

▶ DIRECT FROM CDC ENVIRONMENTAL HEALTH SERVICES

Christine Vanover,
MPH, REHSAndrew Ruiz,
MSPH

Tick Talk: Keeping Environmental Health Up With Current Trends

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 this column on environmental health services from the Centers for Disease Control and Prevention (CDC) in every issue of the *Journal*.

In these columns, authors from CDC's Water, Food, and Environmental Health Services Branch, as well as guest authors, will share insights and information about environmental health programs, trends, issues, and resources. The conclusions in these columns are those of the author(s) and do not necessarily represent the official position of CDC.

Christine Vanover is a public health analyst at the National Center for Environmental Health (NCEH) and works on vector control issues. Andrew Ruiz is a health scientist at NCEH and also works on vector control issues.

Tickborne diseases are on the rise in the U.S. A recent article shows that the number of reported cases of tickborne disease doubled from 22,527 cases in 2004 to 48,610 cases in 2016 (Figure 1) (Rosenberg et al., 2018). Lyme disease makes up 82% of all reported tickborne disease cases and the geographic area at risk for Lyme disease has been expanding (Kugeler, Farley, Forrester, & Mead, 2015). Data from clinical and laboratory diagnoses suggest that approximately 300,000 Americans are infected with Lyme disease each year (Hinkley et al., 2014; Nelson et al., 2015). In the past 13 years, 7 new tickborne diseases affecting humans were identified in the U.S. (Rosenberg et al., 2018).

There are currently no vaccines available in the U.S. to prevent tickborne diseases. A recent study suggests that although pesticide application alone decreased the number

of ticks in residential settings, it was not an effective method for preventing Lyme disease and other tickborne diseases (Hinckley et al., 2016). Current tickborne disease control strategies heavily rely on personal protective behaviors at the individual and household level, which poses a challenge for environmental health professionals who are often called upon to address tickborne disease concerns in their communities.

Approximately half of all state and local health departments provide vector control services that are commonly under the purview of environmental health programs (Association of State and Territorial Health Officials, 2016; National Association of County and City Health Officials [NACCHO], 2016; Ruiz et al., 2018). While vector control might be a priority for many health departments, there is a need to strengthen and build vector control capacity. For example, an assessment of

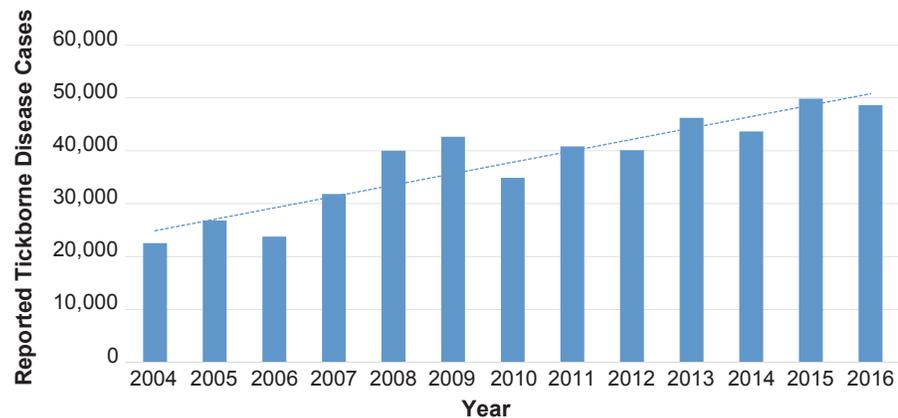
health department and other local agency vector control programs found that 84% of the programs needed improvement and were not prepared to respond to a mosquito-borne disease outbreak (NACCHO, 2017). These results highlight the need to support vector control programs and assure a competent workforce capable of facing growing vectorborne disease challenges.

Environmental health professionals should be aware of two federal initiatives that could enhance vector control services in the U.S.: the Tick-Borne Disease Working Group and the establishment of Regional Centers of Excellence in Vector-Borne Diseases. The U.S. Congress enacted the 21st Century Cures Act in 2016 that authorized the U.S. Department of Health and Human Services secretary to form the Tick-Borne Disease Working Group. The working group is made up of federal and public sector clinicians, tick researchers, and patient advocates with the purpose of reviewing ongoing research and advances in control, diagnosis, and treatment of tickborne disease. This working group will also ensure interagency coordination and minimize duplication of efforts (U.S. Department of Health and Human Services, 2017). They released their first report to Congress in November 2018, publicly available at www.hhs.gov/ash/advisory-committees/tickbornedisease/index.html. Their reports will help shape the nation's tickborne disease priorities.

The second initiative began in 2017 when the Centers for Disease Control and Prevention (CDC) created five Regional Centers of Excellence in Vector-Borne Diseases to coordinate vectorborne disease research in their respective regions. Their focus is on not only developing new vector control tools and technologies but

FIGURE 1

Tickborne Disease Cases Reported to the National Notifiable Disease Surveillance System—United States, 2004–2016



Note. Adapted from Rosenberg et al., 2018. Lyme disease reporting changed in 2008 to include probable cases in addition to confirmed cases.

also training the next generation of vector control professionals and bolstering state and local vector control programs (Centers for Disease Control and Prevention, 2018). Developments from these two initiatives could mean more opportunities for environmental health professionals to engage in tick control activities and expand existing programs.

The need to increase tick services in the U.S. will likely lead to more environmental health agencies participating in tick surveillance and control. Ideally, a tick control program should adopt a comprehensive approach to controlling ticks, which includes education and outreach on personal protection behaviors, tick surveillance to identify high risk areas in the community, and the use of surveillance data to inform environmental and chemical control strategies. The 10 Essential Environmental Public Health Services (EPPHS) provide a framework that can be used to encourage a comprehensive and programmatic approach to providing tick control services and building capacity. To learn more about the 10 EPPHS and how to improve to your vector control program and tick control services, check out CDC's resources and tools available at www.cdc.gov/nceh/ehs/activities/vector-control.html. For resources on tick control and tickborne

disease prevention, visit www.cdc.gov/ticks and www.cdc.gov/lyme/index.html.

CDC and partners continue to support environmental health programs and professionals by creating vector control tools and resources such as the e-Learning course titled Vector Control for Environmental Health Professionals (www.cdc.gov/nceh/ehs/elearn/vcehp.html). This course includes a module specifically covering tick biology, tickborne diseases, and tick management. The National Environmental Health Association (NEHA) released a new resource called VeCtoR: Vector Control Tools & Resources (Figure 2). This innovative toolkit provides access to a wide range of resources, organized by the 10 EPPHS, which includes templates, guidance, and best practices (www.neha.org/eh-topics/vectors-and-pest-control-0/essential-services). NEHA's interactive vector map (www.neha.org/vector-map) is another valuable tool for learning more about the ticks, mosquitos, and pests in your state. This resource provides a general overview of distribution, surveillance, and control of a variety of vectors and pests.

Environmental health professionals are encouraged to leverage these resources to enhance their knowledge of vectors and control strategies, as well as strengthen their vector control programs. 🐜

FIGURE 2

VeCtoR: Vector Control Tools & Resources



Corresponding Author: Christine Vanover, National Centers for Environmental Health, Centers for Disease Control and Prevention, 4770 Buford Highway NE, Atlanta, GA 30341. E-mail: cvanover@cdc.gov.

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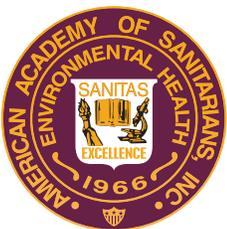
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Did You Know?

National Groundwater Awareness Week is March 10–16. This year marks the 20th anniversary of the observance. This year’s theme is “Think.” Think about this, 44% of the U.S. population depends on groundwater for its drinking water supply. And think about this, the U.S. uses 349 billion gallons of freshwater every day. Learn more about this observance and how you can get involved at www.ngwa.org/get-involved/groundwater-awareness-week/groundwater-awareness-week-2019.

DAVIS CALVIN WAGNER SANITARIAN AWARD



The American Academy of Sanitarians (AAS) announces the annual Davis Calvin Wagner Sanitarian Award. The award will be presented by AAS during the National Environmental Health Association’s (NEHA) 2019 Annual Educational Conference & Exhibition. The award consists of an individual plaque and a perpetual plaque that is displayed in NEHA’s office lobby.

Nominations for this award are open to all AAS diplomates who:

1. Exhibit resourcefulness and dedication in promoting the improvement of the public’s health through the application of environmental and public health practices.
2. Demonstrate professionalism, administrative and technical skills, and competence in applying such skills to raise the level of environmental health.
3. Continue to improve through involvement in continuing education type programs to keep abreast of new developments in environmental and public health.
4. Are of such excellence to merit AAS recognition.

NOMINATIONS MUST BE RECEIVED BY APRIL 15, 2019.

Nomination packages should be e-mailed to

Gary P. Noonan at gnoonan@charter.net.

Files should be in Word or PDF format.

For more information about the award nomination, eligibility, and evaluation process, as well as previous recipients of the award, please visit sanitarians.org/awards.