What does research tell us about norovirus prevention?

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Contamination by suspected ill workers is a major contributor to foodborne norovirus outbreaks
Key to norovirus prevention: keep ill workers from working

Food workers should stay home from work when sick with vomiting or diarrhea

1 in 5 food workers say they have worked with vomiting or diarrhea
Key to norovirus prevention: good hand hygiene

Food workers should wash their hands properly

Food workers practice proper handwashing 1 in 4 times that they should

Food workers should avoid touching ready-to-eat foods with their bare hands

Workers had bare hand contact with ready-to-eat food in 1 in 3 restaurants

Food workers practice proper handwashing 1 in 4 times that they should
Key to norovirus prevention: cleaning and sanitizing

Food contact surfaces should be properly cleaned and sanitized

Contaminated equipment was observed in 2 out of 3 restaurants
How to improve practices related to norovirus prevention?
FOOD SAFETY MANAGEMENT SYSTEMS
# Food safety management system (FSMS)

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<thead>
<tr>
<th>Procedures</th>
<th>A set of actions adopted by management minimizes food safety risks</th>
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<tbody>
<tr>
<td>Training</td>
<td>Teaching employees food safety procedures</td>
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<tr>
<td>Monitoring</td>
<td>Routine measurements to determine if food safety procedures are being followed</td>
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Food safety management system ratings and out-of-compliance food safety practices

Fast food restaurants

- No FSMS: 4.5
- Strong FSMS: 1.7

Full service restaurants

- No FSMS: 5.8
- Strong FSMS: 2.1
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<th>Links between procedures and food safety</th>
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<tr>
<th>Written slicer cleaning policy</th>
<th>Slicers cleaned more frequently</th>
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<tbody>
<tr>
<td>Staffing plans for absent workers</td>
<td>Workers less likely to work while ill</td>
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<tr>
<td>Policy requiring workers to tell managers when they are ill</td>
<td>Smaller outbreaks</td>
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Links between procedures and average norovirus outbreak size

- Restaurant has no cleaning policy: 15.2
- Restaurant has verbal cleaning policy: 13.0
- Restaurant has written cleaning policy: 10.1
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<th>Certified kitchen manager</th>
<th>Fewer critical violations on inspections</th>
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<tbody>
<tr>
<td>Food worker food safety training</td>
<td>More likely to have correct sanitizer solution concentration</td>
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<tr>
<td>Food worker food safety training</td>
<td>Workers more likely to wash hands when needed</td>
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<td>Food worker food safety training</td>
<td>Smaller outbreaks</td>
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</table>
Links between training and average norovirus outbreak size

- Restaurant does not provide training: 15.2
- Restaurant provides on-the-job training: 13.0
- Restaurant provides classroom training: 11.2
- Restaurant provides on-the-job and classroom training: 9.6
Links between monitoring and food safety

Food workers actively monitor cooling food temperatures → Foods more likely to cool within recommended timeframe

Workers record food temperature temperatures → Lower odds of an outbreak
REGULATIONS
Regulations and food safety

- Prohibiting bare-hand contact
- Requiring a certified kitchen manager

→ Fewer norovirus outbreaks
What can food officials do?

- **Focus prevention efforts on**
  - Preventing ill workers
  - Good hand hygiene
  - Cleaning and sanitizing

- **Support strong food safety management systems in restaurants**
  - Procedures
  - Training and certification
  - Monitoring

- **Adopt and enforce food safety regulations**
Thank you

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