In 2014, Rhode Island reported 10 outbreaks to NEARS. This report provides information on characteristics of:
- those outbreaks (pages 1 and 3) and
- outbreak establishments (pages 2 and 3).

### Outbreak Characteristics

<table>
<thead>
<tr>
<th>General</th>
</tr>
</thead>
<tbody>
<tr>
<td>100% were also reported to the National Outbreak Reporting System (NORS)</td>
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<tr>
<td>100% included an environmental assessment</td>
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<tr>
<td>80% (8) occurred in a single setting and 20% (2) occurred in multiple settings</td>
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<tr>
<td>Average time between the date the outbreak establishment was identified for an environmental assessment and specific actions</td>
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<tr>
<td>Date of first contact = 1 day (min = same day, max = 1 day)</td>
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<tr>
<td>Date of establishment observation = 29.88 days (min = same day, max = 103 days)</td>
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<tr>
<td>Date of manager interview = 27.56 days (min = 1 day, max = 103 days)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Primary agents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identified in 50% (5) of outbreaks</td>
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<tr>
<td>20% (1) identified norovirus as the primary agent</td>
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<tr>
<td>20% (1) identified <em>Salmonella</em> as the primary agent</td>
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<tr>
<td>20% (1) identified <em>Listeria</em> as the primary agent</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Contributing factors</th>
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</thead>
<tbody>
<tr>
<td>Identified in 40% (4) of outbreaks</td>
</tr>
<tr>
<td>33% (3) contamination contributing factors</td>
</tr>
<tr>
<td>45% (4) proliferation contributing factors</td>
</tr>
<tr>
<td>22% (2) survival contributing factors</td>
</tr>
<tr>
<td>Most-commonly reported contributing factors</td>
</tr>
<tr>
<td>C7: Contaminated raw product—food was intended to be consumed raw or undercooked (22%, 2)</td>
</tr>
<tr>
<td>P4: Improper cold holding due to malfunctioning refrigeration equipment (22%, 2)</td>
</tr>
</tbody>
</table>
### Outbreak Establishment Characteristics

#### General
- 92% (12 of 13) were restaurants
- 67% (6 of 9) were independently owned and 33% (3) were chains
- 23% (3 of 13) of the menu types were best described as American, followed by Japanese (15%, 2), and other types such as Thai, Italian, Asian, South American, or Vietnamese (62%, 8)
- Establishment types were described as
  - Cook serve (8%, 1 of 13); at least one food item is prepared for same day service and involves a kill step
  - Complex (92%, 12); at least one food item requires a kill step and holding beyond same-day service or a kill step and some combination of holding, cooling, reheating, and freezing
- 100% (13) had critical violations noted during their last routine inspection

#### Hand hygiene
- 88% (7 of 8) had hand sinks in the employee restrooms
  - In 86% (6), the employee restroom hand sinks were appropriately equipped (warm water, hand soap, and drying paper or cloth towels)
- 100% (8) had hand sinks in the work areas
  - In 63% (5), the work area hand sinks were appropriately equipped
- 100% (9) had a policy concerning the use of disposable gloves
  - In 44% (4), the policy concerned the use of gloves at all times when in the kitchen
  - In 56% (5), the policy specified the use of gloves when handling ready-to-eat foods
- 25% (2 of 8) had food workers who were observed handling ready-to-eat foods with bare hands

#### Ill worker
- 89% (8 of 9) had a policy to restrict ill workers from working while ill
- 67% (6) had a policy requiring food workers to tell their manager when they are ill
  - In 83% (5), the policy required ill food workers to report specific symptoms to their manager
  - In 17% (1), the policy did not require ill food workers to report specific symptoms to their manager

#### Kitchen manager certification
- 89% (8 of 9) required kitchen managers to have food safety certification
- 100% had kitchen managers certified in food safety
Outbreak Characteristics

Outbreak reported to NORS 100% 100%
Investigation included an environmental assessment 50% 40%
Identified a primary agent Listeria 20%
Identified a contributing factor Salmonella 20%

Outbreak primary agents

Listeria 20%
Salmonella 20%
Norovirus 20%
Toxic agent 20%
Other agent 20%

Outbreak contributing factors

Contamination factors (n = 3)
100%

Proliferation factors (n = 4)
100%

Survival factors (n = 2)
100%

Most commonly reported contributing factors

C7: Contaminated raw product 22%
P4: Improper cold holding due to malfunctioning refrigeration equipment 22%

Outbreak Establishment Characteristics

General characteristics

Establishment Facility Type
Restaurant 8%
Other 92%

Establishment Ownership
Chain 33%
Independent 67%

Hand hygiene characteristics

Does the establishment have a disposable glove use policy?
Yes 100%
No 0%

Do food workers handle ready-to-eat foods with bare-hands?
Yes 25%
No 75%

Ill worker characteristics

Does the establishment have a policy that requires food workers to tell a manager when they are ill?
Yes 33%
No 67%

Does this policy require ill workers to tell managers what their symptoms are?
Yes 17%
No 83%

Does the establishment require kitchen managers to be certified in food safety?
Yes 11%
No 89%

Are the kitchen managers certified in food safety?
Yes 100%
No 0%