FoodNet in 2012 – A Foundation for Food Safety in the United States
Media Highlights
Contact: CDC Media Relations (404) 639-3286 or media@cdc.gov

"FoodNet's high quality, nationally coordinated surveillance is enormously important for public health and policy. We developed this CID supplement to dig into important issues that go beyond our annual reports. We're excited about these detailed analyses of a decade or more of surveillance data on important foodborne pathogens—as well as on several key scientific issues related to conducting high-quality surveillance—because we think they offer important insights for saving lives and protecting people from foodborne illnesses." **Barbara Mahon, M.D., M.P.H., deputy chief of CDC's Enteric Diseases Epidemiology Branch**

Trends:

Calculating a Measure of Overall Change in the Incidence of Selected Laboratory-Confirmed Infections with Pathogens Transmitted Commonly through Food, Foodborne Diseases Active Surveillance Network (FoodNet), 1996–2010.
Contact: Olga Henao via CDC media relations
The overall frequency of illnesses caused by Campylobacter, Listeria, Salmonella, Shiga toxin-producing E. coli (STEC) O157, Yersinia and Vibrio was 23 percent lower in 2010 than in 1996-1998. However, a decrease in incidence between 2006-2008 and 2010 of 3 percent indicates that progress has slowed recently.

Gender Differences in Food Consumption: FoodNet Population Survey, 2006-2007.
Contact: Olga Henao via CDC media relations
More men than women ate meat, and more women than men ate vegetables and fruits. Men were more likely to have consumed "high-risk" foods such as undercooked hamburger, raw oysters and runny eggs. But only one high-risk food, alfalfa sprouts, was more frequently consumed by women.

Characteristics of Foodborne Disease Outbreak Investigations Conducted by FoodNet Sites, 2003–2008.

Contact: Rendi Murphree via CDC media relations

The food vehicle was determined in 32 percent of FoodNet outbreak investigations, although the etiology (bacteria or virus responsible for the outbreak) was found in 60 percent of outbreak investigations. Investigations that were not successful in determining the food or cause of the outbreak had too few patients ill, too few stool specimens to test or too few control subjects.

Assessment of Physician Knowledge and Practices Concerning STEC Infection and Enteric Illness, 2009, FoodNet.

Contact: Hannah Gould via CDC media relations

Physicians were surveyed to measure their knowledge about Shiga toxin-producing E. coli (STEC) infections. The survey found that physician knowledge of STEC was low, showing a need for educational interventions to help ensure that physicians correctly identify, report, and treat cases of this foodborne illness.

Changing epidemiology of Yersinia enterocolitica infections: markedly decreased rates in young black children, FoodNet, 1996-2009.

Contact: Hannah Gould via CDC media relations

The number of Yersinia enterocolitica infections reported in FoodNet sites significantly decreased from 1996 to 2009. The biggest decrease was in young black children in Georgia, possibly a result of an educational campaign targeted to high-risk groups. The campaign included pamphlets on safe preparation and handling of chitterlings, particularly during the winter months and holidays.

Sources of Illness:

Travel-Associated Enteric Infections Diagnosed After Return to the United States, Foodborne Diseases Active Surveillance Network (FoodNet), 2004–2009.

Contact: Magdalena Kendall via CDC media relations

Campylobacter is the most common cause of foodborne illness in travelers returning to the United States from overseas. Over half of all travel-associated infections reported were in travelers to Latin America and the Caribbean. However, travel to Africa carried the greatest risk of travel-associated infection (75.9 cases per 100,000 travelers).

Estimates of Enteric Illness Attributable to Contact with Animals and Their Environments in the United States.

Contact: Christa Hale via CDC media relations

Fourteen percent of all illnesses (445,213 annually) caused by the 7 most common foodborne diseases are attributable to contact with animals: direct contact with wild animals, pets, and other animals, as well as indirect contact with the animal's feces, bodily fluids or its environment. Campylobacter, Salmonella and Cryptosporidium caused the majority of illnesses, hospitalizations and deaths attributed to contact with animals and their environments.

Pathogens:

Invasive Listeriosis in Foodborne Diseases Active Surveillance Network, 2004–2009: Further Targeted Prevention Needed for Higher-Risk Groups.

Contact: Ben Silk via CDC media relations

There was no significant change in the incidence of listeriosis from 2004 to 2009. Increasing prevention efforts such as food safety education among pregnant women, especially those who are Hispanic, and older adults are recommended to substantially decrease overall rates of listeriosis.

Relative Risk of Listeriosis in Foodborne Diseases Active Surveillance Network (FoodNet) Sites According to Age, Pregnancy and Ethnicity.

Contact: Ben Silk via CDC media relations

Older adults and pregnant women, especially Hispanics, have a higher risk of invasive diseases caused by *Listeria* infections, including bloodstream infection, meningitis, and miscarriage and stillbirth. Among older adults, the risk of invasive listeriosis increases as people get older.

Increasing Rates of Vibriosis in the United States: Review of Surveillance Data from Two Systems, 1996-2010.

Contact: Anna Newton via CDC media relations

The frequency of Vibriosis illness increased from 1996 to 2010, according to data from both Vibrio and FoodNet surveillance systems. More effective prevention efforts such as measures to inform the public about the hazards of raw shellfish consumption and measures to decrease contamination of oysters are recommended to decrease rates of vibriosis.

Population-Based Active Surveillance for Cyclospora Infection – United States, FoodNet, 1997–2009.
Contact: Rebecca Hall via CDC media relations
This report summarizes FoodNet data regarding laboratory-confirmed cases of Cyclospora infection during 1997-2009. While the number of Cyclospora infections reported varied markedly from year to year, the reported cases were concentrated in time (spring and summer) and place (Connecticut and Georgia).

Antimicrobial Susceptibility Patterns of Shigella Isolates in FoodNet Sites, 2000–2010.
Contact: Paul Cieslak via CDC media relations
This article describes antibiotic resistance patterns of Shigella samples submitted to FoodNet sites. Resistance to commonly used antibiotics is high. Although most cases of shigellosis can be managed without antibiotics, it may be more difficult to treat severe infections if Shigella isolates are becoming resistant to commonly used antibiotics.

Salmonella enterica Serotype Enteritidis: Increasing Incidence of Domestically Acquired Infections.
Contact: Shua Chai via CDC media relations
Infections from Salmonella serotype Enteritidis are a growing problem in the United States. Chicken and eggs are likely major sources.

Testing:

Impacts of Culture-Independent Diagnostic Practices on Public Health Surveillance for Bacterial Enteric Pathogens.
Contact: Alicia Cronquist or Raj Mody via CDC media relations
Culture-independent testing is becoming a more common way to diagnose foodborne diseases, and with it comes challenges and opportunities for public health agencies, clinical laboratories and industry. This report summarizes these challenges and opportunities, and suggests strategies that can be adopted to ensure that surveillance data continues to be accurate. Some of the strategies suggested for public health agencies include

collecting information on testing methods used, regularly surveying clinical laboratories regarding testing practices, and conducting validation studies.

Clinical Laboratory Practices for the Isolation and Identification of Campylobacter in FoodNet Sites: Baseline Information for Understanding Changes in Surveillance Data.

Contact: Sharon Hurd via Michael Greenwood, Yale School of Public Health 203-737-5151 or Michael.greenwood@yale.edu

This study highlights the need to develop recommendations for best practices for Campylobacter diagnostic testing. Although most laboratories are using culture-based methods to identify Campylobacter infections, procedures differ widely and most labs do not adhere to existing guidelines, likely resulting in under-diagnosis.