

▶ DIRECT FROM CDC ENVIRONMENTAL HEALTH SERVICES



Chad Curtiss

Equipping Educators to Empower Students With a Tracking Education Kit

Editor's Note: The National Environmental Health Association 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 tools, resources, and guidance for environmental health practitioners. The conclusions in these columns are those of the author(s) and do not necessarily represent the official position of CDC.

Chad Curtiss is an Oak Ridge Institute for Science and Education (ORISE) fellow with the CDC National Environmental Public Health Tracking Program. He works to accelerate public health workforce development within the Tracking Program for educators and public health practitioners.

A survey from 2019 found that one in four environmental health professionals are older than 55 years and furthermore, one in four environmental health professionals planned to retire within 5 years (Gerding et al., 2019). Those findings reveal serious recruitment needs within the environmental health workforce. In addition, the public health landscape continues to evolve, with technological improvements in data collection, analysis, visualization, and dissemination. New environmental public health professionals must be equipped with the most current and best resources to help them succeed in their jobs. Educating new environmental health professionals starts at the undergraduate level. It continues through graduate studies and beyond, and the Environmental Public Health Tracking Program (Tracking Program) within the Centers for Disease Control and

Prevention is ready with timely and practical resources for this growing area of need.

Public Health Educator Goals and Responsibilities to Prepare Students

Public health educators in universities and colleges are crucial in providing essential public health knowledge to students. As they prepare students for the workforce, they are responsible for covering a wide range of topics and tools as part of their course delivery. Their instruction is instrumental in guiding student understanding of environmental health topics such as environmental justice, climate and health, air and water quality, and environmental hazards. Addressing the breadth of topics requires time to plan and awareness of relevant resources—challenges that many educators face.

The Tracking Program provides publicly accessible resources educators can use to support common environmental health activities such as:

- Monitoring community health.
- Identifying people who live or work in settings that put them at greater risk from exposure to hazards.
- Conducting epidemiological studies.
- Planning and applying prevention activities.
- Sharing information with communities.
- Informing city or state planning and health policies.

Tracking Program Resources for Educators

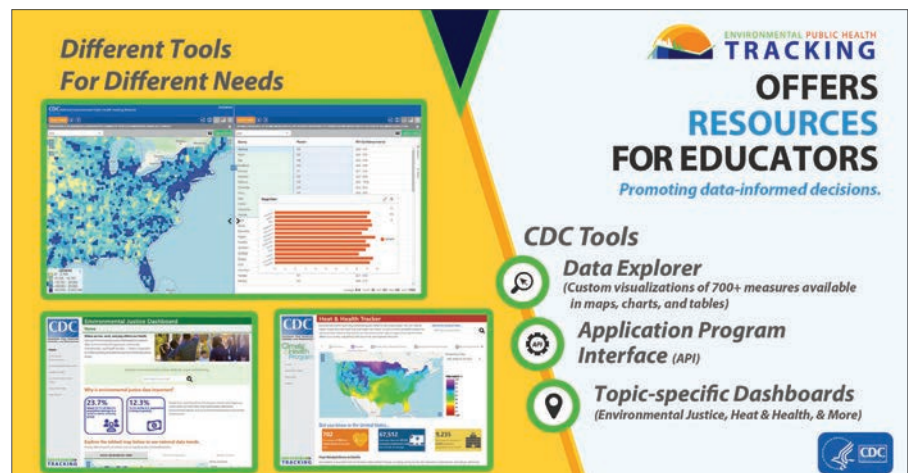
The Tracking Program recognizes that it is not enough to just have data. It is equally important to deliver these data in a variety of ways to serve the different needs of users and inform research and decision making at local, state, and national levels.

The Tracking Program provides powerful public health data and visualization tools that can help educators and their students better characterize public health issues of interest. The tools enable students to explore data connections between people who live in locations that put them at greater risk of being exposed to hazards, environmental factors, and diseases. The tools also provide links to information about the selected data and to all Tracking Program content areas, indicators, data, and associated information.

Educators will benefit from the Tracking Program data visualization resources that can be used to develop lesson plans. Students can use Tracking Program data to better include data-informed connections in their work.

FIGURE 1

National Environmental Public Health Tracking Program Tools From the Centers for Disease Control and Prevention (CDC)



Essential Tracking Program tools (Figure 1) that can be used in the environmental health workforce include the following:

- Data Explorer
- Dashboards
- Application program interface (API).

The interactive Data Explorer (www.cdc.gov/ephracking) has more than 700 environmental and health data measures from more than 90 sources. Students can explore choropleth maps (i.e., a type of statistical thematic map that uses color to show how data changes from place to place) to evaluate specific data side-by-side with other maps. They can analyze trends and issues that involve a variety of health conditions, including asthma, heart disease, and diabetes. Students can also view these data in charts and tables that can be downloaded for further analysis. With some simple coding, users can export and embed any Data Explorer map, chart, or table into their own website.

The Tracking Program also offers interactive dashboards that can be tailored to a specific community. The dashboards provide additional context to the data, such as text or infographics, to help with data literacy and provide a better understanding of the data.

All the data available on the Tracking Network can be accessed by an API, which supports creation of apps or websites. In fact, the Tracking Network uses its own API to feed data from the Data Explorer into the

dashboards to ensure that the latest data are always available.

Learn About the Tracking Education Kit

The Tracking Program aims to connect environmental and health information in one place, making it accessible to anyone and easy to share. Tools are only effective, however, when they are known and used. To that end, the developing workforce must recognize and learn how to benefit from Tracking Program tools, which begins with education.

To support educator curriculum development, inform student educational needs, and demonstrate how Tracking Program tools are helpful, the Tracking Program created the Tracking Education Kit. The kit is a collection of instructor lesson resources featuring PowerPoint slides, an assignment bank, a questions bank, an assignment bank navigator, and an instructor guide.

To create a robust kit that would serve college-level educators, the Tracking Program formed an academic advisory group. Feedback from the academic advisory group was instrumental in shaping the development of the kit. The academic advisory group is made up of five members from three universities: Emory University Rollins School of Public Health, Georgia State University School of Public Health, and Rutgers University School of Public Health. Based on input from the

What Is in the Tracking Education Kit?

PowerPoint Slides: The slides are separated into independent sets by topic to allow educators flexibility in choosing which information to highlight. The slides give an overview of the National Environmental Public Health Tracking Program (Tracking Program) and introduce the Data Explorer, Environmental Justice Dashboard, Heat & Health Tracker, Melanoma Dashboard, and the application program interface (API). The slides also cover topics such as emergency preparedness and where to find more information about tracking.

Questions Bank: The questions bank includes questions with answers based on information in the presentation slides. The questions can be added to an exam, quiz, or knowledge check.

Assignment Bank: The assignment bank provides more than 30 assignments that guide users through the practical application of Tracking Program tools and resources. Many assignments feature additional instructions on conducting an in-person or virtual class activity and include prompts for discussion posts. The activities and prompts can be completed alongside the main assignment or as an independent class activity.

Supporting Resources:

- **Assignment Bank Navigator:** The assignment bank navigator helps educators explore assignments in the assignment bank. It organizes assignments by 14 Council on Education for Public Health competencies, 8 domains, and 10 learning objectives across undergraduate- and graduate-level courses. It specifies whether an assignment includes an in-person or virtual activity; contains a discussion prompt; and is for a group, an individual, or both.
- **Instructor Guide:** The instructor guide helps educators become familiar with Tracking Program resources and provides guidance on navigating and integrating content from the Tracking Education Kit into existing course content.

advisory group, the Tracking Education Kit is designed to fulfill standards set by the Council on Education for Public Health for undergraduate- and graduate-level courses. Additionally, the content includes assignments for in-person and virtual settings.

Request Access to the Tracking Education Kit

The Tracking Education Kit is available by request beginning in mid-2023. To learn

more or request the kit, email: trackingsupport@cdc.gov. 🌸

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