

# Central Oregon Public Health Quarterly

Communicable Disease Update for Crook, Deschutes, and Jefferson Counties  
Third Quarter Report, 2023

24/7 Communicable Disease reporting lines:

Crook County: 541-447-5165

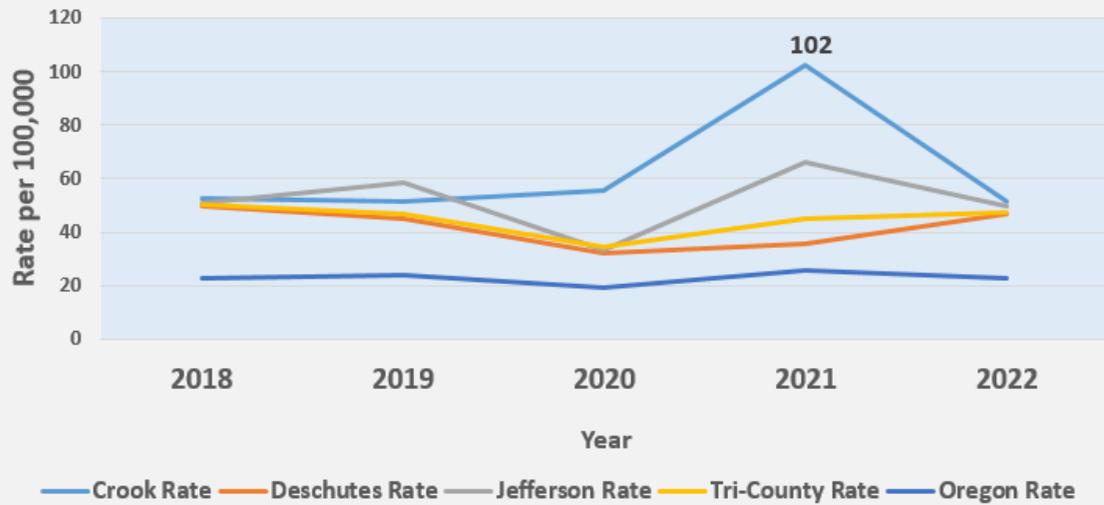
Deschutes County: 541-322-7418

Jefferson County: 541-475-4456



## Campylobacteriosis in Central OR & Statewide

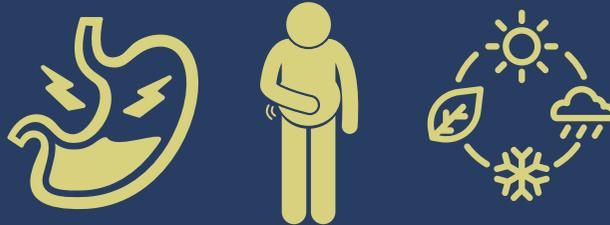
Campylobacteriosis Rates in Central OR & Statewide, 2018-2022



- **Campylobacteriosis** (aka 'Campy') is a common diarrheal illness caused by the *campylobacter* (gram-negative) bacteria (see image above & below)

- Rates have been higher in **Central OR vs. the state** in recent years (OR=dark blue line at bottom)

- Two noted rate spikes occurred in Crook & Jefferson Counties in 2021



### Campy Seasonal Trends

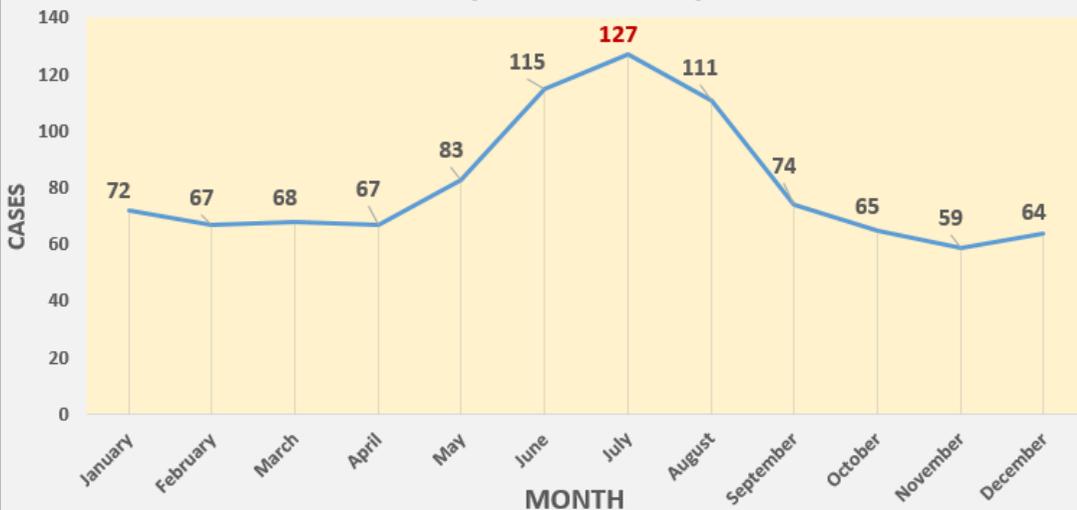
- As with trends seen in many parts of the world, campy is more prevalent in summer months in Central OR & OR —increasing in May & tapering off in September

- Peak cases in Central OR have been reported in **July**

- Reasons for summertime increases include variations in:

- human behaviors/lifestyles during the summer (e.g. eating more BBQ & drinking from streams & other untreated natural water sources)
- campy colonization in poultry & other animal reservoirs (e.g. dairy cattle, pigs, wild birds)
- other unexplored environmental reservoirs

Campylobacteriosis Cases by Month, Central OR (2013-2023\*)

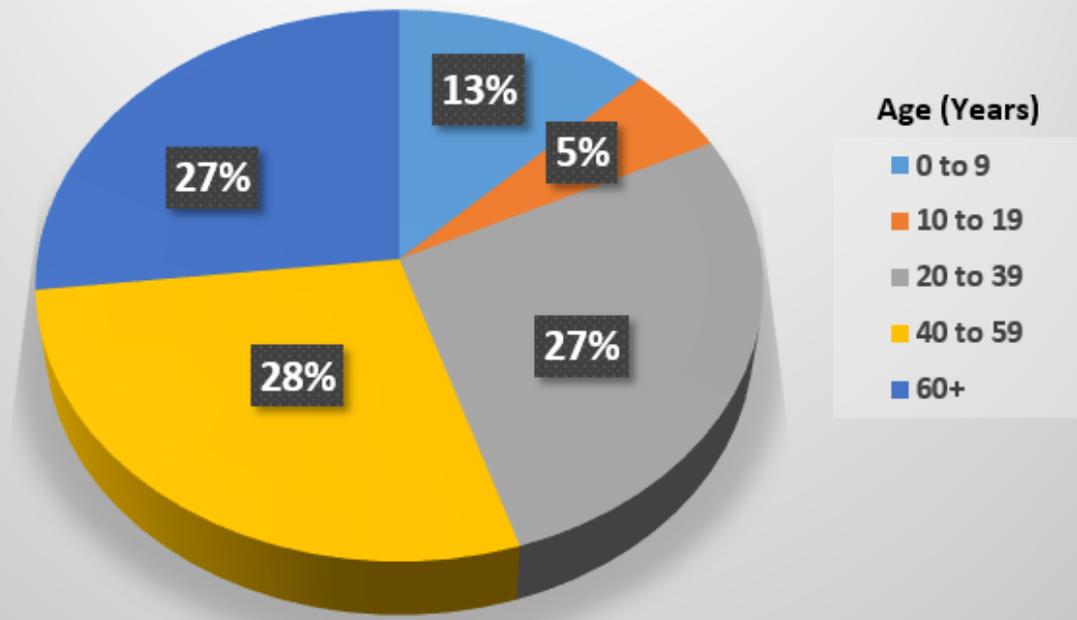


For more information, see recent updates from the [CDC](#) & [OHA](#)

\*As of September 1, 2023

# Campy: Cases by Sex & Age Grouping

Percent of Campylobacteriosis Cases by Age, Central OR (2013-2023\*)



\*As of September 1, 2023

## Ages Impacted by Campy

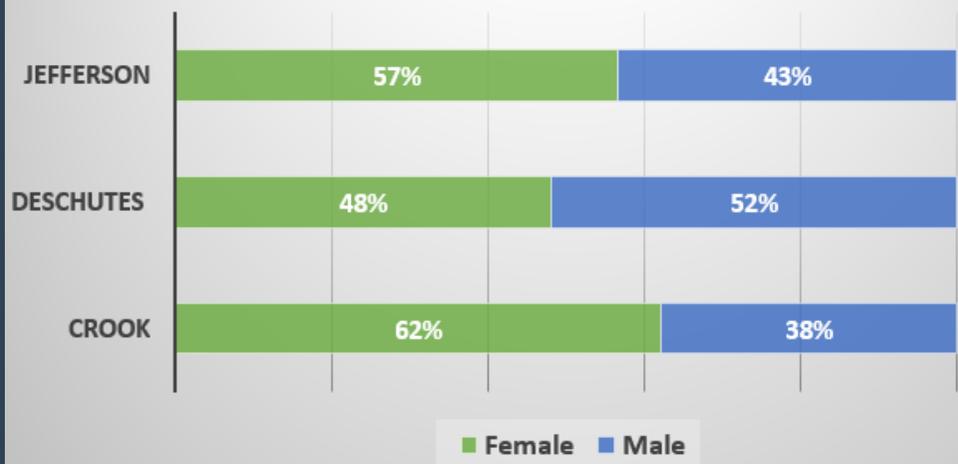
- While anyone can be infected with *Campylobacter*, infection is more common in young children & older adults
- **In Central OR (2013-2023):**
  - Prevalence of infection was evenly distributed (27-28%) among adults in the following 3 categories (20 to 39yr olds; 40 to 59yr olds; & 60+yr olds)
  - **Children:** More cases of campy were reported in **very young children (<10yrs)** (13%) vs. older children (10 to 19yr olds) (5%) [For state trends, see [here](#)]



## Variations in Prevalence by Sex

- While a greater % of females had campy infections in Crook & Jefferson Counties, more males were affected in Deschutes County (2013-2023)
- Worldwide, campy infections are more prevalent in males—which may be due to differing immune responses due to sex hormone levels

Percent of Campylobacteriosis Cases by Sex, Central OR (2013-2023\*)



\*As of September 1st, 2023

# What to know about Campy

## Symptoms



- 2-5 days following exposure, people with *campylobacter* infection will generally have diarrhea (often bloody), fever, & cramps
- Symptoms generally last ~1 week
- Complications following exposure include:
  - irritable bowel syndrome (5-20% exposed to infection)
  - temporary paralysis
  - arthritis



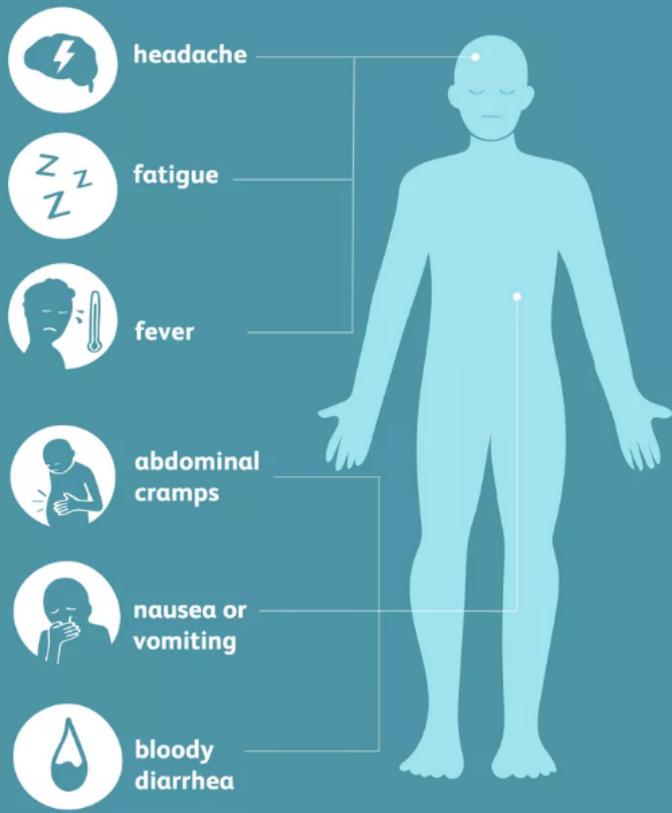
## High Risk Groups

- For individuals with blood disorders (e.g. AIDS) or receiving chemotherapy, campy may spread to the bloodstream (which could be life-threatening)

## Reduce Risk



- Wash hands
- Cook food thoroughly
- More tips [here](#)



\*Image source: <https://www.verywellhealth.com/campylobacter-overview-4586323>

## Sources of Contamination



## Animal Reservoirs



- *Campylobacter* (*C. jejuni* & *C. coli*) colonize the digestive tracts of multiple animal reservoirs (such as birds (wild & domestic), sheep, cattle, pigs) & often these animals show no sign of infection
- Once slaughtered, *Campy* can be carried in intestines, liver, & other edible parts of the animal & propagated into the retail market
- 50-70% of *C. jejuni* cases in humans are caused by poultry (namely **chicken meat**)



## Food & Beverages

- Milk can be contaminated when *Campylobacter* infects cow udders or when milk is contaminated with manure; use pasteurization
- Fruits & veggies can be contaminated via contact with soil or water containing feces from animal sources; always disinfect untreated water to prevent illness



## Oregon Trends & Outbreaks

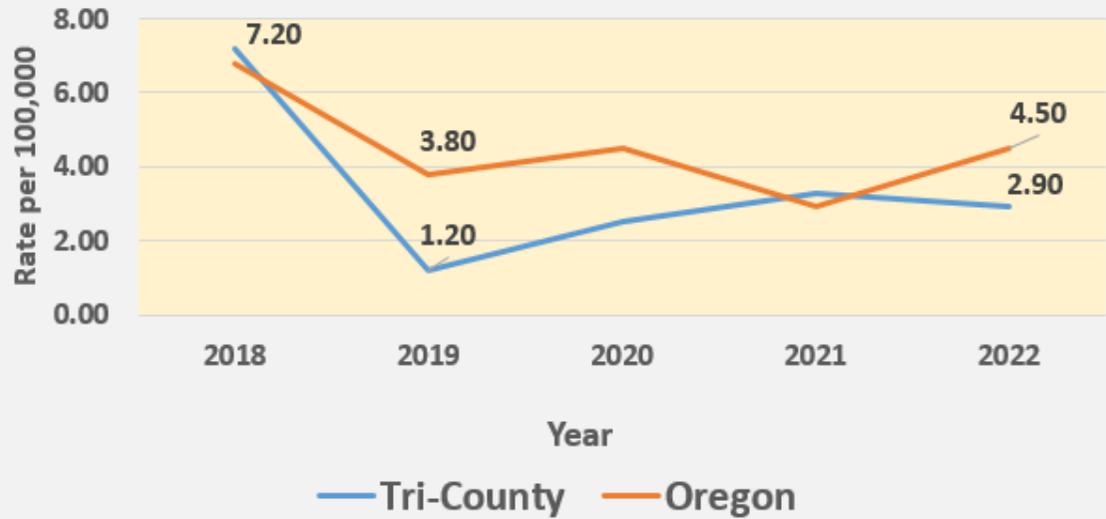
- Campylobacteriosis is the most common bacterial enteric infection reported in Oregon (with overall incidence higher than the US in recent years)
- 15 outbreaks of campylobacteriosis involving OR residents were investigated (2010-2021): 10 foodborne; 1 from animal contact; 1 person to person; 3 where mode of transmission was not determined

★ **OREGON CASE REPORTING;** Health care providers & clinical laboratories are required by law to report cases & suspected cases of campylobacteriosis to local health departments within **one** working day of identification. Cases are subject to restriction on school & day-care attendance, food handling, & patient care for duration of any diarrhea &/or vomiting. Investigative guidelines can be found [here](#).



# Shigellosis in Central OR & Statewide

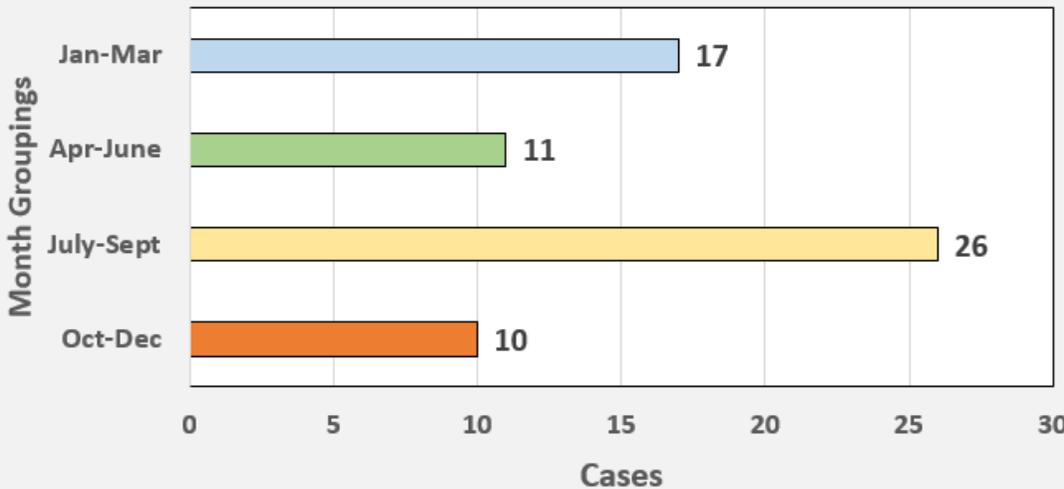
Shigella Rates in Central OR & Statewide, 2018-2022



- Shigellosis (aka *Shigella*) is an intestinal infection caused by a family of gram negative bacteria (image above) called shigella
- In recent years, rates have been variable in OR & Central OR
- From **2019-22**, rates in Central OR increased from ~1-3 cases per 100,000

## Seasonality of Shigellosis

Quarterly Shigella Case Counts, Central OR (2013-2023)\*



- Over the past 10 years, *Shigella* was most common **July-Sept** in Central OR
- While *shigellosis* has known seasonality (with the majority of cases occurring in the summertime), other patterns related to shigellosis include heavy rainfall, flooding, & droughts
- **Shigellosis Outbreak in OR (2015-16):** A *Shigella sonnei* outbreak occurred among homeless persons in OR (July 2015-16); Heavy precipitation likely contributed to transmission, which may have led to:

## Shigellosis by Month in OR (2022-23)

2022      2023



- Increased crowding in shelters & encampments (increasing opportunities for person to person spread)
- Transmission may have occurred through contamination via untreated water

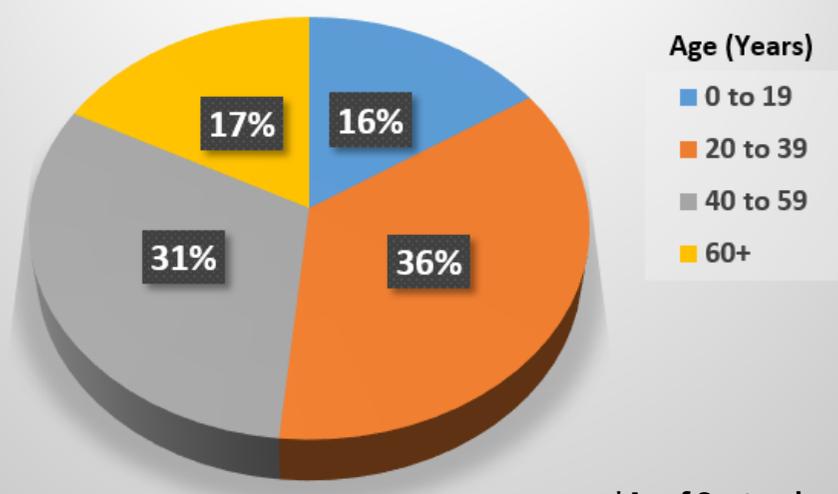
\*As of September 1, 2023

Image above from OHA dashboards found [here](#).

# Shigella: Cases by Age Grouping & Sex



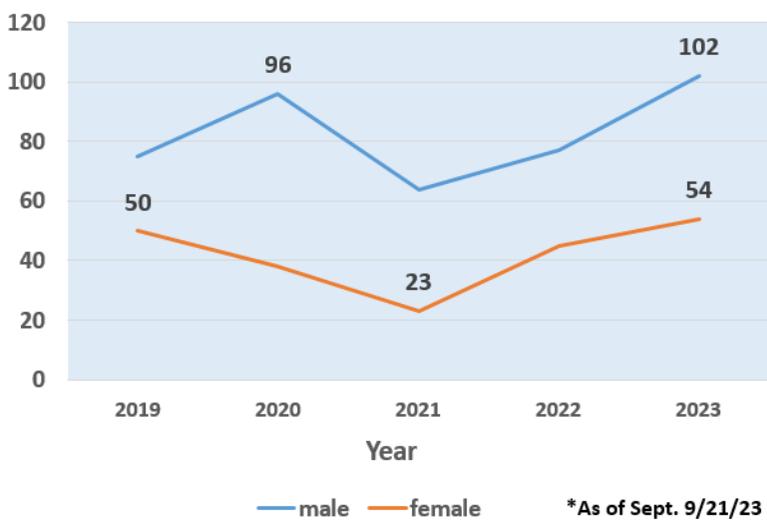
Percent of Shigella Cases by Age, Central OR (2013-2023\*)



\*As of September 1, 2023

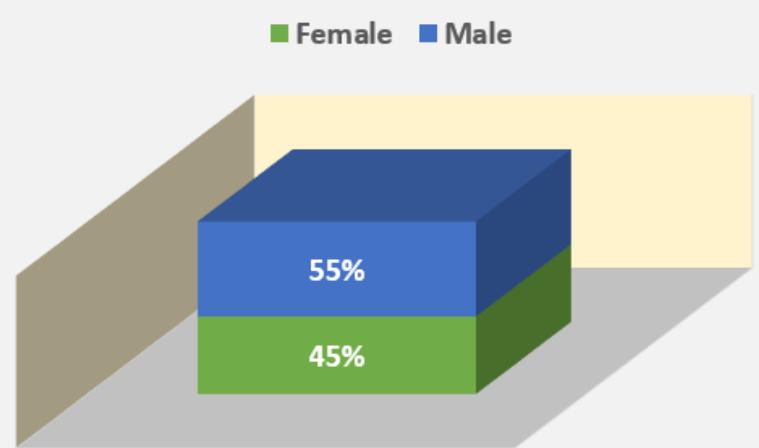
- From 2013-23, Shigellosis was most common in young adults (20-39yr olds: 36%); This is similar to trends in OR where the highest incidence rates in recent years occurred among young adults (30yrs)
- Sex Differences:** In Central OR (2013-23), shigella has been more prevalent in males vs. females (similar to trends in OR statewide)
- From 2021-2023, cases have been steadily increasing statewide for both sexes

Shigellosis Cases by Sex, Oregon (2019-2023\*)



\*As of Sept. 9/21/23

PERCENT OF SHIGELLA CASES BY SEX, CENTRAL OR (2013-2023\*)



## What to know about shigella

### Sources of Contamination

- Shigellosis in OR is generally caused by *S. sonnei* or *S. flexneri*. See OHA Shigellosis dashboards [here](#).
- Humans are the only known reservoir
- Transmission: person to person



### Symptoms

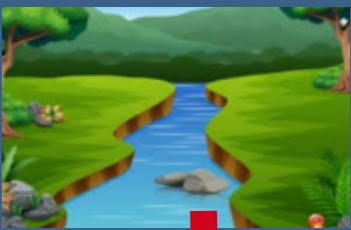


- Generally start 1-2 days post exposure & include:
  - diarrhea (often bloody)
  - fever
  - abdominal pain
  - feeling the need to pass stools (even when bowels are empty)
- NOTE:** While symptoms typically last **5-7 days**, it may be **several months** before bowel habits return to normal. Complications include:
  - reactive arthritis
  - sepsis
  - seizures
  - hemolytic uremic syndrome



### Daycares

- Shigellosis outbreaks in daycare centers are common (due to poor hygienic practices among small children)
- Prevention practices: keeping diaper changing areas disinfected & supervision of handwashing of small children



### Water

- Water can be infected with shigella either from sewage or from a person with shigella swimming in it
- Food can also be infected with shigella if growing in a field containing sewage

### Antibiotic resistance



- High levels of antibiotic resistance to ampicillin and trimethoprim/sulfamethoxazole have been found in OR—thus, testing for antibiotic susceptibility is important for treatment. Read more [here](#).



★ OREGON CASE REPORTING; Health care providers & clinical laboratories are required by law to report cases & suspected cases of shigella to the local health department within one working day of identification or diagnosis.