The Centers for Public Health Preparedness Program: From Vision to Reality

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In 1999, colleagues at the Centers for Disease Control and Prevention (CDC) and leaders from the public health community conceptualized the creation of a network of practice-oriented training and applied public health research centers in accredited schools of public health (SPHs), leading to the creation of the Centers for Public Health Preparedness (CPHPs). This network of academically based centers was modeled structurally after existing networks, such as the National Institute for Occupational Safety and Health Education and Research Centers, the Injury Prevention Research Centers, and the CDC Prevention Research Centers, which are based primarily in SPHs throughout the nation. In those instances, CDC leaders had developed networks of academically based training and research centers with stable, ongoing funding such that:

- Centers were able to create and sustain the core capacity needed for long-term success;
- Centers were able to create stable academic-practice partnerships; and
- Centers were able to undertake innovative, complex, multiyear programs with the expectation that CDC funding would be there to support the work over time.

As none of these existing centers addressed the need for preparedness training and education, CDC determined that a critical strategy to bolster public health preparedness on the public health frontline was to enhance the capacity of SPHs to provide practice-based training and technical assistance, particularly in the area of public health preparedness. To address this emerging need for preparedness training, two of the authors (Baker and Lichtveld) became directly involved in the creation of the CPHP network, and the first four CPHPs were funded in 2000. In this commentary, we will discuss the original vision for the CPHP program, major impacts of the program, and our reflections on critical success factors.

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A "C"-CHANGE MOMENT

As originally conceived, the essential characteristics of the network were that it be practice-oriented and provide training and technical assistance resources to practitioners in the field of public health, thereby supplementing limited practice capacity in SPHs. Although the initial focus related to preparedness, the original vision went well beyond preparedness to include a broad range of competencies needed for effective public health practice.[1,2] In addition, the CPHPs were also tasked to ascertain "what works on the public health frontline," with the intent to develop a diverse portfolio of evidence-based practices and tools through upstream, practice-driven applied research. At the heart of our original vision was a practice-based network of CPHPs in SPHs that would expand over time to result in strong, sustainable partnerships between the academic setting and the practice community.

Much credit goes to leaders in the Association of Schools of Public Health (ASPH) for the coordination and growth of the program. A central component of the original strategy for growth of the network was to develop a sustainable alliance with policy makers to advocate for expanding the network incrementally across many SPHs. Once we had approved but unfunded proposals for new CPHPs, we were able to develop the case for additional funding of CPHPs. This increase in funding actually occurred through a close working relationship between CDC leaders and ASPH leaders that resulted in incremental growth of the network between 2000 and 2004.

FROM A SEED TO A NETWORK

Each of the four original CPHPs (at the University of Illinois at Chicago, University of Washington in Seattle, University of North Carolina at Chapel Hill, and Columbia University in New York City) provided preparedness training and technical assistance, and conducted practice-based research. CPHPs were actively involved in understanding the needs of the public health practice communities and in developing specific just-in-time and just-in-case programs designed to address those needs. For example, Columbia University trained hundreds of nurses employed by the New York City Department of Health in incident response activities. Those nurses represented one of the first cadres of competency-based trained public health professionals who were subsequently deployed on 9/11 to provide care to those affected by the attack on the World Trade Center in 2001.

In addition to playing an important role in serving their communities, CPHPs were involved in broader public health workforce development issues and played a key role in the creation of the CDC National Plan for Public Health Workforce Development.[2,3] One CPHP (Columbia University) pioneered the creation of the Bioterrorism and Emergency Readiness Competencies for all public health workers.[4] During subsequent years, the network grew incrementally as originally envisioned. Increased funding for public health preparedness resulted in increased availability of funds to expand the network of CPHPs and, hence, strengthened public health preparedness capacity on the practice frontline (Table).

THE RETURN ON INVESTMENT

ASPH completed an assessment of the impact of the CPHP program in 2004,[5] which showed a clear return on investment and evidence of benefits to the public health community. The major outcomes of the CPHP network from the assessment included the following:

- Strong, sustained partnerships with the public health practice frontline
- Capacity building and strengthening in state and local public health agencies
- Bolstered capacity and readiness of SPHs to respond to the needs of the public health workforce
- Just-in-time and just-in-case preparedness training targeting the local public health workforce
- Directed applied research benchmarking learner performance and filling critical workforce development research gaps

In 2004, the network comprised 21 CPHPs involving 23 SPHs with public health practice partners in all 50 states, Puerto Rico, and the U.S. Pacific Islands. In addition, CPHPs worked with the National Association of County and City Health Officials on Project Public Health Ready in 13 local health agencies across the nation. The goal of developing and strengthening practice partnerships and delivering needed training and education to the public health workforce had come to fruition. Across the nation, CPHPs contributed significantly to diversifying the types of training and educational opportunities available to public health practitioners, and were also instrumental in diversifying the modalities used for training and education. The portfolio of products from CPHPs included conferences, workshops, graduate-level courses, free online awareness-level training, graduate-level certificate programs, Web-based seminars, periodicals, newsletters, and distance-based learning programs for all levels of training and educational needs. None

Table. Growth of the CPHP program, 2000–2003

	Year			
CPHP program	*2000*	*2001*	*2002*	*2003*
Funding ($ million)	1.66	2.35	19.78	23.84
Number of centers	4	7	19	21

CPHP = Center for Public Health Preparedness

of these accomplishments would have been achieved without the creation of the CPHP program. In addition to training, CPHPs provided technical assistance and performed applied research and program evaluation, which expanded the range of CPHP-practice partnership efforts. Illustrative examples of these impressive success stories are described in this supplemental issue of *Public Health Reports*.

The CPHP network of strong academic-practice partnerships now formed a fertile foundation to attract funding for preparedness-related topics. At the same time, state and local health agencies received funding to work on preparedness. This confluence of events was not random, but rather demonstrative of an enduring vision of synergistically building holistic, sustainable academic-practice partnerships. In many states where CPHPs were located, the development and nurturing of these partnerships has been central to their success.

Over subsequent years, program leadership at CDC evolved with a resulting change in focus and in the relationship of the CPHPs to CDC. The scope of work was narrowed to areas exclusively related to training in public health preparedness and response activities, thereby limiting the ability of CPHPs to address broad public health workforce issues or to engage in technical assistance or practice-based research. In addition, CPHPs were asked to demonstrate that program activities almost exclusively reflected partner requests based on identified service needs, affecting the collaborative nature of the working environment between practice and academia. During this time, the nature of the working relationships between CDC and the CPHPs evolved from a collaborative approach characteristic of the cooperative agreement mechanism to one characterized as a contract-monitoring approach with a checklist of deliverables.

In 2008, the overall funding of the CPHPs was reduced by approximately 50%, with attendant reduction in scope and scale of operations. As a result, program activities suffered in that, with less funding, CPHPs delivered less training and education to the public health workforce. In 2010, CDC issued a request for proposals for a new program called Preparedness and Emergency Response Learning Centers (PERLCs). The overall budget for the PERLC program is less than that for the existing CPHP program. Nonetheless, CDC has allocated approximately $900,000 a year for up to 14 new PERLCs in the new cooperative agreement.

BACK TO THE FUTURE

The wide range of excellent articles in this issue of *Public Health Reports* is indicative of the demonstrable yield of the CPHPs, and there is much to be proud of. Students have become more involved in practice activities through several targeted degree and continuing education programs across SPHs featuring hands-on internships and practica; faculty have increased the level and extent of practice-based education and scholarship; and, most importantly, stronger and sustained ties between the academic institutions and their practice partners have been forged.

In our view, the CPHP program can be strengthened by a recommitment to the program's founding principles, which were reaffirmed in the 2004 ASPH assessment report:

- CPHPs should be seen as a training and applied public health research resource designed to improve workforce preparedness and also as a source of broad-based workforce development.
- The network of CPHPs should grow both in numbers and in levels of funding collaboratively with CDC and practice partners.
- CPHPs should be an active part of CDC's renewed focus related to strengthening state and local public health practice under CDC's new director, Dr. Thomas Frieden.

These principles are consistent with the legislative intent of the Pandemic and All-Hazards Preparedness Act of 2006.[6] That bill formally authorized the CPHP program and provided legislative support for the program.

There is much to celebrate with regard to the impressive success of the CPHP program, as documented in this supplement as well as in other journals. A lot remains to be done if the potential of the CPHP program is to be fully realized and sustained. With the

proper resources and leadership, the new PERLCs can continue to be a pivotal link between academia and practice, in ways that will serve to protect and promote the health of the nation.

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