

# Foodborne Illness

**Amy Harley, MD, MPH**

August 4<sup>th</sup>, 2026

Joint BOH/PHAB meeting

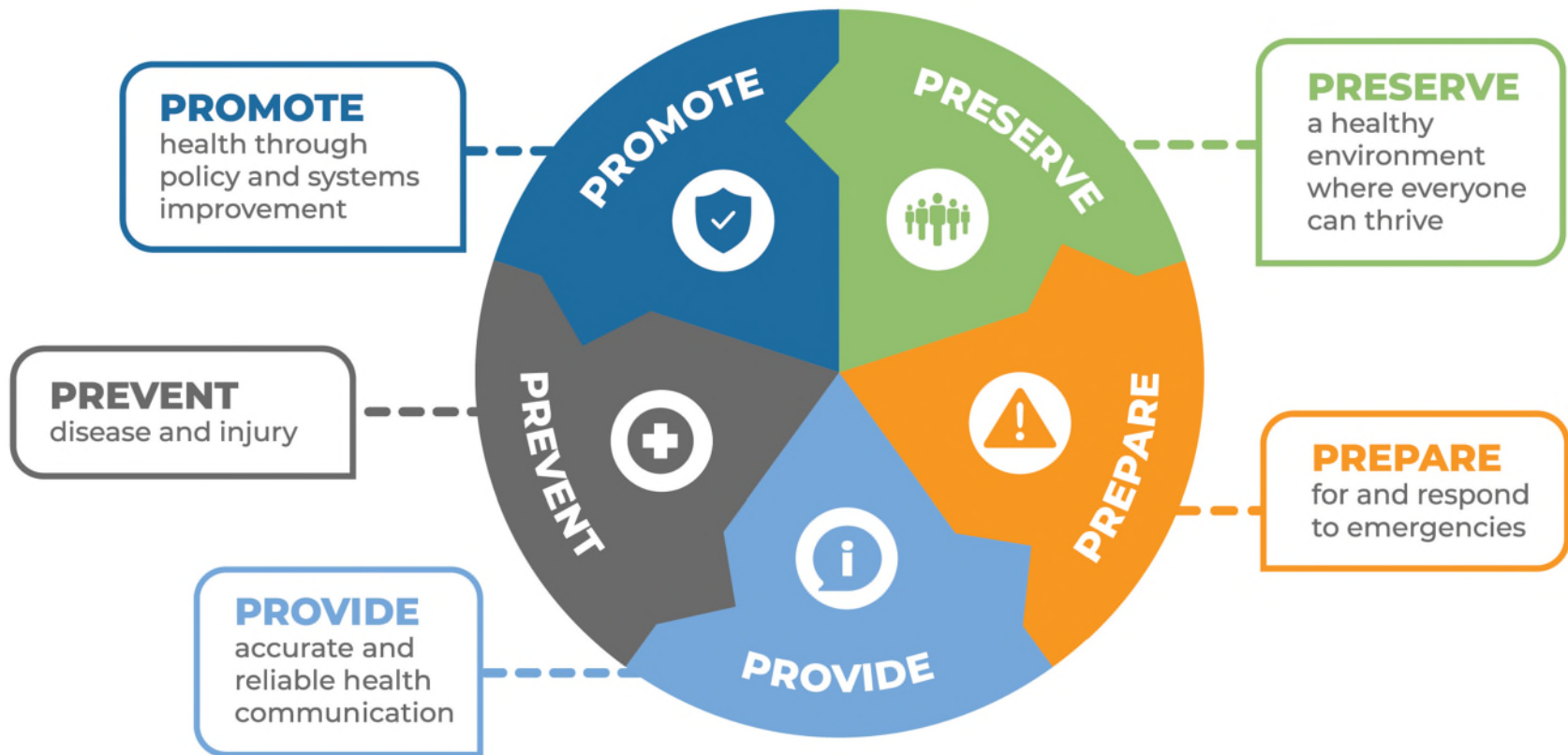


WHATCOM COUNTY  
**HEALTH AND  
COMMUNITY  
SERVICES**



# OUR PURPOSE:

We serve Whatcom County by  
**ADVANCING EQUITY** & **PARTNERING WITH OUR COMMUNITY** to:



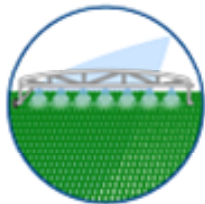
# Environmental Health



# Food Safety Challenges



## Contamination can occur in many places



### Production

If the fields are irrigated with contaminated water, fruits and vegetables can be contaminated before harvest.



### Processing

During the slaughter process, pathogens from an animal's hide or intestines can contaminate the meat.



### Distribution

If refrigerated foods are left on a loading dock for extended periods in warm weather, they could reach temperatures that allow foodborne pathogens to grow.



### Restaurant preparation

Improper handwashing by food workers, particularly any that remain on the job while ill, can contaminate food.



### Home preparation

If a cook uses a cutting board or knife to cut raw chicken and then uses the same item without washing it to slice tomatoes for a salad, the tomatoes can be contaminated by foodborne pathogens from the chicken.

# Foodborne illness

---



## Illness resulting from the ingestion of contaminated food or beverages by:

### Infectious or pathogenic microorganisms

- Bacteria, viruses, or parasites

### Bacterial toxins or chemicals

- Already in the food or produced after ingestion
- Heavy metals or pesticides

# Foodborne Illness

---



## A significant public health problem

Estimated 48 million (1 in 6) Americans sickened by contaminated food or beverages annually

- 128,000 Hospitalizations
- 3,000 Deaths

Due to about 31 major foodborne pathogens

# Top Pathogens U.S.



| Pathogen                                                                                                       | Estimated Illnesses/yr        | Hospitalizations | Deaths     | Notes                             |
|----------------------------------------------------------------------------------------------------------------|-------------------------------|------------------|------------|-----------------------------------|
|  <b>Norovirus</b> ★           | 5.5 million                   | 22,400           | 174        | Most common                       |
|  <b>Campylobacter</b>         | 1.9 million                   | 13,000           | 197        | Leading bacterial cause           |
|  <b>Salmonella</b>            | 1.3 million                   | 12,500           | 238 ★      | Common in outbreaks               |
|  <b>C. perfringens</b>        | 889,000                       | 338              | 41         | Toxin-mediated                    |
|  <b>STEC (<i>E. coli</i>)</b> | 357,000                       | 3,150            | 66         | HUS/Kidney failure                |
|  <b>Listeria</b>              | 1,250                         | 1,070 ★          | 172        | High mortality & hospitalizations |
|  <b>Toxoplasma</b>          | *not notifiable;<br>many mild | 848              | 44         | Zoonotic parasitic disease        |
| <b>Total</b>                                                                                                   | <b>~10 million</b>            | <b>53,300</b>    | <b>931</b> | <b>High burden</b>                |

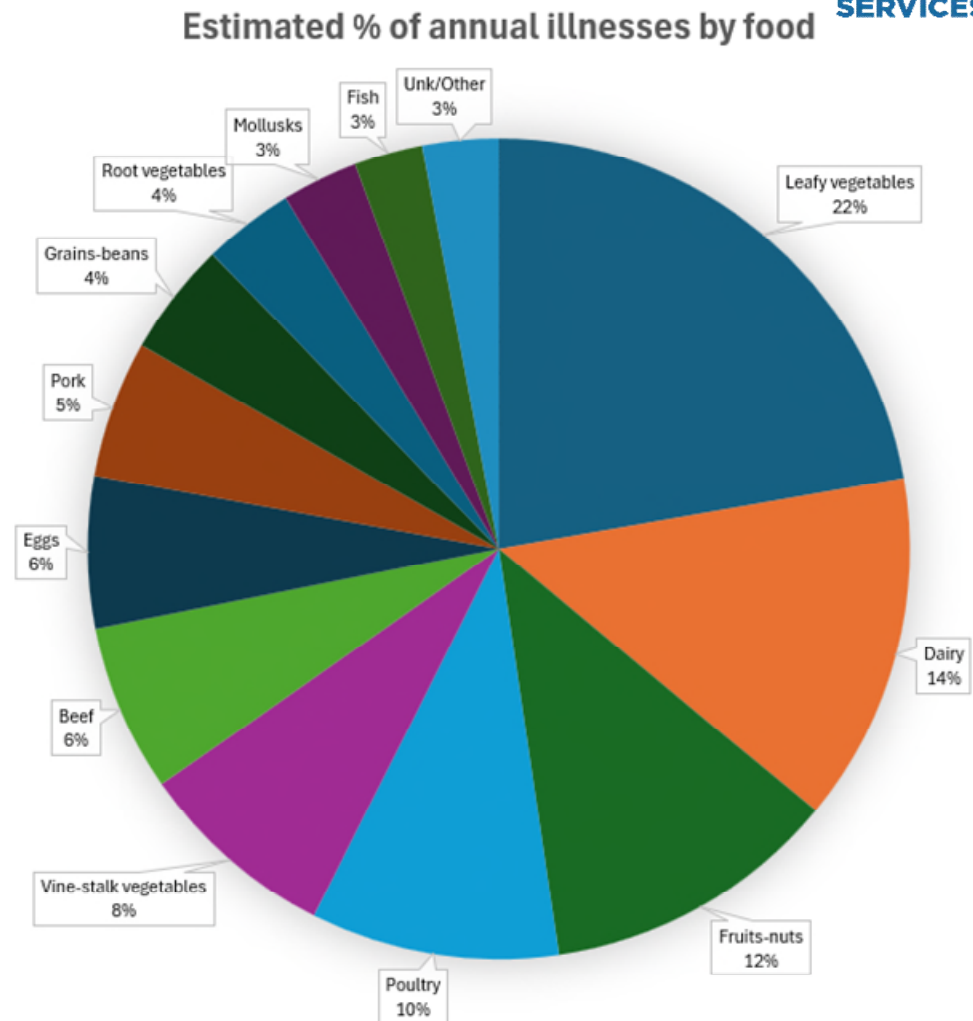
# Food Sources

Raw plant foods account for nearly half of illnesses

- Leafy vegetables
- Norovirus often the culprit

Animal foods cause fewer illnesses but are linked to about one-third of deaths

- Beef, game, pork and poultry\*
- Often linked to Listeria and Salmonella infections





# You Ate Something

## FIVE SIGNS of SEVERE FOOD POISONING

Do you have any of these symptoms? IF SO, SEE A DOCTOR!



Vomiting so often you  
can't keep liquids down



Bloody diarrhea



Fever higher than  
102°F



Dehydration



Diarrhea for more  
than 3 days

# Reporting



## Foodborne Illness Notification System (FINS)

### Food Safety and Foodborne Illness Complaint Form



[Foodborne Illness | Washington State Department of Health](#)

- Where you ate
- What you ate
  - 3-day food diary
- What symptoms you have and when they started
- Other people that got sick
- Other possible exposures
- Other Health and Safety Concerns

### Food Establishment Name

\* must provide value

If related to a group event, like a wedding, list the caterer or name of the event

---

### Street Address or Cross Street

\* must provide value

---

Find the address of the food establishment you are reporting by clicking the link below. A new tab will open. Enter the food establishment name and input all address information (including zip code) back into this report form.

[Find the address on Google Maps here](#)

---

### City

\* must provide value

---

### Zip Code

\* must provide value

If you are reporting an online food product or meal delivery kit, enter your home zip code

---

### What type of food establishment is this?

\* must provide value

- ☐ Restaurant
- ☐ Mobile Food Unit (i.e. Food Truck)
- ☐ Convenience Store
- ☐ Grocery Store
- ☐ Caterer
- ☐ Pop Up or Food Stand
- ☐ Other

**Would you like to provide a 3 day food history?**

☒ Yes ☐ No

\* must provide value

[reset](#)

**What did you eat on \_\_\_\_?**

Please describe (include restaurants, meals at home, group meals like parties, etc.):

[Expand](#)

**What did you eat on \_\_\_\_?**

Please describe (include restaurants, meals at home, group meals like parties, etc.):

[Expand](#)

**What did you eat on \_\_\_\_?**

Please describe (include restaurants, meals at home, group meals like parties, etc.):

[Expand](#)

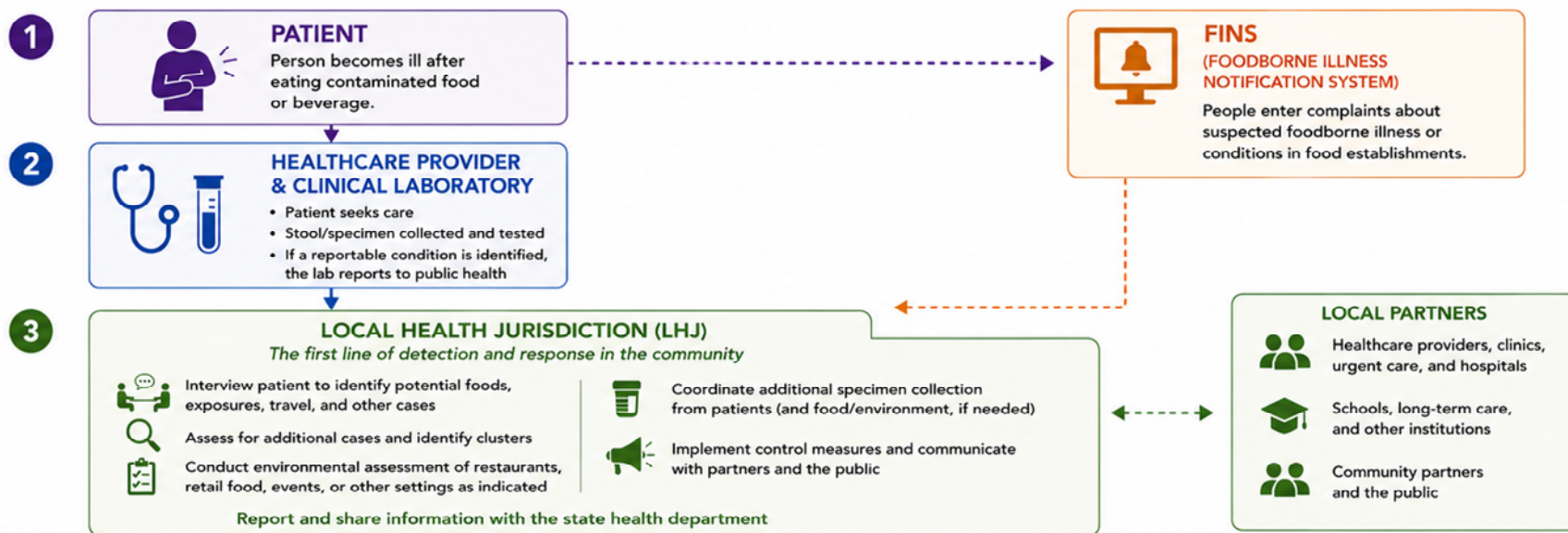
**What did you eat on \_\_\_\_, the same day your symptoms started?**

NOTE: if you started feeling sick before any meals on this day, skip this question.

Please describe (include restaurants, meals at home, group meals like parties, etc.):

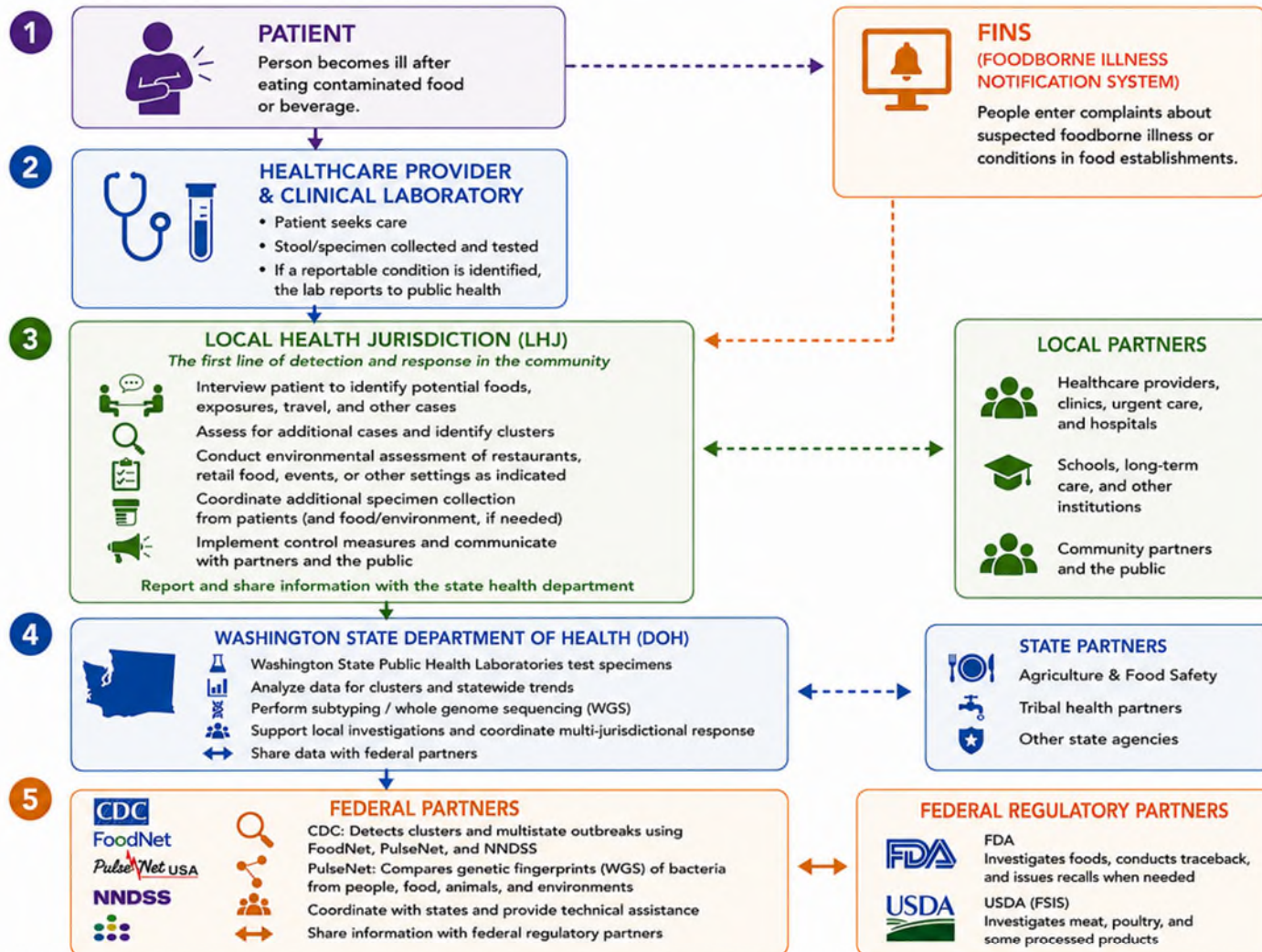
[Expand](#)

# Foodborne Illness Detection





# Outbreak Detection



# Current Outbreak

---



## U.S. is having the largest Cyclospora outbreak on record

Detected when public health surveillance noted an unusual number of cases

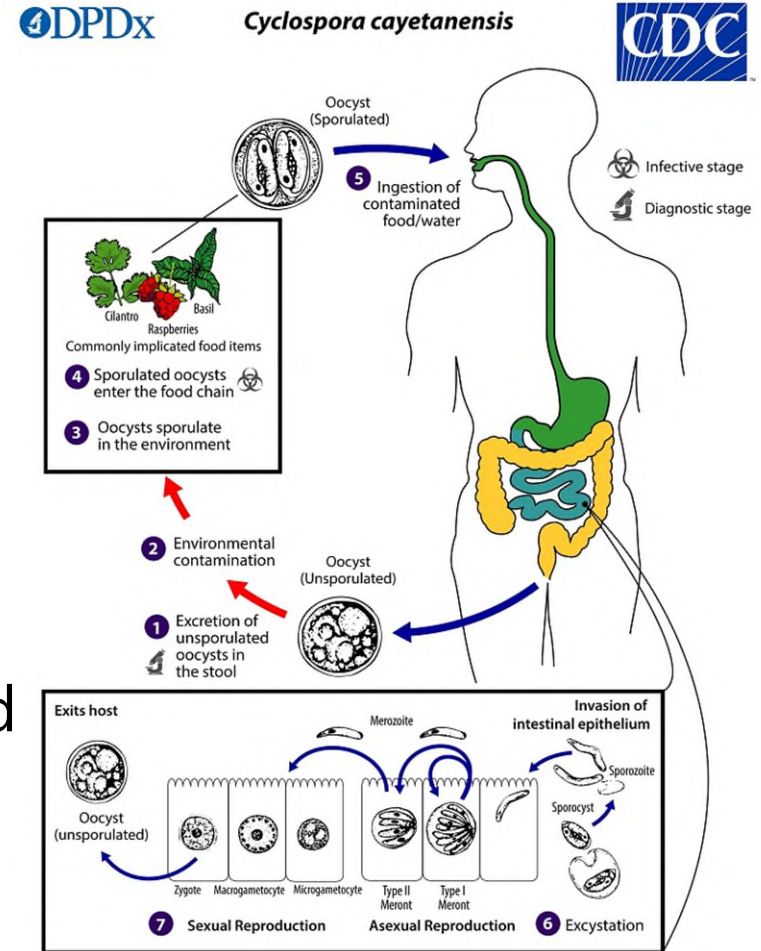
- Patient interviews, surveillance data, lab-testing, traceback

Now > 11,000 cases in 46 states, 3x the typical number

- 27 states named in the iceberg lettuce recall

# Cyclospora

- Human-only parasite
- Spread through food or water contaminated with human feces
  - Often linked to fresh produce
- Incubation period of ~1 week
- Causes prolonged, profuse water diarrhea “explosive”
  - Often missed on routine stool tests
- No direct person to person spread
- Treated with TMP-SMX antibiotic



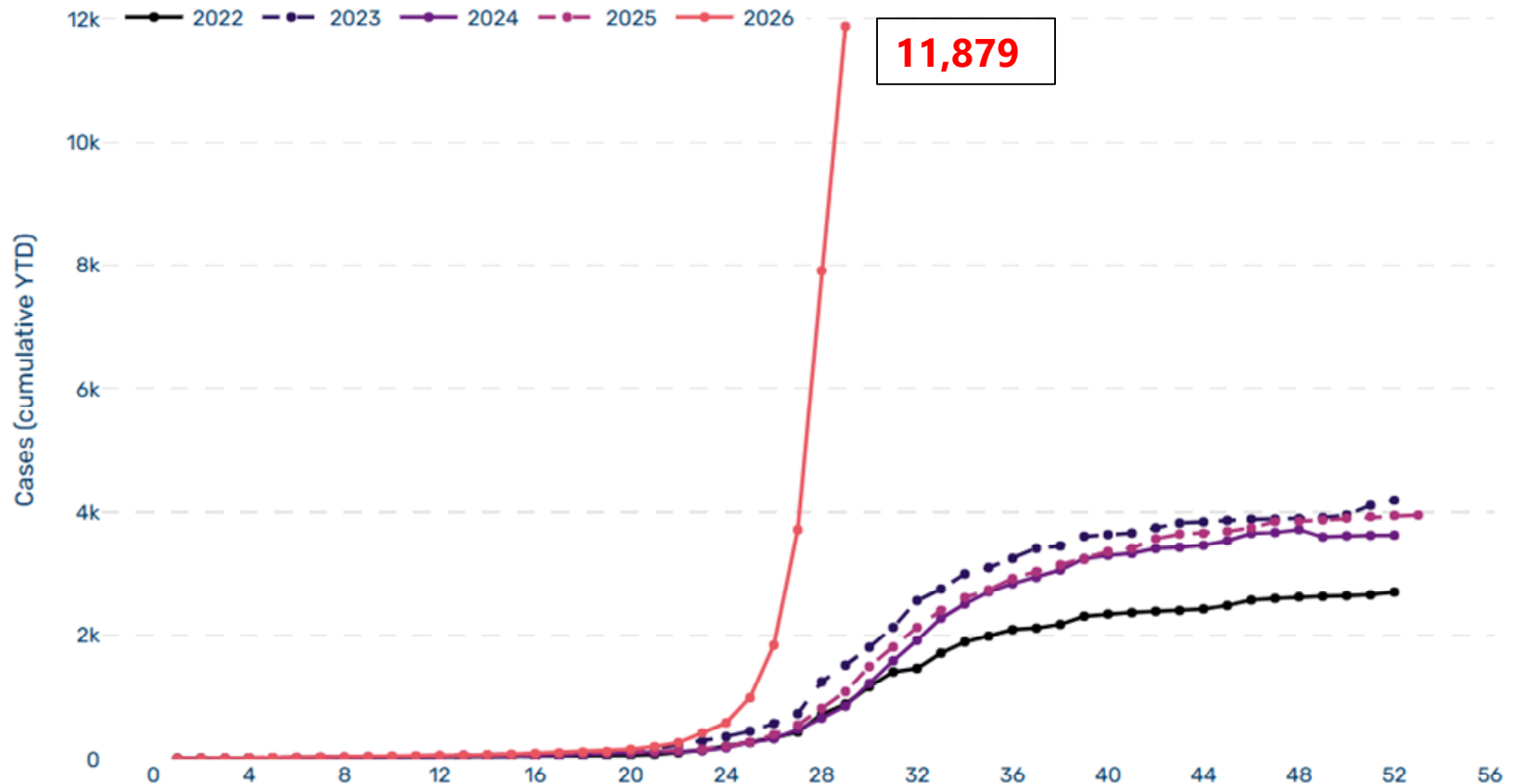


# Largest Recorded Outbreak



## Cumulative weekly cyclosporiasis cases

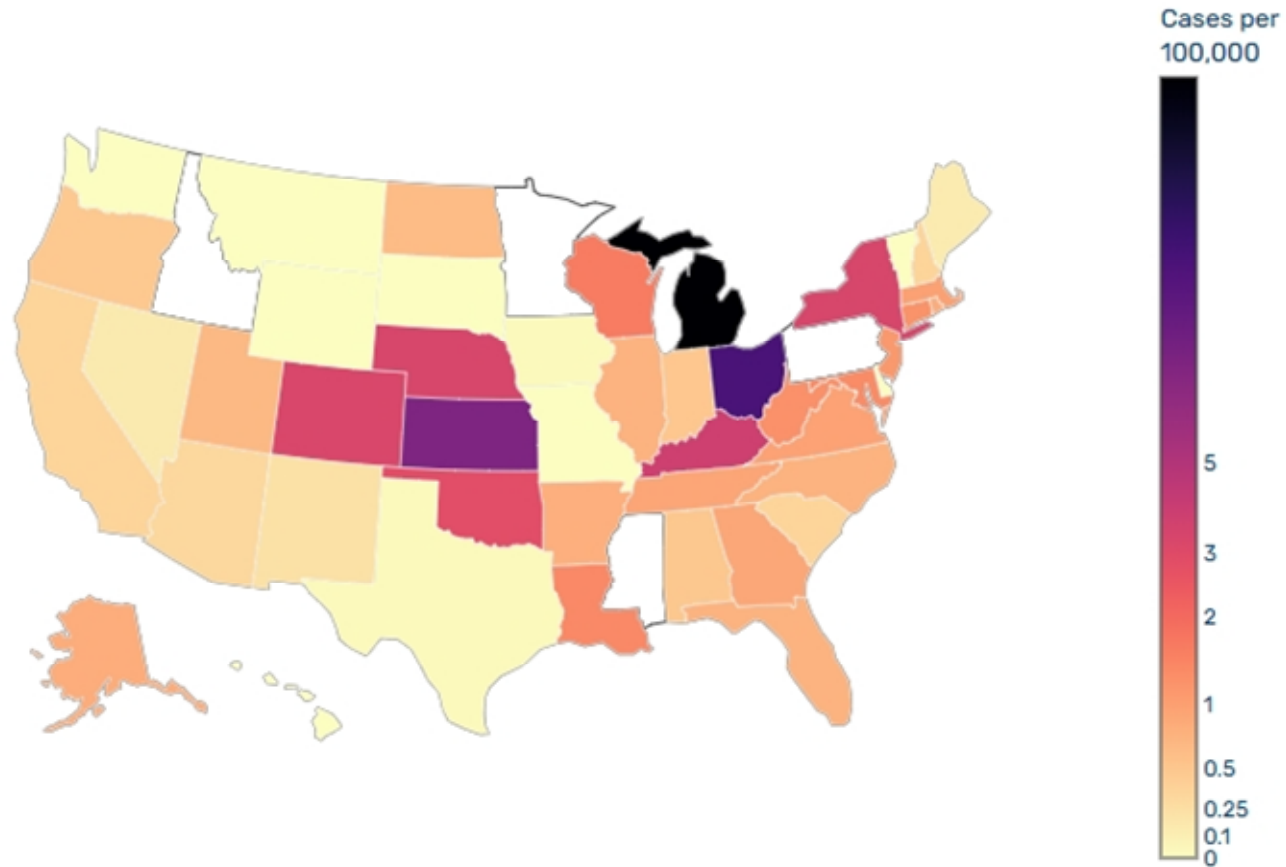
United States: cumulative NNDSS cases by calendar week, one line per year. Data from 2026 are preliminary.



# Many States Impacted

## Cyclosporiasis cases by state (NNDSS)

Cumulative cases per 100,000 • 2026



# Contributing Factors

---



- Fresh produce contaminated with human fecal matter
  - Contaminated water, inadequate hygiene practices
- Biology of Cyclospora
  - Resistant and difficult to detect
- Delayed recognition
  - One week incubation period
  - Laboratory confirmation and traceback lag behind exposure
- Global produce supply chains
  - Widespread distribution complicates traceback
- Reduced capacity for food safety and public health
  - Fewer resources for inspection, surveillance, laboratory support and traceback investigations

# 30 year old quote

---



"This outbreak is a reminder that our supply of fresh produce has become increasingly international and underscores the need to identify and investigate foodborne outbreaks promptly, to consider that a local cluster of cases could be part of a widespread outbreak, and to pursue investigations to the source of the implicated [food]. For imported [foods], international collaboration is critical to the success of the investigation and to the identification of appropriate measures of prevention and control."

The logo features a circular emblem with a light blue border. Inside the circle are five stylized human figures of varying heights and colors (light blue, light green, light blue, light orange, and light blue). Below the figures are three light blue trapezoidal shapes. The text "Thank You" is centered over the emblem in a bold, dark blue font.

# Thank You

WHATCOM COUNTY  
HEALTH AND  
COMMUNITY  
SERVICES