A Millennial's Take on CDC's Environmental Public Health Tracking Network

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Fifteen years ago, the Pew Environmental Health Commission detailed in a report the lack of basic information available to document linkages between environmental exposures and the health of the public. The commission found that there was "no cohesive national strategy to identify environmental hazards, measure population exposures, and track health conditions that may be related to the environment (Pew Environmental Health Commission, 2000)." This report served as the impetus for the creation of the Centers for Disease Control and Prevention's (CDC's) Environmental Public Health Tracking Program (Tracking Program). Before the Tracking Program was funded in 2002, no integrated systems existed at the national or state level that tracked exposures to environmental hazards and potential health effects. In 2002, the Massachusetts Department of Public Health was one of the first state health departments to receive CDC funding for local tracking projects. At this time, I was a preteen in Massachusetts, also connecting the pieces to a bigger picture; but in my case this meant playing Tetris® on my handheld Game Boy®.

In 2009, the National Environmental Public Health Tracking Network (Tracking Network) launched, becoming the first-of-its-kind surveillance system to provide environmental data and public health data in a one-stop shop (Environmental Public Health Tracking Program, 2010). Just as the Tracking Network was maturing and developing into the surveillance system it is now, millennials were being shaped by connectivity and technical advances. Millennials have had access to information at our fingertips since elementary school through the use of computers and smartphones. Today, as a user of the Tracking Network, I can attest to its user-friendly functionality and wealth of data. With just a few strokes on the keyboard, data on environmental hazards and exposures and data on diseases can be pulled up quickly. This system provides interactive and customizable tools to make sense of the data. The younger generation is adept at navigating new platforms and technologies; our brains are trained to adapt to new information-processing skills. We are the first generation to have had access to the Internet during our formative years, which molded the way in which we interact with technology. We also care deeply about the environment, our health, and social determinants of health. The Tracking Network is not only designed in a way that is appealing to millennials like me, but the content it houses is equally as important to my generation.

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CDC's Tracking Program funds health departments in 25 states and one city to build and maintain local tracking networks. These local networks in turn feed data to the national system. The Tracking Program also acquires data from other federal and professional organizational partners. Many far-reaching applications of this data occur: the data help individuals observe trends of exposures and health outcomes, identify at-risk populations, advance research on linkages, and help people develop and evaluate public health actions to control or prevent environment-related diseases.

Millennials and Technology

In the age of instant gratification, this dynamic web-based surveillance system is the kind of product that can be attractive to millennials. As a newly minted 26-year-old adult, I identify as a millennial. Millennials, roughly defined as people born from 1981 to 1997, want information—but we want it fast and easily accessible. Young people are able to rapidly surf and search, synthesize vast amounts of information, and make rapid decisions. Many experts see us as nimble analysts and decision makers (Anderson & Rainie, 2012).

By visiting the Tracking Network, I can quickly gather information on a number of different areas. The Tracking Network's data are divided into three content sections: Health Effects, Environments, and Population Health. The Health Effects section includes data on asthma, birth defects, cancer, carbon monoxide poisoning, childhood lead poisoning, heart disease, reproductive and birth outcomes, and developmental disabilities. The Environments section includes data on climate change, community design, homes, toxic substance releases, outdoor air, water, and pesticide exposures. Finally, the Population Health section includes data on socioeconomics, demographics, children's environmental health, health impact assessments, biomonitoring, and lifestyle risk factors. Data on the Tracking Network are presented as measures and organized by indicator for each content section. For Tracking, an indicator is one or more item, characteristic, or something else that will be assessed and that provides information about a population's health status, their environment, and other factors. This is assessed through direct and indirect measures (e.g., levels of a pollutant in the environment as a measure of possible exposure) that describe health or a factor associated with health in a specified population.

A variety of features make this surveillance system stand out. The Tracking Network includes interactive maps, charts, and tables; a wide-range of vibrant infographics, and a new function called "Info by Location (Figure 1)." This tool allows the user to get quick, customized information on a specific county or state. This feature is convenient to millennials as we are accustomed to "quick-fix" information. Another new feature recently released on the Tracking Network is the multiple measure query function (Figure 2). Now, Tracking Network users are able to query and view multiple measures simultaneously using maps. This means users are now able to display multiple data types and are able to explore trends and possible associations by comparing these multiple measures. Millennials are quick-acting multitaskers, so this functionality fits our needs perfectly.

Millennial Values

Of particular importance to some millennials (like me) are the population characteristics and environmental health data found on the Tracking Network. Our diversity sets us apart from other generations. We are the most racially diverse generation in U.S. history, with some 43% of millennial adults being non-white. (Doherty, Krishnamurthy, Parker, & Taylor, 2014). Many of us are immigrants, or like me, a child of immigrants. Millennials born outside of the U.S. now make up 15% of the population (White House Council of Economic Advisors, 2014). The U.S. Census Bureau projects the full U.S. population will be majority non-white by 2043 (U.S. Census Bureau, 2012). By using the Tracking data, millennials can advance environmental justice and health disparity issues affecting our generation.

Also of importance is our view of the physical environment. A great area of concern to millennials is climate change, something I see as one of my generation's greatest challenges. With the Tracking Program's expanded data on climate change, millennials are able to delve into more than 40 years of weather data about extreme heat days and events and temperature distribution. The data on extreme heat days and events include temperature, heat index, and number of days to define extremely hot days and extreme heat events. The temperature distribution data allows for daily temperature and heat index by county (Figure 3). With 70 years of projected heat data, users are able to inform climate adaption strategies for the future. These data, paired with historical hospitalization data, allow the user to make comparisons between environmental conditions and health problems.

Conclusion

Living in a well-connected world, we are already in an environment saturated with data that can be retrieved easily. The Tracking Network is different; it is the nation's most comprehensive environmental public health surveillance system. The data in this system come from a variety of national, state, and city sources but are conveniently housed in one place.

By 2020, millennials will make up more than one of three adult Americans. Also predicted, 75% of the U.S. workforce will be comprised of millennials by 2025 (Hais & Winograd, 2014). The Tracking Network has been designed to be used by and responsive to the needs of users like me. As we begin to saturate the workforce, millennials will be the next generation's thinkers and movers and decision makers. As the Tracking Network also continues to expand, adding new areas of application and increasing functionality, millennials will have no trouble being able to navigate this important surveillance tool to help advance their generation's public health.

To learn more on the Tracking Program's work, visit us online at www.cdc.gov/eph tracking. To further stay connected with the Tracking Program and get updates on the newest data, tools, and resources, join our LIST-SERV by e-mailing epht@cdc.gov.

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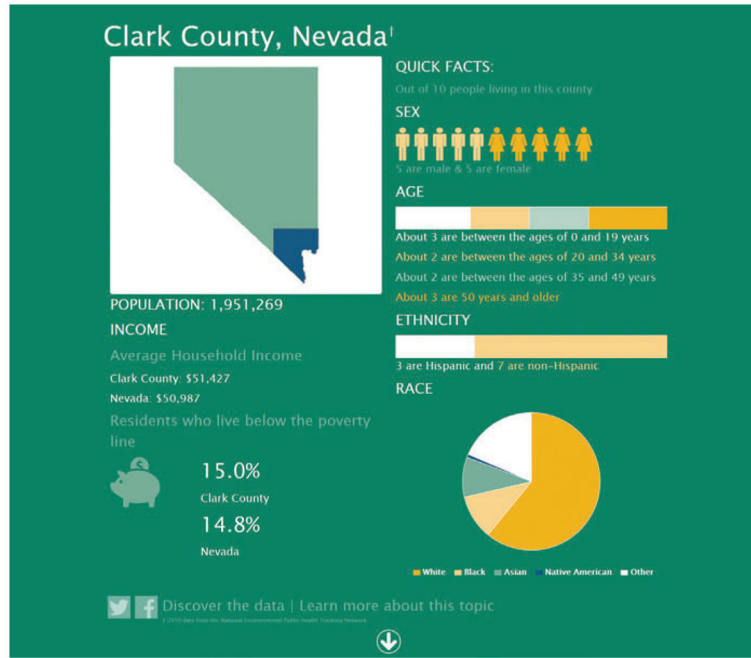
FIGURE 1.
Info by Location (Demographics Section Screenshot)
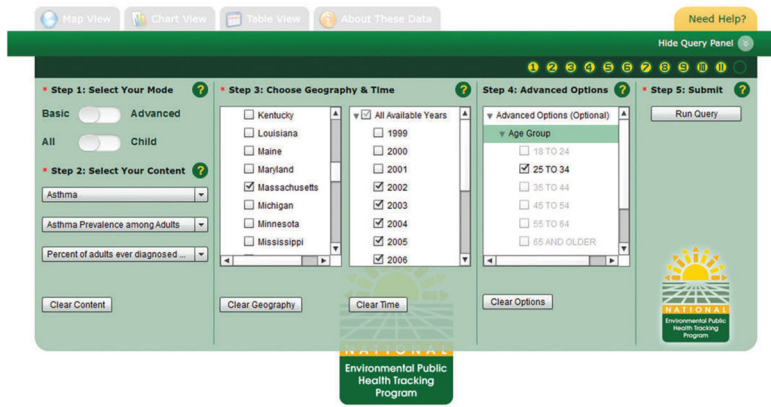
FIGURE 2.
Tracking Portal Displaying Multiple Measures

FIGURE 3.
Climate Change Section of Tracking Program Web Site