

▶ DIRECT FROM CDC ENVIRONMENTAL HEALTH SERVICES BRANCH



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Food Safety Tools and Products for Environmental Health Practitioners

Editor's Note: NEHA strives to provide up-to-date and relevant information on environmental health and to build partnerships in the profession. In pursuit of these goals, we feature a column from the Environmental Health Services Branch (EHSB) of the Centers for Disease Control and Prevention (CDC) in every issue of the *Journal*.

In this column, EHSB and guest authors from across CDC will highlight a variety of concerns, opportunities, challenges, and successes that we all share in environmental public health. EHSB's objective is to strengthen the role of state, local, tribal, and national environmental health programs and professionals to anticipate, identify, and respond to adverse environmental exposures and the consequences of these exposures for human health.

The conclusions in this article are those of the author(s) and do not necessarily represent the views of CDC.

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Did you know that more than half of all foodborne illness outbreaks in the U.S. are associated with restaurants? The Centers for Disease Control and Prevention (CDC) are taking action to prevent these outbreaks by improving environmental public health practice, including foodborne outbreak environmental assessments, food worker education and practices, and restaurant inspections.

Surveillance: CDC's New Surveillance System Can Help Prevent Outbreaks

CDC's new National Voluntary Environmental Assessment Information System (NVEAIS;

www.cdc.gov/nceh/ehs/NVEAIS/index.htm) can help state, local, territorial, and tribal health departments figure out what underlying environmental factors (e.g., food handling practices, worker health policies, and food source attribution) caused a foodborne outbreak so they can prevent the next one from happening.

NVEAIS provides data to help food safety programs identify and monitor underlying environmental factors; establish the basis for generating hypotheses about factors that may lead to foodborne outbreaks; and accomplish guide planning, implementation, and evaluation.

Practice-Based Research: Building the Evidence Base

Since 2000, CDC has worked with state and local health departments to identify environmental causes of foodborne outbreaks. CDC and its Environmental Health Specialists Network (EHS-Net)—funded partners have published 18 articles highlighting study findings and evidence-based environmental health practices to reduce the risk of foodborne disease outbreaks and illnesses among restaurant customers (www.cdc.gov/nceh/ehs/EHSNet/publications/pubs-by-topic.htm). These research findings help inform policy and practice changes that can reduce the risk of foodborne disease outbreaks and illnesses among restaurant customers.

The most recent research was published in the *Journal of Food Protection* in December 2013 (www.cdc.gov/nceh/ehs/News/Features/2013/JFP-articles.html). Four new articles highlight retail food safety study findings about ground beef handling, handling of leafy greens, chicken cross contamination, and sick food workers.

Plain language summaries for all of the articles are also available. Food safety programs and the restaurant industry can use these findings to develop effective interventions to improve food safety in restaurants.

Evidence-Based Practice

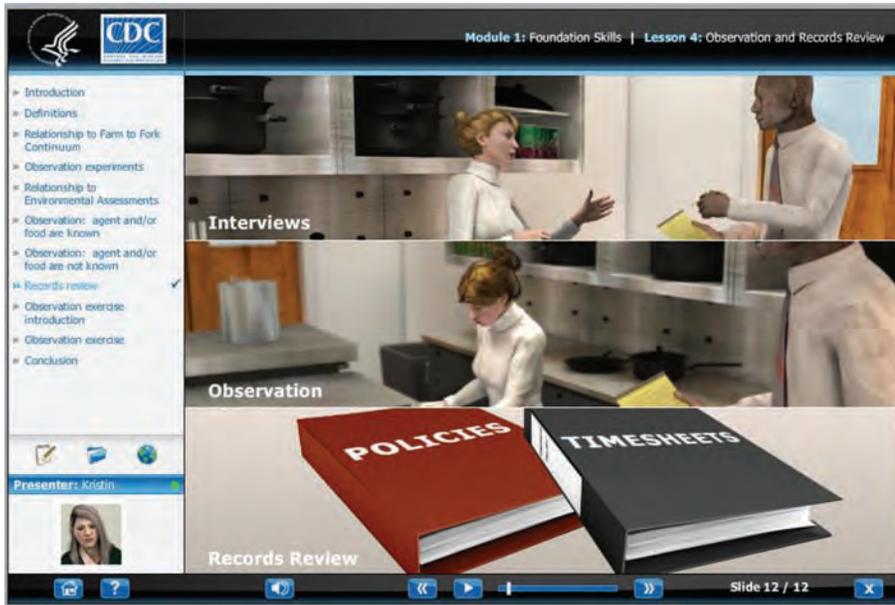
CDC helps state and local environmental health professionals improve their practices to prevent outbreaks.

Funding Health Departments via EHS-Net

CDC funds eight health departments to participate in EHS-Net. EHS-Net is a collabora-

FIGURE 1

CDC's New Training Course on Environmental Assessment Includes Interviewing, Observation, and Records Review



Why Food Safety Matters and How Environmental Public Health Practice Makes a Difference

Each year, contaminated food consumed in the U.S. results in an estimated 48 million illnesses, more than 128,000 hospitalizations, and 3,000 deaths.

Acute foodborne illnesses cost the U.S. an estimated \$152 billion each year in health care, workplace, and other economic losses.

A 2010 survey by the National Association of County and City Health Officials found that 78% of local health departments conduct restaurant inspections. In the U.S., state and local environmental health practitioners make sure our food stays safe. They issue permits and inspect restaurants and other retail food establishments, investigate outbreaks to identify their environmental causes, and educate restaurants on how to improve their practices and prevent outbreaks.

FIGURE 2

CDC's New Training Uses Simulation Techniques



These new techniques teach environmental health practitioners to identify factors that most likely contributed to an outbreak. For example, in a simulation of an environmental assessment of a restaurant, participants can explore the facility, click on a refrigerator, and get temperature and other information on food items.

tive forum of state and local environmental health specialists whose mission is to improve environmental health practice and prevent foodborne and waterborne illness outbreaks nationwide. The environmental health specialists identify issues, investigate outbreaks, provide training, and collaborate with epidemiologists and laboratorians in their states and counties to identify and prevent underlying factors contributing to outbreaks (e.g., food handling practices, worker health policies, and food source of a particular outbreak or group of outbreaks). EHS-Net brings local, state, and federal regulators (Food and Drug Administration [FDA] and U.S. Department of Agriculture [USDA]) and state disease control authorities together to actively work on a variety of food and water safety activities that require public health science-based inquiry.

Changing Policies

CDC research and funding have spurred the adoption of evidence-based practices. For example, findings from an EHS-Net study contributed to FDA amending its *Food Code* in 2009 to include a ban on the sale of undercooked ground beef in retail food establishments that offer children's menu items.

Providing a New e-Learning Training Course

CDC's new e-Learning training on environmental assessment of foodborne illness outbreaks teaches state, local, territorial, and tribal environmental health professionals and food safety officials how to investigate foodborne illness outbreaks as part of an outbreak response team, identify contributing and underlying factors, and recommend appropriate control measures.

They learn basic skills required to conduct foodborne-illness-outbreak environ-

mental assessments. These include effective interviewing, observation and record review, sampling, critical thinking, and organizing assessment information (Figure 1).

The 10–12 hour e-Learning (www.cdc.gov/nceh/ehs/eLearn/EA_FIO/index.htm) training course was collaboratively developed by CDC with the help of its EHS-Net grantees, FDA, and USDA. The training is free and consists of self-paced, interactive multimedia instruction delivered over the Internet (Figure 2).

To Learn More

For more information about CDC's food-related work in environmental public health practice, visit www.cdc.gov/nceh/ehs/EHSNet.

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Did You Know?

The Environmental Health Support Center sponsors training courses on a wide variety of subjects related to the programs of the Indian Health Service's Office of Environmental Health and Engineering. You can register for a class up to three months before it starts at www.ihs.gov.



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