

**EIS Conference 2013**  
**April 22-26, 2013**

**Select Abstract:**

***Increasing Number and Disproportionate Morbidity and Mortality Associated with Multistate Foodborne Disease Outbreaks — United States, 1973–2010***

**Authors:** Von D. Nguyen, S. Bennett, E. Mungai, L. Gieraltowski, L. Gould

**Background:** Approximately 1,000 foodborne disease outbreaks are reported in the United States each year. Multistate outbreaks are a particularly important source of information about foods contaminated during production and then distributed widely, resulting in broadly dispersed illnesses. We analyzed the trends and characteristics of multistate foodborne disease outbreaks.

**Methods:** We reviewed outbreaks detected and reported to CDC's Foodborne Disease Outbreak Surveillance System from 1973–2010. Multistate outbreaks were defined as  $\geq 2$  persons who developed illness after exposure to a common food in multiple states. Analyses examined the number of illnesses, hospitalizations, deaths, implicated foods, and etiologic agents.

**Results:** From 1973–2010, multistate foodborne disease outbreaks accounted for 234 (0.8%) of 27,989 total outbreaks and resulted in 3% of all outbreak-associated illnesses, 10% of hospitalizations, and 16% of deaths. The number of multistate outbreaks increased from an average of 3.4/year during the first five years of the surveillance period to 16.8/year in the most recent five years. Most multistate outbreaks were caused by Salmonella (49%) and Shiga toxin-producing E. coli (STEC, 26%). Among 96 Salmonella outbreaks with a food reported, most were attributed to fruits/nuts (24%), vine or stalk vegetables (20%), and sprouts (17%). Among 57 STEC outbreaks, most were attributed to beef (56%) and leafy green vegetables (23%).

**Conclusions:** From 1973–2010, reported multistate outbreaks accounted for an increasing number of foodborne disease outbreaks and contributed a disproportionate share of outbreak-associated morbidity and mortality. Knowing the implicated foods and pathogens can help to identify important sources of contamination and inform the interventions of regulatory agencies and industry to improve the safety of our food supply.

**Keywords:** disease outbreak, foodborne diseases, food, Salmonella, Escherichia coli