H. 401 – Request for Description of Foodborne Illness Reporting and Data
Vermont Department of Health -- April 30, 2025

Each year in the United States, approximately 48 million people get sick from a foodborne illness, 128,000 are hospitalized, and 3,000 die. There are estimated to be many more cases of illness from people who do not seek out a health care provider. For example, for every reported salmonellosis case, CDC estimates an additional 29.3 cases are not reported.

The Vermont Department of Health has surveillance systems to collect data on reportable foodborne illnesses in the state. These systems capture cases of illness where individuals have sought medical care, submitted a clinical specimen for testing, and a pathogen is detected.

Passive surveillance data represent only the tip of the iceberg. For a foodborne illness to be included in the passive surveillance system, the following steps must occur: a person becomes ill with a diarrheal disease, they go to a health care provider, the provider orders a clinical test (like a bacterial culture or a polymerase chain reaction [PCR] panel that tests for multiple gastrointestinal pathogens), the person submits the specimen (usually stool, but could be urine or blood), a pathogen is detected, and the result is submitted to the Health department.

For reportable foodborne conditions in Vermont, hospital and clinical laboratories must send either the original clinical specimen or an isolate cultured from the specimen to the Vermont Department of Health Laboratory. The Laboratory then sequences the isolate and reports data to the CDC. This passive surveillance system is how the number of cases of foodborne illness is counted. If any step does not occur, the illness is not captured in our case counts, which can lead to underreporting.

In the U.S., CDC estimates that the hospitalization rate for illness from *Listeria monocytogenes* is 94% with an estimated death rate of 15.9% (266 annual deaths). Illness from *Clostridium botulinum* (Botulism) has a hospitalization rate of 82% and an estimated death rate of 17% (9 annual deaths). More severe illness and outcomes can affect children under five years old, adults aged 65 and older, pregnant people, and people with weakened immune systems.

In Vermont, the preliminary data of reportable foodborne and intestinal illnesses for 2024 included 474 cases across the state:

Foodborne and Enteric Conditions	Number of Cases in 2024
Campylobacteriosis	202
Cryptosporidiosis	37
Cyclosporiasis	3
Listeriosis	4
Salmonellosis (excluding *S. typhi/paratyphi*)	110
Shiga toxin-producing *Escherichia coli* (STEC)	65
Shigellosis	34
Vibriosis (non-cholera *Vibrio* species infections)	4
Yersiniosis (non-pestis)	15
Total	474

During January 2015 to April 2025, 38 listeriosis cases were reported in Vermont, and four people died. During this same time period in Vermont, there were 202 reported hospitalizations of people with salmonellosis, 64 hospitalizations of people with STEC, and 241 hospitalizations of people with campylobacteriosis. Six people with salmonellosis or campylobacteriosis infections died.

In Vermont, cases can appear "sporadic." Everyone with reportable foodborne illnesses is interviewed to identify possible exposure sources. People often report eating food from farmers' markets or from neighbors, friends, and colleagues, but unless multiple cases are reported and all mention a similar exposure, it's difficult to pinpoint the cause for individual infections.

Outbreaks are identified when multiple cases match by whole genome sequencing performed in the Health Department Laboratory or when multiple individuals report overlapping exposures during case interviews. Outbreaks indicate a common exposure source, which prompts further analysis of exposure data and possible environmental sample collection to identify the source and provide tailored recommendations to prevent further transmission.

The Health Department investigates all reportable foodborne cases and clusters of illness. This has included recent outbreaks associated with unregulated and unlicensed operators and events, such as:

- 1 salmonella outbreak (2 confirmed cases, 14 suspected) linked to a community event.
- 1 salmonella outbreak (2 confirmed cases, 1 suspected) linked to a homemade dinner.
- 1 campylobacter outbreak (10 cases) linked to an agrotourism-destination served meal.
- 1 cyclospora outbreak (4 confirmed, 5 probable case) linked to a community event.

Regional outbreak examples also include three botulism cases in NY that shared a homemade potato salad containing home-canned peas. The person who prepared the home-canned peas was a novice home canner. They used a peach preserves recipe with a boiling water technique, replacing the peaches with frozen vegetables. They were unaware that low-acid foods (e.g., vegetables) must be canned in a pressure canner rather than a boiling water canner to eliminate *C. botulinum* spores. After the jars cooled, the person correctly checked for jar seal. One of the jars of peas was not sealed, so they covered and refrigerated it, and the family consumed the peas in the potato salad. Two family members developed respiratory failure, requiring intubation and mechanical ventilation in the emergency department, and the third was also intubated. Home-canned food, even when made with commercially processed ingredients, can lead to morbidity or mortality if they are canned incorrectly.

In summary, there is foodborne illness in Vermont and situations are routinely investigated. Foodborne illness is widely underreported, and we know the actual number of cases are higher than what is captured in the reportable disease system. While many foodborne illnesses are mild, some individuals can become very sick or die from an infection. Foodborne illness is preventable, and the goal is to prevent food safety issues from happening in the first place.