

CDC/ATSDR Strategic Plan for Public Health Workforce Development

*Toward a life-long learning system
for public health practitioners*





Background

The practice of public health is changing. In the early 20th century, public health focused on communicable disease prevention, occupational health, and environmental considerations. As the century progressed, the scope of public health concerns expanded to include reproductive health, chronic disease prevention, and injury prevention. Now, as the century draws to a close, other areas of focus for public health are emerging (or re-emerging): genetics, preventing bioterrorism and violence, handling and disposal of hazardous waste, and an ever-widening range of issues which impact the health of the public.(1)

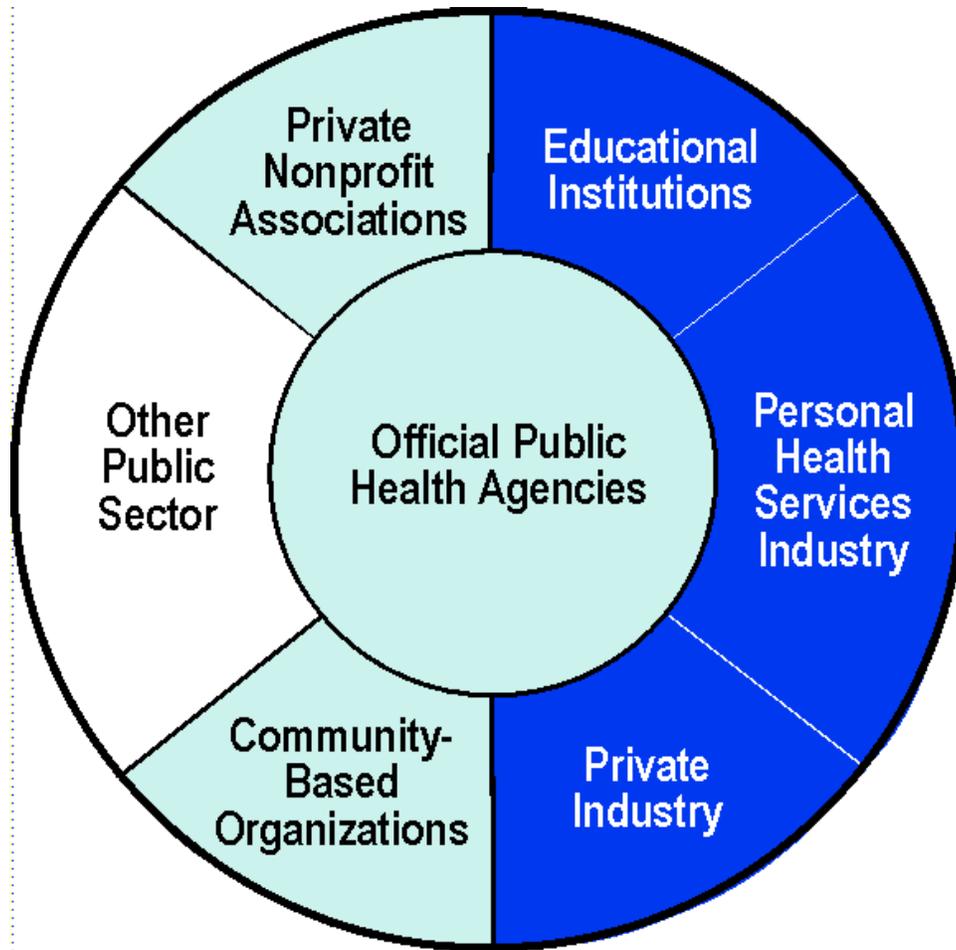
During the past several decades, governmental public health agencies became the health care provider of last resort for indigent populations. Today, 39% of these public health agencies' funds are spent on personal health services.(2) This emphasis on personal health care led to deficiencies in other key competency areas of community-based practice, such as community health assessment, community health planning, and environmental health. As a result of Medicaid managed care, many public health departments are no longer providing personal health care services. The dramatic shift from personal to population based services has been further accelerated by organizational restructuring, privatization of public services, statutory changes, individual leadership initiatives and performance standards for public health departments. The demands on the public health workforce now include expectations for competency in behavioral sciences, community mobilization, health communications, policy development, and other areas for which many are unprepared by either educational preparation or work experience.(3)

The majority of the nation's public health workers have not been trained to deal with the challenges they will be facing in the 21st century.(4) The gap between current capabilities and future needs continues to widen.(5) CDC/ATSDR needs a dependable and well trained workforce to achieve progress its priority areas: strengthening science for public health action; collaborating with partners for prevention; promoting healthy living in healthy communities at every stage of life and working with partners to promote global health. A competent workforce capable of performing the essential services is necessary for long-term success. This report focuses on how CDC/ATSDR can better align its resources to address the training and continuing education needs of the external public health workforce.

The Public Health Workforce

The U.S. public health workforce consists of approximately 500,000 individuals currently employed by a range of organizations involved in public health practice including governmental public health agencies, other public sector agencies, health care delivery organizations, voluntary organizations, community-based groups, academia, and other entities.(6)

FIGURE 1: Public Health Practice Sites: The Professional Public Health System Workforce by Setting



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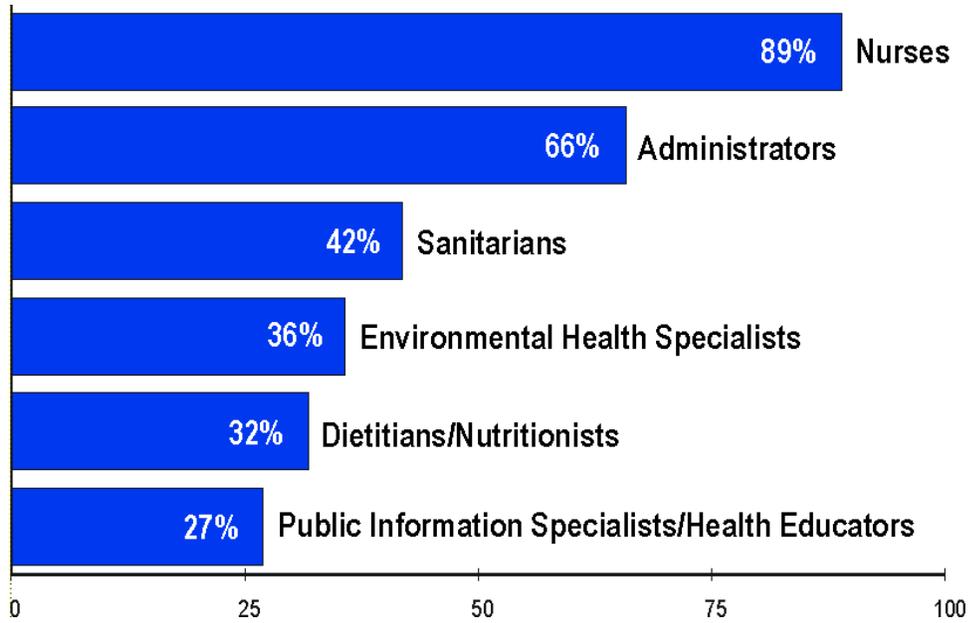
The public health workforce is defined less by where they work than by what they do which is to provide essential public health services to communities throughout the nation.(7) (Table 1) The most common occupations are nurses, managers, environmental health specialists, managers, nutritionists and local educators (Figure 2). The vast majority of this workforce have no formal training in public health and have little background in the core functions, essential services or the competencies required for public health practice and how various system components are interrelated. At a minimum, public health workers need a fundamental understanding of what public health is, what it does and how it accomplishes its mission to “promote physical and mental health and prevent disease, injury and disability.”

TABLE 1. Ten Essential Public Health Services

1.	MONITOR HEALTH status to identify community health problems.
2.	DIAGNOSE AND INVESTIGATE health problems and health hazards in the community.
3.	INFORM, EDUCATE, AND EMPOWER people about health issues.
4.	MOBILIZE COMMUNITY PARTNERSHIPS to identify and solve health problems.
5.	DEVELOP POLICIES and plans that support individual and community health efforts.
6.	ENFORCE LAWS and regulations that protect health and ensure safety.
7.	LINK people TO needed personal health SERVICES AND assure the provision of health CARE when otherwise unavailable.
8.	ASSURE a COMPETENT public health and personal health WORKFORCE .
9.	EVALUATE effectiveness, accessibility, and quality of personal and population-based health services.
10.	RESEARCH for new insights and innovative solutions to health problems.

From: Public Health Functions Steering Committee, *Public Health America*, July 1995.

FIGURE 2. Workforce Composition: Percentage of local health departments having at least one full-time employee in the listed job classification, U.S., 1992-1993.



Adapted from Gerzoff, et. al., *J Public Health Management*, 5(3) 1-9. © 1999, Aspen, Publishers, Inc.

Competency Needs

The public health workforce needs a well rounded realm of knowledge, skills, and abilities in response to the expanding scope and functions of public health practice. Competency needs can be divided into three broad categories:

1. **Basic Competency:** Provides a fundamental understanding of what public health is, what it does and generally how it achieves its mission (e.g., courses or programs such as “Orientation to Public Health Practice,” or “Public Health 101”).
2. **Cross cutting (Core) Competencies:** Provides general knowledge, skill and ability in areas which enable performance of one or more essential service. Table 2 lists at least seven distinct competency areas that are the foundation for performing essential services. For example, competence in epidemiology, policy development, health communications, community needs assessment and mobilization, behavioral sciences, cost-effectiveness can be defined as cross cutting. These competencies requirements can be further refined based on one’s discipline, functional role, organizational setting or programmatic focus.
3. **Technical Competencies:** Provides technical knowledge, skills and abilities needed for a defined program area (e.g., control of infectious disease, chronic disease prevention, environmental health, genetics testing). These technical competencies often build upon basic and core competencies and represent unique application of skills to a particular health problem or issue (e.g., emergency response for bioterrorism).

TABLE 2. Cross Cutting (Core) Competencies for Public Health Practice

COMPETENCY AREA	EXAMPLES
Analytic	<ul style="list-style-type: none"> • Identifies potential strategic issues through ongoing macro environmental scanning. • Obtains and interprets information regarding risk factors. • Knows data collection process, technology, transmission capability, and computer systems storage/retrieval capacities in order to access health related information.
Communication	<ul style="list-style-type: none"> • Listens to others in an unbiased manner and respects points of view of others. • Promotes the expression of diverse opinions and perceptions. • Persuades and influences individuals and groups by increasing knowledge, shaping attitudes, and modifying behaviors towards disease prevention and health promotion.
Policy Development	<ul style="list-style-type: none"> • Interprets information regarding the health status of individuals or populations in order to formulate and prioritize goals and objectives. • Educates health care, legislative and media representatives about the need for new public health programs.
Cultural	<ul style="list-style-type: none"> • Appreciates the importance of diversity within the public health workforce. • Learns appropriate methods for interacting with stakeholders from varied cultural, racial and ethnic groups. • Identifies opportunities for improving stakeholder/public health worker interaction.
Basic Public Health Science	<ul style="list-style-type: none"> • Can relate the PH core functions to essential public health services. • Understands the role of assessment, assurance and policy development in the delivery of the essential services. • Understands how to accomplish effective community engagement.
Leadership & Systems Thinking	<ul style="list-style-type: none"> • Helps define key values and uses these principles to guide action. • Understands the need to see interrelationships rather than cause-effect chains. • Empowers others to create and implement plans based on a shared vision.
Management & Information Management	<ul style="list-style-type: none"> • Matches budget priorities with strategic plan • Manages information systems for collection, retrieval and use of data for decision-making.

Throughout CDC's 52 year history, a majority of the training and continuing education has focused on developing technical competencies. CDC has addressed cross cutting (core) competencies through various courses such as Principles of Epidemiology, Prevention Effectiveness, Program Evaluation, the Public Health Leadership Institute, and products like CDCynergy, a CD-ROM-based health communications planning course. To date, the agency does not offer a course or learning experience which addresses basic competency in public health.

The responsibility for competency identification and validation in public health is ongoing and is not exclusively a CDC/ATSDR role. Professional disciplines (e.g., medicine, nursing, environmental health, health education) will continue to define competencies and related training needed for specific types of practice. Academia, other federal, state and local agencies, and associations will continue to provide training and continuing education based on needs assessment. To achieve measurable impact, all these activities must be better aligned and coordinated in the future. The active involvement of the Health Resources and Services Administration (HRSA), which has a legislative mandate for health professions workforce planning and research, in the development of the CDC/ATSDR strategic plan has laid the foundation for a more unified approach at the federal level to the issue of public health workforce development. Clearly the success of public health workforce development depends upon a unified vision and leadership among a broad array of partners. It is our hope that this report stimulates dialogue and action.

Status of CDC/ATSDR Activities

A survey of the Centers, Institutes and Offices (CIOs) at CDC indicated that more than \$50 million was spent on FY 99 training for the external public health workforce. This training can generally be described as national in scope, provided by CDC's partners and based in the classroom. Today's training efforts are relatively new; more than 50% of such efforts were initiated during the mid-1990s. Reported activities reached at least 664,000 individuals, over 500,000 through distance and distributed learning networks like the Public Health Training Network and National Laboratory Training Network. Other CDC sponsored programs/courses reached 74,435; extramurally funded Training Centers reached an additional 84,150; and conferences awarding continuing education credits reached at least 4,800. Each CIO reports similar challenges in planning, developing, delivering and evaluating its training and continuing education efforts and in using new learning technologies. Even when external workforce training is not a high priority for a center or division, leaders recognize that programmatic success is ultimately linked to a trained, competent workforce. Whether training needs assessments are conducted by individual divisions, externally funded training centers, or through other mechanisms, the findings point to similar needs for basic and cross cutting (core) competencies, (e.g., cultural competence, informatics, systems thinking, evaluation, and health communications).

Major Barriers to Achieving a Competent 21st Century Public Health Workforce

Despite important recent advances in understanding the composition and competency needs of the public health workforce, major barriers exist in assuring the ongoing competency of this workforce.

1. In contrast to other professions, an updated inventory of the workforce does not exist. As a result, planning is hampered by a lack of knowledge of the population in need of training and continuing education. Further, a standard nomenclature on occupational title and organizational setting has not been used to enumerate the public health workforce. Finally, information from which to forecast personnel needs or related training requirements is limited.
2. A national consensus does not exist on the basic and cross cutting competencies or curricula/content elements needed in public health. While progress is being made in competency identification/validation for specific disciplines or technical content areas, significant gaps still exist in the availability/accessibility of needed job-related training and continuing education.
3. An integrated delivery system for life-long learning does not exist. Although current approaches provide useful learning opportunities, the learner faces a fragmented array of choices which use different technologies, may be of unequal quality or value, and often lack user-friendly systems for registration, course support and feedback.
4. Inadequate incentives exist for participation in training and continuing education. National competency standards do not exist for public health workers which could positively influence participation in life-long learning activities.
5. A uniform approach and commitment to evaluation are absent, whether the object of evaluation is the individual, program/curricula or the system itself, (i.e., workforce development initiatives).
6. Financing of workforce training and continuing education is hampered by the absence of a coherent policy framework and strategies for funding these activities. For example, HRSA reports lack of congressionally appropriated dollars for Title VII of PHS Act program authorities as an obstacle in financing its training and continuing education responsibilities for the public health workforce.

This task force report reviews each of these barriers and proposes strategies and action steps for CDC/ATSDR to address each of them.

Major Strategies for Achieving a Competent Public Health Workforce

The goal of the CDC/ATSDR strategic plan is to have a national workforce competent to deliver essential services. No strategy for achieving a competent workforce can succeed without collaboration and cooperation among a broad range of partners. The practice of public health is interdisciplinary and multi-sector. The task force report was developed through an interactive process and included representatives from both the external practice community, academia, managed care as well as from each CIO within CDC. In addition, representatives from HRSA, a key federal partner, were directly involved in preparing this report. The following strategies represent a comprehensive and integrated approach to achieving the goal of a competent public health workforce for the 21st century and include recommended actions through which CDC/ATSDR can provide leadership.

Strategy 1: Monitor Workforce Composition and Forecast Needs. The task force recommends a systematic, ongoing monitoring of public health workforce composition using newly-developed standard occupational classification (S.O.C.) nomenclature and a standard set of work site descriptions. In addition to monitoring composition, a process should be developed to forecast future needs and recommend changes in workforce composition in relation to trends in public health practice. Since the Bureau of Health Professions within HRSA has the statutory authority for health professions workforce data collection, analysis and research, CDC/ATSDR assumes a continued and strengthened collaboration with HRSA to ensure that needed information is consistently gathered and used in planning.

Strategy 2: Identify Competencies and Develop Related Content/Curriculum. The task force recommends the development of a basic public health practice curriculum for use by all public health workers and basic to advanced training in cross cutting (core) competency areas for certain categories of the public health workforce (e.g., nurses, environmental health workers, managers, etc.). The basic curriculum that is proposed reinforces the essential public health services as the description what public health does and identifies the competency areas that underlie public health practice regardless of work setting or functional role (Table 2). CDC/ATSDR can continue to address needs in specific categorical program areas with technical competency-based curricula and can reinforce the development of cross cutting (core) competencies.

Strategy 3: Design an Integrated Learning System. In light of the current fragmentation and bewildering areas of learning opportunities, the task force recommends a nationwide learning system with a unifying structural design. When viewed from the perspective of the learner/customer, the structural system should have three elements:

1. An online “shopping guide” and registration system;
2. Delivery of training, continuing education and/or other workforce development programs; and
3. Feedback on and documentation of individual competency.

Operationally, the system can be viewed as having three levels: local, state, and national, each with varying roles and responsibilities. Local health agencies can identify those in need of training and, in collaboration with other partners, be responsible for creating and maintaining approaches and incentives designed to foster individual and organizational learning. State health agencies, in collaboration with schools of public health, other academic institutions, and health care delivery organizations should be responsible for the ongoing assessment of needs, coordination and support of workforce development programs, assurance of quality, and evaluation of competency. To forge the commitment to discharging these responsibilities, the task force recommends that state (or multi-state) regional learning centers be established to serve every state. Finally, national leadership must be assured to provide for standards and policy development, research, and availability of quality learning experiences.

At each level of the system (local, state, national), there is a need for critical administrative and support functions common to all successful training and educational efforts, regardless of their point of origin, content, or media for delivery. National standards should be adopted for the use of technology and for the design of learning programs, based upon current industry and professional guidelines.

Strategy 4: Provide Incentives to Assure Competency. The task force has determined that participation in learning experiences must be stimulated by a synergistic set of incentives and competency certification. These incentive and certification mechanisms must function at the national, state and local levels in relationship to existing personnel systems, if they are to have the desired effect of stimulating participation in learning programs. This holds true, not only for public agencies, but also for private or non-profit organizations. These incentives should be linked to financial compensation and/or to career development. Competency certification

should exist to assure minimum levels of competency in certain areas of public health practice and be tied to eligibility requirements for certain jobs. The organizational accountability for demonstrating a comprehensive approach to workforce development can be made explicit by developing and disseminating performance standards for local and state public health systems.

Strategy 5: Conduct Evaluation and Research. The commitment to evaluation must be explicit and demonstrated at every level in the learning system: individual, program/curricula or structural/operational level, and system level. The effectiveness of individual learning should be evaluated consistently using uniform methods. The impact of specific programs/curricula or organized networks dedicated to training or continuing education should be evaluated for effectiveness and impact. In addition, comprehensive evaluation at the system level should be performed periodically to assess broad policy and coordination issues.

Strategy 6: Assure Financial Support. Without stable funding, which assures the availability of financial resources needed to develop, coordinate, support, and evaluate learning programs, the vision for a unified system will not be realized. Although learners will continue to have access to training under any scenario, they may or may not receive training which consistently builds their ability to perform the essential services. To address the need for financial resources, the task force recommends a review of existing grant policies and exploration of other innovative approaches to funding and financing so that efforts in public health workforce development are aligned with long term strategies.

Coordination and Accountability

We recommend that a single organizational locus be assigned responsibility for coordinating external workforce development activities within CDC/ATSDR. This program or office should be responsible for overseeing the development of policies and standards, as well as convening partners, as needed, to address issues and to provide support and technical assistance to CIOs and outside partners in implementing this strategic plan. This office should be directly accountable to the Director of CDC/Administrator of ATSDR. Adequate resources should be provided to address these responsibilities.

Summary

The task force recommends that CDC/ATSDR take a leadership role along with other partners in creating a nationwide system for life-long learning in public health practice. The goal of the learning system is to consistently and measurably improve the ability of the workforce to perform the essential services. This represents a renewed commitment to provide learning opportunities to the approximate 500,000 U.S. public health workers throughout their careers, regardless of their geographic location, role or level of responsibility. While providing opportunities for training and continuing education is insufficient to guarantee workforce competency, consistently delivering high quality and relevant learning experiences is a requirement for long term success. Standards must be developed to make appropriate use of technology and ensure program quality. Incentives, including certification, must be developed that have relevance at the local and state level. Financing policies must be developed to assure the financial solvency needed to support operation of the system. Finally, a program or office CDC/ATSDR must be established that is responsible for assuring consistent leadership in this vital area.

Currently, each CIO determines training needs for the external workforce based on its specific mission. By having a shared vision based on the essential services framework and required competencies, each CIO can not only achieve its programmatic agenda but incrementally develop workforce competence and capacity across multiple public health functions. By establishing a program or office that is accountable for workforce development, we can collaborate effectively with our external partners and internally across and within the CIOs. If we and our partners are to make a difference in public health practice, we must use the essential services as a framework and align resources to build the basic, cross cutting and technical competencies required to perform these services. Considering the cost of new learning technologies and the numbers to be trained and retrained, every effort should be made to pool resources to address cross cutting needs.

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