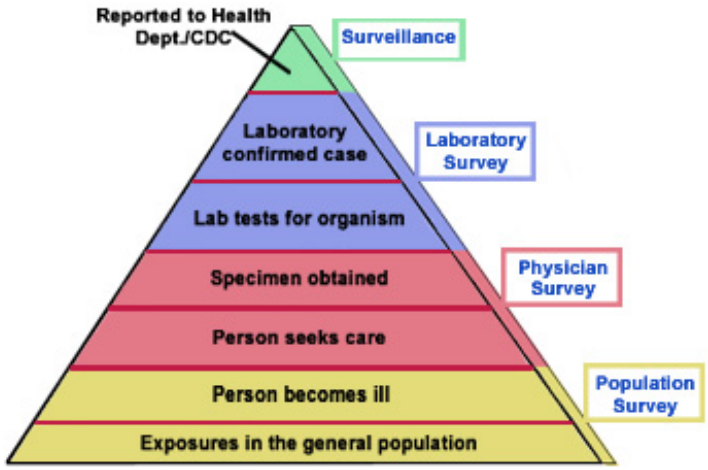
Reportable Disease Section
Division of Epidemiology and Health Planning
Kentucky Department for Public Health

Foodborne Illness

Foodborne illness is a significant public health problem. Foodborne disease outbreaks occur when a group of people consume contaminated food or beverage. Common contaminates are *Bacillus cereus*, *Campylobacter*, *Salmonella*, *Shigella*, *E.coli* 0157:H7, Norovirus, *Staphyloccoccus aureus*, and Hepatitis A. It is estimated that 76 million cases of foodborne disease occur each year in the U.S. Most of these cases are mild but many can require hospitalization. The CDC estimates 325,000 hospitalizations and 5,000 deaths occur each year due to contaminated food. The diagram below displays the disproportionate number of cases reported to the health department and the actual occurrence of foodborne illness. Thus, the primary objective of this handout is to provide information to Kentucky physicians on the process of foodborne outbreak investigations and how they can help prevent others from becoming ill through case confirmation and reporting.



Burden of illness pyramid reflecting the proportion of foodborne illnesses that make it through each step of the diagnosis and reporting process.

Physicians play a vital role in the recognition of foodborne illness outbreaks. Many times foodborne outbreaks are recognized by the group of people who ate together and became ill. Other times the local health department notices an unusual number of cases for a certain reported disease. If a physician identifies several patients coming in with similar symptoms more can be accomplished early in the outbreak investigation to identify cases of disease and determine the source of infection. In the situation that you believe an illness could be caused by contaminated food or water, appropriate diagnostic tests could be ordered on blood, emesis, or stool. The incubation period for the illness and history of foods consumed may provide hints to the microbial etiology. The health history should include a report of food and water sources ingested in the last 72 hours as well as information about travel, animal contact, occupation (specifically in healthcare, daycare, or food service), and any form of group congregation. In the circumstance that only one case of mild illness is seen after consumption of contaminate food or water the physician may defer laboratory testing. Report foodborne illness outbreaks or individual cases of reportable foodborne illnesses to your local health department. Reporting this crucial information early can lead the local health department's Epidemiology Rapid Response Team (ERRT) to the source of the outbreak.

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Each county or district health department in Kentucky maintains a group of professionals educated in outbreak investigation. This group is referred to as the ERRT and includes an epidemiologist, a reportable diseases nurse, and an environmentalist. If there is a large outbreak, the local health director will become involved as well. This team is responsible for collecting data on cases to determine the source of illness. Many times this inquiry requires an environmental inspection, lengthy interviews, lab consultation, cohort studies, case control studies, and statistical analyses.

The most important steps a physician can make in a suspected foodborne outbreak are obtaining patient specimens for testing, reporting to the local health department, and asking the patient questions regarding food history. A table listing the most common foodborne diseases and their characteristics is attached. If you have any questions about foodborne illness or outbreaks check the references below or call your local health department.

References

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