

Public Health Workforce Development Activities of Organizations Associated with the Council on Linkages Between Academia and Public Health Practice

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Introduction

A strong public health workforce is critical to ensuring the health of the American population. A variety of national organizations engage in workforce development activities for the public health workforce, including organizations involved in the Council on Linkages Between Academia and Public Health Practice (Council on Linkages). The Council on Linkages furthers academic/practice collaboration to support workforce development within public health and has 19 national organizations as its members. The Public Health Foundation (PHF) provides staff support for the Council on Linkages. These organizations strive to strengthen the public health workforce by providing training opportunities, conducting and sponsoring workforce research, collecting data on the workforce, supporting workforce recruitment and retention, providing tools and systems to enhance the work of the workforce, advocating for the workforce, collaborating with other organizations to engage in workforce development activities, and sharing information related to the workforce. These activities are crucial for building an effective public health system, and increasing knowledge among organizations about workforce development activities currently occurring or planned for the future will help organizations more effectively support the public health workforce.

Approach

To facilitate the sharing of information regarding public health workforce development activities and encourage coordination and leveraging of activities across organizations, the Health Resources and Services Administration (HRSA) funded PHF (Contract HSH250201100031C) to inventory such activities of Council on Linkages organizations. In July and August 2012, questions were developed with input from HRSA and the Centers for Disease Control and Prevention (CDC) to guide collection of information on workforce development activities (Appendix B). Between September 2012 and June 2013, information was gathered from organizations through phone discussions and written exchanges. Information provided by the organizations was summarized, reviewed by the relevant organizations, and analyzed to identify key findings. These key findings, along with more detailed information about activities, are contained within this report.

Organizations

This report offers information on the variety of workforce development activities in which organizations associated with the Council on Linkages engage. Findings are based on information about the activities of the following organizations:

- American College of Preventive Medicine (ACPM)
- American Public Health Association (APHA)
- Association for Prevention Teaching and Research (APTR)
- Association of Accredited Public Health Programs (AAPHP)
- Association of Public Health Laboratories (APHL)
- Association of State and Territorial Health Officials (ASTHO)
- Association of University Programs in Health Administration (AUPHA)
- Centers for Disease Control and Prevention (CDC)
 - Scientific Education and Professional Development Program Office (SEPDPO)
- Community-Campus Partnerships for Health (CCPH)
- Health Resources and Services Administration (HRSA)
 - Bureau of Health Professions (BHP)
 - Bureau of Primary Health Care (BPHC)
 - HIV/AIDS Bureau (HAB)
 - Maternal and Child Health Bureau (MCHB)

- National Association of County and City Health Officials (NACCHO)
- National Association of Local Boards of Health (NALBOH)
- National Environmental Health Association (NEHA)
- National Library of Medicine (NLM)
- National Network of Public Health Institutes (NNPHI)
- National Public Health Leadership Development Network (NLN)
- Public Health Foundation (PHF)
- Quad Council of Public Health Nursing Organizations (Quad Council)
 - American Nurses Association (ANA)
 - Association of Community Health Nursing Educators (ACHNE)
 - Association of Public Health Nursing (APHN)
 - Public Health Nursing Section of the American Public Health Association (PHN-APHA)
- Society for Public Health Education (SOPHE)

Report Structure

Information on public health workforce development activities in this report is organized within the following sections:

- Strategic Planning
- Definition of the Public Health Workforce
- Training
- Learning Management Systems
- Research and Data Collection
- Recruitment and Retention
- Tools and Systems
- Advocacy
- Partnerships and Information Sharing

Each of the sections begins with an overview of the questions asked on the topic followed by a summary of findings based on the information gathered. Where appropriate, detailed information provided by each organization on the topic concludes the section.

Four appendices provide supplemental information related to workforce development activities. Complete summary information on the workforce development activities of each organization is found in Appendix A. Appendix B contains the questions that guided information collection. Abbreviations used in summarizing the information are available in Appendix C, and individuals who participated in the collection, review, analysis, and summarization of this information are listed in Appendix D.

Key Findings

- **Sharing information on workforce development activities is a high priority.** Organizations specifically highlighted the importance of sharing workforce development information to help them better support their members and constituents, including information collected through this inventory of workforce development activities. Organizations indicated a desire to know “how to tap into Council on Linkages partners’ activities”; “what is having success and working well for others”; and “areas of overlap and opportunities to collaborate”; as well as to not “reinvent the wheel.”
- **Organizations have strategic plans, but not workforce plans.** Strategic plans often address issues of workforce.

- **No consistent definition of the public health workforce is used across organizations.** Organizations frequently view the public health workforce within the context of their own organizational missions, target audiences, and activities.
- **All organizations provide training,** both in person and through distance learning.
- **The provision of training through distance learning will likely increase.** Organizations are planning to expand their distance learning activities, such as webinars, online training, and videoconferences.
- **No single learning management system (LMS) supports public health workforce development.** Organizations use a variety of systems for managing learning.
- **Organizations conduct public health workforce research and collect workforce data.** Workforce data tend to be gathered on a fairly regular basis, often through member surveys.
- **Organizations actively support the recruitment and retention of public health professionals.** Engaging in direct outreach to students; providing internships, scholarships, fellowships, and career development opportunities; and promoting employment opportunities are all ways organizations help build and maintain a strong workforce.
- **Organizations provide a variety of online resources, tools, and systems,** but these tend not to be specific to workforce development.
- **Organizations advocate for the public health workforce,** focusing on issues that directly impact their members or constituents.
- **Organizations collaborate on workforce development activities.** A large number of partnerships exist, both between individual organizations and through coordinated activities, such as the Council on Linkages and Partners in Information Access for the Public Health Workforce (PHPartners).

Strategic Planning

Strategic planning can lay the foundation for an organization's activities. Organizations were asked about their current strategic plans and how these plans are made available, plans for revising strategic plans, and any plans specific to the public health workforce.

Summary of Findings

- **Nearly all organizations have strategic plans**, most of which are available online.
- **Most strategic plans are updated regularly.** Approximately one-third of the organizations review or revise their strategic plans on an annual basis, and another third update their plans every 2-5 years. Other organizations update their plans as needed or periodically.
- **Most strategic plans address the public health workforce.** Only one organization—NACCHO—has a separate workforce plan, but most organizations' strategic plans address the workforce in some way. CDC's Scientific Education and Professional Development Program Office (SEPDPO) is collaborating with partners to prepare a National Public Health Workforce Strategy.

Definition of the Public Health Workforce

Defining the public health workforce has proven a difficult task. A wide range of professions are involved in keeping the public healthy, as are professionals working in areas not exclusively associated with health. Organizations were asked how they define the public health workforce.

Summary of Findings

- **Of the organizations, CDC alone has developed a formal definition of the public health workforce.** Organizations tend to view the public health workforce within the scope of their own missions and activities and typically focus on the portion of the workforce they serve.

Training

Training is a well-recognized workforce development activity. Providing opportunities for training should help to increase skills and competence within the public health workforce. Organizations were asked for details of their training activities, including topics covered, target audiences and numbers of people trained each year, competencies used, availability of training, advertising, cost, delivery and evaluation methods, and future plans for training.

Summary of Findings

- **All organizations provide training.** Training may be delivered in person or through distance learning.
- **Topics addressed by training vary** depending on the mission, members or constituents, and funding sources of the organization. For example, APHA covers the full spectrum of public health topics, while ACPM focuses on training in preventive medicine. NNPHI trainings showcase public health institutes and evidence-based practices, and cover a wide range of topics from accreditation and quality improvement to specific programs such as the National Public Health Performance Standards Program. APHL centers its training primarily on laboratory science, but also provides leadership training focused on operational issues.
- **In general, each organization's target audience for training is its membership, constituents, or the specific group that is the focus of its mission.**
- **Numbers of people trained each year can be difficult to calculate,** at least partially due to the range of training activities in which organizations engage. Estimates range across organizations from the low hundreds to the many thousands.
- **Competencies used in training activities vary** depending on the mission of the organization and target audience of the training. For example, APHA, which has a broad focus, uses a wide range of competencies, including the Association of Schools of Public Health's (ASPH) MPH Core Competency Model, the Council on Linkages' Core Competencies for Public Health Professionals, and others that meet requirements for certification programs. Organizations with more defined target audiences often rely on more discipline-specific competencies, such as SOPHE's use of the Health Education Competencies for Certified Health Education Specialist (CHES) and Master Certified Health Education Specialist (MCHES).
- **Several organizations provide continuing education (CE) credits for training activities.** CE credits offered include those for continuing medical education (CME), continuing nursing education (CNE), CHES, MCHES, and Certified in Public Health (CPH).
- **Most training is open.** All organizations make some training available to the general public health community. Some organizations, such as ASTHO and NACCHO, also have targeted trainings for individuals with specific functions or positions, and others, such as NNPHI, provide trainings to grantee recipients that are not publicly available.
- **Marketing of training is primarily electronic and member-specific.** Frequently used methods of marketing include emails to members, newsletters, websites, social media, and listservs.
- **Fees are charged for most in person trainings,** primarily to cover expenses. Much of the distance training is provided to participants free of charge, depending on the funding sources for the training.
- **All organizations provide both in person and distance training opportunities.** Webinars and online courses are popular forms of distance learning.

- **All organizations engage in evaluation related to training.** Organizations often rely on evaluation forms distributed after training activities to evaluate success. Some organizations use pre- and post-assessments.
- **Distance learning will likely increase.** Many organizations are planning to expand their distance learning activities, such as webinars, online training, and videoconferences. Declining resources for travel to attend training in person are one reason for the increasing emphasis on distance learning options.
- **Drivers of future training plans** include training needs, evaluation feedback, and the availability of funding.

Detailed Findings

Training Focus Areas, Activities, and Audiences

Organization	Focus of Training	Training Activities	Target Audiences	Number Trained/Year
ACPM	<ul style="list-style-type: none"> Preventive medicine 	<ul style="list-style-type: none"> Annual meeting Annual Board Review Course CME for preventive medicine physicians Host site for practicum training 	<ul style="list-style-type: none"> Preventive medicine physicians 	<ul style="list-style-type: none"> 1,000+
APHA	<ul style="list-style-type: none"> Full spectrum of PH workforce development needs Topics include, but are not limited to, aging, behavioral health, cancer, children’s health, chronic disease, environmental health, epidemiology, food safety, health policy and advocacy, health services research, HIV/AIDS, mental health, minority health issues, nutrition and obesity, reproductive health, and women’s health 	<ul style="list-style-type: none"> Annual meeting Learning Institute courses at annual meeting Midyear meeting in June Trainings and CE credits at other organizations’ events Webinar series 	<ul style="list-style-type: none"> Entire PH community 	<ul style="list-style-type: none"> 26,000+
APTR	<ul style="list-style-type: none"> Prevention and population health education for physicians, health professionals, and PH students Annual meeting: <ul style="list-style-type: none"> Integration of population health and clinical health sciences into teaching, training, and practice Prevention in health reform implementation Sharing innovations in curriculum and course design, new technologies, and academic scholarship Paul Ambrose Scholars Program: <ul style="list-style-type: none"> Introduction of PH and prevention to clinical health science students Leadership training Skills to design and implement community-based projects Fellowships and residency rotations: <ul style="list-style-type: none"> Post-graduate experiential learning in governmental PH policy, research, and practice Leadership and professional skills development Prevention and Population Health Teaching Modules: <ul style="list-style-type: none"> Clinical and population-based prevention skills for all health professions students Healthy People 2020 teaching resources 	<ul style="list-style-type: none"> Teaching Prevention annual meeting (spring) Paul Ambrose Scholars Program Post-graduate fellowships and preventive medicine residency rotations Health professions student internship and residency rotation host site Prevention and Population Health Teaching Modules Meetings in conjunction with APHA’s annual meeting Workshops 	<ul style="list-style-type: none"> Members University PH and health professions faculty and students PH practitioners PH and prevention researchers 	<ul style="list-style-type: none"> 1,200+

Organization	Focus of Training	Training Activities	Target Audiences	Number Trained/Year
AAPHP	<ul style="list-style-type: none"> • CEPH accreditation process and collaboration with PH organizations for academic PH programs 	<ul style="list-style-type: none"> • Events and workshops in conjunction with APHA's annual meeting • Freestanding training events on CEPH accreditation process • Special topics webinars 	<ul style="list-style-type: none"> • Members • Academic PH programs 	<ul style="list-style-type: none"> • 120+
APHL	<ul style="list-style-type: none"> • PH laboratory workforce development needs • National Lab Training Network: <ul style="list-style-type: none"> ▪ Range of lab science topics • National Center for Public Health Laboratory Leaders: <ul style="list-style-type: none"> ▪ Operational workforce issues for leadership and management, with activities including: <ul style="list-style-type: none"> ○ Emerging Leader Program – skill building in operational areas, such risk communication, management, finance/HR, etc. ○ Regional leadership forums and focus groups – topics include building a new lab facility, Lean/Six Sigma, PH research, procurement, story crafting, and communicating effectively ○ Emerging Infectious Disease Fellowship Program – projects with host laboratories ○ APHL fellowship programs – areas include newborn screening and environmental health • Global Health Department collaborative training program: <ul style="list-style-type: none"> ▪ Intense two-week training program emphasizing practical lab activities 	<ul style="list-style-type: none"> • National Lab Training Network • National Center for Public Health Laboratory Leaders • Regional forums and focus groups • Fellowship programs • Department of APHL Training teleconferences • Global Health Department collaborative training program, with George Washington University 	<ul style="list-style-type: none"> • Members • Laboratory/bench scientists • Clinical laboratories • PH laboratory managers • PH professionals 	<ul style="list-style-type: none"> • 26,000+
ASTHO	<ul style="list-style-type: none"> • Wide range of topics for SHD staff and other PH professionals • Topics include management, leadership development for members, and programmatic topics such as preparedness and maternal and child health • State Health Leadership Initiative for SHOs: <ul style="list-style-type: none"> ▪ Week-long retreat, site visit from ASTHO's Executive Director, assignment of a SHO mentor, a strategic planning grant, and policy training at the ASTHO Policy Summit • Peer network trainings: <ul style="list-style-type: none"> ▪ Issues of interest to specific peer groups of professionals, including senior deputies, chief financial officers, PH informaticians, HR directors, state legislative liaisons, preparedness directors, environmental health officers, primary care officers, and accreditation coordinators • Internal trainings for ASTHO staff: <ul style="list-style-type: none"> ▪ Diverse topics, from health equity to specific software skills 	<ul style="list-style-type: none"> • Annual meeting • State Health Leadership Initiative • Peer network trainings • Webinars and educational programs in programmatic areas 	<ul style="list-style-type: none"> • SHD officials and staff • PH professionals 	<ul style="list-style-type: none"> • Not available

Organization	Focus of Training	Training Activities	Target Audiences	Number Trained/Year
<p>AUPHA</p>	<ul style="list-style-type: none"> • Healthcare administration education, of which PH is often a component • AUPHA Leaders Conference: <ul style="list-style-type: none"> ▪ Program leadership issues and developing linkages between academia and practice • AUPHA Annual Meeting: <ul style="list-style-type: none"> ▪ Program management and curriculum development, including sessions on PH • Undergraduate faculty training: <ul style="list-style-type: none"> ▪ Topics include program development, exams, management, and electronic records • Academic study tour: <ul style="list-style-type: none"> ▪ Interaction with experts from other countries dealing with similar issues and exploration of innovative programs • Webinar series: <ul style="list-style-type: none"> ▪ Healthcare management education issues, such as student assessment, curriculum development, performance improvement, and change management 	<ul style="list-style-type: none"> • AUPHA Leaders Conference in conjunction with the American College of Healthcare Executives Congress • AUPHA Annual Meeting • Training for undergraduate healthcare administration faculty • Academic study tour • Healthcare management education webinar series • Instructional webinars for new program directors 	<ul style="list-style-type: none"> • Members • Healthcare administration faculty and adjunct faculty • Healthcare administration practitioners 	<ul style="list-style-type: none"> • 500-700
<p>CDC</p>	<ul style="list-style-type: none"> • Wide range of PH topics, including epidemiology; surveillance; statistics; infectious disease; chronic disease; emergency management; environmental health; immunization and vaccine-preventable diseases; injury and violence prevention; maternal and child health; and nutrition, physical activity, and obesity 	<ul style="list-style-type: none"> • Experiential fellowships in applied PH sciences, policy, leadership, and management • E-learning training activities accessible through CDC Learning Connection, including: <ul style="list-style-type: none"> ▪ Instructor-led training and webinars ▪ CDC and partner conferences, workshops, and self-study for CE and delivered through CDC TRAIN ▪ Quick learn lessons for all platforms, including mobile 	<ul style="list-style-type: none"> • Entire PH community • Health workforce • General public • CDC staff 	<ul style="list-style-type: none"> • 82,000+
<p>CCPH</p>	<ul style="list-style-type: none"> • Community engagement, community-engaged research, CBPR, service-learning, and community-academic partnerships • Topics include developing and sustaining CBPR partnerships; establishing community-based research ethics review boards; developing and sustaining service-learning initiatives in health professions education; assessing, recognizing, and rewarding community-engaged scholarship; and promotion and tenure strategies for community-engaged faculty • CCPH consultancy network offers customized trainings for specific audiences 	<ul style="list-style-type: none"> • Conferences, including national/international conferences every other year • Training institutes • Workshops • Educational conference calls • Webinars 	<ul style="list-style-type: none"> • Administrators, faculty, staff, and students of academic institutions seeking to develop community-engaged teaching, research, and program initiatives • Administrators and staff of CBOs seeking to develop equitable partnerships with academic partners • Government and funding agency officials responsible for community-engaged teaching, research, and program initiatives 	<ul style="list-style-type: none"> • 2,500-4,000

Organization	Focus of Training	Training Activities	Target Audiences	Number Trained/Year
<p>HRSA</p>	<ul style="list-style-type: none"> • HRSA-wide: <ul style="list-style-type: none"> ▪ Technical staff training, such as being a grants project officer • BHPr: <ul style="list-style-type: none"> ▪ Integration of population health into health professions education ▪ Enhancement of interprofessional education and teams ▪ Faculty development in primary care, dentistry, dental hygiene, and geriatrics ▪ Workforce development at the undergraduate, graduate, and practitioner levels of the health professions, including nursing, medicine, dentistry, behavioral health, PH, geriatrics, diversity, and primary care, with a focus on underserved populations • HAB: <ul style="list-style-type: none"> ▪ Topics include communication and technical skills; managing grant programs; fiscal oversight and monitoring; compliance and program expectations; and clinical case management, hands-on care, and service delivery • MCHB: <ul style="list-style-type: none"> ▪ Wide range of MCH topics 	<ul style="list-style-type: none"> • HRSA-wide: <ul style="list-style-type: none"> ▪ Technical training for staff • BHPr: <ul style="list-style-type: none"> ▪ Teaching Health Center Graduate Medical Education Program ▪ Mental and Behavioral Health Education and Training ▪ Interdisciplinary and Interprofessional Joint Graduate Degree Program ▪ Preventive Medicine Residency Program ▪ National Center for Interprofessional Practice and Education ▪ AHEC Program ▪ Geriatric Education Centers Program ▪ PHTC Network ▪ Faculty Development in General, Pediatric, and Public Health Dentistry and Dental Hygiene ▪ Physician Faculty Development in Primary Care ▪ Geriatric Training for Physicians, Dentists, and Behavioral and Mental Health Providers ▪ Residencies and fellowships ▪ Training for disadvantaged and minority students ▪ Grantees provide CE for health professionals • HAB: <ul style="list-style-type: none"> ▪ AIDS Education and Training Centers Program ▪ Staff training on legislative requirements for managing the Ryan White HIV/AIDS Program ▪ Clinical training for staff and grantees ▪ Administrative and fiscal training • MCHB: <ul style="list-style-type: none"> ▪ Training for grantees 	<ul style="list-style-type: none"> • Health professionals • Graduate and undergraduate health professions faculty and students • HRSA grantees, including SHDs, LHDs, and community organizations • State MCH/Title V programs • Healthy Start programs • HRSA staff 	<ul style="list-style-type: none"> • Not available
<p>NACCHO</p>	<ul style="list-style-type: none"> • Wide range of topics for LHD staff and PH professionals • Major training areas include community health, environmental health, PH infrastructure, preparedness, research and evaluation, and Survive and Thrive (for new local health officials) • Trainings vary based on programs and projects • Program areas offering training include Health Impact, Planning, Accreditation, Health and Disabilities, Health Inequities, Public Health Preparedness, Executive Leadership Development, Internal Workforce Development at NACCHO, Publications Development, Office Applications, Employee Orientation, and Research Evaluation and Methods 	<ul style="list-style-type: none"> • Annual meeting • Public Health Preparedness Summit • Program- and project-specific trainings • Survive and Thrive • Internal staff trainings 	<ul style="list-style-type: none"> • LHD staff • PH professionals • Local PH directors 	<ul style="list-style-type: none"> • Total: not available • Annual meeting: 1000+ • Public Health Preparedness Summit: 1,000+

Organization	Focus of Training	Training Activities	Target Audiences	Number Trained/Year
NALBOH	<ul style="list-style-type: none"> • Governance, leadership, BOH development, and other topics relevant to the PH workforce • BOH training topics include orienting board members to PH, good governance practices, and the essential public health services • Other topics include governance seminars, environmental health, tobacco, performance standards, and research on BOH 	<ul style="list-style-type: none"> • NALBOH Annual Conference • Annual Ned E. Baker Lecture in Public Health • Presentations to BOH and at conferences • Webinars 	<ul style="list-style-type: none"> • BOH • Health directors • PH workforce 	<ul style="list-style-type: none"> • 1,000
NEHA	<ul style="list-style-type: none"> • Environmental health, including food safety and foodborne illnesses, radon resistant construction, indoor air quality, environmental PH and emergency response, and pest management 	<ul style="list-style-type: none"> • Annual Educational Conference and Exhibition • Food Safety Training • Radon Resistant New Construction Training/Indoor Air Quality • Industry-Foodborne Illness Training • Epi-Ready Training • FDA-Rapid Response Training Foodborne Illness Outbreak • InFORM-Integrated Foodborne Outbreak Response Meeting (development of environmental health educational track) • Environmental Public Health Tracking • Environmental Health Training in Emergency Response • USDA Food-Safe Schools toolkit workshops • CDC Integrated Pest Management/Biology and Control of Vectors workshops 	<ul style="list-style-type: none"> • Environmental and PH professionals • Food service and nutrition workforce • School personnel • Pest management personnel • Community planners and builders 	<ul style="list-style-type: none"> • 1,500+
NLM	<ul style="list-style-type: none"> • Evidence-based PH, PH emergency and disaster preparedness resources, systematic reviews, PH information on the web, TOXNET, PubMed use, and health literacy tools • Resources supporting health services research and PHSSR available at http://www.nlm.nih.gov/hsrinfo/index.html 	<ul style="list-style-type: none"> • Training of the workforce and others, at NLM via its web resources, such as http://phpartners.org, and through its NN/LM • Meetings of partner organizations including APHA; NACCHO; and MLA/librarians involved in PH, preparedness, and disaster response • Targeted web resource with collaborating organizations through Partners in Information Access for the Public Health Workforce (http://phpartners.org) • Online training opportunities, both live and archived (available on demand); brief webinars; and longer courses through DIMRC Disaster Information Specialist Program 	<ul style="list-style-type: none"> • PH workforce • Librarians, especially medical librarians serving PH 	<ul style="list-style-type: none"> • No precise estimate; number varies by resource

Organization	Focus of Training	Training Activities	Target Audiences	Number Trained/Year
NNPHI	<ul style="list-style-type: none"> • Wide range of topics, including accreditation, performance improvement, research and evaluation, evidence-based practice, health policy, leadership, and workforce development • Programs and trainings aligned with national programs, such as the National Public Health Performance Standards Program • Annual conference: <ul style="list-style-type: none"> ▪ Showcasing PHIs, evidence-based practices, and promising practices • Grantee/project-specific trainings: <ul style="list-style-type: none"> ▪ Topics such as health impact assessment, food policy, diabetes, PHSSR, and health equity • Conference presentations on best practices and models: <ul style="list-style-type: none"> ▪ Topics such as accreditation, quality improvement, health impact assessment, community health assessment, and community health improvement planning 	<ul style="list-style-type: none"> • Annual conference • Communities of practice • General informational trainings • Grantee-specific trainings • Workshops and webinars in partnership with other organizations • Conference presentations 	<ul style="list-style-type: none"> • Members • Partners • Funder-specific target audiences • Governmental PH (tribal, local, state, federal) 	<ul style="list-style-type: none"> • Approx. 3,000
NLN	<ul style="list-style-type: none"> • Wide range of topics for PH leaders, including systems thinking, action learning, management, and communications • Member organizations have their own curricula and provide training on various topics, such as business planning, core functions/services, personnel development, program management, crisis communication, and emergency response 	<ul style="list-style-type: none"> • Annual conference • Collaborative Leadership Training – Training of Trainers workshop • Action Learning Coach the Coach program • Webinar series 	<ul style="list-style-type: none"> • PH leaders 	<ul style="list-style-type: none"> • 300+
PHF	<ul style="list-style-type: none"> • Topics relevant to a wide range of professionals in various PH system organizations, including quality improvement, performance management, workforce development, strategic planning, and accreditation preparation and continuous improvement 	<ul style="list-style-type: none"> • Workshops • Webinars • Communities of practice • Conference presentations • Provides PH LMS, TRAIN 	<ul style="list-style-type: none"> • HD staff • PH professionals • Health professionals • Emergency responders • Students 	<ul style="list-style-type: none"> • 2,000+ directly • 150,000+ through TRAIN LMS
Quad Council	<ul style="list-style-type: none"> • Topics relevant to PH nurses, including competencies and certification standards in PHN • Learning Institutes at APHA’s annual meeting: <ul style="list-style-type: none"> ▪ Topics include academic/practice partnerships in PHN and the impact of the Affordable Care Act on PHN practice 	<ul style="list-style-type: none"> • Workshops and webinars on the American Nurses Credentialing Center certification process for the Advanced PHN credential and the Quad Council Competencies for Public Health Nurses, which are based on the Council on Linkages Core Competencies for Public Health Professionals • Learning Institutes at APHA’s annual meeting • Each Quad Council organization conducts its own annual conferences 	<ul style="list-style-type: none"> • PH nurses • PHN students 	<ul style="list-style-type: none"> • 300-400

Organization	Focus of Training	Training Activities	Target Audiences	Number Trained/Year
SOPHE	<ul style="list-style-type: none"> Needs of health educators and PH workforce (generally) 	<ul style="list-style-type: none"> Annual meeting (fall; will not be held after 2012) Annual conference (starting spring 2013) Annual Health Education Advocacy Summit Center for Online Resources & Education, an e-learning portal launched in fall 2012 Self-study articles in SOPHE journals Webinars Knowledge Center (in beta testing 2013) Courses delivered through CDC University Other cosponsored meetings 	<ul style="list-style-type: none"> Members CHES/MCHES APHA Public Health Education & Health Promotion Section Coalition of National Health Education Organizations PH community 	<ul style="list-style-type: none"> 3,300-3,900

Abbreviations: CME = continuing medical education; PH = public health; CE = continuing education; CEPH = Council on Education for Public Health; HR = human resources; SHD = state health department; SHO = state health official; CBPR = community-based participatory research; CBO = community-based organization; MCH = maternal and child health; AHEC = Area Health Education Center; PHTC = Public Health Training Center; LHD = local health department; BOH = board of health; FDA = U.S. Food and Drug Administration; USDA = United States Department of Agriculture; PHSSR = public health services and systems research; NN/LM = National Network of Libraries of Medicine; MLA = Medical Library Association; DIMRC = Disaster Information Management Research Center; PHI = public health institute; LMS = learning management system; HD = health department; PHN = public health nursing; CHES = Certified Health Education Specialist; MCHES = Master Certified Health Education Specialist.

Competencies and Accreditation or Certification Programs Addressed by Training

Organization	Competencies	Accreditation/Certification Programs
ACPM	<ul style="list-style-type: none"> Accreditation Council for Graduate Medical Education Core Competencies for residency training 	<ul style="list-style-type: none"> Provides CME, Maintenance of Certification, and Maintenance of Licensure for preventive medicine physicians
APHA	<ul style="list-style-type: none"> ASPH MPH Core Competency Model Council on Linkages Core Competencies for Public Health Professionals Other sets of competencies as required for certification programs 	<ul style="list-style-type: none"> Accredited provider of CME, CNE, CHES, MCHES, and CPH credits Granted 16,000 CE credit hours to attendees at its 2011 annual meeting
APTR	<ul style="list-style-type: none"> Council on Linkages Core Competencies for Public Health Professionals 	
AAPHP	<ul style="list-style-type: none"> Helps academic PH programs prepare for CEPH accreditation, which requires that competencies appropriate for each program be applied Competencies for academic PH programs are typically practitioner-based skill sets Some academic PH programs use the Council on Linkages Core Competencies for Public Health Professionals 	<ul style="list-style-type: none"> Helps academic PH programs prepare for CEPH accreditation
APHL	<ul style="list-style-type: none"> No competencies are currently used, but progress is being made through the Laboratory Efficiencies Initiative Developed PH lab leadership and management competencies Working with CDC to develop a comprehensive set of PH laboratory core competencies Contributing with CDC to the development of a core curriculum based on competencies for PH laboratory scientists 	

Organization	Competencies	Accreditation/Certification Programs
ASTHO	<ul style="list-style-type: none"> • Planning to incorporate Council on Linkages Core Competencies for Public Health Professionals into some courses 	<ul style="list-style-type: none"> • Offers CE credits for sessions at its annual meeting
AUPHA		
CDC	<ul style="list-style-type: none"> • Each fellowship has its own competencies 	
CCPH	<ul style="list-style-type: none"> • Competencies from CCPH's CBPR curriculum, Developing and Sustaining Community-Based Participatory Research Partnerships: A Skill-Building Curriculum (http://cbprcurriculum.info), and the Community-Engaged Scholarship Toolkit (http://communityengagedscholarship.info) 	
HRSA	<ul style="list-style-type: none"> • BHPr: <ul style="list-style-type: none"> ▪ Uses Council on Linkages Core Competencies for Public Health Professionals for some training activities, such as the PHTCs ▪ Does not require specific competencies for many programs • MCHB: <ul style="list-style-type: none"> ▪ Maternal and Child Health Leadership Competencies (Version 3.0) 	
NACCHO	<ul style="list-style-type: none"> • No standard list of competencies currently used 	
NALBOH		
NEHA		<ul style="list-style-type: none"> • Offers credential assessment training for Certified Professional-Food Safety (CP-FS) and Registered Environmental Health Specialist (REHS), Certified in Comprehensive Food Safety (CCFS), Professional Food Manager training, and Hazard Analysis & Critical Control Points (HACCP) certification • Credentials offered: <ul style="list-style-type: none"> ▪ Certified in Comprehensive Food Safety (CCFS) ▪ Certified Environmental Health Technician (CEHT) ▪ Certified Installer of Onsite Wastewater Treatment Systems (CLOWTS) ▪ New Jersey Requirement for CLOWTS – Advanced Level ▪ Certified Professional – Food Safety (CP-FS) ▪ Healthy Homes Specialist Credential (HHS) ▪ Registered Environmental Health Specialist/Registered Sanitarian (REHS/RS) ▪ Registered Environmental Technician (RET) ▪ Registered Hazardous Substances Professional (RHSP) ▪ Registered Hazardous Substances Specialist (RHSS) ▪ National Radon Proficiency Program
NLM	<ul style="list-style-type: none"> • Council on Linkages Core Competencies for Public Health Professionals <ul style="list-style-type: none"> ▪ Analytic/Assessment Skills ▪ Policy Development/Program Planning Skills ▪ Cultural Competency Skills ▪ Public Health Sciences Skills 	<ul style="list-style-type: none"> • Not directly, but in collaboration with other organizations, such as MLA and the MLA Disaster Information Specialization Program
NNPHI		<ul style="list-style-type: none"> • Offers CE credits for select trainings

Organization	Competencies	Accreditation/Certification Programs
NLN	<ul style="list-style-type: none"> Developed the Public Health Leadership Competency Framework to provide guidance for member organizations 	
PHF	<ul style="list-style-type: none"> Council on Linkages Core Competencies for Public Health Professionals Medical Reserve Corps Core Competencies Matrix CDC Office of Public Health Preparedness and Response Public Health Preparedness Capabilities 	<ul style="list-style-type: none"> Numerous types of CE credits available through TRAIN LMS
Quad Council	<ul style="list-style-type: none"> Quad Council Competencies for Public Health Nurses, based on the Council on Linkages Core Competencies for Public Health Professionals 	<ul style="list-style-type: none"> Delivered webinars and workshops on the American Nurses Credentialing Center certification process for Advanced PHN PHN-APHA is an approved CNE provider
SOPHE	<ul style="list-style-type: none"> Health Education Competencies for Certified Health Education Specialist and Master Certified Health Education Specialist Health Education Competencies for CHES and MCHES overlap with the ASPH MPH Core Competency Model, which is used for CPH credentialing 	<ul style="list-style-type: none"> Provider of NCHEC CE contact hours Provider of NBPHE CPH renewal credits One of the largest providers of CE for CHES

Abbreviations: CME = continuing medical education; ASPH = Association of Schools of Public Health; MPH = Master of Public Health; CNE = continuing nursing education; CHES = Certified Health Education Specialist; MCHES = Master Certified Health Education Specialist; CPH = Certified in Public Health; CE = continuing education; PH = public health; CEPH = Council on Education for Public Health; CBPR = community-based participatory research; PHTC = Public Health Training Center; MLA = Medical Library Association; LMS = learning management system; PHN = public health nursing; NCHEC = National Commission for Health Education Credentialing; NBPHE = National Board of Public Health Examiners.

Training and Evaluation Methods and Future Training Plans

Organization	Delivery Methods	Evaluation Methods	Future Plans
ACPM	<ul style="list-style-type: none"> In person Webinars Online training 	<ul style="list-style-type: none"> Course evaluations Follow-up surveys 	<ul style="list-style-type: none"> Expand course offerings Identify new training areas Assess member needs
APHA	<ul style="list-style-type: none"> In person Webinars 	<ul style="list-style-type: none"> Annual meeting and session evaluations In-depth, pre- and post-evaluations for CE credit classes 	<ul style="list-style-type: none"> Expand access to annual meeting sessions online Increase distance learning Discontinue satellite broadcasts (due to lack of funding)
APTR	<ul style="list-style-type: none"> In person Conference calls Webinars Web-based self-study modules 	<ul style="list-style-type: none"> Course and session evaluations Participant tracking Website analytics 	<ul style="list-style-type: none"> Continue training programs, contingent on funding Expand webinars
AAPHP	<ul style="list-style-type: none"> In person Webinars 	<ul style="list-style-type: none"> Post-training evaluations 	<ul style="list-style-type: none"> Increase distance learning activities Provide educational opportunities for local and regional PH organizations Expand to broader audience (PH practitioners)

Organization	Delivery Methods	Evaluation Methods	Future Plans
APHL	<ul style="list-style-type: none"> • In person • Teleconferences • Webinars • On-demand training 	<ul style="list-style-type: none"> • Needs assessment surveys every 1-2 years • Focus groups 	<ul style="list-style-type: none"> • Explore the possibility of expanding fellowships into areas such as informatics and leadership
ASTHO	<ul style="list-style-type: none"> • In person • Conference calls • Webinars • Video conferences 	<ul style="list-style-type: none"> • Course evaluations • Conference evaluations 	<ul style="list-style-type: none"> • Continue trainings, depending on member needs and funding • Improve videoconferencing capacity for training (increase access to training with limited travel)
AUPHA	<ul style="list-style-type: none"> • In person • Webinars 	<ul style="list-style-type: none"> • Program evaluations 	<ul style="list-style-type: none"> • Continue current efforts
CDC	<ul style="list-style-type: none"> • In person • Webinars • Conference calls • Online training • Podcasts 	<ul style="list-style-type: none"> • Formative evaluations, such as pilot tests • Summative evaluations, including evaluation forms and knowledge checks 	<ul style="list-style-type: none"> • Implement Kirkpatrick Level 3 evaluation through post-training follow-up questions of learners to measure the impact of training
CCPH	<ul style="list-style-type: none"> • In person • Conference calls • Webinars 	<ul style="list-style-type: none"> • Pre- and post-training surveys of participants and, in some cases, their colleagues/supervisors 	<ul style="list-style-type: none"> • Continue current efforts • Increase online training
HRSA	<ul style="list-style-type: none"> • In person • Webinars • Online training 	<ul style="list-style-type: none"> • Training evaluations 	<ul style="list-style-type: none"> • MCHB: <ul style="list-style-type: none"> ▪ Improve coordination of internal training and training provided to grantees
NACCHO	<ul style="list-style-type: none"> • In person • Webinars • Online courses 	<ul style="list-style-type: none"> • Course/training evaluations 	<ul style="list-style-type: none"> • Continue current trainings • Expand eLearning • Create more interactive distance learning opportunities with webcasts, conference calls, videos, quizzes, polling, and new technologies (to expand reach given budget constraints) • Link LHD workforce development planning required for voluntary national HD accreditation and NACCHO courses available
NALBOH	<ul style="list-style-type: none"> • In person • Webinars 	<ul style="list-style-type: none"> • Conference and session evaluations • Logic model • Dashboards • Developmental evaluation • Kirkpatrick's Four Level Evaluation • World Café • Web training tracking • Follow-up surveys 	<ul style="list-style-type: none"> • Continue and improve current offerings • Launch customized BOH consultation • Provide intensive training for BOH development • Counsel PHTCs on training needs of BOH

Organization	Delivery Methods	Evaluation Methods	Future Plans
NEHA	<ul style="list-style-type: none"> • In person • Online courses 	<ul style="list-style-type: none"> • Training evaluations • Pre- and post-tests 	<ul style="list-style-type: none"> • Continue, update, and improve current trainings, depending on funding • Try new approaches, including advanced distance learning and hybrid courses • Modify Industry-Foodborne Illness Training for the manufacturing/processing food industry • Distribute revised Food-Safe Schools toolkit • Enhance online training for Integrated Pest Management
NLM	<ul style="list-style-type: none"> • In person • Online courses • Webinars 	<ul style="list-style-type: none"> • Training surveys/evaluations • Pre- and post-training questionnaires 	<ul style="list-style-type: none"> • Continue training activities • Broaden resources available asynchronously
NNPHI	<ul style="list-style-type: none"> • In person • Webinars • Conference calls 	<ul style="list-style-type: none"> • Course evaluations 	<ul style="list-style-type: none"> • Continue current trainings, depending on funding • Offer new trainings as funding is available
NLN	<ul style="list-style-type: none"> • In person • Webinars • Online courses 	<ul style="list-style-type: none"> • Course evaluations 	<ul style="list-style-type: none"> • Continue to offer current trainings • Offer additional webinar series • Expand NLN Resource Bank
PHF	<ul style="list-style-type: none"> • In person • Webinars • Conference calls • Online courses 	<ul style="list-style-type: none"> • Pre- and post-assessments • Course evaluations • Sponsor feedback • 6 month follow-up 	<ul style="list-style-type: none"> • Expand workshop offerings • Increase number of LMS course providers and courses • Focus on and foster competency-based training
Quad Council	<ul style="list-style-type: none"> • In person • Webinars 	<ul style="list-style-type: none"> • Course evaluations 	<ul style="list-style-type: none"> • Continue current training activities, depending on funding • Each Quad Council organization determines its own training plans
SOPHE	<ul style="list-style-type: none"> • In person • Webinars • Online courses • Self-study journal articles 	<ul style="list-style-type: none"> • Course evaluations • Training questions on annual member surveys 	<ul style="list-style-type: none"> • Promote CORE – add more courses and market to expand awareness • Review/update the Health Education Competencies for CHES and MCHES in collaboration with NCHEC • Explore ways to create a stronger voice for the health education profession through unification with former members of the American Association for Health Education

Abbreviations: CE = continuing education; PH = public health; LHD = local health department; HD = health department; BOH = board of health; PHTC = Public Health Training Center; LMS = learning management system; CORE = Center for Online Resources & Education; CHES = Certified Health Education Specialist; MCHES = Master Certified Health Education Specialist; NCHEC = National Commission for Health Education Credentialing.

Learning Management Systems

An LMS offers a means to coordinate training opportunities for the public health workforce and streamline the training process. Organizations were asked if they use an LMS and which system they use, purposes of and data generated by the LMS, and connectivity of the LMS with other systems.

Summary of Findings

- **Many organizations utilize an LMS.** More than half of the organizations use an LMS in some way, but many are new or limited users. Several organizations use TRAIN for various functions, such as posting and promoting training courses.
- **There is no leading LMS.** Organizations rely on a variety of systems for managing learning. Some organizations purchase an LMS, while others design their systems in-house. When an LMS is used, most organizations rely on a single system, although a small number employ multiple LMSs.
- **Common uses of LMSs** include delivering training, tracking training and CE credits, and conducting evaluations of training.
- **There is limited connectivity among systems.** Few organizations currently connect their LMSs to other organizational management systems.

Detailed Findings

Organization	LMS Used	Purpose	Additional Information
ACPM	<ul style="list-style-type: none"> YourMembership 	<ul style="list-style-type: none"> Allow members to track training taken Allow networking among members 	
APHA	<ul style="list-style-type: none"> E-ssential Learning (used by APHA's Continuing Education Program) 	<ul style="list-style-type: none"> Store information on CE credits Manage CE credits, transcripts, etc. 	
APTR	<ul style="list-style-type: none"> YourMembership 	<ul style="list-style-type: none"> Store and manage member information on CE credits Deliver and archive training sessions and teaching modules Process event registrations Conduct training evaluations 	
AAPHP	<ul style="list-style-type: none"> None 		<ul style="list-style-type: none"> Some member programs use LMSs or connect with TRAIN
APHL	<ul style="list-style-type: none"> SumTotal 	<ul style="list-style-type: none"> Deliver and archive trainings Provide access to transcripts and certificates Store information on PACE CE units 	<ul style="list-style-type: none"> Connected to APHL's association management system (Net Forum)
ASTHO	<ul style="list-style-type: none"> None 		
AUPHA	<ul style="list-style-type: none"> None 		
CDC	<ul style="list-style-type: none"> HHS Learning Portal CDC TRAIN 	<ul style="list-style-type: none"> HHS Learning Portal: Support training needs of HHS employees CDC TRAIN: Support training needs of the entire PH workforce 	
CCPH	<ul style="list-style-type: none"> Catalyst, a system developed by the University of Washington 	<ul style="list-style-type: none"> Process event registrations Conduct pre- and post-training evaluations Generate training participant statistics, such as demographics, self-assessments of knowledge and skills, satisfaction, suggestions for trainings, etc. 	<ul style="list-style-type: none"> Data are used for evaluation and planning and occasionally incorporated into published papers and reports
HRSA	<ul style="list-style-type: none"> HHS Learning Portal 		
NACCHO	<ul style="list-style-type: none"> BlueSky Broadcasting 		<ul style="list-style-type: none"> Trainings are currently on the NACCHO website, TRAIN, and other sites Would like to have a main hub for members to access all training, link it to membership database, and track utilization Lead Analyst for eLearning was hired to lead NACCHO's eLearning efforts

Organization	LMS Used	Purpose	Additional Information
NALBOH	<ul style="list-style-type: none"> In development with NLN/Saint Louis University College for Public Health & Social Justice – the Heartland Centers 		
NEHA	<ul style="list-style-type: none"> Moodle Absorb SkillSoft In-house proprietary software 	<ul style="list-style-type: none"> Deliver courses Store student records and pass scores 	<ul style="list-style-type: none"> Can establish links to other organizations' LMSs so students can use NEHA's courses
NLM	<ul style="list-style-type: none"> None 		<ul style="list-style-type: none"> Courses from NLM and NN/LM are listed in the MLA Educational Clearinghouse and TRAIN
NNPHI	<ul style="list-style-type: none"> None 		
NLN	<ul style="list-style-type: none"> Meridian Global System, the LMS of Saint Louis University's Heartland Centers (a PHTC) 	<ul style="list-style-type: none"> Manage professional development and training information, track credits, and fulfill learning plans Allow access to and deliver courses Generate data, such as number of people trained, training status, courses taken, etc. 	<ul style="list-style-type: none"> Refers its users to other non-NLN courses on the Heartland Center's LMS Heartland Center's LMS links to LMSs of other PHTCs and to TRAIN
PHF	<ul style="list-style-type: none"> TRAIN 	<ul style="list-style-type: none"> Deliver courses worldwide Track and monitor training Evaluate training Store data on trainers, learners, and training Produce statistics on training nationwide 	<ul style="list-style-type: none"> Provides data to PH workforce researchers
Quad Council	<ul style="list-style-type: none"> None 		
SOPHE	<ul style="list-style-type: none"> Peach New Media 	<ul style="list-style-type: none"> Deliver content of training Track courses and credentials Serve as a one stop hub for CE for CHES/MCHES and CPH Generate training statistics, such as number of people trained and CHES/CPH credits provided 	<ul style="list-style-type: none"> Connected to SOPHE's association management system

Abbreviations: LMS = learning management system; CE = continuing education; PACE = Professional Achievement in Continuing Education; HHS = Department of Health and Human Services; PH = public health; NN/LM = National Network of Libraries of Medicine; MLA = Medical Library Association; PHTC = Public Health Training Center; CHES = Certified Health Education Specialist; MCHES = Master Certified Health Education Specialist; CPH = Certified in Public Health.

Research and Data Collection

Engaging in public health workforce research and data collection can help to describe the workforce and inform decisions and activities related to the workforce. Organizations were asked whether they conduct or sponsor workforce research, what data they collect on the workforce, the frequency of research and data collection activities, how workforce data are used, whether workforce data are shared, and what other sources they rely on for workforce data.

Summary of Findings

- **Many organizations conduct research on the public health workforce or collect workforce data.** Approximately half of the organizations engage in workforce research or data collection on a fairly regular basis, often annually.
- **Most organizations collect data from their members or constituents.** More than half of the organizations collect data from their members or constituents, usually through member surveys.
- **Data are used to assess needs** and support advocacy, policy, and planning activities.
- **Most organizations would be willing to share their collected data** with others as appropriate.
- **Most organizations rely on other organizations as additional sources of workforce data.** Sources of public health workforce data include HRSA, CDC, NACCHO, ASTHO, and the Department of Labor.

Detailed Findings

Organization	Research/Data Collection Activities (Frequency)	Data Use	Other Data Sources
ACPM	<ul style="list-style-type: none"> • Workforce study for baseline enumeration of the preventive medicine workforce, with the University of Michigan (proposed) 	<ul style="list-style-type: none"> • Inform policy and advocacy 	<ul style="list-style-type: none"> • American Board of Preventive Medicine • Accreditation Council for Continuing Medical Education • NACCHO • AAMC
APHA	<ul style="list-style-type: none"> • Survey on educational needs to identify needs and gaps (annual) • Demographic information from a sample of its membership 	<ul style="list-style-type: none"> • Assess educational needs and compliance with accrediting organizations 	<ul style="list-style-type: none"> • HRSA • CDC • Other PH organizations
APTR	<ul style="list-style-type: none"> • Data about MPH programs and their graduates (annual) • Tracking of past APTR Fellows and Paul Ambrose Scholars • Data to support 7 Healthy People 2020 educational objectives on clinical prevention and interprofessional education (ECBP12-19) – collected by the APTR Healthy People Curriculum Task Force (baseline, mid-decade, and end-of-decade) 	<ul style="list-style-type: none"> • Information sharing • Inform policy and advocacy • Measure outcomes of training projects • Required data for Healthy People 2020 tracking 	<ul style="list-style-type: none"> • HRSA BHPPr • CDC • CEPH • APTR Healthy People Curriculum Task Force member organizations • IOM
AAPHP	<ul style="list-style-type: none"> • Occasional member surveys • Limited data on member program needs and capacities • Secondary data from member programs, such as CEPH annual reports • No systematic data collection currently, but exploring more systematic approaches • Scholarships that support research • Member programs conduct research 	<ul style="list-style-type: none"> • Inform CE and training activities 	<ul style="list-style-type: none"> • CEPH • PHTCs • Research and literature on the PH workforce
APHL	<ul style="list-style-type: none"> • Research agenda approved by its Board every year includes annual and periodic surveys: <ul style="list-style-type: none"> ▪ Survey of Laboratories (annual) ▪ All Hazards Laboratory Survey ▪ Workforce Compensation and Salary Survey ▪ Facility Characterization Survey, a survey of laboratory directors about facility characteristics (periodic, subject to funding) ▪ Individual Laboratorian Survey, a survey of individual characteristics (periodic, subject to funding) • Training needs assessments • Survey questions on hot topics 	<ul style="list-style-type: none"> • Create state profiles of PH laboratories • Support advocacy • Inform funding decision-makers • Support development of PR materials 	<ul style="list-style-type: none"> • American Society for Clinical Laboratory Science • Department of Labor • HRSA • ASPH
ASTHO	<ul style="list-style-type: none"> • Member survey (annual) • Profile of State Public Health survey (every 2 years) • Budget cuts survey (quarterly) • Planning a study on KSAs for the PH workforce, with the de Beaumont Foundation • Other data collected from SHOs and SHDs as needed 	<ul style="list-style-type: none"> • Information sharing • Support advocacy • Provide comparable information about state PH • Inform policy and priority building • Orient and support health officials 	<ul style="list-style-type: none"> • Interviews with program and HR directors at SHDs and territorial HDs

Organization	Research/Data Collection Activities (Frequency)	Data Use	Other Data Sources
AUPHA	<ul style="list-style-type: none"> • Survey of academic programs, which includes enrollment information and demographics (annual) • Membership assessment survey of what its constituents need 		
CDC	<ul style="list-style-type: none"> • Characterization of the CDC and HHS workforce • Development of strategies for enumerating the PH workforce • Enumeration of the governmental PH workforce • Development and implementation of a system to characterize the governmental PH workforce on an ongoing basis 	<ul style="list-style-type: none"> • Characterize the CDC workforce 	<ul style="list-style-type: none"> • HHS HR database
CCPH	<ul style="list-style-type: none"> • Program evaluations and member surveys on needs and gaps (annual) • Key stakeholder telephone interviews (annual) 	<ul style="list-style-type: none"> • Evaluation and planning • Support published papers and reports 	
HRSA	<ul style="list-style-type: none"> • HRSA-wide: <ul style="list-style-type: none"> ▪ Performance measures data on trainees ▪ Universal Data System tracks performance measures for grant programs • BHPr: <ul style="list-style-type: none"> ▪ National Center for Health Workforce Analysis <ul style="list-style-type: none"> ○ Area Resource File ○ University of Michigan nursing survey ▪ Nurse Practitioner Survey (2012) ▪ Enumeration of the PH workforce, with CDC ▪ National Health Professionals Report ▪ Minimum Data Set, national data set on the health workforce ▪ PHTCs conduct needs assessments, but BHPr does not aggregate these data • HAB: <ul style="list-style-type: none"> ▪ Workforce data on AIDS Education and Training Centers participants, such as needs and site trends (annual) ▪ Ryan White Data Report (every 2 years) ▪ HIV Clinical Workforce Initiative studies ▪ Study of the HIV Workforce (data collected in 2010) ▪ HIV workforce surveys through Health HIV (annual) • MCHB: <ul style="list-style-type: none"> ▪ Title V State Block Grant applications, which may describe workforce needs (annual) ▪ Title V Information System, a searchable public database on block grants 	<ul style="list-style-type: none"> • Program planning • Determine workforce needs • Project demands 	<ul style="list-style-type: none"> • ASTHO • NACCHO
NACCHO	<ul style="list-style-type: none"> • National Profile of Local Health Departments survey (every 2-3 years) • Job loss survey (twice/year) • Staffing benchmarks study with Bernie Turnock (2010) • Workforce and Leadership Development workgroup gathers informal assessment information 	<ul style="list-style-type: none"> • Inform reports and papers • Inform advocacy • Data publicly available via Profile-IQ 	<ul style="list-style-type: none"> • Enumeration study (CDC/HRSA) • Department of Labor
NALBOH	<ul style="list-style-type: none"> • National Public Health Governance Scan of governance structure and function (every 3-5 years) 	<ul style="list-style-type: none"> • Identify programming needs and gaps 	<ul style="list-style-type: none"> • County Health Rankings

Organization	Research/Data Collection Activities (Frequency)	Data Use	Other Data Sources
NEHA	<ul style="list-style-type: none"> • Profile information on members • Environmental Public Health Tracking Program, with CDC • Epi-Ready Team Training Program, with CDC • Food-Safe Schools Program, with CDC • Government and External Affairs Program • Land Use Planning and Design Program, with CDC • National Conversation on Public Health and Chemical Exposures, with CDC • Onsite Wastewater System Program, with EPA • Radon/Indoor Air Quality Training Program, with EPA • Workforce Development Program, with CDC • Biology and Control of Vectors/Public Health Pests Program, with CDC • Environmental Health Regulatory Capacity Assessments for the Council to Improve Foodborne Illness Response, with the Association of Food and Drug Officials 	<ul style="list-style-type: none"> • Inform programs 	<ul style="list-style-type: none"> • None
NLM	<ul style="list-style-type: none"> • Research activities vary in frequency and scope • Multi-year project to explore and identify least cost/most resilient and effective strategies for providing information to PH to support evidence-based PH practice in 15 SHDs and LHDs through shared resource licensing, HD-specific access to resources, training for PH staff, and working relationships between senior HD officials and local resource library leaders and staff, with the New England RML • Awards small disaster health information outreach and collaboration projects between organizations with disaster-related responsibilities, such as HDs, PH coalitions, and universities, and libraries – 7 awards in 2011 and 7 in 2012 • Evaluating and developing a broad implementation plan regarding use of MedlinePlus Connect, a service to link patient portals and electronic health records with consumer health information, by the Institute for Family Health community health center/safety net provider • No explicit agenda on PH workforce research, but has provided, and would provide in the future, search and retrieval services in support of Council on Linkages and other workforce research efforts 	<ul style="list-style-type: none"> • Does not track workforce data directly, but provides easier access to such data through web resources, including http://phpartners.org, Health Services Research Information Central, and DIMRC 	
NNPHI	<ul style="list-style-type: none"> • Member survey on workforce composition and training needs (annual) 	<ul style="list-style-type: none"> • Inform planning • PR and marketing materials 	<ul style="list-style-type: none"> • ASTHO • NACCHO • CDC • HRSA • County Health Rankings
NLN	<ul style="list-style-type: none"> • None 		

Organization	Research/Data Collection Activities (Frequency)	Data Use	Other Data Sources
PHF	<ul style="list-style-type: none"> • PH recruitment and retention research • Research on use of the Council on Linkages Core Competencies for Public Health Professionals • Data from PH workers on issues related to recruitment and retention • Data about training from over 700,000 learners • Data from approximately 4,000 providers of training • Data on over 29,000 training courses 	<ul style="list-style-type: none"> • Inform and improve policies and programs • Guide workforce development initiatives • Identify training gaps 	<ul style="list-style-type: none"> • ASTHO • NACCHO • NIHB • NALBOH • APTR • Quad Council • AAPHP
Quad Council	<ul style="list-style-type: none"> • Each Quad Council organization collects limited data on its members, including some demographic data, but the Quad Council does not aggregate these data • Quad Council organizations conduct research on PHN interventions and the PHN workforce 	<ul style="list-style-type: none"> • Developing research priorities • Evaluating educational strategies for educating the PHN workforce 	<ul style="list-style-type: none"> • HRSA • University of Michigan/RWJF PHN enumeration study • Focus groups
SOPHE	<ul style="list-style-type: none"> • Survey of members, non-members, and chapters (annual) • Periodic surveys of undergraduate and graduate programs in health education • Health Education Job Analysis, a study that forms the basis of the Health Education Competencies for CHES and MCHES (every 5 years; in process in 2013 with goal of publishing by 2015) • Market research on employers and attitudes about health education (2006) • SOPHE's National Task Force on Accreditation in Health Education conducts periodic research • Development of emergency preparedness competencies for health educators (due to be released in 2013) 	<ul style="list-style-type: none"> • Strategic planning 	<ul style="list-style-type: none"> • Department of Labor

Abbreviations: AAMC = Association of American Medical Colleges; PH = public health; MPH = Master of Public Health; ECBP = Educational and Community-Based Programs; CEPH = Council on Education for Public Health; IOM = Institute of Medicine; CE = continuing education; PHTC = Public Health Training Center; ASPH = Association of Schools of Public Health; KSAs = knowledge, skills, and abilities; SHO = state health official; SHD = state health department; HR = human resources; HD = health department; HHS = Department of Health and Human Services; EPA = United States Environmental Protection Agency; LHD = local health department; RML = regional medical library; DIMRC = Disaster Information Management Research Center; PR = public relations; NIHB = National Indian Health Board; PHN = public health nursing; RWJF = Robert Wood Johnson Foundation; CHES = Certified Health Education Specialist; MCHES = Master Certified Health Education Specialist.

Recruitment and Retention

Maintaining an adequate public health workforce depends on the effective recruitment of professionals into the workforce and retention of existing members within the workforce. Organizations were asked to describe their recruitment and retention efforts, including any activities that help to build the workforce pipeline and to improve the working environment for current public health professionals.

Summary of Findings

- **Most organizations engage in recruitment and retention activities.** Such activities include posting jobs online and offering career development activities and information at annual meetings and conferences.
- **Most organizations support the development of the public health workforce pipeline.** More than half of the organizations support the development of the workforce through internships, scholarships, or fellowships oriented to their focus areas. Organizations also engage in direct outreach to schools and students.
- **Most organizations support improving the working environment.** Approximately two-thirds of the organizations provide support to improve the working environment, primarily through conference sessions, information, or other resources.
- **Recruitment and retention may be influenced indirectly.** Organizations may indirectly contribute to recruitment and retention through their other activities, such as conferences and trainings, and by supporting members who engage in recruitment and retention efforts.

Detailed Findings

Organization	Recruitment and Retention Activities
ACPM	<ul style="list-style-type: none"> • Hosts job placement site on its website • Has a Medical Student Section, which is rapidly growing and supports Medical Student Interest Groups in medical schools • Offers sessions for medical students, residents, and new physicians at its annual meeting on opportunities and careers in preventive medicine • Participates in a medical student showcase at the American Medical Association annual meeting
APHA	<ul style="list-style-type: none"> • Hosts job site on its website, Public Health CareerMart • Offers coaches at its annual meeting to assist job seekers • Has an APHA Student Assembly • Founding member of CEPH • Participates in NBPHE
APTR	<ul style="list-style-type: none"> • Sponsors the annual Paul Ambrose Scholars Program, which seeks to bring clinical health professions students into PH • Manages various fellowships and residency rotations for federal partners • Provides support, networking, and curricula for PH teachers • Promotes and collects data for Healthy People 2020 educational objectives, which seek to deliver PH and prevention content at all academic levels • Reaches out to clinical health professions students to engage them in PH leadership activities
AAPHP	<ul style="list-style-type: none"> • Recently started a scholarship program for students in member programs conducting research • Supports member programs in forming partnerships with HDs, such as AHDs and internship sites, so that students can connect, communicate, and work with PH professionals • Supports member programs in preparing practitioners for the PH workforce and other health-related worksites
APHL	<ul style="list-style-type: none"> • Hosts job board on its website, APHL Job Center • Developed <i>A Practical Guide to Public Health Laboratories for State Health Officials</i> • Tracks all PH lab directors and provides support for recruitment, including model job descriptions, interview questions, and resource guides • Engages in PR activities regarding roles within the PH lab system to create career awareness and help with recruitment • Provides information on lab science careers for high school and college students • Supported development of a website that features the PH lab workforce (www.labsciencecareers.com) • Supports development of teacher resources • Participates and exhibits at national meetings, conferences, STEM festivals, and university events • Participated in and administered Career Pathways grants program to support innovative programs to build the workforce pipeline • Planning to explore a national model for an internship program • Encourages members to attend career fairs at high schools and colleges and distributes a presentation template on jobs in PH labs
ASTHO	<ul style="list-style-type: none"> • Posts job openings and internships from SHDs on its website • Hoping to use the Council on Linkages Core Competencies for Public Health Professionals for internal job descriptions • Worked with schools and facilitated state PH information sessions • Provided practicum experiences and internships for MPH students
AUPHA	<ul style="list-style-type: none"> • Provides materials to schools to interest students in health administration careers

Organization	Recruitment and Retention Activities
CDC	<ul style="list-style-type: none"> • Operates PH fellowship programs • Offers internship and fellowship programs for medical and veterinary students • Worked with the Department of Labor to establish the Public Health Informatics Fellowship as a Department of Labor Registered Apprenticeship • Provides Career Paths to Public Health Program to expose students and teachers to PH with activities including: <ul style="list-style-type: none"> ▪ Disease Detectives event at the National Science Olympiad ▪ Science Ambassadors program ▪ Sharing of PH lesson plans for middle and high school students (http://www.cdc.gov/excite) • Developing PH informatics position descriptions for use by SHDs and LHDs • In collaboration with partners, developed applied epidemiology and PH informatics competencies
CCPH	<ul style="list-style-type: none"> • Works to recruit and retain community-engaged faculty in academic institutions and CBOs in community-academic partnerships • Provides mentoring and training for graduate students and post-docs interested in pursuing community-engaged careers in academia • Increases community engagement at its conferences by soliciting for community authored and co-authored presentations and offering scholarships for community presenters • Increased youth engagement at its conferences by soliciting for youth-focused presentations, placing a priority on youth presenters, and offering scholarships for youth participants • Offers training institutes, workshops, mentoring, and other tools for faculty, post-docs, and graduate students to support successful community-engaged careers in academia • Offers training institutes, workshops, mentoring, and other tools for community partners to support successful academic partnerships
HRSA	<ul style="list-style-type: none"> • BHPPr: <ul style="list-style-type: none"> ▪ Provides workforce pipeline programs, especially focused on underserved minorities and diversity ▪ Supports workforce recruitment in underserved communities ▪ Supports CE for workforce retention ▪ Offers traineeships, fellowships, and stipends ▪ Provides faculty development programs ▪ Operates loan repayment program, which supports retention ▪ Operates the Health Careers Opportunity Program, which focuses on recruiting individuals from educationally or economically disadvantaged backgrounds into health and allied health professions programs ▪ AHECs provide career awareness and exposure, structured programming, summer camps, and mentoring ▪ Encourages PHTCs and AHECs to work together to increase career awareness • BPHC: <ul style="list-style-type: none"> ▪ Houses the National Health Service Corps, a key program for recruiting primary care providers, which offers scholarships and loan repayment • HAB: <ul style="list-style-type: none"> ▪ Provides information on opportunities in HIV care through the AIDS Training and Education Centers, residency programs, peer-to-peer mentoring, workforce studies, and community-based partnerships ▪ Provides adjunct staff to organizations to help mitigate clinician burnout ▪ Studying recruitment and retention trends in the HIV care field • MCHB: <ul style="list-style-type: none"> ▪ Works with HBCUs to engage students in PH careers ▪ Operates the MCH Public Health Learning Institute for MCH practitioners ▪ Working to increase MCH career skills in graduate training ▪ Working with grantees on diversity programs ▪ Exploring how to align funding with population MCH needs
NACCHO	<ul style="list-style-type: none"> • Provides internships in collaboration with universities and MPH programs
NALBOH	<ul style="list-style-type: none"> • Engages with the appointment process for BOH and has developed a guide for appointing members
NEHA	<ul style="list-style-type: none"> • Does not address recruitment and retention directly, but its activities indirectly support workforce recruitment and retention

Organization	Recruitment and Retention Activities
NLM	<ul style="list-style-type: none"> • Supports graduate and post-graduate training in biomedical informatics at 14 US universities, 9 of which offer specific programs for PH informatics • Provides traveling exhibits from its Exhibition Program on PH topics for display at HDs, libraries, and tribal locations <ul style="list-style-type: none"> ▪ The exhibit, <i>Against the Odds: Making a Difference in Global Public Health</i>, traveled nationally to schools of PH in 2008-9 through an arrangement between NLM and ASPH, was recognized at the APHA annual meeting, continues to travel, and is currently booked through 2014 ▪ Additional traveling exhibits are planned
NNPHI	<ul style="list-style-type: none"> • Has a job posting section on its website and in its newsletter • Has close ties with universities, which are used to fill internal internship positions • Frequently shares and connects with PHIs regarding internships • Creating a new undergraduate internship program, with one position per year • Exploring summer internships with a wider range of schools of PH and other schools related to PH, such as public administration, health communications, etc. • Offers practicum experiences for MPH students and MHA students • Member PHIs also engage with universities and schools of PH to offer internships and practicum experiences
NLN	<ul style="list-style-type: none"> • Does not engage in recruitment and retention activities directly • Member organizations focus on management strategies that impact recruitment and retention
PHF	<ul style="list-style-type: none"> • Provides internships • Collaborates with HOSA-Future Health Professionals to interest health professions students in PH careers • Tracks career choices of individuals involved in its minority outreach program • Surveyed PH workers on recruitment and retention • Assists organizations in creating workforce development plans • Develops tools to help PH organizations use the Council on Linkages Core Competencies for Public Health Professionals, such as job descriptions and competency assessments • Promotes student internships in HDs through its AHD Learning Community
Quad Council	<ul style="list-style-type: none"> • The Quad Council does not directly engage in recruitment and retention • Quad Council organizations engage in a variety of recruitment and retention activities, such as enhancing PHN curricula, supporting PHN faculty, encouraging students to consider PHN careers, and providing students with scholarships and mentors for APHA's annual meeting
SOPHE	<ul style="list-style-type: none"> • Previously participated in mentoring program through the Public Health Leadership Institute, but this program is no longer funded • Developing new leadership pipeline courses • Provides student outreach targeted at helping students find jobs, develop resumes, etc. • Participates in Health Education Week and National Public Health Week • Interested in engaging in more activities to develop the PH workforce pipeline, but has been limited by funding • Provides 6 paid internships/year • Offers 12-15 scholarships and fellowships to graduate and undergraduate students • Funds 12 people/year to attend its annual meeting or Health Education Advocacy Summit through the 21st Century Campaign endowment

Abbreviations: CEPH = Council on Education for Public Health; NBPHE = National Board of Public Health Examiners; PH = public health; HD = health department; AHD = academic health department; PR = public relations; STEM = science, technology, engineering, and mathematics; SHD = state health department; MPH = Master of Public Health; LHD = local health department; CBO = community-based organization; CE = continuing education; AHEC = Area Health Education Center; PHTC = Public Health Training Center; HBCUs = historically black colleges and universities; MCH = maternal and child health; BOH = board of health; ASPH = Association of Schools of Public Health; PHI = public health institute; MHA = Master of Health Administration; PHN = public health nursing.

Tools and Systems

A variety of tools and systems can support the public health workforce in its activities and enhance its effectiveness. Organizations were asked whether they develop, sponsor, use, or recommend tools or systems to improve workforce performance or employee satisfaction.

Summary of Findings

- **Most organizations provide resources, tools, or systems for the workforce**, but these tend not to be specific to workforce development. Few organizations develop or sponsor tools or systems specifically to improve workforce performance or employee satisfaction.
- **Most workforce development resources and tools are available online.** Of the tools developed or recommended by organizations for workforce development, most can be accessed online. Examples of such tools include NACCHO's Toolbox, CCPH's self-assessment tools, and NLN's Resource Bank.
- **Organizations want to learn about resources and tools.** Several organizations have an interest in learning more about what resources and tools exist so they can share that information with their members.

Advocacy

Membership organizations often advocate on behalf of their members or constituents. Organizations were asked about their advocacy efforts for the public health workforce with respect to jobs, research, training, or workforce development funding and whether they have developed policy statements related to the workforce.

Summary of Findings

- **Nearly all non-governmental organizations engage in some kind of advocacy.** Advocacy activities for the public health workforce typically relate to an organization's mission, members, or constituents.
- **Organizations may advocate for the public health workforce indirectly.** Several of the smaller organizations engage in advocacy through coalitions, such as the Coalition for Health Funding or the Health Professions and Nursing Education Coalition, or through their member organizations or programs.
- **Most non-governmental organizations issue policy or position statements related to the public health workforce.** Policy or position statements are typically available on organization websites.

Detailed Findings

Organization	Advocacy Activities	Policy Statements
ACPM	<ul style="list-style-type: none"> Advocates for preventive medicine residency programs and population-based medicine, including federal funding for preventive medicine residency training programs, loan forgiveness for PH physicians, and expansion of the National Health Service Corps to include preventive medicine Advocates through national coalitions, such as Partnerships to Fight Chronic Disease, Health Professions and Nursing Education Coalition, Coalition for Health Funding, Workplace Wellness Alliance, and National Violence Prevention Network 	<ul style="list-style-type: none"> On website
APHA	<ul style="list-style-type: none"> Advocates for PH jobs, research, training, and workforce development funding Developed a brief, <i>The Affordable Care Act's Public Health Workforce Provisions: Opportunities and Challenges</i>, which addresses workforce development issues 	<ul style="list-style-type: none"> On website
APTR	<ul style="list-style-type: none"> Advocates through coalition activities with TFAH, Coalition for Health Funding, and Health Professions and Nursing Education Coalition; as a member of Research!America; and through its Healthy People Curriculum Task Force Advocates for MPH programs through the APTR Council of Graduate Programs in Public Health 	<ul style="list-style-type: none"> None
AAPHP	<ul style="list-style-type: none"> Advocates for academic PH programs and the PH workforce Degree and direction of advocacy role has been a topic of discussion Advocates for the PH workforce through its member programs Co-sponsors the Advocacy Summit to help prepare students in its member programs for advocacy (has been involved for about 7 years, both as AAPHP and CAMP) 	<ul style="list-style-type: none"> None, but may consider developing in the future
APHL	<ul style="list-style-type: none"> Advocates through a variety of mechanisms, including building currency with legislative representatives, collaborating with organizations such as ASTHO, NACCHO, and CSTE 	<ul style="list-style-type: none"> Policy statement on importance of addressing workforce issues through APHL activities Policy statement on development of a standardized personnel nomenclature
ASTHO	<ul style="list-style-type: none"> Hosts Annual Hill Day in Washington, DC to help members meet with their Members of Congress Helps members arrange agency site visits with their Members of Congress Continually works with policymakers to ensure that state PH's voice is heard, including on workforce issues Supports and advocates for PH loan repayment 	<ul style="list-style-type: none"> Position statement on the PH workforce (being updated) Other policy and position statements address workforce issues indirectly
AUPHA	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> None
CDC	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> None
CCPH	<ul style="list-style-type: none"> Advocates for policies and funding that support CBPR, including providing funding directly to community organizations, and for service-learning as a required component of health professions education Incorporates advocacy into trainings Advocates by participating in advocacy coalitions, submitting comments in response to government requests for public input, etc. 	<ul style="list-style-type: none"> Statements on community engagement in the Clinical and Translational Science Awards program; the NIH peer review process and criteria; and community action agenda on authentic, equitable, and transformative community-academic research partnerships
HRSA	<ul style="list-style-type: none"> None 	

Organization	Advocacy Activities	Policy Statements
NACCHO	<ul style="list-style-type: none"> • Advocates for PH workforce development funding through its Government Affairs Office • Has worked with job loss report data in advocating for PH workforce funding 	<ul style="list-style-type: none"> • On website
NALBOH	<ul style="list-style-type: none"> • Is interested in ensuring resources are in place for the workforce • Has signed various letters of support to keep PH funding that supports a strong workforce 	<ul style="list-style-type: none"> • Effective Board Training Ensures Quality Public Health Services Position Statement (November 2012)
NEHA	<ul style="list-style-type: none"> • Advocates for environmental health jobs, research, training, workforce development funding, and building environmental health capacity in a variety of ways 	<ul style="list-style-type: none"> • On website
NLM	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • None
NNPHI	<ul style="list-style-type: none"> • Advocates primarily for funding for leadership development programs and support for PHIs • Is a founding member of the National Alliance for Leadership Development for the Public's Health 	<ul style="list-style-type: none"> • White papers on leadership and the Public Health Leadership Society, Alliance for Leadership (10 PHIs), and advocating for leadership
NLN	<ul style="list-style-type: none"> • Advocates for training and workforce development funding • Is a convener of the National Alliance for Leadership Development for the Public's Health 	
PHF	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • None
Quad Council	<ul style="list-style-type: none"> • Advocates through its member organizations on relevant topics, i.e., PH funding, nursing education funding, new models of care, PH issues 	<ul style="list-style-type: none"> • Strategic briefs on website • Each Quad Council organization has policy statements on its website
SOPHE	<ul style="list-style-type: none"> • 2011 Advocacy Priorities: <ul style="list-style-type: none"> ▪ Patient Protection and Affordable Care Act ▪ Appropriations for CDC's National Center for Chronic Disease Prevention and Health Promotion ▪ Reauthorization of the Elementary and Secondary Education Act to include health education and physical education as core subjects ▪ Promote the Health Education Profession as a critical component to addressing the health crisis in our society ▪ Health literacy ▪ Health equity across all populations ▪ Tobacco prevention and control ▪ Environmental health/emergency preparedness • Lists Advocacy Resolutions on its website 	<ul style="list-style-type: none"> • On website

Abbreviations: PH = public health; TFAH = Trust for America's Health; MPH = Master of Public Health; CAMP = Council of Accredited MPH Programs; CSTE = Council of State and Territorial Epidemiologists; CBPR = community-based participatory research; NIH = National Institutes of Health; PHI = public health institute.

Partnerships and Information Sharing

Collaboration and coordination of public health workforce development efforts can be facilitated by the establishment of partnerships between organizations and depend heavily on sharing information about such efforts. Organizations were asked to identify their major collaborators, the organizations to which they turn for assistance with workforce development, and their affiliates involved in workforce activities. As well, organizations were asked what information would be helpful in planning workforce development activities and for any additional information relevant to their workforce development efforts.

Summary of Findings

- **Few organizations conduct their public health workforce development activities entirely alone.** Organizations participate in formal partnerships, such as the Council on Linkages and PHPartners, and collaborate with a range of other organizations on workforce development efforts. Most organizations partner with at least one other Council on Linkages member organization. As well, most organizations turn to other organizations, such as CDC, HRSA, NACCHO, and PHF, for workforce development assistance.
- **Organizational affiliates also support the public health workforce.** Approximately two-thirds of the organizations have affiliates involved in public health workforce activities.
- **Sharing information on workforce development activities is important to the organizations.** Approximately half of the organizations specifically highlighted the value of sharing workforce development information to help them better support their members and constituents. Organizations would like to have information on workforce development activities in order to better understand the needs and resources available and plan workforce development activities to help build the most efficient and effective workforce with limited resources.

Detailed Findings

Organizational Relationships

Organization	Partners	Organizations Turned to for Assistance	Affiliates
ACPM	<ul style="list-style-type: none"> • PH stakeholders such as ASTHO, NACCHO, APHA, etc. • HHS • HRSA • CDC • Office of Management and Budget 	<ul style="list-style-type: none"> • HHS • CDC • HRSA 	<ul style="list-style-type: none"> • California and North Carolina affiliate societies • American College of Lifestyle Medicine
APHA	<ul style="list-style-type: none"> • CDC • HRSA • Council on Linkages • Friends of HRSA • CDC Coalition 	<ul style="list-style-type: none"> • CDC workforce initiative 	<ul style="list-style-type: none"> • 53 state and local affiliates • 29 sections • 4 special primary interest groups • 5 forums • 18 caucuses • APHA Student Assembly
APTR	<ul style="list-style-type: none"> • Cooperative Agreement with CDC – one of CDC SEPDPPO's 4 "Academic Partners" with AAMC, ASPH, and AACN • Cooperative Agreement with HHS Office of Disease Prevention and Health Promotion • Works with 8 clinical health professional education organizations through its Healthy People Curriculum Task Force: Association of Schools of Allied Health Professions, AAMC, AACN, American Dental Education Association, National Organization of Nurse Practitioner Faculties, American Association of Colleges of Osteopathic Medicine, American Association of Colleges of Pharmacy, and Physician Assistant Education Association • <i>American Journal of Preventive Medicine</i> • ACPM • PHF • Council on Linkages 	<ul style="list-style-type: none"> • CDC SEPDPPO • HRSA • ASTHO • NACCHO • APHA • CEPH 	<ul style="list-style-type: none"> • None
AAPHP	<ul style="list-style-type: none"> • Primary collaborators: PHF, Council on Linkages, and CEPH • Other collaborators include CDC, HRSA, and RWJF 	<ul style="list-style-type: none"> • Council on Linkages • PHF and TRAIN 	<ul style="list-style-type: none"> • None
APHL	<ul style="list-style-type: none"> • ASTHO • NACCHO • CDC • ASPH • APHA • Coordinating Council on the Clinical Laboratory Workforce 	<ul style="list-style-type: none"> • CDC 	<ul style="list-style-type: none"> • None

Organization	Partners	Organizations Turned to for Assistance	Affiliates
ASTHO	<ul style="list-style-type: none"> • CDC • HRSA • Council on Linkages • Other organizations for information on specific segments of the PH workforce, such as the Center for State and Local Government Excellence and TFAH 	<ul style="list-style-type: none"> • ASTHO members • Council on Linkages member organizations 	<ul style="list-style-type: none"> • 20 affiliates
AUPHA	<ul style="list-style-type: none"> • None 		<ul style="list-style-type: none"> • Public Health Faculty Forum
CDC	<ul style="list-style-type: none"> • Internal partners, such as CDC centers, institutes, and offices • External PH partners, such as PHF, ASTHO, NACCHO, CSTE, and others • Academic partners, such as AACN, AAMC, APTR, ASPH, and others • Foundations, such as RWJF and de Beaumont Foundation • Other groups 	<ul style="list-style-type: none"> • Internal partners, such as CDC centers, institutes, and offices • External PH partners, such as PHF, ASTHO, NACCHO, CSTE, and others • Academic partners, such as AACN, AAMC, APTR, ASPH, and others • Foundations, such as RWJF and de Beaumont Foundation • Other groups 	<ul style="list-style-type: none"> • None
CCPH	<ul style="list-style-type: none"> • APHA Community-Based Public Health Caucus • National Association of Community Health Centers • Association of Asian and Pacific Islander Community Health Organizations • CDC Prevention Research Centers Program's National Community Committee 	<ul style="list-style-type: none"> • ASPH • APHA • Health Professions and Nursing Education Coalition 	<ul style="list-style-type: none"> • None
HRSA			
NACCHO	<ul style="list-style-type: none"> • ASTHO (align questions for HD profiles) • Council on Linkages • CDC • HRSA 	<ul style="list-style-type: none"> • Council on Linkages 	<ul style="list-style-type: none"> • State Associations of County and City Health Officials (SACCHOs)
NALBOH	<ul style="list-style-type: none"> • Member of the Partnership for Public Health Law with APHA, ASTHO, and NACCHO • CDC • RWJF • The Network for Public Health Law 	<ul style="list-style-type: none"> • CDC • NACCHO 	<ul style="list-style-type: none"> • State Associations of Local Boards of Health (SALBOHs)
NEHA	<ul style="list-style-type: none"> • Works with other organizations on a variety of environmental and PH workforce issues, concerns, and projects 		<ul style="list-style-type: none"> • Affiliate organizations in nearly every state (see website)

Organization	Partners	Organizations Turned to for Assistance	Affiliates
NLM	<ul style="list-style-type: none"> • Many collaborations, including: <ul style="list-style-type: none"> ▪ Organizations participating in PHPartners: AHRQ, APHA, ASPH, ASTHO, CDC, HRSA, MLA, National Agricultural Library, NACCHO, NALBOH, NN/LM, PHF, and SOPHE ▪ Council on Linkages ▪ National Coordinating Center for PHSSR ▪ Is a member of the IOM's Forum on Medical and Public Health Preparedness for Catastrophic Events, which includes the HHS Assistant Secretary for Preparedness and Response, CDC, FDA, Department of Homeland Security (Federal Emergency Management Agency and Office of Health Affairs), NIAID, NACCHO, ASTHO, APHA, and other organizations • NN/LM routinely works with regional partners, including HDs 	<ul style="list-style-type: none"> • PHPartners organizations • NN/LM members • Partners in the preparedness area (http://sis.nlm.nih.gov/dimrc/partnersdimrc_ppp.html) 	<ul style="list-style-type: none"> • Approx. 6,000 members of NN/LM, anchored by 8 primarily academic medical libraries
NNPHI	<ul style="list-style-type: none"> • RWJF • CDC • HRSA • ASTHO • NACCHO • NLN • PHF • APHA • PHAB • University of North Carolina Gillings School of Global Public Health • North Carolina Institute of Public Health • Public Health Institute of California • Other member PHIs 	<ul style="list-style-type: none"> • Member PHIs • NLN • Schools of PH 	<ul style="list-style-type: none"> • PHIs
NLN	<ul style="list-style-type: none"> • National Alliance for Leadership Development for the Public's Health • NACCHO • CDC • ASTHO 	<ul style="list-style-type: none"> • NLN Executive Committee • Member organizations • Affiliates 	<ul style="list-style-type: none"> • Approx. 15 affiliate member organizations • Approx. 40 affiliate member individuals

Organization	Partners	Organizations Turned to for Assistance	Affiliates
PHF	<ul style="list-style-type: none"> • ACPM • APHA • APTR • AAPHP • APHL • ASPH • ASTHO • AUPHA • CDC • CCPH • HRSA • NACCHO • NALBOH • NEHA • NLM • NNPHI • NLN • Quad Council • SOPHE • PHAB • University of Kentucky • University of Michigan 	<ul style="list-style-type: none"> • CDC • HRSA • PH PBRNs • PHTCs 	<ul style="list-style-type: none"> • 28 state and national TRAIN affiliates
Quad Council	<ul style="list-style-type: none"> • Is a collaboration of 4 organizations: Association of Public Health Nurses (APHN), Association of Community Health Nursing Educators (ACHNE), APHA Public Health Nursing Section (PHN-APHA), and American Nurses Association Council on Nursing Practice and Economics (ANA) • Participates in the Nursing Community, a coalition of nursing organizations that takes policy positions and advocates for nursing education funding 	<ul style="list-style-type: none"> • Funders such as RWJF • Quad Council member organizations • HRSA • CDC • AACN • Nursing Community 	<ul style="list-style-type: none"> • ASTHO (through APHN) • APHA (through PHN-APHA)

Organization	Partners	Organizations Turned to for Assistance	Affiliates
SOPHE	<ul style="list-style-type: none"> • CDC • HHS • Office of Minority Health • NLM • ATSDR • National Cancer Institute • NIH Office of Behavioral and Social Sciences Research • Department of Education • APHA • ASPH • APTR • AAPHP • NACDD • PHPartners • PHF • TFAH • NACCHO • ASTHO • YMCA of USA • American Lung Association • National Recreation and Park Association • American Cancer Society • Directors of Health Promotion and Education • IUHPE • Research!America 	<ul style="list-style-type: none"> • PHF • PHTCs • Prevention Research Centers • RWJF • Kellogg Foundation 	<ul style="list-style-type: none"> • 20 chapters

Abbreviations: PH = public health; HHS = Department of Health and Human Services; AAMC = Association of American Medical Colleges; ASPH = Association of Schools of Public Health; AACN = American Association of Colleges of Nursing; CEPH = Council on Education for Public Health; RWJF = Robert Wood Johnson Foundation; TFAH = Trust for America's Health; CSTE = Council of State and Territorial Epidemiologists; HD = health department; PHPartners = Partners in Information Access for the Public Health Workforce; AHRQ = Agency for Healthcare Research and Quality; MLA = Medical Library Association; NN/LM = National Network of Libraries of Medicine; PHSSR = public health services and systems research; IOM = Institute of Medicine; FDA = U.S. Food and Drug Administration; NIAID = National Institute of Allergy and Infectious Diseases; PHAB = Public Health Accreditation Board; PHI = public health institute; PBRNs = Practice-Based Research Networks; PHTC = Public Health Training Center; ATSDR = Agency for Toxic Substances and Disease Registry; NIH = National Institutes of Health; NACDD = National Association of Chronic Disease Directors; IUHPE = International Union for Health Promotion and Education.

Planning Needs and Additional Information on Workforce Development Activities

Organization	Planning Needs	Additional Information on Activities
ACPM	<ul style="list-style-type: none"> • What other organizations are doing • Common understanding of the PH workforce 	
APHA	<ul style="list-style-type: none"> • Where to get resources for supporting the workforce • How to tap into Council on Linkages partners' activities 	<ul style="list-style-type: none"> • Continuing to advocate for PH workforce funding • Wants to ensure members acquire skills they need to do their work • Staying current on workforce research

Organization	Planning Needs	Additional Information on Activities
APTR	<ul style="list-style-type: none"> • Understanding of practice needs/expectations for PH and health professions students, as there seems to be a disconnect between what students are learning and what governmental PH needs • How to employ PH students in clinical settings, especially to assist with health reform implementation, Accountable Care Organizations, etc. 	
AAPHP	<ul style="list-style-type: none"> • What innovations in workforce development are on the horizon • What is working well in PH workforce development • What are available and accurate national/regional data sources reflecting professional development needs and capacity (e.g., available online technology) for the PH workforce that can be easily accessed 	<ul style="list-style-type: none"> • Interested in activities that would be of value to its member programs and the PH workforce • Open to ideas and recommendations from the Council on Linkages and other sources
APHL	<ul style="list-style-type: none"> • None 	
ASTHO	<ul style="list-style-type: none"> • What other organizations are doing for workforce development • Data on the PH workforce, including demographics • What workforce development tools are being used 	
AUPHA	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • Willing to disseminate any resources that become available as a result of this effort
CDC	<ul style="list-style-type: none"> • Latest data from partner organizations, helps to inform efforts 	
CCPH	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • Increased recognition of social determinants of health and PH points to members of the PH workforce that may not be well represented on the Council on Linkages, such as community health workers and those working at the intersection of health and the built environment, environmental justice, etc.
HRSA	<ul style="list-style-type: none"> • HAB: <ul style="list-style-type: none"> ▪ Core data on comprehensive workforce numbers and programs ▪ Data compiled across programs 	<ul style="list-style-type: none"> • BHPr: <ul style="list-style-type: none"> ▪ Charged with integrating PH and primary care and is exploring PH workforce competencies within PH and other disciplines, especially primary care ▪ Working with CDC on joint initiatives and starting to implement IOM recommendations on primary care and PH • MCHB: <ul style="list-style-type: none"> ▪ Establishing 4 new Maternal and Child Health Workforce Development Centers, located within academic institutions and focused on academic/practice partnerships
NACCHO	<ul style="list-style-type: none"> • Interested in aligning work with core competencies 	<ul style="list-style-type: none"> • Workforce development efforts are often program-specific, but there are many crosscutting issues • Very much appreciate the Council on Linkages' role with workforce development • Exploring new directions with workforce development, including expansion of eLearning, centralized trainings, an LMS, and establishing linkages with partners • Encouraging LHDs to work with PHTCs

Organization	Planning Needs	Additional Information on Activities
NALBOH	<ul style="list-style-type: none"> • Development of good leadership teams (BOH and health directors) and understanding of how BOH can help make PH more effective and efficient • Defined governance functions to be used as a baseline of standards for developing training and education to strengthen PH governance 	<ul style="list-style-type: none"> • NALBOH Annual Conference is a great opportunity for training and networking • Health director and BOH member networking is very important
NEHA	<ul style="list-style-type: none"> • Existing and planned workforce development activities and the type of information sharing available on such activities 	
NLM	<ul style="list-style-type: none"> • Anticipated changes in how the PH workforce will access and utilize primary and secondary sources of information and data in the future • How to better leverage our collective resources to address the anticipated range of skills and information needs • Would like to hear from Council on Linkages colleagues about how NLM, the RMLs, and the NN/LM could better assist the PH workforce in both the near- and long-term 	<ul style="list-style-type: none"> • Committed to supporting and strengthening access to information and knowledge tools for PH and to encouraging evidence-based PH practice, preparedness, and disaster response
NNPHI	<ul style="list-style-type: none"> • More information on enumeration of the PH workforce beyond governmental PH • Help with outreach to connect with other trainings 	<ul style="list-style-type: none"> • Will be interviewing/surveying PHIs on workforce development activities through funding from CDC's SEPDO
NLN	<ul style="list-style-type: none"> • Who is doing what in PH workforce development, in order to make the best use of limited resources and not reinvent the wheel 	<ul style="list-style-type: none"> • Wants to remain as a hub for PH leadership and to support these activities • Working to redefine membership structure in response to the changing face of PH leadership development
PHF	<ul style="list-style-type: none"> • What has the greatest impact on improving workforce performance • What strategies and activities are organizations engaged in to build and improve the workforce 	<ul style="list-style-type: none"> • Continuing to develop programs and resources to improve the skills, competence, and performance of the workforce
Quad Council	<ul style="list-style-type: none"> • What has the greatest impact on improving PHN workforce performance • What PHN models are most effective in improving the health of the public 	
SOPHE	<ul style="list-style-type: none"> • Results of this study shared, so can be more strategic in decisions and identify relative priorities, areas of overlap, and opportunities to collaborate 	<ul style="list-style-type: none"> • Has collaborated with the IUHPE to develop Domains of Practice in Health Promotion and strengthen accreditation and workforce training processes globally

Abbreviations: PH = public health; IOM = Institute of Medicine; LMS = learning management system; LHD = local health department; PHTC = Public Health Training Center; BOH = board of health; RML = regional medical library; NN/LM = National Network of Libraries of Medicine; PHI = public health institute; PHN = public health nursing; IUHPE = International Union for Health Promotion and Education.

Appendices

Supplemental information about public health workforce development activities is organized into the following four appendices:

- *Appendix A. Organizational Summaries.* This appendix summarizes workforce development activities for each of the organizations from which information was collected. The information in this appendix is identical to the information provided earlier in the report, but is presented by organization rather than topic.
- *Appendix B. Discussion Questions.* This appendix includes the questions used to guide the discussions with organizations through which the information on workforce development activities included in the report was collected.
- *Appendix C. Abbreviations.* This appendix provides a list of abbreviations used in the report.
- *Appendix D. Participants.* This appendix lists individuals involved in the development of the report, including those who provided, reviewed, analyzed, or summarized information on workforce development activities.

Appendix A. Organizational Summaries

A summary of workforce development activities was prepared for each organization that provided this information. These summaries are based on information collected between September 2012 and June 2013. This appendix contains summaries for the following organizations:

- American College of Preventive Medicine (ACPM)
- American Public Health Association (APHA)
- Association for Prevention Teaching and Research (APTR)
- Association of Accredited Public Health Programs (AAPHP)
- Association of Public Health Laboratories (APHL)
- Association of State and Territorial Health Officials (ASTHO)
- Association of University Programs in Health Administration (AUPHA)
- Centers for Disease Control and Prevention (CDC)
 - Scientific Education and Professional Development Program Office (SEPDPO)
- Community-Campus Partnerships for Health (CCPH)
- Health Resources and Services Administration (HRSA)
 - Bureau of Health Professions (BHP)
 - Bureau of Primary Health Care (BPHC)
 - HIV/AIDS Bureau (HAB)
 - Maternal and Child Health Bureau (MCHB)
- National Association of County and City Health Officials (NACCHO)
- National Association of Local Boards of Health (NALBOH)
- National Environmental Health Association (NEHA)
- National Library of Medicine (NLM)
- National Network of Public Health Institutes (NNPHI)
- National Public Health Leadership Development Network (NLN)
- Public Health Foundation (PHF)
- Quad Council of Public Health Nursing Organizations (Quad Council)
 - American Nurses Association (ANA)
 - Association of Community Health Nursing Educators (ACHNE)
 - Association of Public Health Nursing (APHN)
 - Public Health Nursing Section of the American Public Health Association (PHN-APHA)
- Society for Public Health Education (SOPHE)

American College of Preventive Medicine (ACPM)

Website: <http://www.acpm.org>

Training	LMS
<p>Focus of Training</p> <ul style="list-style-type: none"> Preventive medicine <p>Activities</p> <ul style="list-style-type: none"> Annual meeting Annual Board Review Course CME for preventive medicine physicians Host site for practicum training <p>Target Audiences</p> <ul style="list-style-type: none"> Preventive medicine physicians <p>Number Trained/Year</p> <ul style="list-style-type: none"> 1,000+ <p>Competencies</p> <ul style="list-style-type: none"> Accreditation Council for Graduate Medical Education Core Competencies for residency training <p>Accreditation/Certification Programs</p> <ul style="list-style-type: none"> Provides CME, Maintenance of Certification, and Maintenance of Licensure for preventive medicine physicians <p>Delivery Methods</p> <ul style="list-style-type: none"> In person Webinars Online training <p>Evaluation Methods</p> <ul style="list-style-type: none"> Course evaluations Follow-up surveys <p>Future Plans</p> <ul style="list-style-type: none"> Expand course offerings Identify new training areas Assess member needs 	<p>LMS Used</p> <ul style="list-style-type: none"> YourMembership <p>Purpose</p> <ul style="list-style-type: none"> Allow members to track training taken Allow networking among members

Research and Data Collection	Recruitment and Retention	Advocacy	Partnerships and Information Sharing
<p>Activities (Frequency)</p> <ul style="list-style-type: none"> Workforce study for baseline enumeration of the preventive medicine workforce, with the University of Michigan (proposed) <p>Data Use</p> <ul style="list-style-type: none"> Inform policy and advocacy <p>Other Data Sources</p> <ul style="list-style-type: none"> American Board of Preventive Medicine Accreditation Council for Continuing Medical Education NACCHO AAMC 	<p>Activities</p> <ul style="list-style-type: none"> Hosts job placement site on its website Has a Medical Student Section, which is rapidly growing and supports Medical Student Interest Groups in medical schools Offers sessions for medical students, residents, and new physicians at its annual meeting on opportunities and careers in preventive medicine Participates in a medical student showcase at the American Medical Association annual meeting 	<p>Activities</p> <ul style="list-style-type: none"> Advocates for preventive medicine residency programs and population-based medicine, including federal funding for preventive medicine residency training programs, loan forgiveness for PH physicians, and expansion of the National Health Service Corps to include preventive medicine Advocates through national coalitions, such as Partnerships to Fight Chronic Disease, Health Professions and Nursing Education Coalition, Coalition for Health Funding, Workplace Wellness Alliance, and National Violence Prevention Network <p>Policy Statements</p> <ul style="list-style-type: none"> On website 	<p>Partners</p> <ul style="list-style-type: none"> PH stakeholders such as ASTHO, NACCHO, APHA, etc. HHS HRSA CDC Office of Management and Budget <p>Organizations Turned to for Assistance</p> <ul style="list-style-type: none"> HHS CDC HRSA <p>Affiliates</p> <ul style="list-style-type: none"> California and North Carolina affiliate societies American College of Lifestyle Medicine <p>Planning Needs</p> <ul style="list-style-type: none"> What other organizations are doing Common understanding of the PH workforce

American Public Health Association (APHA)

Website: <http://www.apha.org>

Training			LMS
<p>Focus of Training</p> <ul style="list-style-type: none"> • Full spectrum of PH workforce development needs • Topics include, but are not limited to, aging, behavioral health, cancer, children’s health, chronic disease, environmental health, epidemiology, food safety, health policy and advocacy, health services research, HIV/AIDS, mental health, minority health issues, nutrition and obesity, reproductive health, and women’s health <p>Activities</p> <ul style="list-style-type: none"> • Annual meeting • Learning Institute courses at annual meeting • Midyear meeting in June • Trainings and CE credits at other organizations’ events • Webinar series 	<p>Target Audiences</p> <ul style="list-style-type: none"> • Entire PH community <p>Number Trained/Year</p> <ul style="list-style-type: none"> • 26,000+ <p>Competencies</p> <ul style="list-style-type: none"> • ASPH MPH Core Competency Model • Council on Linkages Core Competencies for Public Health Professionals • Other sets of competencies as required for certification programs <p>Accreditation/Certification Programs</p> <ul style="list-style-type: none"> • Accredited provider of CME, CNE, CHES, MCHES, and CPH credits • Granted 16,000 CE credit hours to attendees at its 2011 annual meeting 	<p>Delivery Methods</p> <ul style="list-style-type: none"> • In person • Webinars <p>Evaluation Methods</p> <ul style="list-style-type: none"> • Annual meeting and session evaluations • In-depth, pre- and post-evaluations for CE credit classes <p>Future Plans</p> <ul style="list-style-type: none"> • Expand access to annual meeting sessions online • Increase distance learning • Discontinue satellite broadcasts (due to lack of funding) 	<p>LMS Used</p> <ul style="list-style-type: none"> • E-ssential Learning (used by APHA’s Continuing Education Program) <p>Purpose</p> <ul style="list-style-type: none"> • Store information on CE credits • Manage CE credits, transcripts, etc.

Research and Data Collection	Recruitment and Retention	Advocacy	Partnerships and Information Sharing
<p>Activities (Frequency)</p> <ul style="list-style-type: none"> • Survey on educational needs to identify needs and gaps (annual) • Demographic information from a sample of its membership <p>Data Use</p> <ul style="list-style-type: none"> • Assess educational needs and compliance with accrediting organizations <p>Other Data Sources</p> <ul style="list-style-type: none"> • HRSA • CDC • Other PH organizations 	<p>Activities</p> <ul style="list-style-type: none"> • Hosts job site on its website, Public Health CareerMart • Offers coaches at its annual meeting to assist job seekers • Has an APHA Student Assembly • Founding member of CEPH • Participates in NBPHE 	<p>Activities</p> <ul style="list-style-type: none"> • Advocates for PH jobs, research, training, and workforce development funding • Developed a brief, <i>The Affordable Care Act's Public Health Workforce Provisions: Opportunities and Challenges</i>, which addresses workforce development issues <p>Policy Statements</p> <ul style="list-style-type: none"> • On website 	<p>Partners</p> <ul style="list-style-type: none"> • CDC • HRSA • Council on Linkages • Friends of HRSA • CDC Coalition <p>Organizations Turned to for Assistance</p> <ul style="list-style-type: none"> • CDC workforce initiative <p>Affiliates</p> <ul style="list-style-type: none"> • 53 state and local affiliates • 29 sections • 4 special primary interest groups • 5 forums • 18 caucuses • APHA Student Assembly <p>Planning Needs</p> <ul style="list-style-type: none"> • Where to get resources for supporting the workforce • How to tap into Council on Linkages partners' activities <p>Additional Information on Activities</p> <ul style="list-style-type: none"> • Continuing to advocate for PH workforce funding • Wants to ensure members acquire skills they need to do their work • Staying current on workforce research

Association for Prevention Teaching and Research (APTR)

Website: <http://www.aptrweb.org>

Training	LMS
<p>Focus of Training</p> <ul style="list-style-type: none"> • Prevention and population health education for physicians, health professionals, and PH students • Annual meeting: <ul style="list-style-type: none"> ▪ Integration of population health and clinical health sciences into teaching, training, and practice ▪ Prevention in health reform implementation ▪ Sharing innovations in curriculum and course design, new technologies, and academic scholarship • Paul Ambrose Scholars Program: <ul style="list-style-type: none"> ▪ Introduction of PH and prevention to clinical health science students ▪ Leadership training ▪ Skills to design and implement community-based projects • Fellowships and residency rotations: <ul style="list-style-type: none"> ▪ Post-graduate experiential learning in governmental PH policy, research, and practice ▪ Leadership and professional skills development • Prevention and Population Health Teaching Modules: <ul style="list-style-type: none"> ▪ Clinical and population-based prevention skills for all health professions students ▪ Healthy People 2020 teaching resources <p>Activities</p> <ul style="list-style-type: none"> • Teaching Prevention annual meeting (spring) • Paul Ambrose Scholars Program • Post-graduate fellowships and preventive medicine residency rotations • Health professions student internship and residency rotation host site • Prevention and Population Health Teaching Modules • Meetings in conjunction with APHA's annual meeting • Workshops <p>Target Audiences</p> <ul style="list-style-type: none"> • Members • University PH and health professions faculty and students • PH practitioners • PH and prevention researchers <p>Number Trained/Year</p> <ul style="list-style-type: none"> • 1,200+ <p>Competencies</p> <ul style="list-style-type: none"> • Council on Linkages Core Competencies for Public Health Professionals <p>Accreditation/Certification Programs</p> <ul style="list-style-type: none"> • 	<p>LMS Used</p> <ul style="list-style-type: none"> • YourMembership <p>Purpose</p> <ul style="list-style-type: none"> • Store and manage member information on CE credits • Deliver and archive training sessions and teaching modules • Process event registrations • Conduct training evaluations

Research and Data Collection	Recruitment and Retention	Advocacy	Partnerships and Information Sharing
<p>Activities (Frequency)</p> <ul style="list-style-type: none"> • Data about MPH programs and their graduates (annual) • Tracking of past APTR Fellows and Paul Ambrose Scholars • Data to support 7 Healthy People 2020 educational objectives on clinical prevention and interprofessional education (ECBP12-19) – collected by the APTR Healthy People Curriculum Task Force (baseline, mid-decade, and end-of-decade) <p>Data Use</p> <ul style="list-style-type: none"> • Information sharing • Inform policy and advocacy • Measure outcomes of training projects • Required data for Healthy People 2020 tracking <p>Other Data Sources</p> <ul style="list-style-type: none"> • HRSA BHP • CDC • CEPH • APTR Healthy People Curriculum Task Force member organizations • IOM 	<p>Activities</p> <ul style="list-style-type: none"> • Sponsors the annual Paul Ambrose Scholars Program, which seeks to bring clinical health professions students into PH • Manages various fellowships and residency rotations for federal partners • Provides support, networking, and curricula for PH teachers • Promotes and collects data for Healthy People 2020 educational objectives, which seek to deliver PH and prevention content at all academic levels • Reaches out to clinical health professions students to engage them in PH leadership activities 	<p>Activities</p> <ul style="list-style-type: none"> • Advocates through coalition activities with TFAH, Coalition for Health Funding, and Health Professions and Nursing Education Coalition; as a member of Research!America; and through its Healthy People Curriculum Task Force • Advocates for MPH programs through the APTR Council of Graduate Programs in Public Health <p>Policy Statements</p> <ul style="list-style-type: none"> • None 	<p>Partners</p> <ul style="list-style-type: none"> • Cooperative Agreement with CDC – one of CDC SEPDP0’s 4 “Academic Partners” with AAMC, ASPH, and AACN • Cooperative Agreement with HHS Office of Disease Prevention and Health Promotion • Works with 8 clinical health professional education organizations through its Healthy People Curriculum Task Force: Association of Schools of Allied Health Professions, AAMC, AACN, American Dental Education Association, National Organization of Nurse Practitioner Faculties, American Association of Colleges of Osteopathic Medicine, American Association of Colleges of Pharmacy, and Physician Assistant Education Association • <i>American Journal of Preventive Medicine</i> • ACPM • PHF • Council on Linkages <p>Organizations Turned to for Assistance</p> <ul style="list-style-type: none"> • CDC SEPDP0 • HRSA • ASTHO • NACCHO • APHA • CEPH <p>Affiliates</p> <ul style="list-style-type: none"> • None <p>Planning Needs</p> <ul style="list-style-type: none"> • Understanding of practice needs/expectations for PH and health professions students, as there seems to be a disconnect between what students are learning and what governmental PH needs • How to employ PH students in clinical settings, especially to assist with health reform implementation, Accountable Care Organizations, etc.

Association of Accredited Public Health Programs (AAPHP)

Website: <http://www.aaphps.org>

Training	LMS
<p>Focus of Training</p> <ul style="list-style-type: none"> • CEPH accreditation process and collaboration with PH organizations for academic PH programs <p>Activities</p> <ul style="list-style-type: none"> • Events and workshops in conjunction with APHA's annual meeting • Freestanding training events on CEPH accreditation process • Special topics webinars <p>Target Audiences</p> <ul style="list-style-type: none"> • Members • Academic PH programs <p>Number Trained/Year</p> <ul style="list-style-type: none"> • 120+ <p>Competencies</p> <ul style="list-style-type: none"> • Helps academic PH programs prepare for CEPH accreditation, which requires that competencies appropriate for each program be applied • Competencies for academic PH programs are typically practitioner-based skill sets • Some academic PH programs use the Council on Linkages Core Competencies for Public Health Professionals <p>Accreditation/Certification Programs</p> <ul style="list-style-type: none"> • Helps academic PH programs prepare for CEPH accreditation <p>Delivery Methods</p> <ul style="list-style-type: none"> • In person • Webinars <p>Evaluation Methods</p> <ul style="list-style-type: none"> • Post-training evaluations <p>Future Plans</p> <ul style="list-style-type: none"> • Increase distance learning activities • Provide educational opportunities for local and regional PH organizations • Expand to broader audience (PH practitioners) 	<p>LMS Used</p> <ul style="list-style-type: none"> • None <p>Additional Information</p> <ul style="list-style-type: none"> • Some member programs use LMSs or connect with TRAIN

Research and Data Collection	Recruitment and Retention	Advocacy	Partnerships and Information Sharing
<p>Activities (Frequency)</p> <ul style="list-style-type: none"> Occasional member surveys Limited data on member program needs and capacities Secondary data from member programs, such as CEPH annual reports No systematic data collection currently, but exploring more systematic approaches Scholarships that support research Member programs conduct research <p>Data Use</p> <ul style="list-style-type: none"> Inform CE and training activities <p>Other Data Sources</p> <ul style="list-style-type: none"> CEPH PHTCs Research and literature on the PH workforce 	<p>Activities</p> <ul style="list-style-type: none"> Recently started a scholarship program for students in member programs conducting research Supports member programs in forming partnerships with HDs, such as AHDs and internship sites, so that students can connect, communicate, and work with PH professionals Supports member programs in preparing practitioners for the PH workforce and other health-related worksites 	<p>Activities</p> <ul style="list-style-type: none"> Advocates for academic PH programs and the PH workforce Degree and direction of advocacy role has been a topic of discussion Advocates for the PH workforce through its member programs Co-sponsors the Advocacy Summit to help prepare students in its member programs for advocacy (has been involved for about 7 years, both as AAPHP and CAMP) <p>Policy Statements</p> <ul style="list-style-type: none"> None, but may consider developing in the future 	<p>Partners</p> <ul style="list-style-type: none"> Primary collaborators: PHF, Council on Linkages, and CEPH Other collaborators include CDC, HRSA, and RWJF <p>Organizations Turned to for Assistance</p> <ul style="list-style-type: none"> Council on Linkages PHF and TRAIN <p>Affiliates</p> <ul style="list-style-type: none"> None <p>Planning Needs</p> <ul style="list-style-type: none"> What innovations in workforce development are on the horizon What is working well in PH workforce development What are available and accurate national/regional data sources reflecting professional development needs and capacity (e.g., available online technology) for the PH workforce that can be easily accessed <p>Additional Information on Activities</p> <ul style="list-style-type: none"> Interested in activities that would be of value to its member programs and the PH workforce Open to ideas and recommendations from the Council on Linkages and other sources

Association of Public Health Laboratories (APHL)

Website: <http://www.aphl.org>

Training	LMS
<p>Focus of Training</p> <ul style="list-style-type: none"> • PH laboratory workforce development needs • National Lab Training Network: <ul style="list-style-type: none"> ▪ Range of lab science topics • National Center for Public Health Laboratory Leaders: <ul style="list-style-type: none"> ▪ Operational workforce issues for leadership and management, with activities including: <ul style="list-style-type: none"> ○ Emerging Leader Program – skill building in operational areas, such risk communication, management, finance/HR, etc. ○ Regional leadership forums and focus groups – topics include building a new lab facility, Lean/Six Sigma, PH research, procurement, story crafting, and communicating effectively ○ Emerging Infectious Disease Fellowship Program – projects with host laboratories ○ APHL fellowship programs – areas include newborn screening and environmental health • Global Health Department collaborative training program: <ul style="list-style-type: none"> ▪ Intense two-week training program emphasizing practical lab activities <p>Activities</p> <ul style="list-style-type: none"> • National Lab Training Network • National Center for Public Health Laboratory Leaders • Regional forums and focus groups • Fellowship programs • Department of APHL Training teleconferences • Global Health Department collaborative training program, with George Washington University <p>Target Audiences</p> <ul style="list-style-type: none"> • Members • Laboratory/bench scientists • Clinical laboratories • PH laboratory managers • PH professionals <p>Number Trained/Year</p> <ul style="list-style-type: none"> • 26,000+ <p>Competencies</p> <ul style="list-style-type: none"> • No competencies are currently used, but progress is being made through the Laboratory Efficiencies Initiative • Developed PH lab leadership and management competencies • Working with CDC to develop a comprehensive set of PH laboratory core competencies • Contributing with CDC to the development of a core curriculum based on competencies for PH laboratory scientists <p>Accreditation/Certification Programs</p> <ul style="list-style-type: none"> • <p>Delivery Methods</p> <ul style="list-style-type: none"> • In person • Teleconferences • Webinars • On-demand training <p>Evaluation Methods</p> <ul style="list-style-type: none"> • Needs assessment surveys every 1-2 years • Focus groups <p>Future Plans</p> <ul style="list-style-type: none"> • Explore the possibility of expanding fellowships into areas such as informatics and leadership 	<p>LMS Used</p> <ul style="list-style-type: none"> • SumTotal <p>Purpose</p> <ul style="list-style-type: none"> • Deliver and archive trainings • Provide access to transcripts and certificates • Store information on PACE CE units <p>Additional Information</p> <ul style="list-style-type: none"> • Connected to APHL's association management system (Net Forum)

Research and Data Collection	Recruitment and Retention	Advocacy	Partnerships and Information Sharing
<p>Activities (Frequency)</p> <ul style="list-style-type: none"> • Research agenda approved by its Board every year includes annual and periodic surveys: <ul style="list-style-type: none"> ▪ Survey of Laboratories (annual) ▪ All Hazards Laboratory Survey ▪ Workforce Compensation and Salary Survey ▪ Facility Characterization Survey, a survey of laboratory directors about facility characteristics (periodic, subject to funding) ▪ Individual Laboratorian Survey, a survey of individual characteristics (periodic, subject to funding) • Training needs assessments • Survey questions on hot topics <p>Data Use</p> <ul style="list-style-type: none"> • Create state profiles of PH laboratories • Support advocacy • Inform funding decision-makers • Support development of PR materials <p>Other Data Sources</p> <ul style="list-style-type: none"> • American Society for Clinical Laboratory Science • Department of Labor • HRSA • ASPH 	<p>Activities</p> <ul style="list-style-type: none"> • Hosts job board on its website, APHL Job Center • Developed <i>A Practical Guide to Public Health Laboratories for State Health Officials</i> • Tracks all PH lab directors and provides support for recruitment, including model job descriptions, interview questions, and resource guides • Engages in PR activities regarding roles within the PH lab system to create career awareness and help with recruitment • Provides information on lab science careers for high school and college students • Supported development of a website that features the PH lab workforce (www.labsciencecareers.com) • Supports development of teacher resources • Participates and exhibits at national meetings, conferences, STEM festivals, and university events • Participated in and administered Career Pathways grants program to support innovative programs to build the workforce pipeline • Planning to explore a national model for an internship program • Encourages members to attend career fairs at high schools and colleges and distributes a presentation template on jobs in PH labs 	<p>Activities</p> <ul style="list-style-type: none"> • Advocates through a variety of mechanisms, including building currency with legislative representatives, collaborating with organizations such as ASTHO, NACCHO, and CSTE <p>Policy Statements</p> <ul style="list-style-type: none"> • Policy statement on importance of addressing workforce issues through APHL activities • Policy statement on development of a standardized personnel nomenclature 	<p>Partners</p> <ul style="list-style-type: none"> • ASTHO • NACCHO • CDC • ASPH • APHA • Coordinating Council on the Clinical Laboratory Workforce <p>Organizations Turned to for Assistance</p> <ul style="list-style-type: none"> • CDC <p>Affiliates</p> <ul style="list-style-type: none"> • None <p>Planning Needs</p> <ul style="list-style-type: none"> • None

Association of State and Territorial Health Officials (ASTHO)

Website: <http://www.astho.org>

Training	LMS
<p>Focus of Training</p> <ul style="list-style-type: none"> • Wide range of topics for SHD staff and other PH professionals • Topics include management, leadership development for members, and programmatic topics such as preparedness and maternal and child health • State Health Leadership Initiative for SHOs: <ul style="list-style-type: none"> ▪ Week-long retreat, site visit from ASTHO's Executive Director, assignment of a SHO mentor, a strategic planning grant, and policy training at the ASTHO Policy Summit • Peer network trainings: <ul style="list-style-type: none"> ▪ Issues of interest to specific peer groups of professionals, including senior deputies, chief financial officers, PH informaticians, HR directors, state legislative liaisons, preparedness directors, environmental health officers, primary care officers, and accreditation coordinators • Internal trainings for ASTHO staff: <ul style="list-style-type: none"> ▪ Diverse topics, from health equity to specific software skills <p>Activities</p> <ul style="list-style-type: none"> • Annual meeting • State Health Leadership Initiative • Peer network trainings • Webinars and educational programs in programmatic areas <p>Target Audiences</p> <ul style="list-style-type: none"> • SHD officials and staff • PH professionals <p>Number Trained/Year</p> <ul style="list-style-type: none"> • Not available <p>Competencies</p> <ul style="list-style-type: none"> • Planning to incorporate Council on Linkages Core Competencies for Public Health Professionals into some courses <p>Accreditation/Certification Programs</p> <ul style="list-style-type: none"> • Offers CE credits for sessions at its annual meeting <p>Delivery Methods</p> <ul style="list-style-type: none"> • In person • Conference calls • Webinars • Video conferences <p>Evaluation Methods</p> <ul style="list-style-type: none"> • Course evaluations • Conference evaluations <p>Future Plans</p> <ul style="list-style-type: none"> • Continue trainings, depending on member needs and funding • Improve videoconferencing capacity for training (increase access to training with limited travel) 	<p>LMS Used</p> <ul style="list-style-type: none"> • None

Research and Data Collection	Recruitment and Retention	Advocacy	Partnerships and Information Sharing
<p>Activities (Frequency)</p> <ul style="list-style-type: none"> • Member survey (annual) • Profile of State Public Health survey (every 2 years) • Budget cuts survey (quarterly) • Planning a study on KSAs for the PH workforce, with the de Beaumont Foundation • Other data collected from SHOs and SHDs as needed <p>Data Use</p> <ul style="list-style-type: none"> • Information sharing • Support advocacy • Provide comparable information about state PH • Inform policy and priority building • Orient and support health officials <p>Other Data Sources</p> <ul style="list-style-type: none"> • Interviews with program and HR directors at SHDs and territorial HDs 	<p>Activities</p> <ul style="list-style-type: none"> • Posts job openings and internships from SHDs on its website • Hoping to use the Council on Linkages Core Competencies for Public Health Professionals for internal job descriptions • Worked with schools and facilitated state PH information sessions • Provided practicum experiences and internships for MPH students 	<p>Activities</p> <ul style="list-style-type: none"> • Hosts Annual Hill Day in Washington, DC to help members meet with their Members of Congress • Helps members arrange agency site visits with their Members of Congress • Continually works with policymakers to ensure that state PH's voice is heard, including on workforce issues • Supports and advocates for PH loan repayment <p>Policy Statements</p> <ul style="list-style-type: none"> • Position statement on the PH workforce (being updated) • Other policy and position statements address workforce issues indirectly 	<p>Partners</p> <ul style="list-style-type: none"> • CDC • HRSA • Council on Linkages • Other organizations for information on specific segments of the PH workforce, such as the Center for State and Local Government Excellence and TFAH <p>Organizations Turned to for Assistance</p> <ul style="list-style-type: none"> • ASTHO members • Council on Linkages member organizations <p>Affiliates</p> <ul style="list-style-type: none"> • 20 affiliates <p>Planning Needs</p> <ul style="list-style-type: none"> • What other organizations are doing for workforce development • Data on the PH workforce, including demographics • What workforce development tools are being used

Association of University Programs in Health Administration (AUPHA)

Website: <http://www.aupha.org>

Training	LMS
<p>Focus of Training</p> <ul style="list-style-type: none"> Healthcare administration education, of which PH is often a component AUPHA Leaders Conference: <ul style="list-style-type: none"> Program leadership issues and developing linkages between academia and practice AUPHA Annual Meeting: <ul style="list-style-type: none"> Program management and curriculum development, including sessions on PH Undergraduate faculty training: <ul style="list-style-type: none"> Topics include program development, exams, management, and electronic records Academic study tour: <ul style="list-style-type: none"> Interaction with experts from other countries dealing with similar issues and exploration of innovative programs Webinar series: <ul style="list-style-type: none"> Healthcare management education issues, such as student assessment, curriculum development, performance improvement, and change management <p>Activities</p> <ul style="list-style-type: none"> AUPHA Leaders Conference in conjunction with the American College of Healthcare Executives Congress AUPHA Annual Meeting Training for undergraduate healthcare administration faculty Academic study tour Healthcare management education webinar series Instructional webinars for new program directors <p>Competencies</p> <ul style="list-style-type: none"> <p>Accreditation/Certification Programs</p> <ul style="list-style-type: none"> <p>Delivery Methods</p> <ul style="list-style-type: none"> In person Webinars <p>Evaluation Methods</p> <ul style="list-style-type: none"> Program evaluations <p>Future Plans</p> <ul style="list-style-type: none"> Continue current efforts <p>Target Audiences</p> <ul style="list-style-type: none"> Members Healthcare administration faculty and adjunct faculty Healthcare administration practitioners <p>Number Trained/Year</p> <ul style="list-style-type: none"> 500-700 	<p>LMS Used</p> <ul style="list-style-type: none"> None

Research and Data Collection	Recruitment and Retention	Advocacy	Partnerships and Information Sharing
<p>Activities (Frequency)</p> <ul style="list-style-type: none"> Survey of academic programs, which includes enrollment information and demographics (annual) Membership assessment survey of what its constituents need <p>Data Use</p> <ul style="list-style-type: none"> <p>Other Data Sources</p> <ul style="list-style-type: none"> 	<p>Activities</p> <ul style="list-style-type: none"> Provides materials to schools to interest students in health administration careers 	<p>Activities</p> <ul style="list-style-type: none"> None <p>Policy Statements</p> <ul style="list-style-type: none"> None 	<p>Partners</p> <ul style="list-style-type: none"> None <p>Organizations Turned to for Assistance</p> <ul style="list-style-type: none"> <p>Affiliates</p> <ul style="list-style-type: none"> Public Health Faculty Forum <p>Planning Needs</p> <ul style="list-style-type: none"> None <p>Additional Information on Activities</p> <ul style="list-style-type: none"> Willing to disseminate any resources that become available as a result of this effort

Centers for Disease Control and Prevention (CDC) – Scientific Education and Professional Development Program Office

Website: <http://www.cdc.gov/osels/sepdp>

Training	LMS
<p>Focus of Training Wide range of PH topics, including epidemiology; surveillance; statistics; infectious disease; chronic disease; emergency management; environmental health; immunization and vaccine-preventable diseases; injury and violence prevention; maternal and child health; and nutrition, physical activity, and obesity</p> <p>Activities</p> <ul style="list-style-type: none"> • Experiential fellowships in applied PH sciences, policy, leadership, and management • E-learning training activities accessible through CDC Learning Connection, including: <ul style="list-style-type: none"> ▪ Instructor-led training and webinars ▪ CDC and partner conferences, workshops, and self-study for CE and delivered through CDC TRAIN ▪ Quick learn lessons for all platforms, including mobile <p>Target Audiences</p> <ul style="list-style-type: none"> • Entire PH community • Health workforce • General public • CDC staff <p>Number Trained/Year</p> <ul style="list-style-type: none"> • 82,000+ <p>Competencies</p> <ul style="list-style-type: none"> • Each fellowship has its own competencies <p>Accreditation/Certification Programs</p> <ul style="list-style-type: none"> • <p>Delivery Methods</p> <ul style="list-style-type: none"> • In person • Webinars • Conference calls • Online training • Podcasts <p>Evaluation Methods</p> <ul style="list-style-type: none"> • Formative evaluations, such as pilot tests • Summative evaluations, including evaluation forms and knowledge checks <p>Future Plans</p> <ul style="list-style-type: none"> • Implement Kirkpatrick Level 3 evaluation through post-training follow-up questions of learners to measure the impact of training 	<p>LMS Used</p> <ul style="list-style-type: none"> • HHS Learning Portal • CDC TRAIN <p>Purpose</p> <ul style="list-style-type: none"> • HHS Learning Portal: Support training needs of HHS employees • CDC TRAIN: Support training needs of the entire PH workforce

Research and Data Collection	Recruitment and Retention	Advocacy	Partnerships and Information Sharing
<p>Activities (Frequency)</p> <ul style="list-style-type: none"> • Characterization of the CDC and HHS workforce • Development of strategies for enumerating the PH workforce • Enumeration of the governmental PH workforce • Development and implementation of a system to characterize the governmental PH workforce on an ongoing basis <p>Data Use</p> <ul style="list-style-type: none"> • Characterize the CDC workforce <p>Other Data Sources</p> <ul style="list-style-type: none"> • HHS HR database 	<p>Activities</p> <ul style="list-style-type: none"> • Operates PH fellowship programs • Offers internship and fellowship programs for medical and veterinary students • Worked with the Department of Labor to establish the Public Health Informatics Fellowship as a Department of Labor Registered Apprenticeship • Provides Career Paths to Public Health Program to expose students and teachers to PH with activities including: <ul style="list-style-type: none"> ▪ Disease Detectives event at the National Science Olympiad ▪ Science Ambassadors program ▪ Sharing of PH lesson plans for middle and high school students (http://www.cdc.gov/excite/) • Developing PH informatics position descriptions for use by SHDs and LHDs • In collaboration with partners, developed applied epidemiology and PH informatics competencies 	<p>Activities</p> <ul style="list-style-type: none"> • None <p>Policy Statements</p> <ul style="list-style-type: none"> • None 	<p>Partners</p> <ul style="list-style-type: none"> • Internal partners, such as CDC centers, institutes, and offices • External PH partners, such as PHF, ASTHO, NACCHO, CSTE, and others • Academic partners, such as AACN, AAMC, APTR, ASPH, and others • Foundations, such as RWJF and de Beaumont Foundation • Other groups <p>Organizations Turned to for Assistance</p> <ul style="list-style-type: none"> • Internal partners, such as CDC centers, institutes, and offices • External PH partners, such as PHF, ASTHO, NACCHO, CSTE, and others • Academic partners, such as AACN, AAMC, APTR, ASPH, and others • Foundations, such as RWJF and de Beaumont Foundation • Other groups <p>Affiliates</p> <ul style="list-style-type: none"> • None <p>Planning Needs</p> <ul style="list-style-type: none"> • Latest data from partner organizations, helps to inform efforts

Community-Campus Partnerships for Health (CCPH)

Website: <http://www.ccpb.info>

Training	LMS
<p>Focus of Training</p> <ul style="list-style-type: none"> Community engagement, community-engaged research, CBPR, service-learning, and community-academic partnerships Topics include developing and sustaining CBPR partnerships; establishing community-based research ethics review boards; developing and sustaining service-learning initiatives in health professions education; assessing, recognizing, and rewarding community-engaged scholarship; and promotion and tenure strategies for community-engaged faculty CCPH consultancy network offers customized trainings for specific audiences <p>Activities</p> <ul style="list-style-type: none"> Conferences, including national/international conferences every other year Training institutes Workshops Educational conference calls Webinars <p>Target Audiences</p> <ul style="list-style-type: none"> Administrators, faculty, staff, and students of academic institutions seeking to develop community-engaged teaching, research, and program initiatives Administrators and staff of CBOs seeking to develop equitable partnerships with academic partners Government and funding agency officials responsible for community-engaged teaching, research, and program initiatives <p>Number Trained/Year</p> <ul style="list-style-type: none"> 2,500-4,000 <p>Competencies</p> <ul style="list-style-type: none"> Competencies from CCPH's CBPR curriculum, Developing and Sustaining Community-Based Participatory Research Partnerships: A Skill-Building Curriculum (http://cbprcurriculum.info), and the Community-Engaged Scholarship Toolkit (http://communityengagedscholarship.info) 	<p>Accreditation/Certification Programs</p> <ul style="list-style-type: none"> <p>Delivery Methods</p> <ul style="list-style-type: none"> In person Conference calls Webinars <p>Evaluation Methods</p> <ul style="list-style-type: none"> Pre- and post-training surveys of participants and, in some cases, their colleagues/supervisors <p>Future Plans</p> <ul style="list-style-type: none"> Continue current efforts Increase online training <p>LMS Used</p> <ul style="list-style-type: none"> Catalyst, a system developed by the University of Washington <p>Purpose</p> <ul style="list-style-type: none"> Process event registrations Conduct pre- and post-training evaluations Generate training participant statistics, such as demographics, self-assessments of knowledge and skills, satisfaction, suggestions for trainings, etc. <p>Additional Information</p> <ul style="list-style-type: none"> Data are used for evaluation and planning and occasionally incorporated into published papers and reports

Research and Data Collection	Recruitment and Retention	Advocacy	Partnerships and Information Sharing
<p>Activities (Frequency)</p> <ul style="list-style-type: none"> • Program evaluations and member surveys on needs and gaps (annual) • Key stakeholder telephone interviews (annual) <p>Data Use</p> <ul style="list-style-type: none"> • Evaluation and planning • Support published papers and reports <p>Other Data Sources</p> <ul style="list-style-type: none"> • 	<p>Activities</p> <ul style="list-style-type: none"> • Works to recruit and retain community-engaged faculty in academic institutions and CBOs in community-academic partnerships • Provides mentoring and training for graduate students and post-docs interested in pursuing community-engaged careers in academia • Increases community engagement at its conferences by soliciting for community authored and co-authored presentations and offering scholarships for community presenters • Increased youth engagement at its conferences by soliciting for youth-focused presentations, placing a priority on youth presenters, and offering scholarships for youth participants • Offers training institutes, workshops, mentoring, and other tools for faculty, post-docs, and graduate students to support successful community-engaged careers in academia • Offers training institutes, workshops, mentoring, and other tools for community partners to support successful academic partnerships 	<p>Activities</p> <ul style="list-style-type: none"> • Advocates for policies and funding that support CBPR, including providing funding directly to community organizations, and for service-learning as a required component of health professions education • Incorporates advocacy into trainings • Advocates by participating in advocacy coalitions, submitting comments in response to government requests for public input, etc. <p>Policy Statements</p> <ul style="list-style-type: none"> • Statements on community engagement in the Clinical and Translational Science Awards program; the NIH peer review process and criteria; and community action agenda on authentic, equitable, and transformative community-academic research partnerships 	<p>Partners</p> <ul style="list-style-type: none"> • APHA Community-Based Public Health Caucus • National Association of Community Health Centers • Association of Asian and Pacific Islander Community Health Organizations • CDC Prevention Research Centers Program's National Community Committee <p>Organizations Turned to for Assistance</p> <ul style="list-style-type: none"> • ASPH • APHA • Health Professions and Nursing Education Coalition <p>Affiliates</p> <ul style="list-style-type: none"> • None <p>Planning Needs</p> <ul style="list-style-type: none"> • None <p>Additional Information on Activities</p> <ul style="list-style-type: none"> • Increased recognition of social determinants of health and PH points to members of the PH workforce that may not be well represented on the Council on Linkages, such as community health workers and those working at the intersection of health and the built environment, environmental justice, etc.

Health Resources and Services Administration (HRSA)

Website: <http://www.hrsa.gov>

Training	LMS
<p>Focus of Training</p> <ul style="list-style-type: none"> • HRSA-wide: <ul style="list-style-type: none"> ▪ Technical staff training, such as being a grants project officer • BHPPr: <ul style="list-style-type: none"> ▪ Integration of population health into health professions education ▪ Enhancement of interprofessional education and teams ▪ Faculty development in primary care, dentistry, dental hygiene, and geriatrics ▪ Workforce development at the undergraduate, graduate, and practitioner levels of the health professions, including nursing, medicine, dentistry, behavioral health, PH, geriatrics, diversity, and primary care, with a focus on underserved populations • HAB: <ul style="list-style-type: none"> ▪ Topics include communication and technical skills; managing grant programs; fiscal oversight and monitoring; compliance and program expectations; and clinical case management, hands-on care, and service delivery • MCHB: <ul style="list-style-type: none"> ▪ Wide range of MCH topics <p>Activities</p> <ul style="list-style-type: none"> • HRSA-wide: <ul style="list-style-type: none"> ▪ Technical training for staff • BHPPr: <ul style="list-style-type: none"> ▪ Teaching Health Center Graduate Medical Education Program ▪ Mental and Behavioral Health Education and Training ▪ Interdisciplinary and Interprofessional Joint Graduate Degree Program ▪ Preventive Medicine Residency Program ▪ National Center for Interprofessional Practice and Education ▪ AHEC Program ▪ Geriatric Education Centers Program ▪ PHTC Network ▪ Faculty Development in General, Pediatric, and Public Health Dentistry and Dental Hygiene ▪ Physician Faculty Development in Primary Care ▪ Geriatric Training for Physicians, Dentists, and Behavioral and Mental Health Providers ▪ Residencies and fellowships ▪ Training for disadvantaged and minority students ▪ Grantees provide CE for health professionals • HAB: <ul style="list-style-type: none"> ▪ AIDS Education and Training Centers Program ▪ Staff training on legislative requirements for managing the Ryan White HIV/AIDS Program ▪ Clinical training for staff and grantees ▪ Administrative and fiscal training • MCHB: <ul style="list-style-type: none"> ▪ Training for grantees <p>Target Audiences</p> <ul style="list-style-type: none"> • Health professionals • Graduate and undergraduate health professions faculty and students • HRSA grantees, including SHDs, LHDs, and community organizations • State MCH/Title V programs • Healthy Start programs • HRSA staff <p>Number Trained/Year</p> <ul style="list-style-type: none"> • Not available <p>Competencies</p> <ul style="list-style-type: none"> • BHPPr: <ul style="list-style-type: none"> ▪ Uses Council on Linkages Core Competencies for Public Health Professionals for some training activities, such as the PHTCs ▪ Does not require specific competencies for many programs • MCHB: <ul style="list-style-type: none"> ▪ Maternal and Child Health Leadership Competencies (Version 3.0) <p>Accreditation/Certification Programs</p> <ul style="list-style-type: none"> • <p>Delivery Methods</p> <ul style="list-style-type: none"> • In person • Webinars • Online training <p>Evaluation Methods</p> <ul style="list-style-type: none"> • Training evaluations <p>Future Plans</p> <ul style="list-style-type: none"> • MCHB: <ul style="list-style-type: none"> ▪ Improve coordination of internal training and training provided to grantees 	<p>LMS Used</p> <ul style="list-style-type: none"> • HHS Learning Portal <p>Purpose</p> <ul style="list-style-type: none"> •

Research and Data Collection	Recruitment and Retention	Advocacy	Partnerships and Information Sharing
<p>Activities (Frequency)</p> <ul style="list-style-type: none"> • HRSA-wide: <ul style="list-style-type: none"> ▪ Performance measures data on trainees ▪ Universal Data System tracks performance measures for grant programs • BHPPr: <ul style="list-style-type: none"> ▪ National Center for Health Workforce Analysis <ul style="list-style-type: none"> ○ Area Resource File ○ University of Michigan nursing survey ▪ Nurse Practitioner Survey (2012) ▪ Enumeration of the PH workforce, with CDC ▪ National Health Professionals Report ▪ Minimum Data Set, national data set on the health workforce ▪ PHTCs conduct needs assessments, but BHPPr does not aggregate these data • HAB: <ul style="list-style-type: none"> ▪ Workforce data on AIDS Education and Training Centers participants, such as needs and site trends (annual) ▪ Ryan White Data Report (every 2 years) ▪ HIV Clinical Workforce Initiative studies ▪ Study of the HIV Workforce (data collected in 2010) ▪ HIV workforce surveys through Health HIV (annual) • MCHB: <ul style="list-style-type: none"> ▪ Title V State Block Grant applications, which may describe workforce needs (annual) ▪ Title V Information System, a searchable public database on block grants <p>Data Use</p> <ul style="list-style-type: none"> • Program planning • Determine workforce needs • Project demands <p>Other Data Sources</p> <ul style="list-style-type: none"> • ASTHO • NACCHO 	<p>Activities</p> <ul style="list-style-type: none"> • BHPPr: <ul style="list-style-type: none"> ▪ Provides workforce pipeline programs, especially focused on underserved minorities and diversity ▪ Supports workforce recruitment in underserved communities ▪ Supports CE for workforce retention ▪ Offers traineeships, fellowships, and stipends ▪ Provides faculty development programs ▪ Operates loan repayment program, which supports retention ▪ Operates the Health Careers Opportunity Program, which focuses on recruiting individuals from educationally or economically disadvantaged backgrounds into health and allied health professions programs ▪ AHECs provide career awareness and exposure, structured programming, summer camps, and mentoring ▪ Encourages PHTCs and AHECs to work together to increase career awareness • BPHC: <ul style="list-style-type: none"> ▪ Houses the National Health Service Corps, a key program for recruiting primary care providers, which offers scholarships and loan repayment • HAB: <ul style="list-style-type: none"> ▪ Provides information on opportunities in HIV care through the AIDS Training and Education Centers, residency programs, peer-to-peer mentoring, workforce studies, and community-based partnerships ▪ Provides adjunct staff to organizations to help mitigate clinician burnout ▪ Studying recruitment and retention trends in the HIV care field • MCHB: <ul style="list-style-type: none"> ▪ Works with HBCUs to engage students in PH careers ▪ Operates the MCH Public Health Learning Institute for MCH practitioners ▪ Working to increase MCH career skills in graduate training ▪ Working with grantees on diversity programs ▪ Exploring how to align funding with population MCH needs 	<p>Activities</p> <ul style="list-style-type: none"> • None <p>Policy Statements</p> <ul style="list-style-type: none"> • 	<p>Partners</p> <ul style="list-style-type: none"> • <p>Organizations Turned to for Assistance</p> <ul style="list-style-type: none"> • <p>Affiliates</p> <ul style="list-style-type: none"> • <p>Planning Needs</p> <ul style="list-style-type: none"> • HAB: <ul style="list-style-type: none"> ▪ Core data on comprehensive workforce numbers and programs ▪ Data compiled across programs <p>Additional Information on Activities</p> <ul style="list-style-type: none"> • BHPPr: <ul style="list-style-type: none"> ▪ Charged with integrating PH and primary care and is exploring PH workforce competencies within PH and other disciplines, especially primary care ▪ Working with CDC on joint initiatives and starting to implement IOM recommendations on primary care and PH • MCHB: <ul style="list-style-type: none"> ▪ Establishing 4 new Maternal and Child Health Workforce Development Centers, located within academic institutions and focused on academic/practice partnerships

National Association of County and City Health Officials (NACCHO)

Website: <http://www.naccho.org>

Training	LMS
<p>Focus of Training</p> <ul style="list-style-type: none"> • Wide range of topics for LHD staff and PH professionals • Major training areas include community health, environmental health, PH infrastructure, preparedness, research and evaluation, and Survive and Thrive (for new local health officials) • Trainings vary based on programs and projects • Program areas offering training include Health Impact, Planning, Accreditation, Health and Disabilities, Health Inequities, Public Health Preparedness, Executive Leadership Development, Internal Workforce Development at NACCHO, Publications Development, Office Applications, Employee Orientation, and Research Evaluation and Methods <p>Activities</p> <ul style="list-style-type: none"> • Annual meeting • Public Health Preparedness Summit • Program- and project-specific trainings • Survive and Thrive • Internal staff trainings <p>Target Audiences</p> <ul style="list-style-type: none"> • LHD staff • PH professionals • Local PH directors <p>Number Trained/Year</p> <ul style="list-style-type: none"> • Total: not available • Annual meeting: 1000+ • Public Health Preparedness Summit: 1,000+ <p>Competencies</p> <ul style="list-style-type: none"> • No standard list of competencies currently used <p>Accreditation/Certification Programs</p> <ul style="list-style-type: none"> • <p>Delivery Methods</p> <ul style="list-style-type: none"> • In person • Webinars • Online courses <p>Evaluation Methods</p> <ul style="list-style-type: none"> • Course/training evaluations <p>Future Plans</p> <ul style="list-style-type: none"> • Continue current trainings • Expand eLearning • Create more interactive distance learning opportunities with webcasts, conference calls, videos, quizzes, polling, and new technologies (to expand reach given budget constraints) • Link LHD workforce development planning required for voluntary national HD accreditation and NACCHO courses available 	<p>LMS Used</p> <ul style="list-style-type: none"> • BlueSky Broadcasting <p>Purpose</p> <ul style="list-style-type: none"> • <p>Additional Information</p> <ul style="list-style-type: none"> • Trainings are currently on the NACCHO website, TRAIN, and other sites • Would like to have a main hub for members to access all training, link it to membership database, and track utilization • Lead Analyst for eLearning was hired to lead NACCHO's eLearning efforts

Research and Data Collection	Recruitment and Retention	Advocacy	Partnerships and Information Sharing
<p>Activities (Frequency)</p> <ul style="list-style-type: none"> • National Profile of Local Health Departments survey (every 2-3 years) • Job loss survey (twice/year) • Staffing benchmarks study with Bernie Turnock (2010) • Workforce and Leadership Development workgroup gathers informal assessment information <p>Data Use</p> <ul style="list-style-type: none"> • Inform reports and papers • Inform advocacy • Data publicly available via Profile-IQ <p>Other Data Sources</p> <ul style="list-style-type: none"> • Enumeration study (CDC/HRSA) • Department of Labor 	<p>Activities</p> <ul style="list-style-type: none"> • Provides internships in collaboration with universities and MPH programs 	<p>Activities</p> <ul style="list-style-type: none"> • Advocates for PH workforce development funding through its Government Affairs Office • Has worked with job loss report data in advocating for PH workforce funding <p>Policy Statements</p> <ul style="list-style-type: none"> • On website 	<p>Partners</p> <ul style="list-style-type: none"> • ASTHO (align questions for HD profiles) • Council on Linkages • CDC • HRSA <p>Organizations Turned to for Assistance</p> <ul style="list-style-type: none"> • Council on Linkages <p>Affiliates</p> <ul style="list-style-type: none"> • State Associations of County and City Health Officials (SACCHOs) <p>Planning Needs</p> <ul style="list-style-type: none"> • Interested in aligning work with core competencies <p>Additional Information on Activities</p> <ul style="list-style-type: none"> • Workforce development efforts are often program-specific, but there are many crosscutting issues • Very much appreciate the Council on Linkages' role with workforce development • Exploring new directions with workforce development, including expansion of eLearning, centralized trainings, an LMS, and establishing linkages with partners • Encouraging LHDs to work with PHTCs

National Association of Local Boards of Health (NALBOH)

Website: <http://www.nalboh.org>

Training	LMS
<p>Focus of Training</p> <ul style="list-style-type: none"> • Governance, leadership, BOH development, and other topics relevant to the PH workforce • BOH training topics include orienting board members to PH, good governance practices, and the essential public health services • Other topics include governance seminars, environmental health, tobacco, performance standards, and research on BOH <p>Activities</p> <ul style="list-style-type: none"> • NALBOH Annual Conference • Annual Ned E. Baker Lecture in Public Health • Presentations to BOH and at conferences • Webinars <p>Target Audiences</p> <ul style="list-style-type: none"> • BOH • Health directors • PH workforce <p>Number Trained/Year</p> <ul style="list-style-type: none"> • 1,000 <p>Competencies</p> <ul style="list-style-type: none"> • <p>Accreditation/Certification Programs</p> <ul style="list-style-type: none"> • <p>Delivery Methods</p> <ul style="list-style-type: none"> • In person • Webinars 	<p>LMS Used</p> <ul style="list-style-type: none"> • In development with NLN/Saint Louis University College for Public Health & Social Justice – the Heartland Centers <p>Purpose</p> <ul style="list-style-type: none"> • <p>Evaluation Methods</p> <ul style="list-style-type: none"> • Conference and session evaluations • Logic model • Dashboards • Developmental evaluation • Kirkpatrick’s Four Level Evaluation • World Café • Web training tracking • Follow-up surveys <p>Future Plans</p> <ul style="list-style-type: none"> • Continue and improve current offerings • Launch customized BOH consultation • Provide intensive training for BOH development • Counsel PHTCs on training needs of BOH

Research and Data Collection	Recruitment and Retention	Advocacy	Partnerships and Information Sharing
<p>Activities (Frequency)</p> <ul style="list-style-type: none"> National Public Health Governance Scan of governance structure and function (every 3-5 years) <p>Data Use</p> <ul style="list-style-type: none"> Identify programming needs and gaps <p>Other Data Sources</p> <ul style="list-style-type: none"> County Health Rankings 	<p>Activities</p> <ul style="list-style-type: none"> Engages with the appointment process for BOH and has developed a guide for appointing members 	<p>Activities</p> <ul style="list-style-type: none"> Is interested in ensuring resources are in place for the workforce Has signed various letters of support to keep PH funding that supports a strong workforce <p>Policy Statements</p> <ul style="list-style-type: none"> Effective Board Training Ensures Quality Public Health Services Position Statement (November 2012) 	<p>Partners</p> <ul style="list-style-type: none"> Member of the Partnership for Public Health Law with APHA, ASTHO, and NACCHO CDC RWJF The Network for Public Health Law <p>Organizations Turned to for Assistance</p> <ul style="list-style-type: none"> CDC NACCHO <p>Affiliates</p> <ul style="list-style-type: none"> State Associations of Local Boards of Health (SALBOHs) <p>Planning Needs</p> <ul style="list-style-type: none"> Development of good leadership teams (BOH and health directors) and understanding of how BOH can help make PH more effective and efficient Defined governance functions to be used as a baseline of standards for developing training and education to strengthen PH governance <p>Additional Information on Activities</p> <ul style="list-style-type: none"> NALBOH Annual Conference is a great opportunity for training and networking Health director and BOH member networking is very important

National Environmental Health Association (NEHA)

Website: <http://www.neha.org>

Training	LMS
<p>Focus of Training</p> <ul style="list-style-type: none"> Environmental health, including food safety and foodborne illnesses, radon resistant construction, indoor air quality, environmental PH and emergency response, and pest management <p>Activities</p> <ul style="list-style-type: none"> Annual Educational Conference and Exhibition Food Safety Training Radon Resistant New Construction Training/Indoor Air Quality Industry-Foodborne Illness Training Epi-Ready Training FDA-Rapid Response Training Foodborne Illness Outbreak InFORM-Integrated Foodborne Outbreak Response Meeting (development of environmental health educational track) Environmental Public Health Tracking Environmental Health Training in Emergency Response USDA Food-Safe Schools toolkit workshops CDC Integrated Pest Management/Biology and Control of Vectors workshops <p>Target Audiences</p> <ul style="list-style-type: none"> Environmental and PH professionals Food service and nutrition workforce School personnel Pest management personnel Community planners and builders <p>Number Trained/Year</p> <ul style="list-style-type: none"> 1500+ <p>Competencies</p> <ul style="list-style-type: none"> <p>Accreditation/Certification Programs</p> <ul style="list-style-type: none"> Offers credential assessment training for Certified Professional-Food Safety (CP-FS) and Registered Environmental Health Specialist (REHS), Certified in Comprehensive Food Safety (CCFS), Professional Food Manager training, and Hazard Analysis & Critical Control Points (HACCP) certification Credentials offered: <ul style="list-style-type: none"> Certified in Comprehensive Food Safety (CCFS) Certified Environmental Health Technician (CEHT) Certified Installer of Onsite Wastewater Treatment Systems (CIOWTS) New Jersey Requirement for CIOWTS – Advanced Level Certified Professional – Food Safety (CP-FS) Healthy Homes Specialist Credential (HHS) Registered Environmental Health Specialist/Registered Sanitarian (REHS/RS) Registered Environmental Technician (RET) Registered Hazardous Substances Professional (RHSP) Registered Hazardous Substances Specialist (RHSS) National Radon Proficiency Program <p>Delivery Methods</p> <ul style="list-style-type: none"> In person Online courses <p>Evaluation Methods</p> <ul style="list-style-type: none"> Training evaluations Pre- and post-tests <p>Future Plans</p> <ul style="list-style-type: none"> Continue, update, and improve current trainings, depending on funding Try new approaches, including advanced distance learning and hybrid courses Modify Industry-Foodborne Illness Training for the manufacturing/processing food industry Distribute revised Food-Safe Schools toolkit Enhance online training for Integrated Pest Management 	<p>LMS Used</p> <ul style="list-style-type: none"> Moodle Absorb SkillSoft In-house proprietary software <p>Purpose</p> <ul style="list-style-type: none"> Deliver courses Store student records and pass scores <p>Additional Information</p> <ul style="list-style-type: none"> Can establish links to other organizations' LMSs so students can use NEHA's courses

Research and Data Collection	Recruitment and Retention	Advocacy	Partnerships and Information Sharing
<p>Activities (Frequency)</p> <ul style="list-style-type: none"> • Profile information on members • Environmental Public Health Tracking Program, with CDC • Epi-Ready Team Training Program, with CDC • Food-Safe Schools Program, with CDC • Government and External Affairs Program • Land Use Planning and Design Program, with CDC • National Conversation on Public Health and Chemical Exposures, with CDC • Onsite Wastewater System Program, with EPA • Radon/Indoor Air Quality Training Program, with EPA • Workforce Development Program, with CDC • Biology and Control of Vectors/Public Health Pests Program, with CDC • Environmental Health Regulatory Capacity Assessments for the Council to Improve Foodborne Illness Response, with the Association of Food and Drug Officials <p>Data Use</p> <ul style="list-style-type: none"> • Inform programs <p>Other Data Sources</p> <ul style="list-style-type: none"> • None 	<p>Activities</p> <ul style="list-style-type: none"> • Does not address recruitment and retention directly, but its activities indirectly support workforce recruitment and retention 	<p>Activities</p> <ul style="list-style-type: none"> • Advocates for environmental health jobs, research, training, workforce development funding, and building environmental health capacity in a variety of ways <p>Policy Statements</p> <ul style="list-style-type: none"> • On website 	<p>Partners</p> <ul style="list-style-type: none"> • Works with other organizations on a variety of environmental and PH workforce issues, concerns, and projects <p>Organizations Turned to for Assistance</p> <ul style="list-style-type: none"> • <p>Affiliates</p> <ul style="list-style-type: none"> • Affiliate organizations in nearly every state (see website) <p>Planning Needs</p> <ul style="list-style-type: none"> • Existing and planned workforce development activities and the type of information sharing available on such activities

National Library of Medicine (NLM)

Website: <http://www.nlm.nih.gov>

Training	LMS
<p>Focus of Training</p> <ul style="list-style-type: none"> Evidence-based PH, PH emergency and disaster preparedness resources, systematic reviews, PH information on the web, TOXNET, PubMed use, and health literacy tools Resources supporting health services research and PHSSR available at http://www.nlm.nih.gov/hsrinfo/index.html <p>Activities</p> <ul style="list-style-type: none"> Training of the workforce and others, at NLM via its web resources, such as http://phpartners.org, and through its NN/LM Meetings of partner organizations including APHA; NACCHO; and MLA/librarians involved in PH, preparedness, and disaster response Targeted web resource with collaborating organizations through Partners in Information Access for the Public Health Workforce (http://phpartners.org) Online training opportunities, both live and archived (available on demand); brief webinars; and longer courses through DIMRC Disaster Information Specialist Program <p>Target Audiences</p> <ul style="list-style-type: none"> PH workforce Librarians, especially medical librarians serving PH <p>Number Trained/Year</p> <ul style="list-style-type: none"> No precise estimate; number varies by resource <p>Competencies</p> <ul style="list-style-type: none"> Council on Linkages Core Competencies for Public Health Professionals: <ul style="list-style-type: none"> Analytic/Assessment Skills Policy Development/Program Planning Skills Cultural Competency Skills Public Health Sciences Skills <p>Accreditation/Certification Programs</p> <ul style="list-style-type: none"> Not directly, but in collaboration with other organizations, such as MLA and the MLA Disaster Information Specialization Program <p>Delivery Methods</p> <ul style="list-style-type: none"> In person Online courses Webinars <p>Evaluation Methods</p> <ul style="list-style-type: none"> Training surveys/evaluations Pre- and post-training questionnaires <p>Future Plans</p> <ul style="list-style-type: none"> Continue training activities Broaden resources available asynchronously 	<p>LMS Used</p> <ul style="list-style-type: none"> None <p>Additional Information</p> <ul style="list-style-type: none"> Courses from NLM and NN/LM are listed in the MLA Educational Clearinghouse and TRAIN

Research and Data Collection	Recruitment and Retention	Advocacy	Partnerships and Information Sharing
<p>Activities (Frequency)</p> <ul style="list-style-type: none"> • Research activities vary in frequency and scope • Multi-year project to explore and identify least cost/most resilient and effective strategies for providing information to PH to support evidence-based PH practice in 15 SHDs and LHDs through shared resource licensing, HD-specific access to resources, training for PH staff, and working relationships between senior HD officials and local resource library leaders and staff, with the New England RML • Awards small disaster health information outreach and collaboration projects between organizations with disaster-related responsibilities, such as HDs, PH coalitions, and universities, and libraries – 7 awards in 2011 and 7 in 2012 • Evaluating and developing a broad implementation plan regarding use of MedlinePlus Connect, a service to link patient portals and electronic health records with consumer health information, by the Institute for Family Health community health center/safety net provider • No explicit agenda on PH workforce research, but has provided, and would provide in the future, search and retrieval services in support of Council on Linkages and other workforce research efforts <p>Data Use</p> <ul style="list-style-type: none"> • Does not track workforce data directly, but provides easier access to such data through web resources, including http://phpartners.org, Health Services Research Information Central, and DIMRC <p>Other Data Sources</p> <ul style="list-style-type: none"> • 	<p>Activities</p> <ul style="list-style-type: none"> • Supports graduate and post-graduate training in biomedical informatics at 14 US universities, 9 of which offer specific programs for PH informatics • Provides traveling exhibits from its Exhibition Program on PH topics for display at HDs, libraries, and tribal locations <ul style="list-style-type: none"> ▪ The exhibit, <i>Against the Odds: Making a Difference in Global Public Health</i>, traveled nationally to schools of PH in 2008-9 through an arrangement between NLM and ASPH, was recognized at the APHA annual meeting, continues to travel, and is currently booked through 2014 ▪ Additional traveling exhibits are planned 	<p>Activities</p> <ul style="list-style-type: none"> • None <p>Policy Statements</p> <ul style="list-style-type: none"> • None 	<p>Partners</p> <ul style="list-style-type: none"> • Many collaborations, including: <ul style="list-style-type: none"> ▪ Organizations participating in PHPartners: AHRQ, APHA, ASPH, ASTHO, CDC, HRSA, MLA, National Agricultural Library, NACCHO, NALBOH, NN/LM, PHF, and SOPHE ▪ Council on Linkages ▪ National Coordinating Center for PHSSR ▪ Is a member of the IOM's Forum on Medical and Public Health Preparedness for Catastrophic Events, which includes the HHS Assistant Secretary for Preparedness and Response, CDC, FDA, Department of Homeland Security (Federal Emergency Management Agency and Office of Health Affairs), NIAID, NACCHO, ASTHO, APHA, and other organizations • NN/LM routinely works with regional partners, including HDs <p>Organizations Turned to for Assistance</p> <ul style="list-style-type: none"> • PHPartners organizations • NN/LM members • Partners in the preparedness area (http://sis.nlm.nih.gov/dimrc/partnersdimrc_pp.html) <p>Affiliates</p> <ul style="list-style-type: none"> • Approx. 6,000 members of NN/LM, anchored by 8 primarily academic medical libraries <p>Planning Needs</p> <ul style="list-style-type: none"> • Anticipated changes in how the PH workforce will access and utilize primary and secondary sources of information and data in the future • How to better leverage our collective resources to address the anticipated range of skills and information needs • Would like to hear from Council on Linkages colleagues about how NLM, the RMLs, and the NN/LM could better assist the PH workforce in both the near- and long-term <p>Additional Information on Activities</p> <ul style="list-style-type: none"> • Committed to supporting and strengthening access to information and knowledge tools for PH and to encouraging evidence-based PH practice, preparedness, and disaster response

National Network of Public Health Institutes (NNPHI)

Website: <http://www.nnphi.org>

Training	LMS
<p>Focus of Training</p> <ul style="list-style-type: none"> • Wide range of topics, including accreditation, performance improvement, research and evaluation, evidence-based practice, health policy, leadership, and workforce development • Programs and trainings aligned with national programs, such as the National Public Health Performance Standards Program • Annual conference: <ul style="list-style-type: none"> ▪ Showcasing PHIs, evidence-based practices, and promising practices • Grantee/project-specific trainings: <ul style="list-style-type: none"> ▪ Topics such as health impact assessment, food policy, diabetes, PHSSR, and health equity • Conference presentations on best practices and models: <ul style="list-style-type: none"> ▪ Topics such as accreditation, quality improvement, health impact assessment, community health assessment, and community health improvement planning <p>Activities</p> <ul style="list-style-type: none"> • Annual conference • Communities of practice • General informational trainings • Grantee-specific trainings • Workshops and webinars in partnership with other organizations • Conference presentations <p>Target Audiences</p> <ul style="list-style-type: none"> • Members • Partners • Funder-specific target audiences • Governmental PH (tribal, local, state, federal) <p>Number Trained/Year</p> <ul style="list-style-type: none"> • Approx. 3,000 <p>Competencies</p> <ul style="list-style-type: none"> • 	<p>Accreditation/Certification Programs</p> <ul style="list-style-type: none"> • Offers CE credits for select trainings <p>Delivery Methods</p> <ul style="list-style-type: none"> • In person • Webinars • Conference calls <p>Evaluation Methods</p> <ul style="list-style-type: none"> • Course evaluations <p>Future Plans</p> <ul style="list-style-type: none"> • Continue current trainings, depending on funding • Offer new trainings as funding is available <p>LMS Used</p> <ul style="list-style-type: none"> • None

Research and Data Collection	Recruitment and Retention	Advocacy	Partnerships and Information Sharing
<p>Activities (Frequency)</p> <ul style="list-style-type: none"> • Member survey on workforce composition and training needs (annual) <p>Data Use</p> <ul style="list-style-type: none"> • Inform planning • PR and marketing materials <p>Other Data Sources</p> <ul style="list-style-type: none"> • ASTHO • NACCHO • CDC • HRSA • County Health Rankings 	<p>Activities</p> <ul style="list-style-type: none"> • Has a job posting section on its website and in its newsletter • Has close ties with universities, which are used to fill internal internship positions • Frequently shares and connects with PHIs regarding internships • Creating a new undergraduate internship program, with one position per year • Exploring summer internships with a wider range of schools of PH and other schools related to PH, such as public administration, health communications, etc. • Offers practicum experiences for MPH students and MHA students • Member PHIs also engage with universities and schools of PH to offer internships and practicum experiences 	<p>Activities</p> <ul style="list-style-type: none"> • Advocates primarily for funding for leadership development programs and support for PHIs • Is a founding member of the National Alliance for Leadership Development for the Public's Health <p>Policy Statements</p> <ul style="list-style-type: none"> • White papers on leadership and the Public Health Leadership Society, Alliance for Leadership (10 PHIs), and advocating for leadership 	<p>Partners</p> <ul style="list-style-type: none"> • RWJF • CDC • HRSA • ASTHO • NACCHO • NLN • PHF • APHA • PHAB • University of North Carolina Gillings School of Global Public Health • North Carolina Institute of Public Health • Public Health Institute of California • Other member PHIs <p>Organizations Turned to for Assistance</p> <ul style="list-style-type: none"> • Member PHIs • NLN • Schools of PH <p>Affiliates</p> <ul style="list-style-type: none"> • PHIs <p>Planning Needs</p> <ul style="list-style-type: none"> • More information on enumeration of the PH workforce beyond governmental PH • Help with outreach to connect with other trainings <p>Additional Information on Activities</p> <ul style="list-style-type: none"> • Will be interviewing/surveying PHIs on workforce development activities through funding from CDC's SEPDPO

National Public Health Leadership Development Network (NLN)

Website: <http://www.heartlandcenters.slu.edu/nln>

Training	LMS
<p>Focus of Training</p> <ul style="list-style-type: none"> • Wide range of topics for PH leaders, including systems thinking, action learning, management, and communications • Member organizations have their own curricula and provide training on various topics, such as business planning, core functions/services, personnel development, program management, crisis communication, and emergency response <p>Activities</p> <ul style="list-style-type: none"> • Annual conference • Collaborative Leadership Training – Training of Trainers workshop • Action Learning Coach the Coach program • Webinar series <p>Target Audiences</p> <ul style="list-style-type: none"> • PH leaders <p>Number Trained/Year</p> <ul style="list-style-type: none"> • 300+ <p>Competencies</p> <ul style="list-style-type: none"> • Developed the Public Health Leadership Competency Framework to provide guidance for member organizations <p>Accreditation/Certification Programs</p> <ul style="list-style-type: none"> • <p>Delivery Methods</p> <ul style="list-style-type: none"> • In person • Webinars • Online courses <p>Evaluation Methods</p> <ul style="list-style-type: none"> • Course evaluations <p>Future Plans</p> <ul style="list-style-type: none"> • Continue to offer current trainings • Offer additional webinar series • Expand NLN Resource Bank 	<p>LMS Used</p> <ul style="list-style-type: none"> • Meridian Global System, the LMS of Saint Louis University's Heartland Centers (a PHTC) <p>Purpose</p> <ul style="list-style-type: none"> • Manage professional development and training information, track credits, and fulfill learning plans • Allow access to and deliver courses • Generate data, such as number of people trained, training status, courses taken, etc. <p>Additional Information</p> <ul style="list-style-type: none"> • Refers its users to other non-NLN courses on the Heartland Center's LMS • Heartland Center's LMS links to LMSs of other PHTCs and to TRAIN

Research and Data Collection	Recruitment and Retention	Advocacy	Partnerships and Information Sharing
<p>Activities (Frequency)</p> <ul style="list-style-type: none"> • None <p>Data Use</p> <ul style="list-style-type: none"> • <p>Other Data Sources</p> <ul style="list-style-type: none"> • 	<p>Activities</p> <ul style="list-style-type: none"> • Does not engage in recruitment and retention activities directly • Member organizations focus on management strategies that impact recruitment and retention 	<p>Activities</p> <ul style="list-style-type: none"> • Advocates for training and workforce development funding • Is a convener of the National Alliance for Leadership Development for the Public's Health <p>Policy Statements</p> <ul style="list-style-type: none"> • 	<p>Partners</p> <ul style="list-style-type: none"> • National Alliance for Leadership Development for the Public's Health • NACCHO • CDC • ASTHO <p>Organizations Turned to for Assistance</p> <ul style="list-style-type: none"> • NLN Executive Committee • Member organizations • Affiliates <p>Affiliates</p> <ul style="list-style-type: none"> • Approx. 15 affiliate member organizations • Approx. 40 affiliate member individuals <p>Planning Needs</p> <ul style="list-style-type: none"> • Who is doing what in PH workforce development, in order to make the best use of limited resources and not reinvent the wheel <p>Additional Information on Activities</p> <ul style="list-style-type: none"> • Wants to remain as a hub for PH leadership and to support these activities • Working to redefine membership structure in response to the changing face of PH leadership development

Public Health Foundation (PHF)

Website: <http://www.phf.org>

Training	LMS
<p>Focus of Training</p> <ul style="list-style-type: none"> • Topics relevant to a wide range of professionals in various PH system organizations, including quality improvement, performance management, workforce development, strategic planning, and accreditation preparation and continuous improvement <p>Activities</p> <ul style="list-style-type: none"> • Workshops • Webinars • Communities of practice • Conference presentations • Provides PH LMS, TRAIN <p>Target Audiences</p> <ul style="list-style-type: none"> • HD staff • PH professionals • Health professionals • Emergency responders • Students <p>Number Trained/Year</p> <ul style="list-style-type: none"> • 2,000+ directly • 150,000+ through TRAIN LMS <p>Competencies</p> <ul style="list-style-type: none"> • Council on Linkages Core Competencies for Public Health Professionals • Medical Reserve Corps Core Competencies Matrix • CDC Office of Public Health Preparedness and Response Public Health Preparedness Capabilities <p>Accreditation/Certification Programs</p> <ul style="list-style-type: none"> • Numerous types of CE credits available through TRAIN LMS <p>Delivery Methods</p> <ul style="list-style-type: none"> • In person • Webinars • Conference calls • Online courses <p>Evaluation Methods</p> <ul style="list-style-type: none"> • Pre- and post-assessments • Course evaluations • Sponsor feedback • 6 month follow-up <p>Future Plans</p> <ul style="list-style-type: none"> • Expand workshop offerings • Increase number of LMS course providers and courses • Focus on and foster competency-based training 	<p>LMS Used</p> <ul style="list-style-type: none"> • TRAIN <p>Purpose</p> <ul style="list-style-type: none"> • Deliver courses worldwide • Track and monitor training • Evaluate training • Store data on trainers, learners, and training • Produce statistics on training nationwide <p>Additional Information</p> <ul style="list-style-type: none"> • Provides data to PH workforce researchers

Research and Data Collection	Recruitment and Retention	Advocacy	Partnerships and Information Sharing
<p>Activities (Frequency)</p> <ul style="list-style-type: none"> • PH recruitment and retention research • Research on use of the Council on Linkages Core Competencies for Public Health Professionals • Data from PH workers on issues related to recruitment and retention • Data about training from over 700,000 learners • Data from approximately 4,000 providers of training • Data on over 29,000 training courses <p>Data Use</p> <ul style="list-style-type: none"> • Inform and improve policies and programs • Guide workforce development initiatives • Identify training gaps <p>Other Data Sources</p> <ul style="list-style-type: none"> • ASTHO • NACCHO • NIHB • NALBOH • APTR • Quad Council • AAPHP 	<p>Activities</p> <ul style="list-style-type: none"> • Provides internships • Collaborates with HOSA-Future Health Professionals to interest health professions students in PH careers • Tracks career choices of individuals involved in its minority outreach program • Surveyed PH workers on recruitment and retention • Assists organizations in creating workforce development plans • Develops tools to help PH organizations use the Council on Linkages Core Competencies for Public Health Professionals, such as job descriptions and competency assessments • Promotes student internships in HDs through its AHD Learning Community 	<p>Activities</p> <ul style="list-style-type: none"> • None <p>Policy Statements</p> <ul style="list-style-type: none"> • None 	<p>Partners</p> <ul style="list-style-type: none"> • ACPM • APHA • APTR • AAPHP • APHL • ASPH • ASTHO • AUPHA • CDC • CCPH • HRSA • NACCHO • NALBOH • NEHA • NLM • NNPPI • NLN • QUAD • SOPHE • PHAB • University of Kentucky • University of Michigan <p>Organizations Turned to for Assistance</p> <ul style="list-style-type: none"> • CDC • HRSA • PH PBRNs • PHTCs <p>Affiliates</p> <ul style="list-style-type: none"> • 28 state and national TRAIN affiliates <p>Planning Needs</p> <ul style="list-style-type: none"> • What has the greatest impact on improving workforce performance • What strategies and activities are organizations engaged in to build and improve the workforce <p>Additional Information on Activities</p> <ul style="list-style-type: none"> • Continuing to develop programs and resources to improve the skills, competence, and performance of the workforce

Quad Council of Public Health Nursing Organizations (Quad Council)

Website: <http://quadcouncilphn.org>

Training			LMS
<p>Focus of Training</p> <ul style="list-style-type: none"> • Topics relevant to PH nurses, including competencies and certification standards in PHN • Learning Institutes at APHA's annual meeting: <ul style="list-style-type: none"> ▪ Topics include academic/practice partnerships in PHN and the impact of the Affordable Care Act on PHN practice <p>Activities</p> <ul style="list-style-type: none"> • Workshops and webinars on the American Nurses Credentialing Center certification process for the Advanced PHN credential and the Quad Council Competencies for Public Health Nurses, which are based on the Council on Linkages Core Competencies for Public Health Professionals • Learning Institutes at APHA's annual meeting • Each Quad Council organization conducts its own annual conferences 	<p>Target Audiences</p> <ul style="list-style-type: none"> • PH nurses • PHN students <p>Number Trained/Year</p> <ul style="list-style-type: none"> • 300-400 <p>Competencies</p> <ul style="list-style-type: none"> • Quad Council Competencies for Public Health Nurses, based on the Council on Linkages Core Competencies for Public Health Professionals <p>Accreditation/Certification Programs</p> <ul style="list-style-type: none"> • Delivered webinars and workshops on the American Nurses Credentialing Center certification process for Advanced PHN • PHN-APHA is an approved CNE provider 	<p>Delivery Methods</p> <ul style="list-style-type: none"> • In person • Webinars <p>Evaluation Methods</p> <ul style="list-style-type: none"> • Course evaluations <p>Future Plans</p> <ul style="list-style-type: none"> • Continue current training activities, depending on funding • Each Quad Council organization determines its own training plans 	<p>LMS Used</p> <ul style="list-style-type: none"> • None

Research and Data Collection	Recruitment and Retention	Advocacy	Partnerships and Information Sharing
<p>Activities (Frequency)</p> <ul style="list-style-type: none"> • Each Quad Council organization collects limited data on its members, including some demographic data, but the Quad Council does not aggregate these data • Quad Council organizations conduct research on PHN interventions and the PHN workforce <p>Data Use</p> <ul style="list-style-type: none"> • Developing research priorities • Evaluating educational strategies for educating the PHN workforce <p>Other Data Sources</p> <ul style="list-style-type: none"> • HRSA • University of Michigan/RWJF PHN enumeration study • Focus groups 	<p>Activities</p> <ul style="list-style-type: none"> • The Quad Council does not directly engage in recruitment and retention • Quad Council organizations engage in a variety of recruitment and retention activities, such as enhancing PHN curricula, supporting PHN faculty, encouraging students to consider PHN careers, and providing students with scholarships and mentors for APHA's annual meeting 	<p>Activities</p> <ul style="list-style-type: none"> • Advocates through its member organizations on relevant topics, i.e., PH funding, nursing education funding, new models of care, PH issues <p>Policy Statements</p> <ul style="list-style-type: none"> • Strategic briefs on website • Each Quad Council organization has policy statements on its website 	<p>Partners</p> <ul style="list-style-type: none"> • Is a collaboration of 4 organizations: Association of Public Health Nurses (APHN), Association of Community Health Nursing Educators (ACHNE), APHA Public Health Nursing Section (PHN-APHA), and American Nurses Association Council on Nursing Practice and Economics (ANA) • Participates in the Nursing Community, a coalition of nursing organizations that takes policy positions and advocates for nursing education funding <p>Organizations Turned to for Assistance</p> <ul style="list-style-type: none"> • Funders such as RWJF • Quad Council member organizations • HRSA • CDC • AACN • Nursing Community <p>Affiliates</p> <ul style="list-style-type: none"> • ASTHO (through APHN) • APHA (through PHN-APHA) <p>Planning Needs</p> <ul style="list-style-type: none"> • What has the greatest impact on improving PHN workforce performance • What PHN models are most effective in improving the health of the public

Society for Public Health Education (SOPHE)

Website: <http://www.sophe.org>

Training			LMS
<p>Focus of Training</p> <ul style="list-style-type: none"> Needs of health educators and PH workforce (generally) <p>Activities</p> <ul style="list-style-type: none"> Annual meeting (fall; will not be held after 2012) Annual conference (starting spring 2013) Annual Health Education Advocacy Summit Center for Online Resources & Education, an e-learning portal launched in fall 2012 Self-study articles in SOPHE journals Webinars Knowledge Center (in beta testing 2013) Courses delivered through CDC University Other cosponsored meetings <p>Target Audiences</p> <ul style="list-style-type: none"> Members CHES/MCHES APHA Public Health Education & Health Promotion Section Coalition of National Health Education Organizations PH community 	<p>Number Trained/Year</p> <ul style="list-style-type: none"> 3,300-3,900 <p>Competencies</p> <ul style="list-style-type: none"> Health Education Competencies for Certified Health Education Specialist and Master Certified Health Education Specialist Health Education Competencies for CHES and MCHES overlap with the ASPH MPH Core Competency Model, which is used for CPH credentialing <p>Accreditation/Certification Programs</p> <ul style="list-style-type: none"> Provider of NCHCEC CE contact hours Provider of NBPHE CPH renewal credits One of the largest providers of CE for CHES <p>Delivery Methods</p> <ul style="list-style-type: none"> In person Webinars Online courses Self-study journal articles 	<p>Evaluation Methods</p> <ul style="list-style-type: none"> Course evaluations Training questions on annual member surveys <p>Future Plans</p> <ul style="list-style-type: none"> Promote CORE – add more courses and market to expand awareness Review/update the Health Education Competencies for CHES and MCHES in collaboration with NCHCEC Explore ways to create a stronger voice for the health education profession through unification with former members of the American Association for Health Education 	<p>LMS Used</p> <ul style="list-style-type: none"> Peach New Media <p>Purpose</p> <ul style="list-style-type: none"> Deliver content of training Track courses and credentials Serve as a one stop hub for CE for CHES/MCHES and CPH Generate training statistics, such as number of people trained and CHES/CPH credits provided <p>Additional Information</p> <ul style="list-style-type: none"> Connected to SOPHE's association management system

Research and Data Collection	Recruitment and Retention	Advocacy	Partnerships and Information Sharing
<p>Activities (Frequency)</p> <ul style="list-style-type: none"> • Survey of members, non-members, and chapters (annual) • Periodic surveys of undergraduate and graduate programs in health education • Health Education Job Analysis, a study that forms the basis of the Health Education Competencies for CHES and MCHES (every 5 years; in process in 2013 with goal of publishing by 2015) • Market research on employers and attitudes about health education (2006) • SOPHE's National Task Force on Accreditation in Health Education conducts periodic research • Development of emergency preparedness competencies for health educators (due to be released in 2013) <p>Data Use</p> <ul style="list-style-type: none"> • Strategic planning <p>Other Data Sources</p> <ul style="list-style-type: none"> • Department of Labor 	<p>Activities</p> <ul style="list-style-type: none"> • Previously participated in mentoring program through the Public Health Leadership Institute, but this program is no longer funded • Developing new leadership pipeline courses • Provides student outreach targeted at helping students find jobs, develop resumes, etc. • Participates in Health Education Week and National Public Health Week • Interested in engaging in more activities to develop the PH workforce pipeline, but has been limited by funding • Provides 6 paid internships/year • Offers 12-15 scholarships and fellowships to graduate and undergraduate students • Funds 12 people/year to attend its annual meeting or Health Education Advocacy Summit through the 21st Century Campaign endowment 	<p>Activities</p> <ul style="list-style-type: none"> • 2011 Advocacy Priorities: <ul style="list-style-type: none"> ▪ Patient Protection and Affordable Care Act ▪ Appropriations for CDC's National Center for Chronic Disease Prevention and Health Promotion ▪ Reauthorization of the Elementary and Secondary Education Act to include health education and physical education as core subjects ▪ Promote the Health Education Profession as a critical component to addressing the health crisis in our society ▪ Health literacy ▪ Health equity across all populations ▪ Tobacco prevention and control ▪ Environmental health/emergency preparedness • Lists Advocacy Resolutions on its website <p>Policy Statements</p> <ul style="list-style-type: none"> • On website 	<p>Partners</p> <ul style="list-style-type: none"> • CDC • HHS • Office of Minority Health • NLM • ATSDR • National Cancer Institute • NIH Office of Behavioral and Social Sciences Research • Department of Education • APHA • ASPH • APTR • AAPHP • NACDD • PHPartners • PHF • TFAH • NACCHO • ASTHO • YMCA of USA • American Lung Association • National Recreation and Park Association • American Cancer Society • Directors of Health Promotion and Education • IUHPE • Research!America <p>Organizations Turned to for Assistance</p> <ul style="list-style-type: none"> • PHF • PHTCs • Prevention Research Centers • RWJF • Kellogg Foundation <p>Affiliates</p> <ul style="list-style-type: none"> • 20 chapters <p>Planning Needs</p> <ul style="list-style-type: none"> • Results of this study shared, so can be more strategic in decisions and identify relative priorities, areas of overlap, and opportunities to collaborate <p>Additional Information on Activities</p> <ul style="list-style-type: none"> • Has collaborated with the IUHPE to develop Domains of Practice in Health Promotion and strengthen accreditation and workforce training processes globally

Appendix B. Discussion Questions

Questions were used to guide discussions with organizations about their public health workforce development activities. These discussion questions were developed in July and August 2012. The following questions were used when appropriate:

- Initial Questions
 - Does the organization have a strategic plan? Is it current?
 - Does the organization have a workforce plan? Is it current?
 - Is the strategic plan accessed through the organization's website current?
 - Does the organization have plans to revise its strategic or workforce plans?
 - How does the organization define the public health workforce?
- Training
 - What training activities does the organization sponsor, develop, and/or deliver?
 - What topics, objectives, and/or competencies does training address?
 - Is the training open to the general public health community and, if so, how do people find out about/access it?
 - Who is the target audience of the training?
 - Internal
 - External (members/constituents of the organization and/or others?)
 - How many people receive training annually?
 - How is training delivered?
 - In-person
 - From a distance (modalities?)
 - Does the organization charge fees for its training?
 - How does the organization determine if training is successful?
 - What are the organization's future training plans? Will it continue its current efforts? Does it have plans to try any new approaches?
- Learning Management Systems
 - Does the organization have a learning management system?
 - Does the organization use a learning management system and, if so, which system?
 - For what purposes does the organization use a learning management system?
 - What types of data can the learning management system generate and is the organization willing to share these data with researchers/and or others?
 - Is the learning management system connected with other systems?
- Data
 - Does the organization collect data on workforce composition, needs, and gaps?
 - What types of data?
 - How are the data collected?
 - How does the organization use these data?
 - Does/Can the organization share these data?
 - How often are data collected?
 - Does the organization collect other types of workforce data?
 - Are there other sources that the organization uses to obtain workforce data?

- Recruitment and Retention
 - Does the organization engage in any public health workforce recruitment and retention efforts?
 - Does the organization engage in any activities to build the workforce pipeline, such as reaching out to schools to interest students in public health or provide support for teachers?
 - What types of programs, incentives, salary offerings/benefits, and other strategies does the organization advocate to recruit and retain public health professionals (related to the organization's constituents)?
 - Does the organization do anything to help its constituents improve the working environment?
 - Training
 - Systems to help improve worker efficiency, effectiveness, and/or morale
- Tools and Systems
 - Does the organization develop or sponsor development of tools and/or systems to help improve workforce performance and/or employee satisfaction?
 - Are there particular tools and/or systems the organization uses or recommends for use to help improve workforce performance and/or employee satisfaction?
- Research
 - Does the organization conduct and/or fund workforce research?
 - Does the organization share data about the organization's constituents for the purpose of workforce research?
 - Does the organization conduct assessments to determine the workforce needs of the organization's constituents?
- Advocacy
 - Has the organization developed policy statements related to the public health workforce?
 - Does the organization advocate for public health workforce jobs?
 - Does the organization advocate for public health workforce research?
 - Does the organization advocate for public health workforce training?
 - Does the organization advocate for public health workforce development funding?
- General
 - Does the organization work with other partners on public health workforce development activities? Who are the organization's major collaborators?
 - What organization(s) does the organization turn to for public health workforce development assistance?
 - Does the organization have affiliates that are very involved in public health workforce activities?
 - Are there other organizations that are engaged in significant public health workforce activities that are not members of the Council on Linkages Between Academia and Public Health Practice?
 - What else would the organization like to know about workforce development activities/needs when it is planning its own activities?
 - What else would the organization like to tell us about its public health workforce development plans and activities?

Appendix C. Abbreviations

AACN	American Association of Colleges of Nursing
AAMC	Association of American Medical Colleges
AAPHP	Association of Accredited Public Health Programs
ACHNE	Association of Community Health Nursing Educators
ACPM	American College of Preventive Medicine
AHD	academic health department
AHEC	Area Health Education Center
AHRQ	Agency for Healthcare Research and Quality
ANA	American Nurses Association
APHA	American Public Health Association
APHL	Association of Public Health Laboratories
APHN	Association of Public Health Nursing
APTR	Association for Prevention Teaching and Research
ASPH	Association of Schools of Public Health
ASTHO	Association of State and Territorial Health Officials
ATSDR	Agency for Toxic Substances and Disease Registry
AUPHA	Association of University Programs in Health Administration
BHP _r	HRSA Bureau of Health Professions
BOH	board of health
BPHC	HRSA Bureau of Primary Health Care
CAMP	Council of Accredited MPH Programs
CBO	community-based organization
CBPR	community-based participatory research
CCPH	Community-Campus Partnerships for Health
CDC	Centers for Disease Control and Prevention
CE	continuing education
CEPH	Council on Education for Public Health
CHES	Certified Health Education Specialist
CME	continuing medical education
CNE	continuing nursing education
CORE	Center for Online Resources & Education
Council on Linkages	Council on Linkages Between Academia and Public Health Practice
CPH	Certified in Public Health
CSTE	Council of State and Territorial Epidemiologists
DIMRC	Disaster Information Management Research Center
ECBP	Educational and Community-Based Programs
EPA	United States Environmental Protection Agency
FDA	U.S. Food and Drug Administration
HAB	HRSA HIV/AIDS Bureau
HBCUs	historically black colleges and universities
HD	health department
HHS	Department of Health and Human Services
HR	human resources
HRSA	Health Resources and Services Administration
IOM	Institute of Medicine
IUHPE	International Union for Health Promotion and Education
KSAs	knowledge, skills, and abilities
LHD	local health department

LMS	learning management system
MCH	maternal and child health
MCHB	HRSA Maternal and Child Health Bureau
MCHES	Master Certified Health Education Specialist
MHA	Master of Health Administration
MLA	Medical Library Association
MPH	Master of Public Health
NACCHO	National Association of County and City Health Officials
NACDD	National Association of Chronic Disease Directors
NALBOH	National Association of Local Boards of Health
NBPHE	National Board of Public Health Examiners
NCHEC	National Commission for Health Education Credentialing
NEHA	National Environmental Health Association
NIAID	National Institute of Allergy and Infectious Diseases
NIH	National Institutes of Health
NIHB	National Indian Health Board
NLM	National Library of Medicine
NLN	National Public Health Leadership Development Network
NN/LM	National Network of Libraries of Medicine
NNPHI	National Network of Public Health Institutes
PACE	Professional Achievement in Continuing Education
PBRNs	Practice-Based Research Networks
PH	public health
PHAB	Public Health Accreditation Board
PHF	Public Health Foundation
PHI	public health institute
PHN	public health nursing
PHN-APHA	Public Health Nursing Section of the American Public Health Association
PHPartners	Partners in Information Access for the Public Health Workforce
PHSSR	public health services and systems research
PHTC	Public Health Training Center
PR	public relations
Quad Council	Quad Council of Public Health Nursing Organizations
RML	Regional Medical Library
RWJF	Robert Wood Johnson Foundation
SEPDPO	CDC Scientific Education and Professional Development Program Office
SHD	state health department
SHO	state health official
SOPHE	Society for Public Health Education
STEM	science, technology, engineering, and mathematics
TFAH	Trust for America's Health
USDA	United States Department of Agriculture

Appendix D. Participants

Information on Public Health Workforce Development Activities Provided or Reviewed by:

- American College of Preventive Medicine – Paul Bonta, Associate Executive Director, Policy, Advocacy and External Affairs
- American Public Health Association – Karlene Baddy, Program Director, Public Health Systems & Partnership; Regina Davis, Associate Executive Director, Health Policy and Practice; Annette Ferebee, Director, Center for Professional Development, Public Health Systems & Partnership
- Association for Prevention Teaching and Research – Vera S. Cardinale, Associate Director, Training and Education; Allison Lewis, Executive Director
- Association of Accredited Public Health Programs – Gary D. Gilmore, Director Member at Large, Executive Board, Past President
- Association of Public Health Laboratories – Eva Perlman, Senior Director of Professional Development
- Association of State and Territorial Health Officials – Melissa Lewis, Director, Workforce Development; Ramon Bonzon, Senior Director, Member Services Engagement & Development
- Association of University Programs in Health Administration – Kristi Donovan, Senior Director of Professional Affairs
- Centers for Disease Control and Prevention – Pat Drehobl, Associate Director for Program/Communication, SEPDPO (Point of Contact for SEPDPO)
- Community-Campus Partnerships for Health – Sarena Seifer, Executive Director
- Health Resources and Services Administration – Kyle Peplinski, Public Health Analyst, BHP; Shannon Bolon, Chief, Primary Care Medical Education Branch, Division of Medicine and Dentistry, BHP; Laura Cheever, Associate Administrator (acting), HAB; Natasha Coulouris, Senior Public Health Advisor, Office of Planning, Analysis, and Evaluation; Marian Ladipo, Public Health Analyst, Division of Public Health and Interdisciplinary Education, BHP; Sarah Linde-Feucht, Chief Public Health Officer; Mariquita Mullan, Director, Division of Public Health and Interdisciplinary Education, BHP; Cindy Phillips, Deputy Director, Division of Public Health and Interdisciplinary Education, BHP; Lauren Ramos, Deputy Director for Workforce Development, MCHB; Irene Sandvold, BHP; Julia Sheen-Aaron, Division of Public Health and Interdisciplinary Education, BHP; Sylvia Trent-Adams, Deputy Associate Administrator (acting), HAB; Nadra Tyus, Public Health Analyst, National Center for Health Workforce Analysis, BHP
- National Association of County and City Health Officials – David Dyjack, Associate Executive Director; Alex Hart, Program Analyst, Public Health Infrastructure & Systems (former)
- National Association of Local Boards of Health – Stephanie Branco, Director of Program Planning and Evaluation; Anne Drabczyk, Chief Executive Officer
- National Environmental Health Association – Terry Osner, Senior Advisor; Rance Baker, Program Administrator; Larry Marcum, Managing Director; Kristen Ruby, *Journal of Environmental Health* Editor
- National Library of Medicine – Lisa A. Lang, Assistant Director for Health Services Research Information and Head, National Information Center on Health Services Research and Health Care Technology; Lisa A. Sedlar, Librarian, National Information Center on Health Services Research and Health Care Technology
- National Network of Public Health Institutes – An Nguyen, Program Manager

- National Public Health Leadership Development Network – Sarah Weiner, Program Coordinator; Eileen Legaspi, Heartland Centers LMS Coordinator
- Public Health Foundation – Ron Bialek, President; Kathleen Amos, Project Manager, Council on Linkages Between Academia and Public Health Practice
- Quad Council of Public Health Nursing Organizations – Jeanne Matthews, Quad Council Liaison to the Council on Linkages Between Academia and Public Health Practice
 - American Nurses Association
 - Association of Community Health Nursing Educators
 - Association of Public Health Nursing
 - Public Health Nursing Section of the American Public Health Association
- Society for Public Health Education – Elaine Auld, Chief Executive Officer

Public Health Foundation Staff:

- Ron Bialek, President, Public Health Foundation; Director, Council on Linkages Between Academia and Public Health Practice
- Kathleen Amos, Project Manager, Council on Linkages Between Academia and Public Health Practice
- Elizabeth Arriaza, Consultant
- Jonathan Munetz, Project Analyst, Council on Linkages Between Academia and Public Health Practice