Public Communications and Outbreaks of *E. coli* O157:H7 Infections linked to Romaine Lettuce

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PulseNet/OutbreakNet Central Regional Meeting
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Spring 2018 Outbreak of *E. coli* O157:H7 Infections Linked to Romaine Lettuce
April 10: What Did We Know?

- **How many illnesses and where?**
  - 17 illnesses in 7 states

- **Outbreak ongoing?**
  - Yes

- **What evidence links the food to illness?**
  - Epi: Strong signal for salads/leafy greens, strength of romaine signal somewhat unclear
  - Traceback: Ongoing
  - Lab testing: None

- **Is public communication needed?**
  - Case count increasing rapidly
  - *E. coli* O157:H7 is serious
  - Media aware of NJ illnesses
  - Rumors about restaurant chain involvement
  - **Decision:** Communicate about the multistate investigation
April 10: CDC Investigation Notice

- 17 people infected with the outbreak strain of *E. coli* O157:H7 from 7 states
  - Included infections recently reported by the NJ health department

- “This investigation is ongoing and a specific food item, grocery store, or restaurant chain has not been identified as the source.”
April 13: What Did We Know?

- **How many illnesses and where?**
  - 35 illnesses in 11 states
  - 22 hospitalized, 3 HUS

- **Outbreak ongoing?**
  - Yes

- **What evidence links the food to illness?**
  - Epi: Pre-chopped romaine
  - Traceback: Pointing to chopped romaine from the Yuma, AZ region
  - Lab testing: None

- **Is public communication needed?**
  - Case count increasing rapidly
  - *E. coli* O157:H7 is serious
  - Romaine lettuce leading hypothesis about the source
  - Traceback to Yuma, AZ growing region, but no farm ID’ed
  - **Decision:** Warn consumers and retailers not to eat or sell romaine lettuce grown in Yuma, AZ region
April 13: CDC Issues Advice to Consumers and Retailers

- Restaurants and retailers should not serve or sell any **chopped romaine lettuce from the Yuma, Arizona growing region**.

- Consumers anywhere in the U.S. who have **store-bought chopped romaine lettuce at home** should not eat it and should throw it away.

- Before purchasing romaine lettuce at a grocery store or eating it at a restaurant, consumers should **confirm with the store or restaurant** that it is not chopped romaine lettuce from the Yuma, Arizona growing region.
April 20: What Did We Know?

- **How many illnesses and where?**
  - 53 illnesses in 16 states
  - 31 hospitalized, 5 HUS

- **Outbreak ongoing?**
  - Yes

- **What evidence links the food to illness?**
  - Epi: 95% reporting romaine lettuce
  - Traceback: Chopped and whole head from the Yuma, AZ region
  - Lab testing: None

- **Is public communication needed?**
  - Case count increasing rapidly
  - *E. coli* O157:H7 is serious
  - Current advice only includes chopped romaine lettuce
  - **Decision:** Warn consumers and retailers not to eat or sell *any* romaine lettuce grown in Yuma, AZ region
April 20: CDC Advice Expands

- Based on new information, CDC expands its warning to consumers to cover all types of romaine lettuce from the Yuma, Arizona growing region.

- Warning now includes whole heads and hearts of romaine lettuce, in addition to chopped romaine and salads and salad mixes containing romaine.
May 16: What Did We Know?

- **How many illnesses and where?**
  - 172 people infected in 32 states

- **Outbreak ongoing?**
  - Illnesses still being reported
  - Lettuce past its shelf life

- **What evidence links the food to illness?**
  - Epi: 91% reporting romaine lettuce
  - Traceback: Chopped and whole head from the Yuma, AZ region
  - Lab testing: None

- **Is public communication needed?**
  - Last shipments from Yuma were one month ago
  - Lettuce likely past its shelf life, so risk to consumers is lower
  - **Decision:** Lift consumer warning about romaine lettuce from Yuma
May 16: CDC Lifts Warning about Romaine from Yuma

- Romaine lettuce from the Yuma growing region is past its shelf life and is likely no longer being sold in stores or in restaurants.

- Advice to consumers:
  - See a clinician if you have symptoms of an *E. coli* infection
June 28: Outbreak Declared Over

- Outbreak declared over on June 28, 2018
  - 21 day maximum shelf life for romaine
  - 2-4 week reporting delay in PulseNet

- 210 ill people from 36 states
  - 48% hospitalized; 27 people developed HUS; 5 deaths

- “This outbreak appears to be over.”
Fast Forward...

Fall 2018

Outbreak of *E. coli* O157:H7 Infections

Linked to Romaine Lettuce
November 20: What Did We Know?

- **How many illnesses and where?**
  - 32 people infected in 11 states

- **Outbreak ongoing?**
  - Yes

- **What evidence links the food to illness?**
  - Epi: Strong signal for salads/leafy greens and for romaine lettuce, same PFGE pattern from 2017
  - Traceback: Ongoing
  - Lab testing: None

- **Is public communication needed?**
  - Case count increasing rapidly
  - *E. coli* O157:H7 is serious
  - Three days before Thanksgiving
  - Harvest season ongoing
  - **Decision:** Warn the U.S. not to eat any romaine until we learn more
November 20: CDC Food Safety Alert

“Do not eat, serve, or sell any romaine lettuce until more information is available.”

- Includes whole heads, hearts, organic, chopped
- Any romaine lettuce from any where
November 26: What Did We Know?

- How many illnesses and where?
  - 43 people infected in 12 states

- Outbreak ongoing?
  - Yes

- What evidence links the food to illness?
  - Epi: XX% reporting romaine lettuce
  - Traceback: Central Coastal regions of central/northern CA
  - Lab testing: None

- Is public communication needed?
  - Case count increasing
  - *E. coli* O157:H7 is serious
  - Industry indicating they will create labels that will include harvest information, not available yet
  - **Decision:** Warn the U.S. not to eat romaine from specific regions, labels available soon
December 6: Labels Introduced

- On December 6, industry introduces labels on romaine lettuce
  - 52 people infected in 15 states

- Outbreak ongoing?
  - Yes

- Consumer messaging is more specific
  - Don’t eat romaine lettuce from “central coastal regions of northern and central California”
  - Hydroponic, greenhouse grown are not linked
  - Check the label for harvest region
December 6: Labels Introduced

Actionable?
January 9: Outbreak Declared Over

- Outbreak declared over on January 29, 2019
  - 21 day maximum shelf life for romaine
  - 2-4 week reporting delay in PulseNet

- 62 ill people from 16 states
  - 46% hospitalized; 2 people developed HUS; 0 deaths

- “This outbreak appears to be over.”
Communications Lessons Learned

- **Spring 2018**
  - Issued public warning within 8 days of identifying the multistate outbreak
  - Started with specific advice, not as actionable
  - Challenging to provide clear advice

- **Fall 2018**
  - Needed to issue warning quickly, could not wait for growing regions or farms
  - Used broad warning, led to industry action
  - Collateral damage to farmers outside of central/northern California

- Providing right message quickly is vital – adjusted approach after Spring outbreak to ensure advice was **actionable**
Questions?

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For more information, contact CDC
1-800-CDC-INFO (232-4636)

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.