In 2019, Rhode Island reported 10 foodborne illness outbreaks to NEARS. This summary provides information on characteristics of those outbreaks and the establishments where the outbreaks occurred.

### Outbreak Characteristics

#### Foodborne Illness Outbreaks (N = 10)*

<table>
<thead>
<tr>
<th>Confirmed agent</th>
<th>Suspected / Unidentified agent</th>
</tr>
</thead>
<tbody>
<tr>
<td>50%</td>
<td>50%</td>
</tr>
</tbody>
</table>

#### Outbreak Response

Average number of days between the date the outbreak establishment was identified for an environmental assessment and the date of:

- 1st contact with establishment = 0 days (min = 0, median = 0, max = 0)
- Establishment observation = 0 days (min = 0, median = 0, max = 1)
- Manager interview = 5 days (min = 0, median = 1.5, max = 36)

Average number of visits to the outbreak establishment needed to complete an environmental assessment = 2 visits (min = 1, median = 2, max = 6).

#### Characteristics of the Outbreak Investigation (N = 10)

<table>
<thead>
<tr>
<th>Description</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental assessment conducted</td>
<td>100%</td>
</tr>
<tr>
<td>Environmental samples collected</td>
<td>50%</td>
</tr>
<tr>
<td>Primary agent identified</td>
<td>100%</td>
</tr>
<tr>
<td>Suspected or confirmed food identified</td>
<td>90%</td>
</tr>
<tr>
<td>Contributing factor identified</td>
<td>80%</td>
</tr>
<tr>
<td>Outbreak reported to NORS</td>
<td>80%</td>
</tr>
</tbody>
</table>

#### Outbreak Primary Agents (N = 10)

- Norovirus: 30%
- Salmonella: 10%
- Vibrio parahaemolyticus: 10%
- Clostridium perfringens: 10%
- Other: 40%

#### Most Common Confirmed/Suspected Food Vehicles (N = 9)**

- Multi-ingredient: 22% (11% confirmed, 11% suspected)
- Mollusk: 11%
- Poultry: 11%
- Pork: 11%
- Leafy greens: 11%
- Grains/Beans: 11%
- Fish: 11%

#### Identified Contributing Factors by Category (N = 8)**

- Contamination: 88%
- Proliferation: 25%
- Survival: 25%

#### Most Common Outbreak Contributing Factors (N = 8)**

- C6: Contaminated raw product—food was intended to be consumed after a kill step
- C7: Contaminated raw product—food was intended to be consumed raw or undercooked
- P4: Improper cold holding due to malfunctioning refrigeration equipment
- C10: Bare-hand contact by an ill food worker
- P8: Improper/slow cooling
- S1: Insufficient time and/or temperature during cooking

Note: Percentages may not add up to 100% due to rounding.

* Denotes data that can be used toward meeting Standard 5 in FDA’s Voluntary National Retail Food Regulatory Program Standards.

* Each outbreak may have more than 1 identified contributing factor and food vehicle, so percentages may equal more than 100%.
Outbreak Establishment Characteristics

Establishment Description
86% (6) of the establishments were independently owned; the remaining 14% (1) were chains.
70% (7) of the establishments were restaurants; the remaining 30% (3) were other establishment types such as correctional facilities and grocery stores.

Food Preparation Processes
In outbreaks in which there was a suspected or confirmed food vehicle, the food preparation processes used for those food vehicles were best described as Complex (22%, 2), Cook Serve (0%, 0), and Prep Serve (78%, 7).

Hand Hygiene Characteristics
Glove Use
100% (7) of the establishments had a policy concerning the use of disposable gloves.
43% (3) of the establishments had food workers observed handling ready-to-eat foods with bare hands.

Hand Sinks for Workers
100% (7) of the establishments had hand sinks in the employee restrooms.
- In 86% (6) of these establishments, all employee restroom hand sinks were appropriately equipped (warm water, hand soap, and paper or cloth towels).
100% (7) of the establishments had hand sinks in the employee work areas.
- In 71% (5) of these establishments, all employee work area hand sinks were appropriately equipped (warm water, hand soap, and paper or cloth towels).

Ill Worker Policies
43% (3) of the establishments had a policy to restrict or exclude ill workers.
29% (2) of the establishments had paid sick leave for their workers.

Kitchen Manager Certification
43% (3) of the establishments required kitchen managers to be food safety certified.
86% (6) of the establishments had kitchen managers that were food safety certified.

Note: Some outbreaks may involve more than one establishment.
For calculations related to establishments, the denominator (N) is the number of establishments.
Percentages in the pie charts may not add up to 100% due to rounding.

For more information on CDC’s National Environmental Assessment Reporting System (NEARS), visit www.cdc.gov/nceh/ehs/nears/