

INFECTIOUS DISEASE REPORT

Utah County Health Department

2018

YEAR SUMMARY

ENTERIC DISEASE – LOCAL OUTBREAKS

NOROVIRUS

Norovirus is no longer reportable unless there is an outbreak. Due to the rapidity of symptom onset and cessation, it is difficult to test for norovirus. However, rapid spread of the symptoms within a large population usually indicates that norovirus is the culprit. The virus is very contagious and can be passed by exposure to contaminated surfaces or by inhalation of vomit fumes.

On September 5th, six schools in the Alpine School District reported a sudden increase of students and staff with vomiting and diarrhea. These schools saw, on average, a 10% absence during a week's time. Parents were asked to keep their children home if they had any nausea, vomiting, or diarrhea, and for 3 days after symptoms ended. Many parents communicated that they kept their children home out of fear of them becoming infected, not because they were experiencing symptoms. During the outbreak the school district instructed each of their schools to regularly disinfect every surface in classrooms and other high-traffic areas with bleach, ammonia, and other hospital grade disinfectants. No more reports of symptoms in any of the schools were received after October 6th.

E. COLI

In October a group of unrelated people tested positive for the same serotype of Shigatoxin-producing E. coli (STEC). The one factor they had in common was visiting a popular Halloween corn maze/petting zoo. Livestock and game are the main carriers of STEC. Since the establishment has a petting zoo and a communal "corn play pit", it was most the most likely origin of the cluster of infection. The business took proactive steps to educate the public of the importance of handwashing/sanitizing after coming into contact with the animals.

SALMONELLA

In February a group of unrelated people tested positive for the same serotype of Salmonella Newport. All had eaten at a popular restaurant in Utah County. Environmental Health was notified and the restaurant was inspected. No infractions were noted.

There was no common food item among all the cases. UCHD requested testing of the staff and the restaurant paid their employees for their time in taking the test. One employee was found to have the infection and determined to be the source of transmission to the patrons. That employee did not go back to work until a course of antibiotics was finished and two subsequent tests came back negative.

ENTERIC DISEASE – NATIONAL OUTBREAKS

In May there was a multi-state outbreak of Salmonella Mbandaka related to Honey Smacks cereal. Utah County had one resident that was part of this outbreak. This resident confirmed having consumed that brand of cereal.

INFECTIOUS DISEASE REPORT

Utah County Health Department

2018

YEAR SUMMARY

HEPATITIS - Viral

HEPATITIS A

Utah County has identified 16 confirmed Hepatitis A virus (HAV) infection this year, many among persons who are homeless and/or using illicit drugs. Fifteen of these cases have been linked by investigation and/or viral sequencing to a national outbreak of Hepatitis A involving cases in California and Arizona that started in 2016. This specific outbreak entered Utah County in June of 2017.

In response to the outbreak epidemiology investigators worked to identify cases and contacts, provide education, and ensure opportunities for vaccination of close contacts to cases and vulnerable populations.

No further cases were reported in Utah County after February 25th while other counties continued having sporadic cases after this date. We believe that the outreach prevention measures taken at the Utah County Jail and at the Food & Care Coalition were instrumental in keeping the outbreak from crossing back into Utah County.

HEPATITIS B - New Cases & Perinatal Program

Utah County Health Department participates in the Hepatitis B Perinatal Program. Infants of mothers who are infected with the Hepatitis B virus (HBV) have a 40% chance of becoming infected with the virus; if they acquire the infection at birth, they have a 95% chance of chronically carrying the infection for life, and 25% of these will die from chronic liver disease. If the infant receives immunoglobulin within 12 hours of birth and complies with the modified vaccine schedule, the chances of becoming infected is almost nil. The program provides free immunoglobulin to the delivery hospital, free vaccine to the baby, and free testing for all family members. In order to be able to do this, close surveillance and follow up is necessary during the entire pregnancy.

Reports of HBV-positive women who were newly pregnant = 7.

Post-delivery immunoglobulin and follow up vaccine = 5 (100%).

Patients newly diagnosed with HBV (non-perinatal) = 88.

HEPATITIS C

In the past, Hepatitis C (HCV) has been difficult to investigate due to the lack of manpower to handle the overwhelming numbers of those newly testing positive. Most are un/underinsured, low-income, incarcerated, and/or homeless. Even when able to contact these patients, very few resources could be offered to help them combat this disease.

Recently the Utah Department of Health (UDOH) acquired a grant that allowed each County Health Department to hire an additional epidemiology investigator to take on this responsibility. This new employee has been able to contact a large percentage of the cases, thus being able to provide education and resources to each patient. The grant also provides funding for contact tracing and testing.

INFECTIOUS DISEASE REPORT

Utah County Health Department

2018

YEAR SUMMARY

During the year, UCHD received 288 reports of newly-diagnosed HCV cases. Of these, 28 lived in another county. Case classification of those living in Utah County: 19 acute; 164 chronic; 1 resolved; 76 not cases. Most prevalent risk factor: IV drug use.

INFLUENZA

The official influenza surveillance season begins at Week 40 (early October) and ends at Week 20 (mid-May) of the following year.

2017-2018 season: Utah County had 1,574 positive influenza tests reported; 299 of those were hospitalized, and 7 deaths. Nationwide, Influenza type A(H3N2) viruses predominated overall during that season. However, Influenza B viruses became more commonly reported in early March through May 2018.

The overall effectiveness of the 2017-2018 flu vaccine against both Influenza A and B viruses was estimated to be 40%. This means the flu vaccine reduced a person's overall risk of having to seek medical care at a doctor's office for flu illness by 40%. Protection by virus type and subtype was: 25% against A(H3N2), 65% against A(H1N1) and 49% against B viruses.

2018-2019 season (currently in progress as of December 2018): Utah County so far has 43 positive influenza tests reported; 13 of those have been hospitalized, and 2 deaths. One of those deaths occurred in a patient under the age of 18 years. So far, Influenza A(H1N1-2009) has been predominant. It is not possible to predict with certainty if a flu vaccine will be a good match for circulating viruses; the effectiveness will be determined as more data is available over the course of this season.

MULTI-DRUG RESISTANT ORGANISMS

(especially Carbapenem)

Carbapenem-resistant Enterobacteriaceae (CRE) are a family of germs that are difficult to treat because they have high levels of resistance to antibiotics. They are a normal part of the human gut bacteria that can become carbapenem-resistant. Healthy people usually do not get CRE infections - this type of infection usually happens to patients in hospitals, nursing homes, and other healthcare settings. Patients whose care requires devices like ventilators (breathing machines), urinary (bladder) catheters, or intravenous (vein) catheters, and patients who are taking long courses of certain antibiotics are most at risk for CRE infections. Most troublesome is when the organism develops into Carbapenemase, which is when the organism creates an enzyme that actually destroys the Carbapenem antibiotic, rendering it completely useless in fighting the bacterium.

When a case is reported, the Health Department needs to determine if the patient is hospitalized or in a long-term care facility (LTCF). If one of these is the case, special attention is given to make sure that specific steps are taken to stop transmission of other patients. Steps that are taken include:

*Risk assessment;

INFECTIOUS DISEASE REPORT

Utah County Health Department

2018

YEAR SUMMARY

- *Appropriate hand hygiene;
- *Contact precautions - gowning and gloving before entering the room;
- *Minimizing device usage (central venous and urinary catheters, and endotracheal tubes);
- *Facilities that are transferring infected patients must notify the receiving facility of the patients' status so that appropriate infection measures can be promptly implemented upon the patient's arrival;
- *Ensuring correct antimicrobial usage - appropriate indications, duration, and the narrowest spectrum;
- *Appropriate environmental cleaning, especially upon patient discharge.

Utah County hospitals reported 19 cases of CRE; of these, 37% originated from one LTCF. This care center was visited by Utah Department of Health epidemiologists to discuss solving the issue. There were no newly reported cases after October.

RABIES

2018

Two bats tested positive for rabies. One bat was found to have inhabited sleeping areas in a home where 5 people reside. The second bat was found in a resident's backyard; the resident and his dog both had skin contact with the bat. Appropriate preventive measures were arranged and completed.

In October a resident of Sanpete County was hospitalized and subsequently passed away in a Utah County Hospital. It was later confirmed that he had been infected with rabies. The surviving spouse indicated that their attic had been infested with bats and they often found bats in their bedroom in the morning. They had not been aware of the need for post-exposure treatment.

Several Utah County residents have reported having been bitten by dogs or monkeys while traveling abroad. Appropriate preventive measures were arranged and completed.

SEXUALLY-TRANSMITTED INFECTIONS

HIV

Utah County received 22 reports of HIV-infected persons; twelve of those cases were newly diagnosed - the other 9 had been diagnosed in a different state and had been tested upon moving here to continue care. One of those newly diagnosed was a person under the age of 18.

CHLAMYDIA & GONORRHEA

Utah County investigated 1,232 reports of Chlamydia, as compared to the 2017 total of 1,178. There was also a significant increase in Gonorrhea cases: 220 cases in 2018, as compared to 189 in 2017.

INFECTIOUS DISEASE REPORT

Utah County Health Department

2018

YEAR SUMMARY

SYPHILIS

Utah County has had a 60% increase in the number of new Syphilis case since 2017. Seventy-five percent of these cases are male and are predominantly men who have sex with men (MSM).

Note: In past years, the Utah Department of Health has allocated free medication (Rocephin, Bicillin, Azithromycin) for the treatment of Gonorrhea, Syphilis, and Chlamydia. Beginning in 2019 each local health department will be responsible for purchasing its own medications.

STREPTOCOCCAL INFECTIONS - INVASIVE

Utah County received 174 reports of invasive strep infections (reportable only if found in normally sterile sites, such as blood, cerebral spinal fluid, bone, placenta). Most common diagnoses include bacteremia, pneumonia, meningitis, cellulitis, necrotizing fasciitis, and toxic shock syndrome.

GROUP A STREP (streptococcus pyogenes)

Thirty-three cases (5 deaths) with an average age of 48 years. This year the most prevalent diagnosis was bacteremia, but also included necrotizing fasciitis ("flesh-eating disease"), cellulitis, bone sepsis, pneumonia, and STSS. STSS is a cascade of symptoms resulting in multi-organ failure, called Streptococcal Toxic Shock Syndrome. Group A Strep is the most likely organism responsible for causing STSS.

GROUP B STREP (GBS)

Fifty-two cases (3 deaths) with an average age of 41 years. However, most of the cases occur in the 0 to 1-month age group. Pregnant women should be screened for GBS between 35 to 37 weeks of every pregnancy; if positive, she receives preventive antibiotics during delivery. However, if the woman is not screened, for example due to preterm birth, then an untreated infection can be passed onto the baby.

This year the most prevalent diagnosis was bacteremia, but also included cellulitis, bone/joint sepsis, and pneumonia.

STREP PNEUMONIAE

Thirty-six cases (3 deaths) with an average age of 51 years. There is a vaccine for this organism. PCV is given during the regular childhood schedule at 2, 4, 6, and 15 months of age. PCV13 or 23 is an adult dose that is usually given after age 65.

This year the most prevalent diagnoses were pneumonia and meningitis, but also included bacteremia and one case of STSS.

INFECTIOUS DISEASE REPORT

Utah County Health Department

2018

YEAR SUMMARY

OTHER INVASIVE STREP GROUPS

Other species of strep infections reported included Alpha-hemolytic, Anginosus, Group C, Group F, Group G, Intermedius, Mitis, Mutans, Parasanguinis, Salivarius, and Viridans. Fifty-three cases (4 deaths) with an average age of 54 years. This year the most prevalent diagnosis was bacteremia, but also included one case of meningitis.

VACCINE-PREVENTABLE

The school nurses are invaluable in protecting students, staff, and faculty from many of these diseases. They receive many of the reports by parents, conduct part of the investigations, compile many of the reports, and enforce the vaccine-exemption rules.

CHICKENPOX

There was an outbreak of chickenpox at a charter school in Orem starting right before Thanksgiving. Sixty-four percent of those infected were unvaccinated. By the end of the outbreak 11 cases had been reported.

Another charter school in Orem had an outbreak of chickenpox in March and April with 8 cases total. None of those infected had been vaccinated.

Exclusions were made for vaccine-exempt children, and education was provided on the benefits of vaccination.

MUMPS

There was one suspect case of Mumps in an adult Utah County resident. The source of the infection was unclear as there was no history of travel, symptomatic contacts, large group events, or out-of-state visitors. The diagnosis was also unclear as only a positive antibody test was the indicator. The follow up RNA test was negative; however, the specimen was collected so long after symptom onset that there was the chance that it was a false negative. The case was still handled as suspect in regards to contact tracing and vaccination education.

PERTUSSIS

Pertussis numbers were significantly increased as compared to 2017. In 2017 there were 45 cases, indicating a 7.6 rate per 100,000. In 2018 there were 105 cases, indicating a 17.7 rate per 100,000. All cases associated with school had appropriate follow up with exclusions for the vaccine-exempt.

INFECTIOUS DISEASE REPORT

Utah County Health Department

2018

YEAR SUMMARY

VECTOR-BORNE

LYME DISEASE

Utah County received 57 reports of Lyme disease, of which 5 were actual cases. Two of those 5 were diagnosed as "confirmed", and had acquired the infection in the Eastern U.S., where Lyme disease is endemic. The other 3 were suspect only due to lack of confirmatory results or ability to interview the patient. There is a belief among a small group of Utah County residents that Lyme disease can be contracted in Utah; however, epidemiological studies done by the CDC so far have not confirmed that. Most of the 57 positive lab reports had been erroneously interpreted by the patients' health care providers.

WEST NILE VIRUS

Utah County had the first 2018 case of West Nile Virus for the state, and was the county's only case for the year. The case had been camping in Idaho and in Iron County, UT during the exposure period; however, since mosquitoes were also seen at the case's Utah County residence, Mosquito Abatement sprayed the area around the home.

ZIKA VIRUS

A total of 70 Utah County residents were evaluated for risk factors to Zika Virus. The concerns reported were symptoms after traveling to an affected country or a pregnant woman (or her spouse) having traveled to an affected country. All test results returned negative. All were instructed to use condoms for 6 months after possible exposure, as per CDC guidelines.

INFECTIOUS DISEASE REPORT

Utah County Health Department

2018

Population found at: <https://www.census.gov/quickfacts/fact/table/utahcountyutah/PST120216>

Previous 5 year count

	2013		2014		2015		2016		2017		13-17 Average		2018	
	Pop: 552,406		Pop: 561,534		Pop: 575,205		Pop: 575,205		Pop: 592,299				Pop: 592,299	
	Rate		Rate		Rate		Rate		Rate		Rate		Rate	
Acute Flaccid Myelitis	Not reportable until 2017								1	0.2	1.0	0.2	1	0.2
Anaplasmosis	Not reportable until 2017								1	0.2	1.0	0.2	0	0.0
Anthrax	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0	0.0
Babesiosis	0	0.0	0	0.0	0	0.0	1	0.2	1	0.2	0.4	0.1	1	0.2
Bacteremia	See "Syndromes"													
Botulism - adult	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0	0.0
Botulism - infant	1	0.2	3	0.5	0	0.0	1	0.2	0	0.0	1.0	0.2	0	0.0
Brucellosis	0	0.0	0	0.0	0	0.0	1	0.2	0	0.0	0.2	0.0	1	0.2
Campylobacter	77	13.9	100	17.8	69	12.0	88	15.3	99	16.7	86.6	15.2	73	12.3
Carbapenem resistant/ carbapenemase - Acenitobacter, E.Coli, Enterobacter, Klebsiella	Not reportable until 2014		8	1.4	4	0.7	20	3.5	32	5.4	16.0	2.7	33	5.6
Chagas Disease	0	0	0	0	0	0.0	0	0.0	0	0.0	0.0	0.0	1	0.2
Chancroid	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0	0.0
Chickenpox	54	9.8	54	9.6	41	7.1	61	10.6	57	9.6	53.4	9.3	60	10.1
Chikungunya	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0	0.0
Chlamydia	772	139.8	959	170.8	1,025	178.2	1,056	183.6	1,183	199.7	999.0	174.4	1,232	208.0
Cholera	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0	0.0
Coccidioicomycosis	5	0.9	6	1.1	5	0.9	9	1.6	6	1.0	6.2	1.1	11	1.9
Colorado Tick Fever	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0	0.0
Creutzfeld-Jacob Disease (CJD)	0	0.0	2	0.4	2	0.3	1	0.2	0	0.0	1.0	0.2	0	0.0
Cryptosporidium	16	2.9	12	2.1	23	4.0	48	8.3	19	3.2	23.6	4.1	35	5.9
Cyclosporiasis	Not reportable until 2017								1	0.2	1.0	0.2	3	0.5
Dengue Fever	3	0.5	2	0.4	0	0.0	4	0.7	2	0.3	2.2	0.4	3	0.5
Diphtheria	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0	0.0
Ehrlichiosis	1	0.2	0	0.0	0	0.0	0	0.0	2	0.3	0.6	0.1	0	0.0
E. Coli O157 or STEC	18	3.3	31	5.5	26	4.5	26	4.5	25	4.2	25.2	4.4	24	4.1
Giardia	35	6.3	44	7.8	32	5.6	22	3.8	46	7.8	35.8	6.3	49	8.3
Gonorrhea	68	12.3	105	18.7	139	24.2	167	29.0	200	33.8	135.8	23.6	220	37.1

INFECTIOUS DISEASE REPORT

Utah County Health Department

2018

Population found at: <https://www.census.gov/quickfacts/fact/table/utahcountyutah/PST120216>

Previous 5 year count

	2013		2014		2015		2016		2017		13-17 Average		2018	
	Pop: 552,406	Rate	Pop: 561,534	Rate	Pop: 575,205	Rate	Pop: 575,205	Rate	Pop: 592,299	Rate	Rate	Rate	Pop: 592,299	Rate
Haemophilus Influenzae non-B	7	1.3	12	2.1	5	0.9	6	1.0	16	2.7	9.2	1.6	7	1.2
Haemophilus Influenzae type B	2	0.4	0	0.0	0	0.0	0	0.2	0	0.0	0.4	0.1	0	0.0
Hantavirus	0	0.0	0	0.0	0	0.0	1	0.2	1	0.2	0.4	0.1	0	0.0
Hemolytic Uremic Syndrome (HUS)	2	0.4	2	0.4	1	0.2	2	0.3	4	0.7	2.2	0.4	2	0.3
Hepatitis A	2	0.4	2	0.4	2	0.3	2	0.3	34	5.7	8.4	1.4	16	2.7
HEPATITIS B	See below													
Total Reports	191	34.6	176	31.3	187	32.5	226	39.3	248	41.9	205.6	35.9	201	33.9
Acute	1	0.2	2	0.4	2	0.3	1	0.2	0	0.0	1.2	0.2	1	0.2
Chronic: New	15	2.7	13	2.3	15	2.6	23	4.0	17	2.9	16.6	2.9	88	14.9
Perinatal	16	2.9	16	2.8	16	2.8	6	1.0	9	1.5	12.6	2.2	7	1.2
HEPATITIS C	See below													
Total Reports	216	39.1	201	35.8	223	39	274	47.6	345	58.2	251.8	43.9	329	55.5
Acute	2	0.4	2	0.4	7	1.2	2	0.3	19	3.2	6.4	1.1	16	2.7
Chronic: New	193	34.9	171	30.5	213	37.0	210	36.5	169	28.5	191.2	33.5	149	25.2
HIV - new cases	7	1.3	1	0.2	12	2.1	14	2.4	20	3.4	10.8	1.9	22	3.7
Influenza - Season Oct - May	Oct 2012 to May 2013		Oct 2013 to May 2014		Oct 2014 to May 2015		Oct 2015 to May 2016		Oct 2016 to May 2017		Season Average		Oct 2017 to May 2018	
Activity	303	54.9	301	53.6	485	84.3	480	83.4	445	75.1	402.8	70.3	1,574	265.7
Hospitalized	123	22.3	104	18.5	154	26.8	154	26.8	182	30.7	143.4	25.0	299	50.5
Deaths	0	0.0	5	0.9	1	0.2	4	0.7	4	0.7	2.8	0.5	5	0.8
Pediatric death	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0	0.0
Influenza - Year	2013		2014		2015		2016		2017		Average		2018	
Activity		0.0	484	86.2	81	14.1	632	109.9	481	81.2	419.5	58.3	1,474	248.9
Hospitalized		0.0	143	25.5	211	36.7	217	37.7	192	32.4	190.8	26.5	269	45.4
Deaths	0	0.0	3	0.5	0	0.0	4	0.7	5	0.8	2.4	0.4	9	1.5
Pediatric death	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	1	0.2
Legionellosis	2	0.4	1	0.2	2	0.3	4	0.7	6	1.0	3.0	0.5	2	0.3
Leprosy (Hansen's)	0	0.0	1	0.2	0	0.0	0	0.0	0	0.0	0.2	0.0	0	0.0
Leptospirosis	Not reportable until 2017								0	0.0	0.0	0.0	0	0.0

INFECTIOUS DISEASE REPORT

Utah County Health Department

2018

Population found at: <https://www.census.gov/quickfacts/fact/table/utahcountyutah/PST120216>

Previous 5 year count

	2013		2014		2015		2016		2017		13-17 Average		2018	
	Pop: 552,406	Rate	Pop: 561,534	Rate	Pop: 575,205	Rate	Pop: 575,205	Rate	Pop: 592,299	Rate		Rate	Pop: 592,299	Rate
Listeriosis	1	0.2	2	0.4	0	0.0	1	0.2	0	0.0	0.8	0.1	0	0.0
Lyme disease	See below													
Confirmed	6	1.1	2	0.4	2	0.3	3	0.5	4	0.7	3.4	0.6	2	0.3
Suspect or Unk	10	NA	22	NA	14	NA	8	NA	3	NA	11.4	NA	3	NA
Not a Case	25	NA	34	NA	35	NA	47	NA	74	NA	43.0	NA	52	NA
Total Reports	41	7.4	60	10.7	51	8.9	58	10.1	81	13.7	58.2	10.1	57	9.6
Malaria	2	0.4	1	0.2	0	0.0	1	0.2	3	0.5	1.4	0.2	1	0.2
Measles	0	0.0	0	0.0	3	0.5	0	0.0	0	0.0	0.6	0.1	0	0.0
Meningitis	See "Syndromes"													
Meningococcal	1	0.2	0	0.0	0	0.0	0	0.0	0	0.0	0.2	0.0	0	0.0
Mumps	0	0.0	0	0.0	0	0.0	0	0.0	3	0.5	0.6	0.1	1	0.2
Pertussis	253	45.8	222	39.5	88	15.3	33	5.7	45	7.6	128.2	22.8	105	17.7
Plague (Yersinia pestis)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0	0.0
Poliovirus	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0	0.0
Psittacosis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0	0.0
Q Fever	0	0.0	0	0.0	0	0.0	3	0.5	2	0.3	1.0	0.2	1	0.2
Rabies - animal	4	NA	4	NA	3	NA	6	NA	6	NA	4.6	NA	2	NA
Rabies - human	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0	0.0
Relapsing Fever	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0	0.0
Rocky Mountain Spotted Fever	5	0.9	2	0.4	4	0.7	2	0.3	3	0.5	3.2	0.6	3	0.5
Rubella - congenital	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0	0.0
SARS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0	0.0
St Louis Encephalitis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0	0.0
Salmonella	65	11.8	56	10.0	92	16.0	63	11.0	58	9.8	66.8	11.7	77	13.0
Shigella	3	0.5	3	0.5	5	0.9	10	1.7	6	1.0	5.4	0.9	8	1.4
Smallpox	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0		0.0
Streptococcus A (Group A Strep)	28	5.1	20	3.6	26	4.5	30	5.2	24	4.1	25.6	4.5	33	5.6
Streptococcus B (Group B Strep)	22	4.0	28	5.0	28	4.9	44	7.6	42	7.1	32.8	5.7	52	8.8

INFECTIOUS DISEASE REPORT

Utah County Health Department

2018

Population found at: <https://www.census.gov/quickfacts/fact/table/utahcountyutah/PST120216>

Previous 5 year count

	2013		2014		2015		2016		2017		13-17 Average		2018	
	Pop: 552,406		Pop: 561,534		Pop: 575,205		Pop: 575,205		Pop: 592,299				Pop: 592,299	
		Rate		Rate		Rate		Rate		Rate		Rate		Rate
Streptococcus Pneumoniae	49	8.9	41	7.3	37	6.4	35	6.1	34	5.7	39.2	6.9	36	6.1
Streptococcus Other Species	77	13.9	74	13.2	77	13.4	50	8.7	55	9.3	66.6	11.7	53	8.9
Syphilis	5	0.9	14	2.5	13	2.3	21	3.7	23	3.9	15.2	2.6	36	6.1
Tetanus	0	0.0	0	0.0	0	0.0	0	0.5	0	0.0	0.0	0.1	0	0.0
Toxic Shock Syndrome	3	0.5	2	0.4	6	1.0	3	0.0	6	1.0	4.0	0.6	6	1.0
Tuberculosis	See Tuberculosis Report													
Tularemia	1	0.2	0	0.0	1	0.2	0	0.0	0	0.0	0.4	0.1	0	0.0
Typhoid - acute	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0	0.0
Vibriosis	0	0.0	1	0.2	0	0.0	1	0.2	2	0.3	0.8	0.1	1	0.2
Viral Hemorrhagic Fever (Ebola, Marburg)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0	0.0
West Nile infection	1	0.2	0	0.0	0	0.0	2	0.3	8	1.4	2.2	0.4	1	0.2
Yellow Fever	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0	0.0
Zika - Surveillance	Not reportable until 2016						113	19.6	148	25.0	130.5	22.3	70	11.8
Zika - Cases	Not reportable until 2016						2	0.3	1	0.2	1.5	0.3	0	0.0

	2013	2014	2015	2016	2017	13-17 Average	2018
Total Reports	2,564	2,897	2,565	3,331	4,165	NA	5,020
Out of County	152	165	172	395	343	NA	338
Non-Cases	145	135	72	462	396	NA	304

INFECTIOUS DISEASE REPORT

Utah County Health Department

2018

SYNDROMES*

*Note: Syndromes are not always reported

Bacteremia Causative Organism

Haemophilus Influenzae, non-B	4
Streptococcus Group A	12
Streptococcus Group B	26
Streptococcus Pneumoniae	12
Streptococcus - Other species	51
Total Bacteremia	105

Meningitis/Encephalitis Causative Organism

E. Coli	1
Enterobacter	1
Enterovirus	3
Herpes Simplex Virus	3
Staphylococcus Aureus	2
Streptococcus Group B	
Streptococcus Pneumoniae	1
Streptococcus - Other species	1
Varicella Virus	3
West Nile Virus	
No organism identified (aseptic)	
Total Meningitis	15

Toxic-Shock Syndrome Causative Organism

Streptococcus Group A	4
Streptococcus Group B	1
Streptococcus Pneumoniae	1
Total TSS	6

DEATHS Underlying Cause or Contributing Factor

**Not always reported*

Coccidioidomycosis	2
Haemophilus Influenzae (not B)	1
Hepatitis C	1
Influenza	9
Legionnaires	1
Meningitis	2
Streptococcus Group A	5
Streptococcus Group B	3
Streptococcus Other Species	4
Streptococcus Pneumoniae	3
Total Deaths	31

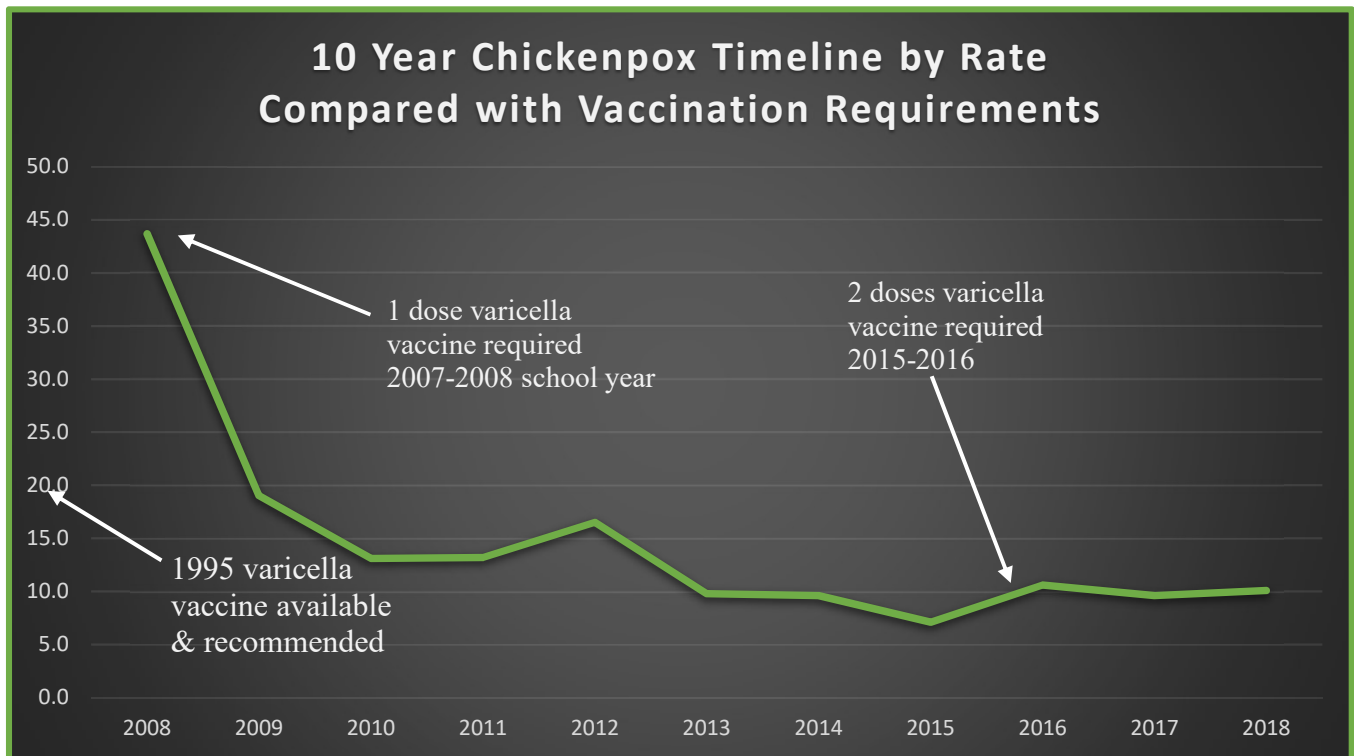
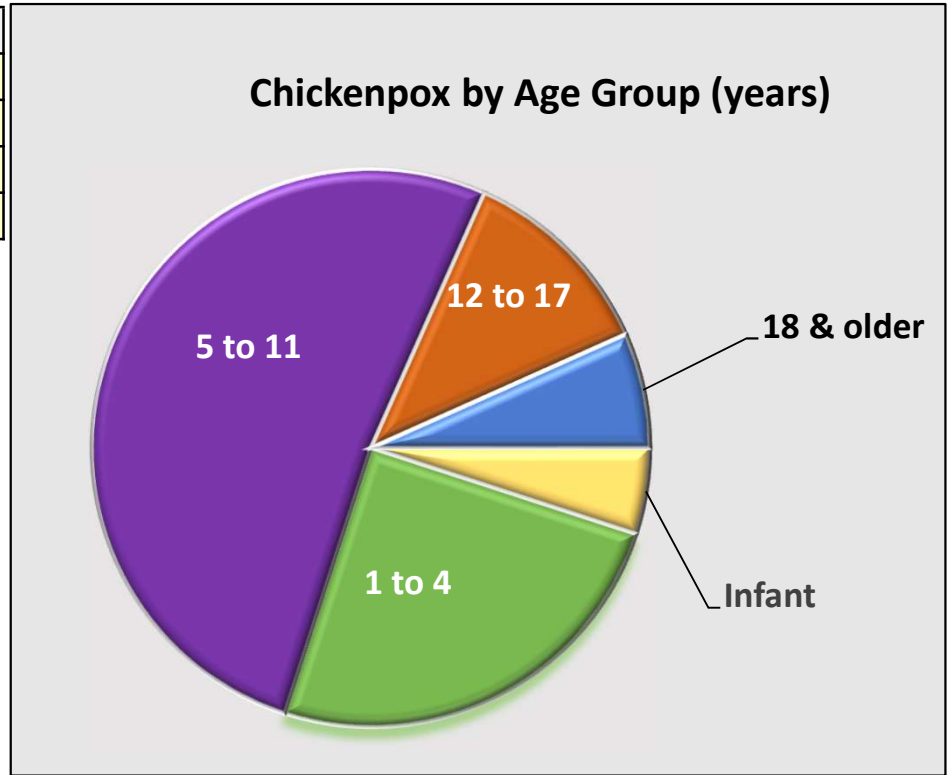
INFECTIOUS DISEASE REPORT

Utah County Health Department

2018

CHICKENPOX

57	Total Cases
0 to 48	Range of Ages
8.5	Mean
7	Median
5 to 11	Mode (age group)



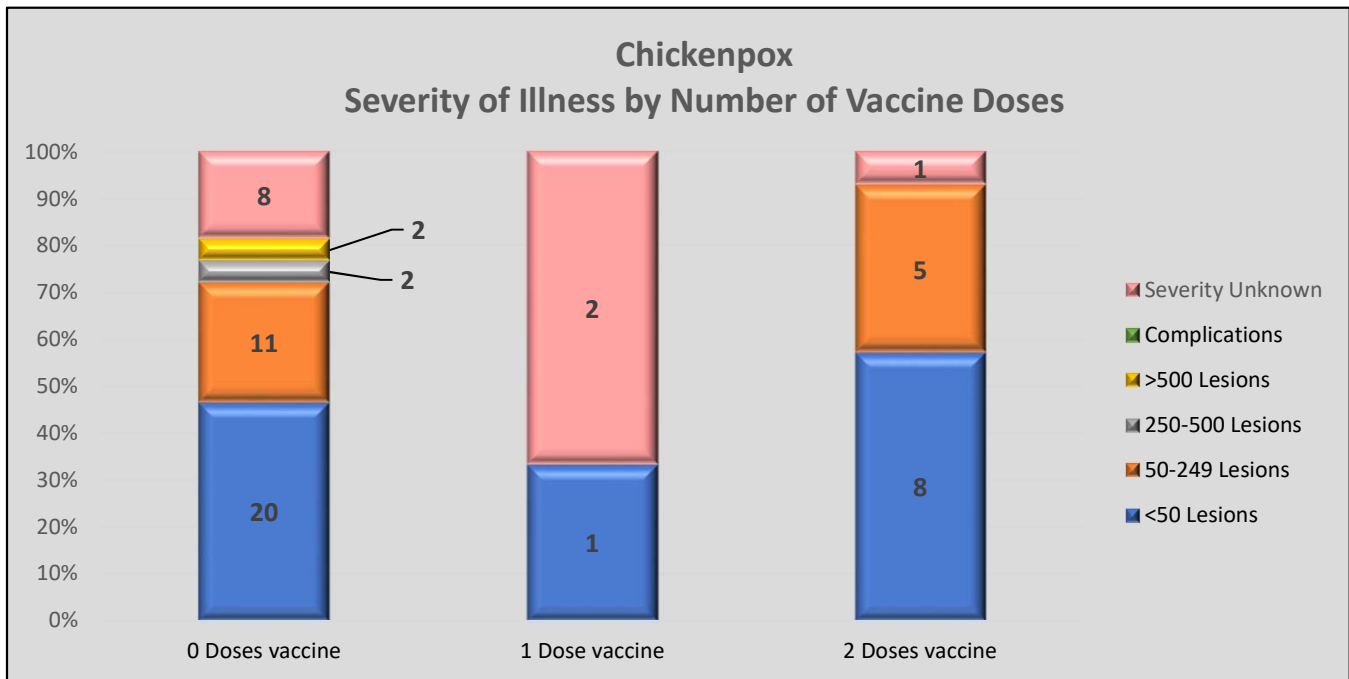
<http://www.immunize.org/laws/varicella.asp>

INFECTIOUS DISEASE REPORT

Utah County Health Department

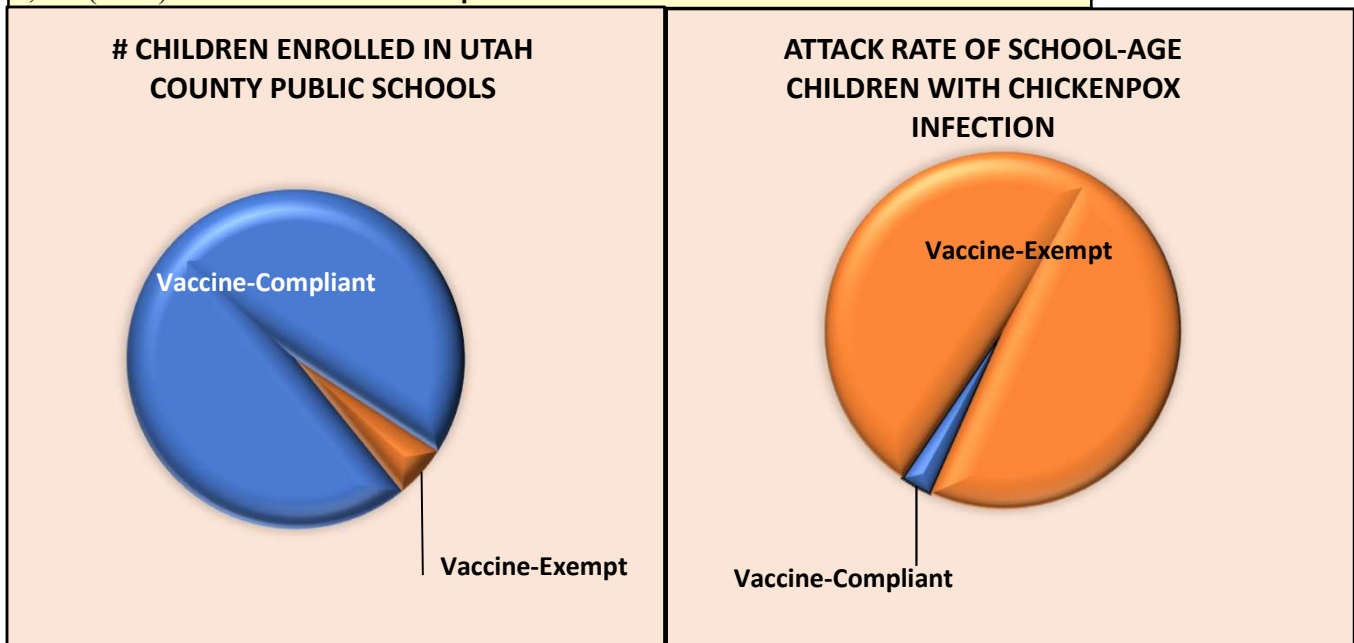
2018

CHICKENPOX



Percentage of Immunized Students with Illness vs. Percentage of Unimmunized Students with Illness

121,813	Students Enrolled in Utah County Schools
115,669 (95%)	Vaccine-compliant children enrolled in school
6,144 (5.0%)	Vaccine-exempt children enrolled in school



INFECTIOUS DISEASE REPORT

Utah County Health Department

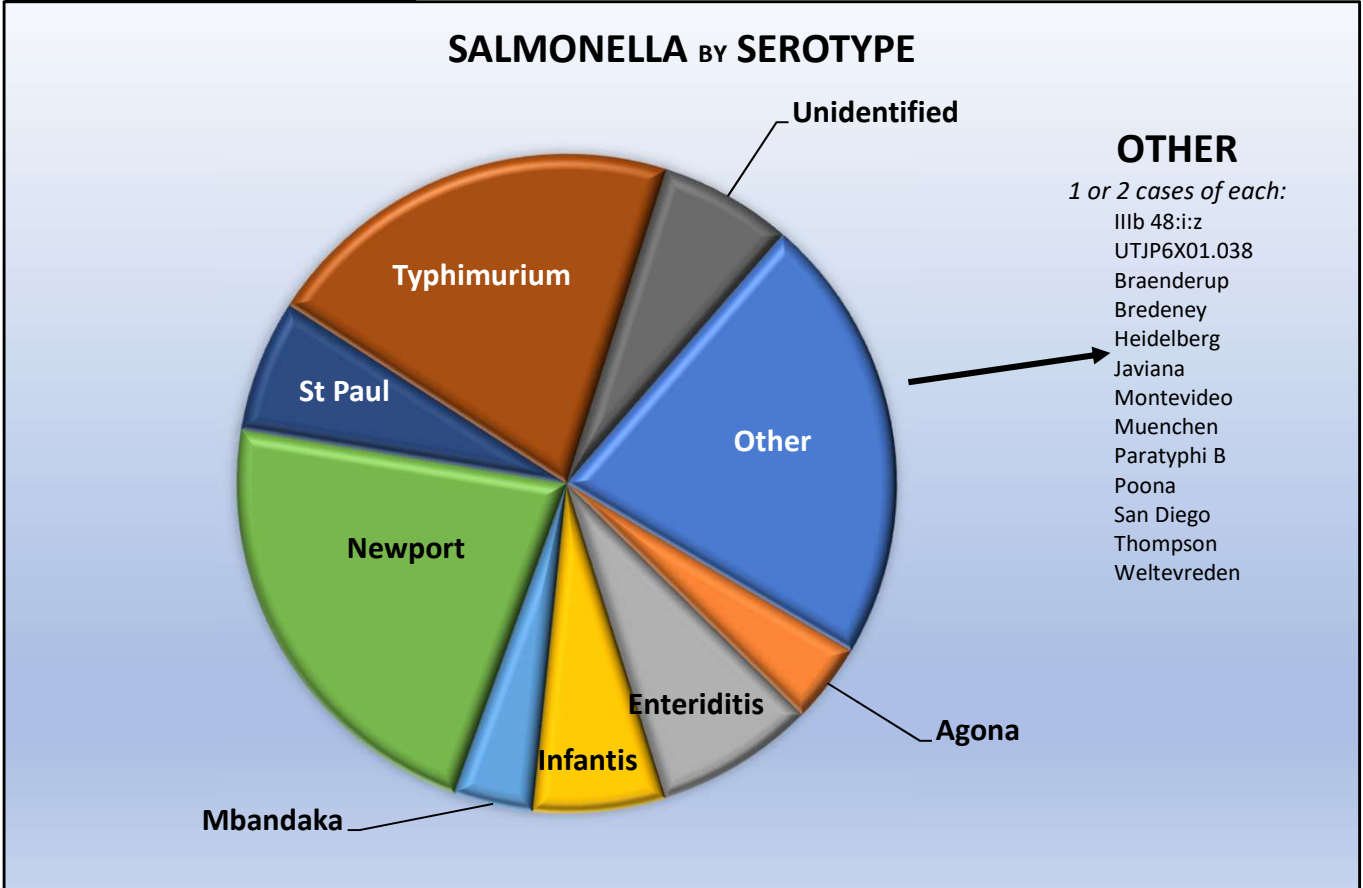
2018

CHICKENPOX - Outbreaks

Charter School - Alpine School District - K to 6	
583	Students enrolled
12	Number cases
2.1%	Percentage of student body
Charter School - Alpine School District - K to 12	
578	Students enrolled
8	Number cases
1.4%	Percentage of student body

ENTERIC DISEASES

Salmonellosis	
77	Total
0 to 81	Range
35.1	Mean
35	Median
30 to 49	Mode Age Group



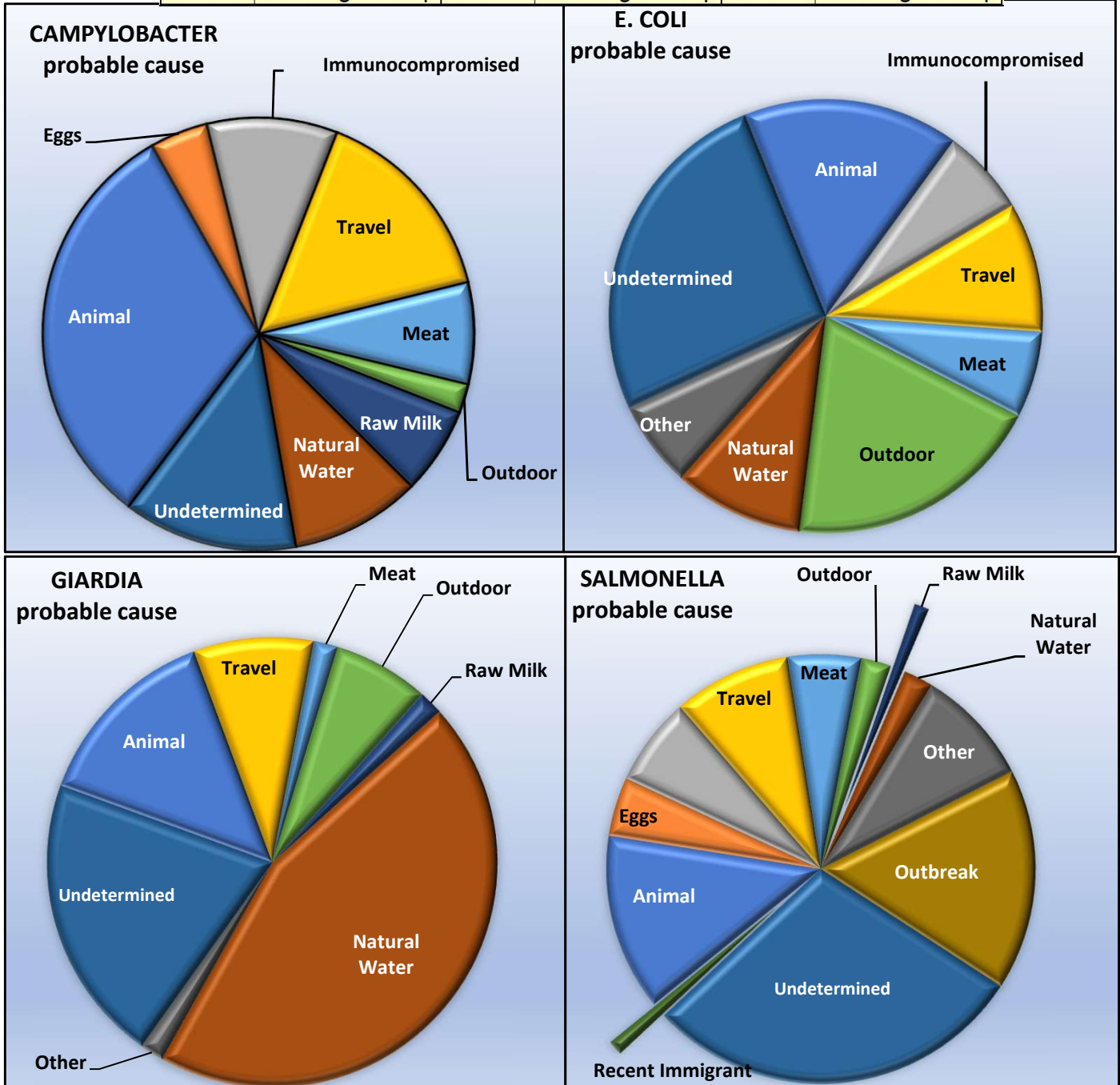
INFECTIOUS DISEASE REPORT

Utah County Health Department

2018

ENTERIC DISEASES

Campylobacteriosis		E. Coli		Giardiasis	
73	Total	24	Total	49	Total
0 to 91	Range	1 to 79	Range	0 to 72	Range
29.6	Mean	25.0	Mean	26.9	Mean
23	Median	17	Median	25	Median
18 to 29	Mode Age Group	5 to 17	Mode Age Group	18 to 29	Mode Age Group



INFECTIOUS DISEASE REPORT

Utah County Health Department

2018

Enteric Outbreaks

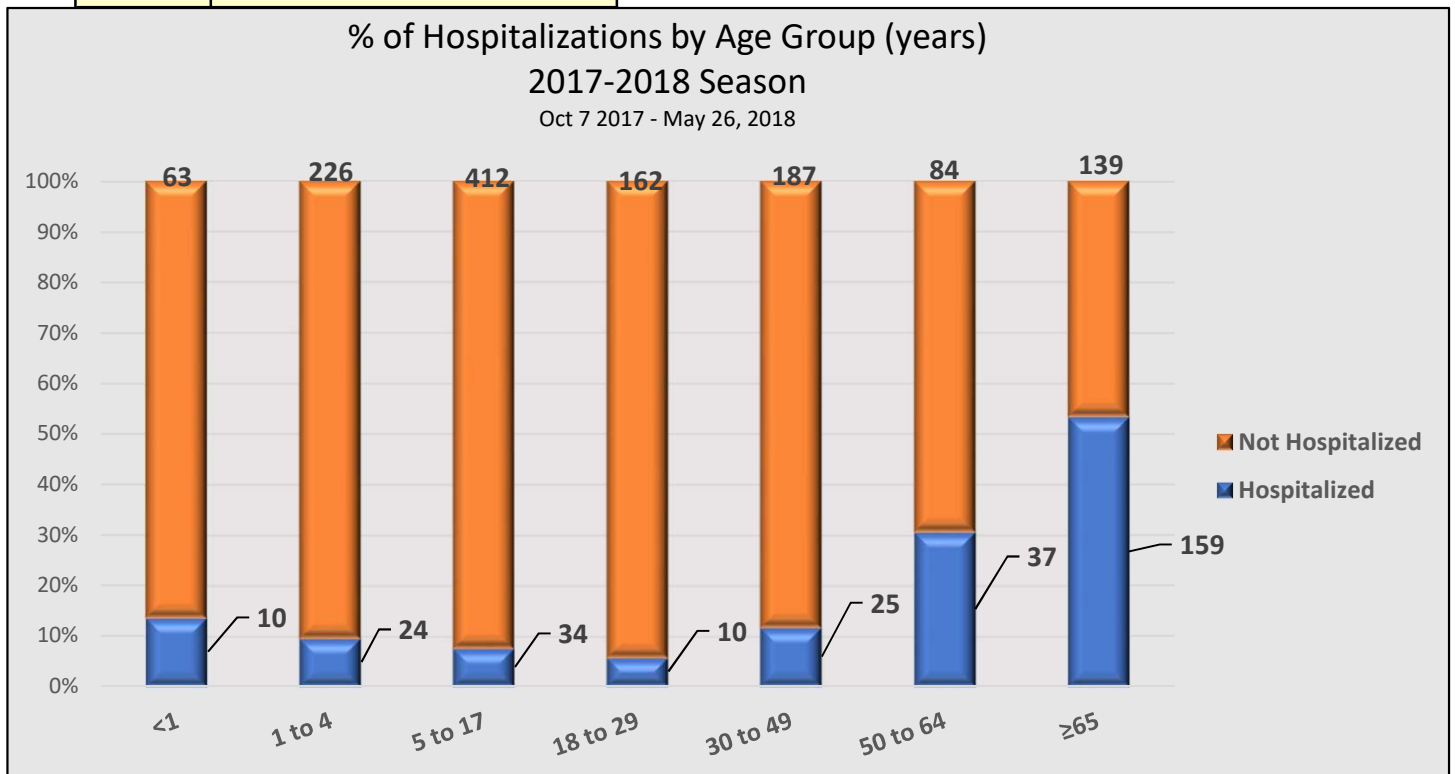
Number of Utah County Residents Associated with Outbreak

1	Campylobacter: Oak City, Utah - Raw Milk
3	E. Coli: Utah County - Pumpkin Farm
1	Salmonella Infantis: California
2	Salmonella Mbandaka: National Oubreak
13	Salmonella Newport: Utah County - Local Restaurant
1	Salmonella Newport: National Outbreak

INFLUENZA

2017 - 2018 Season (October 7, 2017 to May 26, 2018)

1,574	Total Influenza Reports
299	Hospitalized
1,274	Activity
0 to 94	Range of Ages
37.5	Mean
33	Median
≥65	Mode (age group)



INFECTIOUS DISEASE REPORT

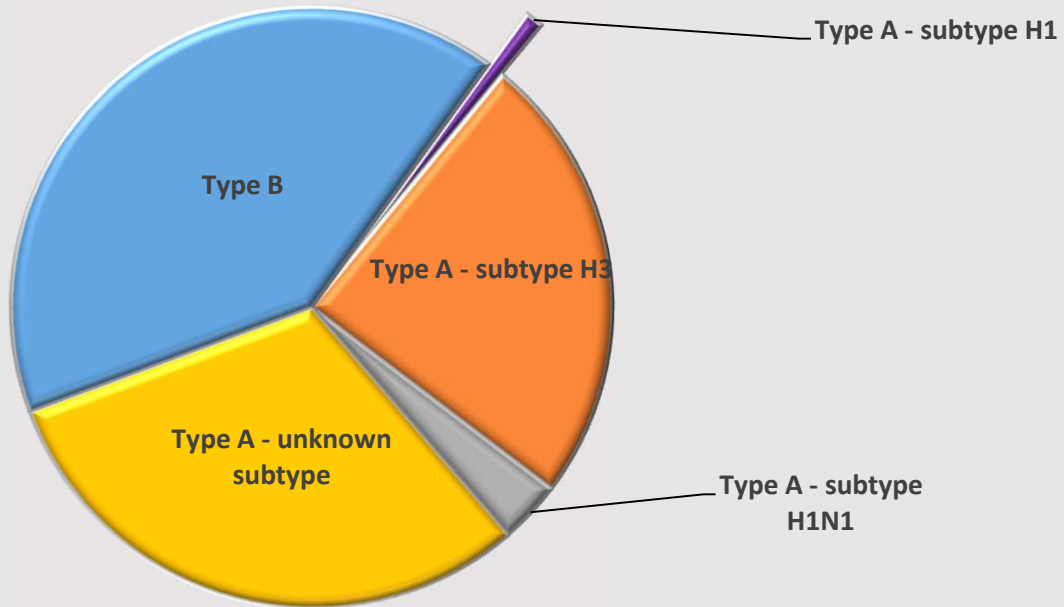
Utah County Health Department

2018

INFLUENZA

Influenza by Type 2017-2018 Season

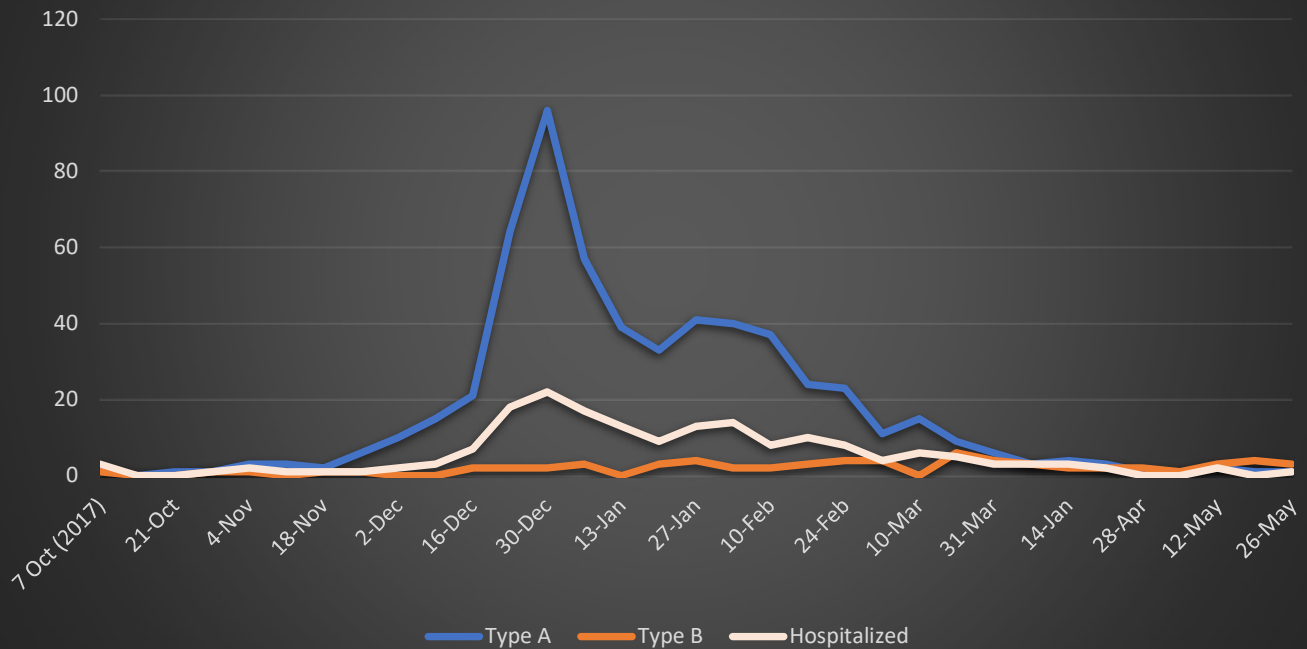
Oct 7, 2017 - May 26, 2018



Influenza Timeline by Type

2017-2018 Season

Oct 7, 2017 - May 26, 2018

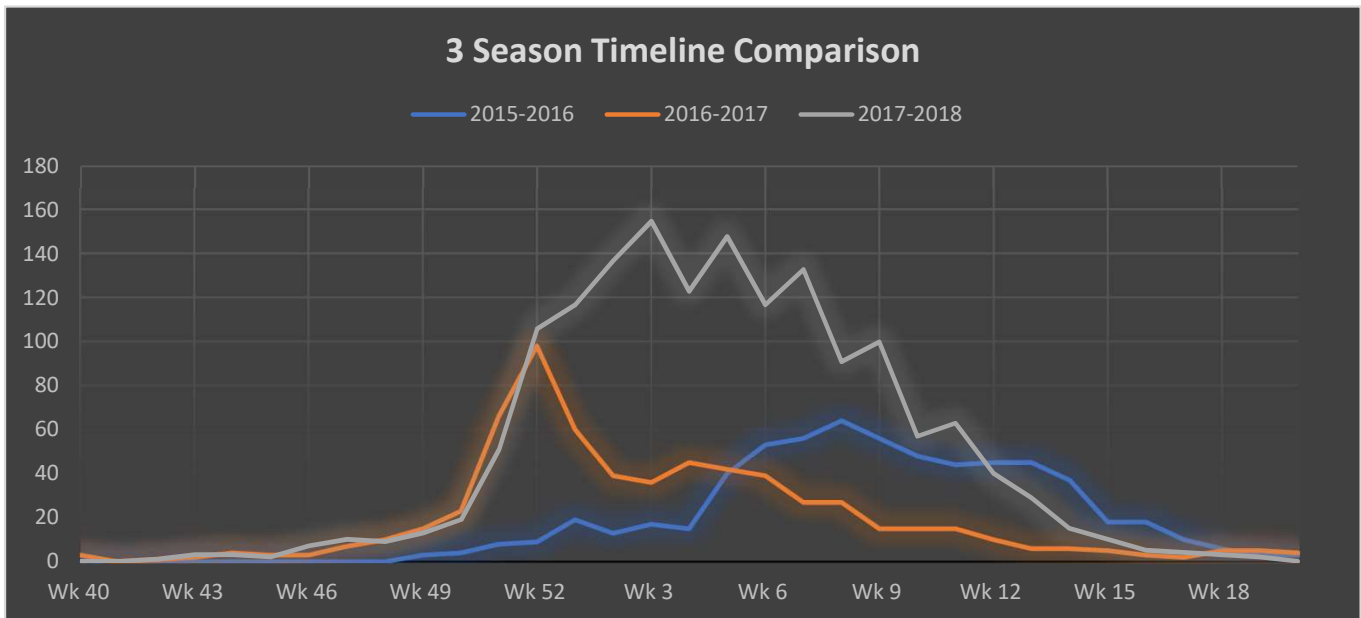


INFECTIOUS DISEASE REPORT

Utah County Health Department

2018

INFLUENZA



PERTUSSIS

105	Total Cases
0 to 88	Age Range
18.6	Mean
14	Median
5 to 17	Mode - age group
0	Hospitalized
0	Deaths

	Outbreaks - 2018 (≥2 cases in a group)
5	Total # Outbreaks
25	# Cases Associated with Outbreaks

Percentage of Immunized Students with Illness vs. Percentage of Unimmunized Students with Illness

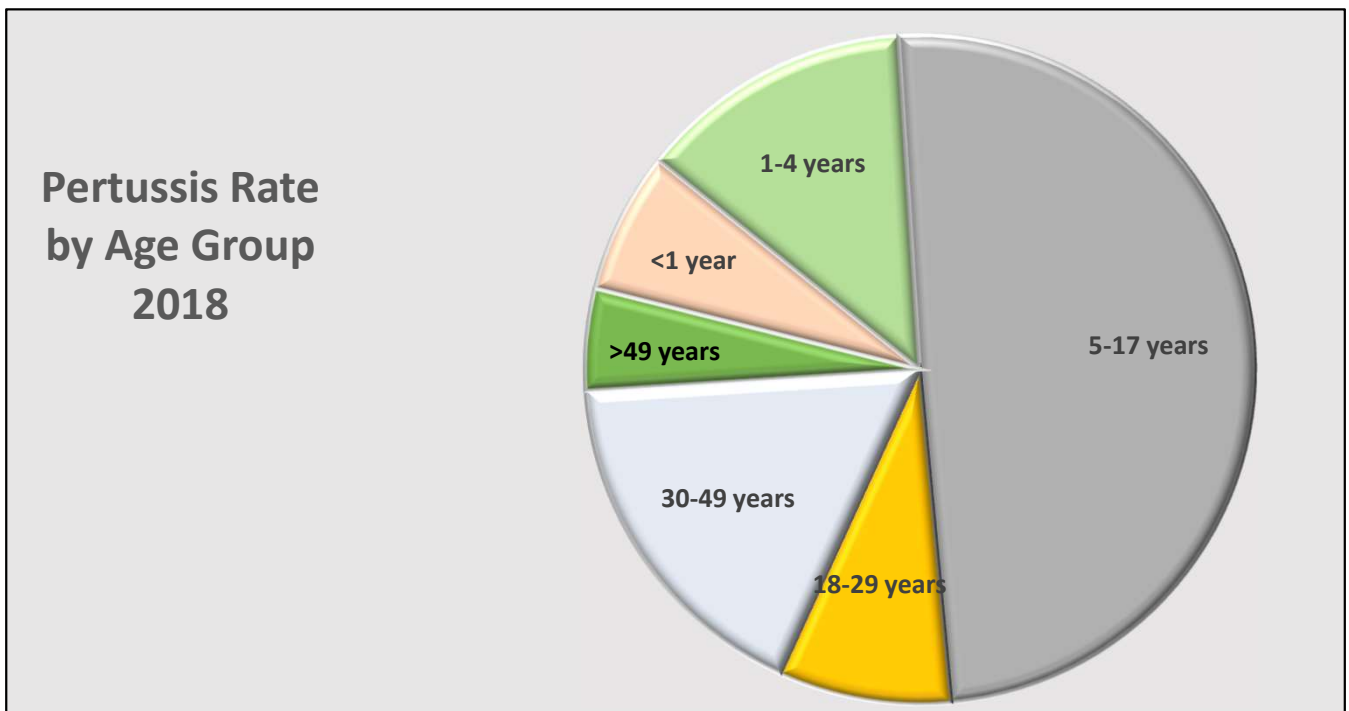
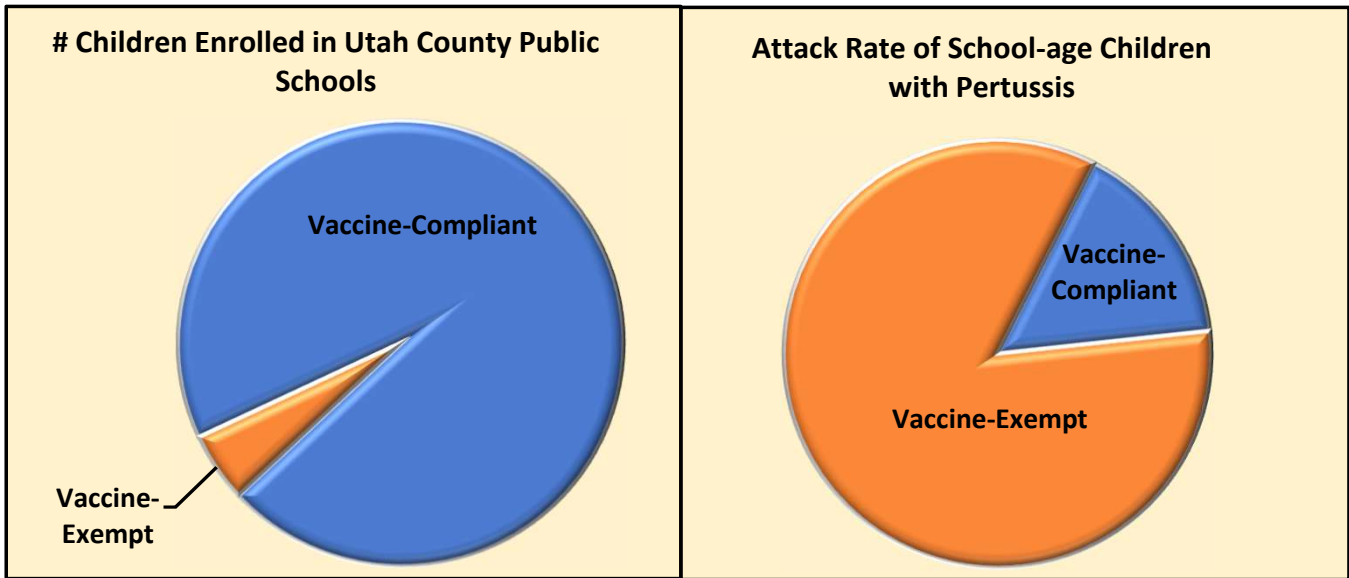
121,813	Students Enrolled in Utah County Schools
119,883 (99.8%)	Vaccine-compliant children enrolled in school
38	Vaccine-Compliant with illness
0.03%	Vaccine-Compliant attack rate
5,443 (4.5%)	Vaccine-exempt children enrolled in school
10	Vaccine-Exempt with illness
0.18%	Vaccine-Exempt attack rate

INFECTIOUS DISEASE REPORT

Utah County Health Department

2018

PERTUSSIS



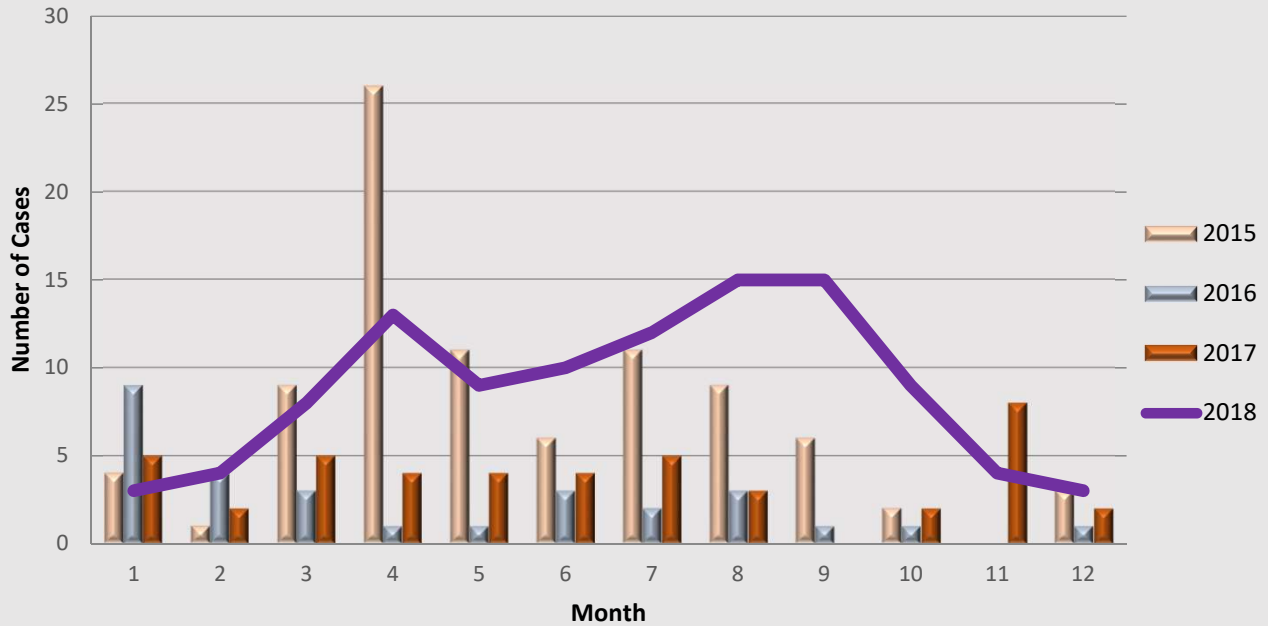
INFECTIOUS DISEASE REPORT

Utah County Health Department

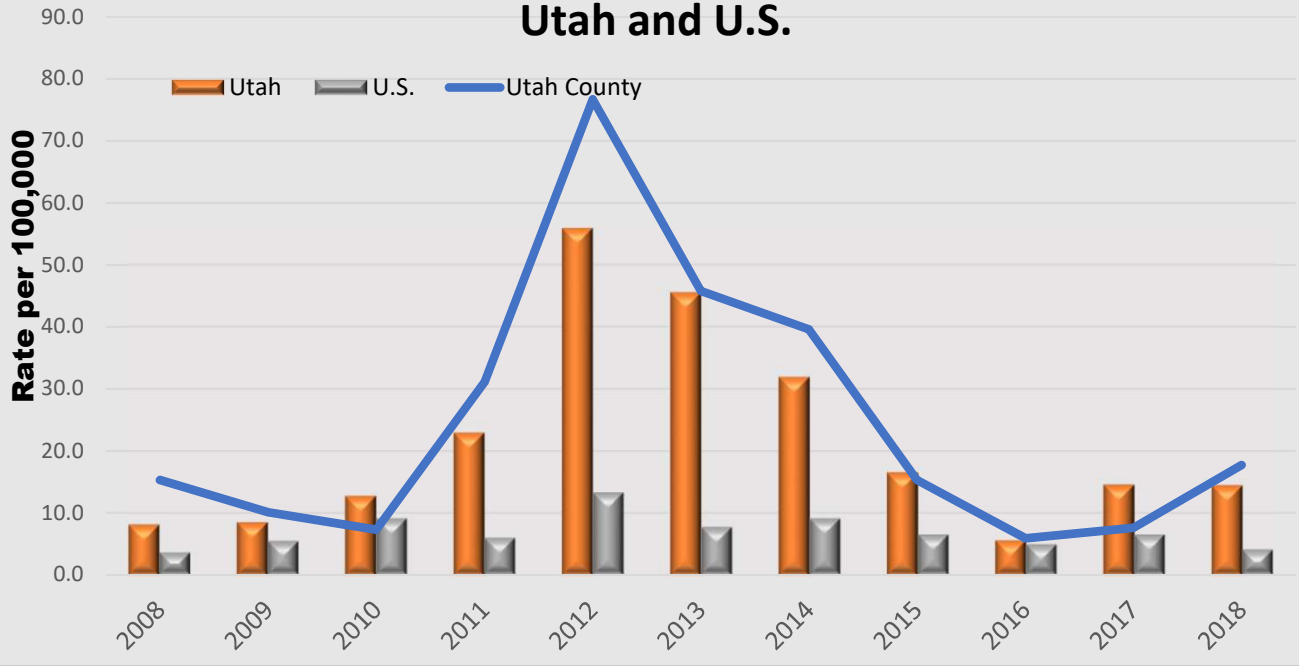
2018

PERTUSSIS

3 Year Comparison - Pertussis Cases per Month



10 year Utah County Pertussis Rates compared to Utah and U.S.



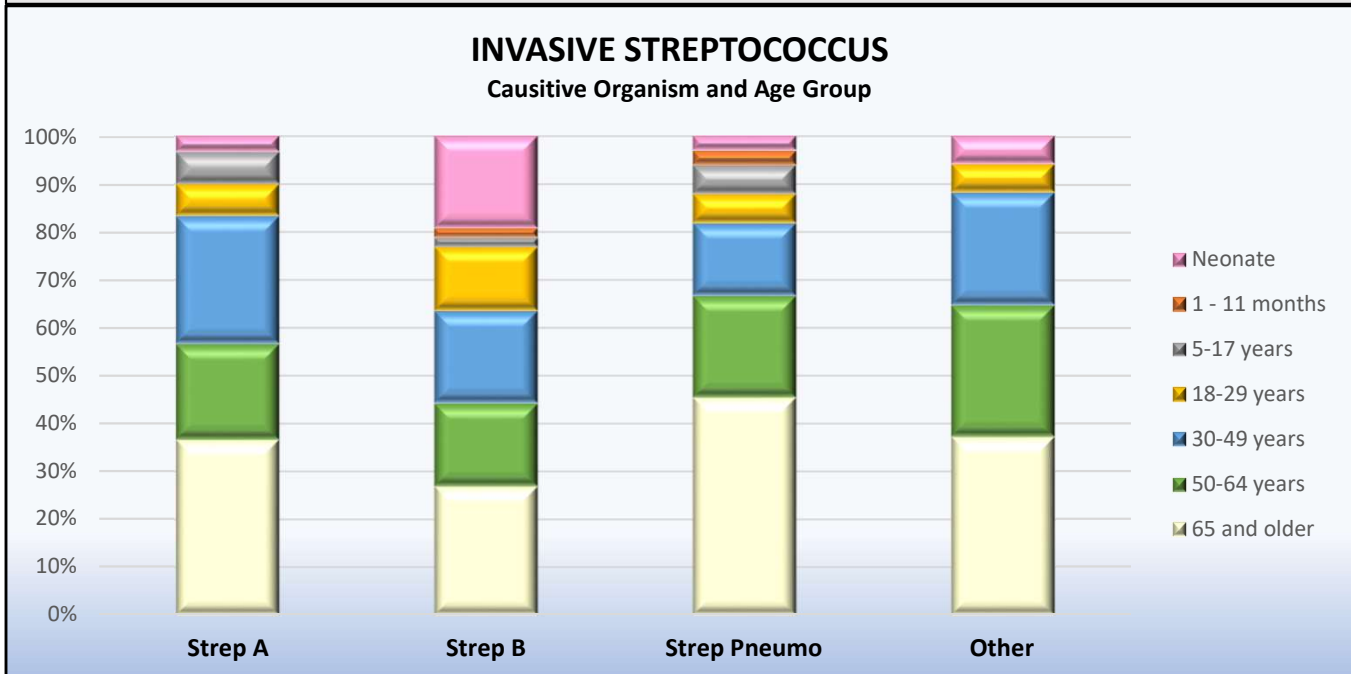
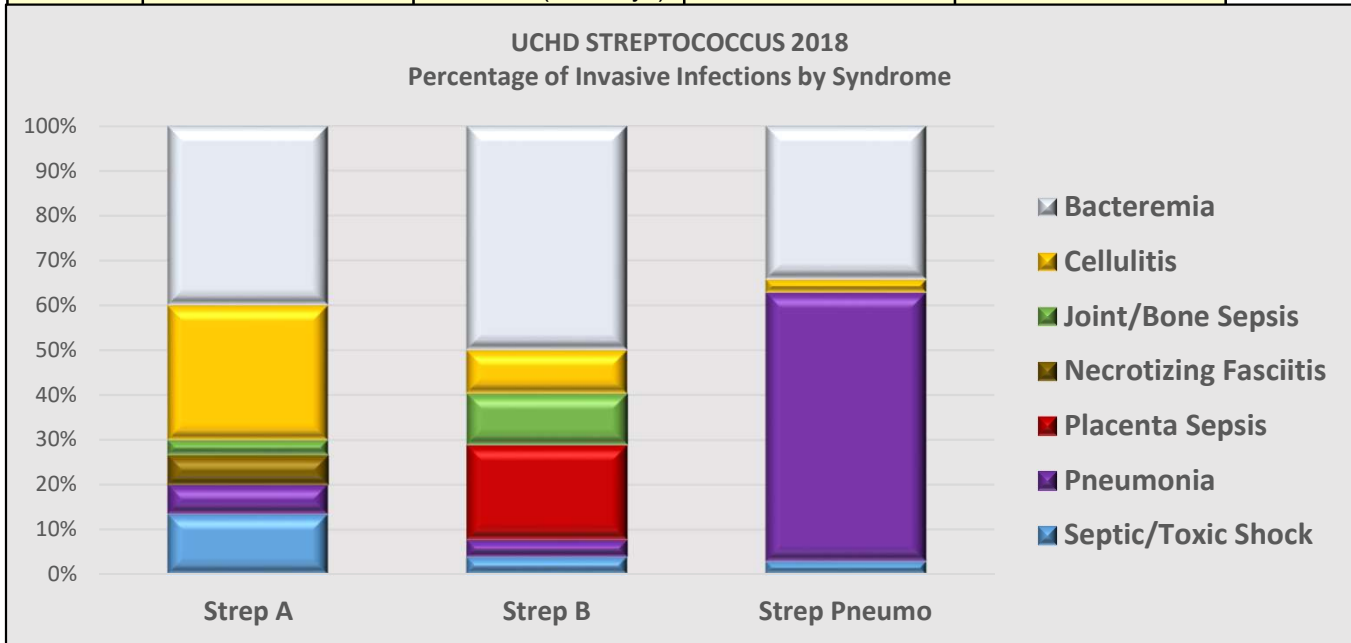
INFECTIOUS DISEASE REPORT

Utah County Health Department

2018

INVASIVE STREPTOCOCCUS

	Group A Strep	Group B Strep	Strep Pneumoniae	Other Species Strep
Total	24	42	34	55
Range	1 to 80	0 to 86	1 to 91	0 to 96
Mean	40.3	33.4	47.7	47.6
Median	39	55	57	54
Mode	47	Neonate (<30 days)	79	39



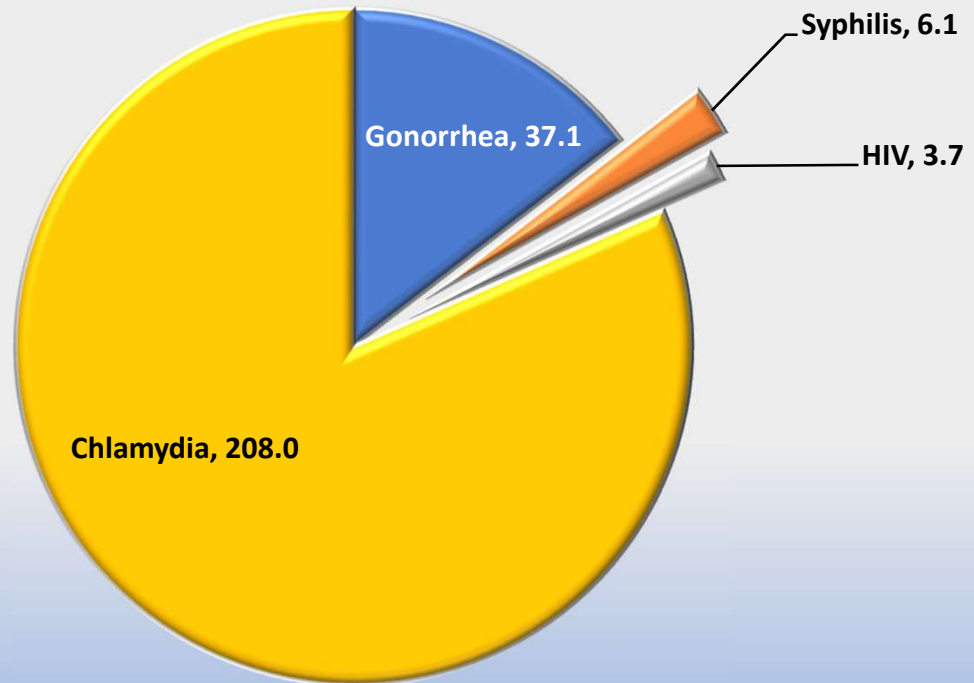
INFECTIOUS DISEASE REPORT

Utah County Health Department

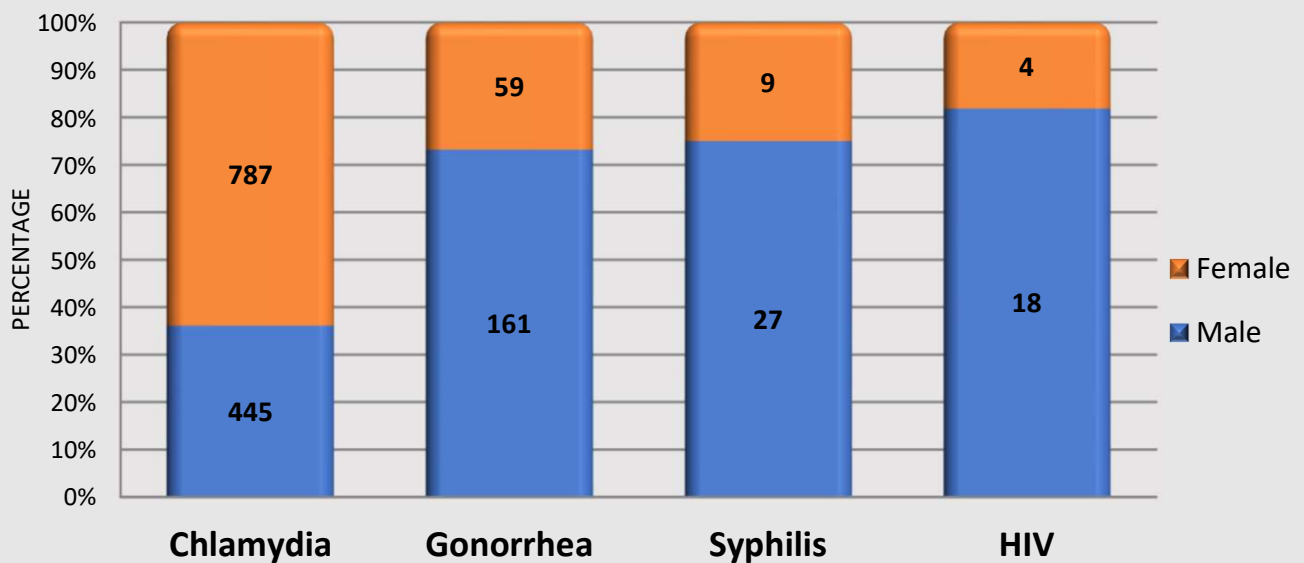
2018

SEXUALLY TRANSMITTED INFECTIONS

Rate Comparison of Reported STI's
Utah County 2018



UCHD SEXUALLY TRANSMITTED DISEASE 2018
Percentage Comparison by Gender

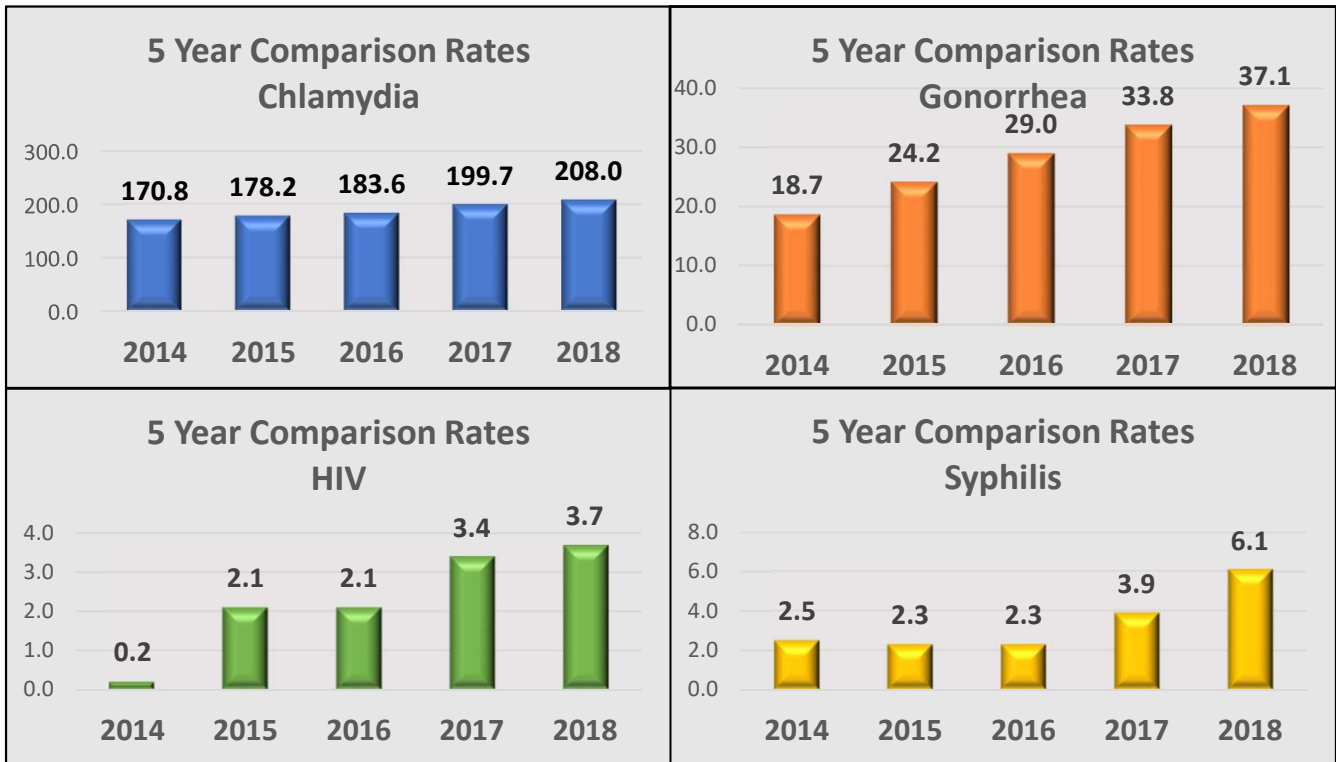


INFECTIOUS DISEASE REPORT

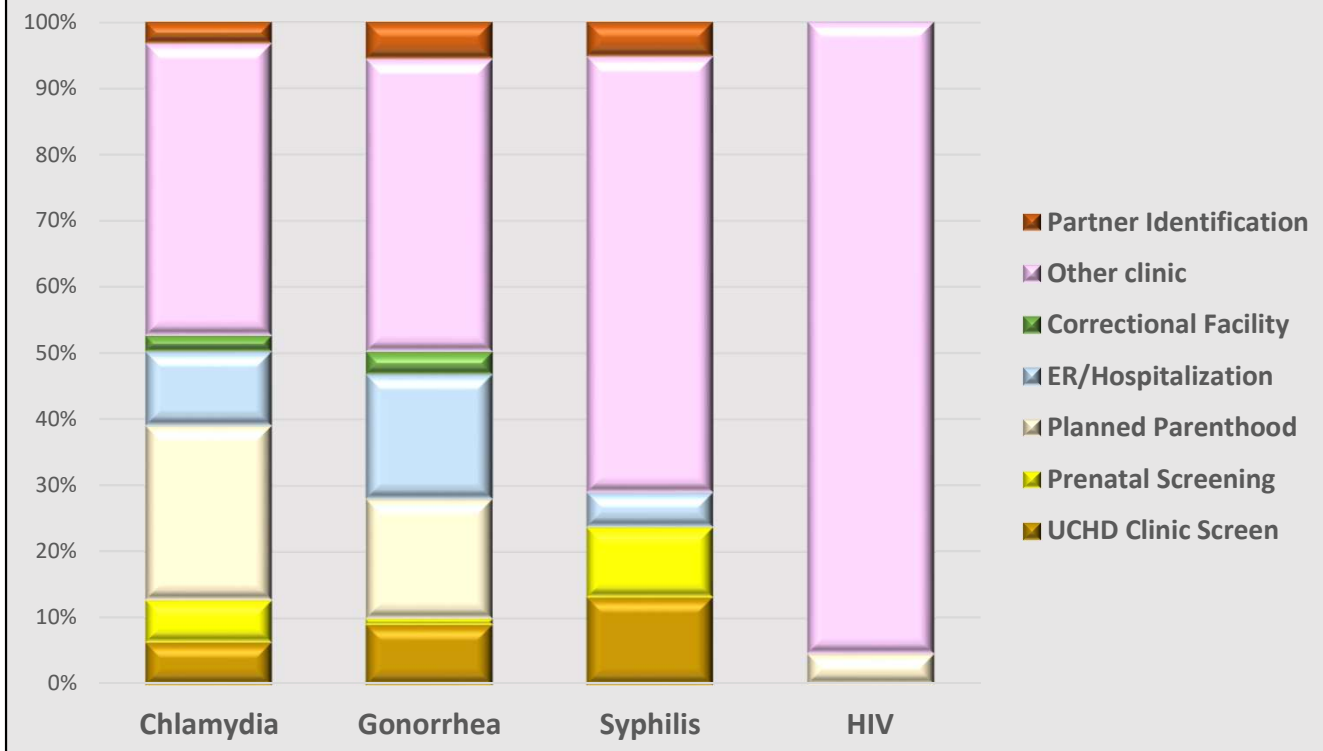
Utah County Health Department

2018

SEXUALLY TRANSMITTED INFECTIONS



METHOD of DETECTION



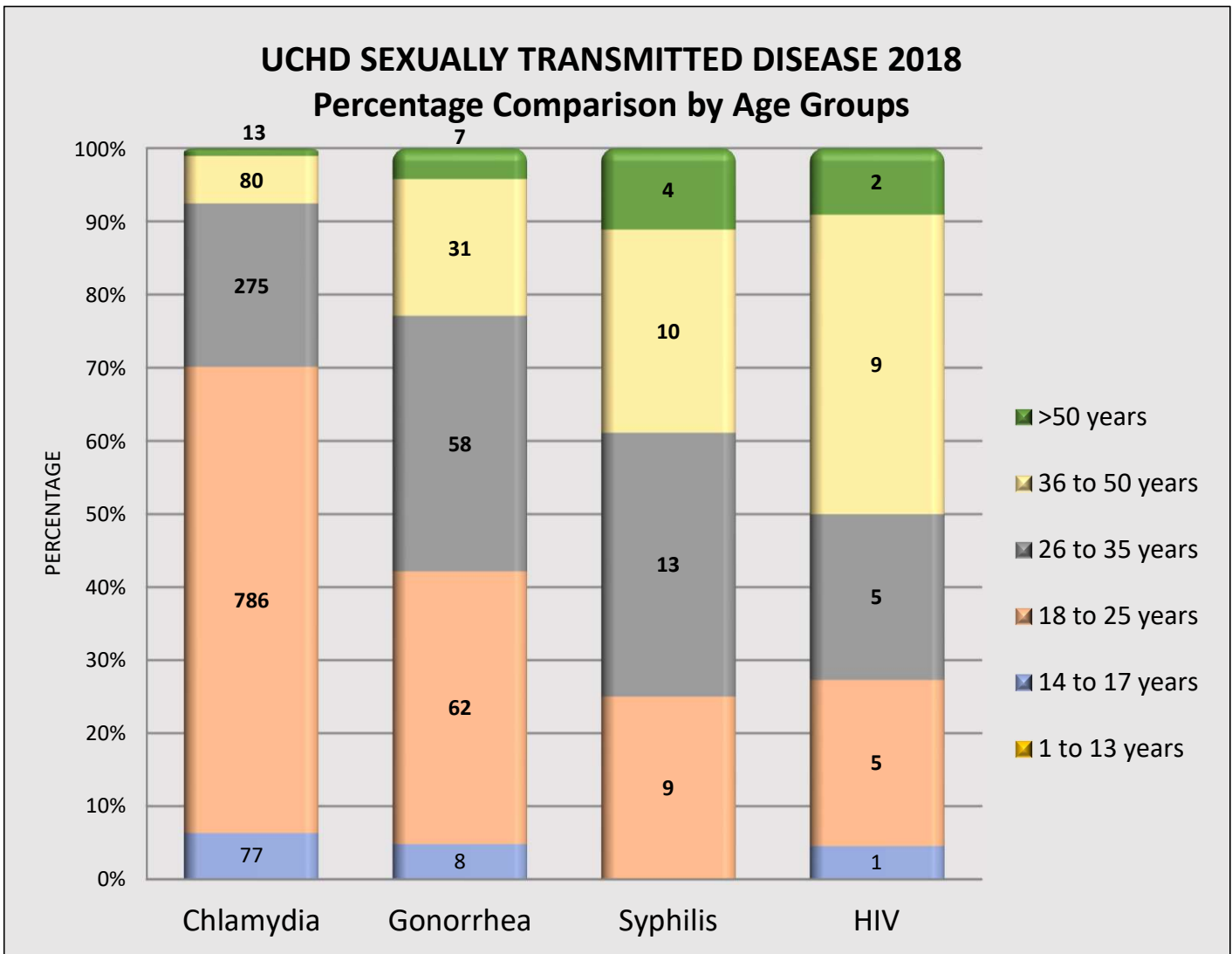
INFECTIOUS DISEASE REPORT

Utah County Health Department

2018

SEXUALLY TRANSMITTED INFECTIONS

Age	Chlamydia	Gonorrhea	Syphilis	HIV
Range	6 to 65	14 to 64	20 to 84	17 to 58
Mean (average)	24.3	28.8	36.4	35.3
Median (middle)	22	27	32	35
Mode (most frequent)	20	23	31	30

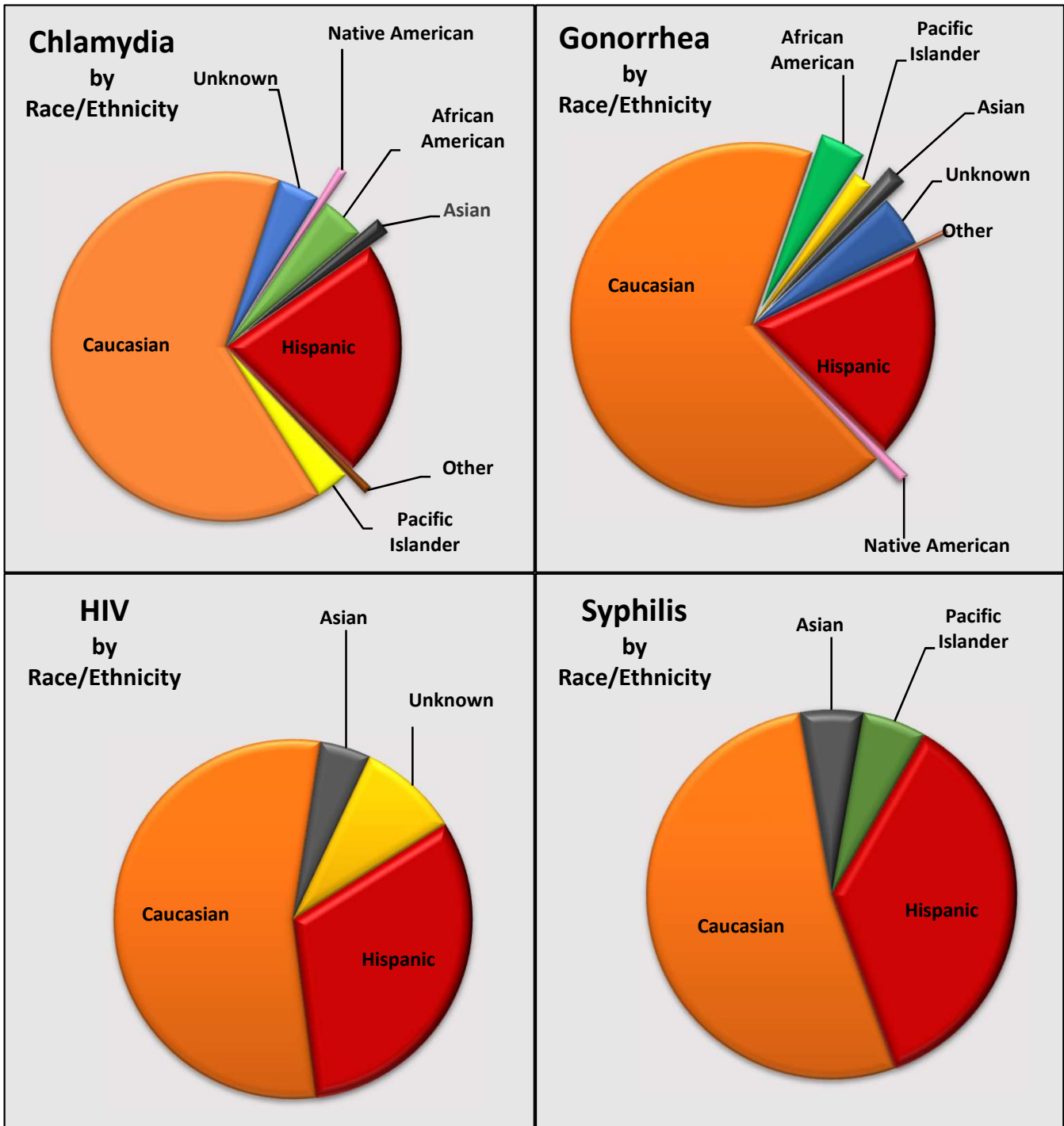


INFECTIOUS DISEASE REPORT

Utah County Health Department

2018

SEXUALLY TRANSMITTED INFECTIONS



INFECTIOUS DISEASE REPORT

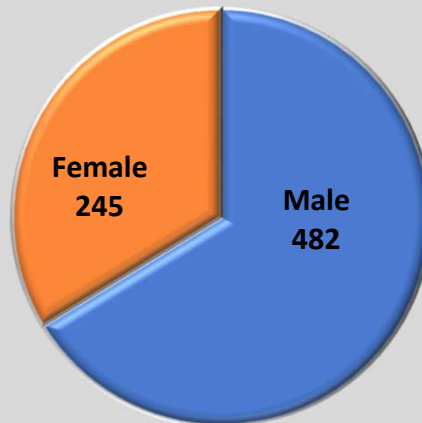
Utah County Health Department

2018

STI CLINIC

5 Year Comparison	2014	2015	2016	2017	2018
Total patients seen in clinic	976	907	712	686	727
Minors	46	24	20	12	20
Chlamydia/Gonorrhea Testing	430	355	376	375	452
Syphilis Testing	200	181	175	178	205
HIV Testing	307	407	259	263	251

**2018 UCHD
STI Clinic
Gender
Distribution**



**UCHD STI CLINIC 2018
PATIENT RACE/ETHNICITY**

