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Enumerating the Environmental Public Health Workforce—Challenges and Opportunities

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, 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 services being developed through EHSB include access to topical, relevant, and scientific information; consultation; and assistance to environmental health specialists, sanitarians, and environmental health professionals and practitioners.

The findings and conclusions in this report are those of the author(s) and do not necessarily represent the official position of CDC.

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Workforce enumeration is the foundation for identifying workforce needs. In 2000, the Health Resources and Services Administration (HRSA) sponsored an enumeration of the public

health workforce (HRSA, 2000), but since then, no comprehensive enumeration has occurred. The Centers for Disease Control and Prevention (CDC) and HRSA are now collaborating on an effort to determine the number

and composition of the U.S. workforce at the federal, state, and local levels.

Limited public health workforce data are being captured by periodic profile studies by the Association of State and Territorial Health Officials (ASTHO, 2011), the National Association of County and City Health Officials (NACCHO, 2011), the U.S. Office of Personnel Management (OPM, 2011a), the Bureau of Labor Statistics (BLS, 2011), and similar surveys. No one source, however, provides complete data on all, or even the majority of, public health workers. One key goal of the CDC-HRSA collaboration is to establish public health workforce enumeration as an ongoing activity—a surveillance-like system—by using existing data sources and focusing first on the governmental public health workforce.

To that end, a case definition for *public health worker* for this phase of the project has been developed that encompasses governmental public health workers at the federal, state, and local levels. The governmental public health workforce was defined as “all persons responsible for providing any of the 10 Essential Public Health Services who are employed in federal, state, or local governmental public health agencies and those providing environmental health and public health laboratory services (University of Michigan/Center of Excellence in Public Health Workforce Studies & University of Kentucky/Center of Excellence in Public Health Workforce Research and Policy [U MI & U KY], 2012).” This case definition might underestimate the total number of public health workers, but it serves as the necessary first step in routinely enumerating and characterizing the nation's governmental public health workforce. Such

a surveillance-like system can provide accurate and timely information to researchers, public health decision makers, health planners, and policy makers.

One of the more difficult groups to enumerate and categorize accurately is the environmental public health (EPH) worker because, of all the public health disciplines, they might be the group with the most diverse assignments. EPH workers in a state health department or in a state environmental protection agency might have similar job functions described within a state personnel system, but as with other public health professions, job titles for EPH workers vary widely and are difficult to enumerate precisely. This can also be observed at the local level and in large cities where EPH workers often are situated in agencies outside the traditional health department. Consequently, NACCHO's and ASTHO's profile studies probably do not capture the data necessary to enumerate EPH workers thoroughly. In contrast, double-counting personnel likely occurs in states with centralized personnel systems where state-funded employees are deployed to the local level.

Given the complexity of the EPH workforce in terms of the specialization of the occupations and workplace settings, conducting an accurate characterization of the workforce is imperative. One of the grandfathers of the EPH profession, Larry Gordon, drew an important distinction between environmental health professionals and professionals working in environmental health. Later, in 2009, a message from then-president of NEHA Welford C. Roberts said, "There is a current need for a comprehensive enumeration of the environmental health workforce (Roberts,

2009)." Enumeration is important because it leads us to question why the EPH profession does not have a standardized curriculum or competency standards and how broad job descriptions and titles can obscure identification of the actual EPH discipline. This stands in stark contrast with the medically based disciplines within public health, which tend to have required board certifications, competency standards, and distinct titles for practicing professionals. Students might perceive this as a barrier to entering EPH, leaving our pipeline supply diminished.

CDC recognizes the importance of enumerating the EPH workforce and is therefore at the forefront of planning strategies to include these workers in the CDC-HRSA collaboration efforts. Recently, the first year report of the collaboration was published by the University of Michigan Center of Excellence in Public Health Workforce Studies and the University of Kentucky Center of Excellence in Public Health Workforce Research and Policy. That report outlines the methodology, results, and recommendations of the first phase of the enumeration project (U MI & U KY, 2012). EPH worker estimates are presented in the tables, although they are undercounted because those workers not employed by the state or local health departments are not included in ASTHO's and NACCHO's profile surveys. The level of undercounting of environmental health workers at the state and local levels varies, depending on the state and local structure.

By using data from the 2011 OPM survey, we determined that an estimated 7,651 EPH workers are in the federal civilian sector of selected U.S. government depart-

ments (i.e., the Departments of Health and Human Services, Agriculture, Homeland Security, Defense, Veteran Affairs, and the Environmental Protection Agency) (OPM, 2011b). Data from the 2010 Bureau of Labor Statistics estimates reveal that 37,970 and 32,930 workers are employed by state and local governmental agencies, respectively. These numbers vary considerably from the 2010 ASTHO survey (5,780) and the 2010 NACCHO survey (13,800). As we have discussed, some of the difference might be attributed to the fact that EPH workers are not always employed by the state or local health departments and are thus undercounted in these two surveys; other reasons might be the definition of EPH worker used in the different surveys or the timing of the surveys.

NEHA can help facilitate discussions among ASTHO and NACCHO and other state or local environmental health affiliates and partners to more accurately account for all EPH workers, regardless of employment locations. To have more accurate data on the numbers of EPH workers, more discussions with the partners should occur. In particular, NEHA and CDC's Environmental Health Services Branch will work with selected state partners to understand the enumeration challenges presented when states go through organizational changes. Only through such collaborations can the goal of an accurate and reliable workforce surveillance-like system be realized. 🗣️

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References

- Association of State and Territorial Health Officials. (2011). *ASTHO profile of state public health: Volume two*. Arlington, VA: Author. Retrieved from http://www.astho.org/uploadedFiles/Publications/Files/Survey_Research/ASTHO_State_Profiles_Single%5B1%5D%20lo%20res.pdf
- Bureau of Labor Statistics. (2011). *Occupational employment statistics*. Washington, DC: Author. Retrieved from <http://www.bls.gov/oes/home.htm>
- Health Resources and Services Administration. (2000). *The public health workforce: Enumeration 2000*. Report of the Center for Health Policy, Columbia University School of Nursing. Washington, DC: U.S. Department of Health and Human Services.
- National Association of County and City Health Officials. (2011). *2010 national profile of local health departments*. Washington, DC: Author. Retrieved from <http://www.naccho.org/topics/>

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References *continued from page 35*

<p>infrastructure/profile/resources/2010report/upload/2010_Profile_main_report-web.pdf</p> <p>Roberts, W.C. (2009). The environmental health industry: Salute to the private sector. <i>Journal of Environmental Health</i>, 72(4), 4, 43.</p> <p>University of Michigan/Center of Excellence in Public Health Workforce Studies, & University of Kentucky/Center of Excellence in Public Health Workforce Research and Policy. (2012). <i>Strategies for enumerating the U.S. Government public health workforce</i>. Washington, DC: Public Health Foundation. Retrieved from</p>	<p>http://www.phf.org/resourcestools/Documents/Enumerating_the_Public_Health_Workforce_Final_Report_2012.pdf</p> <p>U.S. Office of Personnel Management. (2011a). <i>Federal classification and job grading systems</i>. Washington, DC: Author. Retrieved from http://www.opm.gov/fedclass/</p> <p>U.S. Office of Personnel Management. (2011b). <i>FedScope federal human resources data</i>. Washington, DC: Author. Retrieved from http://www.fedscope.opm.gov/v</p>
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