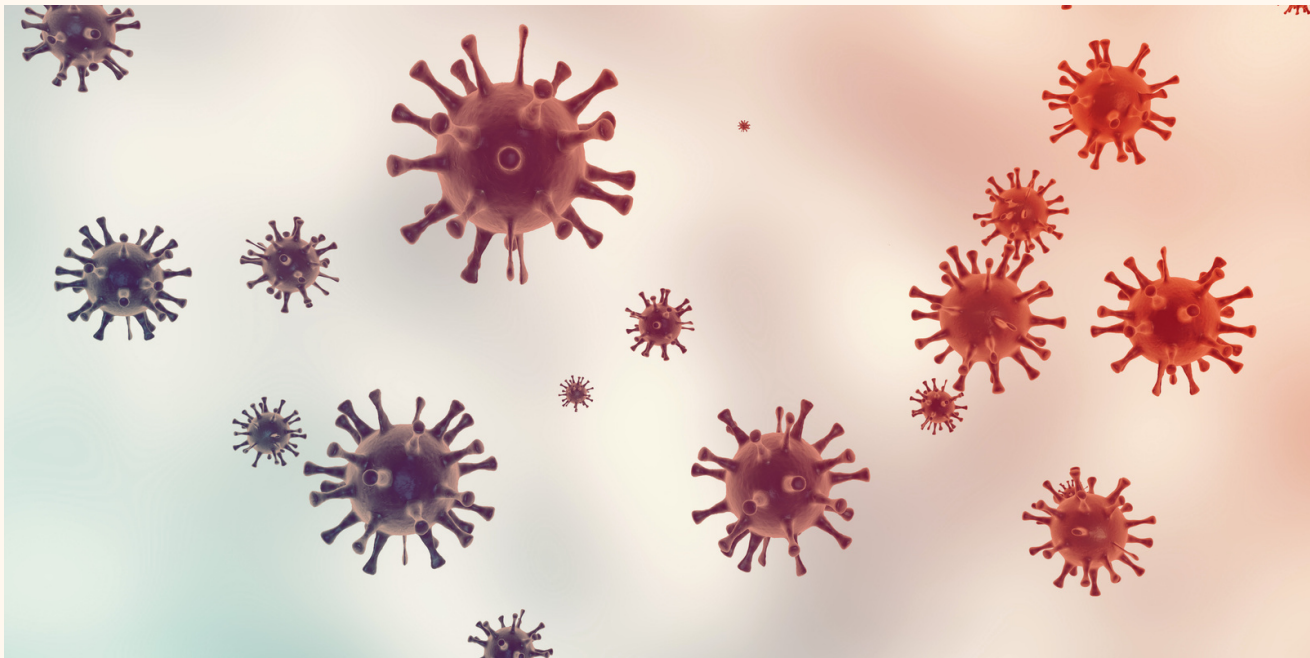




CHAMPAIGN COUNTY
2016-2020

INFECTIOUS DISEASES AMONG CHILDREN

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Infectious Disease Reporting

In Ohio, more than 80 infectious diseases are required by law to be reported to local and state public health agencies. These diseases have the potential to cause serious illness, missed time from school or work, hospitalization and even death. During 2016-2020, 117 cases of infectious disease were reported among children less than 18 years old living in Champaign County, excluding COVID-19.

Report Focus

This report summarizes probable and confirmed cases of enteric diseases, vaccine preventable diseases, sexually transmitted infections among children in Champaign County and mortality of children due to an infectious diseases during 2016-2020.

For each disease subtype listed above, this report provides data regarding:

- Disease incidence among children
- Hospitalizations
- Time Trends for selected diseases
- Demographics

Throughout this report, the term "children" refers to individuals less than 18 years old.

Disease Prevention

Many diseases in this report can be avoided through simple actions, such as handwashing or vaccination.

For information on preventing infectious diseases among children, please see:



[cdc.gov/parents/children/healthy_children](https://www.cdc.gov/parents/children/healthy_children)

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Enteric Diseases

Enteric diseases are caused by micro-organisms such as viruses, bacteria and parasites that cause intestinal illness. These diseases most frequently result from consuming contaminated food or water and some can spread from person to person.

Burden Among Children

Over one quarter (25.9%) of all enteric disease cases in Champaign County occurred among children, although children make up only 22.3% of the population (Table 1, Figure 13). Among Children in Champaign County, 21 enteric disease cases were reported during 2016-2020 for an age specific rate of 249.4 cases per 100,000 population less than 18 years old (Table 1).

Hospitalizations

Among children in Champaign County, 14.3% of enteric disease cases were hospitalized. Hospitalization rates varied by disease from 0% of E. coli cases to 40.0% of Salmonellosis cases (Table 1).

Table 1: Enteric Diseases Among Children; Cases, rates and characteristics of reportable enteric diseases among children living in Champaign County, 2016-2020.

Disease	Cases	Rate*	% Hospitalized	% of All Cases That Occurred Among Children
Overall Enteric Diseases	21	249.4	14.3%	25.9%
Campylobacteriosis	5	59.4	0.0%	23.8%
Cryptosporidiosis	7	83.1	14.3%	43.8%
E. coli, Shiga Toxin-Producing (O157:H7, Not O157, Unknown Serotype)	2	23.8	0.0%	40.0%
Giardiasis	2	23.8	0.0%	40.0%
Salmonellosis	5	59.4	40.0%	26.3%

*Age specific rate per 100,000 population <18 years old

Enteric Diseases Cont.,

Most Common Diseases

Among Children in Champaign County, Cryptosporidiosis was the most commonly reported enteric disease, followed by Campylobacteriosis and Salmonellosis (Table 1). From 2016 to 2020, the rates have varied (Figure 1).

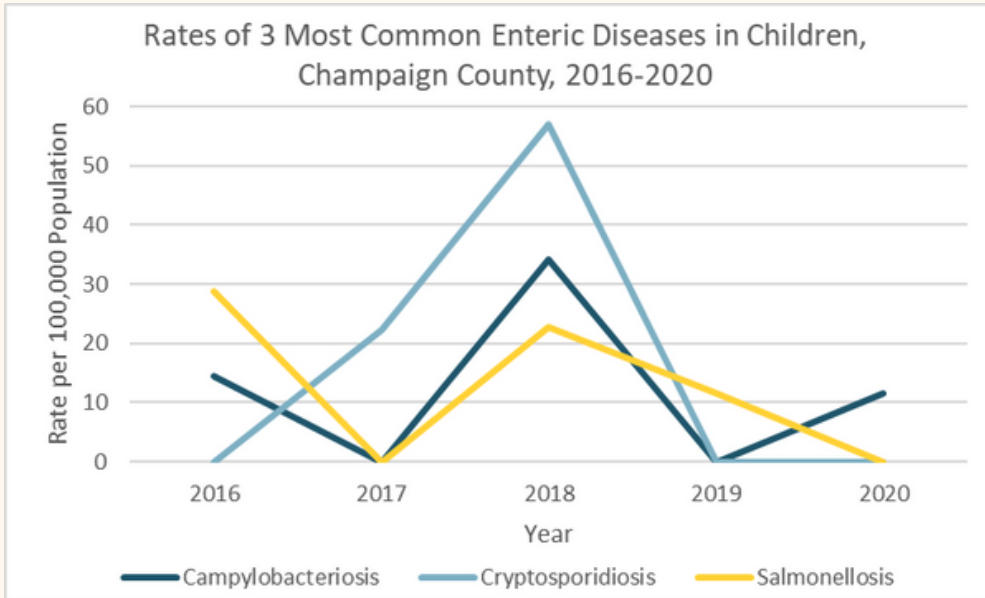


Figure 1: Rates of the 3 most common enteric diseases in children of Champaign County from 2016-2020.

Age

Children made up 25.9% of all enteric cases in Champaign County from 2016 to 2020 (Figure 2). More enteric disease cases were reported among children in younger age groups. 47.6% of enteric disease cases were less than 5 years old (Figure 3), although children less than 5 years old make up only 23.8% of the child population in Champaign County (Figure 14).

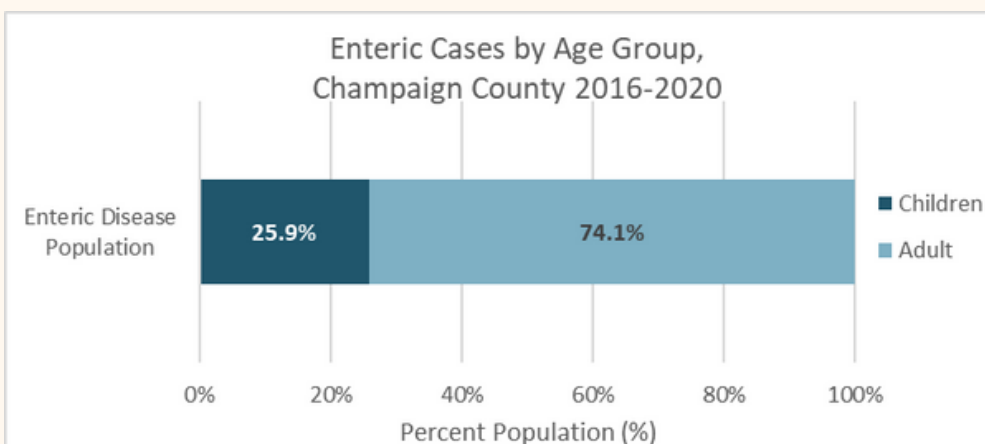


Figure 2: Enteric Cases by age group in Champaign County from 2016-2020.

Enteric Diseases Cont.,

Age Continued

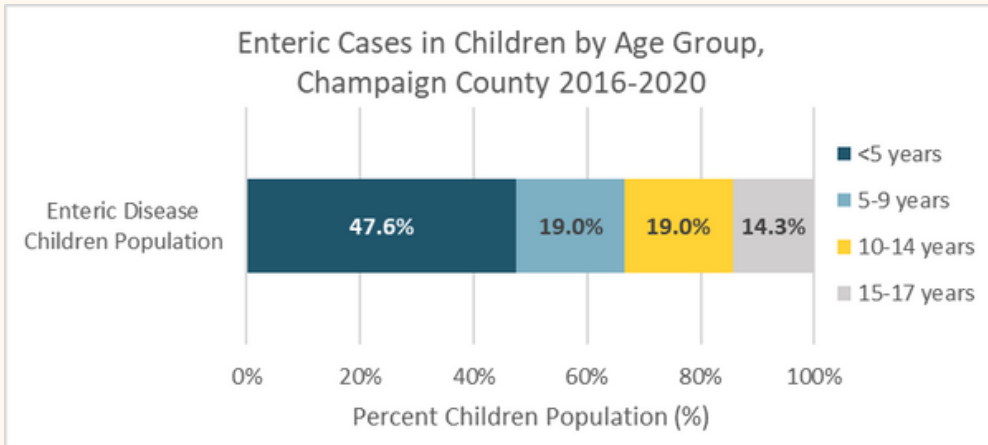


Figure 3: Enteric Cases in children by age group in Champaign County from 2016-2020.

Race and Ethnicity

More enteric disease cases were reported among non-Hispanic White children (Figure 4). 81.0% of enteric diseases cases were non-Hispanic White, and the non-Hispanic White make up 88.6% of the child population in Champaign County (Figure 15).

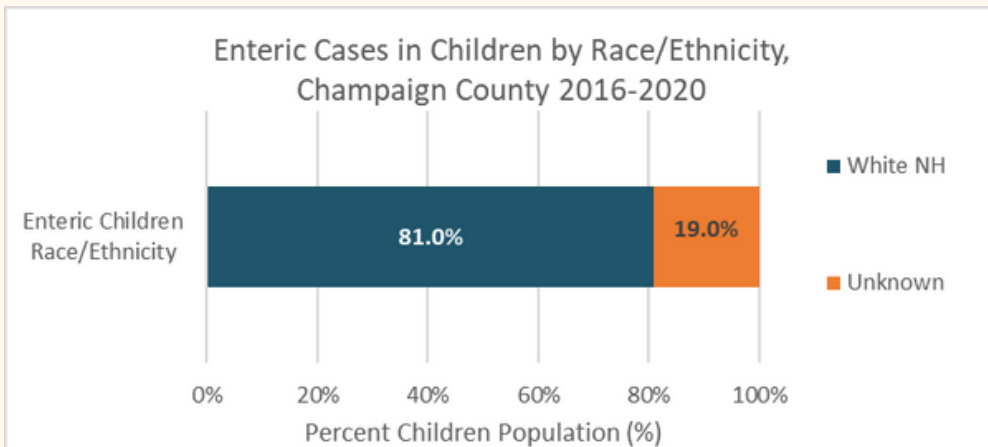


Figure 4: Enteric Cases in children by race/ethnicity in Champaign County from 2016-2020.

NH=Non-Hispanic

Vaccine-Preventable Diseases

A vaccine-preventable disease (VPD) is an infectious disease for which an effective preventive vaccine exists, which is normally recommended during childhood. Diseases listed in this section are caused by bacteria or viruses and many are spread via respiratory droplets.

Burden Among Children

Under one quarter (12.5%) of all VPD cases in Champaign County occurred among children, although children make up only 22.3% of the population (Table 2, Figure 13). Among Children in Champaign County, 30 VPD cases were reported during 2016-2020 for an age specific rate of 356.3 cases per 100,000 population less than 18 years old (Table 2).

Hospitalizations

Among children in Champaign County, 70.0% of VPD cases were hospitalized. Hospitalization rates varied by disease from 0% of Varicella cases to 100% of Meningitis - aseptic/viral cases (Table 2). By definition, 100% of Influenza-associated hospitalizations cases were hospitalized.

Table 2: VPD Diseases Among Children; Cases, rates and characteristics of reportable VPD diseases among children living in Champaign County, 2016-2020.

Disease	Cases	Rate*	% Hospitalized	% of All Cases That Occurred Among Children
Overall Vaccine-Preventable Diseases	30	356.3	70.0%	12.5%
Influenza-associated hospitalization	17	201.9	100.0%	10.4%
Meningitis - aseptic/viral	3	35.6	100.0%	37.5%
Mumps	1	11.9	0.0%	50.0%
Pertussis	1	11.9	0.0%	100.0%
Streptococcus pneumoniae	1	11.9	100.0%	5.9%
Varicella	7	83.1	0.0%	87.5%

*Age specific rate per 100,000 population <18 years old

Vaccine-Preventable Diseases Cont.,

Most Common Diseases

Among Children in Champaign County, Influenza-associated hospitalization was the most commonly reported VPD, followed by Varicella and Meningitis - aseptic/viral (Table 2). From 2016 to 2019, the rates have steadily increased for Varicella and Meningitis (Figure 5). From 2018 to 2020 influenza-associated hospitalizations increased (Figure 5).

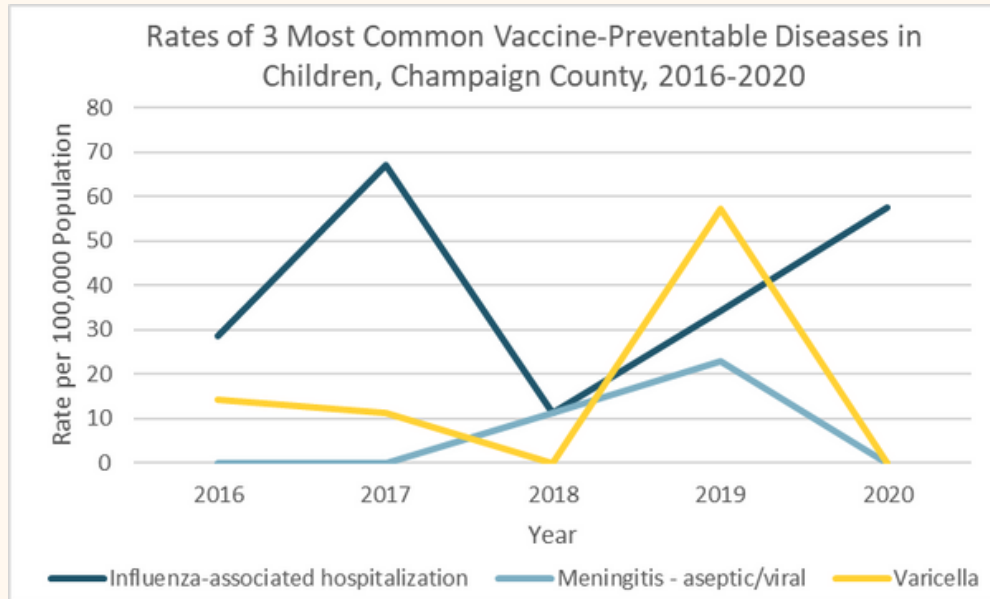


Figure 5: Rates of the 3 most common VPD's in children of Champaign County from 2016-2020.

Age

Children made up 12.5% of all VPD cases in Champaign County from 2016 to 2020 (Figure 6). More VPD cases were reported among children in younger age groups. 56.7% of VPD cases were less than 5 years old (Figure 7), although children less than 5 years old make up only 23.8% of the child population in Champaign County (Figure 14).

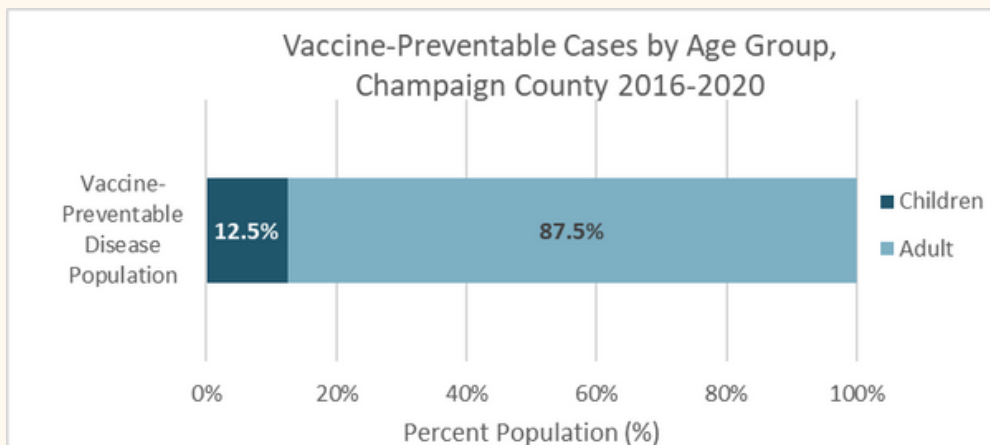


Figure 6: VPD Cases by age group in Champaign County from 2016-2020.

Vaccine-Preventable Diseases Cont.,

Age Continued

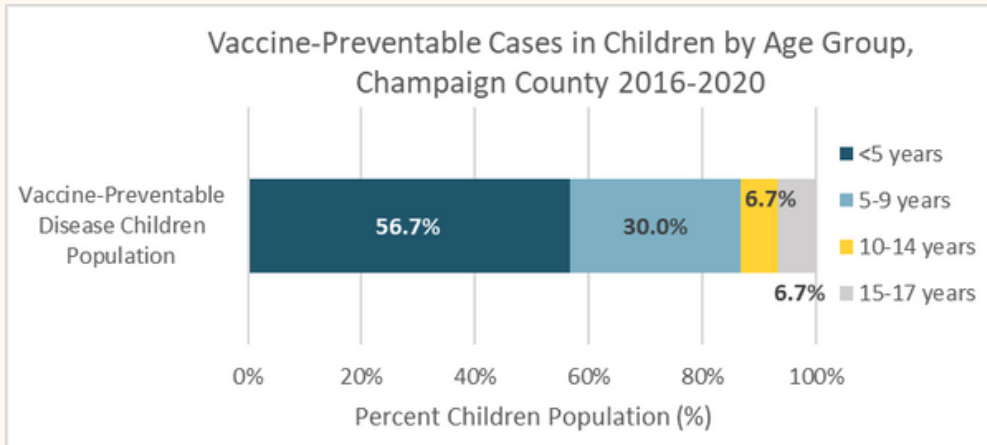


Figure 7: VPD Cases in children by age group in Champaign County from 2016-2020.

Race and Ethnicity

More VPD cases were reported among non-Hispanic White children (Figure 8). 90.0% of VPD cases were non-Hispanic White, and the non-Hispanic White make up 88.6% of the child population in Champaign County (Figure 15).

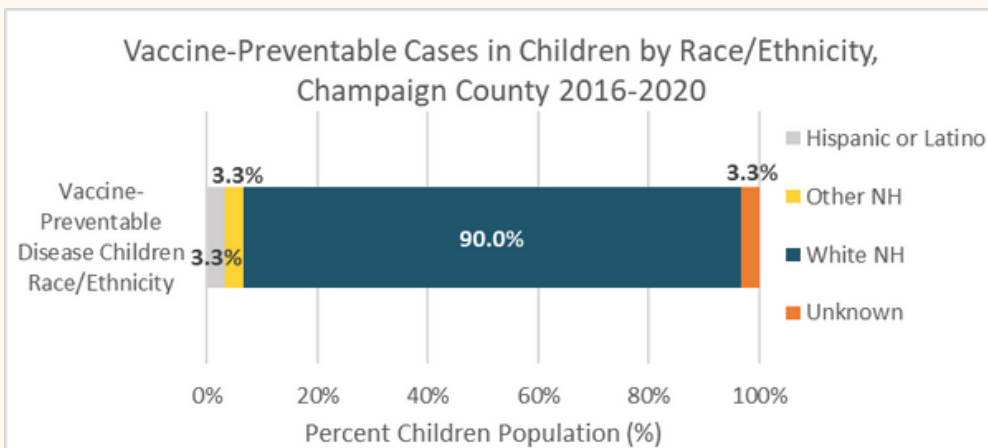


Figure 8: VPD Cases in children by race/ethnicity in Champaign County from 2016-2020.

NH=Non-Hispanic

Sexually Transmitted Infections

Sexually transmitted infections (STIs), or sexually transmitted diseases (STDs), are infections that are passed from one person to another through sexual contact. The contact is usually vaginal, oral, or anal sex. But sometimes they can spread through other intimate physical contact.

Burden Among Children

Under one quarter (6.6%) of all STI cases in Champaign County occurred among children, although children make up only 22.3% of the population (Table 3, Figure 13). Among Children in Champaign County, 64 STI cases were reported during 2016-2020 for an age specific rate of 760.2 cases per 100,000 population less than 18 years old (Table 3).

Hospitalizations

Among children in Champaign County, 1.6% of STI cases were hospitalized. Hospitalization only occurred in 2.0% of Chlamydia infection cases (Table 3).

Table 3: Sexually Transmitted Infections Among Children; Cases, rates and characteristics of reportable sexually transmitted infections among children living in Champaign County, 2016-2020.

Disease	Cases	Rate*	% Hospitalized	% of All Cases That Occurred Among Children
Overall Sexually Transmitted Infections (STI)	64	760.2	1.6%	6.6%
Chlamydia infection	51	605.8	2.0%	9.2%
Gonococcal infection	10	118.8	0.0%	6.8%
Hepatitis C - chronic	2	23.8	0.0%	1.1%
Hepatitis C - Perinatal Infection	1	11.9	0.0%	100.0%

*Age specific rate per 100,000 population <18 years old

Sexually Transmitted Infections Cont.,

Most Common Diseases

Among Children in Champaign County, Chlamydia infection was the most commonly reported STI, followed by Gonococcal infection (Table 3). From 2018 to 2020, the rates for Chlamydia infections have varied while the rates for Gonococcal infections have decreased (Figure 9).

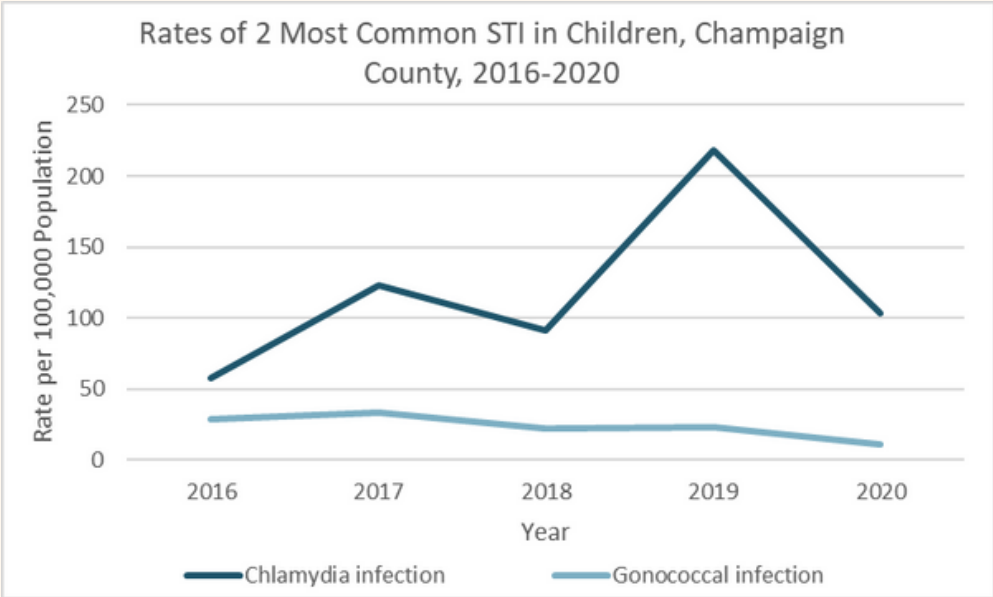


Figure 9: Rates of the 2 most common STI's in children of Champaign County from 2016-2020.

Age

Children made up 6.6% of all STI cases in Champaign County from 2016 to 2020 (Figure 10). More STI cases were reported among children in older age groups. 92.2% of STI cases were 15-17 years old (Figure 11), although children 15-17 years old make up only 19.3% of the child population in Champaign County (Figure 14).

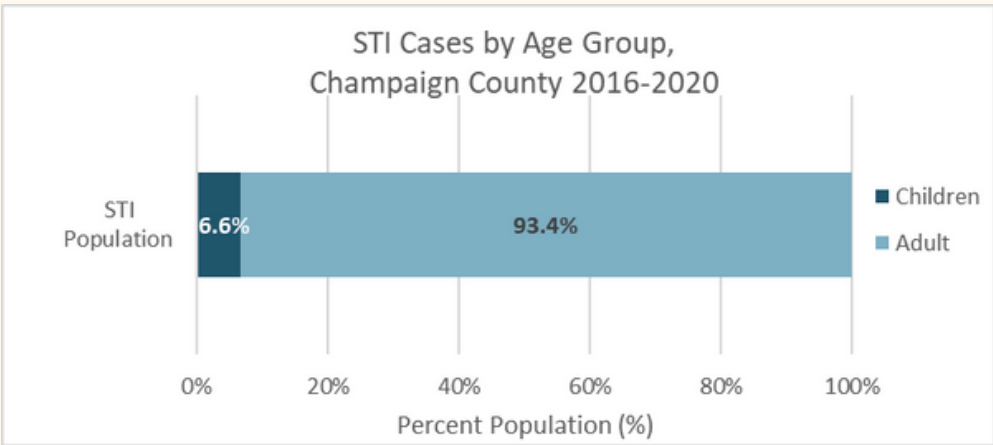


Figure 10: STI Cases by age group in Champaign County from 2016-2020.

Sexually Transmitted Infections Cont.,

Age Continued

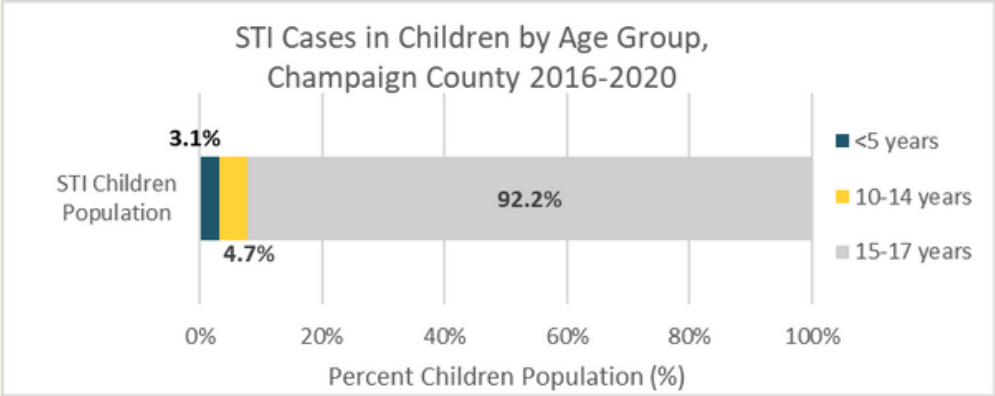


Figure 11: STI Cases in children by age group in Champaign County from 2016-2020.

Race and Ethnicity

More STI cases were reported among non-Hispanic White children (Figure 12). 54.7% of STI cases were non-Hispanic White, and the non-Hispanic White make up 88.6% of the child population in Champaign County (Figure 15).

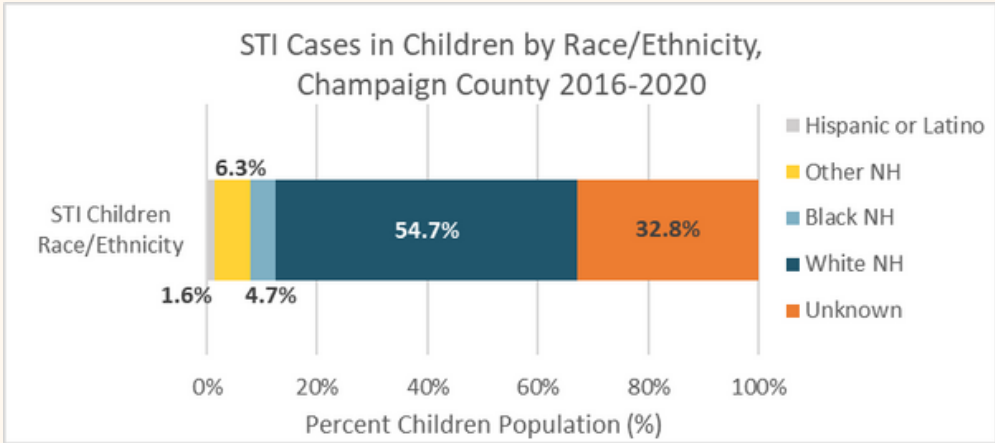


Figure 12: STI Cases in children by race/ethnicity in Champaign County from 2016-2020.

NH=Non-Hispanic

Population of Champaign County Children

To help compare the data from the sub-types of diseases above, the demographics of Champaign County children are below.

Champaign County Population

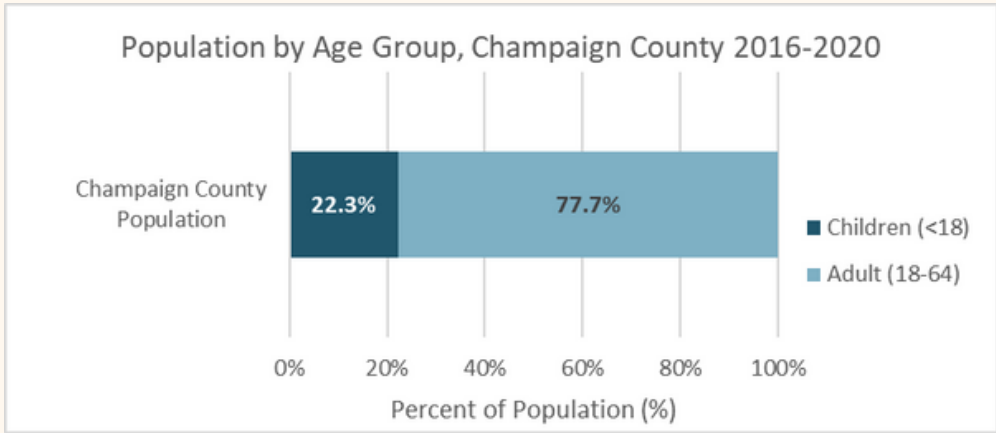


Figure 13: Champaign County Population by Age Group, 2016-2020.

Age

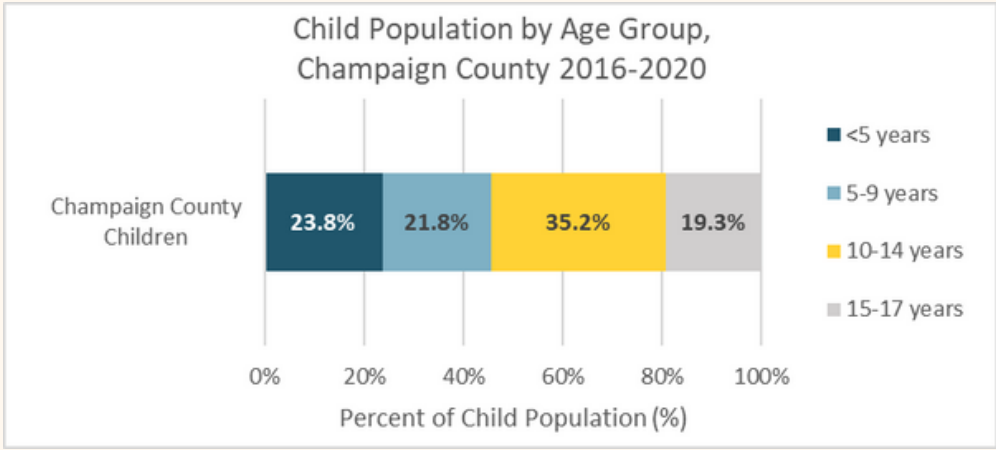


Figure 14: Champaign County Child Population by Age Group, 2016-2020.

Race and Ethnicity

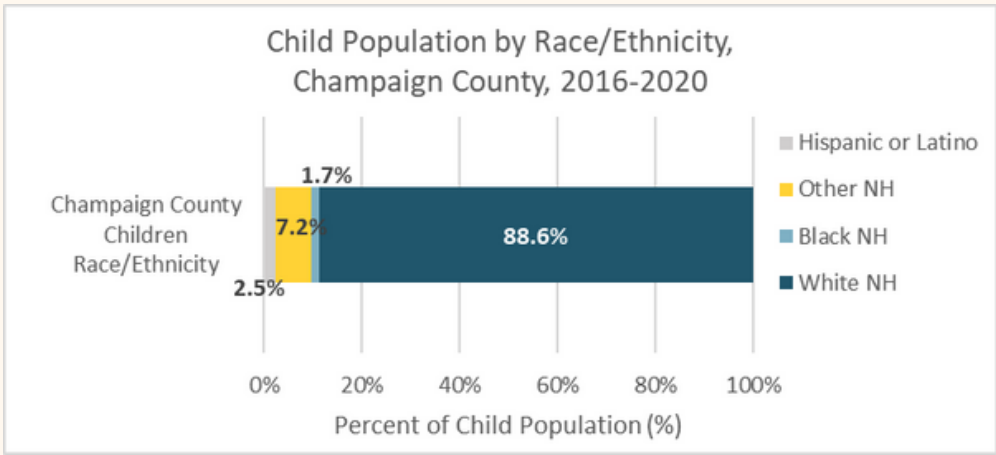


Figure 15: Champaign County Child Population by Race/ Ethnicity, 2016-2020.

NH=Non-Hispanic

Mortality

Deaths Among Children Related to Infectious Diseases

During 2016-2020, 2 children in Champaign County had an infectious disease listed as the underlying cause of death, accounting for 4.3% of all deaths among Champaign County children during the that time period. Of the deaths due to infectious diseases, 50.0% occurred among children less than 1 year of age.

The underlying cause related to infectious diseases was:

- Sepsis, unspecified

