



Communicable Disease Report 2016 Gallatin City-County Health Department

Montana state law requires health care providers to report more than 50 diseases or conditions to local health departments in order to track and limit the spread of infectious diseases. The Communicable Disease staff at Gallatin City-County Health Department responds to these reports to monitor community health status, investigate cases that may pose a public health risk, and inform and educate the community to prevent the spread of disease. Through contact investigation and epidemiological analysis, the Health Department detects and mitigates disease outbreaks thereby preventing the spread of communicable diseases.

The aim of this report is to provide a broad summary of infectious disease cases reported to Gallatin City-County Health department from January 1, 2016 through December 31, 2016. In addition, this report identifies a number of diseases of particular interest either because of prevalence or potential impact on the health of our community.

Below is a brief summary of the some of the most frequently reported diseases in the county during 2016, comparing this data to a rolling 5 year average in Gallatin County.

Disease	2012	2013	2014	2015	2016	Average
HIV	1	1	0	3	5	2
Campylobacter	40	25	34	43	41	37
Chlamydia	344	333	344	372	497	378
Shiga-toxin E. coli	10	9	5	15	20	12
Giardia	13	18	19	15	33	20
Gonorrhea	3	3	11	25	31	15
Hepatitis A	2	0	0	1	1	1
Hepatitis B	11	2	4	2	3	4
Hepatitis C	94	51	53	51	68	63
Pertussis	28	25	39	25	5	24
Salmonella	11	15	14	22	13	15
Shigella	0	5	1	4	3	3
Tuberculosis	0	0	0	0	1	0
Syphilis	1	0	0	3	4	2

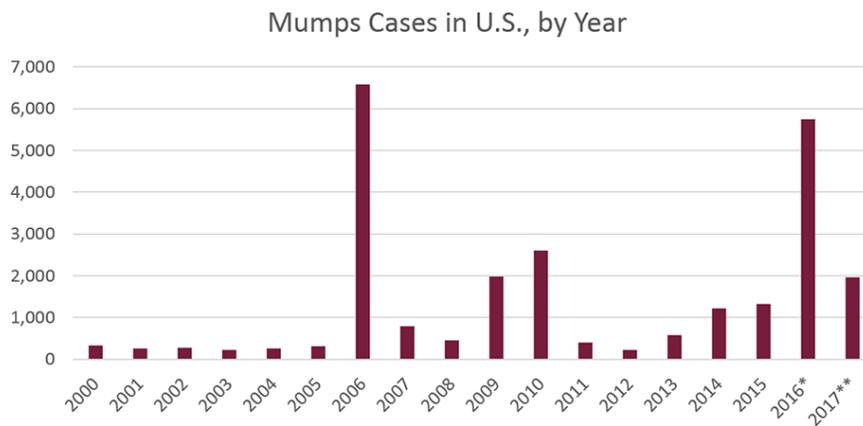
Mumps

In 2016, Gallatin County experienced a mumps outbreak for the first time in more than twenty-five years. The outbreak started in February and the last cases were diagnosed in the middle of March. There were 21 detected cases (18 confirmed and 3 epidemiologically linked). All of the cases were either students or household members of students in Belgrade schools.

In response to the outbreak, Belgrade schools and the Health Department held a vaccine clinic at the Belgrade Special Events Center and vaccinated sixty people. Students who were not completely vaccinated were excluded from school for roughly two weeks after a case was identified. The period of exclusion lasted longer for some students because new cases of mumps were diagnosed.

Analysis: Although there were 21 cases of mumps, vaccination coverage rates for students in Belgrade schools is high, and there would have been many more cases if the coverage rates were lower. While the MMR vaccine is effective, it does not give 100% protection from the mumps virus. In our outbreak, the attack rate in people who had two doses of MMR was 1% and the attack rate in people who had zero or one doses was 25%. In the 2016, the US 2016 experienced a spike in mumps cases with outbreaks on several college campuses.

Mumps Cases in U.S., by Year



From CDC Mumps Cases and Outbreaks at <https://www.cdc.gov/mumps/outbreaks.html>

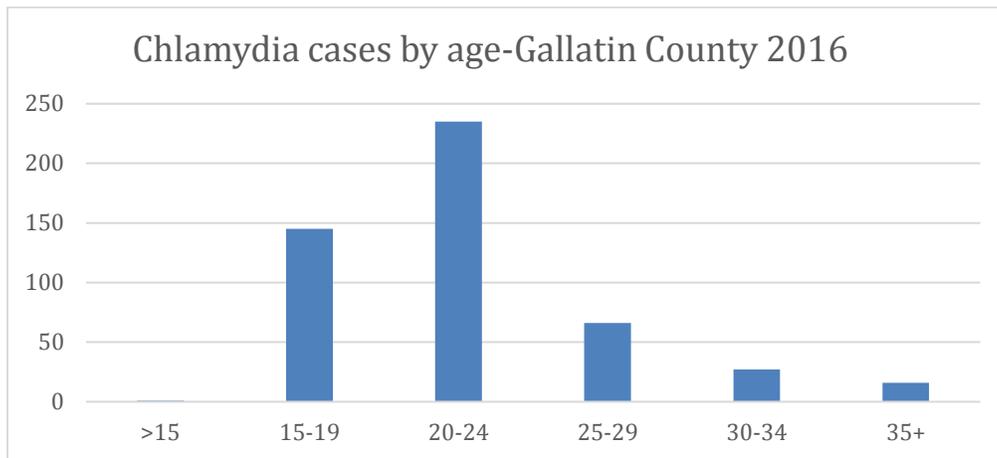
Chlamydia

Chlamydia (rate per 100,000) in Gallatin County 2013-2016

2013	351.8
2014	353.6
2015	369
2016	475

Chlamydia rates in Gallatin County increased by 29% compared to last year. People between the ages of 15 and 24 represent 78% of the chlamydia cases in Gallatin County. The CDC recommends annual screening for STDs for sexually active women younger than 25 years old.

Analysis: The 29% increase in chlamydia rates is concerning. Healthy People 2020 cite social stigma around sexuality and STDs as a factor to higher STD rates. Consistent and correct condom usage should be emphasized especially for the age groups with the highest rate of cases. Public Health nurses at Gallatin County Health Department follow up with each case of chlamydia in attempts to anonymously identify, notify and treat partners.



Gonorrhea

Gonorrhea (rate per 100,000) in Gallatin County 2013-2016

2013	3.17
2014	11.31
2015	24.8
2016	29.7

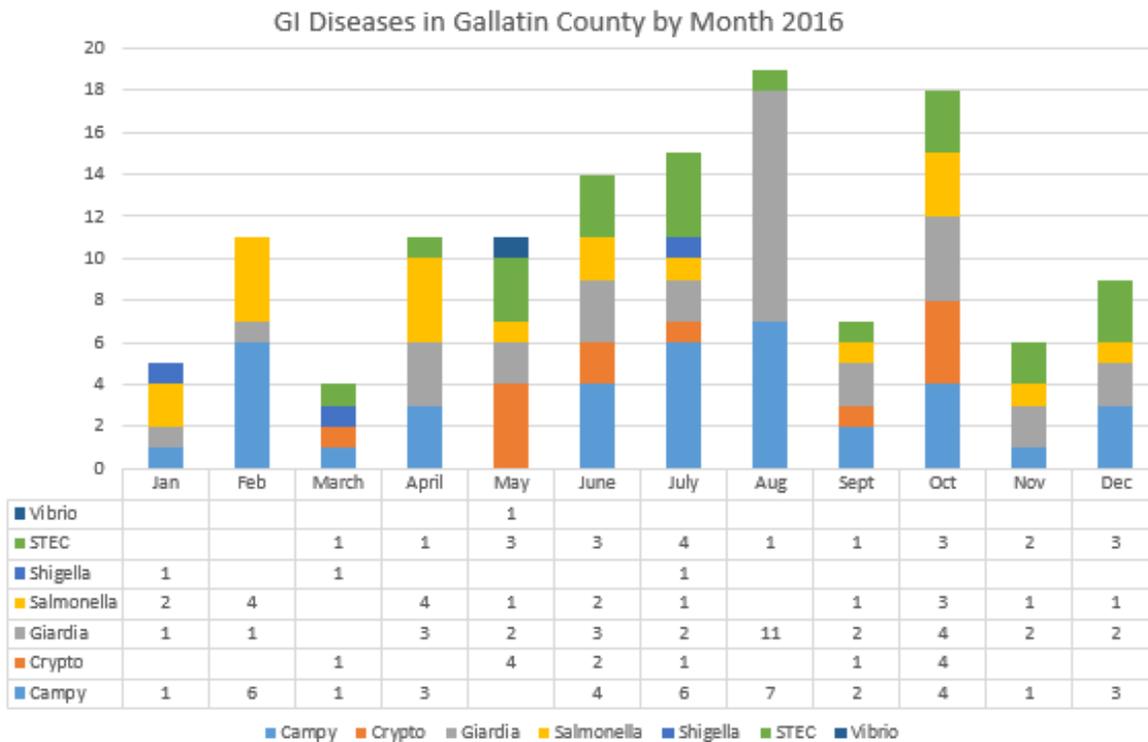
Rates of gonorrhea have more than doubled in the last two years. Gonorrhea is another sexually transmitted disease and is often tested in conjunction with chlamydia. Gonorrhea has become resistant to antibiotics; therefore, it is now treated with two different antibiotics. There is a robust surveillance system in the country that monitors *Neisseria gonorrhea* for resistance to the current treatment regime.

Analysis: While the rates of gonorrhea are not as high as the rates for chlamydia, the rapid increase in rates over the past three years is concerning. Improved technology that allows for faster and easier testing may represent a percentage of the increase. Protection from gonorrhea, similar to chlamydia, includes correct and consistent condom use. As in the case of chlamydia, public health nurses follow up with each case to make every attempt to anonymously identify, notify and treat partners.

Gastrointestinal Illness

This year's pattern of GI diseases matches historical averages. Usually, July, August and October have the most cases of diseases reported. Gallatin County residents are exposed to potential pathogens when they drink untreated water while camping, hiking, floating or fishing. The most commonly reported GI disease is giardia. Giardia is a protozoa that is usually transmitted by ingesting water containing giardia cysts. Giardia cysts are larger than bacteria and viruses and can be removed by using a water filter. Giardia cysts can also be killed by boiling water. Chemical treatments such as iodine drops or bleach drops are less effective than boiling and filtering water.

Analysis: In 2016, Gallatin County residents were not involved in any detected food borne outbreaks. Recreational water activity and exposure while travelling are common sources of infection.



Tuberculosis

Gallatin County had one case of tuberculosis this year in a Montana State University student. Montana is a low incidence state for tuberculosis, typically averaging four cases per year. Tuberculosis requires follow-up with close contacts along with placing and reading TB tests. Disease investigations start with close contacts and expands depending on how many people in this group have positive TB tests. Luckily, the person was not very infectious and recovered quickly. No close contacts, housemates, classmates, professors or mentors had positive screening tests. MSU Student Health was an important partner in the contact investigation and their assistance was appreciated.

References:

Healthy People 2020(2017). *HealthyPeople.gov-Sexually Transmitted Diseases*. Retrieved on May 1, 2017 from <https://www.healthypeople.gov/2020/topics-objectives/topic/sexually-transmitted-diseases>

Heymann, D. L. (2015). *Control of Communicable Diseases Manual* (20th ed.). Washington, DC: American Public Health Association.