

FOODBORNE DISEASE: Notes about the Disease

There is probably no other group of diseases for which the general public holds the public health system more responsible for control than foodborne diseases. Perhaps this is at least partially because anyone who eats in restaurants in North Carolina with any frequency has undoubtedly noticed the sanitation grade cards issued by environmental health specialists from local health departments posted in each entry way. However, all too often, many of our citizens find themselves an unwilling participant in a foodborne disease outbreak because of someone's careless food handling practices. Contrary to popular belief, only some cases are restaurant-associated; most of these illnesses are not acquired while dining in a restaurant. The Centers for Disease Control and Prevention (CDC) estimates that there are about 76 million cases of foodborne disease in the US each year.¹ If these cases were evenly distributed (which they undoubtedly are not), that translates into an annual morbidity rate of about one case per every four persons!

In his 101-page manual written while an employee of CDC, Frank Bryan lists well over 200 different diseases transmitted by foods.² While many of these are admittedly uncommon, the public health worker charged with investigating a foodborne disease outbreak should always bear in mind that, until laboratory confirmation of an etiologic agent is made, multiple possibilities may exist.

Notwithstanding, the incubation period, symptoms of the case-patients, and probable involved food give clues to the investigator about the likely cause of an outbreak so that a hypothesis can be formulated about avenues to pursue in the investigation. When beginning an investigation, it is useful to think of foodborne diseases in groups based on these properties, and one helpful chart for this purpose can be found in the "Bad Bug Book" published by the US Food and Drug Administration.³

All forms of foodborne disease are reportable in NC, even if the cause is not specifically documented. NC specifically assigns separate disease codes for selected specific foodborne illnesses: **staphylococcal food intoxication, clostridium perfringens foodborne intoxication, ciguatera foodborne poisoning, mushroom foodborne poisoning, and scombroid fish foodborne poisoning, and other/unknown foodborne disease**. Also, many diseases listed separately on the list of reportable communicable diseases can be transmitted via different routes, of which the foodborne route may be an important one (e.g., botulism, salmonellosis). Finally, although they are technically not due to an infectious agent, cases of foodborne illness caused by chemicals or environmental toxins are reportable as well.

1. "Foodborne Illness: Frequently Asked Questions," *Centers for Disease Control*, 10 January 2005, www.cdc.gov/ncidod/dbmd/diseaseinfo/files/foodborne_illness_FAQ.pdf.
2. Frank L. Bryan, *Diseases Transmitted by Foods: (A Classification and Summary)*, 2nd ed. (Atlanta, GA: Centers for Disease Control, 1982), [chppm-www.apgea.army.mil/tsunami/Diseasesfromfood\(2\).pdf](http://chppm-www.apgea.army.mil/tsunami/Diseasesfromfood(2).pdf).
3. "Bad Bug Book: Foodborne Pathogenic Microorganisms and Natural Toxins Handbook: Onset, Duration, and Symptoms of Foodborne Illness," *U.S. Food and Drug Administration*, 12 October 2005, www.cfsan.fda.gov/~mow/app2.html.