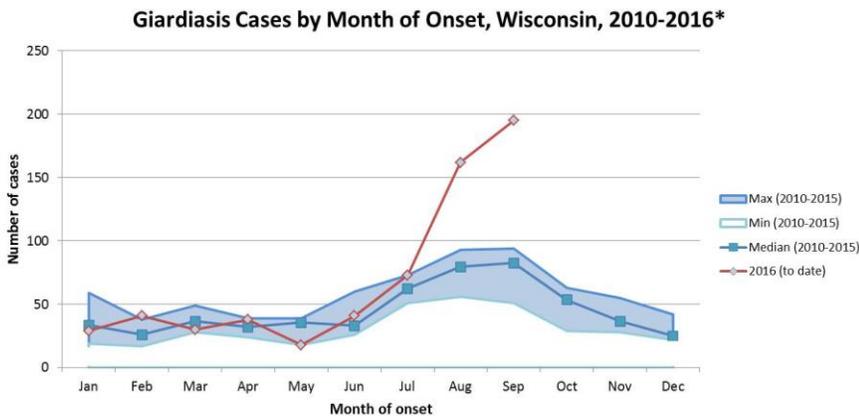


Fall 2016 Giardiasis Update

The Wisconsin Division of Public Health (DPH) Communicable Diseases Epidemiology Section (CDES) has observed an increase in the incidence of giardiasis cases statewide this year. The majority of the increase is occurring in the Northern and Northeastern regions. The information below is intended to help answer some of the common questions we have received from local health departments and to provide prevention messaging for our local partners to use according to their needs.

As of October 10, 621 confirmed cases of giardiasis have been reported among Wisconsin residents during 2016. In comparison, 471 confirmed cases were reported in the state during 2015.



*Episode date used to approximate onset date; 2016 case total includes confirmed, probable, and suspect cases as of 10/10/2016; 2010-2015 case totals include confirmed cases only

While the incidence of giardiasis has increased, we have not identified any outbreaks linked to a common source. In Wisconsin, we typically see the number of giardiasis cases peak during late summer and early fall. In past years, we have noted higher numbers of cases during years with high amounts of precipitation and extreme weather events. Certainly, Wisconsin has experienced higher than normal levels of precipitation and flooding this year, especially in the northern half of the state.

We are also seeing a lot of secondary transmission reported among household members of ill individuals and among caretakers. With increased numbers of cases comes increased potential for secondary transmission. Public health officials should be alert for potential outbreaks of giardiasis in daycare and other institutional settings and during patient education, emphasize personal hygiene, handwashing, and remaining home while symptomatic, especially from high-risk settings.

Why So Many Cases Now?

Although we usually see a fall peak in cases associated with the accumulation of long-lived cysts in the environment during the year, this year's case total is the highest in the last five years. While *Giardia* cysts can be found in surface waters throughout the year, in North America levels are generally higher in the late summer to early winter. Levels may fluctuate significantly due to weather events. We suspect that the increased precipitation, number of severe weather events, and flooding in the northern half of the state this summer has contributed to higher giardiasis incidence this fall.

What Steps can be Taken by Local Public Health Agencies?

DPH will continue to monitor giardiasis statewide, but offers the following tips to help our partners monitor it on the local level:

- Conduct thorough routine follow-up interviews with case-patients as soon as possible. Be sure to collect detailed information about exposures such as specific water body or establishment names, dates of exposures, and details of water contact or items consumed.
- Think about potential exposures not necessarily included on the questionnaire, such as fall harvest celebrations that may have occurred recently in your area.

- If one case-patient mentions an interesting exposure, ask other case-patients about that exposure too.
- Discuss completed interviews among staff in the office to identify and explore commonalities.
- Finally, emphasize the prevention messages (below) to the community and when providing patient/client education.

Environmental and Animal Reservoirs

Although humans are the primary reservoir for *Giardia*, it can also infect dogs, cats, beavers, cattle, sheep, rodents (including squirrels, mice, etc.), and other animals. Infectious cysts are excreted in the stool of infected people and animals. In nature, these cysts are deposited by animals into the environment, including soil, water, leaf litter, and manmade structures (e.g., bird baths, rain gutters). Cysts can survive weeks to months depending on the temperature. Humans come into contact with these cysts through a variety of activities that involve contact with soil, water, or an ill individual. Some species and types of *Giardia* infect only one species, and some can infect both humans and animals. Animals can also carry types of *Giardia* typically associated with humans.

Messaging: Preventing Giardiasis

Prevent further transmission in the home, workplace, or daycare:

- Wash your hands after using the bathroom and changing diapers, and before eating or handling any food, including food for pets.
- Keep children with diarrhea home until they are well.
- Make sure that persons with diarrhea, especially children, wash their hands carefully and frequently with soap to reduce the risk of spreading the infection, especially in day care/preschool settings.
- To protect others, if you have diarrhea, do not go swimming.
- Avoid contact with feces during sexual intercourse.

Reduce risk of exposure from recreational water, drinking water, and the environment:

- Do not drink untreated surface water, including water from lakes, rivers, streams, rain barrels, springs, and shallow wells, or from hoses. All standing water should be treated as contaminated.
- Practice good swimmer hygiene when swimming. Don't allow any water to get in your mouth. Supervise small children to prevent them from swallowing water.
- Get your private residential drinking water well tested annually for bacteria and nitrates. DHS recommends homeowners test their private drinking water wells at least once a year for Total Coliforms, *E. coli*, and nitrate. Total coliform and *E. coli* testing is sufficient to identify if a well is under the influence of surface water, which may also be carrying *Giardia*. The Wisconsin Department of Natural Resources (DNR) maintains a list of labs in the state certified to test private well water samples for bacteria. It is available here: <http://dnr.wi.gov/topic/Wells/documents/PrivateLabs.pdf>. Instructions for the treatment of positive wells can be found on Wisconsin DNR's website at <http://dnr.wi.gov/files/PDF/pubs/DG/DG0003.pdf>.
- Wash hands after doing any yard work, gardening, gutter cleaning, bird bath cleaning, or removal of stagnant water from your yard, even if you wear gloves.
- Wash raw fruits and vegetables with clean water before eating.
- Remember that you can be exposed to *Giardia* while fishing every time you handle bait, your catch, or wash your hands in the lake water.
- Always wash hands after contact with farm animals, pets, animal feces, and animal environments. Minimize any contact with animal feces (poop) and be sure to wear gloves and wash hands after cleaning up any feces.

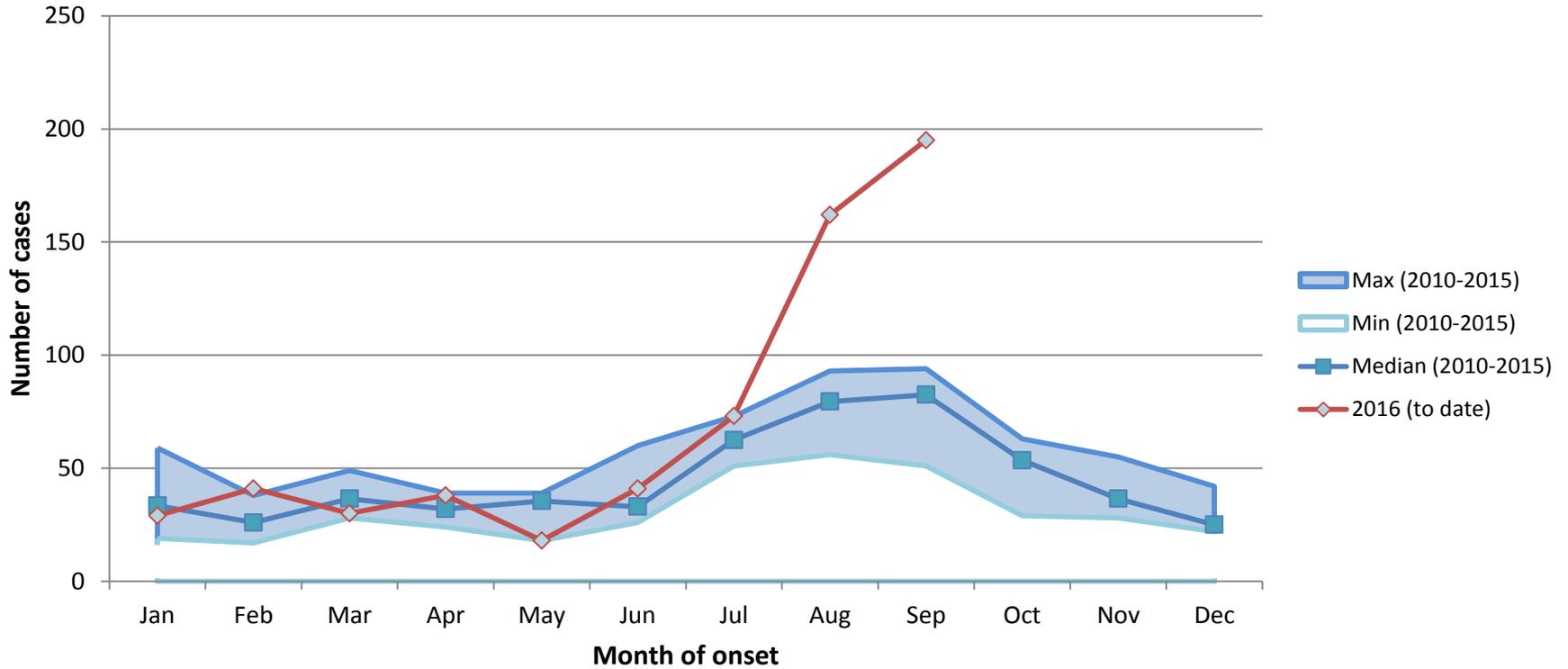
Additional Resources

Wisconsin DHS Flood Toolkit: <https://www.dhs.wisconsin.gov/publications/p0/p00631.pdf>

DHS Giardiasis Fact Sheet: <https://www.dhs.wisconsin.gov/publications/p4/p42047.pdf>

CDC Giardia Homepage: <https://www.cdc.gov/parasites/giardia/>

Giardiasis Cases by Month of Onset, Wisconsin, 2010-2016*



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