. Geographic distribution of Group B strep by ZIP code, Tarrant County, 2016



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Rate per 100,000

- 9.5 - 14.3
- No or Excluded Data
- 14.4 - 22.0
- County Boundary



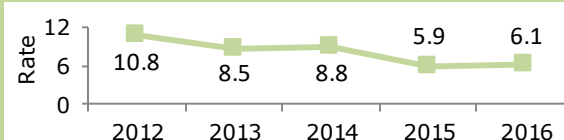
10. Chickenpox (Varicella)

- **Causative Agent:** (viral) Varicella-zoster virus
- **Signs/Symptoms:** In unvaccinated individuals, fever and rash initially presenting as red bumps progressing to blister-type lesions which may last 3-4 days before drying. Rash and lesions are typically found in differing stages of development and usually in covered areas of the body; over 200 lesions may be present. In vaccinated individuals exhibiting breakthrough infections, less than 50 non-blister like bumps may appear typically without fever.
- **Mode(s) of Transmission:** Direct contact, droplet, or air borne contact of lesion fluid or respiratory secretions of infected individuals.
- **Incubation Period:** 10-21 days; commonly 14-16 days
- **Period of Communicability:** Up to 5 days, typically 1-2 days before rash onset and continuing until lesions are dry which is typically 5 days.

SUMMARY: Chickepox (Varicella)

Number of cases	121
Incidence rate (per 100,000 population)	6.1
Change from 5-year average incidence	-23.9%

5-Year Trend (2012-2016)



Gender	Number	(Percent)	Rate	Age (in years)
Female	62	(51.2)	6.1	Mean 14
Male	59	(48.8)	6.0	Median 6.0
Unknown	0			Min-Max 0-64

Race/Ethnicity	Number	(Percent)	Rate	Age Group	Number	(Percent)	Rate
Hispanic	32	(26.4)	5.2	0-14	83	(68.6)	18.6
Non-Hispanic Black	14	(11.6)	@	15-24	9	(7.4)	@
Non-Hispanic White	45	(37.2)	4.9	25-44	18	(14.9)	@
Other/Multiracial	11	(9.1)	@	45-64	11	(9.1)	@
Unknown	19			65+	0	(0.0)	0.0

Select cases not reported to protect confidentiality and prevent inadvertent disclosure

@ = rate unstable for less than 20 cases

Bold = highest incidence rate in each demographic category

Data source: Tarrant County Public Health

Figure 21. Chickenpox cases by month, Tarrant County, 2016

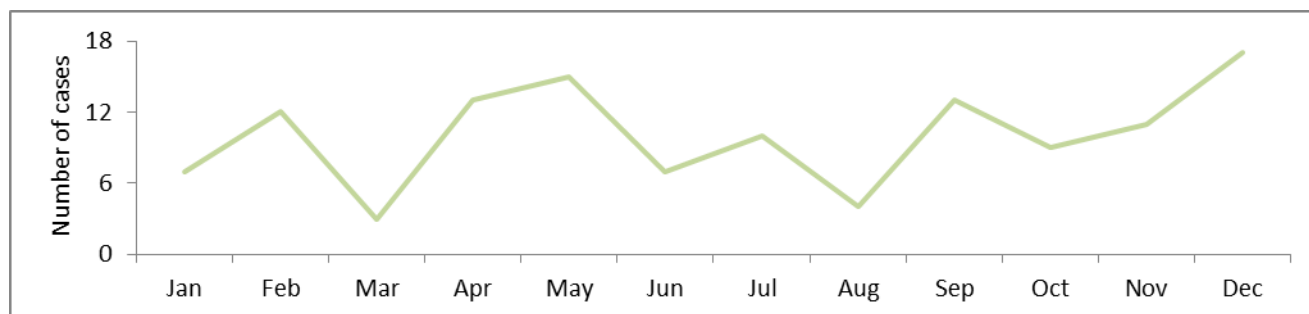
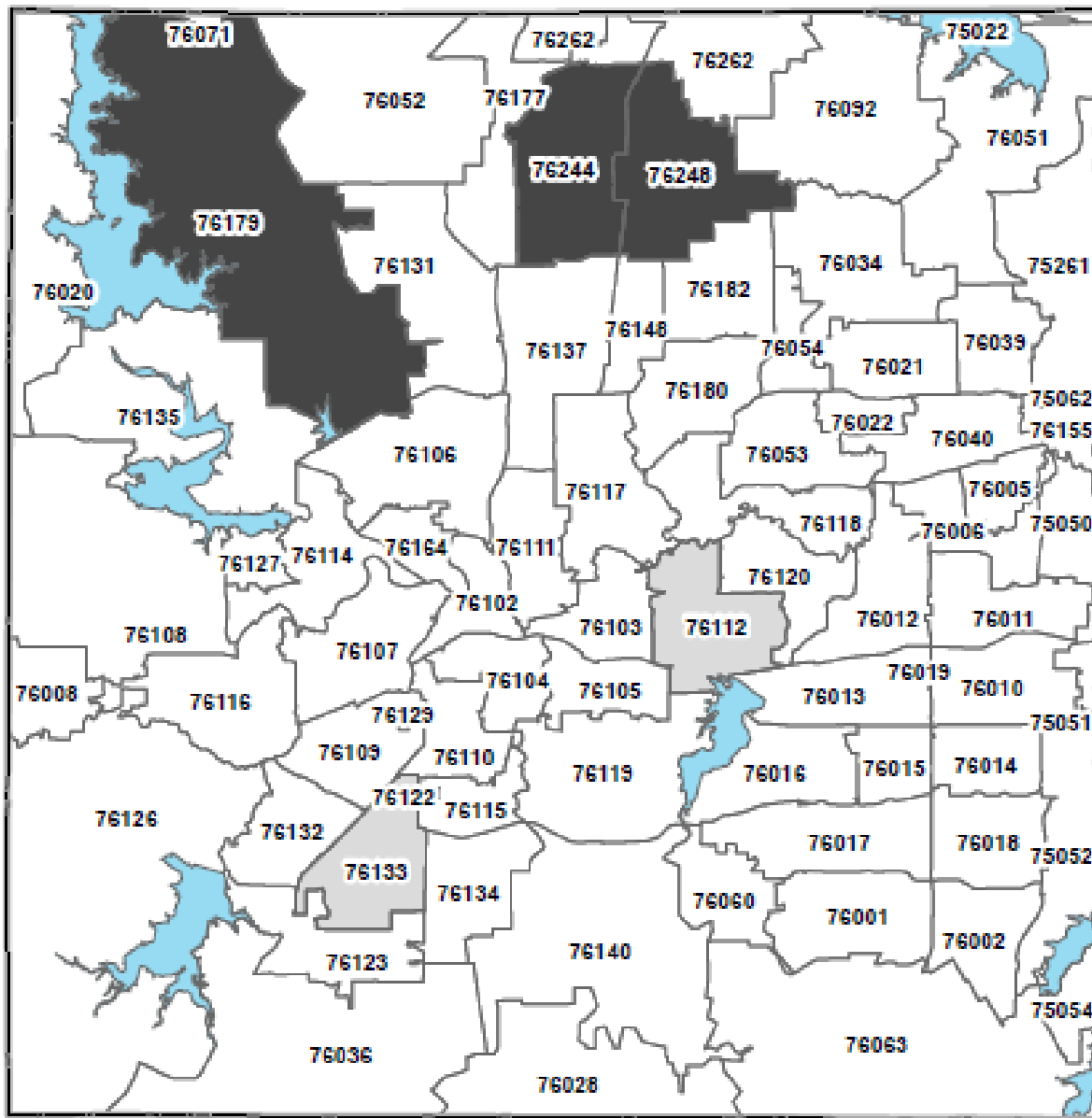


Figure 22. Geographic distribution of Chickenpox by ZIP code, Tarrant County, 2016



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Rate per 100,000

- 12.5 - 21.8
- 9.9 - 12.4
- County Boundary
- No or Excluded Data



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