In 2016, 5 foodborne illness outbreaks were reported to NEARS by Rhode Island. This summary provides information on characteristics of those outbreaks and the establishments where the outbreaks occurred.

### Outbreak Characteristics

#### Foodborne Illness Outbreaks (N = 5)*

- **Confirmed agent** 40%
- **Suspected agent** 60%

#### Outbreak Response

The average number of days between the date the outbreak establishment was identified for an environmental assessment and the date of the following activities with the outbreak establishment:

- 1st contact = 0 days
  (min = 0, median = 0, max = 1)
- Establishment observation = 2 days
  (min = 0, median = 1, max = 5)
- Manager interview = 2 days
  (min = 0, median = 2, max = 5)

The average number of visits to the outbreak establishment needed to complete an environmental assessment = 2 visits (min = 1, median = 2, max = 3).

#### Characteristics of the Outbreak Investigations (N = 5)

- An environmental assessment was conducted 100%
- Environmental samples were collected 40%
- A primary agent was identified 80%
- A suspected or confirmed food was identified 60%
- A contributing factor was identified 80%
- The outbreak was reported to NORS 80%

#### Outbreak Primary Agents (N = 4)

- **Bacillus cereus** (25%)
- **Norovirus** (50%)
- **Salmonella** (25%)

#### Most Common Confirmed/Suspected Food Vehicles (N = 3)**

- Grains/Beans 33%
- Multi-ingredient 33%

#### Identified Contributing Factors by Category (N = 4)**

- **Contamination** 75%
- **Proliferation** 25%
- **Survival** 0%

#### Most Common Outbreak Contributing Factors (N = 4)**

- C7: Contaminated raw product—food intended to be eaten raw or undercooked 25%
- C10: Bare-hand contact by an ill food worker 25%
- C11: Glove-hand contact by an ill food worker 25%
- PS: Improper cold holding due to an improper procedure or protocol 25%

* Each outbreak may have more than one identified contributing factor, so percentages may equal more than 100%.

* Each outbreak may have more than one identified food vehicle, so percentages may equal more than 100%.

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

Establishment Description
100% (4) of the establishments were independently owned.
75% (6) of the outbreaks occurred in restaurants; the remaining 25% (2) occurred in other establishment types such as a bakery and a wholesale location.

<table>
<thead>
<tr>
<th>Establishment Ownership (N = 4)</th>
<th>Establishment Type (N = 8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100% Independent</td>
<td>25% Restaurant 75% Other</td>
</tr>
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</table>

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 Cook Serve (100%, 3) and Prep Serve (33%, 1).

<table>
<thead>
<tr>
<th>Food Preparation Processes (N = 3)**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cook Serve 67%</td>
</tr>
<tr>
<td>Prep Serve 33%</td>
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</table>

Hand Hygiene Characteristics
Glove Use
75% (3) of the establishments had a policy concerning the use of disposable gloves.
25% (1) of the establishments had food workers observed handling ready-to-eat foods with bare hands.

Hand Sinks
100% (4) of the establishments had hand sinks in the employee restrooms.
• In 100% (4) of these establishments, all employee restroom hand sinks were appropriately equipped (warm water, hand soap, and paper or cloth towels).
100% (4) of the establishments had hand sinks in the employee work areas.
• In 100% (4) of these establishments, all employee work area hand sinks were appropriately equipped (warm water, hand soap, and paper or cloth towels).

Food Workers Handle Ready-To-Eat Food with Bare Hands

<table>
<thead>
<tr>
<th>Food Workers Handle Ready-To-Eat Food with Bare Hands (N = 4)</th>
</tr>
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<tbody>
<tr>
<td>25% Yes 75% No</td>
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Ill Worker Policies
75% (3) of the establishments had a policy to restrict or exclude ill workers.
50% (2) of the establishments had paid sick leave for their workers.

<table>
<thead>
<tr>
<th>The Establishment Has a Policy to Restrict or Exclude Ill Workers (N = 4)</th>
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<tbody>
<tr>
<td>25% Yes 75% Unsure</td>
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<table>
<thead>
<tr>
<th>The Establishment Has Paid Sick Leave for Ill Workers (N = 4)</th>
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</thead>
<tbody>
<tr>
<td>50% Yes 50% No</td>
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</table>

Kitchen Manager Certification
25% (1) of the establishments require kitchen managers to be food safety certified.
100% (4) of the establishments had kitchen managers that were food safety certified.

<table>
<thead>
<tr>
<th>Kitchen Managers Are Required to Be Certified in Food Safety (N = 4)</th>
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<tbody>
<tr>
<td>25% Yes 25% No</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Kitchen Managers Are Certified in Food Safety (N = 4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100% Yes</td>
</tr>
</tbody>
</table>

* Each outbreak may have more than 1 identified food vehicle and food preparation process, so percentages may equal more than 100%.

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