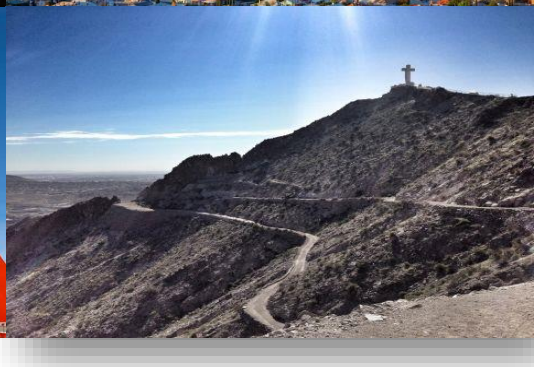
Annual Report



Epidemiology & Infectious Diseases

2018 - 2021

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EXECUTIVE SUMMARY

Executive Summary

The City of El Paso Department of Public Health (DPH) Epidemiology and Surveillance Division serves the El Paso City-County community and is responsible for disease investigation and control for over 800,000 residents. It works closely with binational and regional public health partners from Ciudad Juarez in Northern Mexico and Las Cruces, and other nearby cities, in Southern New Mexico for the coordination of cases and care of residents diagnosed with a communicable reportable condition in El Paso City-County.

The Division consists of three distinct programs: Epidemiology, Public Health Follow-Up, and Tuberculosis. These programs operate as a team to meet the epidemiology, surveillance, and disease investigation needs of the community as well as to inform other public health, and other community programs, on necessary course of action based on the current incidence of disease. Funding for all activities is secured through local, state, and federal grants.

Between 2018 and 2021, the Epidemiology and Surveillance Division received notification of communicable notifiable conditions, some of which were more prevalent than others. In 2021, for vector-borne diseases, the most frequently reported cases were coccidioidomycosis with 61 cases and West Nile Virus with 18 cases. For foodborne and waterborne illnesses, Salmonella and Campylobacter were the most commonly reported cases with 121 cases of Salmonella reported in 2019 and 76 cases of Campylobacter in 2021. Chlamydia and gonorrhea were the two most conditions reported for sexually transmitted infections in 2018, with 678 cases of chlamydia and 135 cases of gonorrhea. For vaccine-preventable diseases, the most significant conditions reported were pertussis and mumps, with 29 cases of pertussis in 2018 and 28 cases of mumps in 2019. There were a considerable number of cases of Hepatitis C reported in 2021, reaching 1489 cases reported to the DPH. In addition, a considerably high number of cases of lead poisoning cases in children were also reported, particularly in 2019 with 1468 cases. Drowning, another notifiable condition, also yielded a considerably high number of reported cases of 15 drownings in 2021. It is important to note a decline in most reported notifiable conditions during the years 2020-2021 of the COVID-19 pandemic. This may be attributed to restrictions healthcare providers needed to observe which limited their capacity to provide services as pre-pandemic, community fear to seek medical care, and other contributing factors.

PROGRAM DESCRIPTIONS

Program Description

The City of El Paso Department of Public Health's (DPH) Epidemiology and Surveillance Division is responsible for the management of all reportable communicable conditions for the local service area comprised of El Paso and Hudspeth Counties, Texas, with a combined population of over 800,000 (United States Census). The Epidemiology and Surveillance Division includes two other distinct programs -Public Health Follow-up and Tuberculosis Control and Elimination, which jointly, compiled this first annual report which, for comparison purposes, includes data from 2018 to 2021.

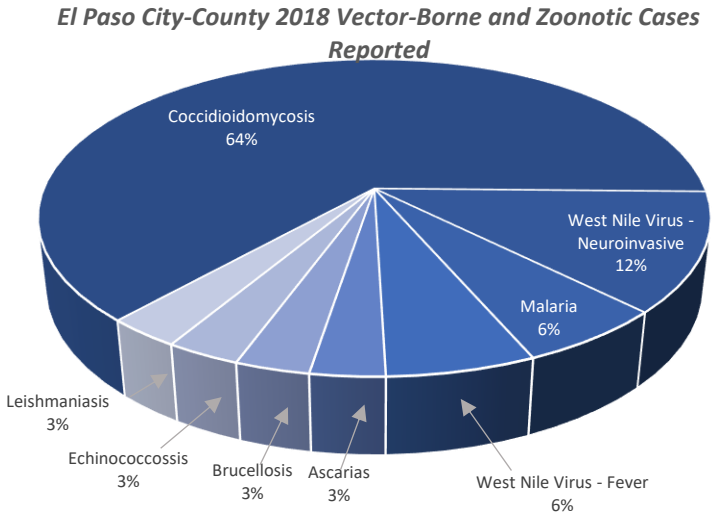
The Epidemiology and Surveillance Division's overarching goal is to protect and improve the health of the community by conducting disease surveillance, overseeing case investigations, and providing healthcare provider education and guidance, and community health education and linkage to needed care within the service area. This division studies disease patterns that manifest and have the potential to spread within local groups of people. Researching disease trends is essential for forecasting infection rates and developing evidence-based strategies for mitigating the spread of the disease. The program focuses on stopping the spread of communicable diseases by quickly responding to disease outbreaks, collecting and analyzing data, and by monitoring disease occurrences to determine risk factors and modes of transmission.

The Epidemiology and Surveillance team responds to disease outbreaks through continuous use of active and syndromic surveillance. In addition, the team is also responsible for tracking and reporting over 80 notifiable conditions, all of which may be reported and managed 24 hours a day, 7 days a week. In addition, staff is on call after hours, including weekends, to respond to urgent questions from healthcare providers, hospitals, or community members and provide technical support and guidance when needed. Community health education is a crucial component of the division for alerting the community of potential health risks and recommended precautions to reduce the spread of disease.

VECTOR-BORNE AND ZOONOTIC DISEASES

Vector-Borne and Zoonotic Disease

Zoonotic diseases are transmissible from animal to animal, as well as from animals to people. Animals can potentially carry harmful germs, such as viruses, bacteria, parasites, and fungi, that can spread to people, potentially causing illness. Infections caused by zoonotic diseases can be spread by direct contact, indirect contact, or vector-borne. Direct contact with the saliva, blood, urine, mucous, feces, and other body fluids of an infected animal can result from petting or touching animals, as well as from their bites and scratches. Physical contact with contaminated areas and objects where animals live and roam, such as pet habitats, pet food, water dishes, or plants and soil is an indirect way of acquiring a zoonotic disease. Vector-borne diseases are transmitted through vectors, such as mosquitos, ticks, and fleas that carry pathogens. When a person is bitten by a vector, they can acquire a vector-borne disease which can cause illness. People having close contact with animals, including pets, should take precautions to protect themselves from infection and see a doctor if they begin to feel ill.

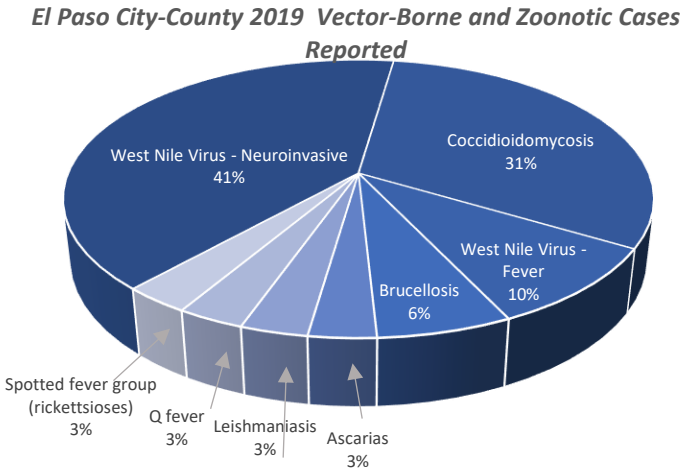


Graph 1. El Paso Vector-Borne and Zoonotic, percentage of cases, 2018

El Paso City-County 2018 Vector-Borne and Zoonotic	Cases Reported
Ascarias	1
Brucellosis	1
Chagas' disease	0
Coccidioidomycosis	21
Cysticercosis	0
Echinococcosis	1
Leishmaniasis	1
Lyme disease	0
Malaria	2
Q fever	0
Spotted fever group (rickettsioses)	0
West Nile Virus Fever	2
West Nile Virus Neuroinvasive	4
Total	**33**

Table 1. Vector-Borne and Zoonotic, number of cases, 2018

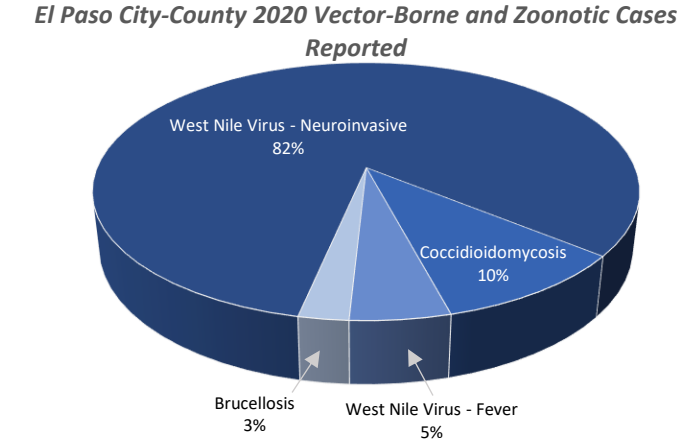
VECTOR-BORNE AND ZOONOTIC DISEASES



Graph 2. El Paso Vector-Borne and Zoonotic, percentage of cases, 2019

Table 2. Vector-Borne and Zoonotic, number of cases, 2019

El Paso City-County 2019 Vector-Borne and Zoonotic	Cases Reported
Ascarias	1
Brucellosis	2
Chagas' disease	0
Coccidioidomycosis	10
Cysticercosis	0
Echinococcossis	0
Leishmaniasis	1
Lyme disease	0
Malaria	0
Q fever	1
Spotted fever group (rickettsioses)	1
West Nile Virus Fever	3
West Nile Virus Neuroinvasive	13
Total	**32**

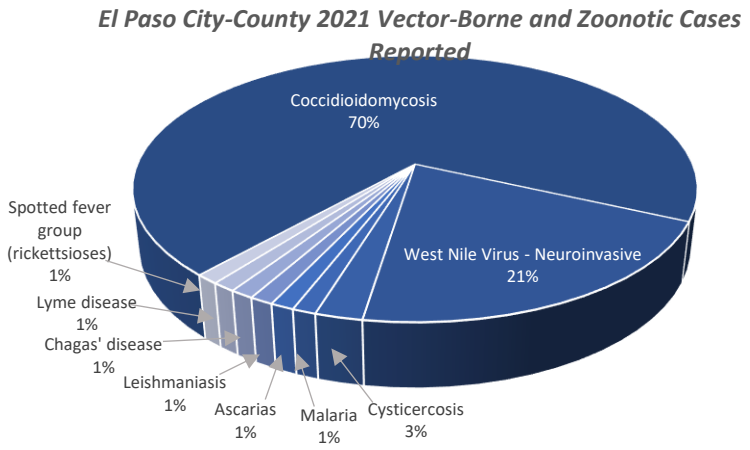


Graph 3. El Paso Vector-Borne and Zoonotic, percentage of cases, 2020

El Paso City-County 2020 Vector-Borne and Zoonotic	Cases Reported
Ascarias	0
Brucellosis	0
Chagas' disease	0
Coccidioidomycosis	33
Cysticercosis	0
Echinococcossis	0
Leishmaniasis	0
Lyme disease	2
Malaria	0
Q fever	0
Spotted fever group (rickettsioses)	1
West Nile Virus Fever	0
West Nile Virus Neuroinvasive	4
Total	**40**

Table 3. Vector-Borne and Zoonotic, number of cases, 2020

VECTOR-BORNE AND ZOONOTIC DISEASES

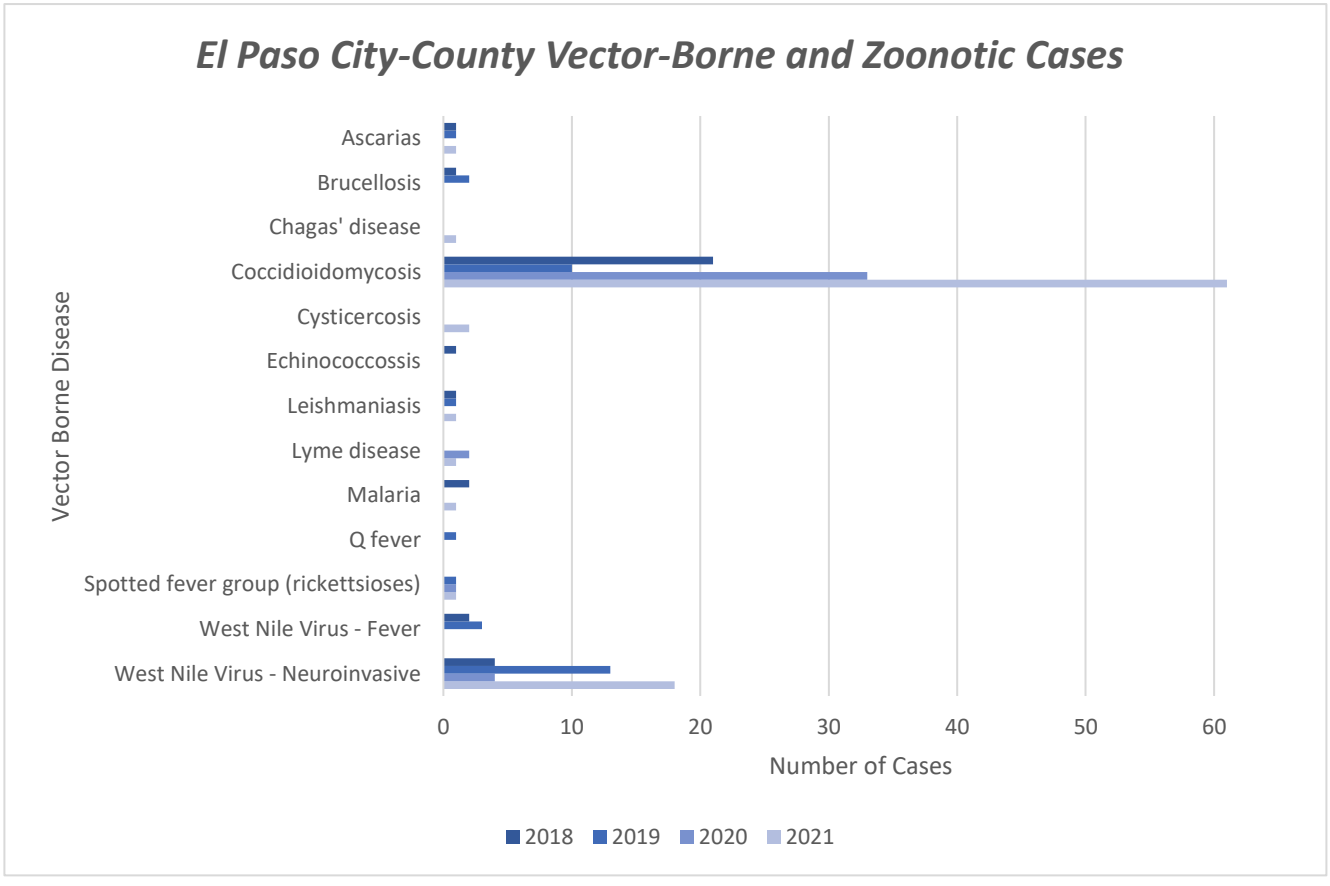


Graph 4. El Paso Vector-Borne and Zoonotic, percentage of cases, 2021

Table 4. Vector-Borne and Zoonotic, number of cases, 2021

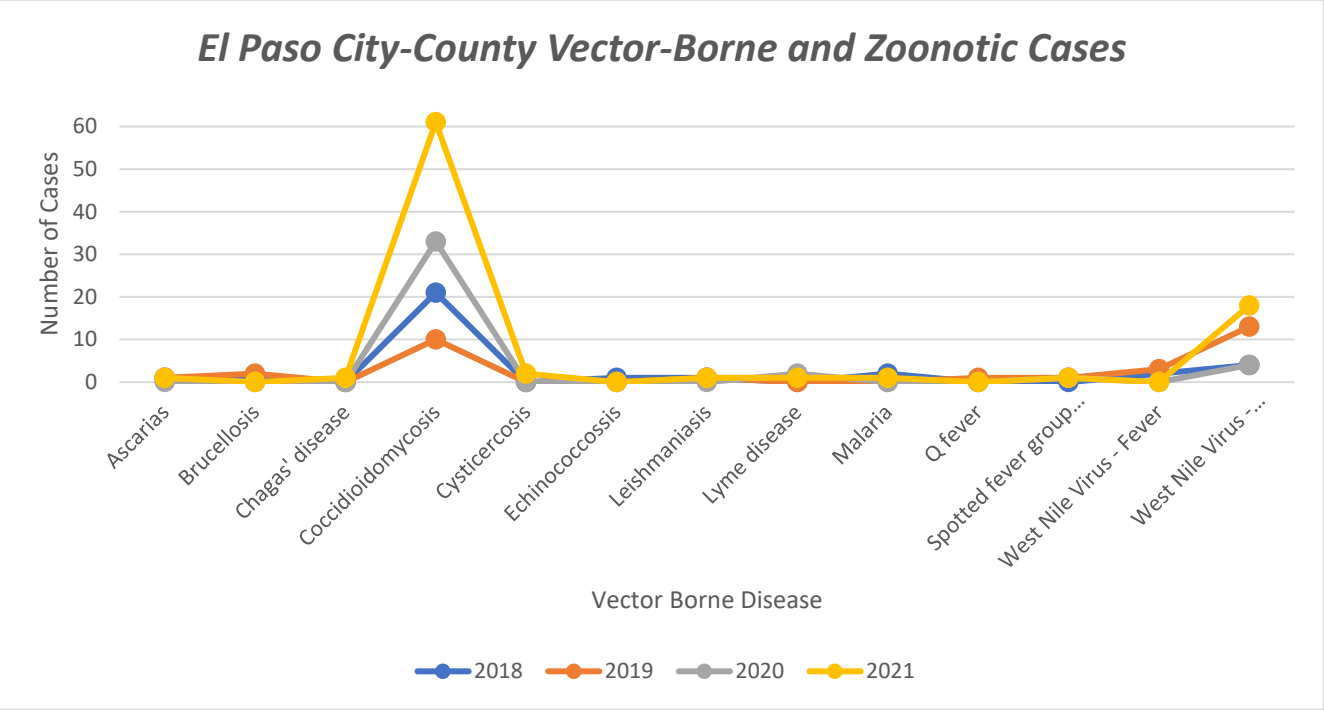
El Paso City-County 2021 Vector-Borne and Zoonotic	Cases Reported
Ascarias	1
Brucellosis	0
Chagas' disease	1
Coccidioidomycosis	61
Cysticercosis	2
Echinococcossis	0
Leishmaniasis	1
Lyme disease	1
Malaria	1
Q fever	0
Spotted fever group (rickettsioses)	1
West Nile Virus Fever	0
West Nile Virus Neuroinvasive	18
Total	**87**

Graph 5. EL Paso Vector-Borne and Zoonotic cases, 2018-2021



VECTOR-BORNE AND ZOONOTIC DISEASES

Graph 6. EL Paso Vector-Borne and Zoonotic cases, 2018-2021

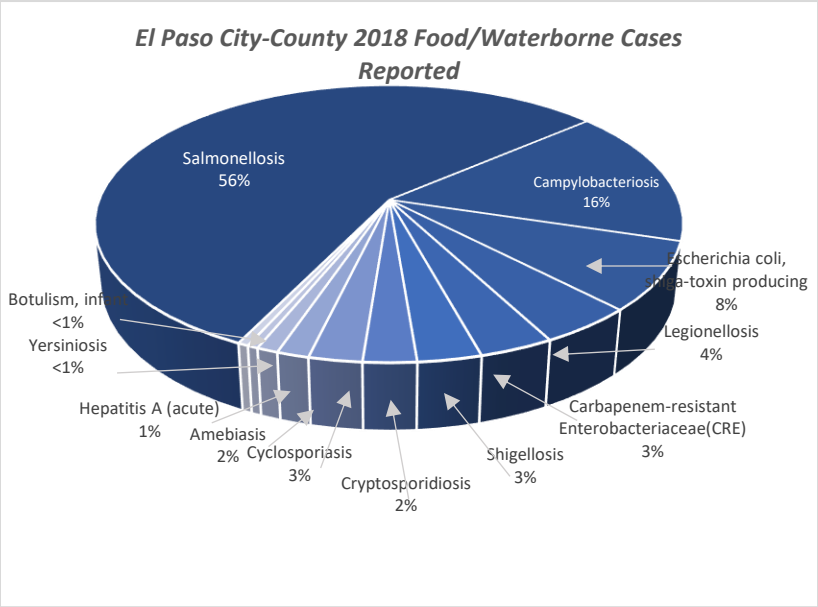


El Paso City-County Vector-Borne and Zoonotic	Cases Reported			
	2018	2019	2020	2021
Ascarias	1	1	0	1
Brucellosis	1	2	0	0
Chagas' disease	0	0	0	1
Coccidioidomycosis	21	10	33	61
Cysticercosis	0	0	0	2
Echinococcossis	1	0	0	0
Leishmaniasis	1	1	0	1
Lyme disease	0	0	2	1
Malaria	2	0	0	1
Q fever	0	1	0	0
Spotted fever group (rickettsioses)	0	1	1	1
West Nile Virus Fever	2	3	0	0
West Nile Virus Neuroinvasive	4	13	4	18
Total	**33**	**32**	**40**	**87**

Table 6. Vector-Borne and Zoonotic, number of cases, 2018-2021

Foodborne and Waterborne Illness

Bacteria, viruses, or parasites that are transmitted via the fecal-oral route, through contaminated food and water, and animal or person-to-person contact are known to cause enteric diseases. Waterborne illnesses are caused by water that is contaminated with disease-causing pathogens, which could be drinking or recreational water. While there are more than 250 foodborne and many waterborne diseases, the most common ones are Campylobacter, Salmonella, Shigella, and Escherichia coli O157:H7 or shiga toxin-producing E. coli (STEC). The symptoms and incubation periods for these enteric diseases vary each of these, ranging from hours to a week.

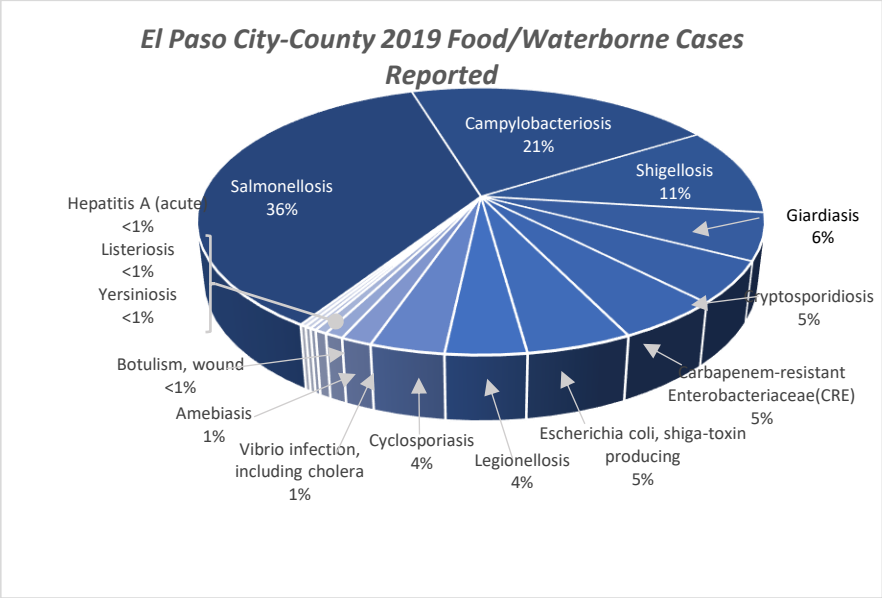


Graph 1. El Paso Food/Waterborne, percentage of cases, 2018

El Paso City-County 2018 Food/Waterborne	Cases Reported
Amebiasis	3
Botulism, infant	1
Botulism, wound	0
Campylobacteriosis	32
Carbapenem-resistant Enterobacteriaceae (CRE)	7
Cryptosporidiosis	5
Cyclosporiasis	5
Escherichia coli, shiga-toxin-producing	16
Giardiasis	0
Hepatitis A (acute)	2
Legionellosis	9
Listeriosis	0
Salmonellosis	113
Shigellosis	6
Typhoid Fever	0
Vibrio infection, including cholera	0
Yersiniosis	1
Total	**200**

Table 1. El Paso Food/Waterborne, number of cases, 2018

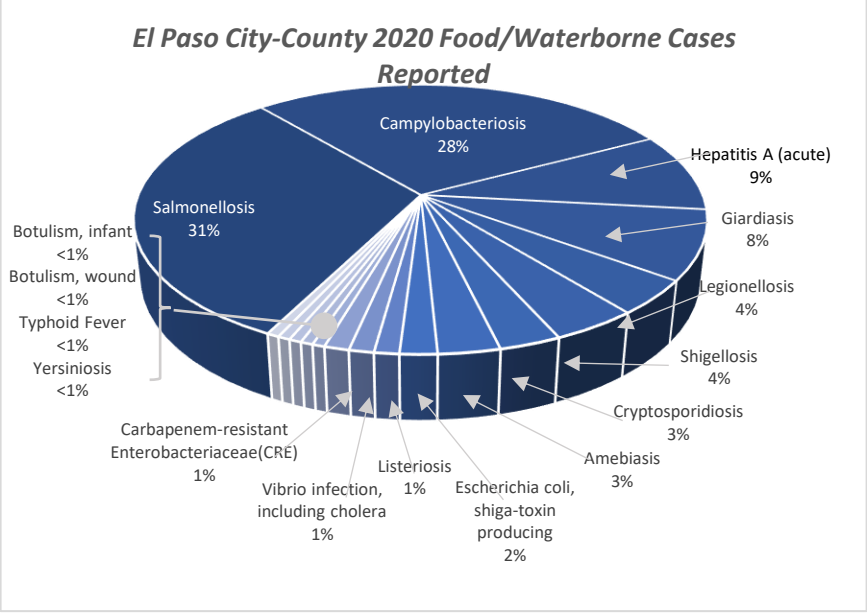
FOODBORNE AND WATERBORNE ILLNESS



Graph 2. El Paso Food/Waterborne, percentage of cases, 2019

Table 2. El Paso Food/Waterborne, number of cases, 2019

El Paso City-County 2019 Food/Waterborne	Cases Reported
Amebiasis	3
Botulism, infant	0
Botulism, wound	2
Campylobacteriosis	70
Carbapenem-resistant Enterobacteriaceae (CRE)	17
Cryptosporidiosis	17
Cyclosporiasis	12
Escherichia coli, shiga-toxin-producing	17
Giardiasis	19
Hepatitis A (acute)	1
Legionellosis	13
Listeriosis	1
Salmonellosis	121
Shigellosis	36
Typhoid Fever	0
Vibrio infection, including cholera	5
Yersiniosis	1
Total	**335**

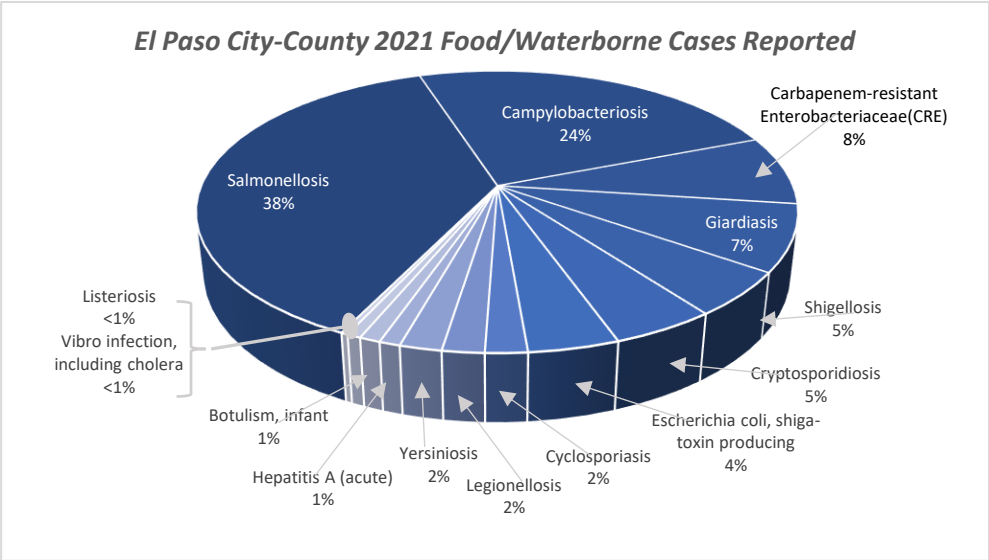


Graph 3. El Paso Food/Waterborne, percentage of cases, 2020

El Paso City-County 2020 Food/Waterborne	Cases Reported
Amebiasis	5
Botulism, infant	1
Botulism, wound	1
Campylobacteriosis	48
Carbapenem-resistant Enterobacteriaceae (CRE)	2
Cryptosporidiosis	5
Cyclosporiasis	1
Escherichia coli, shiga-toxin-producing	3
Giardiasis	14
Hepatitis A (acute)	16
Legionellosis	7
Listeriosis	2
Salmonellosis	53
Shigellosis	7
Typhoid Fever	1
Vibrio infection, including cholera	2
Yersiniosis	1
Total	**169**

Table 3. El Paso Food/Waterborne, number of cases, 2020

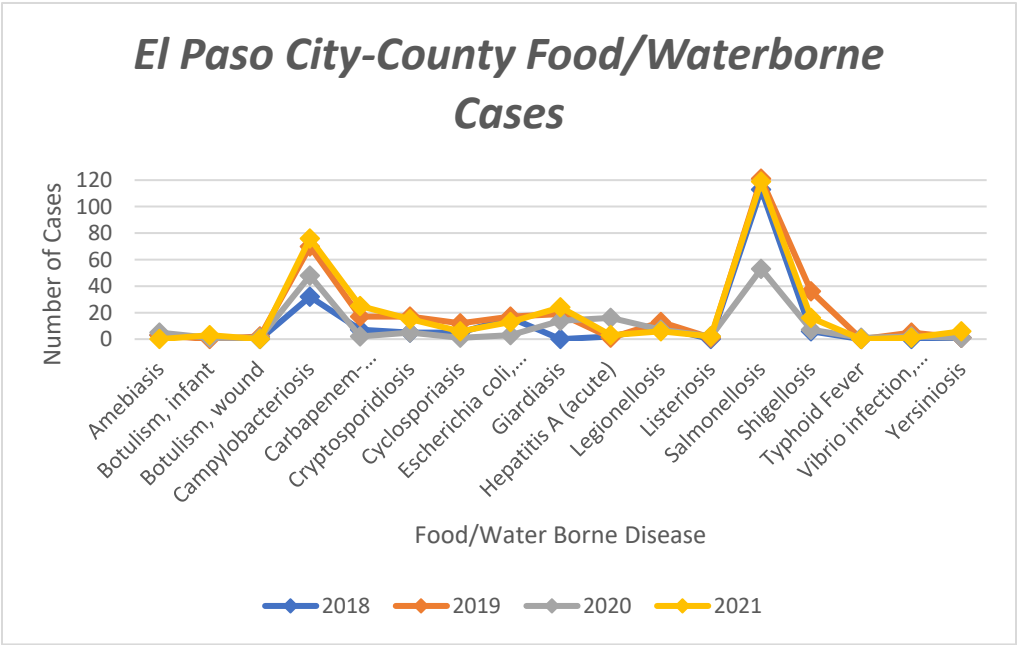
FOODBORNE AND WATERBORNE ILLNESS



Graph 4. El Paso Food/Waterborne, percentage of cases, 2021

Table 4. El Paso Food/Waterborne, percentage of cases, 2021

El Paso City-County 2021 Food/Waterborne	Cases Reported
Amebiasis	0
Botulism, infant	3
Botulism, wound	0
Campylobacteriosis	76
Carbapenem-resistant Enterobacteriaceae (CRE)	25
Cryptosporidiosis	15
Cyclosporiasis	6
Escherichia coli, shiga-toxin-producing	13
Giardiasis	24
Hepatitis A (acute)	3
Legionellosis	6
Listeriosis	2
Salmonellosis	119
Shigellosis	16
Typhoid Fever	0
Vibrio infection, including cholera	1
Yersiniosis	6
Total	**315**



Graph 5. El Paso Food/Waterborne cases, 2018-2021

El Paso City-County Food/Water Borne	Cases Reported			
	2018	2019	2020	2021
Amebiasis	3	3	5	0
Botulism, infant	1	0	1	3
Botulism, wound	0	2	1	0
Campylobacteriosis	32	70	48	76
Carbapenem-resistant Enterobacteriaceae(CRE)	7	17	2	25
Cryptosporidiosis	5	17	5	15
Cyclosporiasis	5	12	1	6
Escherichia coli, shiga-toxin producing	16	17	3	13
Giardiasis	0	19	14	24
Hepatitis A (acute)	2	1	16	3
Legionellosis	9	13	7	6
Listeriosis	0	1	2	2
Salmonellosis	113	121	53	119
Shigellosis	6	36	7	16
Typhoid Fever	0	0	1	0
Vibrio infection, including cholera	0	5	2	1
Yersiniosis	1	1	1	6
Total	**200**	**335**	**169**	**315**

Table 5. El Paso Food/Waterborne, number of cases, 2018

SEXUALLY TRANSMITTED INFECTIONS (STIs)

Sexually Transmitted Infections (STI)

The STI program falls under the Public Health Follow-Up Program which is responsible for receiving, recording, and monitoring STI case reports submitted by local health agencies within the El Paso City-County. This information, once analyzed, is utilized to generate a better understanding on STIs, to inform and guide preventive actions, and to allocate the resources necessary to conduct outreach, educate the community, and prevent the spread of these conditions. Through data gathered from 2018 to 2021 on STIs, this section illustrates the most prevalent conditions -Chlamydia, Gonorrhea, Syphilis, Hepatitis C, and HIV/AIDS.

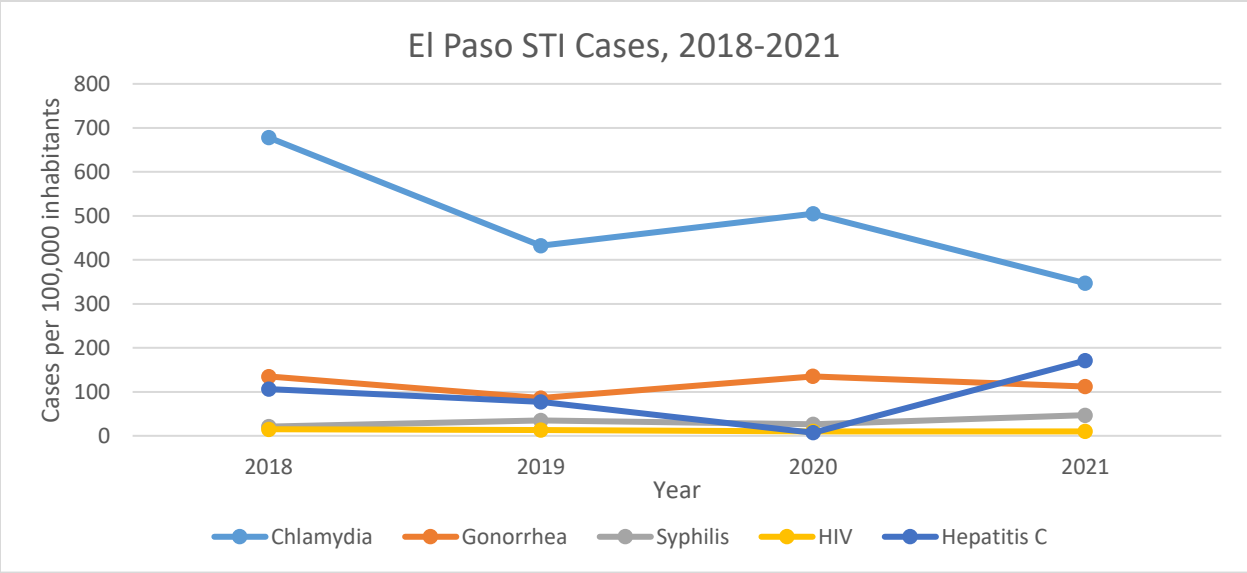
Conditions reported are all treatable and most are curable; however, early detection is critical to prevent complications and reduce spread. To reduce the risk of reinfection, our community partner services agencies provide a valuable opportunity for early intervention.

To account for the current population, the following chart represents cases per 100,000 individuals. Although Chlamydia has consistently remained the highest-reported STI in the El Paso City-County, Syphilis has experienced the fastest-growing rate, more than doubling in the last four years.
Gonorrhea cases have remained relatively stable, despite a slight decrease in 2019. On the other hand, HIV has seen a downward trend, particularly in regard to newly-diagnosed AIDS cases. Finally, Hepatitis C has experienced the sharpest fluctuation, dropping from 2018 to 2020, before spiking in 2021. This section will elaborate on the trends of STIs and discuss them in terms of sex and age.

Disease	2018	2019	2020	2021
Chlamydia	678	432	505	347
Gonorrhea	135	86	135	112
Syphilis, Total	21	35	26	47
HIV	15	13	10	10
AIDS	1.8	0.7	1.3	1
Hepatitis C, Total	106	77	7	171

Table 1. El Paso STI cases per 100,000 individuals, 2018-2021

SEXUALLY TRANSMITTED INFECTIONS (STIs)



Graph 1. El Paso STI trends, 2018-2021

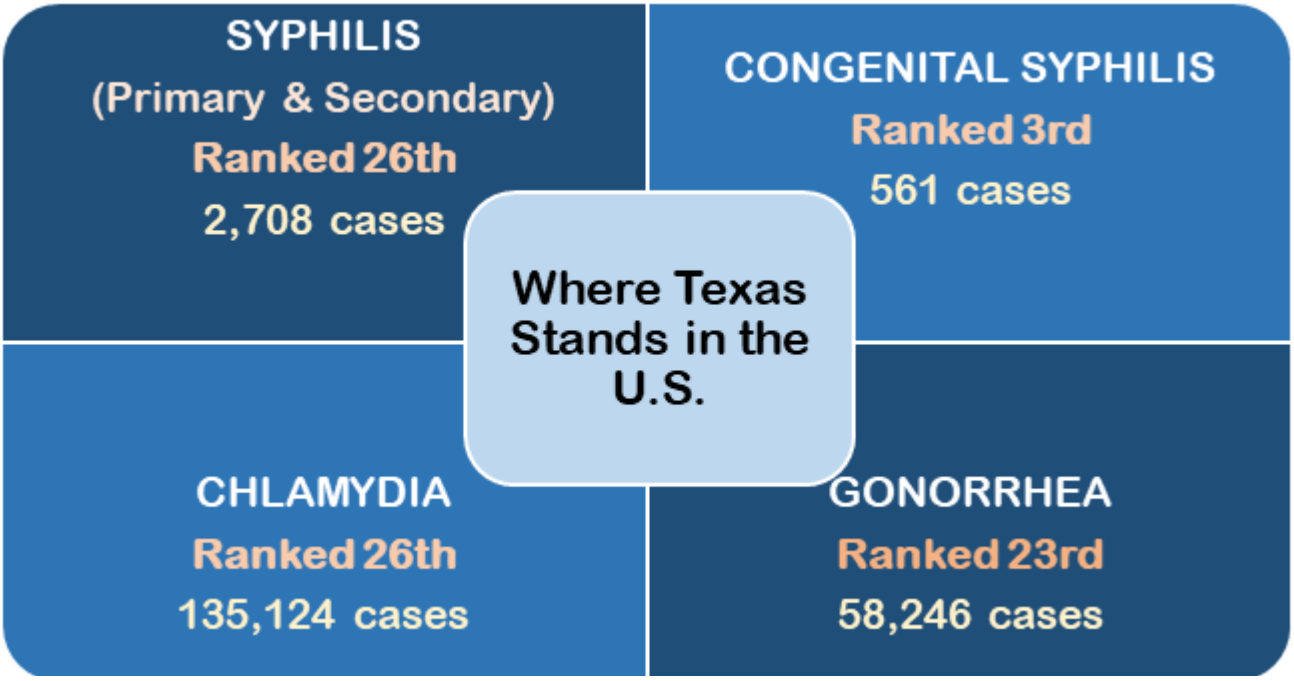


Figure 1. Texas STI rates compared to the rest of the nation.

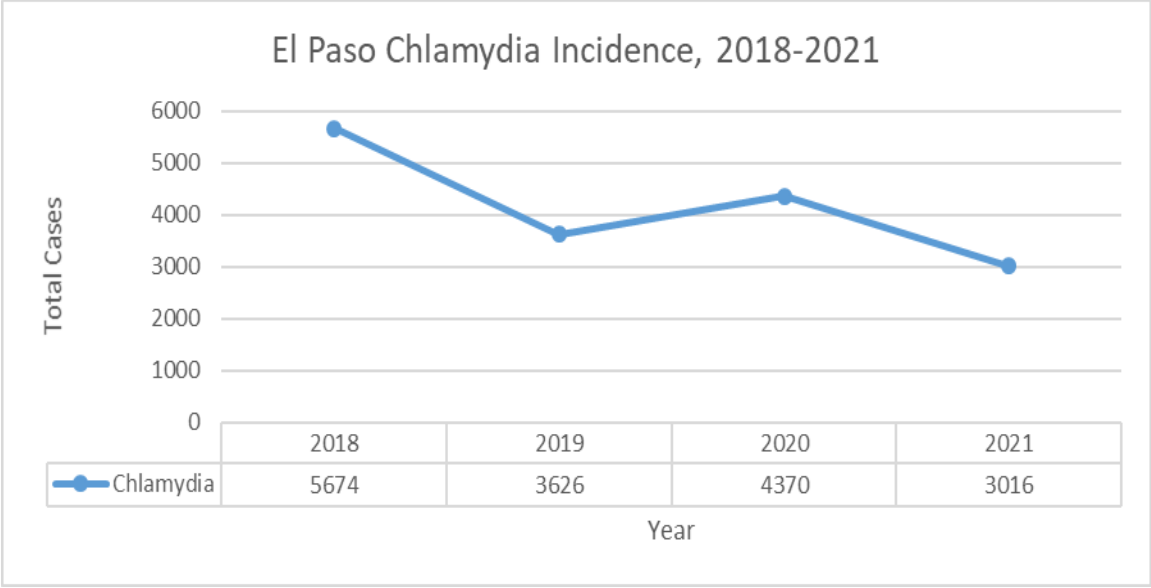
SEXUALLY TRANSMITTED INFECTIONS (STIs)

Chlamydia

Chlamydia trachomatis is a gram-negative bacterium behind the most common non-viral STD in the world. Clinically, Chlamydia usually manifests in the form of genital discharge combined with painful urination, but can frequently be found affecting the throat and rectal areas.

Due to treatment failure in recent years, the Centers for Disease Control (CDC) has altered the prescribed treatment regimen for Chlamydia in 2021 to 100mg of Doxycycline twice a day for 7 days. If left untreated, it can lead to serious complications in women including the development of pelvic inflammatory disease (PID) which can then cause ectopic pregnancy or infertility. Exposure during childbirth increases the risk of blindness in the infant, a condition known as trachoma. Although men do not typically suffer long-term complications, there have been cases of infertility reported.

In 2019 the DPH received 3,626 reports of Chlamydia, a noticeable decrease when compared to the 5,674 reported in 2018. However, in 2020 El Paso City-County experienced a slight increase with 4,370 cases reported to the health department before plummeting in 2021 with only 3,016 reports.



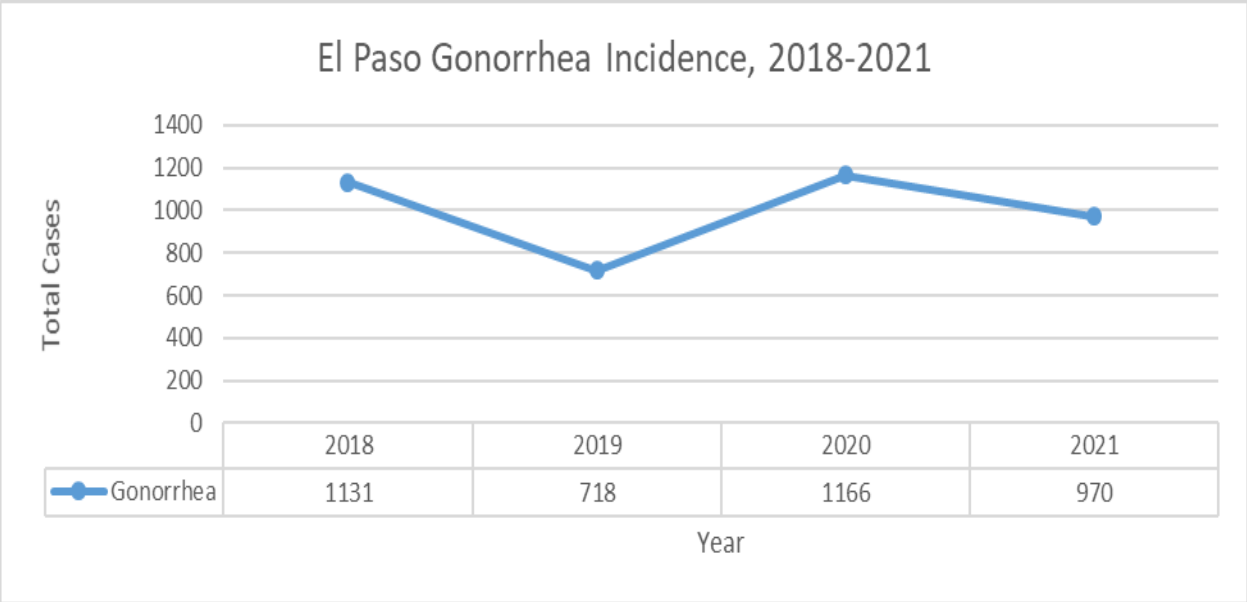
Graph 2. El Paso Chlamydia cases 2018-2021

SEXUALLY TRANSMITTED INFECTIONS (STIs)

Gonorrhea

Caused by the diplococcus Neisseria gonorrhoeae, Gonorrhea can incubate in the throat and rectum in addition to the genitals. Although most infections are asymptomatic, some women experience painful urination, increased vaginal discharge, and vaginal bleeding between periods; in addition to painful urination, men may also experience penile discharge and painful or swollen testicles. When located in the rectum, the infection may cause anal itching, discharge, bleeding, and painful bowel movements. Additionally, an infant born to a woman with Gonorrhea can develop skin or eye infection. The CDC has tracked numerous treatment failures associated with Gonorrhea and therefore the suggested treatment guideline has been updated to 500mg intramuscular Ceftriaxone.

In the past four years, Gonorrhea has experienced fluctuating trends, while overall remaining considerably less widespread than Chlamydia. Despite trending towards 1000 reports per year, a noticeable decline was observed in 2019 with 718 cases reported, and a second, yet lesser, the decline was observed in 2021 with 970 reports.



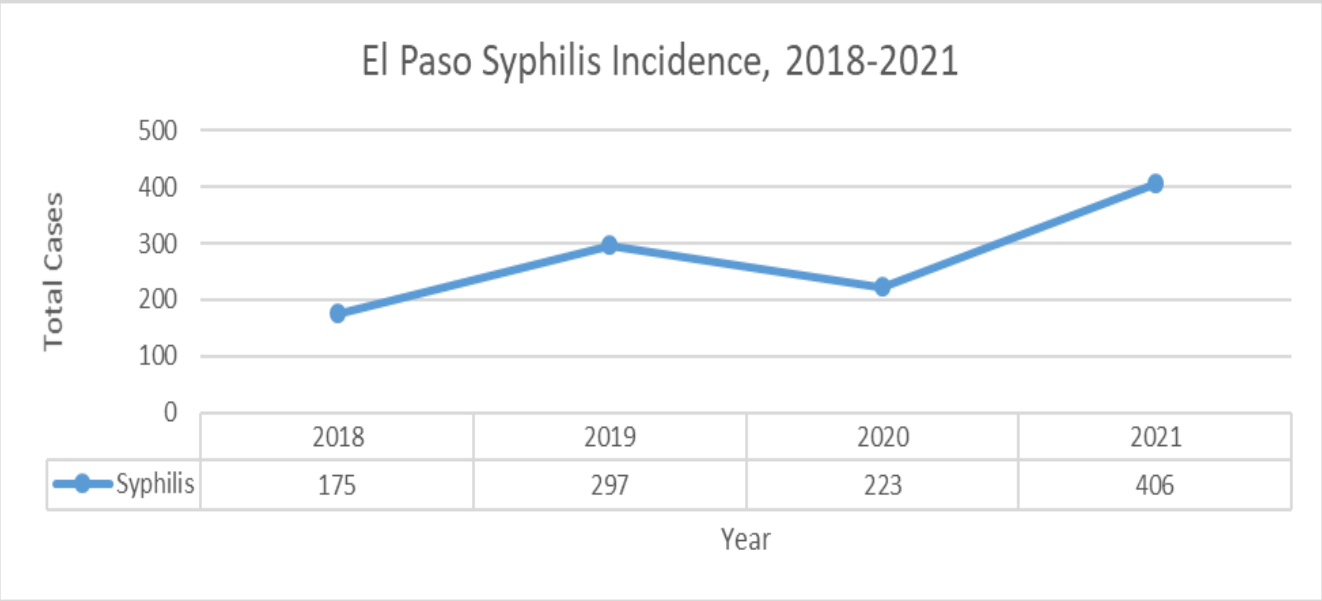
Graph 3. El Paso Gonorrhea cases 2018-2021

SEXUALLY TRANSMITTED INFECTIONS (STIs)

Syphilis

Syphilis is a progressive condition caused by the spirochete Treponema pallidum; initial symptoms include a painless lesion known as a chancre, before progressing to a distinctive rash affecting the palms of the hands and soles of the feet. Late stages may result in damage to the central nervous system, leading to dementia-like confusion.

Early stages are fully cured with one dose of IM Benzathine Penicillin; therefore, yearly testing is important as it allows health officers to determine the length of an infection and guides clinicians towards adequate treatment. However, due to the difficulty in eliminating long-term infections, late syphilis requires a course of three doses of penicillin administered a week apart. Of particular notice, is the specificity of such treatment, particularly in regards to pregnant women: those missing a dose must restart the injections to be considered adequately treated and prevent further complications and congenital transmission.

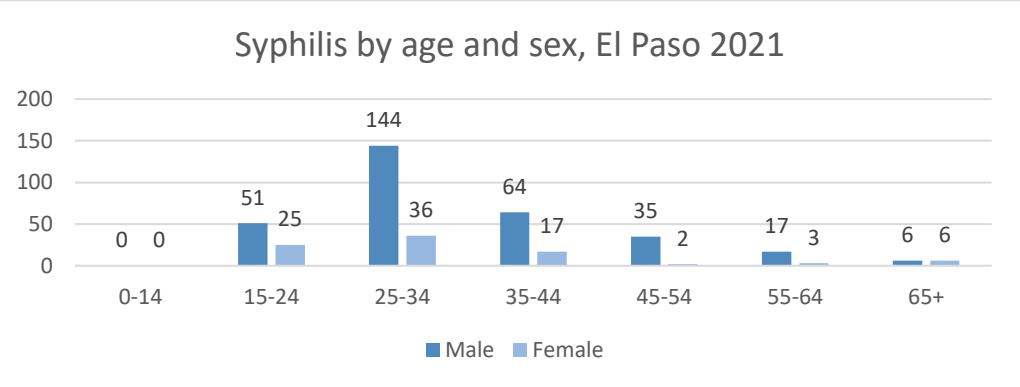


Graph 4. El Paso Syphilis cases 2018-2021

El Paso City-County has experienced a steady rise in Syphilis cases over the last few years, with 175 total new infections in 2018, 297 and 223 in 2019 and 2020 respectively, and reaching 406 in 2021.

SEXUALLY TRANSMITTED INFECTIONS (STIs)

As visualized in the population chart below, Syphilis primarily affects individuals in their mid-to-late 20s and early 30s and is most commonly found in males. A major concern stems from the fact that women of reproductive age represent a major demographic group affected by this condition, emphasizing the importance of STI testing during pregnancy.



Graph 5. Demographic breakdown of Syphilis in El Paso County, 2021

Congenital Syphilis (CS) arises when an infected mother does not receive adequate treatment before delivery and passes the infection to the infant. The disease can cause severe health complications in babies including jaundice, bone deformity, anemia, blindness, and other neurological problems. Furthermore, there have been cases reported in which CS causes the mother to undergo a miscarriage or delivery of a stillbirth. In 2021, the health department received two reports of syphilitic stillbirths in El Paso City-County, prompting the release of a health advisory on April 21 of that year. Both stillbirths occurred to women in their 30s, however the first stillborn was a female at 30 weeks of gestation while the second was a male at 31 weeks. To prevent CS, Texas law requires physicians to test all pregnant women for Syphilis during their first prenatal visit and retest in the third trimester.

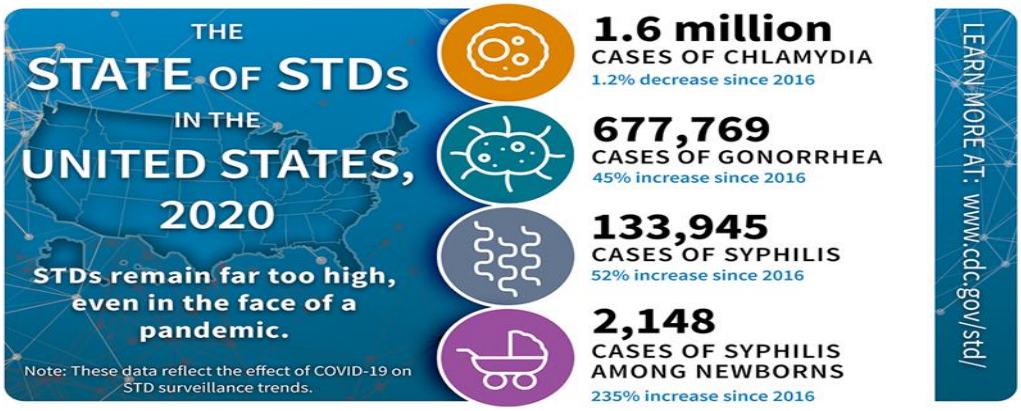


Figure 2. STI numbers at a glance. Courtesy of CDC at https://cdc.gov/std/statistics/2020/infographic.htm#SMgraphics

SEXUALLY TRANSMITTED INFECTIONS (STIs)

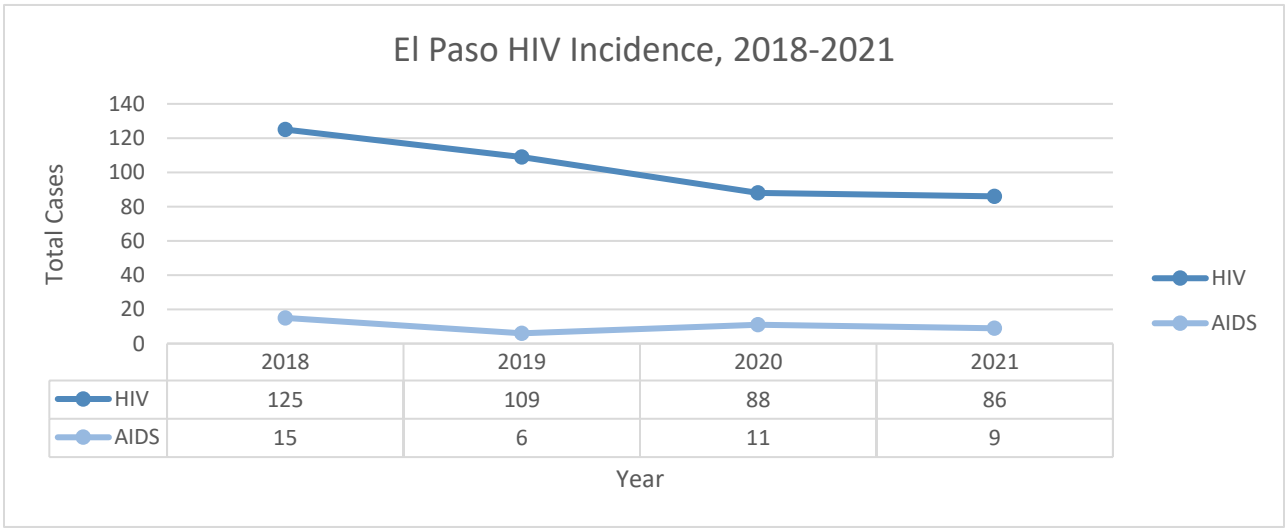
HIV/AIDS

The Human Immunodeficiency Virus (HIV) affects cells of the immune system, diminishing an individual's ability to fight infections. These opportunistic infections then pose a significant threat, especially in the final stage of HIV progression, known as Acquired Immunodeficiency Syndrome (AIDS). While characteristically asymptomatic, individuals with recently-acquired HIV may experience flu-like symptoms including chills, fatigue, night sweats, and headaches.

HIV management is considered a miracle of modern medicine, with people living with HIV enjoying an undiminished quality of life thanks to the widespread availability of antiretroviral therapy. The DPH is proud to collaborate with three Ryan White CARE Act Grant awardees who provide affordable HIV treatments to our community.

HIV progression to AIDS has decreased in the last decade, in part due to education programs and the availability of medication, as well as a widespread understanding of the concept of viral suppression. Once an individual reaches a viral load lower than 200 copies per milliliter of blood, their risk of transmitting the infection dramatically decreases by about 99.99%.

As part of the CDC's Ending the HIV Epidemic campaign, strategic community mobilization, and outreach goals have led to a decrease in HIV transmission in recent years. Despite seeing 125 new cases of HIV in 2018, the program has reported less than 90 instances in 2020 and 2021.

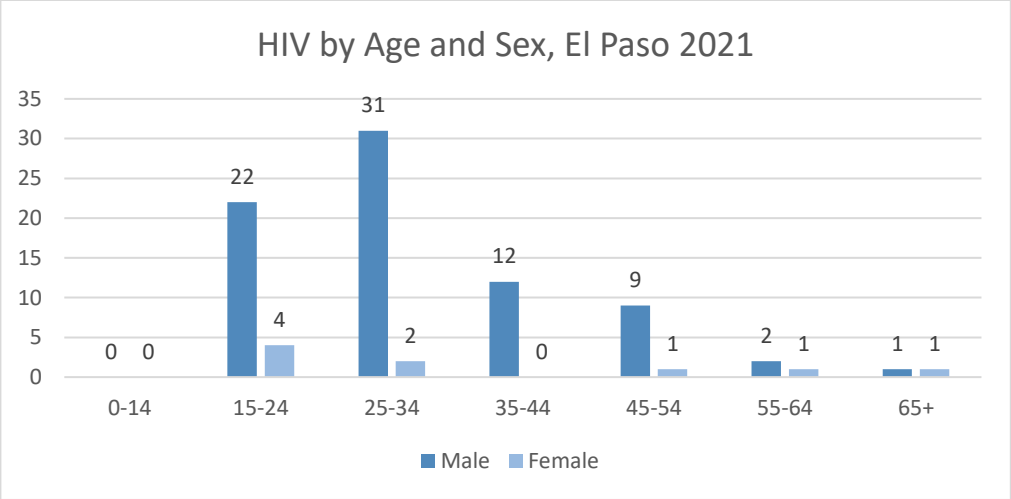


	2018	2019	2020	2021
HIV	125	109	88	86
AIDS	15	6	11	9

Graph 6. El Paso HIV/AIDS cases 2018-2021

SEXUALLY TRANSMITTED INFECTIONS (STIs)

The demographic breakdown of HIV in El Paso City-County centers around males aged 25 through 34, while in females the majority of cases occur in the late teens and early twenties.

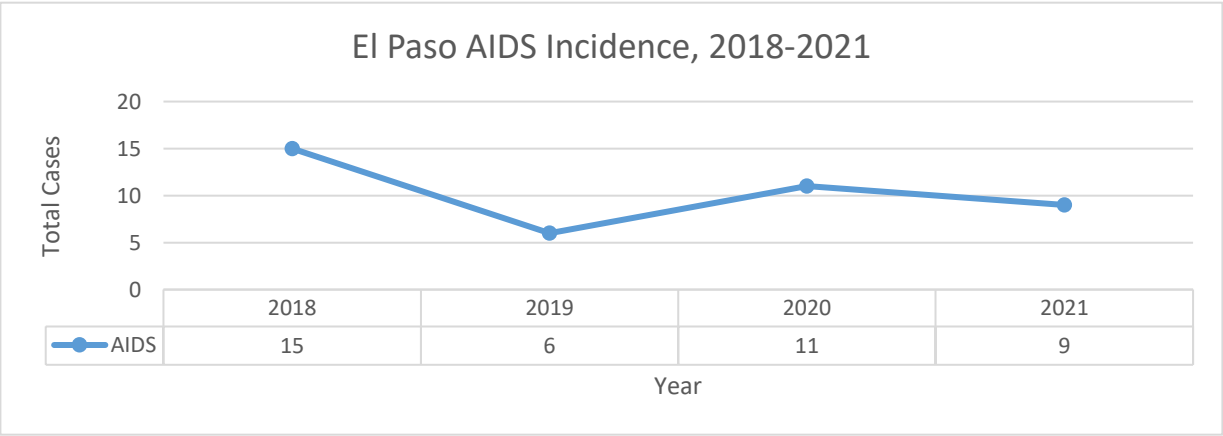


Graph 7. El Paso HIV cases by age and sex, 2021

AIDS

If left untreated, HIV will continue to deplete an individual's CD4+ cells until their immune system is no longer able to mount a defense. This condition, known as Acquired Immunodeficiency Syndrome (AIDS) is defined as the moment the patient's CD4+ count drops below 200 cells per microlitre.

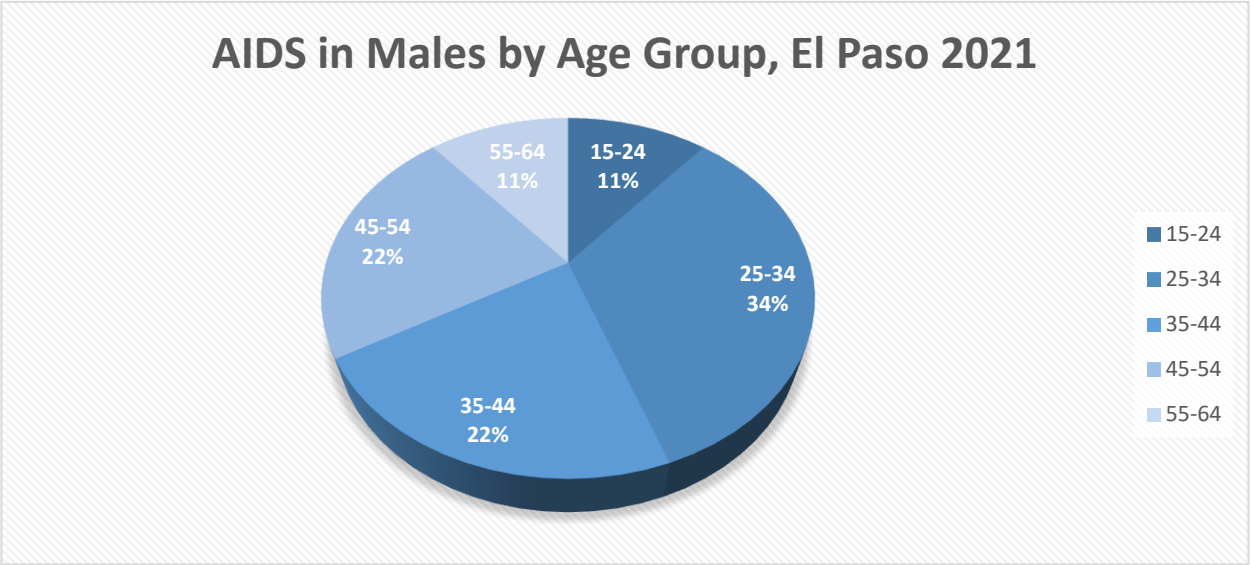
Thanks in part to the aforementioned nationwide goals leading to increased prevention and early intervention efforts, fewer new AIDS diagnoses have been reported in the El Paso City-County compared to previous years. In 2018, 15 newly-diagnosed individuals were diagnosed with AIDS, compared to only 9 in 2021.



Graph 8. El Paso new AIDS cases 2018-2021

SEXUALLY TRANSMITTED INFECTIONS (STIs)

New AIDS cases in El Paso City-County have been identified in males primarily aged 25-34, often diagnosed as a result of hospitalizations involving opportunistic infections. It is worth mentioning there are no newly-diagnosed women with AIDS in El Paso City-County as of 2021.



Graph 9. El Paso AIDS demographic breakdown 2021

Limitations

The DPH began tracking internal data in 2021, relying on the Texas Center for Health Statistics for previous years. Due in part to ramifications surrounding the COVID-19 Pandemic, data analysis and processing is severely limited for the years 2019 and 2020. Where applicable, a demographic profile has been stratified by age and sex; future expansion will allow for a more robust interpretation of STI cases in the El Paso City-County.

TUBERCULOSIS

Tuberculosis Program

The mission of the Tuberculosis (TB) Program is to mitigate the spread of TB in El Paso City-County by prompt identification and appropriate treatment of persons infected with TB.

The TB Program works with hospitals, physicians, and other medical providers to:

1) Identify and treat TB disease;
2) Identify, evaluate, and treat newly infected contacts to infectious TB cases; and,
3) Screen high-risk populations for TB infection,
4) Treat Latent TB Infection to minimize progression to TB Disease.

TB and Latent TB Infection

Tuberculosis (TB) is caused by a bacterium called Mycobacterium Tuberculosis. TB is spread through the air (airborne) from one person to another. The TB bacteria is released into the air when a person with TB disease of the lungs, coughs, sneezes, speaks or sings. Those individuals who are nearby may become exposed to the TB bacterium and in turn, become infected. The bacterium usually attacks the lungs, but TB bacteria can attack any part of the body such as the kidneys, spine, and brain. Although, not every individual infected with the TB bacteria can become sick, if not treated or diagnosed properly, TB disease can be fatal. As a result, two TB-related conditions exist: Latent TB Infection (TBI) and Active TB disease (TB). If not treated or diagnosed properly, TB disease can be fatal.

TB is NOT spread by:

- shaking someone's hand,
- sharing food or drinks,
- touching bed linens or toilet seats,
- sharing toothbrushes,
- or by kissing.

People who are infected with TBI have the TB bacterium in their body but do not feel sick nor have symptoms. These individuals cannot spread the TB bacterium. However, they may convert to TB disease if their immune system is suppressed.
People with TB disease can be treated and cured if they seek medical help and proper treatment. People who are infected with TBI can take preventive treatment to reduce their risk of progressing to TB disease in the future.

Signs and Symptoms of TB Disease

Symptoms of TB disease are dependent on where the TB Bacterium is present. TB bacteria most typically grows in the lungs (pulmonary TB). TB disease in the lungs may cause symptoms such as a cough that lasts 3 weeks or longer, chest pain, or coughing up blood or sputum (phlegm from deep inside the lungs). Other symptoms of TB disease are weakness or fatigue, weight loss, no appetite, chills, fever, or night sweats.

Treatment

Latent TB infection (TBI) and TB disease can be treated. TB disease treatment is provided by using Directly Observed Therapy (DOT), which is advised by the CDC. If TB disease is not treated, it can be fatal. TB treatment consists of a four-drug regimen in which all four antibiotics target the TB bacteria to eliminate it. The treatment for TB is known as RIPE (Rifampin, Isoniazid, Pyrazinamide, Ethambutol), all four drugs are used for the elimination of the TB bacteria. TB treatment can be anywhere from 6 months to as long as 12 months. Latent TB treatment is provided as well, which reduces the risk that the TB latent infection will progress to TB disease. Treatment of TBI is essential for controlling and eliminating TB in the United States.

As of now, four regimens are approved for the treatment of TBI. We offer a 12-week treatment (3-HP) for those who meet CDC protocol. This is a fast-track treatment and the latest regimen for combating TBI. The treatments/ medications used to treat TBI are Isoniazid (INH) and Rifapentine (3HP), Rifampin (4R), Isoniazid and Rifampin (3HR), and Isoniazid (6H/9H).

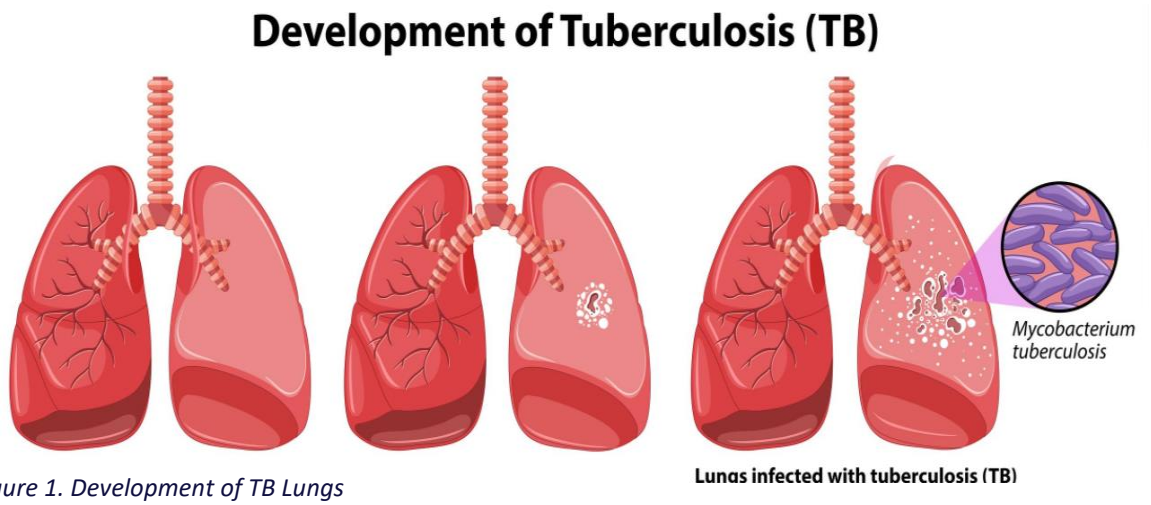


Figure 1. Development of TB Lungs

TUBERCULOSIS

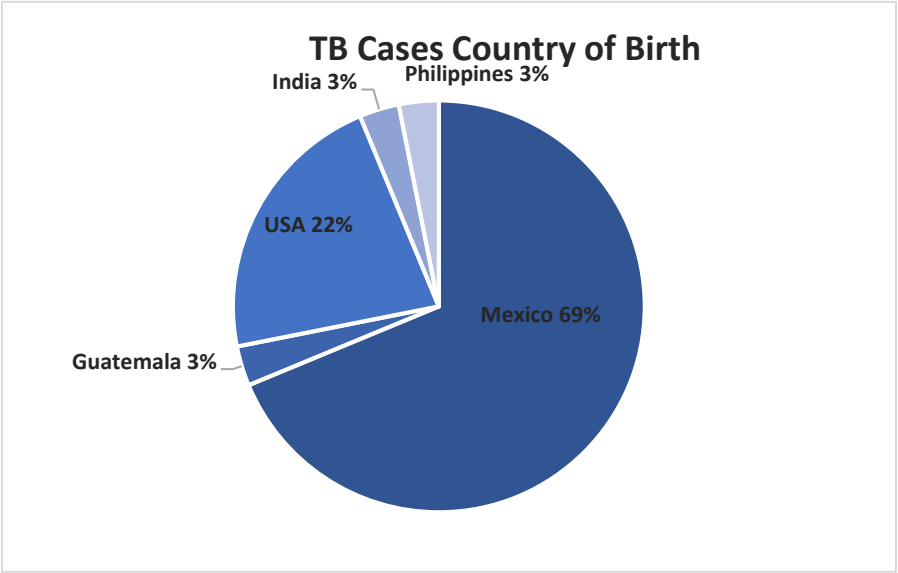
2018 TB Data

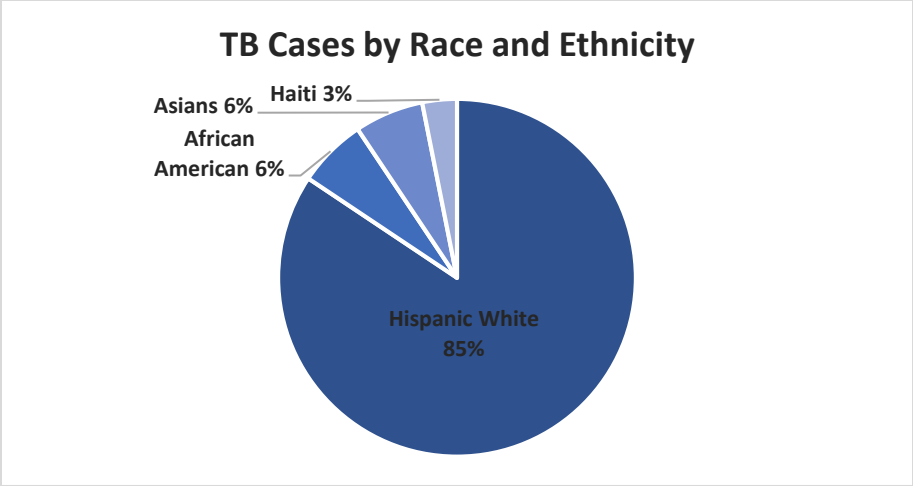
During the period January 1, 2018, to December 31, 2018, the TB program confirmed 32 total TB cases, 26 of which were pulmonary cases; 6 were extrapulmonary cases. There were 175 TB disease suspect cases.

Table 1. Country of Birth, number of cases, 2018

Country of Birth	Cases Reported
USA	7
Mexico	22
Guatemala	1
India	1
Philippines	1
Total	32

Graph 1. Country of Birth, percentage of cases, 2018





Graph 2. Race/Ethnicity, number of cases, 2018

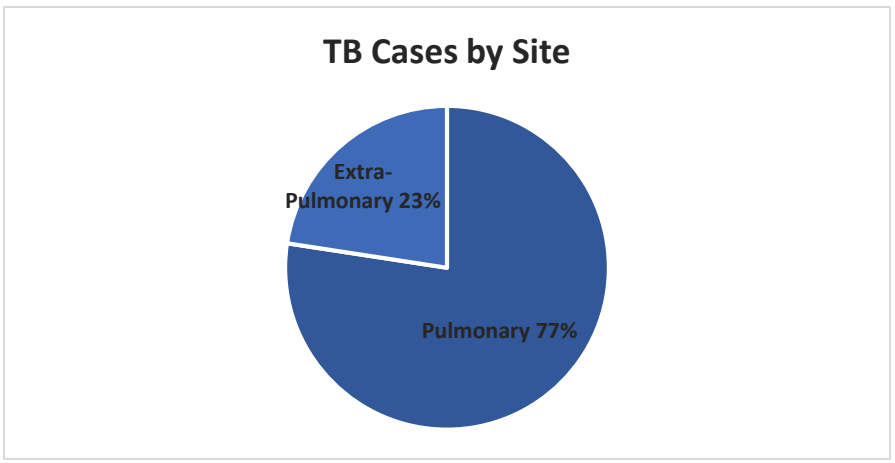
Race/ Ethnicity	Cases Reported
Hispanic White	27
African American	2
Asians	2
Haiti	1
Total	32

Table 2. Race/Ethnicity, number of cases, 2018

Site	Cases Reported
Pulmonary	25
Extra Pulmonary	7
Total	32

Table 3. Cases by Site, number of cases, 2018

Graph 3. Cases by Site, number of cases, 2018

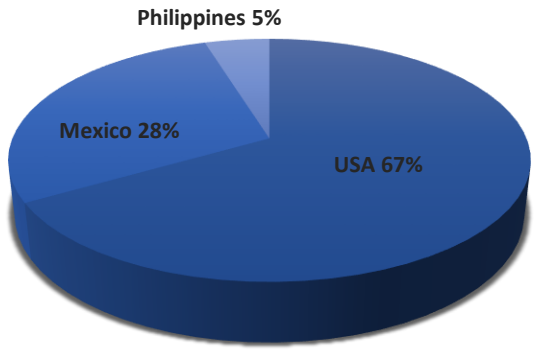


TUBERCULOSIS

2019 TB Data

During the period January 1, 2019, to December 31, 2019, the TB program confirmed a total of 21 total TB cases, 17 of which were pulmonary TB cases, and four individuals confirmed with extrapulmonary TB. There were 197 individuals suspected of having TB disease.

TB Cases by Country of Birth



Graph 4. Country of Birth, percentage of cases, 2019

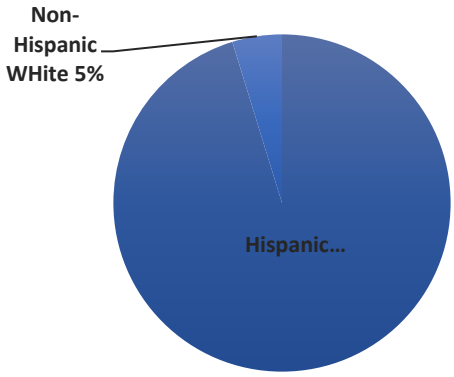
Table 4. Country of Birth, number of cases, 2019

Country of Birth	Cases Reported
USA	14
Mexico	6
Philippines	1
Total	21

Race/ Ethnicity	Cases Reported
Hispanic White	20
Non-Hispanic White	1
Total	21

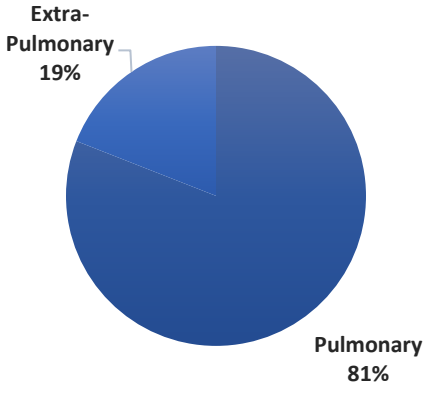
Table 5. Race/Ethnicity, number of cases, 2019

Cases by Race/ Ethnicity



Graph 5. Race/Ethnicity, percentage of cases, 2019

TB Cases by Sites



Graph 6. Cases by Sites, percentage of cases, 2019

Site	Cases Reported
Pulmonary	17
Extra Pulmonary	4
Total	21

Table 6. Cases by Sites, number of cases, 2019

TUBERCULOSIS

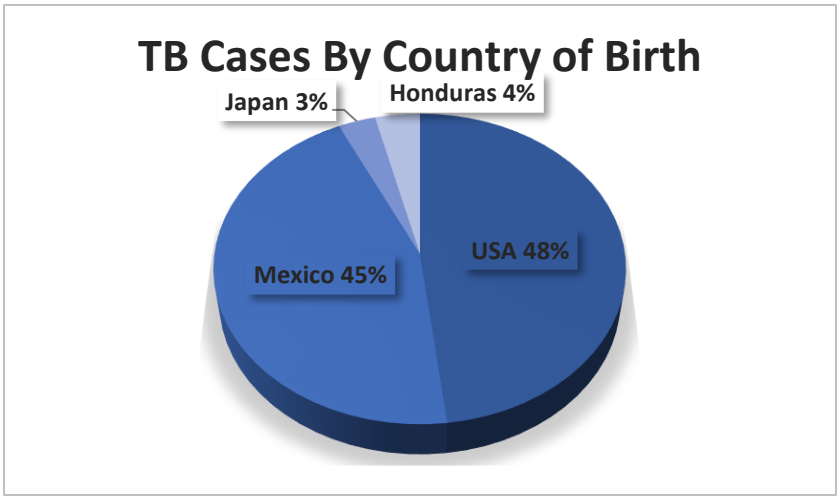
2020 TB Data

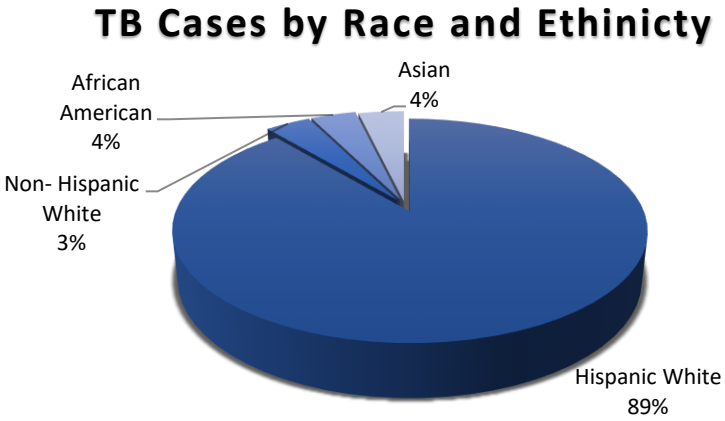
During the period January 1, 2020, to December 31, 2020, the TB program confirmed a total of 31 TB cases, with 77.0% of these being pulmonary cases. There were two extrapulmonary cases in addition to these. There were 80 individuals suspected of having TB disease.

Country of Birth	Cases Reported
USA	15
Mexico	14
Japan	1
Honduras	1
Total	31

Table 7. Country of Birth, number of cases, 2020

Graph 7. Country of Birth, percentage of cases, 2020





Graph 8. Race/Ethnicity, percentage of cases, 2020

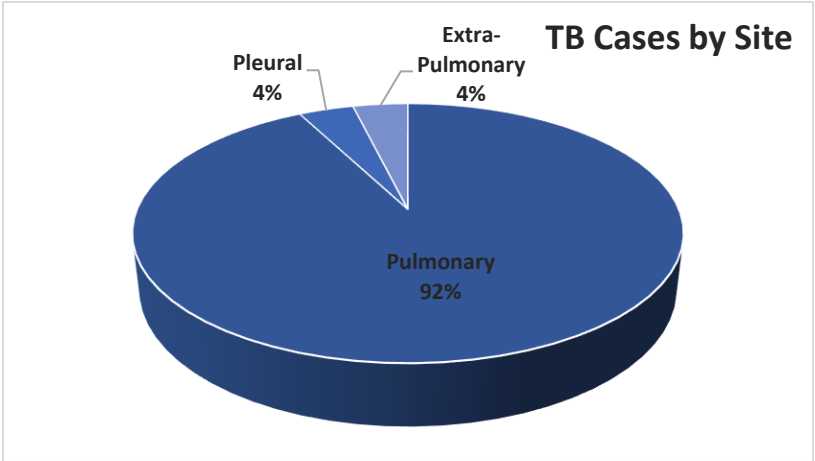
Table 8. Race/Ethnicity, number of cases, 2020

Race/ Ethnicity	Cases Reported
Hispanic White	28
Non-Hispanic White	1
African American	1
Asian	1
Total	31

Site	Cases Reported
Pulmonary	29
Extra Pulmonary	2
Total	31

Table 9. Cases by Site, number of cases, 2020

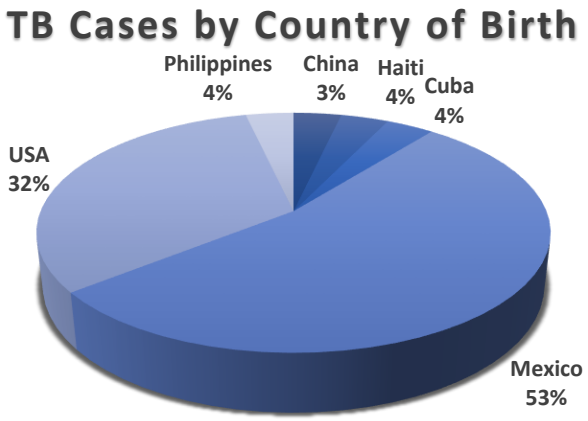
Graph 9. Cases by Site, percentage of cases, 2020



TUBERCULOSIS

2021 TB Data

During the period January 1, 2021, to December 31, 2021, the TB program investigated all suspected and confirmed cases of tuberculosis disease in El Paso City-County. There were 28 total confirmed TB cases; 92.8% of these were pulmonary with bacteria in the lungs. Two cases were extra-pulmonary, meaning TB disease occurred in any other part of the body other than the lungs. There were 125 individuals suspected of having TB disease.



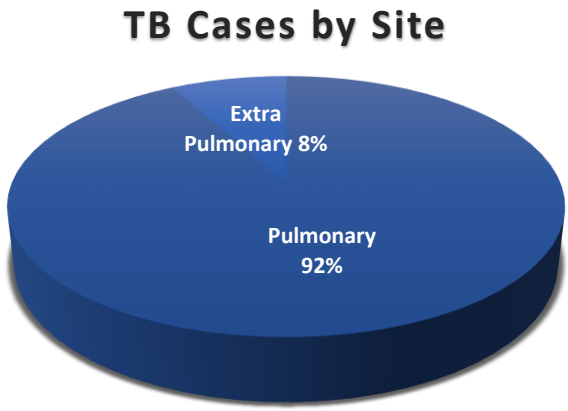
Graph 10. Country by Birth, percentage of cases, 2021

Table 10. Country of Birth, number of cases, 2021

Country of Birth	Cases
USA	9
Mexico	15
China	1
Haiti	1
Cuba	1
Philippines	1
Total	**28**

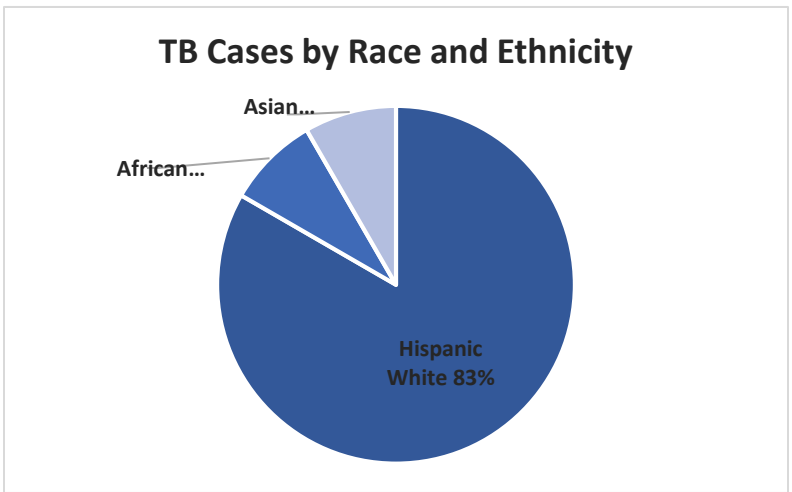
Site	Cases Reported
Pulmonary	**26**
Extra Pulmonary	**2**
Total	**28**

Table 11. Cases by Site, number of cases, 2021



Graph 11. Cases by site, percentage of cases, 2021

Graph 12. Race/Ethnicity, percentage of cases, 2021



Race/ Ethnicity	Cases Reported
Hispanic White	**24**
African American	**2**
Asian	**2**
Total	**28**

Table 12. Race/Ethnicity, number of cases, 2021

VACCINE-PREVENTABLE DISEASES

Vaccine-Preventable Diseases (VPD)

Vaccine-Preventable Diseases (VPDs) are infectious diseases caused by viruses or bacteria that can be prevented with vaccines. According to the CDC, tens and thousands of people in the United States become ill with VPDs (CDC, 2019).

On-time vaccination throughout childhood is vital because it is the best way to prevent infection before exposure to potentially life-threatening diseases. Immunity is the body's way of preventing disease. Although vaccinated individuals can still become infected with diseases, however, those who have at least received 1 dose of the vaccine have less severe outcomes than those unvaccinated.

Unvaccinated children are at increased risk of vaccine-preventable diseases such as Chickenpox, Diphtheria, Flu, Hepatitis A, Hepatitis B, Hib, HPV, Measles, Meningococcal, Mumps, Polio, Pneumococcal, Rotavirus, Rubella, Tetanus, Whooping cough (Pertussis), and SARS CoV-2 (COVID-19). All vaccine-preventable diseases are reported to the DPH, and investigated by the epidemiology staff.

The graph below shows Chickenpox (varicella) Measles (rubeola), Mumps, and Pertussis cases reported in El Paso Citv-Countv from 2018 to 2021.

Graph 1. El Paso VPD, percentage of cases, 2018

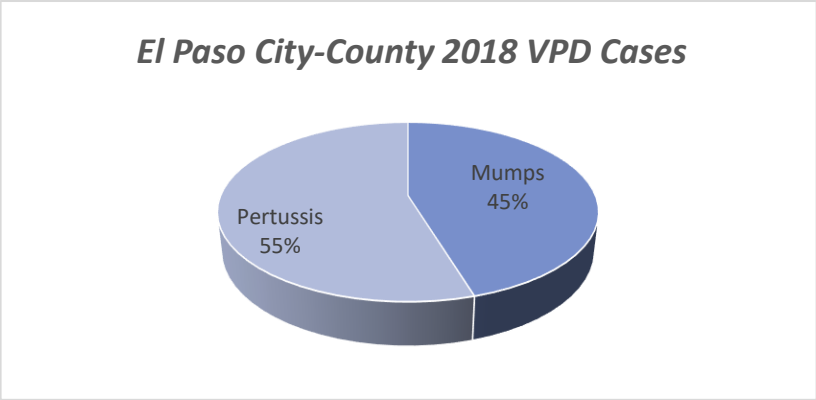


Table 1. El Paso VPD, number of cases, 2018

El Paso City-County 2018	Cases Reported
Chickenpox (varicella)	0
Measles (rubeola)	0
Mumps	24
Pertussis	29
Total	**53**

Graph 2. El Paso VPD, percentage of cases, 2019

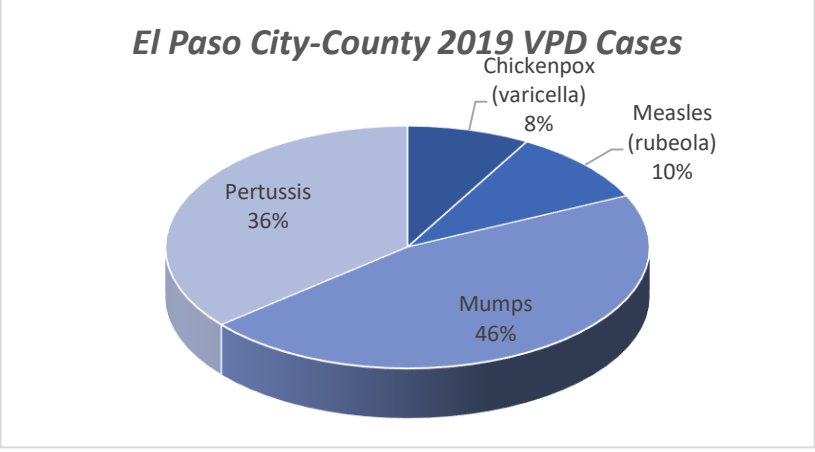


Table 2. El Paso VPD, number of cases, 2019

El Paso City-County 2019	Cases Reported
Chickenpox (varicella)	5
Measles (rubeola)	6
Mumps	28
Pertussis	22
Total	**61**

VACCINE-PREVENTABLE DISEASES

Graph 3. El Paso VPD, percentage of cases, 2020

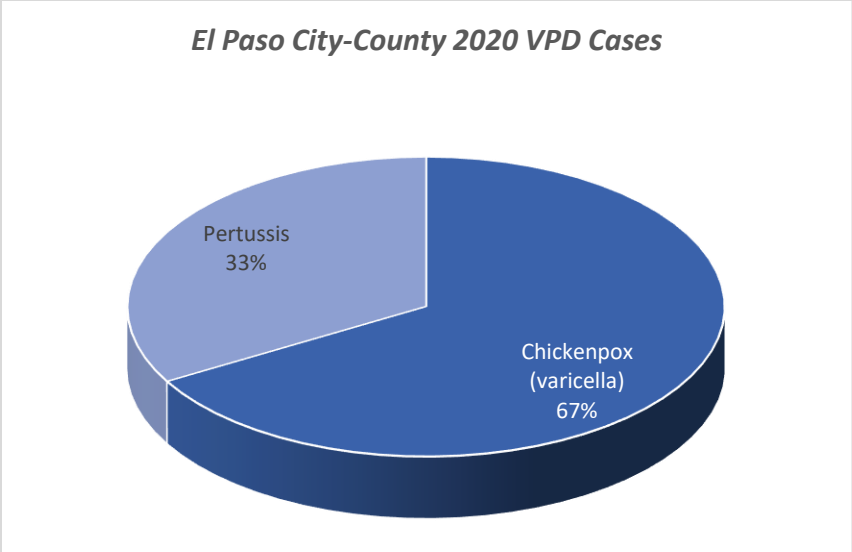


Table 3. El Paso VPD, number of cases, 2020

El Paso City-County 2020	Cases Reported
Chickenpox (varicella)	2
Measles (rubeola)	0
Mumps	0
Pertussis	1
Total	**3**

Graph 4. El Paso VPD, percentage of cases, 2021

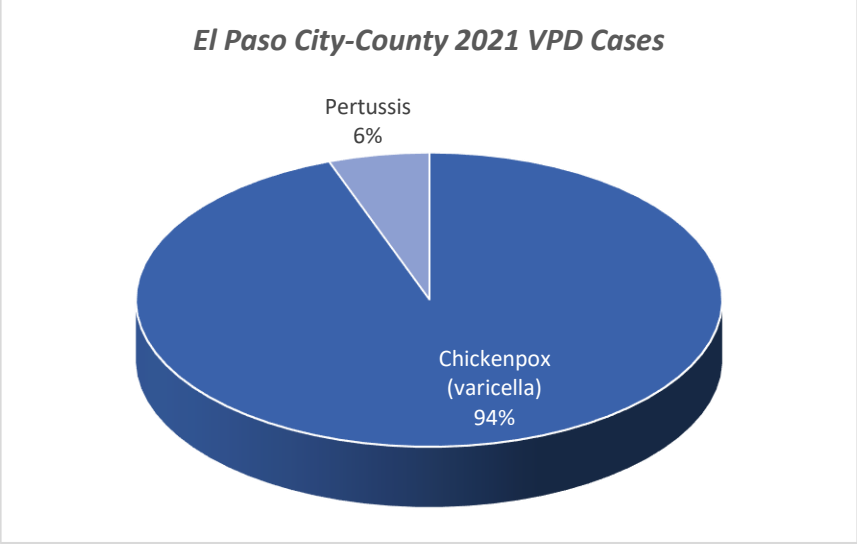
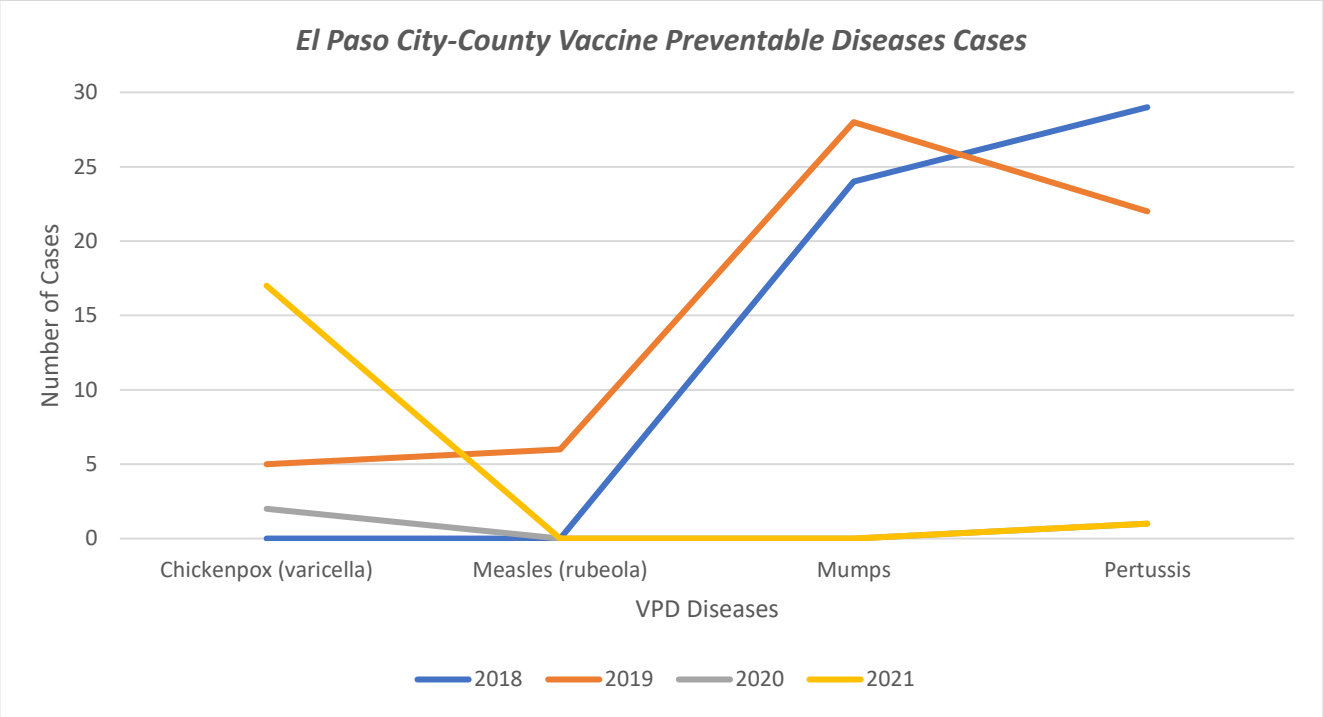


Table 4. El Paso VPD, number of cases, 2021

El Paso City-County 2021	Cases Reported
Chickenpox (varicella)	17
Measles (rubeola)	0
Mumps	0
Pertussis	1
Total	**18**

VACCINE-PREVENTABLE DISEASES



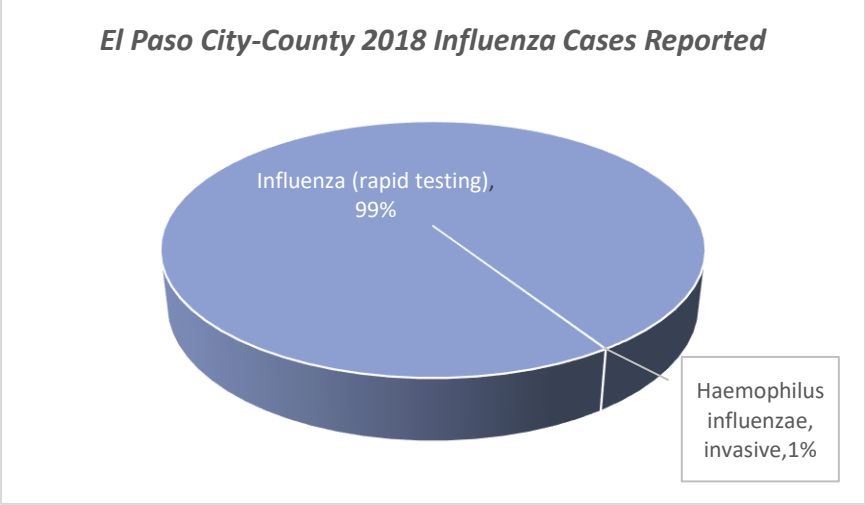
Graph 5. El Paso VPD cases, 2018-2019

El Paso City-County Vaccine-Preventable Disease	Cases Reported			
	2018	2019	2020	2021
Chickenpox (varicella)	0	5	2	17
Measles (rubeola)	0	6	0	0
Mumps	24	28	0	0
Pertussis	29	22	1	1
Total	**53**	**61**	**3**	**18**

Table 5. El Paso VPD number of cases, 2018-2019

Influenza (Flu)

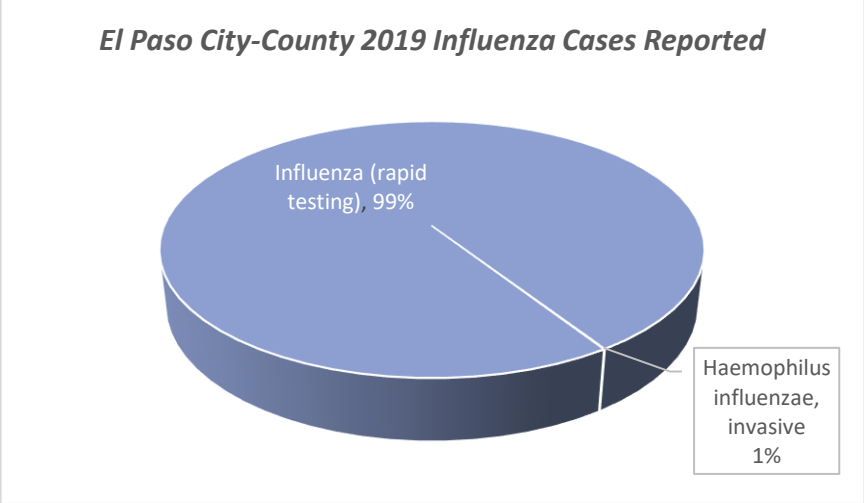
Influenza (flu) is a contagious respiratory illness that infects the nose, throat, and lungs from influenza viruses in the form of tiny droplets. These droplets are spread when people with flu cough, sneeze, talk, or touch surfaces that has flu virus on it and subsequently transmitting it to their own mouth, nose, or eyes. The influenza virus can lead to mild to severe illness and potential death, particularly among young children, older people, and people with certain health conditions. Receiving a flu vaccine each year is the best way to prevent flu.



Graph 6. El Paso (Flu), percentage of cases, 2018

El Paso City-County 2018	Cases Reported
Haemophilus influenzae, invasive	2
Influenza (rapid testing)	13,093
Total	**13,095**

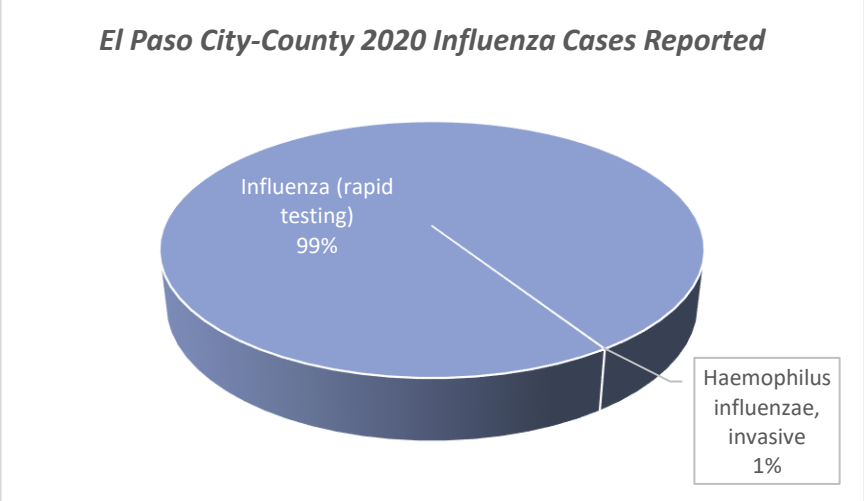
Table 6. El Paso (Flu), number of cases, 2018



Graph 7. El Paso (Flu), percentage of cases, 2019

El Paso City-County 2019	Cases Reported
Haemophilus influenzae, invasive	8
Influenza (rapid testing)	14,535
Total	**14,543**

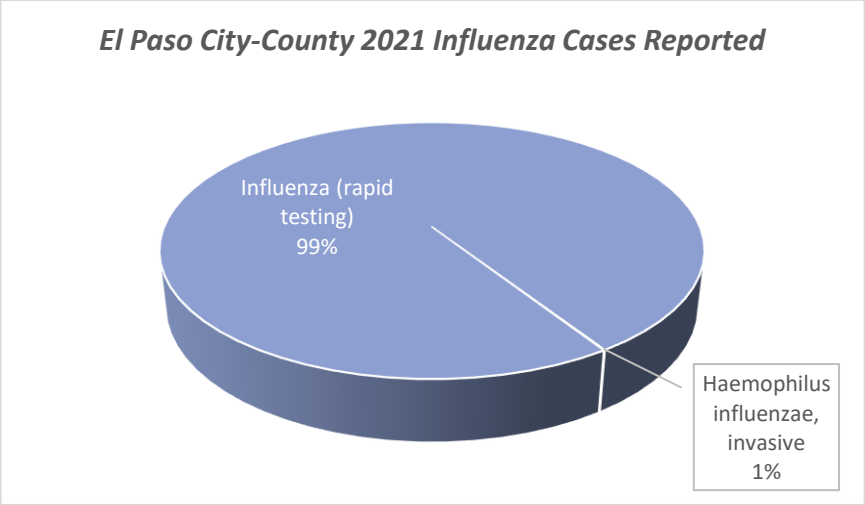
Table 7. El Paso (Flu) number of cases, 2019



Graph 8. El Paso (Flu), percentage of cases, 2020

El Paso City-County 2020	Cases Reported
Haemophilus influenzae, invasive	1
Influenza (rapid testing)	13,247
Total	**13,248**

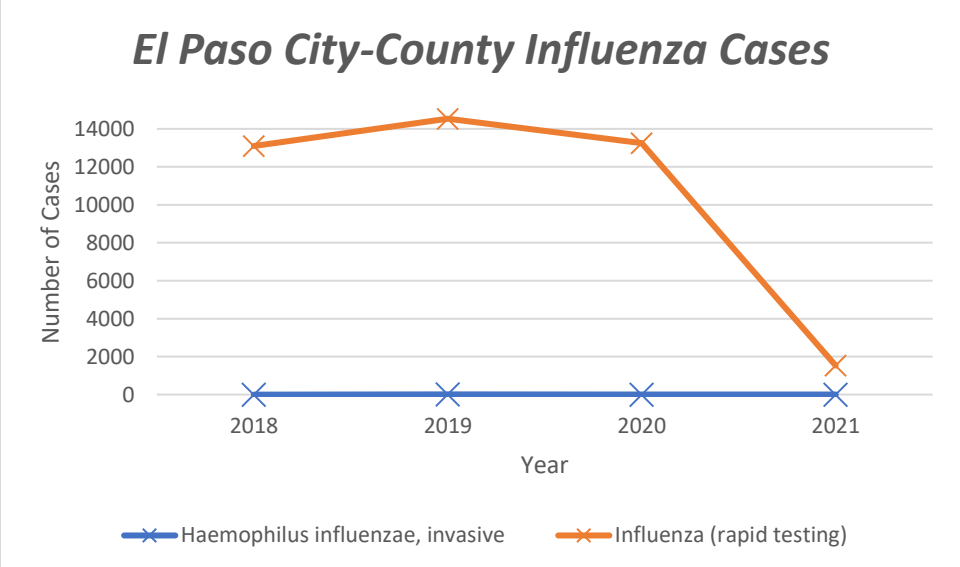
Table 8. El Paso (Flu) number of cases, 2020



Graph 9. El Paso (Flu), percentage of cases, 2021

El Paso City-County 2021	Cases Reported
Haemophilus influenzae, invasive	1
Influenza (rapid testing)	1,526
Total	**1,527**

Table 9. El Paso (Flu), number of cases, 2021

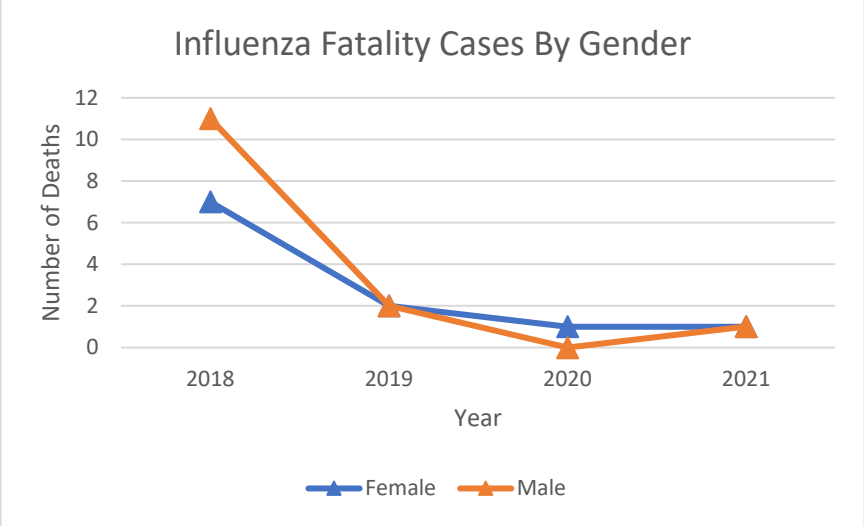


Graph 10. El Paso (Flu) cases, 2018-2021

El Paso City-County Influenza	Cases Reported			
	2018	2019	2020	2021
Haemophilus influenzae, invasive	2	8	1	1
Influenza (rapid testing)	13,093	14,535	13,247	1,526
Total	**13,095**	**14,543**	**13,248**	**1,527**

Table 10. El Paso (Flu) cases, 2018-2021

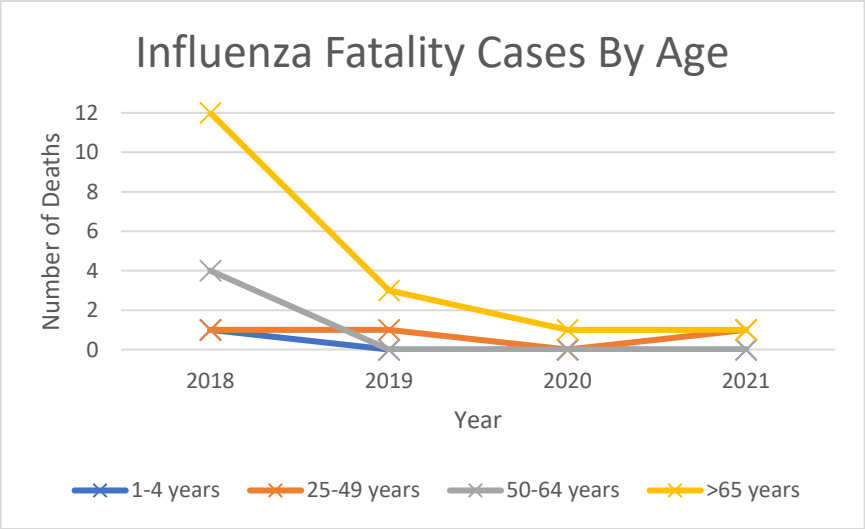
Influenza Reported Fatality Cases



Graph 11. El Paso Influenza Fatality cases, 2018-2021

Influenza Fatality Cases Reported				
Gender	**2018**	**2019**	**2020**	**2021**
Female	7	2	1	1
Male	11	2	0	1
Total	**18**	**4**	**1**	**2**

Table 11. El Paso Influenza Fatality cases, 2018-2021



Graph 12. El Paso Influenza Fatality by Age cases, 2018-2021

Influenza Fatality Cases Reported				
Age	**2018**	**2019**	**2020**	**2021**
1-4 years	1	0	0	0
25-49 years	1	1	0	1
50-64 years	4	0	0	0
>65 years	12	3	1	1
Total	**18**	**4**	**1**	**2**

Table 12. El Paso Influenza Fatality by Age cases, 2018-2021

VIRAL HEPATITIS

Hepatitis B

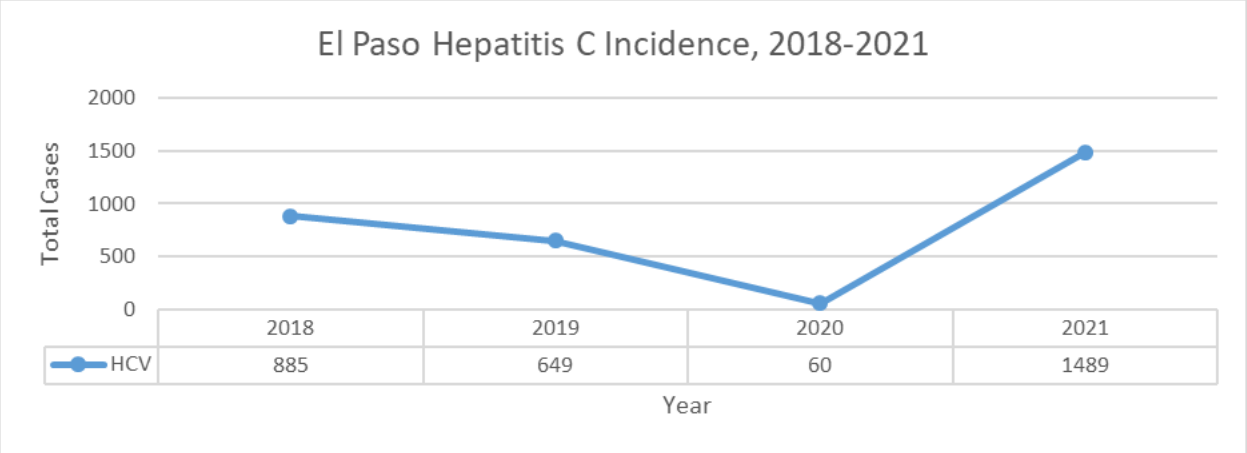
Hepatitis B is a vaccine-preventable liver infection caused by the hepatitis B virus (HBV). HBV is spread when blood, semen, or other body fluids from an infected person with the virus enters the body of someone who is not infected. This happens through sexual contact, sharing needles, or other drug injections, or from mother to baby at birth.

Not all people newly infected with HBV experience symptoms, but those that do, include fatigue, poor appetite, stomach pain, nausea, and jaundice. For many people, it can become a short-term or long-term illness chronic infection that can lead to serious life-threatening health issues.

Hepatitis C

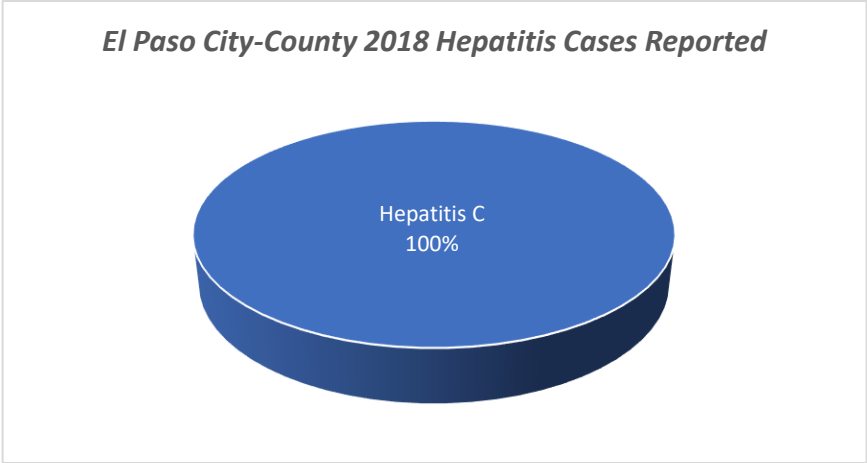
There are multiple varieties of Viral Hepatitis, yet all of them affect the liver. While robust immunization campaigns are targeting Hepatitis A and B, there is currently no effective vaccine against Hepatitis C (HCV). This, combined with the virus's tendency to cause chronic damage often resulting in cirrhosis and cancer makes HCV prevention paramount in decreasing the prevalence of liver failure in El Paso.

HCV is most commonly acquired intravenously, often by sharing needles, but can also be transmitted sexually. While curable, Hepatitis C treatments tend to be prolonged and expensive.



Graph 1. El Paso Hep C cases, 2018-2021

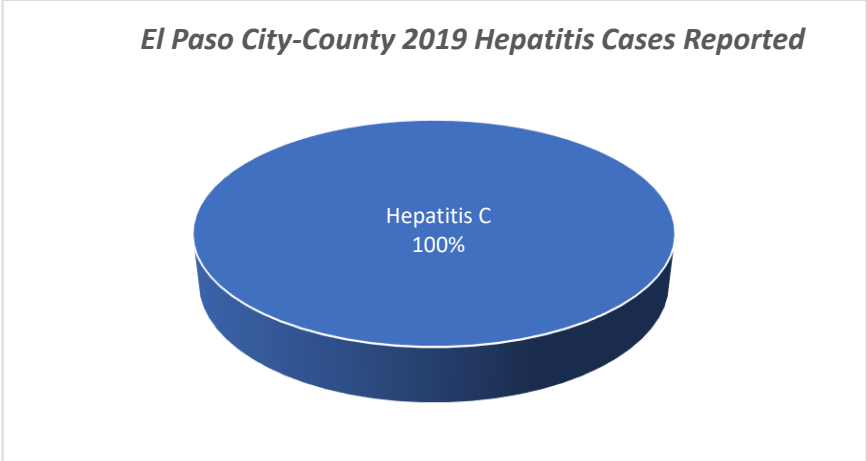
VIRAL HEPATITIS



Graph 2. El Paso Hepatitis, percentage of cases, 2018

El Paso City-County 2018	Cases Reported
Hepatitis B	0
Hepatitis C	885
Total	**885**

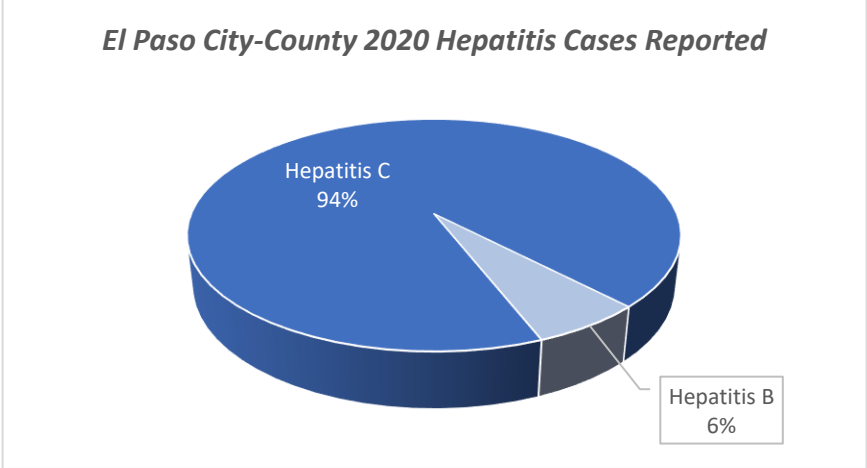
Table 2. El Paso Hepatitis, number of cases, 2018



Graph 3. El Paso Hepatitis, percentage of cases, 2019

El Paso City-County 2019	Cases Reported
Hepatitis B	0
Hepatitis C	649
Total	**649**

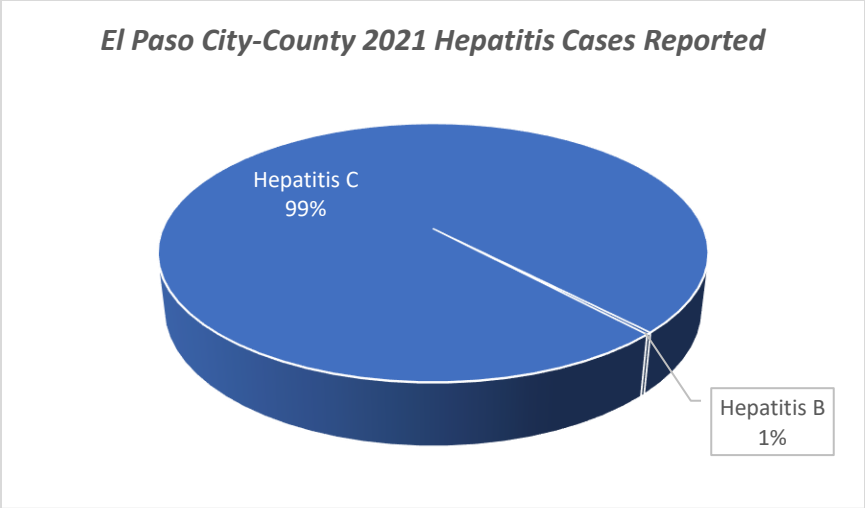
Table 3. El Paso Hepatitis, number of cases, 2019



Graph 4. El Paso Hepatitis, percentage of cases, 2020

El Paso City-County 2020	Cases Reported
Hepatitis B	4
Hepatitis C	60
Total	**64**

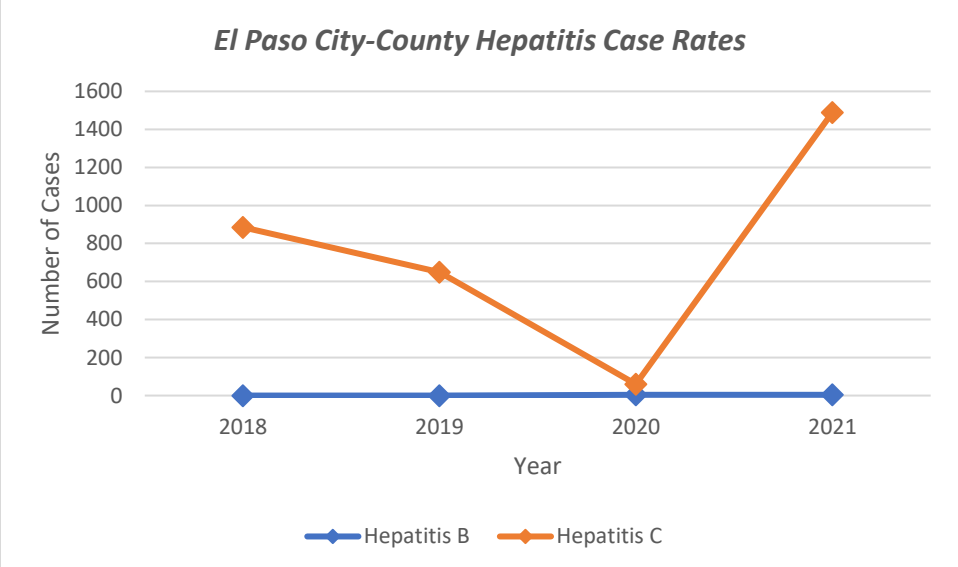
Table 4. El Paso Hepatitis, number of cases, 2020



Graph 5. El Paso Hepatitis, percentage of cases, 2021

El Paso City-County 2021	Cases Reported
Hepatitis B	4
Hepatitis C	1489
Total	**1493**

Table 5. El Paso Hepatitis, number of cases, 2021



Graph 6. El Paso Hepatitis cases, 2018-2021

El Paso City-County Hepatitis	Cases Reported			
	2018	2019	2020	2021
B	0	0	4	4
C	885	649	60	1489
Total	**885**	**649**	**64**	**1493**

Table 6. El Paso Hepatitis, number of cases, 2018-2021

Creutzfeldt-Jakob disease

Creutzfeldt-Jakob disease (CJD) is a rare and rapidly progressive, invariably fatal neurodegenerative disorder believed to be caused by a prion protein. It is sometimes called a "spongiform" disease because the brain may develop holes in it like a sponge. It is theorized that an abnormal prion protein converts a normal prion protein to an abnormal form, thus resulting in brain tissue destruction and giving it a sponge-like appearance. Symptoms can include dementia, changes in behavior, mood, and sleeping, as well as loss of balance and coordination; other symptoms may include difficulty walking or muscle spasms. There is no known treatment, and most patients die within one year from the onset of symptoms. In El Paso City-County, two cases were reported in 2018 and one case was reported in 2020.

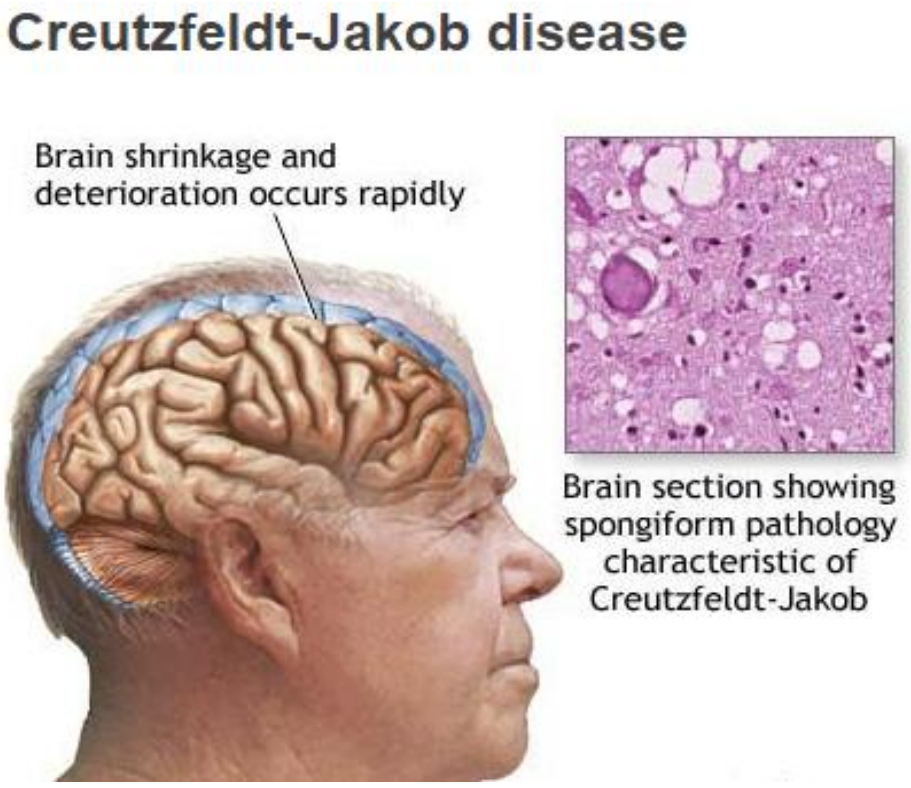


Figure 1. Creutzfeldt-Jakob disease

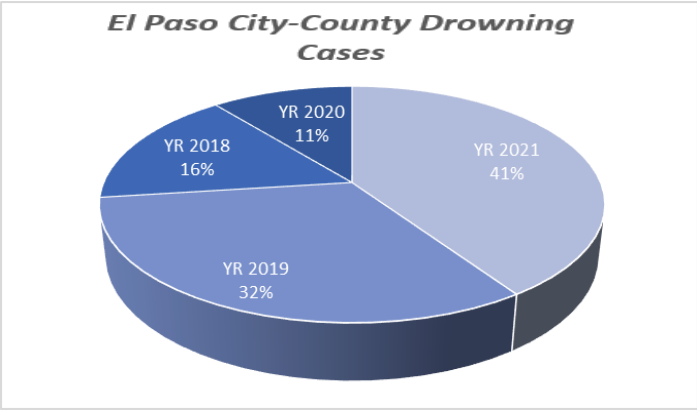
Drowning/ Near Drowning

Drowning and Near Drowning

Process of experiencing respiratory impairment from submersion or immersion in liquid.

Who is at risk of drowning?

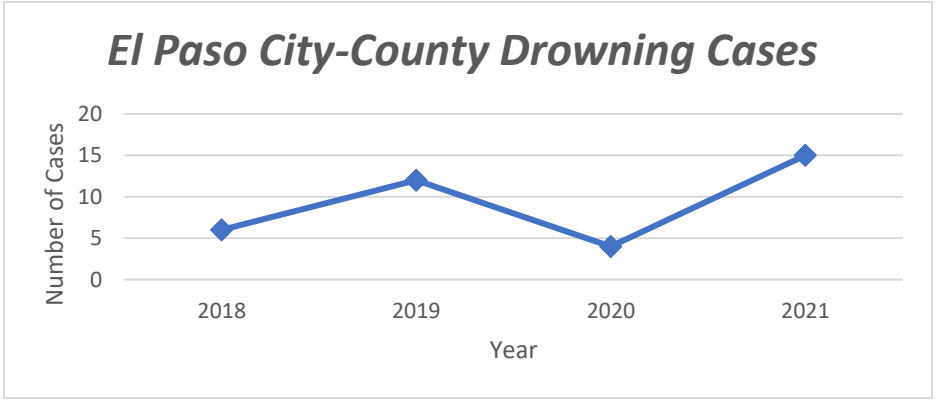
- Children ages 1-4,
- Males (Nearly 80%),
- Some racial and ethnic groups
- People with seizure disorders or medical conditions,
- Not able to swim,
- Missing or ineffective fences around water,
- Lack of close supervision,
- Not wearing life jackets,
- Drinking alcohol,
- Using drugs and prescription medications.



Graph 1. El Paso Drowning, percentage of cases, 2018-2021

El Paso City-County Drowning	Cases Reported
2018	6
2019	12
2020	4
2021	15
Total	**37**

Table 1. El Paso Drowning, number of cases, 2018-2021



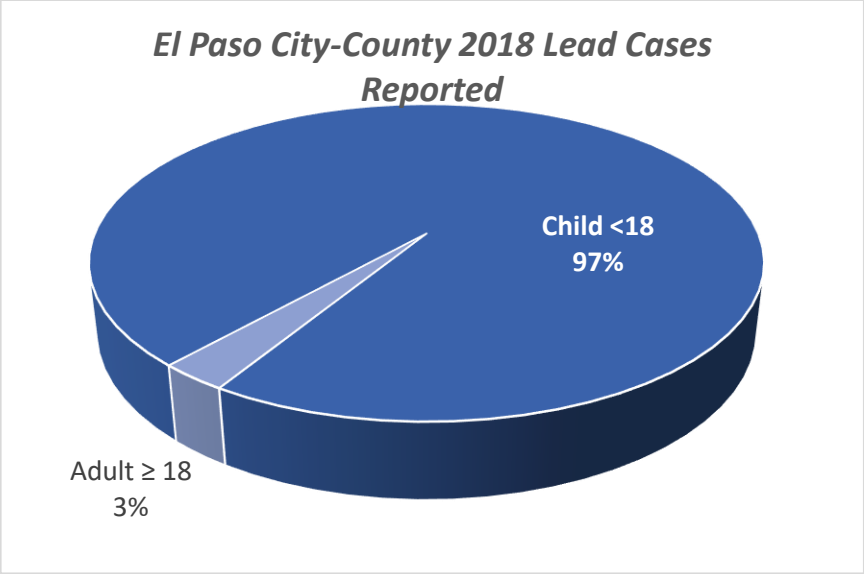
Graph 2. El Paso Drowning cases, 2018-2021

Lead Poisoning

Lead Poisoning

Lead quickly enters the body after exposure via touch, ingestion, or breathing in dust-carrying lead particles. Lead poisoning among children can result in damage to the brain and nervous system, slowed growth and development, learning and behavior problems, and hearing and speech problems. Once ingested, lead blood level rises. Once the exposure is eliminated, the amount of lead in the blood decreases (Health effects, 2022). Lead poising is often difficult to notice though parents should discuss testing for the lead with their child's health provider if lead exposure suspicion occurs.

Change in value: In 2012, the blood lead "reference value" was created to identify higher levels of lead among children ages 1-5 years old. The BLRV is not a clinical reference level defining an acceptable range of blood levels in children nor is it a health-based toxicity threshold (The CDC updates blood lead reference value, 2022). The BLRV among children was established at 5 micrograms per deciliter (µg/DL) corresponding to the 97.5th percentile in 2012. Data from the 2015-2018 NHANES cycle determined the 97.5th percentile is 3.5 µg/DL. On May 14, 2021, The Lead Exposure and Prevention Advisory Committee (LEPAC) voted in favor of updating the reference value from 5 µg/DL to 3.5 µg/DL.

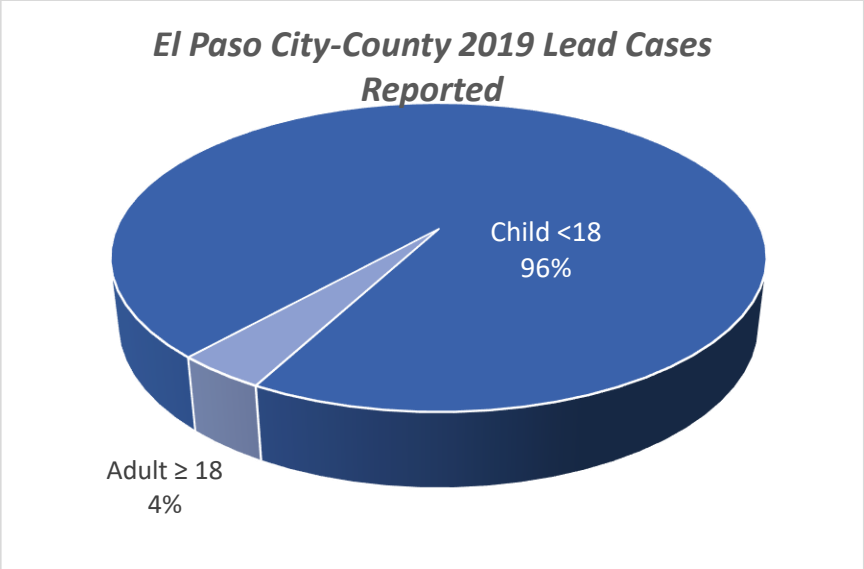


Graph 1. El Paso Lead, percentage of cases, 2018

El Paso City-County 2018 Lead	Cases Reported
Adult ≥ 18	24
Child <18	818
Total	**842**

Table 1. El Paso Lead, number of cases, 2018

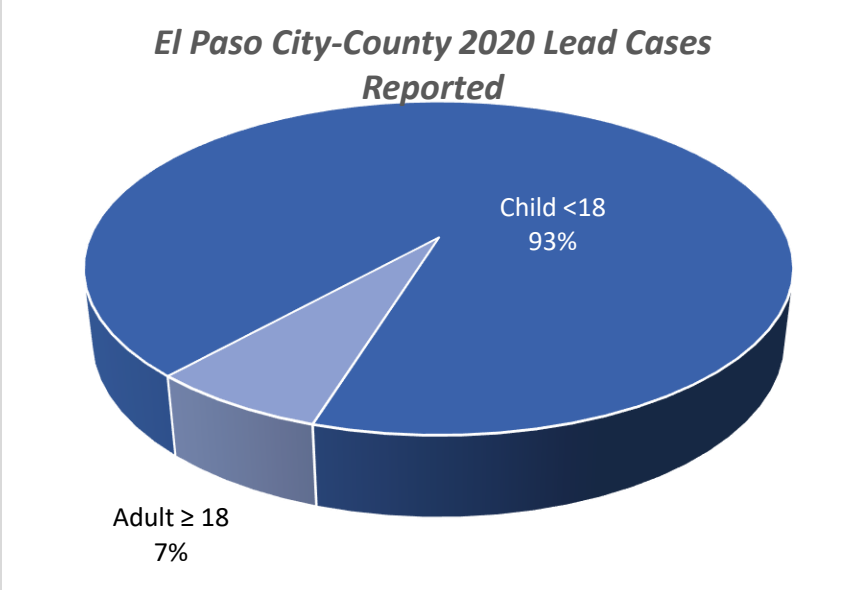
Lead Poisoning



Graph 2. El Paso Lead, percentage of cases, 2019

El Paso City-County 2019 Lead	Cases Reported
Adult ≥ 18	58
Child <18	1468
Total	**1526**

Table 2. El Paso Lead, number of cases, 2019

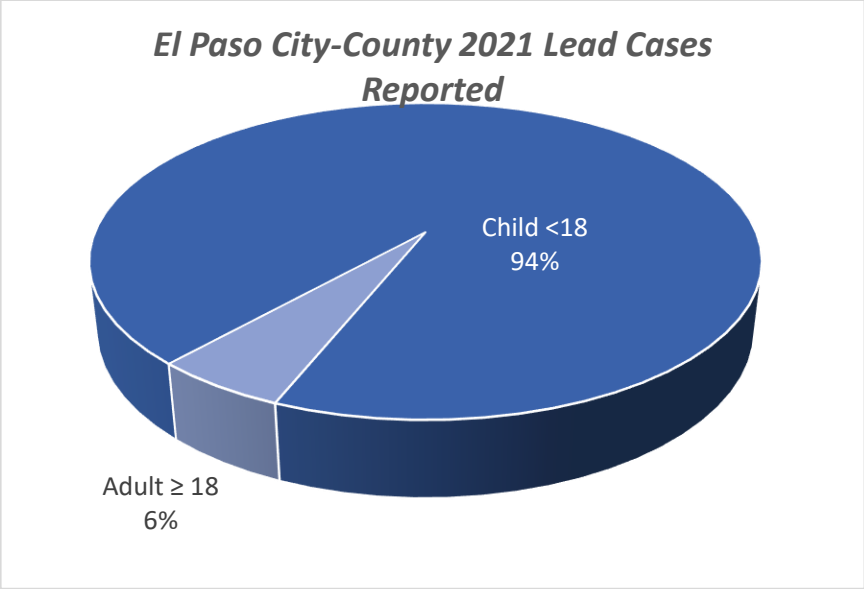


Graph 4. El Paso Lead, percentage of cases, 2020

El Paso City-County 2020 Lead	Cases Reported
Adult ≥ 18	50
Child <18	679
Total	**729**

Table 4. El Paso Lead, number of cases, 2020

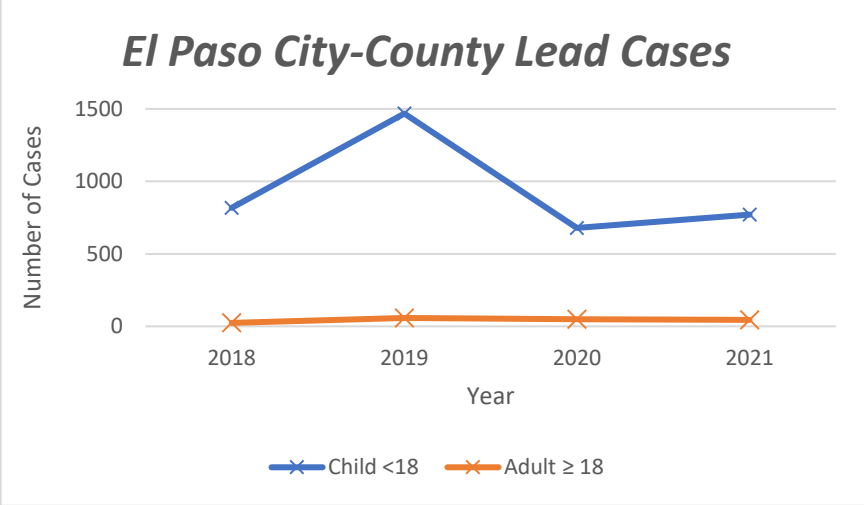
Lead Poisoning



Graph 5. El Paso Lead, percentage of cases, 2021

El Paso City-County 2021 Lead	Cases Reported
Adult ≥ 18	45
Child <18	770
Total	**815**

Table 5. El Paso Lead, number of cases, 2021



Graph 6. El Paso Lead cases, 2018-2021

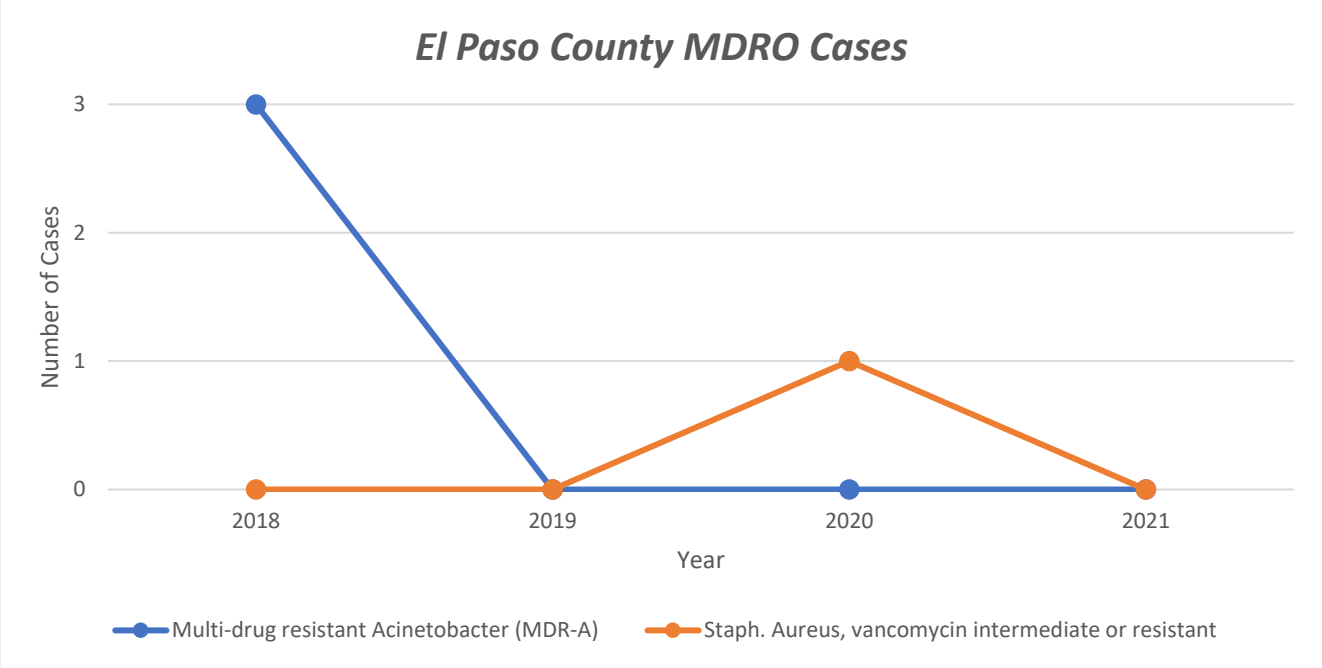
El Paso City-County Lead	Cases Reported			
	2018	2019	2020	2021
Adult ≥ 18	24	58	50	45
Child <18	818	1468	679	770
Total	**842**	**1526**	**729**	**815**

Table 6. El Paso Lead, number of cases, 2018-2021

Multi-Drug Resistant Organisms (MDRO)

Multi-Drug Resistant Organisms (MDRO)

Bacterial microorganisms that are resistant to one or more antimicrobial agents are known as Multidrug-resistant organisms (MDROs). MDROs develop when taking antibiotics longer than needed or are taken when they may not be needed. These germs can all cause infections, therefore, this makes it difficult to treat since many antibiotics will not work to treat them. MDROs are spread by direct contact with a person's bodily fluid that is infected, such as blood, wound drainage, urine, bowel movements, or sputum. In addition, they can also spread by having contact with surfaces that have these germs on them.



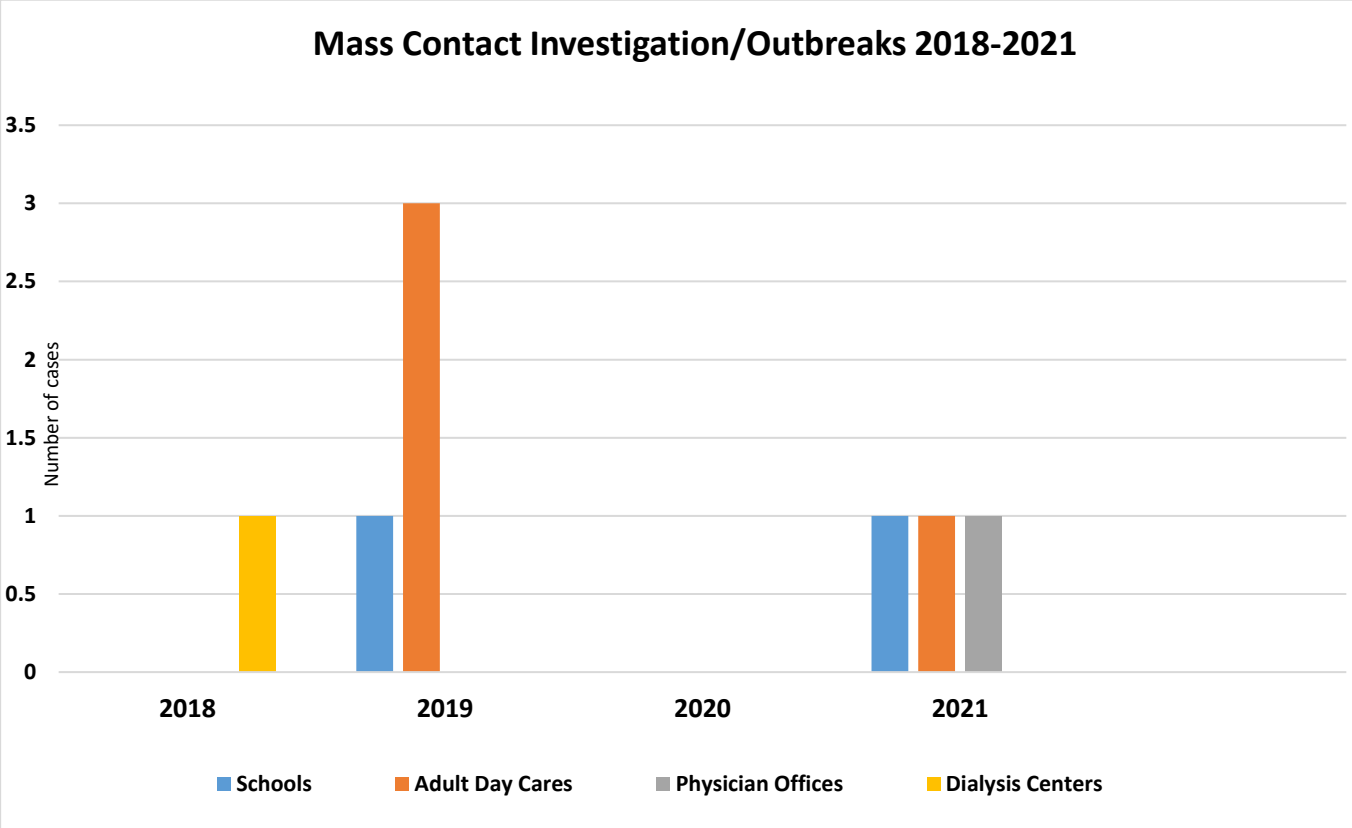
Graph 1. El Paso MDRO cases, 2018-2021

El Paso City-County MDR	Cases Reported			
	2018	2019	2020	2021
Multi-drug resistant Acinetobacter (MDR-A)	3	0	0	0
Staph. Aureus, vancomycin intermediate or resistant	0	0	1	0
Total	**3**	**0**	**1**	**0**

Table 1. El Paso MDR, number of cases, 2018-2021

OUTBREAK SUMMARY

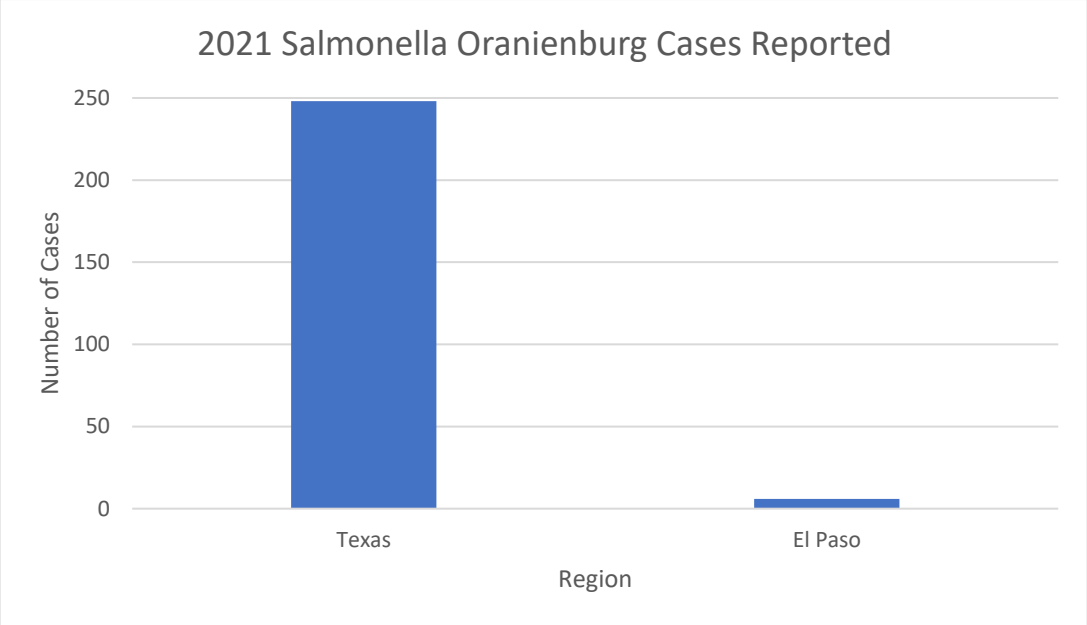
Tuberculosis (TB) Outbreaks 2018-2021



Graph 1. El Paso TB Outbreaks, 2018-2021

Salmonella Oranienburg

In 2021, Texas had 248 cases of Salmonella Oranienburg. El Paso City-County had a total of 6 for the year 2021 reported cases. Suspected exposures included whole raw red, white, and yellow onions imported from the State of Chihuahua, Mexico, in which suppliers were identified as ProSource Produce LLC and Keeler Family Farms between July 1, 2021, and August 31, 2021. Several companies recalled the onions.



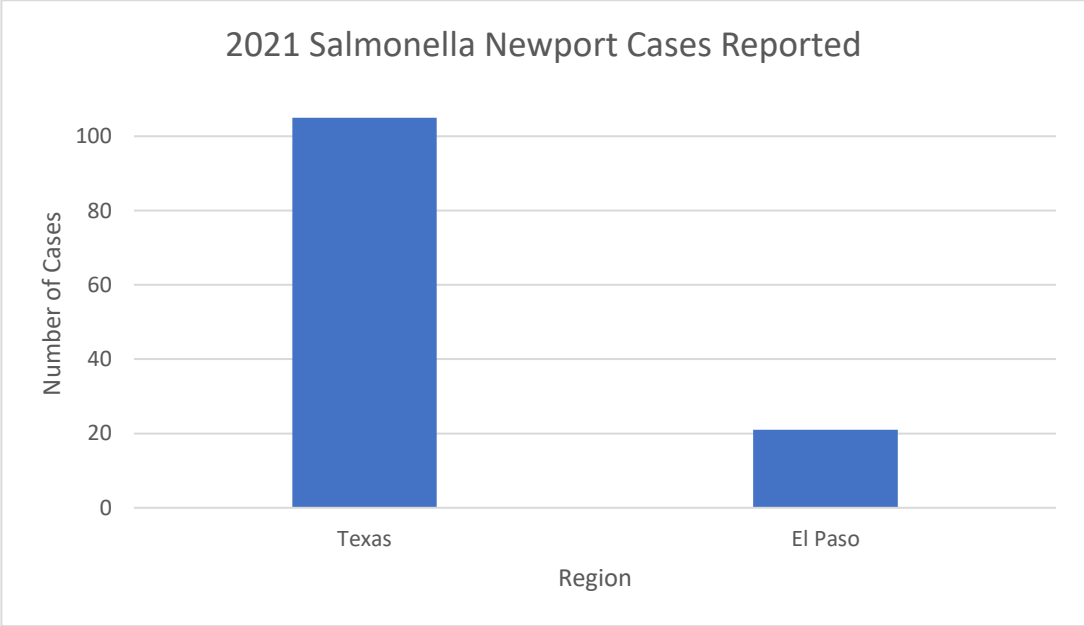
Graph 2. Salmonella Oranienburg cases, 2021

2021 Salmonella - Oranienburg	
Region	**Cases Reported**
Texas	248
El Paso	6
Total	**254**

Table 2. Salmonella Oranienburg, number of cases, 2021

Salmonella Newport

In 2021, Texas had 105 cases of Salmonella Newport. El Paso City-County had a total of 21 reported cases. Suspected exposures included travel to Mexico, ground and/or intact beef products, unpasteurized dairy, and/or Mexican/Latin style soft cheeses, beef jerky from Chihuahua Country brand, as well as red, white, yellow, and sweet yellow onions, in which Thomson International, Inc. was a supplier of the onions linked to this outbreak and the onions were recalled.



Graph 3. Salmonella Newport cases, 2021

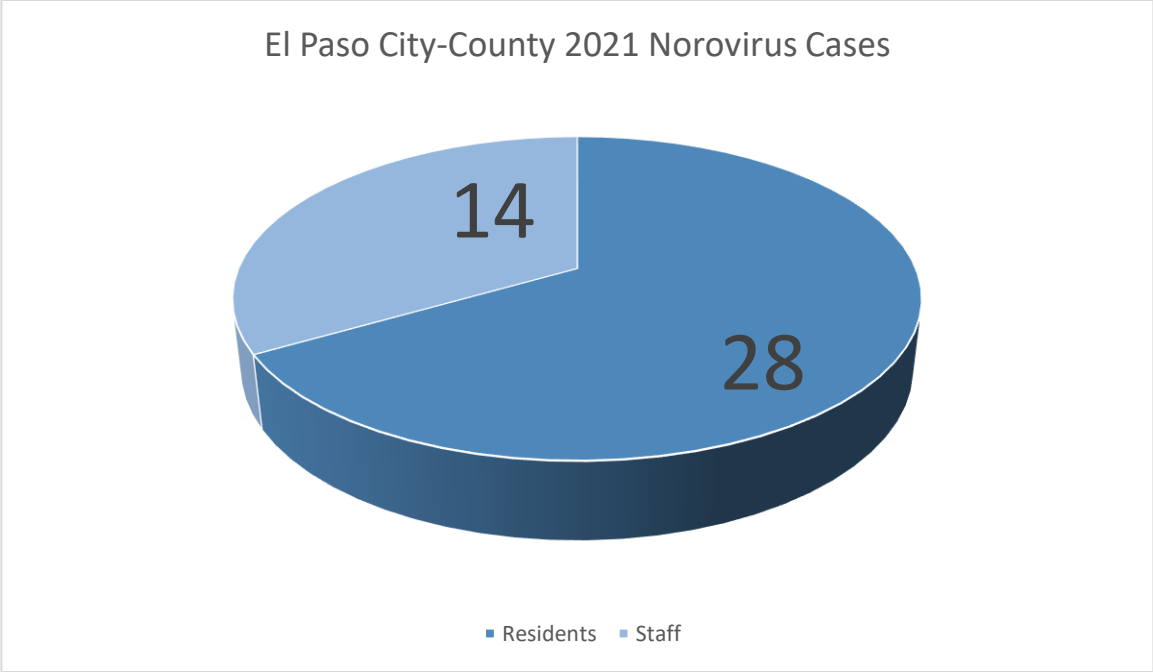
2021 Salmonella - Newport	
Region	**Cases Reported**
Texas	105
El Paso	21
Total	**126**

Table 3. Salmonella Newport, number of cases, 2021

OUTBREAK SUMMARY

Norovirus

Norovirus is a very contagious virus that is also known as the “stomach flu” and a common cause of viral gastroenteritis outbreaks. Norovirus symptoms include nausea, vomiting, diarrhea, abdominal cramping, and fever, and typically begin 12 to 48 hours after exposure to the virus. Most people recover within one or two days and seldom have serious long-term health effects. It is transmitted via fecal-oral route by consuming contaminated food or water, direct person-to-person spread, droplet route from vomitus, or environmental and fomite contamination (inanimate object or substance). In April 2021, El Paso City-County received reported cases of 28 residents and 14 staff at a local nursing home facility. The Epidemiology and Surveillance Division responded to the outbreak and monitored all cases daily until all were asymptomatic. The outbreak was resolved in eight days.



Graph 4. El Paso Norovirus Cases, 2021

OUTBREAK SUMMARY

Measles

Measles is a very highly contagious viral disease that can lead to serious health complications, such as pneumonia and encephalitis, especially in babies and young children. In 2019, El Paso City-County had 6 reported cases of measles. The Epidemiology and Surveillance Division was able to respond very quickly and diligently investigated all cases, which resulted in containment of further spread of the disease.

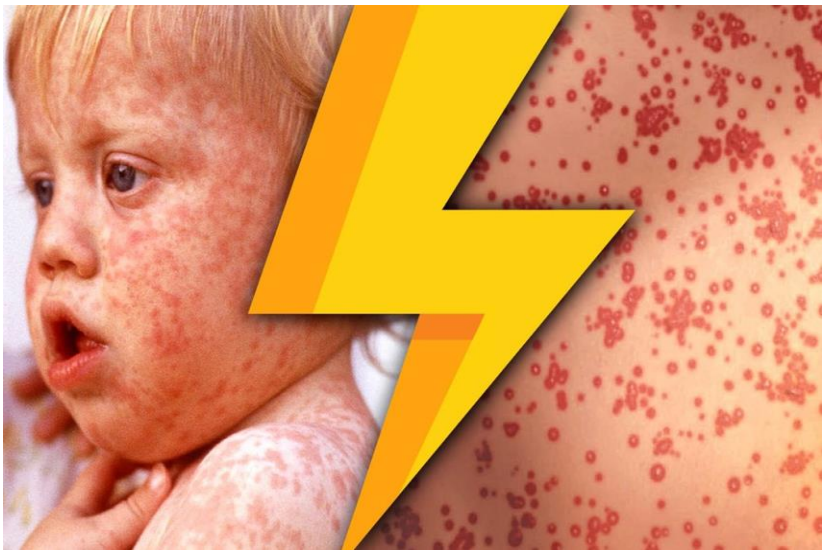


Figure 1. Measles Skin Rash

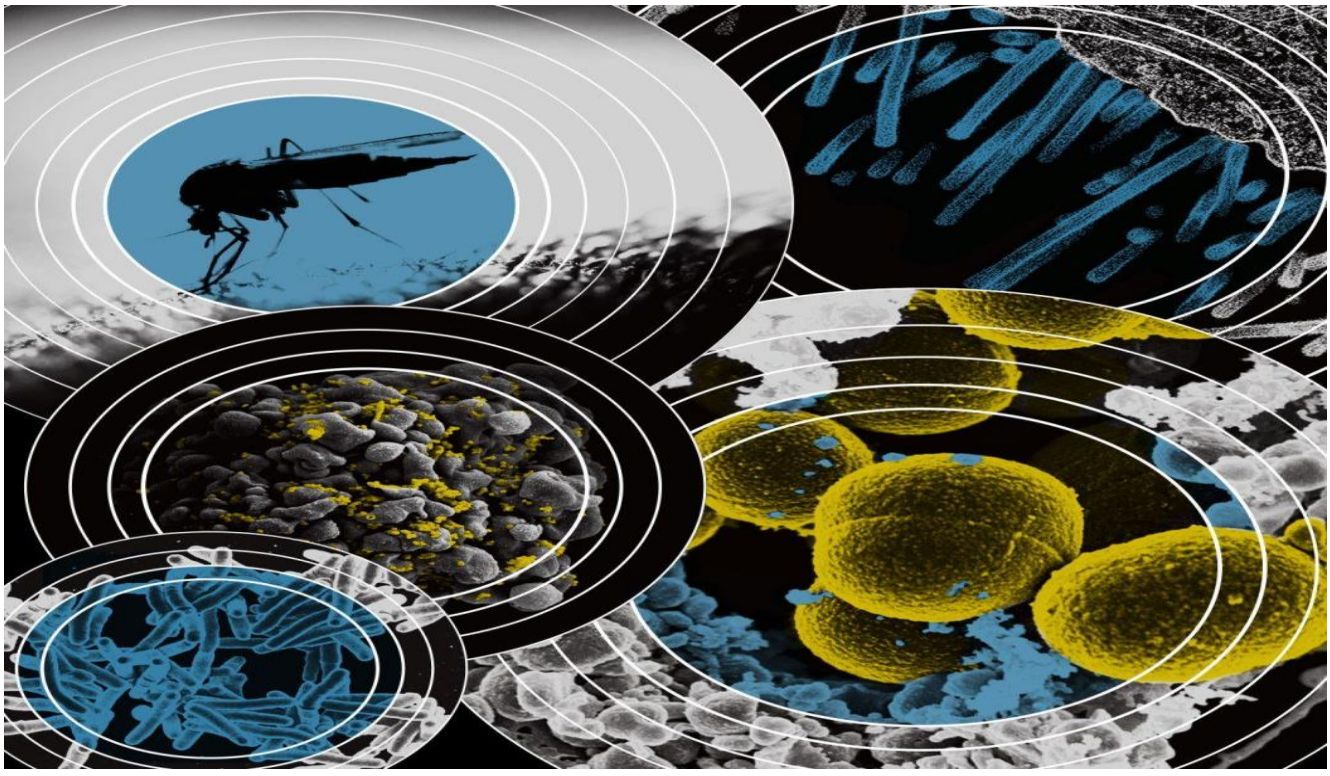
Figure 2. Outreach (Measles)

EMERGING PATHOGENS

Emerging Pathogens

Emerging Infectious Diseases (EID) are defined as an infectious disease that is newly recognized within a population or is reemerging. These pathogens are rapidly increasing in incidence and geographically. Many are zoonotic and vector-borne but can also be foodborne or airborne. Agent must have the ability to spread from human to human and cause disease.

These conditions are reported and investigated by the Epidemiology and Surveillance Division and are noted on the Notifiable Conditions list as urgent; the Epidemiologist on call 24/7 can respond immediately. Depending on the severity of the situation, the Epidemiology and Surveillance team will work closely with the Public Health Emergency Preparedness Program to respond to the situation; all epidemiological data is reported to the Texas Department of State Health Services for additional support and guidance. Health Alerts, Notifications and Advisories are immediately disseminated among local healthcare providers; and prevention measures are implemented to control the spread of the disease.



Anthrax

Anthrax occurs naturally in soil and causes serious infectious diseases. Domestic and wild animals around the world are affected by anthrax. People become infected with anthrax when spores enter the body, causing them to become activated and multiply and spread in the body with toxins leading to severe illness. People can get sick by breathing in the spores, having contact with infected animals, such as cattle, sheep, goats, antelope, and deer, or eating or drinking contaminated water with the spores, or the spores get inside skin that is cut or scraped. Anthrax is most commonly found in Central and South America, sub-Saharan Africa, central and southwestern Asia, southern and eastern Europe, and the Caribbean; it is rare in the United States.

Symptoms include fever, chills, chest discomfort, shortness of breath, confusion, dizziness, cough, nausea, vomiting (possibly bloody), stomach pains, headache, drenching sweats, extreme fatigue, body aches, swollen neck glands, sore throat, painful swallowing, hoarseness, diarrhea or bloody diarrhea, headache, flushing red face and red eyes, fainting, and swollen abdomen. Small blisters or bumps that are itchy may appear and, in some cases, a black skin sore. Symptoms can take between 1 day to more than 2 months to appear.

In April and May of 1979, the city of Sverdlovsk, USSR had an outbreak of anthrax. Prior to 2001, the United States had a case of anthrax in 1976. After the September 11 attacks on the World Trade Center and Pentagon, four letters with white powder containing anthrax spores were recovered. Twenty-two people became sick with anthrax and five of them died. It was the first time an intentional release of anthrax had happened in the United States.

Figure 1. Pateint's right hand showing dark papules and lesions from Anhrax

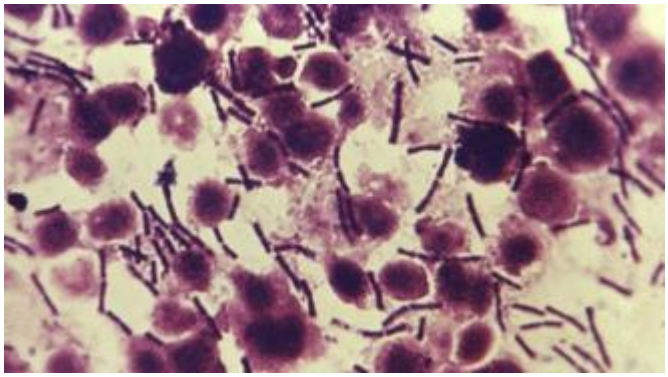


Figure 2. Microscopic view of Anthrax

Ebola

Ebola Virus Disease (EVD) is a rare and deadly disease. The virus that causes EVD is located mainly in sub-Saharan Africa. It can spread from animals or humans to humans through direct contact with body fluids. Urgent medical attention is usually recommended by healthcare providers. It is extremely rare. It may be dangerous or life-threatening. There is no known cure but certain treatments are available to manage the condition. Symptoms generally appear between 2 to 21 days after the virus enters the body. They include fever, fatigue, joint and muscle pain, headache, sore throat, and cough. Other symptoms as the disease progresses include vomiting, diarrhea, rash, explaining bruising, internal and external bleeding, and weight loss. Several outbreaks have been reported between 2014-2021 in the Democratic Republic of the Congo as well as in West Africa and Guinea.

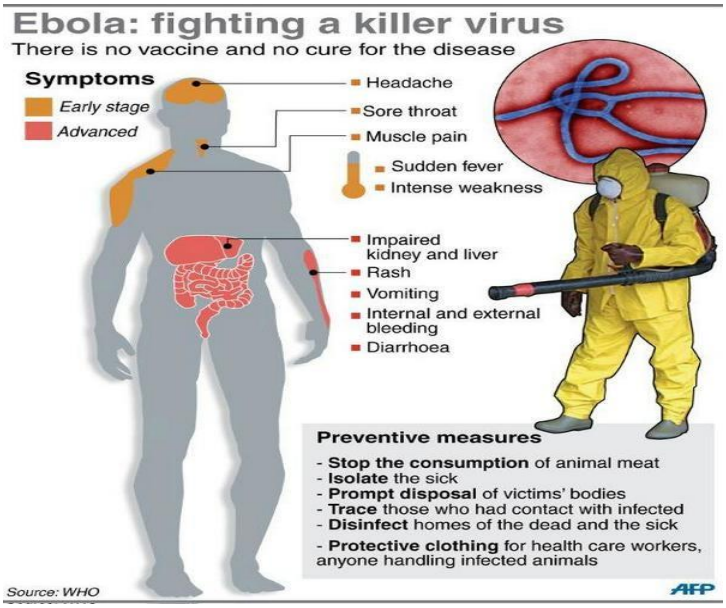


Figure 3. Symptoms of Ebola

Figure 4. Ebola Virus

MERS

Some examples of EIDs include MERS (Middle East Respiratory Syndrome). It is a viral respiratory illness new to humans caused by a coronavirus. It was first reported in Saudi Arabia in 2012 and has then spread to other countries including the United States. Symptoms include fever, cough, and shortness of breath and may also include diarrhea and vomiting.

Figure 5. MERS Health Advisory

COVID-19 Pandemic

COVID-19 is a disease caused by the virus called SARS CoV-2. Most people have mild symptoms or are asymptomatic but may also become severely ill, especially people who are immunocompromised or have underlying health conditions. The virus is spread via person-to-person transmission through droplets or aerosol, airborne, and surface transmission.

The first known outbreak started in Wuhan, China in November of 2019. The World Health Organization (WHO) declared the outbreak a Public Health Emergency of International Concern in January and a pandemic on March 11, 2020. As of December 2021, 282,790,822 individuals worldwide have been confirmed as infected with COVID-19. Furthermore, as of April 2022, more than 6.22 million deaths have been attributed to COVID-19.

The DPH received the first case on March 13, 2020. From March 2020 to April 2022, the DPH had investigated a little over 240,000 COVID-19 cases. The Epidemiological curve seen in Graph 1 shows the number of cases and the waves in different time periods mainly due to new COVID-19 variants. The first wave was seen in November/December of 2020 due to the Delta variant and the latest wave was seen in January 2022 with the Omicron variant. Graph 3 shows cumulative cases by age and gender. Those in age groups 20-30 show the highest number of cases reported compared to the other age groups with very minimal difference seen in gender. Graph 2 indicated the number of deaths due to COVID-19 in El Paso City-County by age and gender. Data shows males in their 60-80 age group are at higher risk of death from COVID-19 compared to females in the same age group.

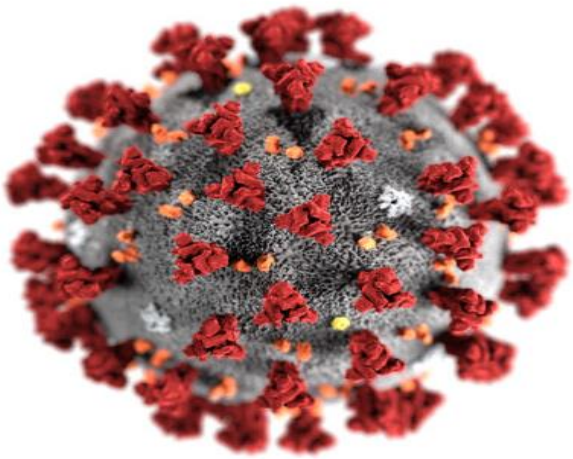
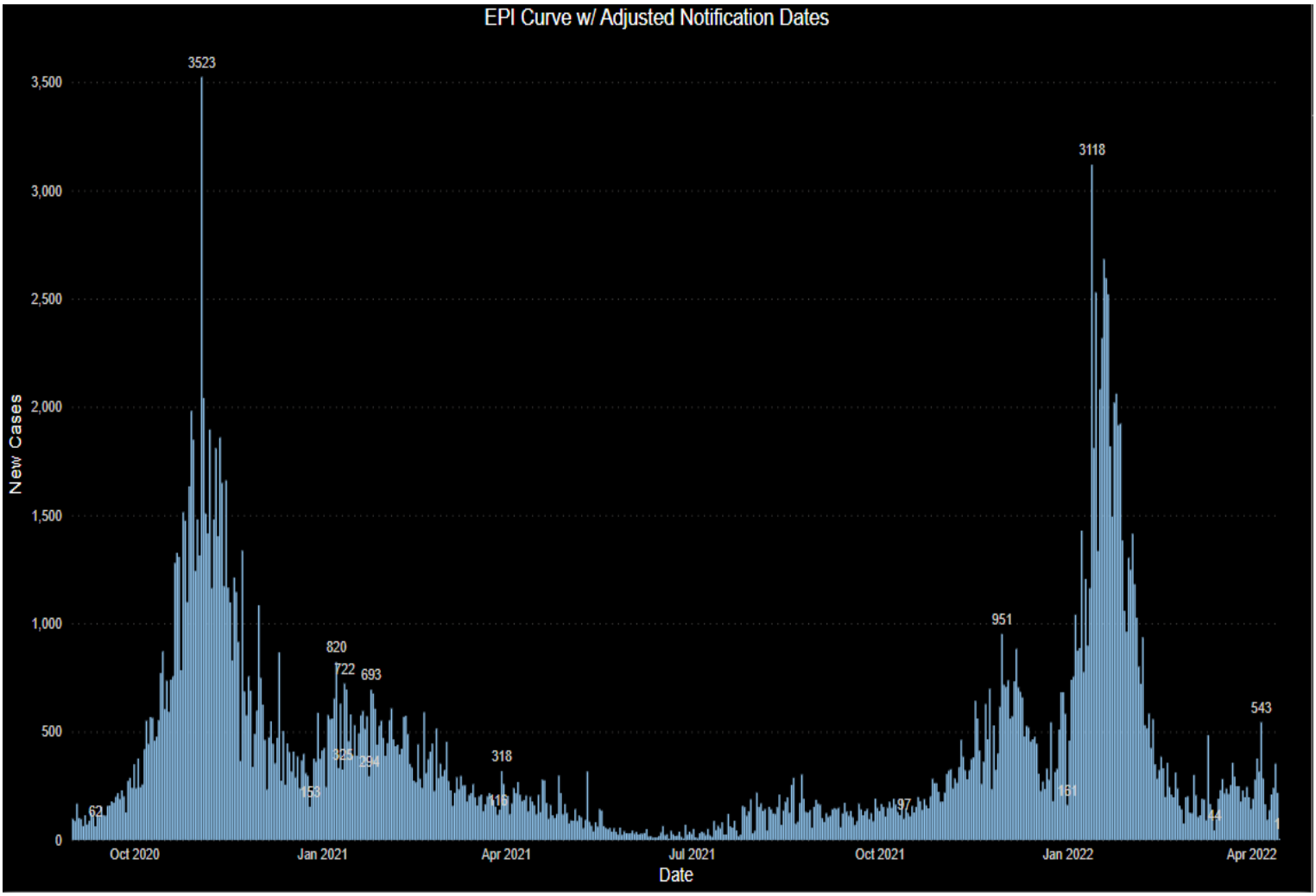
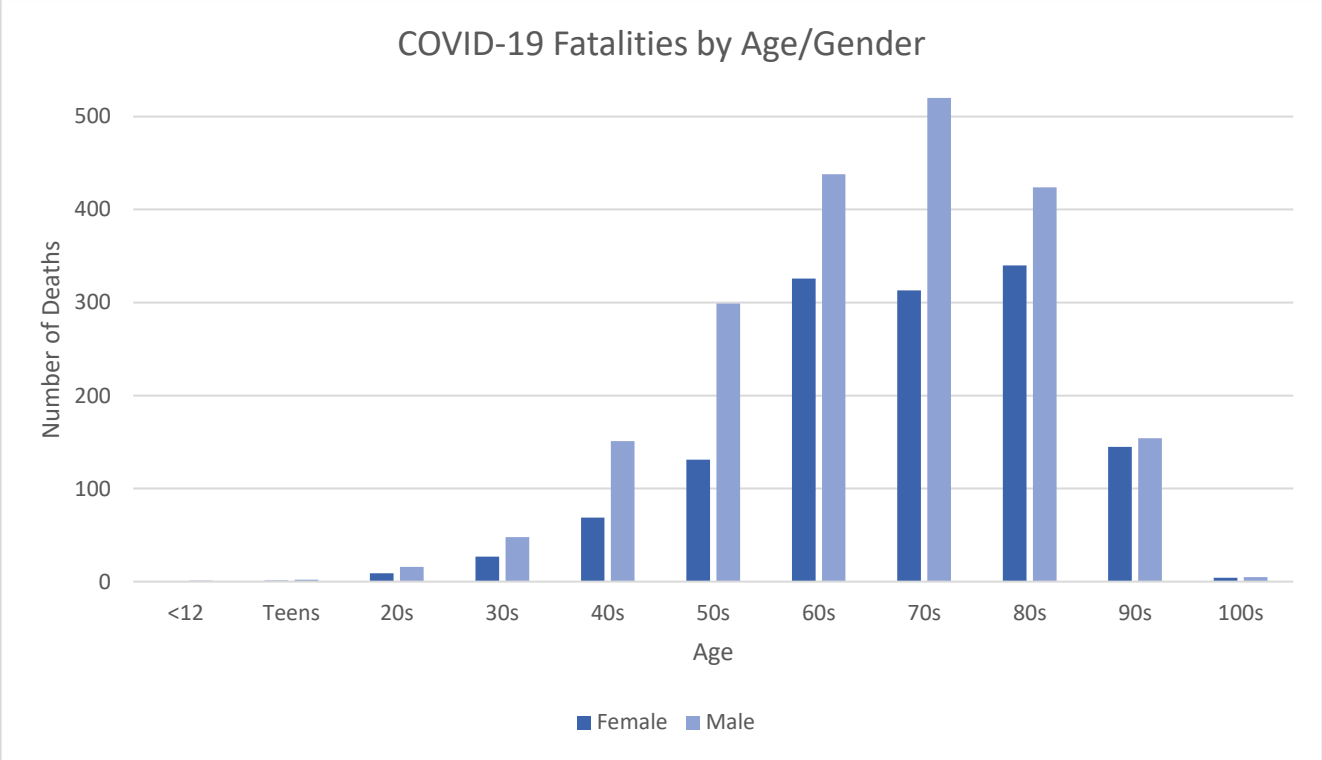


Figure 6. COVID-19 Virus

El Paso COVID-19 EPI Curve, 2020-2022



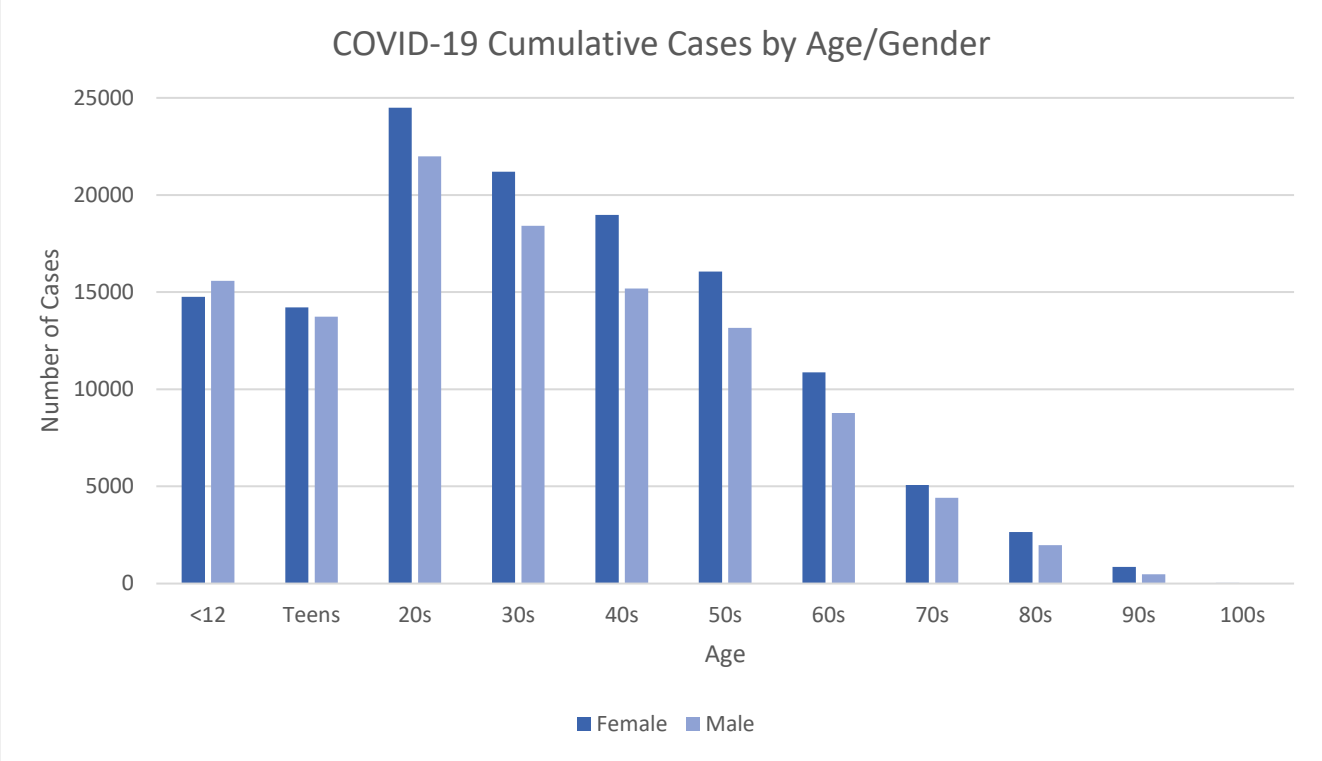
Graph 1. El Paso EPI Curve, COVID-19, 2020-2022



Graph 2. El Paso COVID-19 Fatalities by Age/Gender

COVID-19 Fatalities by Age/Gender											
	Age										
Gender	**<12**	**Teens**	**20s**	**30s**	**40s**	**50s**	**60s**	**70s**	**80s**	**90s**	**100s**
Female	0	1	9	27	69	131	326	313	340	145	4
Male	1	2	16	48	151	299	438	520	424	154	5
Total	**1**	**3**	**25**	**75**	**220**	**430**	**764**	**833**	**764**	**299**	**9**

Table 2. El Paso COVID-19 Fatalities by Age/Gender



Graph 3. El Paso COVID-19 Cases by Age/Gender

COVID-19 Cumulative Cases by Age/Gender											
	Age										
Gender	**<12**	**Teens**	**20s**	**30s**	**40s**	**50s**	**60s**	**70s**	**80s**	**90s**	**100s**
Female	14756	14222	24494	21193	18970	16053	10876	5067	2654	863	40
Male	15581	13741	21987	18408	15195	13157	8776	4420	1971	484	13
Total	**30337**	**27963**	**46481**	**39601**	**34165**	**29210**	**19652**	**9487**	**4625**	**1347**	**53**

Table 3. El Paso COVID-19 Cases by Age/Gender

Zika

Another emerging pathogen is Zika; this is spread mostly by a bite of an infected mosquito and can also be passed from a pregnant woman to her fetus and can cause certain birth defects such as microcephaly. It is also transmitted through sex or blood transfusions. Symptoms of Zika include fever, rash, headache, joint pain, red-eye, and muscle pain. To date, there is no current local transmission of the Zika virus in the United States. The last cases reported in Florida and Texas were in 2016-2017. During that time, there were large outbreaks of the Zika virus resulting in an increase in travel-associated cases in the United States and widespread transmission in Puerto Rico and the US Virgin Islands. Cases began to decline in 2017 and there have been no reports of Zika virus transmission by mosquitos in the US.

Zika virus disease cases* reported to ArboNET — United States, 2015-2020

Year	US States Locally acquired**	US States Travel-associated†	US Territories Locally acquired	US Territories Travel-associated
2015	0	62	9	1
2016	224	4,944	36,367	145
2017	7	445	665	1
2018	0	74	147	1
2019	0	28	73	1
2020	0	4	57††	0

Table 4. Zika virus cases in the United States., 2015-2020

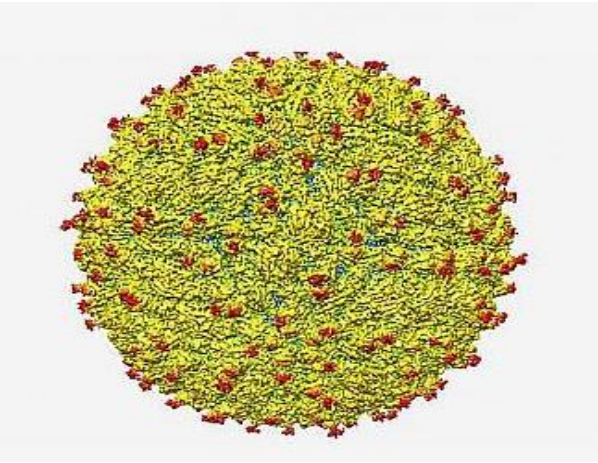


Figure 7. Zika Virus

Figure 8. Zika Virus, rash on eyes and face

OTHER ACTIVITIES

Emergency Preparedness

The Public Health Emergency Preparedness Program (PHEP) works closely with internal and external partners to prevent, prepare, respond, and recover from the effects of health emergencies. The PHEP program is tasked to lead Emergency Support Function 8 (Health and Medical) and support Emergency Support Function 6 (Mass Care) during an emergency response. In addition, the PHEP Program works closely with the DPH Epidemiology and Surveillance and Laboratory programs to plan, facilitate, and participate in public health emergency exercises, drills, and staff training. Furthermore, the PHEP program chairs the BioWatch Advisory Council (BAC) and coordinates with the El Paso City-County Office of Emergency Management (OEM), Department of Homeland Security, Epidemiology and Laboratory programs, and BAC members' response to a bioterrorism event. The program also leads the COVID-19 Education Task Force and Cluster Management Task Force for infectious diseases outbreaks and provides on-site Infection Prevention and Control (IPC) assessments to high-risk facilities. The PHEP team has worked closely with the OEM to support COVID-19 pandemic response operations. The PHEP program is accredited by the NACCHO Project Public Health Ready (PPHR).

Laboratory Response Network (LRN)

The DPH Public Health Laboratory is also a member of the Laboratory Response Network (LRN) established by the CDC in 1999. The LRN serves as a network for laboratories to respond to biological and chemical threats and other public health emergencies. The DPH Laboratory is equipped to test for Category A agents and collaborates with BioWatch for testing as needed. The network also assists with other tests available for other laboratories within the network. The DPH Laboratory was the first local health department laboratory in validating and testing for SARS COV-2 in the region.

Academic Health Department

The DPH is a proud Academic Health Department (AHD) with multiple academic affiliations with local, state, and national academic institutions offering a wide range of student opportunities in public health including introduction to public health role and functions, clinical rotations, dentistry rotations, internships, and other. Through academic health department partnerships, a formal affiliation of a health department and an academic institution is stablished to train future health professionals and promote public health as a career.

OTHER ACTIVITIES

United States-Mexico Binational Collaboration

The United States and Mexico border is approximately 1,954 miles long. These two Border States share several factors that affect the health of both communities. People travel back and forth from the United States and Mexico to visit, work, or attend school. This unique way of life within the border region can be a mode of transmission for many diseases found on both sides of the border. A higher incidence of infectious disease has been documented in United States regions bordering Mexico compared to non-border areas. The DPH works closely with the Mexican state and municipal health authorities to detect and monitor infectious disease patterns along the border region. Disease reporting and sharing of information are an important factor for working together to identify and respond to disease outbreaks affecting both sides of the border, through close working partnerships and mutual support and collaboration. Protocols for case investigations are jointly developed and implemented by both countries for timely detection and response to binational health issues and emergencies. The overall goal of this binational partnership is to improve the health of the US-Mexico border community. Communication between both regions is imperative to control the spread of infectious diseases along the border

Figure 1. USA/MEXICO

ATTACHMENT I – NOTIFIABLE DISEASE REPORTING POSTER

City of El Paso Department *of Public Health*

NOTIFIABLE CONDITIONS

PH: (915) 212-6520 epireporting@elpasotexas.gov FAX: (915) 212-0170

24/7 Confidential Web-Based Disease Reporting System: https://elpaso.phims.org/cmr/login.aspx

Report by Name, Age, DOB, Gender, Race/Ethnicity, Address, Telephone number, Disease, Date of Onset, Method of Diagnosis, and Name, Address and Telephone Number of Physician

IMMEDIATELY NOTIFIABLE - 24/7 telephone (915) 212-6520

Anthrax [1]	Diphtheria [1]	Rabies, human
Botulism (foodborne, infant, and wound) [1]	Lead, any blood level (child or adult)	Smallpox
Candida auris	Measles (rubeola)	*Staphylococcus aureus*, VISA and VRSA [1]
Chikungunya virus	Meningococcal infections, invasive [1]	Tularemia [1]
Coronavirus, novel (including MERS and SARS)	Novel Influenza	Viral hemorrhagic fever (including Ebola)
Dengue virus	Plague (*Yersinia pestis*) [1]	Yellow fever
	Poliomyelitis, acute paralytic	Zika virus

Notifiable within 24 hours

Brucellosis [1]	Influenza-associated pediatric mortality	Rubella (including congenital)
Carbapenem-resistant *Enterobacteriaceae* (CRE)	Mumps	Syphilis – primary and secondary stages [3]
Hepatitis A (acute)	Pertussis	Tuberculosis (*M. tuberculosis* complex) [1,6,7]
Hepatitis B, perinatal (HBsAg+ <24 months old) (child)	Poliovirus infection, non-paralytic	*Vibrio* infection, including cholera [1]
Human immunodeficiency virus (HIV) infection, acute infection [4]	Q fever	

Notifiable within 72 hours

Acquired immune deficiency syndrome (AIDS)	Giardiasis	Prion disease such as Creutzfeldt-Jakob disease (CJD) [5]
Amebic meningitis and encephalitis	Gonorrhea [3]	Relapsing fever (tick-borne)
Anaplasmosis	*Haemophilus influenza*, invasive [1]	Saint Louis Encephalitis virus
Arbovirus infection [2]	Hansen's disease (Leprosy)	Salmonellosis, including typhoid fever [1]
Asbestosis	Heat Stroke	Shiga toxin-producing *Escherichia coli* [1]
Ascariasis	Hantavirus infection	Shigellosis
Babesiosis	Hemolytic Uremic Syndrome (HUS)	Silicosis
Campylobacteriosis	Hepatitis B infection identified prenatally or at delivery (mother)	Spotted fever group rickettsioses
Chagas Disease	Hepatitis B and E (acute)	Streptococcus *pneumoniae*, invasive [1]
Chancroid [3]	Hepatitis C (acute and chronic)	Syphilis – all other stages [3]
Chickenpox (Varicela)	Hookworm (Ancylostomiasis)	*Taenia solium* & undifferentiated *Taenia* infection
Chlamydia trachomatis infection [3]	Human immunodeficiency virus (HIV) infection, non-acute infection [4]	Tetanus
Coccidioidomycosis	Influenza, type A and B	Trichinosis
Cryptosporidiosis	Leishmaniasis	Trichuriasis
Cyclosporiasis	Legionellosis	Tuberculosis infection [6,8]
Cysticercosis	Listeriosis [1]	Typhus
Drowning/near drowning	Lyme Disease	West Nile Virus (neuroinvasive and fever)
Echinococcocis	Malaria	Yersiniosis
Ehrlichiosis	Paragonimiasis	
Fascioliasis		

ANY OUTBREAK, EXOTIC EMERGING DISEASE, OR UNUSUAL GROUP EXPRESSION OF DISEASE THAT MAY BE OF PUBLIC HEALTH CONCERN MUST BE REPORTED IMMEDIATELY. THIS INCLUDES ANY CASE OF A SELECT AGENT.

Texas Law

Several Texas Laws (Health & Safety Code, Chapters 81, 84, and 87) require specific information regarding notifiable conditions to be provided to local and state health departments (CEPDPH & TDSHS). Health care providers, hospitals, laboratories, schools, and others are to report patients who are suspected of having a notifiable condition (Chapter 97, Title 25, Texas Administrative Code). ***Failure to report is a Class B misdemeanor that carries a sentence of up to 180 days and a fine up to $2000 under the Texas Health and Safety Code, §81.049.***

HIPAA

The HIPAA Privacy Rule [45 C.F.R. Section 164.512(b)] allows reporting without authorization for public health purposes and where required by law.

Special Instructions

1. Lab isolates must be sent to DSHS Lab. For S. pneumonia and H. Influenzae, submit isolate only in children under 5 years-of-age. Call **(512) 776-7598** for specimen submission information.
2. Arboviral infections including, but not limited to, those caused by California serogroup virus, Eastern Equine Encephalitis virus, and Western Equine Encephalitis virus.
3. Chancroid, chlamydia, gonorrhea, and syphilis reports must also include the report date, and results of tests. Submit electronically or using faxable S-27 **(Fax 915-212-0174)**. Questions on reporting procedures may be directed to **(915) 212-6596.**
4. Any person suspected of having HIV should be reported, including HIV exposed infants. Questions on reporting procedures may be directed to **(915) 212-6585. Fax (915) 212-0174.**
5. For purposes of surveillance, CJD notification also includes Kuru, Gerstmann-Sträussler-Scheinker (GSS) disease, fatal familial insomnia (FFI), sporadic fatal insomnia (sFI), Variable Protease-Sensitive Prionopathy (VPSPr), and any novel prion disease affecting humans.
6. Tuberculosis may be reported on Form TB-400, "Report of Case and Patient Services". Telephone reports may be directed to **(915) 212-6559.** Fax radiology and lab results to **(915) 212-0172.**
7. Reportable tuberculosis disease includes the following: suspected tuberculosis disease pending final laboratory results; positive nucleic acid amplification tests; clinically or laboratory-confirmed tuberculosis disease; and all Mycobacterium tuberculosis (M.tb) complex including M. tuberculosis, M. bovis, M. africanum, M. canerrii, M. microti, M. caprae, and M. pinnipedii.
8. TB infection in determined by a positive result from an FDA-approved Interferon-Gamma Release Assay (IGRA) test such as T-Spot ® TB or QuantiFERON ® - TB GOLD In-Tube Test or a tuberculin skin test, and a normal chest radiograph with no presenting symptoms of TB disease.

Revised 2021

ATTACHMENT 2 – EL PASO COUNTY AT A GLANCE

Population at glance

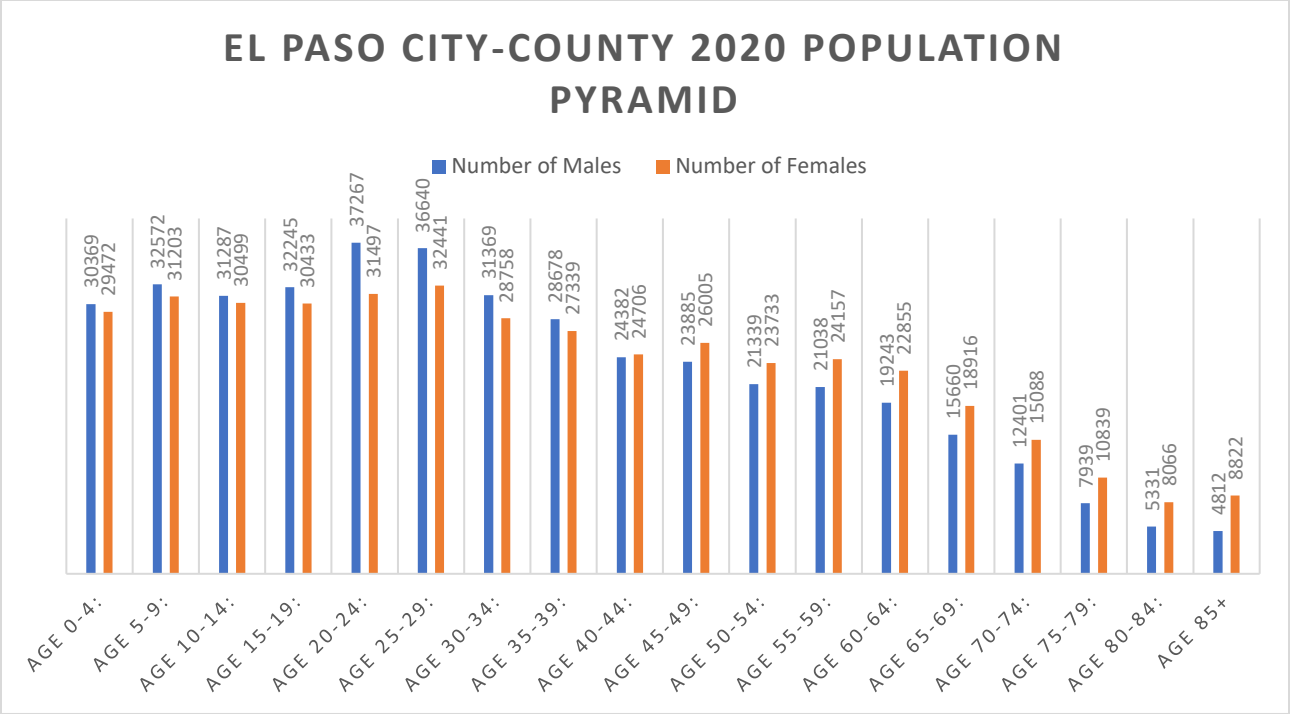
The City of El Paso is the sixth-largest city in Texas and the 22nd largest city in the US with a 2019 census population estimate of 681,728, a 5.2% increase from the 2010 census and a 20.2% increase from the 2000 census (US Census). El Paso County's population is approximately 839,238. The City of El Paso is located in the Southwest Region of the country and the Far West corner of Texas abutting the US/Mexico border, separated from its sister city Ciudad Juárez, Chihuahua, Mexico by the Rio Grande River, and bordering Doña Ana County, New Mexico on its northwestern boundary. Together, the two international cities form the El Paso/Juárez Borderplex, the continent's second-largest bi-national metropolis on the US/Mexico border with an estimated 2.7 million people.

El Paso is home to Fort Bliss, the US Army's second-largest military base geographically, with a population of 8,264. El Paso County has 329 colonias; these are unincorporated resource-poor settlements in the outlying areas of the county. As per the US Census, 80.9% of El Paso's residents are of Hispanic or Latino origin and 69.3% of those over the age of five years speak a language other than English at home.

A visual representation of demographics and health indicators for the County population is presented below. Data is limited to available information through public sources dating back to 2019.

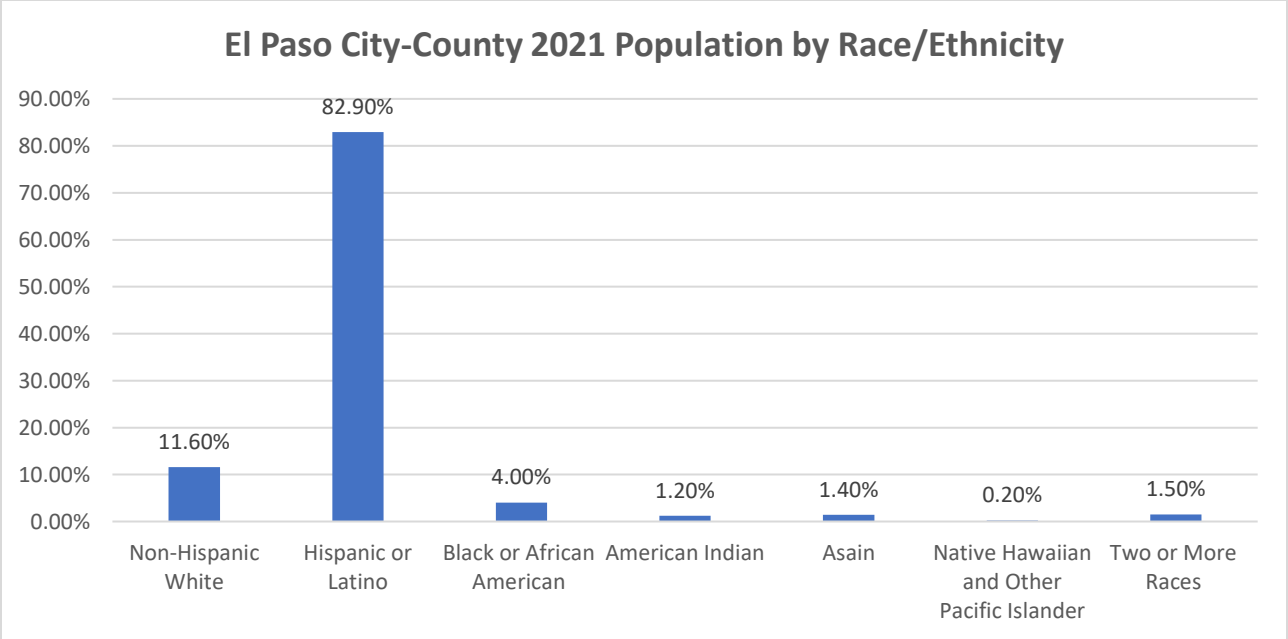
ATTACHMENT 2 – EL PASO COUNTY AT A GLANCE

[Texas County Population Pyramids (txcip.org)]



Graph 1. El Paso County Population Pyramid, 2020

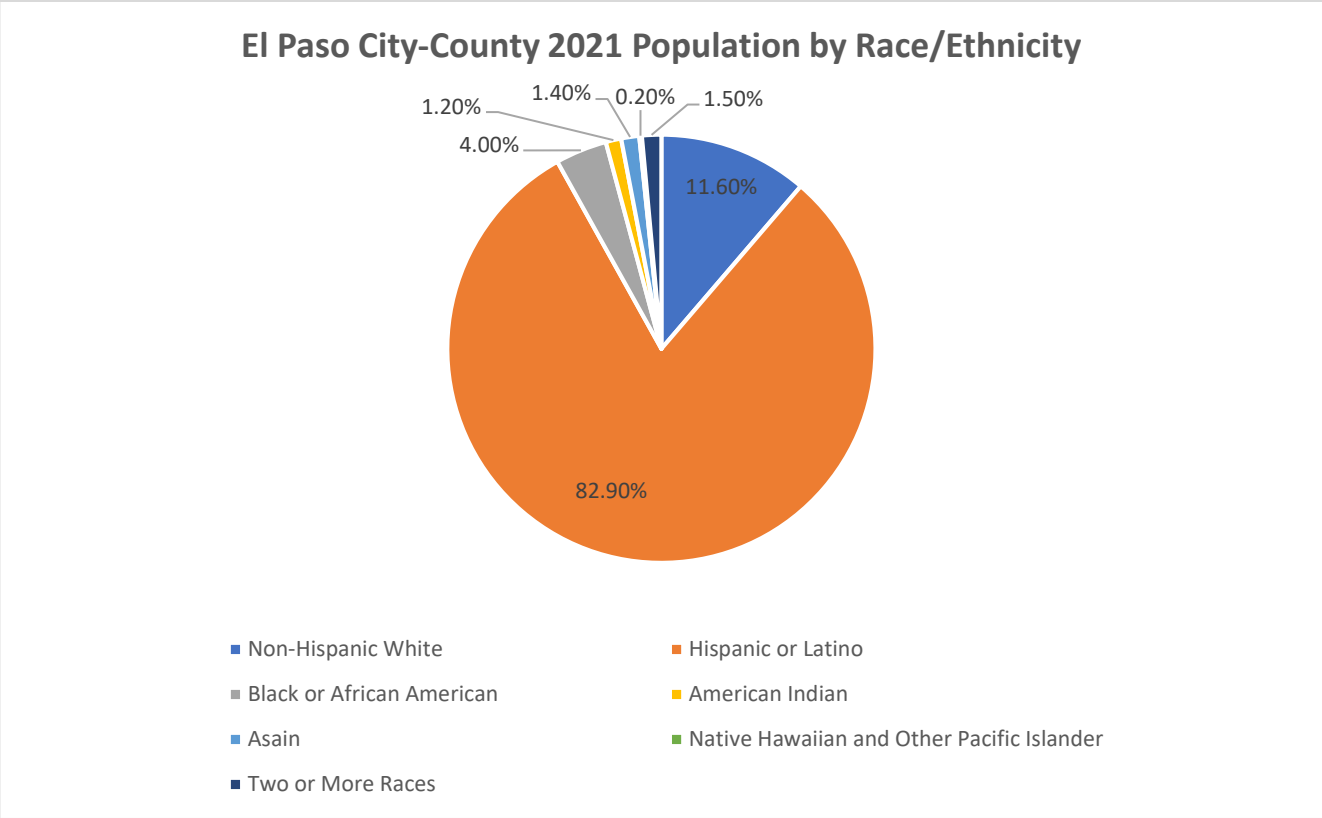
[United States Census Bureau QuickFacts: El Paso County, Texas]



Graph 2. El Paso County Population by Race/Ethnicity, 2021

ATTACHMENT 2 – EL PASO COUNTY AT A GLANCE

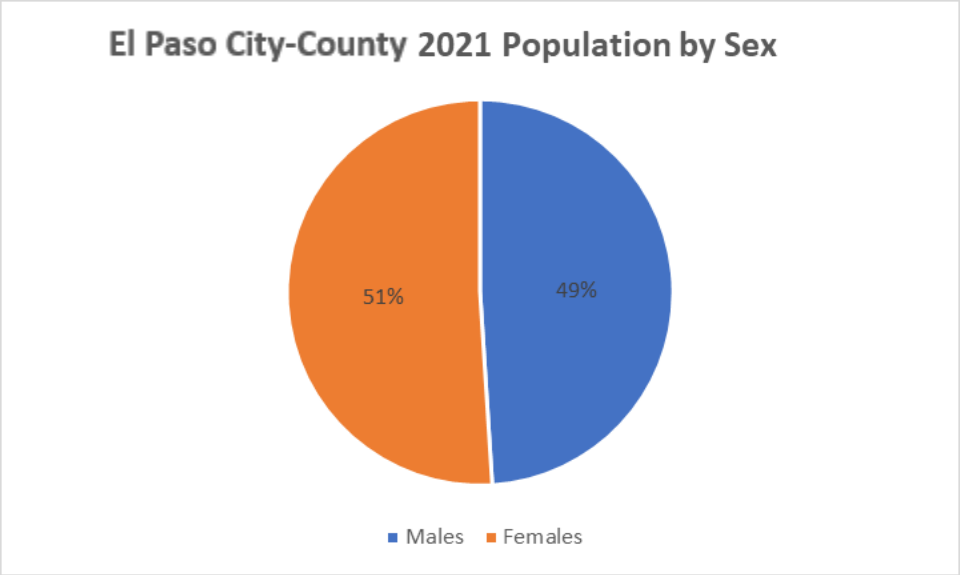
El Paso City-County 2021 Population by Race/Ethnicity



Graph 3. El Paso County Population by Race/Ethnicity, 2021

ATTACHMENT 2 – EL PASO COUNTY AT A GLANCE

El Paso, TX - Profile data - Census Reporter

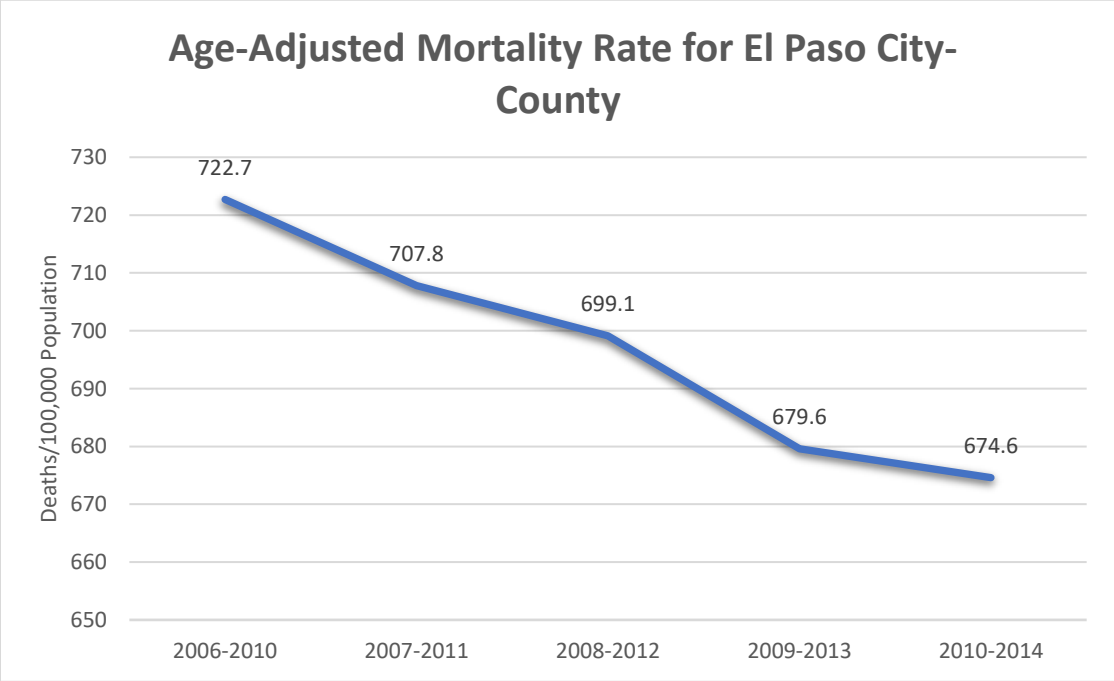


Graph 4. El Paso County Population by Sex, 2021

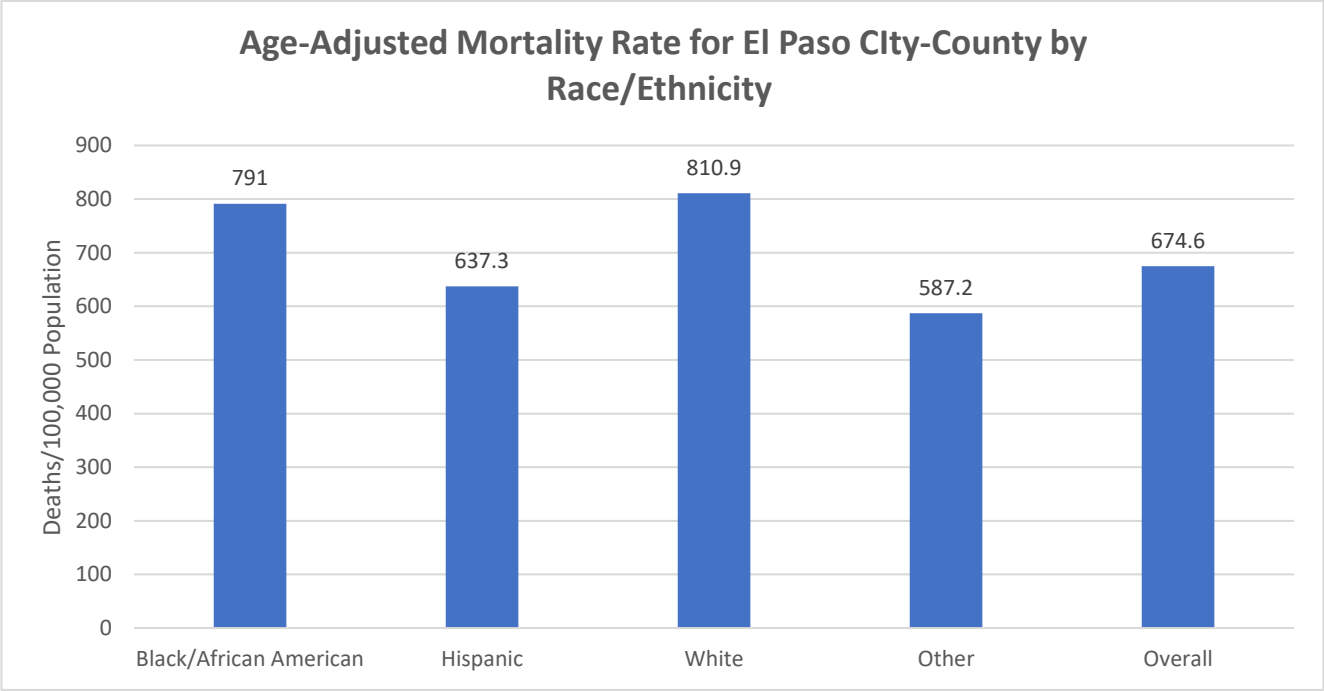
Texas Health Data - Deaths (2006-2019)

In 2019, El Paso County had 5,718 deaths, and a crude death rate of 671 deaths per 100,000.

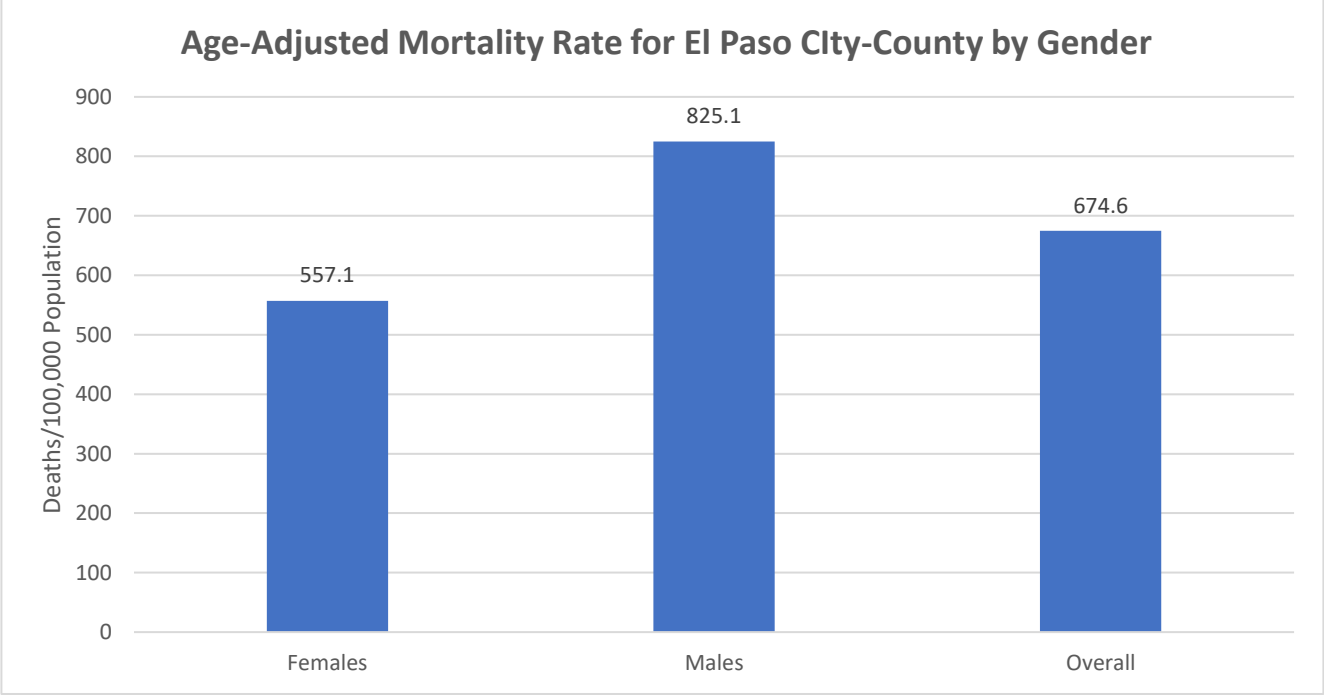
Healthy Paso del Norte :: Indicators :: Age-Adjusted Death Rate :: County : El Paso, TX



Graph 5. El Paso County Mortality Rate, 2006-2014

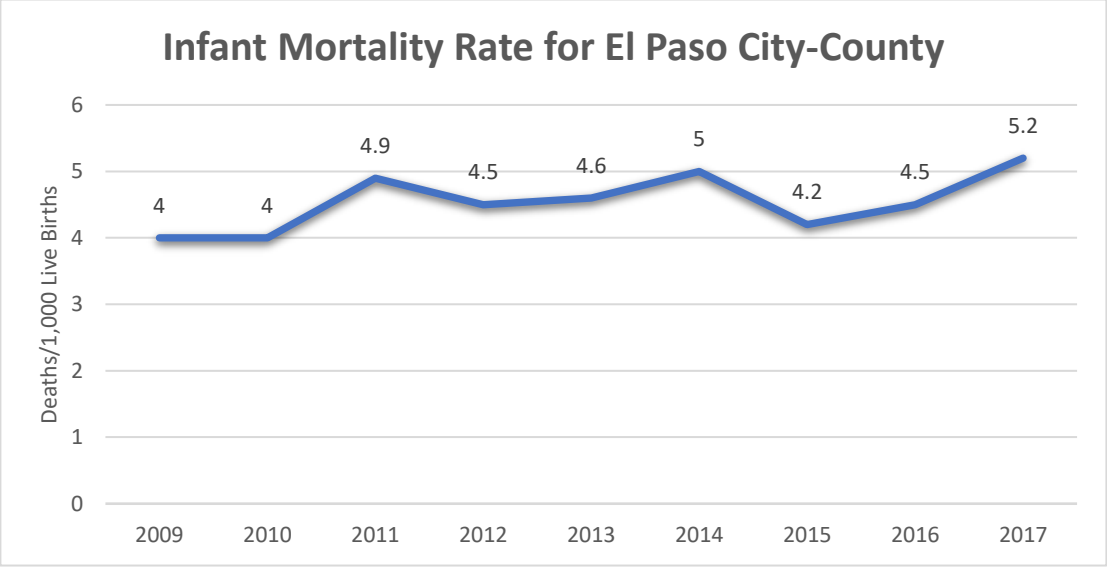


Graph 6. El Paso County Mortality Rate by Race/Ethnicity



Graph 7. El Paso County Mortality Rate by Gender

Healthy Paso del Norte :: Indicators :: Infant Mortality Rate :: County : El Paso, TX



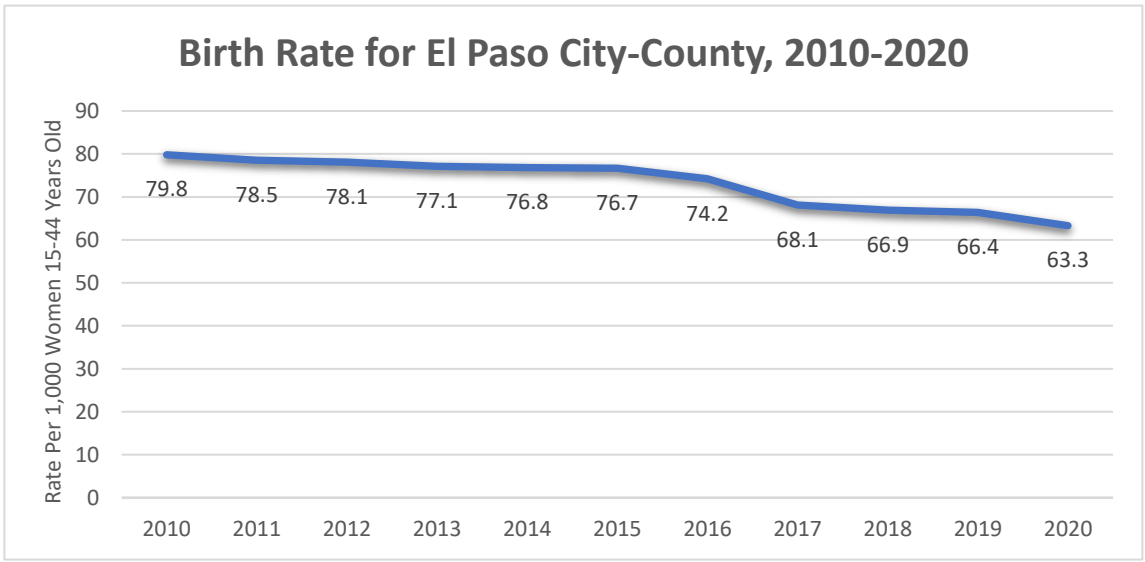
Graph 8. El Paso County Infant Mortality Rate, 2009-2017

Birth rate: El Paso county, 2010-2020 | PeriStats | March of Dimes

In 2020, there were 11,089 live births in El Paso county.

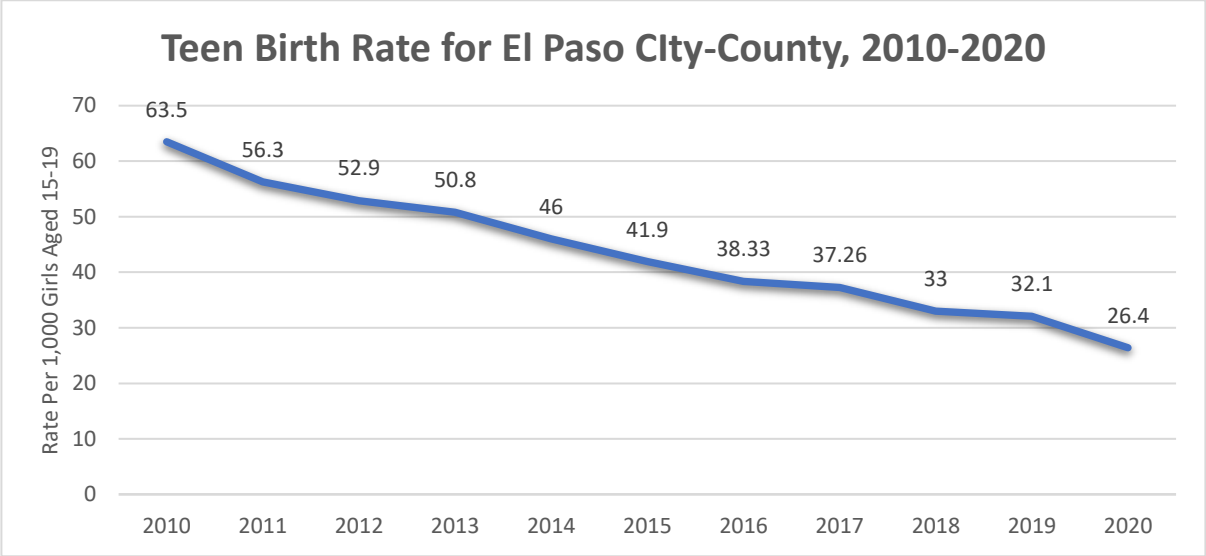
The birth rate in El Paso City-County in 2020 was 63.3 per 1,000 women ages 15-44.

Of all live births in El Paso City-County during 2018-2020 (average), 83.3% were Hispanic, 11.1% were white, 3.7% were black, 0.2% were American Indian/Alaska Native and 1.5% were Asian/Pacific Islander.



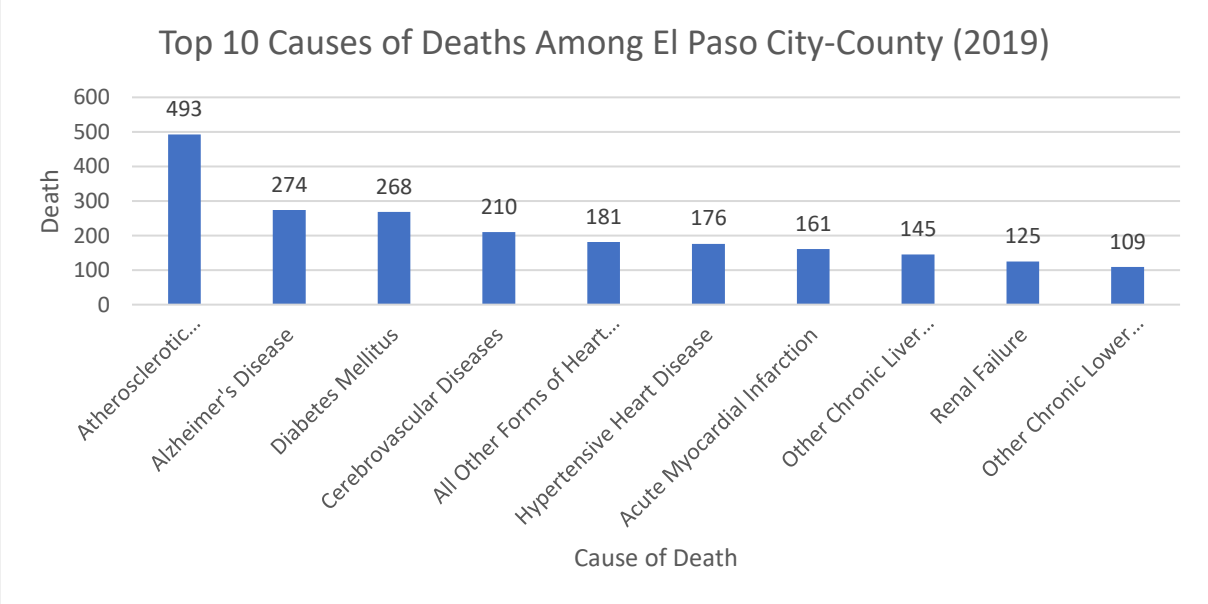
Graph 9. El Paso County Birth Rate, 2010-2020

[Teen Birth in Texas – The Texas Campaign to Prevent Teen Pregnancy (txcampaign.org)]



Graph 10. El Paso County Teen Birth Rate, 2010-2020

[Texas Health Data - Deaths (2006-2019)]



Graph 11. El Paso County Top 10 Causes of Death, 2019

STATE OF TEXAS

10 Statistics Around the Texas Teen Pregnancy Rate - Texas Adoption Center

The largest percentage of Texas teens to get pregnant each year are Hispanic (34.4%) and come from places near the Mexico border. African American girls represent 26.7% of teen pregnancies and whites comprise 14.6%. These figures are rounded out by Native Americans at 12.6% and Asians at 3%. 75% of teen pregnancies are unintended.

Stats of the State of Texas (cdc.gov)

Top 10 Causes of Deaths Among El Paso City-County (2019)

1. Atherosclerotic Cardiovascular Disease
2. Alzheimer's Disease
3. Diabetes Mellitus
4. Cerebrovascular Diseases
5. All Other Forms of Heart Disease
6. Hypertensive Heart Disease
7. Acute Myocardial Infarction
8. Other Chronic Liver Disease and Cirrhosis
9. Renal Failure
10. Other Chronic Lower Respiratory Diseases

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