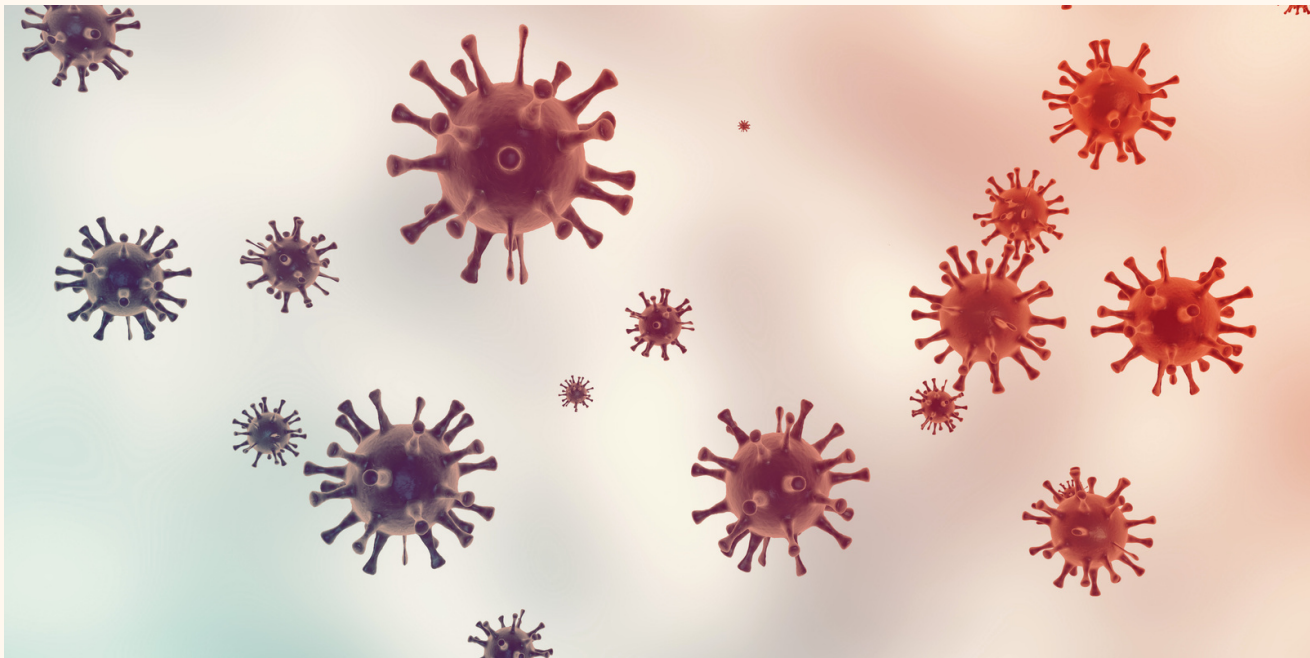




**CHAMPAIGN COUNTY**  
**2016-2020**

# **INFECTIOUS DISEASES AMONG THE ELDERLY**

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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 work, time with family, hospitalization and even death. During 2016-2020, 153 cases of infectious disease were reported among the elderly, greater than 64 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 the elderly in Champaign County and mortality of the elderly due to an infectious diseases during 2016-2020.

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

- Disease incidence among the elderly
- Hospitalizations
- Time Trends for selected diseases
- Demographics

**Throughout this report, the term "elderly" refers to individuals greater than 64 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, please see:



[cdc.gov/earlycare/infectious-disease/index.html](https://www.cdc.gov/earlycare/infectious-disease/index.html)

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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 the Elderly

Under one quarter (13.6%) of all enteric disease cases in Champaign County occurred among the elderly, the elderly make up only 18.3% of the population (Table 1, Figure 13). Among the elderly in Champaign County, 11 enteric disease cases were reported during 2016-2020 for an age specific rate of 160.3 cases per 100,000 population greater than 64 years old (Table 1).

## Hospitalizations

Among the elderly in Champaign County, 36.4% of enteric disease cases were hospitalized. Hospitalization rates varied by disease from 0% of Shigellosis cases to 100% of Salmonellosis cases (Table 1).

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

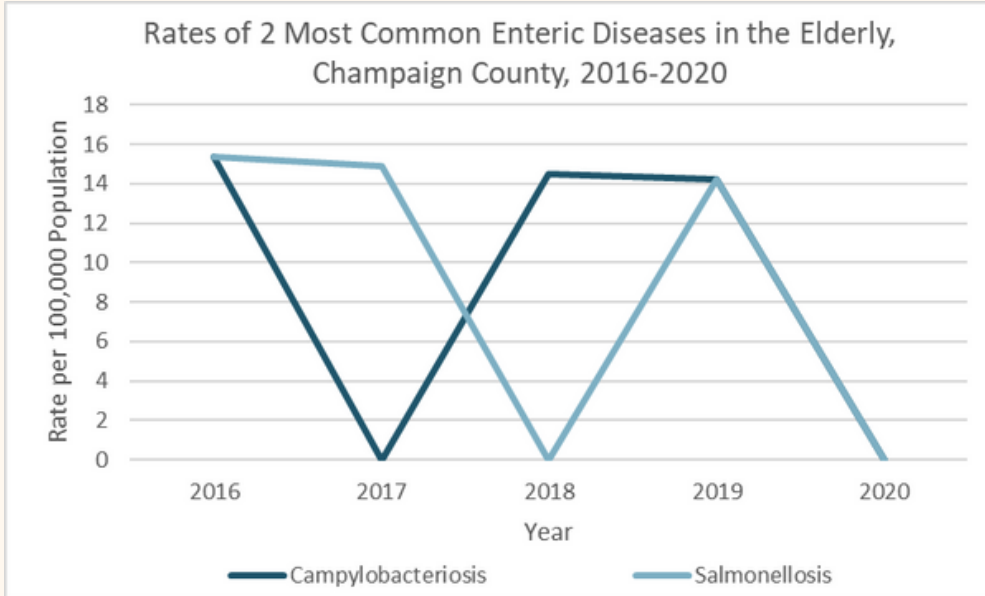
Disease	Cases	Rate*	% Hospitalized	% of All Cases That Occurred Among the Elderly
<b>Overall Enteric Diseases</b>	11	160.3	36.4%	13.6%
<b>Campylobacteriosis</b>	3	43.7	0.0%	14.3%
<b>Cryptosporidiosis</b>	1	14.6	0.0%	6.3%
<b>Giardiasis</b>	1	14.6	100.0%	20.0%
<b>Salmonellosis</b>	3	43.7	100.0%	15.8%
<b>Shigellosis</b>	1	14.6	0.0%	50.0%
<b>Vibriosis (not cholera)</b>	1	14.6	0.0%	50.0%
<b>Yersiniosis</b>	1	14.6	0.0%	100.0%

\*Age specific rate per 100,000 population 65+ years old

# Enteric Diseases Cont.,

## Most Common Diseases

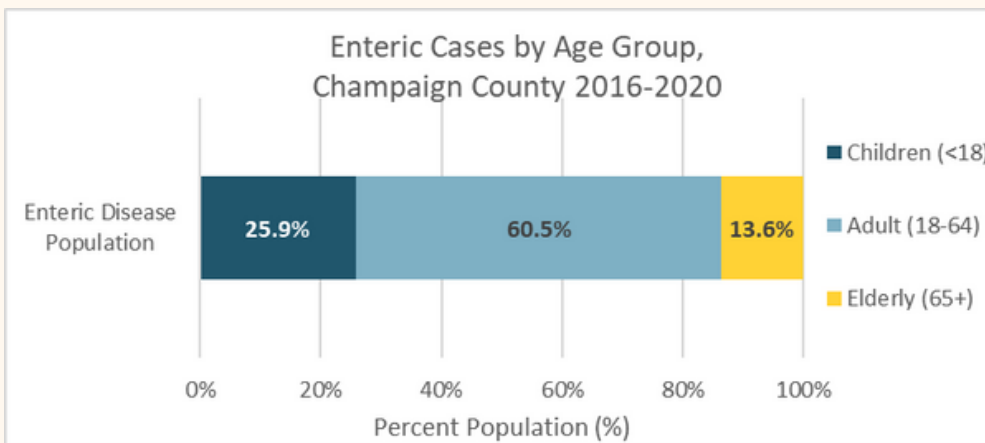
Among the elderly in Champaign County, Campylobacteriosis and Salmonellosis were the most commonly reported enteric disease (Table 1). From 2016 to 2020, the rates have varied (Figure 1).



**Figure 1:** Rates of the 2 most common enteric diseases in the elderly of Champaign County from 2016-2020.

## Age

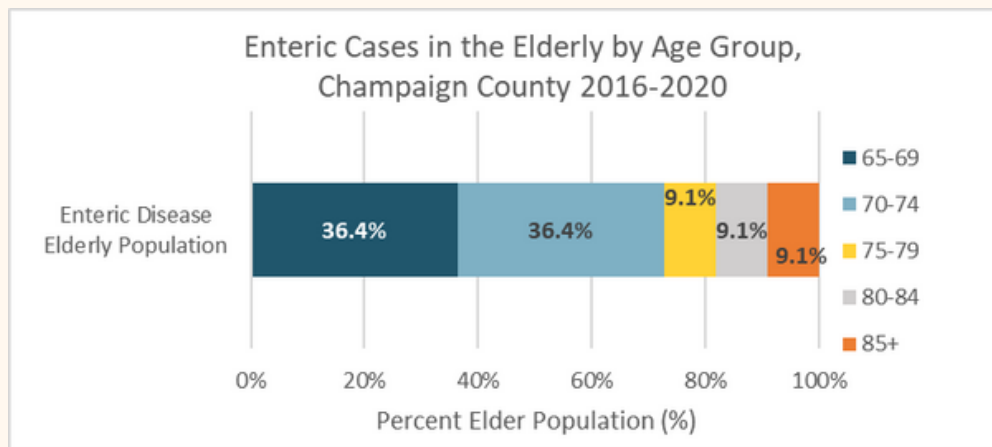
The elderly made up 13.6% of all enteric cases in Champaign County from 2016 to 2020 (Figure 2). More enteric disease cases were reported among the elderly in the younger age groups. 36.4% of enteric disease cases were in the 65-69 age group (Figure 3). The elderly in the 65-69 year old age group is the highest (30.3%) age group of the elder population in Champaign County (Figure 14).



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

# Enteric Diseases Cont.,

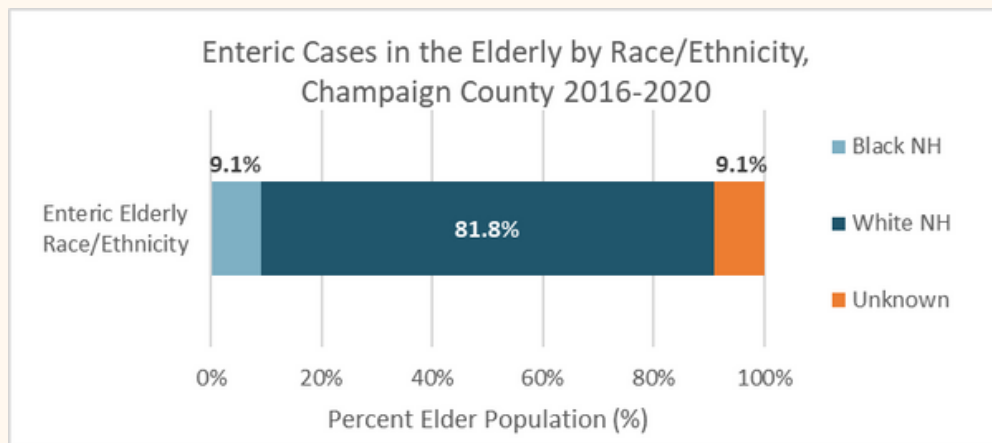
## Age Continued



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

## Race and Ethnicity

More enteric disease cases were reported among the non-Hispanic White elderly (Figure 4). 81.8% of enteric diseases cases were non-Hispanic White, and the non-Hispanic White make up 76.5% of the elderly population in Champaign County (Figure 15).



**Figure 4:** Enteric Cases in the elderly 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 the Elderly

Under one half (46.3%) of all VPD cases in Champaign County occurred among the elderly, although the elderly make up only 18.3% of the population (Table 2, Figure 13). Among the elderly in Champaign County, 111 VPD cases were reported during 2016-2020 for an age specific rate of 1617.2 cases per 100,000 population greater than 64 years old (Table 2).

## Hospitalizations

Among the elderly in Champaign County, 90.1% 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 the Elderly; Cases, rates and characteristics of reportable VPD diseases among the elderly living in Champaign County, 2016-2020.

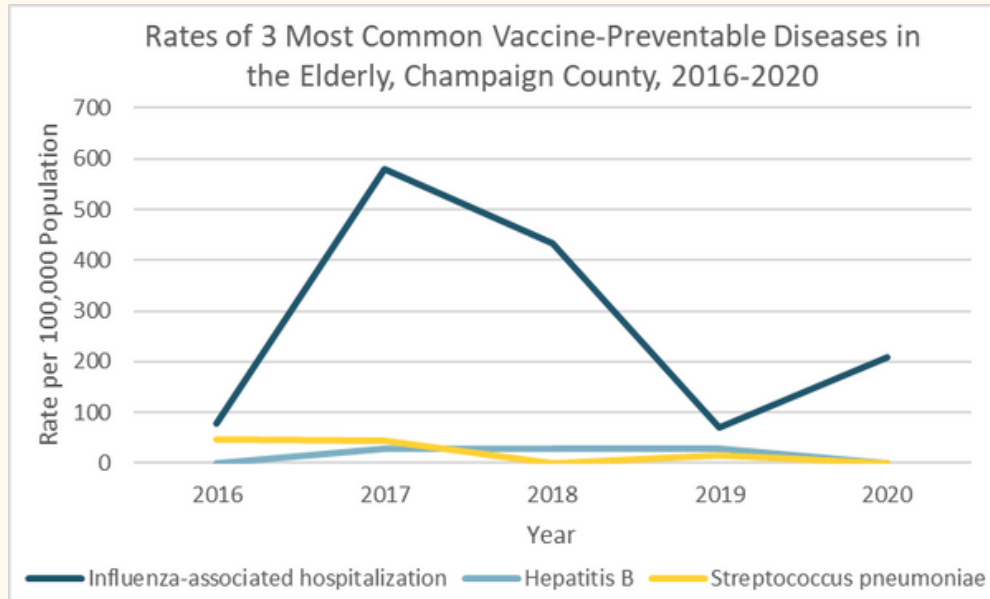
Disease	Cases	Rate*	% Hospitalized	% of All Cases That Occurred Among the Elderly
<b>Overall Vaccine-Preventable Diseases</b>	111	1617.2	90.1%	46.3%
<b>Haemophilus influenzae (invasive disease)</b>	2	29.1	100.0%	40.0%
<b>Hepatitis B (including delta) - Chronic</b>	6	87.4	0.0%	21.4%
<b>Influenza-associated hospitalization</b>	94	1369.5	100.0%	57.7%
<b>Meningitis - aseptic/viral</b>	1	14.6	100.0%	12.5%
<b>Streptococcus pneumoniae</b>	7	102.0	42.9%	41.2%
<b>Varicella</b>	1	14.6	0.0%	12.5%

\*Age specific rate per 100,000 population 65+ years old

# Vaccine-Preventable Diseases Cont.,

## Most Common Diseases

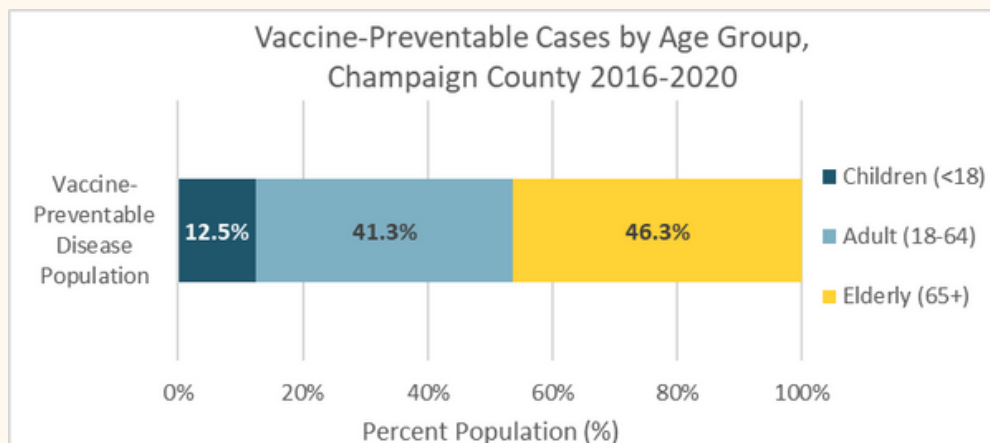
Among the elderly in Champaign County, Influenza-associated hospitalization was the most commonly reported VPD, followed by Streptococcus pneumoniae and Hepatitis B (Table 2). From 2016 to 2020, the rates have stayed relatively the same for Streptococcus pneumoniae and Hepatitis B (Figure 5). From 2017 to 2019 influenza-associated hospitalizations decreased (Figure 5).



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

## Age

The elderly made up 46.3% of all VPD cases in Champaign County from 2016 to 2020 (Figure 6). More VPD cases were reported among the elderly in youngest age group. 21.6% of VPD cases were 65-69 years old (Figure 7), although the 65-69 years old age group make up only 30.3% of the elderly population in Champaign County (Figure 14).

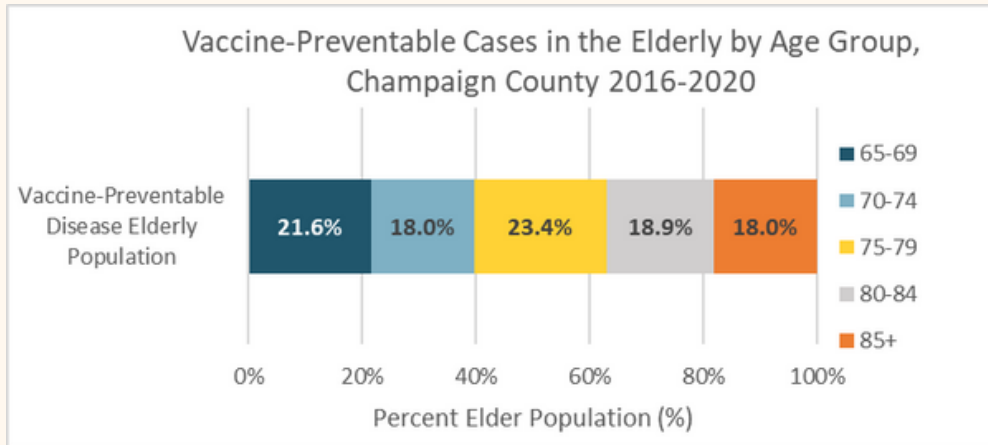


**Figure 6:** VPD Cases by age group in Champaign County from 2016-2020.



# Vaccine-Preventable Diseases Cont.,

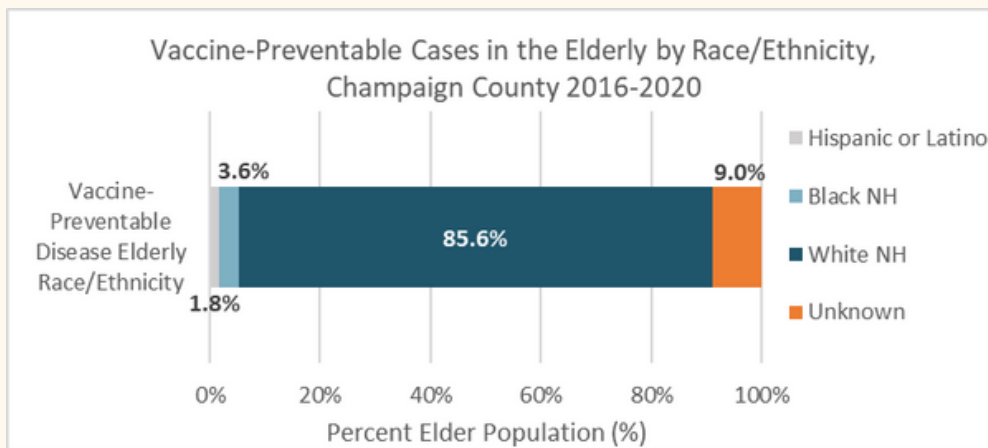
## Age Continued



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

## Race and Ethnicity

More VPD cases were reported among the non-Hispanic White elderly (Figure 8). 85.6% of VPD cases were non-Hispanic White, and the non-Hispanic White make up 76.5% of the elderly population in Champaign County (Figure 15).



**Figure 8:** VPD Cases in the elderly 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. These infections also include viral hepatitis, due to the capability of being passed through sexual contact.

## Burden Among the Elderly

Under one twentieth (2.6%) of all STI cases in Champaign County occurred among the elderly, and the elderly make up 18.3% of the Champaign County population (Table 3, Figure 13). Among the elderly in Champaign County, 25 STI cases were reported during 2016-2020 for an age specific rate of 364.2 cases per 100,000 population greater than 64 years old (Table 3).

## Hospitalizations

Among the elderly in Champaign County, 0.0% of STI cases were hospitalized (Table 3).

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

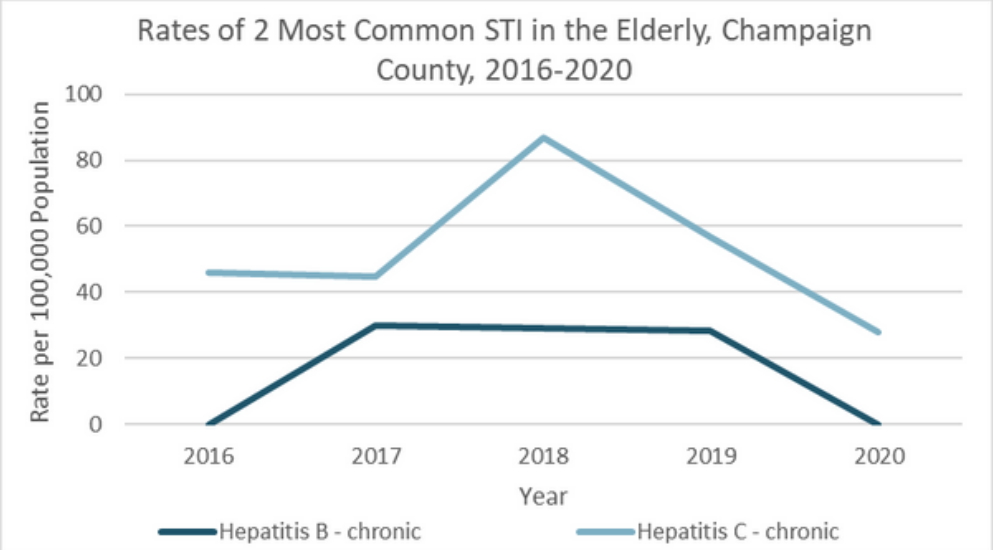
Disease	Cases	Rate*	% Hospitalized	% of All Cases That Occurred Among the Elderly
<b>Overall Sexually Transmitted Infections (STI)</b>	25	364.2	0.0%	2.6%
<b>Hepatitis B (including delta) - Chronic</b>	6	87.4	0.0%	21.4%
<b>Hepatitis C - chronic</b>	18	262.2	0.0%	9.5%
<b>Syphilis - All Types</b>	1	14.6	0.0%	3.7%

\*Age specific rate per 100,000 population 65+ years old

# Sexually Transmitted Infections Cont.,

## Most Common Diseases

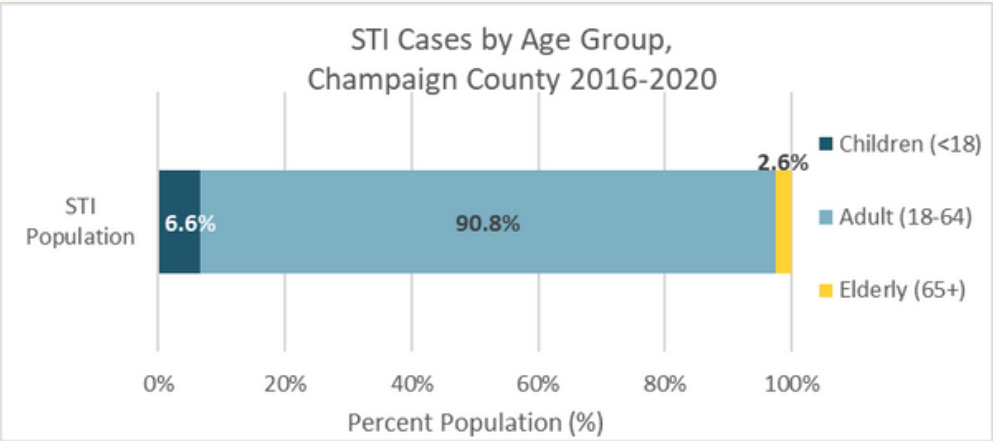
Among the elderly in Champaign County, Chronic Hepatitis C was the most commonly reported STI, followed by Chronic Hepatitis B (Table 3). From 2018 to 2020, the rates have steadily decreased for Chronic Hepatitis B & C (Figure 9).



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

## Age

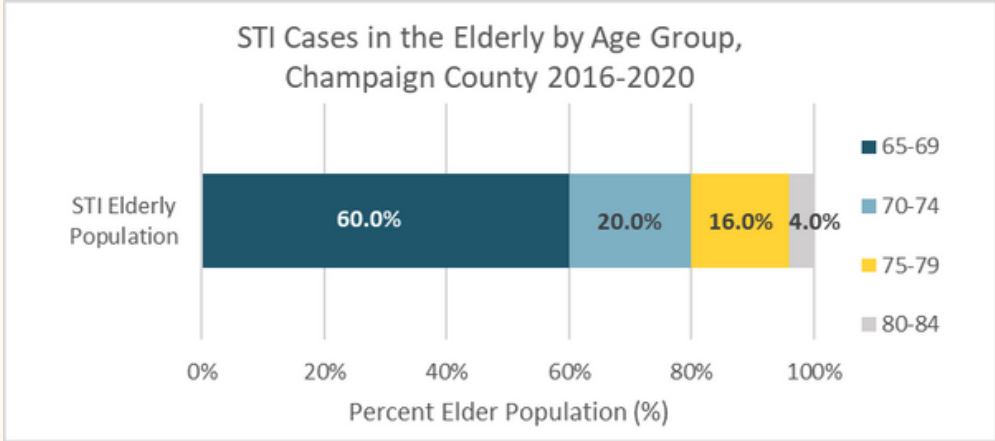
The elderly made up 2.6% of all STI cases in Champaign County from 2016 to 2020 (Figure 10). More STI cases were reported among the elderly in the younger age group. 60.0% of STI cases were 65-69 years old (Figure 11), although the 65-69 years old make up only 30.3% of the elder population in Champaign County (Figure 14).



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

# Sexually Transmitted Infections Cont.,

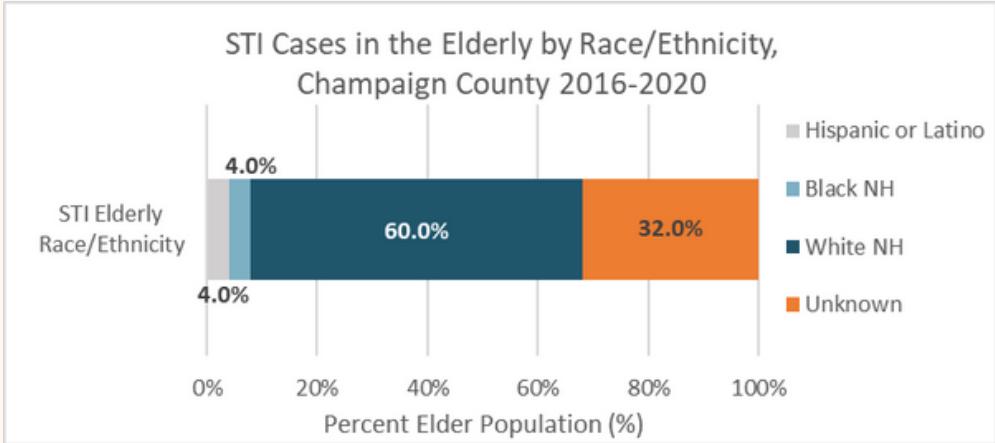
## Age Continued



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

## Race and Ethnicity

More STI cases were reported among the non-Hispanic White elderly (Figure 12). 60.0% of STI cases were non-Hispanic White, and the non-Hispanic White make up 76.5% of the elder population in Champaign County (Figure 15).



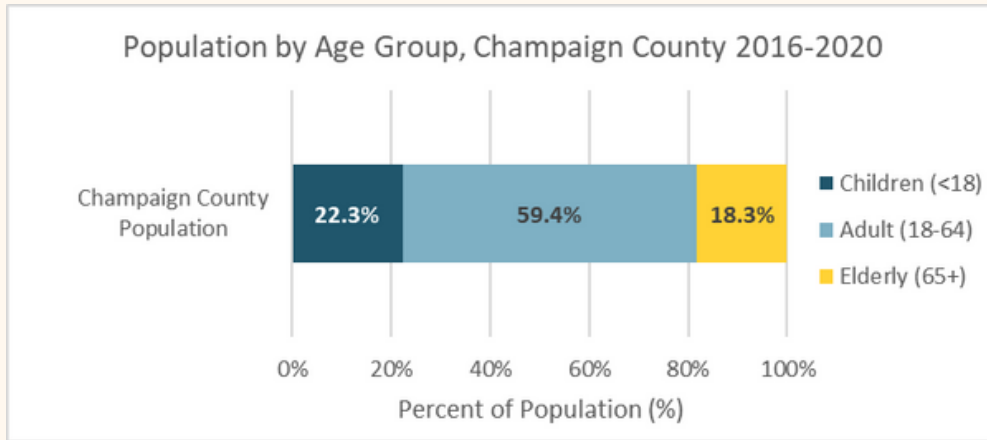
**Figure 12:** STI Cases in the elderly by race/ethnicity in Champaign County from 2016-2020.

NH=Non-Hispanic

# Population of Champaign County Elderly

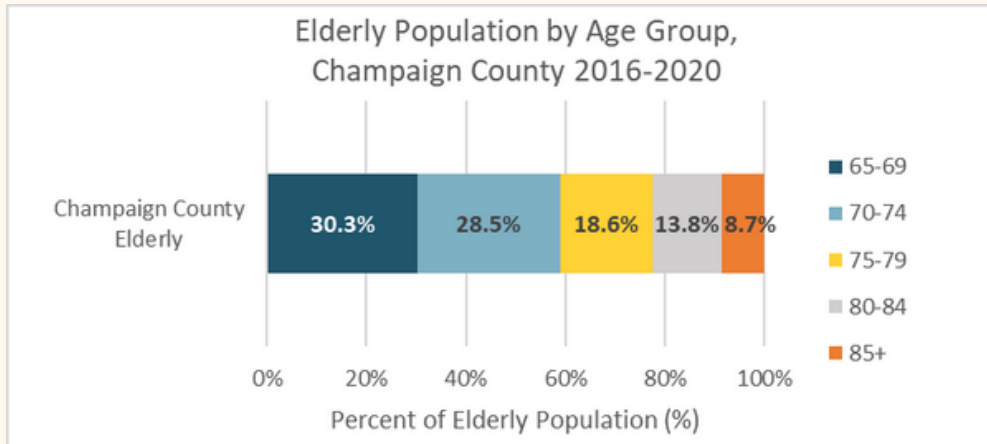
To help compare the data from the sub-types of diseases above, the demographics of the Champaign County Elderly are below.

## Champaign County Population



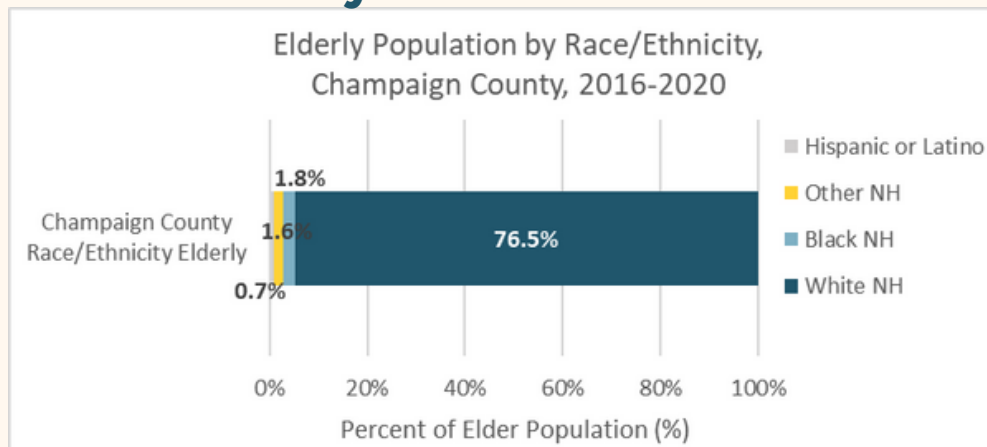
**Figure 13:** Champaign County Population by Age Group, 2016-2020.

## Age



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

## Race and Ethnicity



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

NH=Non-Hispanic

# Mortality

## Deaths Among the Elderly Related to Infectious Diseases

During 2016-2020, 65 elderly individuals in Champaign County had an infectious disease listed as the underlying cause of death, accounting for 2.4% of all deaths among the Champaign County elderly during the that time period. Of the deaths due to infectious diseases, 32.3% occurred among elderly greater than 84 years of age.

The 3 main underlying causes related to infectious diseases were:

- Sepsis, unspecified
- Enterocolitis due to Clostridium difficile
- Influenza with pneumonia, seasonal influenza virus identified

