

► **DIRECT FROM CDC** ENVIRONMENTAL HEALTH SERVICES BRANCH

Using the National Environmental Assessment Reporting System to Enhance Foodborne Illness Outbreak Investigations in New York City Restaurants

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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 these columns, EHSB and guest authors share insights and information about environmental health programs, trends, issues, and resources. The conclusions in this article are those of the author(s) and do not necessarily represent the views of CDC.

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New York City (NYC) is home to over 24,000 restaurants, with each receiving a routine inspection of food safety practices by the NYC Department of Health and Mental Hygiene at least once yearly. The department also investigates about 100 suspected restaurant-related foodborne illness outbreaks each year, and about 20–30 of these are confirmed and reported to

the Centers for Disease Control and Prevention's (CDC) National Outbreak Reporting System (NORS).

Within the NYC Department of Health and Mental Hygiene, the Office of Environmental Investigations is responsible for receiving, verifying, and investigating public complaints of foodborne illness linked to NYC restaurants. Complainants are interviewed

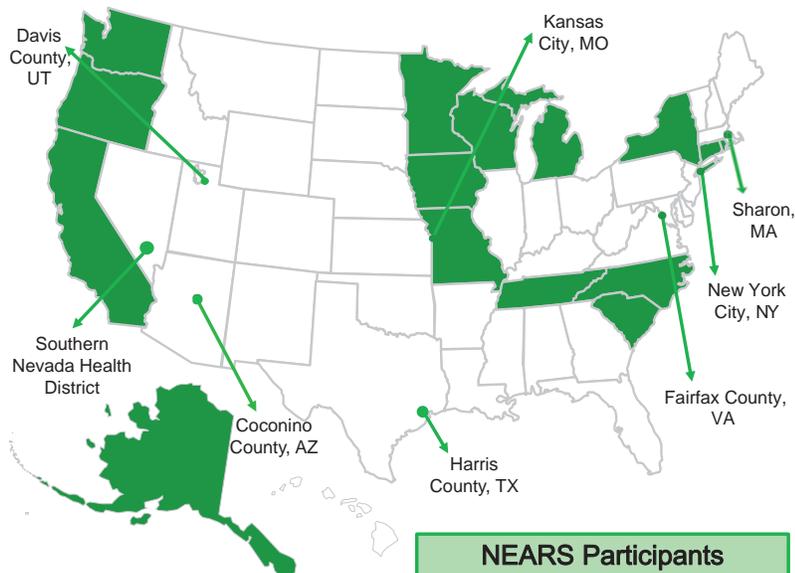
by phone and once an outbreak has been verified (typically meaning two or more cases have been linked to a restaurant), inspectors are dispatched to perform an initial assessment. The priority is to identify and correct the immediate cause(s) of the outbreak (also called contributing factors) so that more people do not become ill. When identified, contributing factors are categorized and reported to CDC NORS as probable or suspected cases of contamination, or improper use of time, temperature, or other processes to control proliferation or survival of agents.

Focusing an investigation on contributing factors can help halt an outbreak, but it does not deepen understanding of why contributing factors occurred. The environmental antecedents upstream in the process that led to the outbreak offer insight into why, and this insight can inform strategies for outbreak prevention—the ultimate public health aim. Examples of environmental antecedents include lack of explicit policies and practices for handling food or cleaning a facility, lack of paid sick leave, communication barriers, complexity of food preparation, and certain physical attributes of the facility such as presence and location of hand washing sinks.

CDC's Environmental Health Specialist Network developed the National Environmental Assessment Reporting System (NEARS) in recognition of the importance of monitoring environmental antecedents and to increase awareness of the role they play in causing outbreaks. NEARS provides tools for standardizing collection of data on environmental antecedents and reporting these data to CDC. CDC further supports participating jurisdictions (Figure 1) by checking, clean-

FIGURE 1

National Environmental Assessment Reporting System (NEARS) State and Local Participants



For a listing of the state and local agencies participating in NEARS, please visit www.cdc.gov/nceh/ehs/nears/participants.htm.

Visit our Web site at www.cdc.gov/nceh/ehs to access these and other resources. Sign up to receive future updates from us at “Get E-mail Updates” at the bottom of the web page.



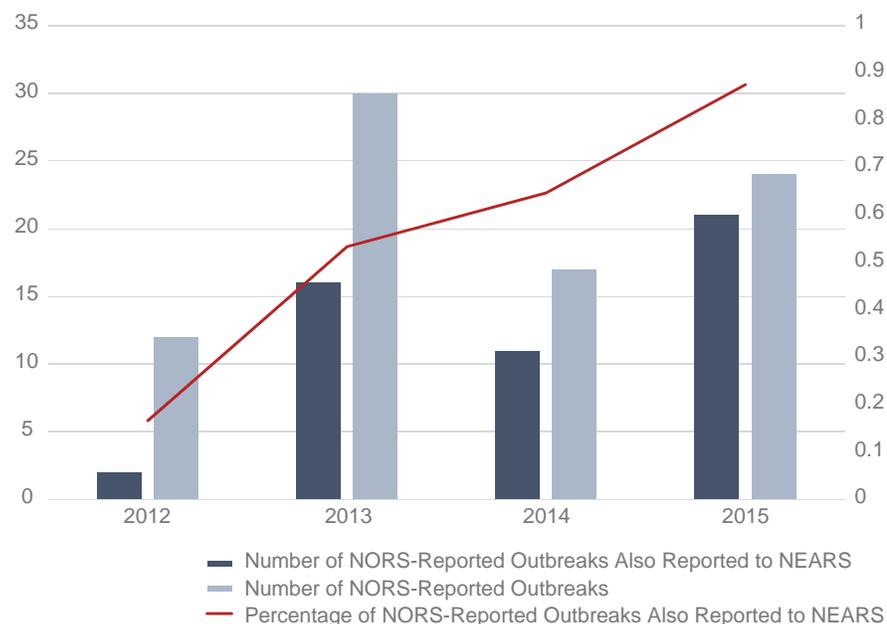
ing, and housing the data they submit, and providing annual customized outbreak surveillance reports that summarize identified agents, restaurant characteristics, contributing factors, and environmental antecedents. Jurisdictions can also download the data they submit to conduct their own analyses.

In 2012, when NYC began piloting NEARS, staff completed standardized environmental assessments for only 2 out of 12 outbreaks linked to restaurants. Improving completeness of reporting meant addressing a few initial obstacles. Adding more elements of standardized data collection to the outbreak investigation had to be extremely efficient to be feasible and sustainable. To meet this need, the establishment observation tool was simplified and shortened, and staff collected information by phone whenever possible. It was important to demonstrate the potential value in devoting time to collecting the additional data, so we created and shared a template for an *Annual Report of Foodborne Illness Outbreaks in New York City*, which contains table shells that can be populated with aggregated data from NEARS and NORS. The report aims to provide quantitative information about aspects of the restaurant environment that we can target to prevent future outbreaks.

By the end of 2015, NYC had conducted environmental assessments using NEARS for 88% of NORS-reported outbreaks in restaurants (Figure 2) and we have enhanced our understanding of the root causes of the outbreaks we have investigated. For example, data we have collected on outbreaks involving a sick food handler working in a restaurant that does not offer paid sick leave has emphasized the need to enforce recently enacted paid sick leave laws in NYC. In 2016, the Office of Environmental Investigations

FIGURE 2

Surveillance for Environmental Antecedents of Foodborne Illness Outbreaks in New York City Restaurants, 2012–2015



NORS = National Outbreak Reporting System; NEARS = National Environmental Assessment Reporting System.

officially adopted NEARS into their standard operating procedure for foodborne illness investigations, ensuring that data on environmental antecedents will be collected and reported for every outbreak going forward. This enhanced data collection will ultimately inform strategies for supporting restaurant

operators in maintaining a foodborne illness prevention-oriented environment that we expect will reduce the occurrence of outbreaks in NYC.

For more information about NEARS, including how to participate, visit www.cdc.gov/nceh/ehs/nears. 🐼

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Did You Know?

You can learn more about all the credentials NEHA offers directly from our credentialing coordinator. View the recorded webinar at www.neha.org/credentialing-webinar for an overview and the process to attain a NEHA credential, including the Registered Environmental Health Specialist/Registered Sanitarian. Questions and answers from attendees during the live webinar are also included.

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The NEHA Endowment Foundation was established to enable NEHA to do more for the environmental health profession than its annual budget might allow. Special projects and programs supported by the foundation will be carried out for the sole purpose of advancing the profession and its practitioners.

Individuals who have contributed to the foundation are listed below by club category. These listings are based on what people have actually donated to the foundation—not what they have pledged. Names will be published under the appropriate category for one year; additional contributions will move individuals to a different category in the following year(s). For each of the categories, there are a number of ways NEHA recognizes and thanks contributors to the foundation. If you are interested in contributing to the Endowment Foundation, please call NEHA at 303.756.9090. You can also donate online at www.neha.org/about-neha/donate.

Thank you.

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