

Direct from CDC

Environmental Health Services Branch

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A New Reality for Environmental Health

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 conclusions in this article are those of the author(s) and do not necessarily represent the views of the Centers for Disease Control and Prevention.

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Today's economic situation presents a new reality for environmental health (EH). The flexibility of the system may have extended beyond its ability to perform. As a result, EH professionals need to think hard about broadening environmental health's scope and type of practice because returning to the status quo of recent years is unlikely. This column will focus on

- the tremendous EH workforce issues facing the U.S.,
- the efforts of the Environmental Health Services Branch (EHSB) at the Centers for Disease Control and Prevention (CDC) over the past year to favorably affect these workforce issues, and
- possible initiatives for EH practitioners to broaden the scope of practice in the new reality of the field.

Issues Facing the Environmental Health Workforce

The tough economic environment in which the U.S. is currently operating has affected workers across the country, and the field of environmental health is no exception. In late 2008, when President-elect Obama and the U.S. Congress were formulating a stimulus package to help turn the U.S. economy around, the National Association of County and City Health Officials (NACCHO) conducted a survey of city and county health departments about the effects of the economic downturn on local health departments. From the survey results, NACCHO estimated that more than 7,000 local health department jobs had been lost in 2008 and at least that number was expected to be lost in 2009.

Other discouraging news came from NACCHO's sister public health agency at the state level, the Association of State and Territorial Health Officials (ASTHO), which also recently surveyed its members. That survey found that

- federal dollars make up about half of the average state's public health budget,
- 33% of states will lay off workers,
- 60% of states have reduced services,
- 30% of states have eliminated programs, and
- 22% of health departments expect a cut of at least 10% for FY 2009.

In addition, Nelson Fabian, NEHA's executive director, and Rebecca Berg, also with NEHA, conducted a recent informal survey of individual NEHA members across the country with similar findings as the other surveys.

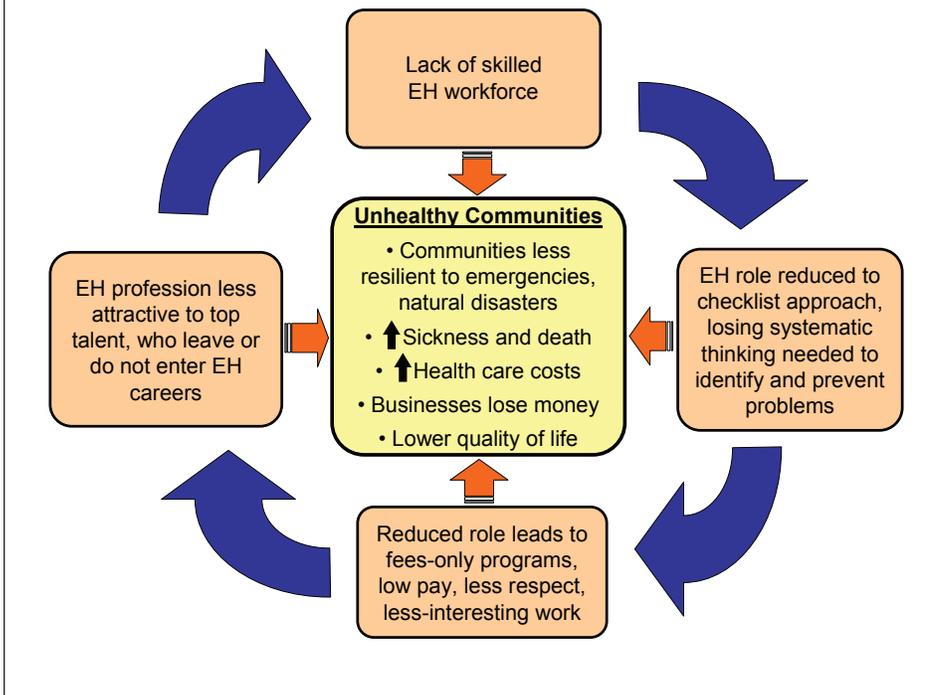
- EH programs are being eliminated.
- EH programs are being downsized.
- EH programs are reverting to being fee based and mandated.
- Vector control programs have been hard hit; one prominent EH director stated, "Mosquitoes don't pay fees."
- Community assessment and planning programs (without fees) are also hard hit.
- Some personnel are now commuting long distances because they are unable to sell their houses where they had their first jobs.

Finally, here at CDC, in early spring 2009, the Office of Workforce and Career Development (OWCD) released a report on the EH workforce ("Strategic Options for CDC Support of the Local, State, and Tribal Environmental Public Health Workforce"; http://www.cdc.gov/nceh/ehs/Docs/Strategic_Options_for_CDC_Support.pdf). In summary,

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FIGURE 1

Environmental Health (EH) Workforce Crisis Feedback Loop



the report found that the EH workforce is in crisis (Figure 1) and gave recommendations for CDC leadership in several areas, including

- improving training and education;
- marketing the EH profession;
- improving recruitment, benefits, and retention;
- developing performance indicators;
- improving leadership development; and
- developing overall comprehensive vision and strategy.

How CDC Is Addressing EH Workforce Issues

These surveys and reports present a dire picture, indeed, of the current state of the EH workforce. CDC is committed, however, to using its resources to address these issues and ameliorate as much as possible their negative effects on the field of environmental health.

CDC began these efforts at home first. Last year at this time, my column in the *JEH* described how EHSB had aligned its staffing with the major goal areas of the national EH revitalization strategy (<http://www.cdc.gov/nceh/ehs/Strategy.htm>). In addition, EHSB has gone through a long, sometimes ardu-

ous, process to create an internal strategic plan. This plan further refines EHSB activities to direct the branch toward the overall vision of EH revitalization. Figure 2 is a simplified view of that internal strategic plan, which includes a large segment dealing with EH workforce issues.

In addition to an internal strategic plan, EHSB also developed an EH workforce plan and presentation to address the lack of EH involvement in outbreak investigations. Before I arrived at CDC about two years ago, my previous EH experience had been at the local and state levels where we worked hard to form teams with colleagues in epidemiology, nursing, and laboratory sciences. After a few months working at CDC, however, I discovered that EH is not as strong a player in outbreak investigations at the local, state, and national levels as it should be to maximize prevention opportunities. Ideally, an effective public health model would be one where the epidemiology, laboratory, and environmental health disciplines of the disease triangle are actively engaged in outbreak prevention and response.

To help EH become more involved in outbreak investigations, EHSB created and submitted a 10-step plan, linked to EHSB's inter-

nal strategic plan, that was based on ideas I had heard during my travels to public health organizations across the country and from colleagues at CDC. The goal of the 10-step plan is to build positive working relationships within CDC to better respond to outbreaks. More importantly, it also focuses on building the EH workforce capacity in this country to maximize prevention opportunities in future outbreaks and other emergencies. The plan has become known as a staircase plan of ideas, concepts, and projects moving forward to 2020. EHSB used CDC's internal outbreak hotwash process as the opportunity to launch it.

A few months after EHSB developed the 10-step plan, as the national presidential election approached, collapses of major financial institutions and companies occurred. President-elect Obama asked Congress to formulate a stimulus package to help the economy. Across the federal government, employees created proposals that would preserve and create jobs. EHSB created a stimulus proposal about the EH workforce issues that was based on the 10-step EH workforce plan.

During the transition of the stimulus bill from the House to the Senate, the budget allocation for workforce issues moved from CDC to the Health Resources and Services Administration (HRSA) and largely changed to primary care. This change meant that the EH workforce proposal did not get sent for funding consideration, but CDC is working closely with HRSA to identify opportunities for collaboration.

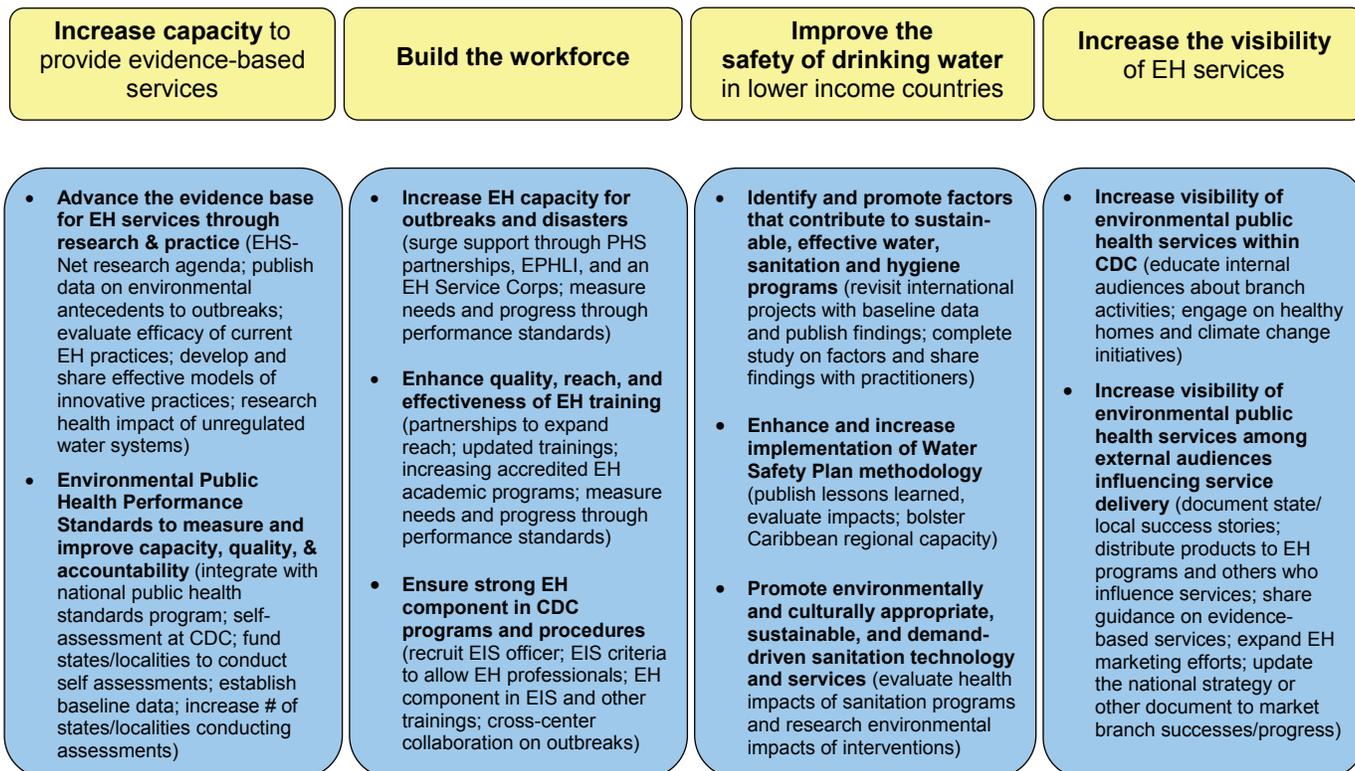
In addition to collaborating with HRSA, CDC is moving forward on a number of other opportunities for addressing the EH workforce and capacity issues. Currently, these opportunities include the following and are discussed in-depth below:

- accreditation of local and state public health agencies,
- FY 2011 budget initiatives on the EH workforce,
- HRSA stimulus allocation and connection to HRSA staff,
- joint EH workforce planning with the U.S. Food and Drug Administration (FDA),
- CDC H1N1 capacity discussions with Congress,
- health care reform debate, and
- a meeting of the National Center for Environmental Health (NCEH)/Agency for Toxic Substances and Disease Registry (ATSDR) Board of Scientific Counselors that focused on the workforce crisis.

FIGURE 2

Environmental Health Services Branch Internal Strategic Plan 2009 Summary

Improving environmental health services and developing the environmental health professionals who deliver those services to prevent adverse environmental exposure and health consequences for the public.



Definitions: CDC: Centers for Disease Control and Prevention; EH: environmental health; EHS-Net: Environmental Health Specialists' Network; EIS: Epidemic Intelligence Service; EPHLI: Environmental Public Health Leadership Institute; PHS: U.S. Public Health Service.

Additionally, CDC's summer student programs are attracting high-quality undergraduate students. Two of these programs are

- Collegiate Leaders in Environmental Health (CLEH), a 10-week summer environmental internship for undergraduate students majoring in environmental studies, environmental engineering, ecology, or related fields who are passionate about the environment, about human health, and about the link between the two. (Visit <http://www.cdc.gov/nceh/cleh/> for more information about CLEH.)
- Summer Undergraduate Program in Environmental Health (SUPEH), a 10-week summer internship for undergraduate students in accredited environmental health programs who are majoring in environ-

mental health. Interns participate in activities with EHSB. (Visit <http://www.cdc.gov/nceh/ehs/supeh/> for more information about SUPEH.)

The number of high-quality students applying for these programs is an encouraging glimpse into the potential caliber of the future EH workforce.

Accreditation

During March and April 2009, staff from EHSB connected with Dr. Kaye Bender, executive director of the Public Health Accreditation Board (PHAB). From these interactions, Dr. Bender determined that EH issues needed to be further addressed in the proposed PHAB standards. EHSB staff and EH leaders

from across the country commented on the proposed standards during the PHAB vetting process. Many of the comments related directly and indirectly to workforce issues.

EHSB staff also traveled to Kentucky in April 2009 to the Keeneland Conference, which is focused on public health systems and services research, to meet with Dr. Bender. During that meeting, PHAB committed to engaging EH representation on PHAB workgroups. In addition, PHAB may fund an EH think tank to plan for the future rollout of the PHAB standards and for other potential avenues of EH activity, including EH workforce issues. Lastly, Dr. Bender offered to select sites with strong EH involvement as test sites for the PHAB standards this past fall.

In June 2009 EHSB changed how it trains EH professionals in using Environmental Public Health Performance Standards (EnvPHPS). In concert with EHSB instructors Pat Bohan, Sarah Kotchian, and CAPT John Sarisky, EHSB is attempting a statewide implementation of the standards in Georgia. Georgia was chosen because the state's EH unit was being transferred from one agency to another. In addition, the state's EH director, a graduate of CDC's Environmental Public Health Leadership Institute (EPHLI; <http://www.cdc.gov/nceh/ehs/ephli>), supported the effort. As the district EH directors in Georgia have applied the standards, many EH workforce issues have been found, including a large number of held vacancies and low salaries.

FY 2011 Budget Initiatives

Within CDC, programs have opportunities for input on budget initiatives but the competition for funding is fierce. As part of this process, EHSB submitted an FY 2011 proposal centered around the EH workforce in the context of waterborne and foodborne outbreaks. We appreciate the support of center leadership in this effort.

At the same time, EHSB was also working closely with CDC counterparts on the other two sides of the disease triangle—in epidemiology and laboratory sciences—to incorporate EH needs in budget initiatives concerning foodborne and waterborne illness reduction and prevention. We are happy that this type of collaboration is possible.

HRSA Discussions

In June and July 2009, EHSB and HRSA staffs discussed possible collaborative efforts on EH workforce issues. Currently, HRSA has some long-standing funding support of paid traineeships and internships with some loan forgiveness for graduate students in accredited schools of public health. Discussions included

- possible loan forgiveness for students of accredited EH undergraduate programs (visit the Association of Environmental Health Academic Programs Web site [<http://www.aehap.org/>] for information about these undergraduate programs);
- intersection of CDC's EH training academy idea with the existing 14 Public Health Training Centers funded by HRSA to allow continuing education for individuals needing an environmental public health background;
- HRSA does not have an equivalent to CDC's EPHLI (<http://www.cdc.gov/nceh/ehs/EPHLI>);

- progress of the EH Inactive Reserve being developed for the U.S. Public Health Service Commissioned Corps;
- possible intersection of CDC's proposed EH Service Corps with HRSA's National Health Service Corps; and
- the need for a thorough enumeration of EH and public health staff.

H1N1 Outbreak

State and local EH professionals were heavily involved in the response to the H1N1 outbreak, both within the emergency response structure and through serving as a technical resource regarding cleaning, sanitary guidance, and prevention of transmitting the disease. This involvement exposed further vulnerabilities in the EH workforce because, in many localities, the extra H1N1 workload caused other important environmental health work to be temporarily shelved. As evidenced here, the EH workforce's capacity to handle emergency events as well as important routine environmental health work is shrinking.

Joint EH Workforce Planning with FDA

Several large national foodborne illness outbreaks have placed much attention on the food protection system in the U.S. Part of the system rests on an adequate and strong EH workforce, especially at the local and state levels. EHSB and FDA staff have met several times to discuss common EH workforce initiatives that can be addressed by both agencies. NCEH/ATSDR is creating a new forum to link with FDA leadership.

Presentation to NCEH Board of Scientific Counselors

Presentations at the June 2009 NCEH/ATSDR Board of Scientific Counselors meeting included a focus on the EH workforce crisis. Over the last year, EHSB's original 10-step staircase plan had evolved into a broader 10-step plan to address the larger systematic issues threatening the capacity to protect EH. The board asked many questions, which will set the stage for a more formal peer review process later this year.

Possible Initiatives for Environmental Health Practitioners

Today's environmental health professionals are practicing in unprecedented times. The number of issues in the EH and environmental protection arenas is increasing, yet the challenges for EH administrators in many communities in light of the economic crisis are also increasing. The following are a few ideas

for EH professionals to help alleviate the challenges they face.

- Consider using the EnvPHPS (<http://www.cdc.gov/nceh/ehs/EnvPHPS>) to assess your programs and the EH system in your community. This honest self-assessment reveals gaps in your programs and system as compared to the 10 essential services. You can then create improvement plans to build a stronger program in the future.
- Prepare for the voluntary accreditation process due to be launched in 2011. Any work you conducted in the EnvPHPS process will help these preparations. As Pat Bohan noted in a recent presentation, zoos across the country were often in decrepit condition before they started an accreditation process. The accreditation process led to recognition of critical challenges and subsequent efforts to address them, including a dramatic upgrading of facilities and the standards of care.
- Consider establishing a summer internship program similar to CLEH (<http://www.cdc.gov/nceh/cleh>) or SUPEH (<http://www.cdc.gov/nceh/ehs/supeh>). Involvement with students could help your program's future recruitment efforts.
- Use available time gained because work is slow due to the sluggish housing and real estate markets to begin a community environmental health assessment. The time you may have spent before the economic downturn on on-site well and septic installations and permitting could now be used for assessments such as the Protocol for Assessing Community Excellence in Environmental Health model (<http://www.cdc.gov/nceh/ehs/CEHA>). Improving program responsiveness to community needs not only helps communities but has the added benefit of improving community support for such programs. In addition, the process may help redefine the EH accepted field of practice from a mandated fees-only approach to a more holistic approach to supporting community-level health and prevention.
- Conduct an exercise with your staff, as Pete Thornton, a leader in EH practice, advocates. Ask: "How would we deal with a 25% and then a 50% budget cut? What would the priority programs be?" In answering these questions, you and your staff should consider how you would do your jobs in these scenarios. Thornton believes that EH professionals should revert to their *raison d'être*, which is to prevent disease, injuries, and deaths. Getting

back to the basics, however, does not necessarily mean that EH would revert only to fee-supported programs.

- Capitalize on the U.S. economy transitioning to using cleaner energy and supporting green jobs. In several shining examples, local and state EH programs and staff are connecting their work to other agencies and organizations that are fully immersed in these sustainability arenas. NEHA has a sustainability committee, ably led by Tom Gonzales, that could help you get started in your community.
- Establish relationships with community planning and zoning officials to inject environmental health principles into land-use decisions. The U.S. population is rapidly aging and is seeing the impact of chronic diseases. Many of these diseases can be linked back to the built environment and how well (or poorly) the physical environment promotes healthy choices. If EH professionals work with planning and zoning officials, this interaction will have a positive effect on chronic disease prevention and will create healthier spaces in which people can live, work, and play <http://www.cdc.gov/healthyplaces/>.

- Prepare yourself for the Registered Sanitarian/Registered Environmental Health Specialist exams. EHSB has been working with the University of Alabama at Birmingham to create online study modules to help EH professionals prepare for the registration exams. These modern modules will replace the CDC Home Study courses of yesteryear. The online modules will be available on the EHSB Web site (<http://www.cdc.gov/nceh/ehs>).
- Review the excellent keynote address that Dr. Howard Frumkin, director of NCEH, delivered at NEHA's Annual Educational Conference & Exhibition in Atlanta last June. The presentation can be seen by visiting <http://nehacert.org/moodle/course/view.php?id=196>. During the keynote and the following question-and-answer session, Dr. Frumkin mentioned several of the above areas of work for EH practitioners to embrace. He acknowledged the tough situation many local programs are facing and advocated that EH staff be entrepreneurial in using the above-mentioned strategies and in identifying opportunities for diversified funding in tough economic times.

EHSB is here to help you get through this difficult time. Please feel free to connect with any

of our staff on issues raised in this article or visit us online at <http://www.cdc.gov/nceh/ehs>. ☎

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did you know

Worldwide demand for water has more than tripled over the past 50 years.

Source: Hoffmann, "The Linkage Between Water and Energy," <http://sustainability.nationalacademies.org/pdfs/Hoffman.pdf>.