

Protecting the Public from Foodborne Illness Outbreaks

Over two hundred known pathogens can be transmitted through food. The Centers for Disease Control and Prevention estimate that foodborne diseases cause about 22% of the 350 million cases of diarrhea occurring annually in the US. Of these cases, more than 300,000 are hospitalized and 5,000 die.¹ A relatively small number of foodborne illnesses come to the attention of health departments. Consequently it is difficult to detect outbreaks and initiate the appropriate control measures to protect the public from foods contaminated with pathogenic agents.

The most common way that health departments become aware of foodborne outbreaks is through phone calls from citizens or health care providers who are aware of multiple cases of illness, that appear to be related by time and/or place. Health care practitioners have a critical role not only in surveillance for foodborne illness outbreaks but in implementing control measures to interrupt the spread of these illnesses.

Since the pathogens causing foodborne illness often spread easily from person to person, early intervention can prevent or curtail outbreaks. Persons with infectious diarrhea should be excluded from working in sensitive occupations such as food handling or childcare. Patient education on the mode of transmission and the importance of hand washing after defecation (or changing diapers of an ill infant) is extremely useful in efforts to reduce the transmission of these diseases.

A timely report to the Office of Epidemiology (OOE) from a healthcare practitioner of a suspected foodborne illness outbreak prompts an investigation conducted by OOE and Environmental Health (EH) staff. The main goal after confirming the existence of an outbreak is to institute immediate interventions to stop the outbreak and prevent further cases from occurring. Additionally,

epidemiological and environmental investigations are conducted to identify the source. Lab analyses are performed on environmental and food samples and compared with clinical specimens from cases in an effort to link the illnesses with a particular food or contaminated surface.

When the implicated source is a widely distributed food, EH staff will place a hold on the locally identified food source, and initiate a traceback of the food to the distributor, manufacturer or grower, which may result in a recall of that food. For example, in April of this year, cases of *Salmonella poona* were identified in several states (including Nevada). A multi-state case-control study was conducted which identified cantaloupe as the most probable source. The Food and Drug Administration in collaboration with local health departments carried out a traceback that identified the importer/distributor of the cantaloupe. The company then issued a recall of the implicated brand of cantaloupe that had been imported from Mexico.

When the suspect food is associated with a single restaurant, samples of the implicated food are taken and the food is placed on hold (embargoed). If laboratory tests identify a pathogen or spoilage, the food is destroyed. Recently, an incident occurred that not only illustrates this health department function, but also the important role a health care provider played. An emergency room nurse reported a single case of suspected scombroid intoxication to the OOE. Several cases of frozen ahi tuna were placed on hold at the implicated restaurant (within two hours of receiving the report) and later destroyed when it was discovered that some of the fish was decomposed. The wholesale distributor of the fish was cited for not having the appropriate business and Health District permits.

The OOE maintains a database of foodborne illness complaints to assist in the identification of outbreaks. Epidemiologists take food and restaurant histories from persons complaining of foodborne illness and enter the information into a database. Every foodborne illness complaint results in a restaurant inspection. The database is designed to immediately cue the user regarding multiple complaints on the same food establishment. This may indicate a possible outbreak related to the facility and an investigation would then be carried out. **Health care providers can facilitate this method of surveillance by encouraging patients suspected of having a foodborne illness to call 383-1378 to report the illness.**

In order to protect the public from foodborne illness outbreaks, public health workers and private healthcare providers must maintain vigilance for possible outbreaks. Appropriate and timely responses can limit the number of persons affected. **If you suspect a foodborne illness outbreak, call the Office of Epidemiology 24-hour number, 383-1378 to report.**

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SELECTED REPORTABLE DISEASES* YEAR-TO-DATE 2002

DISEASE	YEAR TO DATE	
	June 20, 2001	June 20, 2002
Amebiasis	0	9
Campylobacteriosis	75	51
Cryptosporidiosis	2	2
E. coli O157:H7	2	6
Giardiasis	48	39
Hepatitis A	34	9
Rotavirus	295	311
Salmonellosis	61	87
Shigellosis	20	5

*Numbers include confirmed and probable cases.

**When You See
Unusual,
Think Outbreak!**