

Giardiasis

Giardiasis is a Class C Disease and must be reported to the state within five business days.

Giardia duodenalis, also referred to as *Giardia intestinalis*, is a flagellate protozoan that infects principally the upper small intestine and is the most commonly diagnosed intestinal parasite in U.S. public health laboratories. Persons are most commonly infected by the consumption of contaminated water, but infection from consumption of contaminated food and fecal-oral (hands and fomites) transmission also occurs. Person-to-person transmission most commonly occurs in childcare centers or in institutions for the mentally disabled. Diagnosis is traditionally made by the identification of cysts, (the resistant stage responsible for infection), or trophozoites in the feces, duodenal fluid, or mucosa.

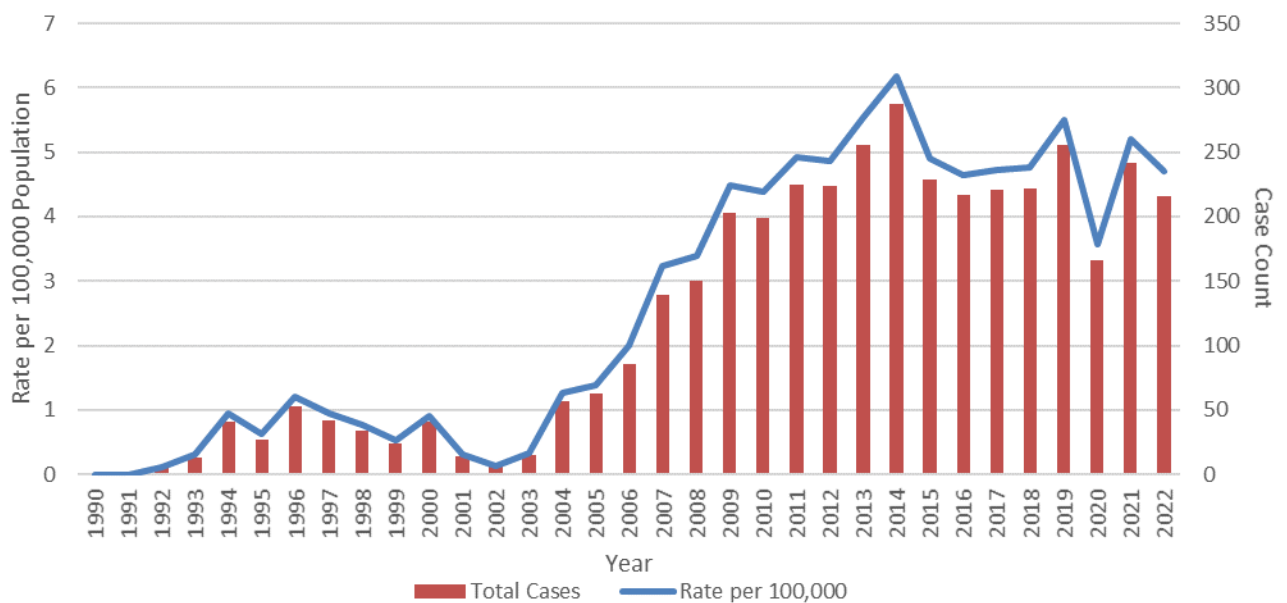
Surveys of the United States have demonstrated prevalence rates of *Giardia* organisms in stool specimens that range from 1% to 20%, depending on geographic location and age.

Although humans are the principal reservoir of infection, *Giardia* can infect dogs, cats, beavers and other animals. Semi-aquatic animals can serve as zoonotic hosts and can transfer the organism to humans through contaminated water. *Giardia* are considered resistant to chlorine and the small size of the cysts, (8-12 microns), renders some filtration systems useless.

Incidence Rate and Cases of Giardia

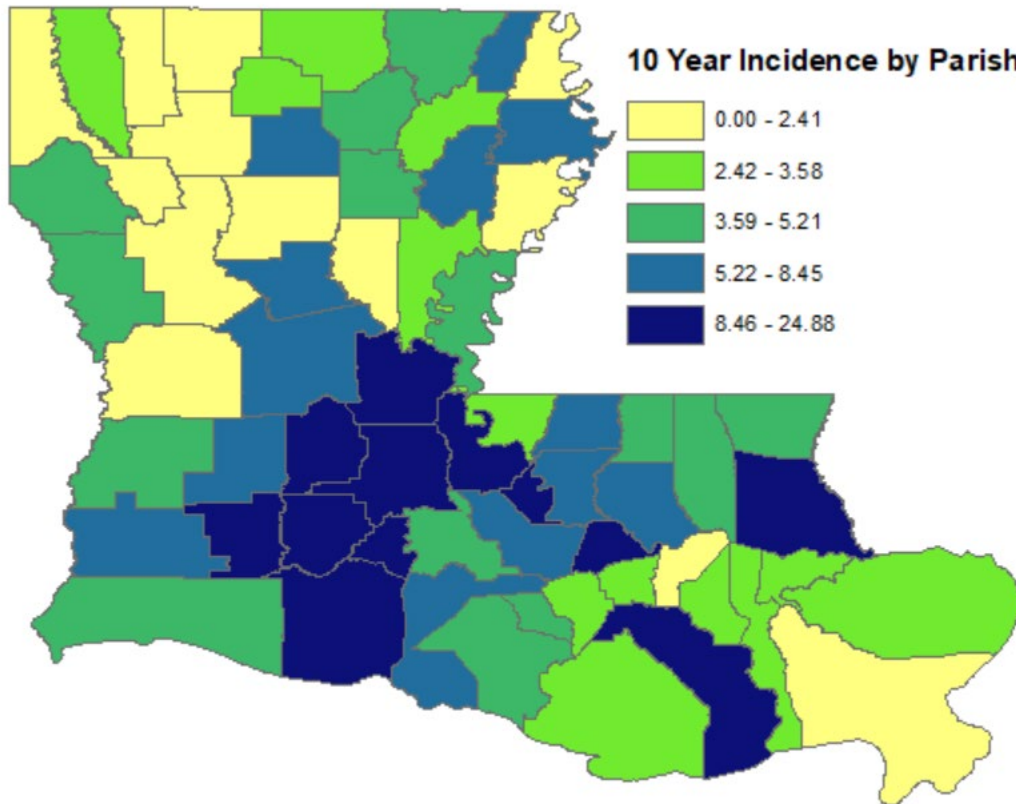
Over the last 20 years, there have been about 6 to 297 cases reported annually. The annual incidence rates in Louisiana range from 0.12 to 6.39 cases per 100,000 population (Figure 1).

Figure 1: Giardia Incidence Rates and Cases - Louisiana, 1990-2022



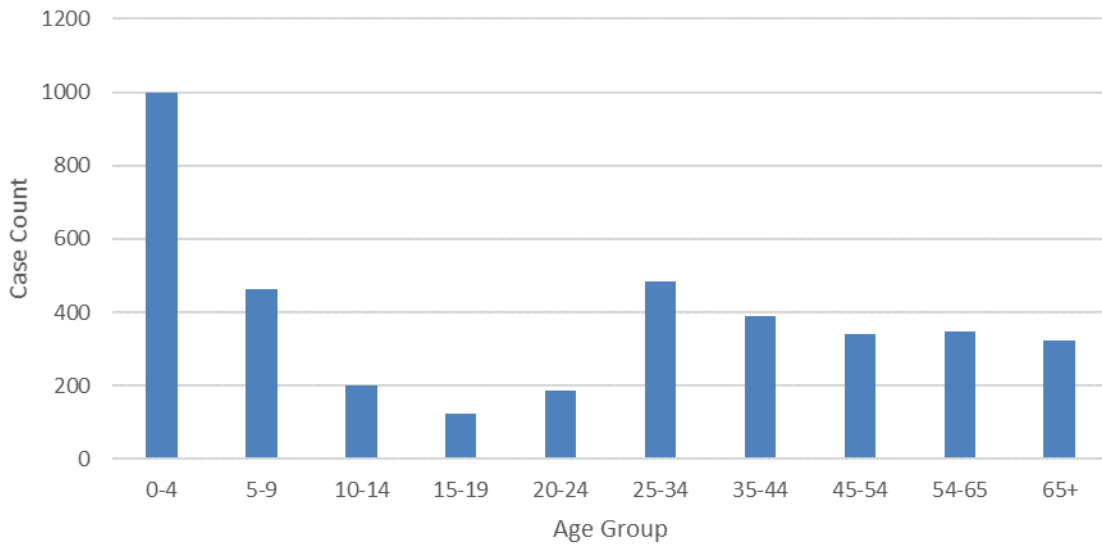
These low incidence rates are influenced by the often asymptomatic nature of the disease and under-reporting. The highest incidence rates are seen in Acadia, Ascension, Jefferson Davis, Lafayette, Lafourche, and West Baton Rouge (Table). Each of these parishes have a 10 year incidence rate of 10 per 100,000 or higher.

Figure 2: Giardia Rate per 100,000 Population by Parish – Louisiana, 2012 – 2022



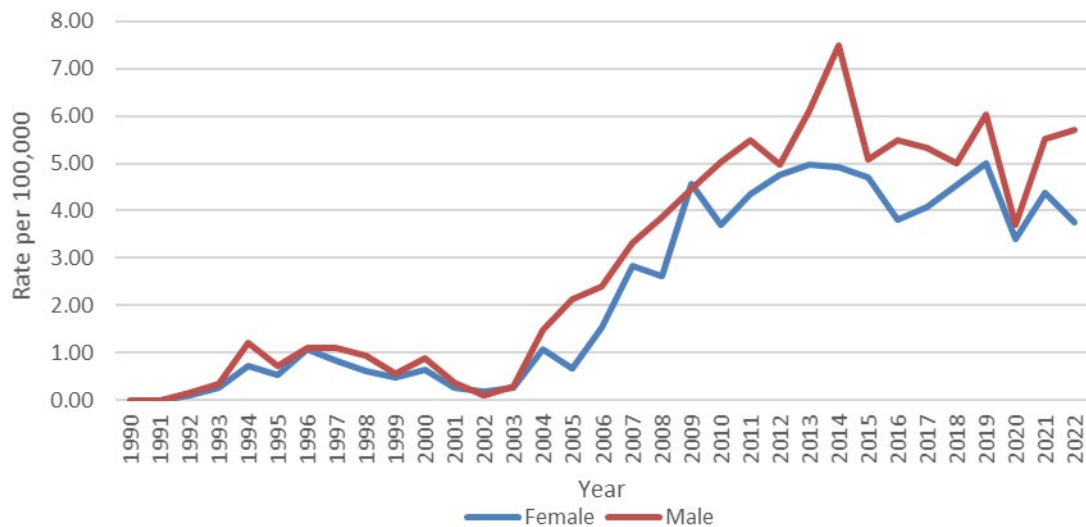
Nationally a bimodal age distribution in giardiasis rates is observed; with the highest rates occurring among newborns to children five years of age. In Louisiana, the highest incidence rates of giardiasis occur in children one to four years of age (Figure 2).

Figure 3: Giardia 10 Year Incidence Rates by Age Group - Louisiana, 2012-2022



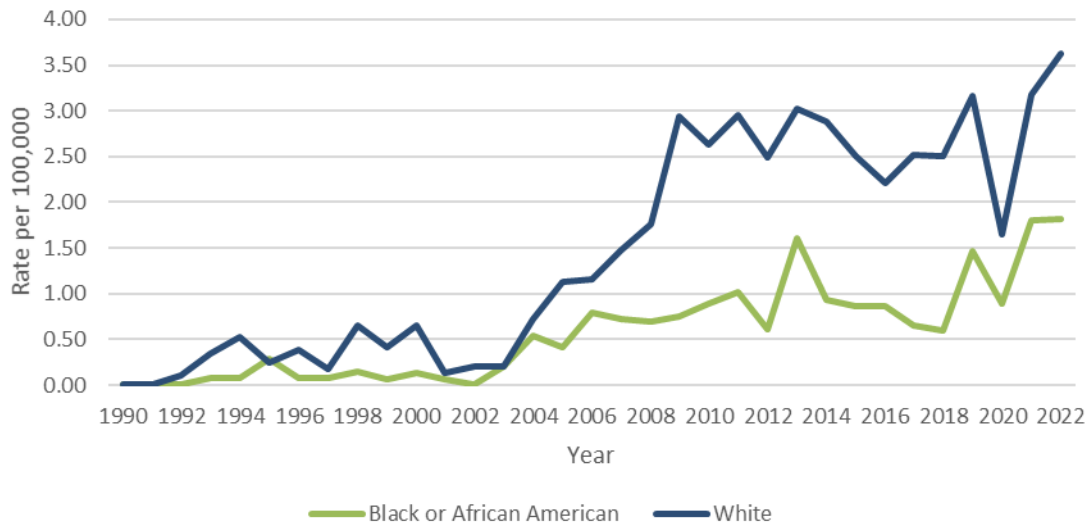
Females and males have exhibited similar rate trends throughout the period (Figure 3).

Figure 4: Giardia Incidence Rates by Gender - Louisiana, 1990-2022



Nationally, incidence rates are higher in Whites than in African-Americans; Louisiana shows the same racial distribution (Figure 4).

Figure 5: Giardia Incidence Rates by Race - Louisiana, 1990-2022



In the U.S., a seasonal peak in case reports coincides with the summer recreational water season and may reflect the heavy use by young children of communal swimming venues (e.g., lakes, rivers, swimming pools and water parks) (Figure 5).

Figure 6: Giardia Cases by Month - Louisiana, 1990-2022

