Factors that Contribute To Outbreaks of Foodborne Illness

Findings from CDC’s National Environmental Assessment Reporting System

Environmental health and food safety programs can work to identify contributing factors for all foodborne illness outbreaks. Finding contributing factors helps us know what went wrong so we can better prevent future outbreaks.

We Recommend

To identify foodborne illness outbreak contributing factors, investigators should

- Use their knowledge about the germ linked to the outbreak to guide their environmental assessment.
- Conduct their assessment as soon as they learn of a potential outbreak.
- Conduct a complete assessment that may require multiple visits to the outbreak establishment.

To improve their ability to identify contributing factors, investigators can take CDC’s free, interactive training on conducting environmental assessments.

Understanding Contributing Factors Helps Prevent Outbreaks

Each year, more than 800 foodborne illness outbreaks occur in the United States. Data on contributing factors are critical to outbreak prevention, and environmental assessments identify contributing factors.

But, we don’t know a lot about how to help investigators identify contributing factors. The purpose of this project was to learn more about outbreak traits linked with identifying contributing factors.
What We Found

Contributing factors were identified in 3 out of every 5 outbreaks (194 of 297) reported to CDC’s National Environmental Assessment Reporting System.

Contributing factors were more likely to be identified if

- the germ linked to the outbreak was known,
- the outbreak establishment prepared all meals on-site,
- the outbreak establishment served more meals daily,
- investigators quickly (within a day of learning about the outbreak) contacted the establishment thought to be linked with an outbreak to schedule their assessment visit, and
- investigators made multiple visits to the outbreak establishment to complete their assessment.

Timely and complete outbreak assessments are important to identifying contributing factors. These findings highlight the need for strong environmental health and food safety programs with the capacity to complete such assessments.

Key Terms

**Contributing factor**: what happened to cause a foodborne outbreak (what behaviors, practices or environmental conditions led to food being contaminated or to germs growing or surviving in food). For example, food not being cooked at a hot enough temperature to kill germs.

**Environmental assessment**: part of the outbreak investigation describing how and why the environment contributed to germs getting in and spreading to make people sick.

**Environmental health and food safety programs**: public health programs responsible for ensuring environmental health and food safety; staff in these programs are typically responsible for inspection restaurants and conducting environmental assessments during foodborne illness outbreak investigations.

**Outbreak establishment**: an establishment that has been linked with a foodborne illness outbreak; for example, several people with a foodborne illness all report eating the same food at the same restaurant.