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For many health agencies and communities, however, the journey has been much less profound. A dialogue has begun between agencies and the community but has not yet had a significant impact. The evaluation suggested that resources and the presence of a “champion” with political clout within the agency were key in determining outcomes. The sites in which the transformation was most pronounced have staff members who are passionate about the value of community involvement and about redefining the ways in which the agency works with the community. These sites also have resources that they can dedicate towards this end. Agencies with few resources are likely to be able to make only small steps. These agencies hope to have a blueprint for action—*PACE EH* action plans—should resources become available.

Small steps have potential long-term impact. *PACE EH* can be useful when resources and political support are scarce. *PACE EH* has three legs: (1) scientific assessment; (2) community change; and (3) agency capacity building. Advances in all three do not need to occur for the process to have value. Changes of the magnitude envisioned by the *PACE EH* developers take time. CDC and its partners can help by continuing to support *PACE EH*, developing new tools and guidance as new knowledge emerges, and sharing success stories. Particular attention should be directed to developing *PACE EH* as an ongoing assessment tool rather than as a process for developing priorities at a single point in time. Increasing the number of communities that protect and promote health and safety and prevent illness and injury in all their members requires ongoing assessment and implementation. 

To view the final report of the process evaluation, visit www.cdc.gov/nceh/ehs/Docs/PACE_EH_Final_Report.pdf. For more information, contact [Carlyn Orians](mailto:Carlyn.Orians@battelle.org) at orians@battelle.org.

The National Environmental Public Health Performance Standards and Their Implications for Environmental Health Infrastructure and Practice

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Recent threats from emerging and reemerging diseases, bioterrorism, global warming, and other environmental health issues, as well as increasing pressure at all governmental levels for proof of agency effectiveness, emphasize the need for the strong public health infrastructure called for in *Healthy People 2010*. It is not enough to provide excellence in such specific programs as food protection and liquid waste; there is also an urgent need to ensure that the public is getting healthier as a result of these programs.

Environmental health agencies have been concerned with measuring their effectiveness for many years. Most often, these measurements took the form of outputs (e.g., numbers of inspections conducted) and, occasionally, of outcomes (e.g., numbers of failing septic systems corrected or response time to resolve complaints). Now the emphasis has moved to the measurable impact that environmental health organizations have on improving the public’s health. That emphasis, in turn, calls for a renewed focus on improving the infrastructure that allows environmental health agencies to measure that impact.

Over the next few years, local environmental health practitioners will have the opportunity to improve the infrastructure of their agencies with the aid of the National Environmental Public Health Performance Standards (NEnvPHPS). Once finalized, this tool will be a companion to the National Public Health Performance Standards (NPHPS), which have been available over the past decade. NEnvPHPS will be valuable in providing more information about the specific capacity needs of environmental health agencies.

Until the development of NPHPS, there was no national agreement on how to measure the capacity of a public health agency and little consensus about the types of capabilities an agency needed to provide strong public health services. In the 1990s, the three core functions of public health were defined, followed by the 10 essential services of public health, which listed the 10 components necessary for a strong public health infrastructure. These essential services form the basis for

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NPHPS and, ultimately, NEnvPHPS. NEnvPHPS measures capacities not traditionally supported by fees, yet critical to agencies' ability to detect, prevent, and respond to environmental hazards and emerging threats.

The 10 essential services of public health were modified in the 1990s to form the Ten Essential Environmental Health Services, which now serve as the framework for NEnvPHPS. These companion standards add more specificity to NPHPS in the area of environmental health. In 2006, research was done to compare NPHPS results with NEnvPHPS results. The research confirmed the need for a separate but complementary tool to elicit more specific information on environmental health capacity. Staff members from the Centers for Disease Control and Prevention (CDC) have worked to ensure ongoing collaboration and data sharing from the use of both tools, which can be used separately or in conjunction with one another.

Practitioners developed the NEnvPHPS instrument and instructions for use with funding and oversight by the CDC's National Center for Environmental Health (NCEH). A national *ad hoc* group of environmental health leaders and practitioners reviewed and commented on the first draft. The standards were then pilot-tested in Oklahoma, Pennsylvania, Georgia, and Florida and then revised. A national group of nongovernmental organizations, including the National Association of County and City Health Officials, provided further input. NCEH will test the tool again in May and June 2007 with a group of participants in a National Environmental Health Association (NEHA) pre-conference workshop. Workshop participants will receive and use a copy of the draft

standards tool to assess their agencies, become early contributors to the CDC's baseline on environmental health capacity, and leave the workshop with an action plan to address one or more of their agency's capacity gaps. After that workshop and additional feedback on the tool and the implementation process, CDC will finalize the tool and prepare to offer it nationwide in 2008.

How should agencies use the NEnvPHPS tool? Agencies can gather a cross-section of staff to participate in the assessment. This will increase awareness of the 10 components of a strong environmental health infrastructure and provide the most accurate picture of an agency and its opportunities for improvement. The tool can be completed in less than a day. After the assessment, it becomes the baseline against which to measure improvements in the agency's ability to provide the essential services.

How will using this tool benefit local public health and environmental health departments? NEnvPHPS, which uses fewer indicators and questions than does NPHPS, helps the agency create a picture and a baseline of its current environmental health infrastructure capacity.

The tool and assessment process can also be used to train new staff who may not be formally trained in public health and environmental health. NEnvPHPS can provide a sound foundation by which an agency can gain a better understanding of the work its staff does. It can also help identify gaps in the system, and addressing those gaps will improve the effectiveness of the overall system. An ongoing process of assessment and action planning encourages improvement and innovation. Assessments resulting from the tool can educate and raise awareness with elected officials, boards of health, and other stakeholders about the resources

Ten Essential Environmental Health Services

1. Monitor environmental and health status to identify and solve community environmental health problems.
2. Diagnose and investigate environmental health problems and hazards in the community.
3. Inform, educate, and empower people about environmental health issues.
4. Mobilize partnerships to identify and solve environmental health problems.
5. Develop policies and plans that support individual and community environmental health efforts.
6. Enforce laws and regulations that protect health and ensure safety.
7. Link people to needed environmental health services and assure the provision of environmental health services when otherwise unavailable.
8. Assure a competent environmental health workforce.
9. Evaluate the effectiveness, accessibility, and quality of personal and population-based environmental health services.
10. Conduct research for new insights and innovative solutions to environmental health problems and issues.

Source: *A National Strategy to Revitalize Environmental Public Health Services* (CDC, 2003)

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Agencies will have the opportunity to engage in a new national initiative to help make the case for the link between a strong public health infrastructure and a healthy community.

and collaboration needed to protect the community adequately.

NCEH believes that, over time, the nationwide use of the tool will build capacity, consistency, and accountability across our nation's environmental health system. CDC is planning a number of components to accompany the standards, including a data-collection system, an online toolkit with resources for improving each of the 10 essential services, and a marketing program to make agencies aware of these products. Information about innovative and outstanding practices in each of the 10 essential environmental health services will be exchanged. An ongoing process will develop state and tribal tools. CDC is developing an evaluation plan and research that will assess the relation among a robust environmental health infrastructure, improved health outcomes, and reduced community risk.

What does this mean for the future of environmental health and for the field of practice? For the first time, a national tool will be available to help agencies assess their capacity to perform the 10 essential environmental health services. Agencies will have the opportunity to engage in a new national initiative to help make the case for the link between a strong public health infrastructure and a healthy community. The tool will include instructions on how to create an evaluation plan and objectives to improve essential services prioritized by the agency, as well as links to online resources to help with each of the essential services. Agencies will have the ability to compare their own capacity to that of other agencies across the country and will be able to educate their elected officials about the standards, the resources necessary for

strong agency preparedness, and their willingness to be accountable to the people they serve. Visit www.cdc.gov/nceh/ehs for more information on the availability of NEnvPHPS toward the end of 2007. 

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