

# **CDC's experience: A case study of communications during a foodborne outbreak response**

Division of Foodborne, Waterborne, and Environmental Diseases  
Centers for Disease Control and Prevention  
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# **Why does CDC communicate about an outbreak?**

## **#1 Reason:**

**Specific source identified AND public can take action**

## **Other reasons to communicate include:**

- ❑ Cases increasing rapidly (ongoing outbreak)
- ❑ High-risk group involved
- ❑ Deaths, high hospitalization rate
- ❑ Pathogen severity is high
- ❑ High media interest
- ❑ Misinformation being circulated

# How does CDC communicate about an outbreak?

## ❑ General Public

- CDC Website
- Social media
- News media

## ❑ Public Health Partners

- Email lists
- Conference calls

## ❑ Industry Partners

- Email lists
- Conference calls

## ❑ International Partners

- Public Health Emergency of International Concern (PHEIC)
- INFOSAN

# When does CDC communicate about an outbreak?

- ❑ **Communication to the public may be needed at any point, or it may never be needed**
  - In 2014, over **220 multistate clusters** were investigated by CDC
  - Only 12 outbreaks were communicated about publicly
- ❑ **The decision about “when” typically occurs quickly**
  - New information can trigger communication at any point in an investigation



## **Five Common Communication Scenarios**

- ❑ **During an investigation, knowledge about what the food source is accumulates and changes, as does the need to communicate.**
- ❑ **A working document was developed to assist federal agencies during multistate outbreak investigations.**
  - Describes **5 common scenarios** encountered during investigations
  - Outlines reasons why or why not communication is needed
  - Acts as a guide when discussing the need for public communication internally and between federal agencies

# Five Common Communication Scenarios

## Examples

### Scenario 1

- Cluster of illnesses with no specific source identified

20 people infected with one strain of *E. coli*

### Scenario 2

- Generic food type identified as likely vehicle

Epi signal for ground beef

### Scenario 3

- Specific food product, brand identified as likely vehicle

Brand X ground beef is likely vehicle

### Scenario 4

- Local outbreak, locals and/or state release press

Outbreak of *E. coli* infections in Ohio

### Scenario 5

- Pathogen identified in food independent of any human illness

Ground beef recalled for *E. coli* contamination

# Questions to Consider

## Reasons NOT to Communicate:

- ❑ Will communicating create message fatigue?
- ❑ Is there no clear action step for the public?
- ❑ Is there insufficient evidence?
- ❑ Is the food vehicle generic in nature?
- ❑ Is the outbreak over?

## Reasons to Communicate:

- ❑ Is the pathogen causing severe illness?
- ❑ Is there a high number of cases?
- ❑ Is the outbreak ongoing?
- ❑ Is the food vehicle novel?
- ❑ Does the product have a long shelf life?
- ❑ Is a large group of people potentially exposed?
- ❑ Can the public take specific actions to protect themselves?

# **LISTERIOSIS AND CARAMEL APPLES**

## **OCTOBER 2014 – JANUARY 2015**



# Caramel Apples

- ❑ **Apples on a stick dipped in hot caramel and cooled**
  - Can have toppings (i.e., nuts, chocolate)
- ❑ **Typically consumed as treats around autumn holidays (i.e., Halloween)**



# Outbreak of Listeriosis – November 2014

- ❑ **How many people are sick? Where?**
  - **22 people in 10 states**
- ❑ **How severe are the illnesses?**
  - **1 death, 3 invasive illnesses in healthy children**
- ❑ **Who is coordinating the investigation?**
  - **CDC**
- ❑ **Has a food vehicle been identified?**
  - **No**
  - **Items of interest include hot dogs, strawberries, ice cream, Asian buffets**

# Five Common Communication Scenarios

## Scenario 1

- Cluster of illnesses with no specific source identified – 22 cases of listeriosis in 10 states

## Scenario 2

- Generic food type identified as likely vehicle

## Scenario 3

- Specific food product, brand identified as likely vehicle

## Scenario 4

- Local outbreak, locals and/or state release press

## Scenario 5

- Pathogen identified in food independent of any human illness

## Questions to Consider NOT Communicating

- ❑ Will communicating create message fatigue? **Yes**
- ❑ Is there no clear action step for the public? **Yes**
- ❑ Is the food vehicle generic in nature? **Yes, no food vehicle**
- ❑ Is there insufficient evidence? **Yes**
- ❑ Is the outbreak over? **No**

## Questions to Consider Communicating

- ❑ Is the pathogen causing severe illness? **Yes**
- ❑ Is there a large number of cases? **Yes (for *Listeria*)**
- ❑ Is the outbreak ongoing? **Yes**
- ❑ Is the food vehicle novel? **Unknown**
- ❑ Does the product have a long shelf life? **Unknown**
- ❑ Is a large group of people potentially exposed?  
**Unknown**
- ❑ Can the public take specific actions to protect themselves? **No**

**At this point in the investigation,  
should CDC communicate to the  
public about this outbreak?**

## **Decision: Do Not Communicate**

- ❑ **CDC chose not communicate at this point because a common food item consumed by ill people had not been identified**
  - No action step for the public to take to protect themselves
- ❑ **The investigation continued to gather more epidemiologic information**

# **Outbreak of Listeriosis – December 2014**

- ❑ **How many people are sick? Where?**
  - **28 people in 10 states**
- ❑ **How severe are the illnesses?**
  - **5 deaths, 3 invasive illnesses in healthy children**
- ❑ **Who is coordinating the investigation?**
  - **CDC**
- ❑ **Has a food vehicle been identified?**
  - **83% reported prepackaged caramel apples**
  - **No single brand in common**



# Outbreak of Listeriosis – December 2014

## Scenario 1

- Cluster of illnesses with no specific source identified

## Scenario 2

- Generic food type identified as likely vehicle – Caramel apples

## Scenario 3

- Specific food product, brand identified as likely vehicle

## Scenario 4

- Local outbreak, locals and/or state release press

## Scenario 5

- Pathogen identified in food independent of any human illness

## Questions to Consider NOT Communicating

- ❑ Will communicating create message fatigue? **No**
- ❑ Is there no clear action step for the public? **No**
- ❑ Is the food vehicle generic in nature? **No specific brand, but food product is unique and easy to identify**
- ❑ Is there insufficient evidence? **Unsure (Epidemiologic)**
- ❑ Is the outbreak over? **No**

## Questions to Consider Communicating

- ❑ Is the pathogen causing severe illness? **Yes**
- ❑ Is there a large number of cases? **Yes (for *Listeria*)**
- ❑ Is the outbreak ongoing? **Yes**
- ❑ Is the food vehicle novel? **Yes**
- ❑ Does the product have a long shelf life? **Yes**
- ❑ Is a large group of people potentially exposed? **Yes**
- ❑ Can the public take specific actions to protect themselves? **Yes**

**At this point in the investigation,  
should CDC communicate to the  
public about this outbreak?**

## Decision: Communicate

- ❑ To prevent additional illnesses, CDC felt it was important to communicate even though a **specific brand** of caramel apples had not yet been identified by traceback or product testing
- ❑ Although “caramel apples” is a generic food product, CDC was able to specify the type of product:
  - Commercially produced
  - Prepackaged
  - Not homemade

## Action Taken

### CDC Consumer Warning (December 19, 2014):

“The information CDC has at this time indicates that commercially produced, prepackaged caramel apples may be contaminated with *Listeria*. *Listeria* can cause a serious, life-threatening illness.

**Out of an abundance of caution, CDC recommends that U.S. consumers not eat any commercially produced, prepackaged caramel apples,** including plain caramel apples as well as those containing nuts, sprinkles, chocolate, or other toppings, until more specific guidance can be provided.

At this time, no illnesses related to this outbreak have been linked to apples that are not caramel-coated and not prepackaged or to caramel candy.

There is no evidence currently linking illnesses to homemade caramel apples. If you are unsure if a caramel apple is commercially produced or homemade, then you should not eat it.”

## Did People Hear Us?

From December 19-31, 2014:

- ❑ CDC webpage viewed **187,653** times
  - 86,977 times on December 19
- ❑ **1,290 media stories** mentioned “caramel apples, *Listeria*, CDC”
  - 131 million estimated impressions
- ❑ **2,670 tweets** were sent
  - 38.4 million estimated impressions from Twitter mentions

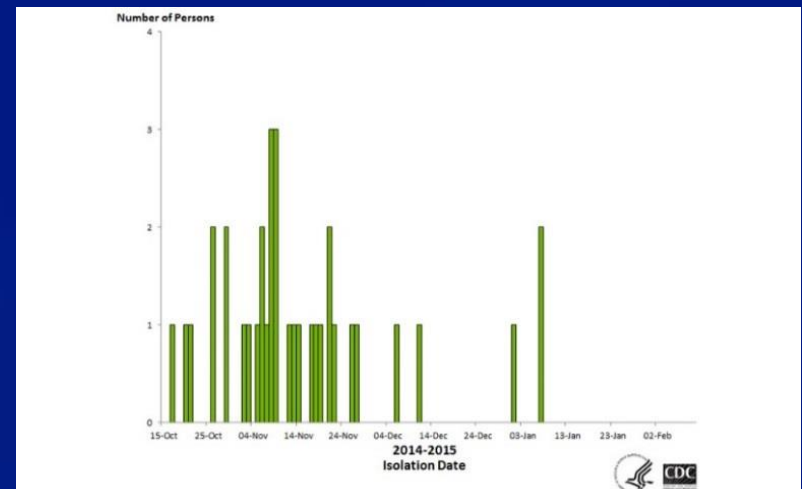
CDC continues to advise not to eat commercially produced, prepackaged caramel apples because of #Listeria outbreak: <http://t.co/nxlgRi6x0i> .

31 Dec 2014 by CDC



# Outbreak of Listeriosis – January 2015

- ❑ **As more information was collected, CDC updated its consumer warning to include company and brand names**
  - Product recalls
  - Scenario 3: Specific brands identified as likely vehicle
- ❑ **Last illness onset on January 6, 2015**
- ❑ **Outbreak declared over on February 12, 2015**





## Summary

- ❑ **There are increasing demands for the government to be more transparent**
  - Message fatigue is real, but this phenomenon is less common in today's communications landscape, and should not be a major reason to delay public communication
- ❑ **Officials should continuously evaluate the available evidence during investigations to determine if a public warning is needed**
  - The five communication scenarios act as a guide for this discussion

**[www.cdc.gov/foodsafety/outbreaks/index.html](http://www.cdc.gov/foodsafety/outbreaks/index.html)**