



DEPARTMENT OF HEALTH AND HUMAN SERVICES

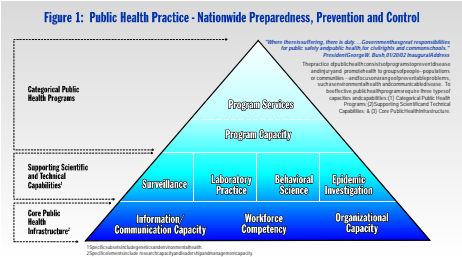


RESEARCH AGENDA FOR PUBLIC HEALTH WORKFORCE DEVELOPMENT

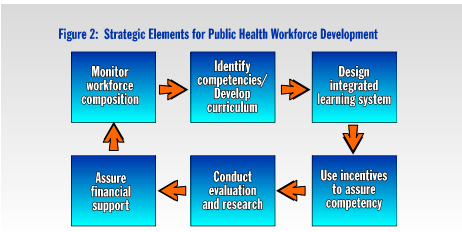
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BACKGROUND:

Three components of public health infrastructure (workforce capacity and competency, information and data systems; and organizational capacity) form a foundation for the "Pyramid of Preparedness."



CDC, in collaboration with national partners, developed a strategic plan for public health workforce development and complementary implementation plan to strengthen frontline preparedness. There are six strategic elements that provide a blueprint for action.



PROBLEM:

Evidence of the effects of workforce quantity (staffing levels and mix) and quality (professional education/credentialing) on performance of core public health functions is limited. Research suggests that the effects of workforce (capacity and competency) will be modified by the characteristics of the agencies in which individuals work. The science base to predict the nature and extent of such effects is lacking.

RESEARCH OBJECTIVE:

Build a research agenda for public health workforce development to complement the emerging national interest in public health systems research.

METHODS:

Literature Review - A literature review on public health workforce was conducted using Pub Med/Medline search and general internet search using terms such as public health workforce, healthcare workforce, workforce research, workforce development, health care providers, public health professionals, and an extensive review of *American Journal of Public Health* and *Journal of Public Health Management and Practice*. Articles were further classified into public health workforce, then research-specific. All research articles were reviewed and matched with the strategic element to which it most provided direction (Figure 2).

Journal Source	Total Publications Listed	Total Articles: Workforce Related	Public Health Workforce	Research on Public Health Workforce
AJPH	7048	112	47	17
JPHMP	542	40	40	16
Pub Med		334	62	19

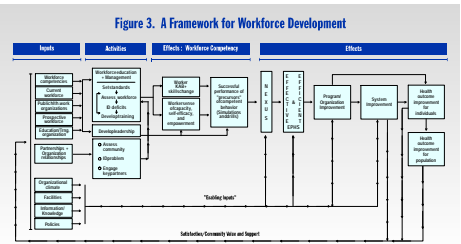
A series of 80 research questions were generated; 50 related to the strategic elements (Figure 2) and 30 were listed as general.

EXPERT PANEL WORKGROUPS:

CDC convened a series of 4 expert panel workgroups from November 2000 through February 2003 to provide recommendations on research directions in workforce development. Hugh Tilson, MD, DrPH serves as chairperson of the research and evaluation workgroup. Participants include representatives from academia and practice (ASPH, ASTHO, NACCHO, NALBOH, other professional organization), researchers, CDC and HRSA. Participants developed a logic model for public health workforce development demonstrating inputs, processes, effect, outputs and outcomes. (See Figure 3) In February 2003, using a modified nominal group process, participants selected top priority research questions from a listing of all questions generated in previous meetings or implied in the literature review. A total of 135 questions were grouped into issues related to workforce size/composition (inputs); competency requirements; workforce development methods; and organizational context.

MODELING:

Figure 3 outlines how various inputs affect workforce development within an organizational context. Investments in workforce development assume that workforce competency/capacity is linked with the effectiveness and efficiency of providing essential public health services and ultimately improving health outcomes. The model is preliminary. Research questions can be addressed within the boxes or arrows in the model.



RESULTS:

- Over 30 key questions were identified as high priority; the list below represents key gaps in public health science:
- Relationship of performance indicators (National Public Health Performance Standards - Essential Service #8- assure a competent workforce) and health outcomes controlled for community context.
 - Competency - what methods are most effective? What organizational variables support competency development and application?
 - Best indicators for workforce performance (e.g., workforce size, etc.).
 - Monitor workforce - size, distribution, qualifications, and tenure.
 - Labor market forces: recruitment, retention, wage/salary/benefits and personnel system characteristics.

CONCLUSIONS/NEXT STEPS:

The logic model and further refinement of research questions will continue as part of discussions at annual meetings (Academy Health, A.P.H.A., and Annual Workforce Development Meeting). Research from non-public health settings can be reviewed for applicability, including fields such as educational technology and organizational development.

POLICY IMPLICATIONS:

- Institute of Medicine Reports - *Who Will Keep the Public Healthy?* *Educating Public Health Professionals in 21st Century* and *The Future of the Public's Health* validate importance of, and need for, a research agenda.
- Workforce issues are critical to understanding the value of public health, to cost-effective policy and funding, and to continuous improvement. Clear definitions will facilitate focus and avoid isolation.
- Broad public and private partnerships are needed to implement research agenda.

ACKNOWLEDGEMENTS:

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