

## **Cryptosporidiosis**

Agent: *Cryptosporidium parvum* and *Cryptosporidium hominis* are the most common species that cause disease in humans (parasite)

Mode of Transmission: Occurs via the fecal-oral route and can include person-to-person, animal-to-person, foodborne, and waterborne transmission. Animals such as cattle, sheep, and goats have tested positive for the parasite and are an important reservoir, contributing to both direct transmission and contamination of water supplies; however, many other animals, including cats and dogs, can be infected and transmit disease. *Cryptosporidium* oocysts may be excreted from infected individuals for up to several months after diarrhea has resolved. Oocysts can remain infectious for 2-6 months after being excreted. The oocysts are very resistant to chemicals used to purify drinking water and disinfect recreational water (e.g., chlorine in pools).

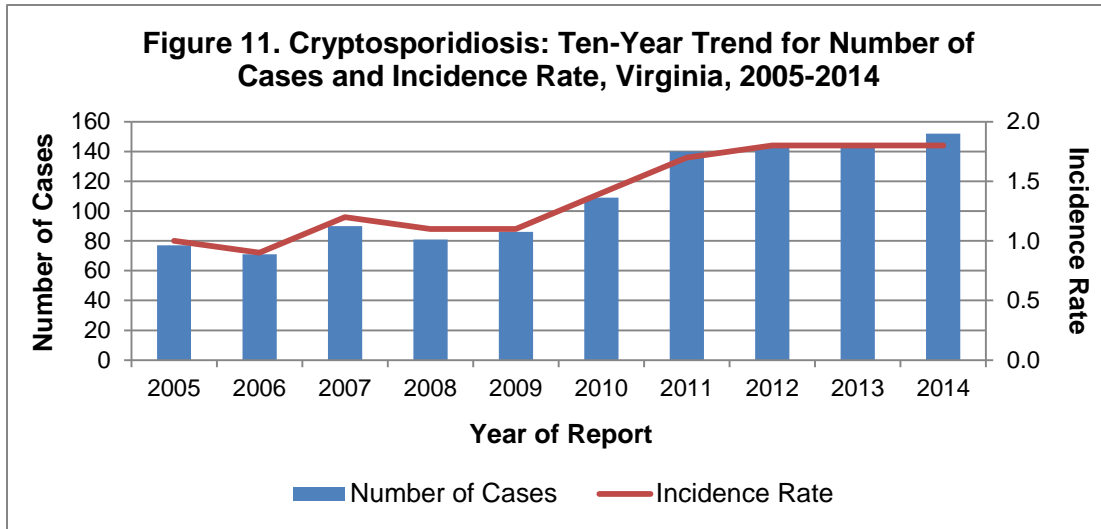
Signs/Symptoms: Profuse watery diarrhea with nausea, cramping, and abdominal pain. The diarrhea may be preceded by anorexia and vomiting in children. Illness is typically self-limiting. Immunocompromised persons have a higher risk of severe disease, which can lead to poor outcomes, including death. Asymptomatic infections are common.

Prevention: Preventive measures include careful hand hygiene after using the bathroom, after changing diapers or cleaning a child who has used the bathroom, after handling animals or their feces, and before preparing and eating food. People with diarrhea should not enter public recreational water. Water purification methods, including boiling water or filtration, should be considered when drinking water from natural streams, lakes, springs, or any unknown source.

<b>Cryptosporidiosis: 2014 Data Summary</b>	
Number of Cases:	152
5-Year Average Number of Cases:	124.6
% Change from 5-Year Average:	+22%
Incidence Rate per 100,000:	1.8

In 2014, 152 cases of cryptosporidiosis were reported in Virginia. This represents a slight increase when compared to the 144 cases reported in 2013, and also represents a 22% increase from the five-year average of 124.6 cases per year (Figure 11). The statewide incidence rate of 1.8 cases per 100,000 population has remained the same in Virginia since 2012.

The incidence rate for cryptosporidiosis in Virginia continues to be lower than the U.S. rate. From 2005 to 2012 (the most recent year for which national data are available), the mean U.S. incidence rate (2.9 per 100,000) was more than twice the mean Virginia incidence rate (1.3 per 100,000). Also, during that time period, Virginia has generally experienced an upward trend in incidence, while the national rates have fluctuated.



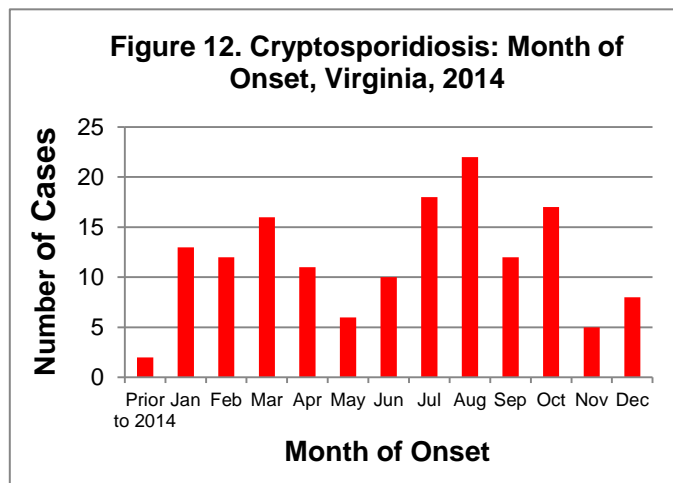
In 2014, the highest incidence rates were observed in the 20-29 and 30-39 year age groups (2.4 cases per 100,000 each). This represents a 41% increase in incidence among the 30-39 year age group, which had a rate of 1.7 cases per 100,000 in 2013. All other age groups had incidence rates ranging from 1.0 to 2.1 cases per 100,000 during 2014.

Race was not reported for 36 cases (24%) in 2014. Among cases with a known race, the incidence rate was highest among the black population (1.7 cases per 100,000), followed by the white population (1.4 cases per 100,000) and the “other” race population (0.3 cases per 100,000). During 2014, incidence was the same among males and females (1.8 cases per 100,000, respectively).

Geographically, the highest incidence rate was observed in the northern region (2.7 cases per 100,000). Rates ranged from 0.6 to 2.3 cases per 100,000 in other regions, with the lowest incidence occurring in the central region (see map below).

Nationally, a higher number of illnesses are typically seen during the summer and early fall months, which is consistent with increased recreational water exposure, including public pools. This seasonal pattern was observed in Virginia during 2014, where onset of cases peaked during July and August (Figure 12).

The most frequently reported risk factor among cases in 2014 was contact with animals (43 cases, 32%). Other reported risk factors included recreational water exposure (40 cases, 29%) and travel (40 cases, 29%). No outbreaks of cryptosporidiosis were reported in Virginia during 2014.



# Cryptosporidiosis Incidence Rate by Locality Virginia, 2014

