

## Communicable Disease Report for 2015 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, 2015 through December 31, 2015. 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 2015, comparing this data to a rolling 5year average in Gallatin County.

Disease	2011	2012	2013	2014	2015	Average
HIV	2	1	1	0	3	1
Campylobacter	41	40	25	34	43	37
Chlamydia	307	344	333	344	372	340
Shiga-toxin E. coli	8	10	9	5	15	9
Giardia	11	13	18	19	15	15
Gonorrhea	5	3	3	11	25	9
Hepatitis A	0	2	0	0	1	1
Hepatitis B	4	11	2	4	2	5
Hepatitis C	83	94	51	53	51	66
Pertussis	49	28	25	39	25	33
Salmonella	21	11	15	14	22	17
Shigella	6	0	5	1	4	3
Tuberculosis	1	0	0	0	0	0
Syphilis	1	1	0	0	3	1



## Gastrointestinal Illness

Gallatin City-County Health Department was an active part of a multistate team that investigated *E. coli* 0157 found in the celery/onion component from Taylor Farms which was used to make chicken salad at Costco. Six Montana residents, four of which were from Gallatin county, were diagnosed with *E.coli* that matched the DNA fingerprint of the bacteria isolated from the contaminated celery/onion mixture. The cases were identified in the beginning of November and the product was pulled on November 23<sup>rd</sup>.

The Gallatin City-County Health Department also was part of an investigation that linked a strain of *salmonella*, called *Salmonella* Poona, to cucumbers. There were sixteen Montana residents, including three Gallatin County residents, diagnosed with *Salmonella* Poona. Trace-back investigation conducted by state health departments and the CDC found a single distributor in San Diego, California which was obtaining the cucumbers from Mexico.

**Analysis:** In 2015, Bozeman Health implemented PCR (polymerase chain reaction) testing for gastrointestinal (GI) pathogens. This method of testing is able to identify bacterial, parasitic and viral pathogens more rapidly than older technologies. Since the test looks for DNA/RNA, it can detect organisms which may not grow in a culture. Therefore, this year's data for GI illness may represent a better test rather than a true increase in disease in county.

## Chlamydia and Gonorrhea

Chlamydia (rate per 100,000) in Gallatin County 2013-2015

<b>2013</b>	351.8
<b>2014</b>	353.6
<b>2015</b>	369

Although Gallatin county's rates have increased, we are below the US and state average. In 2014, the rate of chlamydia for the country was 456.1 per 100,000. In 2015, the rate in Montana was 411 per 100,000.

**Analysis:** In the last three years, the rate of chlamydia has increased. This may be due to more people getting tested (the samples are easier to obtain and the testing is more likely to pick up a positive case). Healthy People 2020 goals for chlamydia focus on increased screening, especially for women 25 years and younger. Because asymptomatic, untreated infections can cause fertility problems in the future, public health interventions focus on screening and treatment of infected individuals.

Gonorrhea (rate per 100,000) in Gallatin County 2013-2015

<b>2013</b>	3.17
<b>2014</b>	11.31
<b>2015</b>	24.8



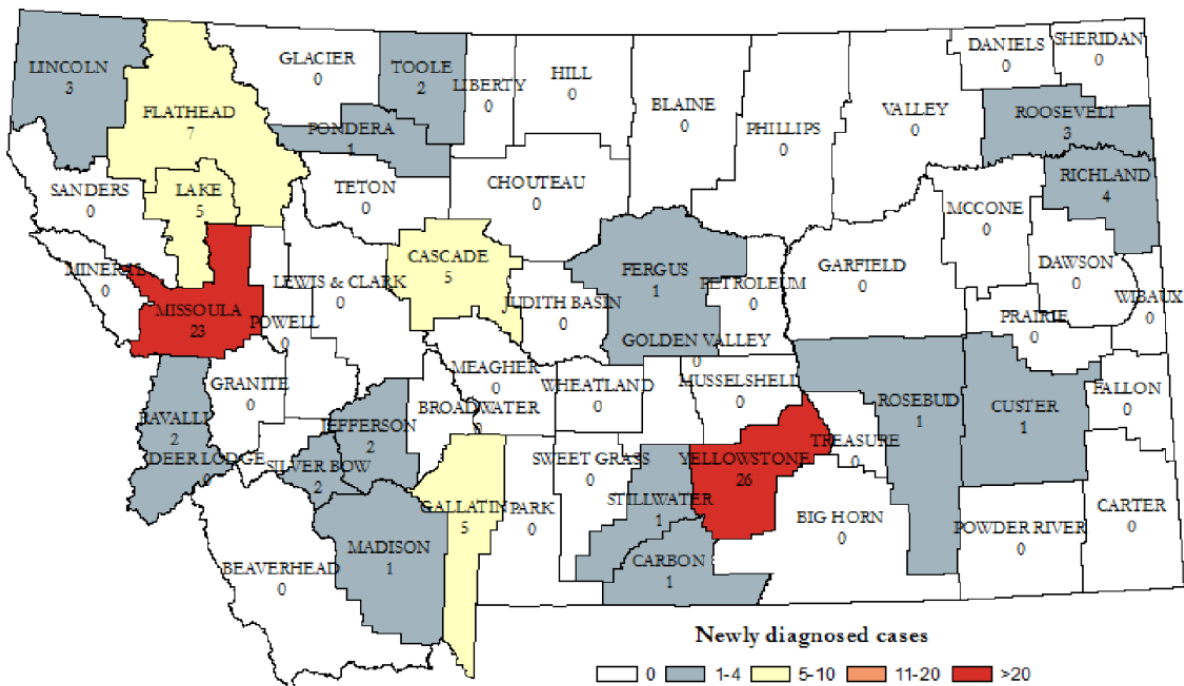
**Analysis:** Gonorrhea rates more than doubled in the last three years, following a trend both in Montana and the US. Gonorrhea can currently be treated effectively with a combination of two different antibiotics, but there is concern for developing antibiotic resistance. This increase in rates may reflect an increase in testing for oral and anal gonorrhea.

While our rates remain below those of Montana and US, the message of safer sex, including consistent and correct condom use is important.

## HIV

There were three new cases of HIV diagnosed in Gallatin County in 2015. All three were found using the HIV rapid test. The test consists of a finger-stick where a drop of blood is applied to the testing unit and results are available in 20 minutes. The rapid test requires further blood tests for confirmation. Bridgercare and AIDSOutreach offer free, rapid HIV testing.

Below is an illustration of newly diagnosed HIV cases by county in Montana for the last 5 years.



## Syphilis

It is worth noting that the three cases of syphilis are probably an under-representation of the true number. During the summer of 2015, Gallatin City-County Health Department worked closely with local healthcare partners to identify, test and treat contacts to a confirmed case. This investigation took one month to complete; eventually, we were able to get appropriate care for 8 out of 9 people. Only three people met the strict definition of a confirmed case and there were two other probable cases.

Syphilis is a bacterial disease that is easily treated in the early stages. If syphilis is left untreated, it can lead to damage to the cardiovascular and neurological systems. Treatment in later stages will not reverse previous damage, just prevent further insult.

## Pertussis

Gallatin County had 25 cases of pertussis in 2015. There were no significant outbreaks. In October 2015, updates to Montana school immunization requirements went into effect. One of the updates was to replace the Td (tetanus & diphtheria only) with Tdap (tetanus, diphtheria & acellular pertussis) for entry into 7<sup>th</sup> grade. Hopefully, having more students protected from pertussis with Tdap will reduce future outbreaks in the school setting.

**Analysis:** According to CDC, pertussis rates peak every 3-5 years. The rates of pertussis in Gallatin County appear to follow a three-year cycle.

## References:

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