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Equipping Environmental Health Workers With Environmental Assessment Tools

Erik W. Coleman, MPH

Food-related illnesses affect tens of millions of people and kill thousands in the U.S. each year. They also cause billions of dollars in health care-related and industry costs annually. As a result, the Centers for Disease Control and Prevention (CDC) have identified reducing food-borne diseases as a “winnable battle (CDC, 2013).” To address this issue, in April 2014 CDC’s National Center for Environmental Health launched two food safety tools that are transforming how environmental health workers conduct foodborne illness environmental assessments as part of an outbreak response and how they report these data to prevent future outbreaks.

Tool #1

The first tool is the e-Learning on Environmental Assessment of Foodborne Illness Outbreaks (www.cdc.gov/nceh/ehs/elearn/ea_fio). This free online training is designed to improve environmental health workers’ competency with foodborne illness outbreak environmental assessments. These assessments, conducted as part of outbreak response, can help identify environmental causes of outbreaks. The clues and data gathered from environmental assessments identify how and why germs got into the environment and spread to make people sick (e.g., improper hand washing resulting from lack of food safety training). Environmental health workers typically conduct environmental assessments and use the information gathered to stop the current outbreak and prevent future ones. Users of the e-Learning tool acquire in-depth skills and knowledge to

- investigate foodborne illness outbreaks as a member of a larger outbreak response team,
- identify an outbreak’s environmental causes, and
- recommend appropriate control measures.

Corresponding Author: Erik W. Coleman, Health Scientist (Informatics), Centers for Disease Control and Prevention, National Center for Environmental Health, Division of Emergency and Environmental Health Services, 4770 Buford Highway NE, MS F-58, Atlanta, GA 30341. HYE1@cdc.gov.

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.

Erik W. Coleman is a health scientist (informatics) in EHSB’s Division of Emergency and Environmental Health Services at the National Center for Environmental Health.

Currently, over 1,900 users in 49 states, the District of Columbia, and over 50 countries throughout the world have registered and begun using the e-Learning tool. Over 60% of federal, state, local, territorial, or tribal government users ($n = 1,188$) are environmental health workers ($n = 762$) who conduct routine inspections, plan reviews, complaint investigations, or outbreak response within their respective government agencies (Figure 1).

Additionally, the e-Learning tool is being used in academic settings and professional training programs throughout the country. Over 200 students have used it to meet their educational and academic requirements (e.g., Bachelor of Science, nursing, and Master of Public Health degree course requirements). CDC programs like the Public Health Associate Program, in which associates are assigned to public health agencies and nongovernmental organizations, encourage associates working in environmental health to use the e-Learning tool.

The increasing enrollment of the e-Learning tool by environmental health workers is encouraging. The National Association of County and City Officials (NACCHO), however, estimates 13,300 environmental health workers are employed at local health departments across the country (NACCHO, 2014). To target more environmental health workers and increase awareness of the e-Learning tool, CDC anticipates strategically working with federal, state, local, territorial, and tribal food safety programs to reach additional environmental health workers.

Tool #2

The second tool launched by CDC, the National Voluntary Environmental Assessment Information System (NVEAIS; www.cdc.gov/nceh/ehs/nveais), is a surveillance system that collects foodborne illness outbreak environmental assessment data. It enables ongoing, systematic collection, management, analysis, interpretation, and dissemination of foodborne illness outbreak environmental assessment data (e.g., detailed food vehicle information, contributing factors, establishment description and categorization, etc.).

NVEAIS is available to federal, state, local, territorial, and tribal food regulatory agencies throughout the U.S. Data reported to NVEAIS will be used to

- characterize food vehicles and monitor trends;
- identify and monitor contributing factors and environmental causes;
- generate hypotheses;
- guide planning, implementation, and evaluation of food safety programs; and
- prevent future outbreaks.

CDC encourages all food safety programs to use NVEAIS to improve food safety in the U.S. Currently, eight state and three local health departments report environmental assessment data to NVEAIS (Table 1).

By participating in NVEAIS, food safety programs provide critical environmental assessment data that can be used to prevent and reduce future outbreaks. CDC will analyze

standardized data from NVEAIS to understand how and why outbreaks occur, share findings and recommend actions from this analysis to improve outbreak response, and prevent future outbreaks.

Environmental health workers in food safety programs play an essential role in the effort to reduce foodborne illnesses. CDC wants federal, state, local, territorial, and tribal food safety programs to use the e-Learning tool and NVEAIS to assist in winning the battle on food safety (www.cdc.gov/winnablebattles/foodsafety). The use of these tools can improve knowledge on how to conduct environmental assessments, help to better understand how and why outbreaks occur, and influence food safety policies and practices so that future outbreaks are reduced and ultimately eliminated.

Biography



Erik W. Coleman, MPH

References

- Centers for Disease Control and Prevention. Winnable battles: Food safety. 2013. Retrieved from <http://www.cdc.gov/winnablebattles/foodsafety>
- National Association of County and City Health Officials. 2013 National profile of local health departments. Washington, DC: Author; 2014. Retrieved from <http://www.naccho.org/topics/infrastructure/profile/upload/2013-National-Profile-of-Local-Health-Departments-report.pdf>

CDC Environmental Assessment Tools

The **e-Learning on Environmental Assessment of Foodborne Illness Outbreaks** provides training on how to conduct foodborne illness outbreak environmental assessments. www.cdc.gov/nceh/ehs/elearn/ea_fio

The **National Voluntary Environmental Assessment Information System** is a national effort to systematically collect, analyze, interpret, and disseminate environmental data from food-borne illness outbreak investigations. www.cdc.gov/nceh/ehs/nveais

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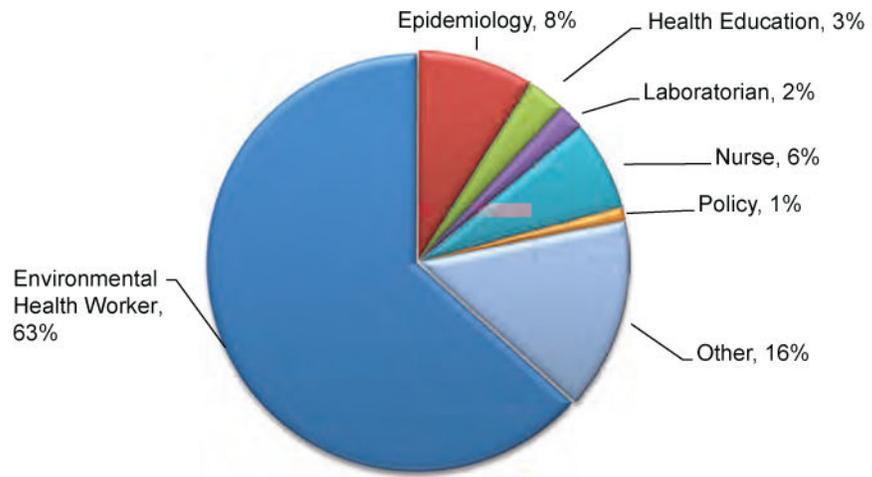


FIGURE 1. e-Learning on Environmental Assessment of Foodborne Illness Outbreaks Government Users: Job Functions
Percentages may equal >100% because of rounding.

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TABLE 1

National Voluntary Environmental Assessment Information System Users

State Programs	Local Programs
California Department of Health Connecticut Department of Health Minnesota Department of Health New York State Health Department North Carolina Department of Health and Human Services Rhode Island Department of Health Tennessee Department of Health	Davis County Health Department (Utah) Fairfax County Health Department (Virginia) New York City Department of Health and Mental Hygiene Note: The Wisconsin Department of Health was inadvertently left off the list of state programs in the original JEH publication.

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