Developing Leaders, Building Networks:

An Evaluation of the National Public Health Leadership Institute - 1991-2006

September 30, 2007

NCIPH
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INSTITUTE FOR PUBLIC HEALTH

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North Carolina Institute for Public Health
School of Public Health
University of North Carolina at Chapel Hill
Chapel Hill, North Carolina

September 30, 2007

We are pleased and very proud to share with you this comprehensive evaluation of the National Public Health Leadership Institute. Having been actively involved in the launch of PHLI some sixteen years ago and still earnestly engaged since I moved to the University of North Carolina, I found this report particularly gratifying.

In many ways, the evaluation confirmed what many of us knew - that PHLI has made a major difference in the lives of public health leaders across the nation.

- Of all the findings, the most gratifying was to hear so many graduates describe specific improvements in programs, organizations, systems, and policies that PHLI had contributed to bringing about.
- Nearly all reported learning valuable concepts and putting them into practice.
- Many gained a much better understanding of the roles they could play locally and nationally in improving public health systems.
- Hundreds reported that their professional networks were strengthened through PHLI and the networks they subsequently developed or joined.
- A large number gained confidence to take on greater leadership challenges.
- Hundreds took on additional leadership roles through their jobs, professional associations, and coalitions – at national, state, and local levels.

Scholars linked improvements in programs, organizations, systems, and policies directly to the leadership provided by individuals, teams, and large groups of PHLI graduates thinking and acting together. The graduates often enlisted countless others in this important work.

I would like to personally thank David Steffen and Donna Dinkin for their thoughtful, responsive, tireless, and creative leadership of PHLI in the years the program has been housed here at UNC.

I am particularly proud of our internationally-recognized evaluation team, led by Karl Umble. We were thrilled to focus on all sixteen years of PHLI, working closely with Carol Woltring, Executive Director, Center for Health Leadership & Practice, Public Health Institute, and Steve Frederick, our friend and colleague at CDC. We greatly appreciate all who responded. The response rate and depth were indications of the value placed on PHLI by the hundreds of outstanding alumni.

This comprehensive evaluation should help guide leadership development for many years to come. We hope this report will be useful and of interest to you.

Sincerely,

Edward L. Baker, M.D., M.P.H.
Director
North Carolina Institute for Public Health

Center for Heath Leadership and Practice
Public Health Institute
Oakland, California

September 30, 2007

Dear Public Health Colleagues,

Yes, public health leadership development does make a difference!

I am very pleased that the Centers for Disease Control and Prevention sponsored this comprehensive National Public Health Leadership Institute Evaluation Report 1991-2006.

This was a collaborative effort of the Center for Health Leadership and Practice, Public Health Institute, and the University of North Carolina team headed by Dr. Karl Umble. It was a pleasure to work together to synthesize previous evaluations and published papers and to design the 2007 new data collection efforts.

Those of us close to this work for so many years feel the effects of it through so many deep conversations with graduates and the evidence of strengthened leadership and innovation at all levels of the public health system, often linked directly to specific learnings from PHLI. Now, thanks to the dedicated work of the UNC team, we once again have added to the body of previous evidence that the national investment in the Public Health Leadership Institute has made a big difference in more than a majority of the graduates, and that Public Health as a field has benefited from those individuals' sustained commitment to their leadership in Public Health.

I am very proud of the work we have collectively done over the past sixteen years. This is indeed a milestone in leadership evaluation work and our work together. I look forward to the future and helping to sustain this work so that a future generation of public health leaders are trained, engaged, and connected to those that have come before.

With continued dedication to this important work and appreciation for all those who have contributed so much over these years,

Carol L. Woltring, M.P.H.

Executive Director
Center for Heath Leadership and Practice
Public Health Institute
Oakland, California

Acknowledgements

Umble's main collaborators and co-authors on the evaluation included Alison Gunn, M.P.H.; two doctoral students, Sandra Diehl, M.P.H., and Susan Haws, M.P.H.. Alison Gunn worked nearly full-time on the evaluation for six months, focusing on evaluation management, implementing the survey, and helping with survey data analysis. Sandra Diehl and Susan Haws conducted almost all of the interviews, and wrote analyses of the interview data. Umble was the final writer and editor for the document. Gunn, Diehl, and Haws also gave valuable advice on instrument design.

Aiko Hattori, M.P.H. helped with data analysis and drafted tables and charts. Margot Mahannah helped analyze qualitative data from the survey. Matthew Burr helped us find graduates and transcribed the interviews. Delesha Miller, M.S.P.H. helped us plan the data collection methods, reviewed instruments, and wrote an initial outline of the report. Kimberley Freire, M.P.H. and Liz Mahanna also reviewed the instruments and offered valuable suggestions for improving them. Judy Beaver, Deborah McGee, and Darlene Freedman provided excellent administrative support. Zannie Gunn designed the cover.

Important additional suggestions on survey and interview instruments were made PHLI graduates Bobby Pestronk (Genesee County, Michigan), Marie Flake (Seattle, Washington), David Steffen (Chapel Hill, North Carolina), Bob Stolarick (Shelby County, Tennessee), Nancy Tolliver (Charleston, West Virginia), Mike Sage (Atlanta, Georgia), and Steve Boedigheimer (Little Rock, Arkansas).

Finally, we thank the many PHLI graduates who completed the survey and took time to be interviewed. They provided remarkably helpful information on PHLI's impact in order to shape the field in the years to come.

Karl Umble, Ph.D., M.P.H.
Lead Author

Suggested citation: Umble, K.E., Diehl, S.J., Gunn, A., & Haws, S. (2007). <u>Developing Leaders, Building Networks: An Evaluation of the National Public Health Leadership Institute – 1991-2006</u>. Chapel Hill, NC: North Carolina Institute for Public Health.

In September 2007, the National PHLI received additional CDC funding and will continue to be offered. For current information about the National PHLI, and to access copies of this report and other PHLI evaluations, visit: http://www.phli.org/

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List of Acronyms

APHA	American Public Health Association
ASTHO	Association of State and Territorial Health Officials
CCL	Center for Creative Leadership
CDC	Centers for Disease Control and Prevention
IOM	Institute of Medicine
NACCHO	National Association of County and City Health Officials
NALBOH	National Association of Local Boards of Health
NCIPH	North Carolina Institute for Public Health
NLN	National Public Health Leadership Development Network
OWCD	Office of Workforce and Career Development
PHLI	National Public Health Leadership Institute
PHLS	Public Health Leadership Society
SACCHO	State Association of County and City Health Officials
UNC-SPH	University of North Carolina at Chapel Hill School of Public Health

Executive Summary

Background

The National Public Health Leadership Institute (PHLI) is a leadership development program in the United States sponsored by the Centers for Disease Control and Prevention (CDC). The Institute's mission is to strengthen the leadership competencies of senior public health leaders and to build a network of senior leaders who can work together and share knowledge on how to address public health challenges.

The CDC founded PHLI in 1990 and remains its sponsor. PHLI represented a significant CDC commitment to improve public health infrastructure following the influential 1988 Institute of Medicine report, The Future of Public Health, which called for major improvements in the practice of public health in the United States.

From 1991- 2000, PHLI was offered under the continuous management of the Center for Health Leadership and Practice, which is part of the non-profit Public Health Institute in Oakland, California. During this time, nine cohorts of about 50 scholars per year were developed. In 2000, the CDC selected a new partnership to offer PHLI, headed by the North Carolina Institute for Public Health at the University of North Carolina at Chapel Hill (UNC) School of Public Health. Other partners included the Kenan-Flagler Business School at UNC-Chapel Hill, and the non-profit Center for Creative Leadership in Greensboro, North Carolina. This partnership developed an additional six cohorts of scholars through 2006. The total number of graduates was 806.

In 2006-2007, the CDC elected to sponsor an evaluation of the program's first fifteen years of operation. This report presents the results of that evaluation, which examined PHLI's influence on the following major domains:

> Domain 1. Individual Leader Development
>
> Domain 2. Leader Actions: Career-Related Outcomes and Voluntary Leadership Positions Taken
>
> Domain 3. Public Health Leadership Network Development and Network Actions
>
> Domain 4. Public Health Systems and Infrastructure Development

In addition, the evaluation examined graduate and stakeholder perspectives on PHLI and the Future Direction of Public Health Leadership Development in the United States, which was "Domain 5."

Methods

This study used a combination of quantitative data from a survey and qualitative data from that survey and from interviews.

Survey

The web-based survey sought to ascertain whether the program's basic objectives had been achieved, and focused on key areas that stakeholders were most interested in. It included questions related to:

- Career patterns of graduates and voluntary service in public health

- Individual "leader development" including: the influence of PHLI on scholars' understanding, skills, interest in leadership service, confidence, courage, sense of belonging to the national cadre of leaders in public health, self-awareness, openness to the ideas of others, networks, and overall leadership

- Individual "practices", including changes in involvement in local, state, and national leadership activities

- Specific results of PHLI and improved leadership, including changes in programs, organizations, policies, and systems

We located a working email address for 80% (n=646) of the 806 graduates. The final response rate was 61% (n=393) out of those 646.

Interviews

We interviewed 17 graduates on how PHLI influenced their leadership knowledge, attitudes, skills, practices, positions, and involvement in voluntary work, leadership networks, and collaborations. We also asked about changes at organizational and systems levels that they could attribute at least partially to PHLI. Of the 17, 8 (47%) were graduates of the California PHLI, 9 (53%) of the UNC program. We also conducted 18 interviews with key informants with knowledge of the history, purposes, graduates, and results of PHLI. These interviews focused on national level trends and changes that they could trace to PHLI, plus recommendations for the program and related efforts.

Quantitative survey data were analyzed using SAS (SAS Institute, Cary, NC). Differences in means were analyzed using paired samples t-tests. Qualitative data from the open-ended survey questions were analyzed using content analysis methods.

Interviews were recorded and transcribed. The two staff members who conducted the interviews conducted a content analysis (Patton, 1990) of the transcripts using across-case matrices derived from within-case summaries (Miles and Huberman, 1994).

Findings

The Figure on the next page summarizes study findings and their relationships to one another.

Domain 1. Individual Leader Development

We asked graduates to rate PHLI's long-term influence on their leadership; 36% chose "large" while 43% chose "moderate", 18% chose "small" and 2% chose "no influence."

The majority reported that PHLI had strengthened these constructs related to understanding and skills to a "moderate" or "large" degree:

- Understanding useful general principles of leadership (81%)
- Awareness of best practices and models for public health leadership (68%)
- Understanding of the breadth of the public health system and their role (56%)
- Openness to the ideas of others about how to address problems (75%)
- Skills in leading efforts that require the collaboration of many people or organizations (73%) and other specific leadership practices that are useful in public health (73%)

The majority reported that PHLI had strengthened their interest in the following possible involvements to a "moderate" or "great" extent:

- Interest in deepening their involvement with leadership efforts to improve their agency or community (78%)
- Interest in deepening their involvement with public health leadership efforts at the national level (59%) and at the state level (54%)
- Their commitment to staying in public health in their work (66%)

In addition, the majority reported that PHLI has strengthened these constructs to a "moderate" or "great" extent:

- Self-awareness as a leader: their strengths, liabilities, and how others view and receive their leadership (82%)
- Sense that as a public health leader, they are important and have a valuable role to play (77%) and belong to the national cadre of leaders in public health (68%)
- Professional network of people they can contact for ideas about how to handle their leadership (55%)
- Confidence to take on public health leadership responsibilities (75%)
- Courage to take the initiative and act to improve public health (75%)

Figure. Model of National Outcomes

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National PHLI Program
  │
  ├──►  ┌─────────────────────────┐      ┌──────────────┐      ┌───────────────────────────┐
  │     │ Individual Leader       │◄────►│ Leader       │◄────►│ Public Health Systems and │
  │     │ Development             │      │ Actions      │      │ Infrastructure Development│
  │     └─────────────────────────┘      └──────────────┘      └───────────────────────────┘
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Individual Leader Development

- Greater understanding, skills, and valuing of certain approaches in Public Health and Leadership
- Validation of the Importance of Public Health Leadership
- Understanding and Validation: Self as Leader
- Confidence/Courage Motivation/Responsibility

Leader Actions

- Career Patterns: Staying Put, Addressing Issues, Taking New Jobs
- Taking on Voluntary Leadership Roles
- Everyday Leadership Actions on the Job
- Focused Actions to Achieve Specific Goals
- Developing Others

Public Health Systems and Infrastructure Development

- Program Change and Development
- Organizational Change and Development
- Policy Change and Development
- Systems Change and Development

Network Development

- National
- Organizational, Local, State

Network Actions

- National
- Organizational, Local, State

Interview themes and hundreds of survey comments reinforced and explained improvements in understanding of leadership; improved understanding, skill, and valuing of collaborative leadership and systems thinking to address challenges; and other specific skills gained. Many also emphasized that PHLI connected them to a wide network of leaders with whom they could exchange valuable information. The network helped them feel that they "belonged" to a national network of public health leaders and were themselves "valid" leaders and increased their courage and confidence to "step up to the plate" and take on additional leadership responsibilities. One put it succinctly: [emphases added]:

> *PHLI helped to give me the requisite leadership <u>skills</u>, the <u>support group to feel others in my position were making/could make a difference</u>, gave me the <u>confidence</u> to step up to the plate, and impressed upon me the <u>obligation</u> to do so. PHLI was a very limited opportunity and almost all of us in it felt this privilege we had been given should be reciprocated for via <u>active public health leadership</u> in our respective work and personal spheres of influence.*

While some of these benefits may seem "soft" and unimportant to some readers, they are directly related to more recent and holistic concepts of competence that are widely embraced today. "Competence is not to be synonymous with skill. A competence is defined as the ability to successfully meet complex demands in a particular context. Its manifestation, competent performance, depends on the mobilization of knowledge, cognitive and practical skills, as well as social and behavioral components such as attitudes, emotions, values, and motivations. This holistic notion of competence is not reducible to one cognitive dimension" (Hakkarainen et al., 2004, p. 16)

Put differently, these findings about scholars' perceptions of important gains from PHLI remind us that leaders are not "machines" in need only of new practical skills, but complex personalities in search of a role and mission, vision, courage and encouragement, validation and confidence, and companions for the journey.

Domain 2. Leader Actions: Career-Related Outcomes and Voluntary Leadership Positions Taken

The great majority of survey respondents - 87% - were still working in public health. Seven percent were working in another closely related field. About 20% of all PHLI graduates have now retired, but nearly all of them had remained in public health until they retired.

Using the construct of "trained leader-years" – full time employment years after PHLI graduation – we found that graduates had invested 1210 trained leader-years in local government, 640 years in state government, and 314 in federal government. In addition, scholars had spent 366 years in academic work, and 111 years working in health care.

Main foci for graduates' daily work after graduation included general organizational leadership in governmental agencies, community public health development, bioterrorism and preparedness, policy development and advocacy, and workforce development (both general and leadership development). Other fairly common foci included non-profit leadership, epidemiology, chronic disease, healthcare leadership, and infectious disease.

About 52% had stayed in the same organization and position since graduation – which interviewees attributed to commitment to a place rather than any form of stagnation. About 19% said that PHLI had helped them attain new jobs by increasing their skills, confidence, interest, and networks, or by impressing the employer that the scholar had attended. Jobs that PHLI helped scholars attain often included federal bureau or division chief and state or local health officer, deputy, or division chief.

About 81% had taken on additional "voluntary" leadership roles that were not required by their jobs, such as task forces, boards, professional associations, and informal advocacy; 54% had taken on such roles *and* responded that PHLI had played some role in their doing so, mainly by increasing their confidence, interest in the work, skills, and networks.

Examples of voluntary roles scholars had taken on with PHLI's influence included, at the national level, serving on boards and committees with NACCHO, ASTHO, NLN, PHLS, APHA, and other associations. At the state level, roles commonly included helping with or serving on boards with a state public health association or state association of county and city health officials. At the local level, many worked with community-level task forces and boards. The great majority of scholars responded that PHLI had made "some" or a "great" contribution to the leadership actions that they took when they assumed these voluntary roles.

One comment epitomized many others with regard to leadership service:

> *I was appointed shortly after I graduated [from PHLI] to the Board of the Massachusetts Public Health Association, the nation's largest APHA affiliate, and successfully implemented at MPHA a state wide initiative called the Coalition for Local Public Health which is finally before the Legislature dealing with reform of a fragmented … local health structure… taking on a reform of local public health structure … has taken almost 10 years of steady development to arrive now at active dialog with the state legislature. Without PHLI, I would never have conceptualized developing a state-wide local public health coalition comprising 5 major public health associations to achieve a reorganization of the antiquated Massachusetts local health department structure.*

Domain 3. Public Health Leadership Network Development and Network Actions

When asked to "explain in some detail one of the most important influences that PHLI has had on your leadership," over 80 scholars (24% of the respondents who answered this question) cited gaining improved and valuable network connections.

The most commonly cited benefits of these connections included enhanced overall understanding of public health leadership's roles and goals; long-term professional knowledge-sharing; social support for taking action – such as ideas, encouragement, and good examples set by others; and being introduced to opportunities for formal collaborative work, such as with NACCHO or a State Public Health Association. In addition, many described how these collaborations had led to specific improvements in organizations, programs, policies, and "systems" at organizational, community, and state-levels.

Forty-five percent had sought "wise counsel" from another PHLI graduate in the past two years, while 55% had collaborated with other PHLI graduates on projects or activities. Formal network activities that emerged from PHLI included the PHLS, the NLN, and State and Regional PHLI's. These comments were typical about the value of network development:

> *Being part of a national cadre of very outstanding leaders, developing good relationships within that network, had a significant impact on me and my work. It <u>continues to affect how I think, what I ask about and how I approach many challenging situations</u>.*

> *Through PHLI, I met other public health leaders across the country, and have maintained <u>friendships</u> with them since 1997. This <u>network of accomplished leaders has been an invaluable source of advice, best practices, referrals, and support</u>. I have held leadership positions at the local (health officer) and state (deputy health secretary) level for almost 12 years, and have found that a leadership network has been essential in my career.*

Domain 4. Public Health Systems and Infrastructure Development

We wanted to know if PHLI had wide influences on programs, organizations, relationships, and policies. We "operationalized" these concepts by asking the question in this way:

- Can you think of an *organizational change* that PHLI graduates influenced directly or indirectly? (e.g. revised mission, process, positions, expansion, reorganization, funding, or other)

- Can you think of a *program change* that PHLI graduates influenced directly or indirectly? (e.g. new, expanded, improved, better funded program)

- Can you think of a *systems change* that PHLI graduates influenced directly or indirectly? (e.g. a partnership, collaboration, new cross-organizational system or method for improving practice)

- Can you think of a *policy (law) change* that PHLI graduates influenced directly or indirectly?

For each question, the response options were "Yes", "No," and "Not sure." The results were as follows:

- 40% reported having observed a policy (law) change that PHLI graduates influenced directly or indirectly
- 60% reported having observed a program change that PHLI graduates influenced directly or indirectly
- 66% reported having observed an organizational change that PHLI graduates influenced directly or indirectly
- 67% reported having observed a systems change that PHLI graduates influenced directly or indirectly

We asked graduates to pick one such change and "(a) describe in some detail the change that was made, (b) explain how *PHLI* contributed to it, and (c) tell us why you view the change as important." In response, we received nearly 300 responses, many of them extensive paragraphs, with these general themes:

- 96 described improved collaborations, partnerships, coalitions, and relationships at the national (n=25), state (n=42), or local (n=26) levels.
- 76 described developing or implementing specific methods and tools for improving organizational and system performance, such as Essential Services, Performance Standards, accreditation systems for public health agencies, the National Code of Ethics, MAPP, and APEX*PH*. Others described substantial restructuring and improvements in local health services on a statewide basis, and other more specific state and local efforts in such domains as immunization and Medicaid fraud prevention.
- 31 described new policies passed at the national (n=4), state (n=23), and local levels (n=4) in domains such as preparedness, tobacco control, injury control, public health systems funding, and health insurance for preventive care.
- 94 described organizational changes including reorganizations (n=26), developing and adopting new approaches to planning for organizational or community public health improvement (n=15), adopting stakeholder and community engagement as a fundamental way of leading an agency (n=10), new (n=8), installation of performance management and improvement tools (n=7), quality improvements (n=6), and other diverse improvements.

- 68 described improved or new programs at national (n=14), state (n=39) and local/organizational levels (n=15) including workforce and leadership development, HIV testing, worksite wellness, dental public health and other diverse areas

Many scholars described specific changes they *personally* had initiated, or which their team had initiated through the *applied team project* component of the program.

A large number of others explained that a *group* or "*critical mass*" of PHLI graduates had accumulated over time within a state or federal agency, jurisdiction, or association (such as NACCHO) and collaborated to shape a new initiative.

Very frequently, graduates collaborated *with one another* to lead *others* through a collaborative process which led to infrastructure and systems improvements – such as leading a community public health system through a MAPP process, or leading an organization through a participatory strategic planning process that engaged a wider group of stakeholders than had previously been included.

A general historical pattern emerged from the data: a group of "thought leaders" met at PHLI and worked together to reconceptualize how public health systems should be structured and should function, and also how public health leaders should work to improve them. This highly influential group of graduates worked with others in senior positions nationally, and through associations such as NACCHO, ASTHO, PHLS, and NALBOH, to devise and disseminate new tools to help state and local governments define and improve public health infrastructure and systems. These tools included but were not limited to the Essential Services, Performance Standards, agency accreditation systems, APEX*PH* and MAPP, the Code of Ethics, and state and regional public health leadership development institutes.

Many PHLI graduates working at national, state, and local levels followed the lead of the early thought leaders by further refining these tools and ideas, and leading national, state, and local implementation of them.

These quotations were typical of many we received describing these developments:

> *[A] reconceptualization of the public health system following [the 1988] IOM Future of Public Health report. Early graduates and subsequent graduates have been the "thought leaders" advancing the reconceptualization. [This is important because it] has helped a whole new generation of public health officials rethink their work.*

> *Relating to 'systems' change, several key PHLI graduates were directly responsible for the exploration of a new national accreditation program for state and local public health agencies. This was effective and visionary leadership at its best. PHLI contributed in two ways. First, by developing the sense of shared leadership among top public health professionals as the 'standard' for how we*

would achieve advances in public health practice. Second, and importantly, PHLI brought public health leaders together to share experiences, become true colleagues, and create a common ideal for WHAT public health could become. I do not believe we would have pushed public health in the direction of creating a national accreditation system to assess and improve public health agencies across the Nation without the efforts and vision of PHLI graduates.

[PHLI influenced] the growth of local health departments in Nebraska in 2001. Prior to a local-statewide initiative, there were 16 local health departments covering 22 counties in the state. After the intervention, there were 32 health departments covering the ENTIRE state (all 94 counties). Several PHLI alums were involved, along with public health leaders that had participated in the state-level PLHI. These folks served as change-agents and were leaders that help guide and got the process passed. This change was HUGE in that an entire state went from part-time to fulltime coverage of public health services. Health status change-measures are now in place to evaluate and affirm the positive impact that local public coverage DOES make.

Domain 5. PHLI and the Future Direction of Public Health Leadership Development in the United States

Graduates and key informants made these observations and recommendations:

- Individual leader development and network development are important synergistic efforts that have helped to create a common public health framework and a fertile ground for diffusion of innovation
- Offer a continuum of "cutting edge" or forward-looking development opportunities including a national institute as well as continuing education and informal development activities to build a culture of lifelong learning and to sustain vibrant networks
- Consider how to support a more integrated and coordinated system of leadership development at the national and state levels
- Consider strategies to strengthen networks beyond the current methods, including enhanced connections to support succession planning and to facilitate opportunities to work on issues of national importance
- Build in an on-going evaluation system, focusing on both process and outcome measures
- Adequate and on-going funding is needed in order to support innovative programming and to enhance the existing leadership development foundation

Discussion

Leader Development and Network Development: Warp and Woof

In PHLI, leader and network development were simultaneous, mutually supportive, and parts of one another. We might say that they were "warp and woof", essential parts of the same woven cloth, or a virtuous cycle. Either one without the other would have been less effective.

All of the personal gains that leaders made in PHLI helped them become interested, knowledgeable, skilled, and confident network members. Likewise, being part of a network of trusted colleagues at the vanguard of public health leadership promoted confidence and courage, inspired graduates to imitate their peers and network colleagues, and taught them much more than they could learn in a classroom setting.

This study's observations of the complementary but distinct roles of "leader development" and "leadership network development" reflect wider discussions in the leadership literature. For example, some writers recently have used "leader development" to refer to initiatives designed primarily to develop individual leaders' capabilities, and reserve "leadership development" for efforts to develop networks of leaders who can work together (Day, 2003). That conception of "leadership development" is becoming more prominent as the concepts of "collaborative" or "shared" leadership have gained favor for use in complex multi-party settings (Chrislip and Larson, 1994).

This understanding of leader and network development as warp and woof also fits very closely with models of collective expertise being discussed in scientific literature about networks (Cross, 2004), competence, expertise, professional development and communities of practice (Wenger, 2002) and professional performance. "The expertise needed in the knowledge society cannot be understood by referring only to a sum of individual cognitive competencies, but also to joint or shared competence manifest in the dynamic functioning of communities and networks of experts and professionals as well as supporting tools and instruments" (Hakkarainen et al., 2004, p. 8).

Visions for the Future Direction of Public Health Leadership Development in the United States

The data and recommendations from graduates and key informants summarized above endorse the program's historic emphases on both leader and network development, and offer ways to strengthen both. Future versions of PHLI should integrate "leader development" and "leadership network development" tightly with one another and with applied leadership work on issues of importance to agencies and systems. Such applied work can be quite valuable for both leadership learning and network development during the program itself. In addition, the long-term collaborations that emerge from PHLI can and should be nurtured. This study found that they can have significant impacts.

I. Introduction

The National Public Health Leadership Institute is a leadership development program in the United States sponsored by the U.S. Centers for Disease Control and Prevention (CDC). The Institute's mission is to strengthen the leadership competencies of senior public health leaders and to build a network of senior leaders who can work together and share knowledge on how to address public health challenges. The CDC founded PHLI in 1990 and remains its sponsor.

For its first nine years, PHLI was offered in California and annually enrolled 50-60 individual leaders ("scholars"). In 2000, the CDC selected a new partnership to offer PHLI, headed by the North Carolina Institute for Public Health at the University of North Carolina at Chapel Hill (UNC) School of Public Health. This group offered the program through 2006.

In 2006-2007, the CDC elected to sponsor an evaluation of the program's first fifteen years of operation. This report presents the results of that evaluation, which examined PHLI's influence on the following major domains:

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In addition, the evaluation examined graduates' and stakeholders' perspectives on:

> Domain 5. PHLI and the Future Direction of Public Health Leadership Development in the United States

II. The National Public Health Leadership Institute: History and Description

As noted, PHLI is a leadership development program sponsored by the Centers for Disease Control and Prevention (CDC). Broadly, PHLI's mission has been to strengthen the leadership competencies of senior public health leaders and to build a network of senior leaders who can work together and share knowledge on how to address public health challenges.

PHLI's primary target audiences have included public health directors and their deputies from state- and local-level agencies, and leaders in key federal agencies and national public health professional associations. To enrich learning, PHLI also has enrolled a few international leaders in most cohorts.

The Genesis of the Program

PHLI may be traced to several events in the late 1980's and early 1990's. In 1988, the Institute of Medicine (IOM) issued its landmark report, *The Future of Public Health*. This report continues to be quoted in statements explaining PHLI's origin, and has provided much of the formal basis for subsequent CDC initiatives in leadership and management development. Since it has been so foundational, we quote this report extensively here (IOM, 1988):

> *Management of a public health agency is a demanding, high-visibility assignment requiring, in addition to technical and political acumen, the ability to motivate and lead personnel, to plan and allocate agency resources, and to sense and deal with changes in the agency's environment and to relate the agency to the larger community. Progress in public health in the United States has been greatly advanced throughout its history by outstanding individuals who fortuitously combined all these qualities. Today, the need for leaders is too great to leave their emergence to chance... (p. 6)*

> *Greater emphasis in public health curricula should be placed on management and leadership skills, such as the ability to communicate important agency values to employees and enlist their commitment; to sense and deal with important changes in the environment; to plan, mobilize, and use resources effectively; and related to the operation of the agency in its larger community role. (pp. 14-15)*

> *... Although many public health managers display these capabilities, the emphasis in the field on technical competence and professionalism sometimes leads to a neglect of management as a skill in its own right. Management is often assumed to be purely a matter of common sense or innate ability rather than a body of knowledge that can be acquired through training and experience. (p. 155)*

In March 1990, Dr. Bill Roper became CDC Director. Roper had extensive experience in public health practice and declared one of CDC's three top priorities to be "strengthening the public health infrastructure." Building on the IOM report, CDC's Public Health Practice Program Office proposed the creation of a program to enhance leadership capacity nationally. In April, 1990, Dr. Roper approved annual funding of $500,000 to create a National Public Health Leadership Institute.

CDC convened leaders representing the major public health organizations to guide the creation of a request for proposals, which was issued in 1990. Eligibility was restricted to accredited U.S. schools of public health. The selected proposal was submitted by the Western Consortium for Public Health, a non-profit consortium which included the

schools of public health at the University of California at Berkeley, the University of California at Los Angeles, and San Diego State University. The Western Consortium designed and developed PHLI in its initial form. The Institute was offered in California under the continuous management of the Center for Health Leadership and Practice, through the Western Consortium, and later through UCLA, from1991- 2000. Carol Woltring, Director of the Center for Health Leadership and Practice, led the program during those years. The Center for Health Leadership and Practice is part of the larger non-profit Public Health Institute located in Oakland, headed by Joe Hafey.

The California Years

The California PHLI program, which was offered for nine years, included one year of learning activities, beginning and ending at the annual American Public Health Association meeting. Its stated mission was "to strengthen America's public health system by enhancing the leadership capacities of senior public health officials to address the challenges facing public health" (Woltring et al., 2003, p. 104). Its goals were (Woltring et al., 2003, p. 104):

- To develop scholars' abilities to create and implement a shared vision for their organizations and communities;
- To develop scholars' ability to mobilize resources and the organizational and community capacity necessary to address public health challenges and achieve the national health objectives;
- To develop a national network of leaders that fosters life-long learning and shapes the future of public health.

Other stated objectives included (Woltring et al., 2003, p. 105):

- To provide scholars with knowledge, skills, and experiences that enhance their commitment and ability to provide public health leadership
- To support scholars in exercising leadership within their own agency or jurisdiction, within professional organizations and schools of public health, and within other contexts
- To enhance scholars' skills and abilities to develop collaborations that contribute to the development of healthy communities.

Leaders applied for the program as individuals and participated in the following activities (Figure 1):

- A one day Orientation Workshop held during the American Public Health Association (APHA) Annual Meeting each Fall
- A one-week April retreat held at the Chaminade Conference Center in Santa Cruz, California, consisting of presentations by major thought leaders in public health and leadership, and time together to enrich relationships and networks
- Peer consultation, networking activities, and learning teams
- Action learning projects completed by individual scholars or teams of scholars

- A series of conference calls during the year on leadership topics including web-based chat rooms.
- Readings including books and articles
- A graduation event held each year at the APHA Annual Meeting.

Woltring et al. (2003, p. 105) note that in the Institute's latter years, its curriculum focused on "personal growth for leadership excellence; leading organizational change; and community building and collaborative leadership." Its additional focus on network building expanded significantly with the establishment of the Public Health Leadership Society, which was staffed by PHLI through 2000.

This California PHLI team set the foundation for leadership development in public health with a year-long program design that included: leadership assessment tools, personal leadership plans, curriculum based on leadership theory and applied public health leadership tools, distance learning methods, action learning projects, and national network development. As we note below, this model was the basis for many of the state and regional public health leadership institutes that emerged with the support and input of PHLI alumni.

During the first nine years, emphasis was on enrolling senior leaders from local, state and federal levels of public health as well as public health academia, health care organizations and national health organizations. Many of these early senior leaders were agency and department directors. From 1991-2000, 502 senior leaders from 48 states participated.

The Chaminade Conference Center in Santa Cruz, California was the site of PHLI's first nine years. Many graduates greatly valued the leadership education and network development that occurred here during that time.

Two published evaluations describe the California program and its results. In a six-month follow-up evaluation of the first cohort, survey respondents reported that PHLI led to personal, professional, and organizational changes (Scutchfield et al., 1993). Personal changes included increased knowledge, skills, confidence, and motivation to lead. PHLI also helped change the way scholars analyzed problems and increased their abilities to

develop a vision and use networks to reach objectives. Outcomes included reorganization of departments, improved planning, and enhanced learning cultures in organizations.

In an evaluation after eight years of operation (Woltring et al., 2003), graduates (N = 438) reported many leadership improvements. Selected findings include: overall improvement in their view of their role as a leader with new skills (82% reported improvement); improvements in using new approaches to meet public health challenges (77%); improvements in developing coalitions and collaborations (68%); improvements in their organization's performance in accomplishing its core functions (67%); improvements in partnering to enhance community health (67%), developing the capacity of community-based organizations to partner (55%) and accomplish their missions (51%); improvements in communicating effectively with the media and external stakeholders (66%); and increased activity in teaching and mentoring others in the field of public health (65%). Eighty-two percent also reported that their current professional networks had been enhanced, which had led to moderate or great impacts on their personal growth and careers. Other data were also reported.

The National Public Health Leadership Institute's First Class (1991)

Figure 1. Program Model for the California-based PHLI Program (1991-1999)

Inputs from Scholars	**Skills Training Areas**	**Intermediate Outcomes**	**Long-term Outcomes**
Senior officials from: • State Public Health Departments • Local Public Health Departments • Centers for Disease Control and Prevention • Health Resources and Services Administration • Public Health Academia • National Health Organizations • Health Care Organizations	• Personal growth • Leading organizational change • Community building and collaborative leadership • Leadership in training others • Communications **Year-long learning activities** • Readings • Personal leadership assessment • Teleconferences • Electronic seminars • On-site retreat • Peer consultation • Networking • Applied leadership initiative	Enhanced personal leadership skills and expansion of personal and professional networks	1. Improved public health leadership for: • Organizational change • Community building and collaborative leadership • Training others • Field of public health 2. National public health leaders network development (Public Health Leadership Society)

The North Carolina Years

In 2000, the CDC selected a new partnership to offer PHLI: the University of North Carolina at Chapel Hill (UNC) School for Public Health, the UNC Kenan-Flagler Business School, and the nonprofit Center for Creative Leadership (CCL), headquartered in Greensboro, NC. This partnership offered six cohorts of the program through 2006. For simplicity, we will refer to this partnership as the "UNC group" or "UNC."

The UNC group continued nearly all of the California program's goals and methods, but made some changes in focus, emphasis, and methods. Similar to the California program, UNC's stated mission was:

- To strengthen leaders' understanding and skills, with a focus on collaborating and partnering with others

- To foster long-term collaboration and networks among scholars and other public health system leaders

More specific objectives stated that as a result of the program, scholars would:

1. Have an increased self-awareness: Be more aware of their particular leadership style and their strengths and areas for improvement in leadership.
2. Possess increased knowledge, commitment, skill, and improved leadership practices, including:

   a. Forming and using interdisciplinary and/or interorganizational teams of leaders to address health challenges, rather than trying to address the challenges on their own.
   b. Contributing effectively on teams of leaders working for improvements.
   c. Effectively leading teams of staff to set and achieve goals.
   d. Fostering organizational change using systems thinking skills and methods.
   e. Building relationships with community partners to achieve common goals.
   f. Negotiating effectively with other leaders to achieve win-win outcomes.
   g. Communicating effectively with the public about health issues.
   h. Communicating effectively with policy-makers, legislators, or local politicians to achieve goals.

3. Pursue increased self-directed learning on leadership: Be more aware of and committed to self-directed learning on leadership, such as through personal development planning, using books and other resources, asking for ideas and feedback from others facing similar challenges, and seeking out "developmental assignments" for growth.
4. Have increased their effectiveness and impact in dealing with a particular team challenge: As a result of the Team Leadership Projects, the scholars will have increased their effectiveness in addressing their particular challenge, and begun to have an impact on some of the forces related to the challenge.
5. Have increased their "network" of leaders in similar positions with whom they can share knowledge and work on challenges.

UNC initially asked scholars to apply and enroll in teams from states, cities, regions, national associations, or federal agencies, rather than as individuals as in the California program. These teams were asked to engage with a public health issue or opportunity in their jurisdiction or purview through a major "action learning" project. The team structure was intended to help the scholars learn to value and practice "collaborative leadership" and to help the team make a lasting impact on their issue (Chrislip & Larson, 1994; Marquardt, 1999).

For example, in a team from Cleveland, the health directors for Cleveland City and neighboring Cuyahoga County joined forces with an epidemiologist and a center director at Case Western Reserve University Medical School to plan a health institute to serve Cleveland. In another case, an academic-practice coordinator at the University of Pittsburgh SPH joined a team from the Pennsylvania Department of Health to plan and implement a preparedness leadership development program.

After three cohorts, UNC's market research showed that some senior leaders preferred to enroll as individuals. As a result, UNC began accepting both individual and team applicants. Solo scholars and teams both completed action-learning projects. These projects had regular and rigorous reporting requirements, and each solo scholar or team had a project "coach" with extensive experience who encouraged reflection and provided resources.

With over 100 applicants annually, priority was again given to applicants who were senior leaders in state and metropolitan health departments, especially health directors and their direct reports, along with senior federal leaders. Scholar teams often included a leader from a non-governmental partner, such as a health system or university. Most teams were from a state or metropolitan area or a federal agency such as CDC, and addressed a regional or organizational issue. Functional teams (such as state laboratory directors or public health dental leaders from various organizations) also enrolled and worked on issues in those disciplines.

The Paul J. Rizzo Conference Center in Chapel Hill, North Carolina was the site of the major PHLI retreats from 2001-2006.

The Center is affiliated with the Kenan-Flagler Business School, University of North Carolina at Chapel Hill, which was a partner during those years.

The UNC program had a 5-phase design (Figure 2) that incorporated the action learning project, two on-site meetings with leadership seminars with expert presenters, assessment tools and personalized coaching, textbooks and readings, distance learning conference calls, and a graduation meeting.

In Phase One, the two-day on-site "launch," scholars learned about leading teams, refined project ideas, and analyzed their approach to change and interaction via leadership style assessment tools.

Phase Two, in the workplace, involved project fieldwork plus conference calls, reading key texts, and completing individual and multi-rater leadership assessments. For the multi-rater feedback portion of the program, the UNC group chose the Benchmarks instrument widely used by the Center for Creative Leadership (CCL) for developmental feedback, and used trained professional coaches certified by the CCL to help the scholars "digest" the feedback and form personal development plans at the on-site program (Phase Three). This multi-rater feedback and the personalized coaching feature remained very important to the program and the learners throughout the six UNC cohorts.

Phase Three, the weeklong residence or "on-site" program, included team project work plus seminars and simulations in leadership, teamwork, systems thinking, change, negotiation, and communication. CCL-certified coaches provided each scholar with in-depth coaching based on multi-rater and leadership style assessments, and scholars formed a personal development plan. The residence program also enabled scholars to get to know one another through informal interactions and learning activities, with the goal of strengthening and widening their professional networks.

In Phase Four, again in the workplace, scholars continued project work, attended conference calls, and received optional personal coaching. In Phase Five, the final on-site program, scholars presented project results and lessons learned, graduated, and were encouraged to join the alumni group, the Public Health Leadership Society. This was normally held just prior to the annual APHA meeting.

The UNC team has published two evaluations. In 2005, Umble et al. presented results showing that PHLI increases scholars' understanding and practice of collaborative leadership, and builds knowledge-sharing and problem-solving networks. These practices and networks can lead to strengthened inter-organizational relationships, coalitions, services, programs, and policies. Intensive teamwork and project-based learning were keys to the program's impact.

Miller, Umble, Dinkin, and Frederick (2007) reported on how the program's learning methods work singly and together to produce outcomes for learners and their organizations. Six months after graduation, graduates reported reactions to PHLI by using an online survey. The survey consisted of quantitative questions about key leadership behaviors taught in the program and the usefulness of PHLI's main learning methods, as

well as open-ended questions about changes in understanding, skills, practices, and outcomes.

Figure 2. Five Phases of the North Carolina-based PHLI Program (2000-2006)

Phase One: Launch and Orientation (November)	Phase Two: Scholar Retreat Preparation	Phase Three: Scholar Teams in Residence (May)	Phase Four: Retreat Learning Continuation	Phase Five: Learning Demonstration and Graduation (November)
Envision the public health future	Distance learning telephone conference calls on significant leadership topics with national faculty	Transformational and adaptive leadership	Distance learning follow-up telephone conference calls on retreat topics with retreat faculty	Present final leadership project report before peers and faculty
Solve complex interorganizational and strategic problems via simulation	Complete 360 degree and personal assessment tools	Systems thinking		Team awards and diploma presentations
Develop and refine leadership projects		Negotiation of relationships	Individual leadership development planning	
Analyze one's approach to change and interaction via assessment tools	Leadership project work and post-launch and mid-term reports	Effective communication in crisis	Leadership project work and post-retreat report	
Individual leadership development planning		Change management		
		Team building	Personalized follow-up coaching (optional)	
		Leadership project work		
		Personalized coaching and individual leadership development planning based on 360 assessments		

The study found that PHLI's learning methods were interrelated and led to such outcomes as changed leadership understanding, knowledge and skill development, increased confidence, increased self-awareness, leadership practice changes, and organizational results. Many of the self-reported practice changes were statistically significant. The learning project was strongly associated with development of collaborations, whereas assessment tools and coaching increased self-awareness. Skill-building seminars led to knowledge and skill development. Textbooks or readings and distance-learning conference calls were not often cited by graduates as having been influential by themselves. However, graduates often integrated information and skills from multiple methods to learn and gain skills, and the action learning project proved to be an important integrative learning experience for most scholars.

Enrollment Statistics

The California-based version of PHLI graduated nine cohorts which included 502 leaders. The UNC-based PHLI graduated six cohorts totaling 304 scholars. The majority worked for local, state, or federal agencies, while many others worked for universities and other organizations (Table 1). A higher percentage of the California graduates worked for local government, while a higher portion of the UNC graduates worked for state government. Combined, approximately 75% of all scholars worked for government agencies – 35% local, 28% state, and 13% federal. About 6% worked for universities, while others commonly worked for health care organizations, non-profits, and professional associations. To increase perspective and diversity, UNC enrolled one international team nearly every year, and California also welcomed several international scholars.

The average age for the UNC cohorts was 47, which was probably very close to the California number, but that is not available.

Table 1: PHLI Graduates by Sector of Employment

Sector of Employment	All PHLI Graduates			Survey Respondents for 2007 Evaluation
	California-based PHLI[a] N = 502	UNC-based PHLI N = 304	Total-California and UNC-based PHLI N = 806	
City/county/district local government	200(40%)	86(28%)	286(35%)	39%
State government	88(18%)	139(46%)	227(28%)	33%
Federal government	77(15%)	26(9%)	103(13%)	11%
University/Academia	38(8%)	13(4%)	51(6%)	7%
Other[b]	99(20%)	40(13%)	139(17%)	10%

[a]The numbers for the California years are close, but not exact, because several addresses in the original database had been updated with job changes.

[b]For the California and UNC cohorts combined, the "Other" group in Table 1 was divided between healthcare, public health and professional associations (e.g. APHA, Association of Public Health Laboratories), and international scholars (approximately 22-30 in each of those groups), other non-profits (e.g. foundations) (approximately 15-20), and others (e.g. corporations, private consultants). More precisely, the "other" for California was made up of approximately 16 healthcare, 15 public health or professional association, 10 other non-profit, 7 international, and approximately 50 others. For the UNC cohorts, the "other" was made up of 7 healthcare, 11 public health or professional association (e.g. APHA, NALBOH), 3 other non-profit, 15 international, and 4 other.

Program Conceptual Models

The evaluation was rooted in the conceptual models for PHLI's effects at the individual and network levels (Figures 3 and 4). At the individual level (Figure 3), the model shows that PHLI intends to help leaders develop expanded perspectives on public health, and a deeper understanding of current leadership concepts that are relevant to public health. It also seeks to help leaders develop specific skills, and a broader and deeper network. The program theorizes that these gains will increase scholars' confidence in taking on leadership roles, and sense of responsibility and aspiration to use what they learn to improve public health. The program also theorizes that leaders with improved confidence, skills, and leadership aspirations will be more likely to remain in public health and take on expanded leadership roles in their organizations and jurisdictions. Furthermore, it is hoped that the widened and denser national networks will improve participation in national and regional networks, collaborations, and professional service organizations. Finally, it is theorized that these outcomes will lead to improved public health organizations, services, and policies, and ultimately, improve health outcomes.

Figure 4 shows the program's theory of action at the network level. This model shows again that the program intends to cultivate leaders who understand current leadership concepts. As a result, it is expected that they will increase their support for leadership development as a way to improve the public health infrastructure, including support for state and regional institutes. As noted above, the program has also theorized that scholars will have stronger and wider network connections and increase their subsequent participation in professional organizations and collaborative efforts to improve the public health infrastructure. With a wider and better trained volunteer base, these efforts should be able to more effectively improve public health and support better health outcomes.

Figure 3: PHLI 1990-2006 Conceptual Model: Individual Level Outcomes

Expanded perspectives and understanding of public health and current concepts in leadership
Examples:
- IOM reports, systems view of public health
- Senge: Fifth Discipline: learning organizations & systems thinking
- Team learning, collaborative leadership
- Heifetz: "adaptive leadership"
- Current national models for organizational and community leadership (e.g. APEX*PH*, MAP)
- Leadership development

Increased confidence in taking on public health leadership roles

Sense of responsibility and aspiration to use new perspectives and models to improve public health

Participation in the PHLI program

Improved specific leadership skills
Examples:
- Self-awareness and adaptive self-regulation to fit leadership situations
- Negotiation
- Media/Communication
- Systems thinking
- Developing common vision
- Team leadership and teamwork
- Collaboration

Remaining in public health leadership field

Taking challenging positions

Expanded roles and improved leadership performance in:
- Organization
- Community, region
- State
- Nation

Improved public health organizations, services, laws

Ultimately, improved health outcomes

Broader and deeper professional network
- Sense of belonging and commitment to the field of public health leadership
- Trusting relationships with other public health leaders - regional and national

Increased participation in:
- National, regional knowledge-sharing networks
- National, regional collaborations
- Professional service organizations

- Increased awareness of national priorities and models in public health
- Increased professional knowledge-sharing

Figure 4: PHLI 1990-2006 Conceptual Model: Network Level Outcomes

Expanded cadre of leaders with common perspectives on public health and understanding of leadership.
Examples:
- IOM reports, systems view of public health
- Senge: Fifth Discipline: learning organizations & systems thinking
- Team learning, collaborative leadership
- Heifetz: "adaptive leadership"
- Current national models for organizational and community leadership (e.g. APEX*PH*, MAP)
- Leadership development

Commitment to and support for developing other leaders

Increased number of state and regional leadership development institutes

Increased cadre of leaders available for local, state, and national positions

PHLI Program

Leaders who participate in PHLI have stronger and wider professional network connections with:
- Other leaders who attended or staffed PHLI
- Other leaders with whom they worked on projects during PHLI

Stronger, better supported local, state, and national initiatives to improve public health infrastructure
- Management initiatives
- Workforce development programs
- Policy initiatives
- Organizational development initiatives such as accreditation, performance management

Improved public health organizations, services, laws

Ultimately, improved health outcomes

Leaders who participate in PHLI increase their participation in:
- National, regional knowledge-sharing networks
- National, regional collaborations working for public health improvements
- Professional organizations such as state and national public health associations, Public Health Leadership Society

Related Advances in Public Health Leadership Development

We next describe three advances in public health leadership development whose origins are closely tied to the National PHLI. More details on these developments and their relationships to the National PHLI are presented later in this report. For now, we describe these movements to provide the reader with necessary background for understanding and contextualizing PHLI. They include the Public Health Leadership Society, the State and Regional Public Health Leadership Institutes, and National Public Health Leadership Development Network.

The Public Health Leadership Society

In 1993, at the request and with the leadership of alumni, the program created an alumni group, called the Public Health Leadership Society (PHLS) (www.phls.org), to foster continued leadership development, improve connections among PHLI alumni and other leaders, and "to advance the cause of public health." The Society has sponsored an annual educational meeting at APHA, most often using special speakers or panel discussions. The Society has also sponsored distance learning activities, such as an annual series of telephone conference calls, reading groups, and annual receptions at national meetings of related organizations, such as the National Association of City and County Health Officials. It also gives members a subscription to a journal, <u>Leadership in Public Health</u>, edited by one of its members, Louis Rowitz, Ph.D., of the University of Illinois at Chicago.

In addition, the Society has pursued special initiatives to benefit public health. One of the most important was the development of a series of documents called "Principles of the Ethical Practice of Public Health" and "Skills for Ethical Practice of Public Health." With special funding by CDC and led by the PHLI class of 2000, the Center for Health Leadership and Practice, and the PHLS' own ethics work group, the code was developed, piloted, and officially adopted by the American Public Health Association in 2002. It has also been adopted, endorsed, or acknowledged by six other national public health organizations. It was disseminated on-line (http://www.phls.org/home/section/3-26/), and through journal articles (Thomas et al., 2002; Thomas, 2003).

PHLS has also issued white papers on topics such as enumerating the public health workforce, workforce development, and leadership, including "Public Health Leadership Development: Recommendations for a Sustainable National Network" (http://www.phls.org/home/section/3/).

Later, the Society opened up its membership to alumni of the state and regional public health leadership development institutes, many of which PHLI graduates helped to spawn. PHLS had 161 members in August 2007.

PHLS was originally organized by Carol Woltring and the PHLI staff at the Center for Health Leadership and Practice, but in 2000 it was moved to the Louisiana Public Health Institute, where it has been directed by Joe Kimbrell.

State and Regional Public Health Leadership Development Institutes

As we have seen, the National PHLI was conceptualized, funded, and launched in 1990-1991. Simultaneously, but independently from one another and the CDC initiative, faculty leaders at two schools of public health were planning similar programs for state audiences: Kate Wright at Saint Louis University and Lou Rowitz at the University of Illinois at Chicago.

Saint Louis University received initial funding in 1990 from the Association of Teachers of Preventive Medicine to develop and launch a Public Health Leadership Institute and Certificate Program. In winter of 1991-92, the state of Missouri fully funded the Saint Louis University program, and the program launched its first cycle in 1992. Meanwhile, in Illinois, Rowitz launched a state program.

Many other programs were soon to follow at state and regional levels, and they continue to be developed and sustained. As of August 2007, thirteen programs had been organized at the state level, and eleven had been organized at the regional level, serving 48 states and Puerto Rico.

Most of the "state and regional programs" developed after that time were founded by graduates of the National PHLI and/or by persons aware of the national model and intent on replicating aspects of it. In some cases, several PHLI graduates from a state or region recognized the need for something like PHLI in their states or regions, and combined their efforts to start a program. This occurred many times during the California years of PHLI. In other later cases, teams enrolled in the North Carolina PHLI program with the purpose of developing a state or regional program as their "team project." Teams from Kansas, Wisconsin, the Great Basin (Utah and Nevada), and Puerto Rico have established or shaped their programs in this manner. In addition, a dental team that graduated in 2005 organized, received funding, and launched the National Oral Health Leadership Institute (http://www.ada.org/prof/resources/pubs/adanews/adanewsarticle.asp?articleid=1998). A team from Pennsylvania created a state PHLI focused on disaster preparedness leadership.

Another team from the Institute of Public Health in Ireland has also developed and institutionalized a program there based on the PHLI model (http://www.publichealth.ie/index.asp?locID=479&docID=-1).

In another important spin-off, CDC developed an internal Leadership and Management Institute, enrolling 35-50 scholars annually. This effort was fostered by several PHLI graduates from CDC as a direct result of their participation in PHLI. Several other programs have been developed for specific disciplines, such as for health educators, environmental health specialists, and, as just noted, public health dentists.

While these programs have all been adapted in curriculum, instructional methods, faculty, and audience to fit their states and budgets, nearly all follow key aspects of the National PHLI design, such as offering programs that last nine to twelve months and use several

residential meetings (Wright, Rowitz, & Merkle, 2001). Most also include individual or team-based action learning projects, readings, peer learning groups, and distance learning. In most cases, the CDC has contributed funding, but the initiatives have also been supported by foundations, state funds, tuition, and other sources of revenue.

According to statistics furnished by the NLN (see the next section) the number of graduates of the state and regional leadership institutes is 4,877 as of August 2007. If one includes the graduates of all of the member programs in the NLN, which includes 6 programs at the national level and 3 internationally, the number of graduates is 6,987.

One further point to make here is that since many of the state and regional programs are direct or indirect offspring of the National PHLI, through PHLI graduates who started their own programs back home, the National PHLI has had a substantial multiplier effect. By this we mean that National PHLI itself has graduated about 800 leaders, but through the multiplier effect of these leaders supporting and initiating state and regional institutes, another nearly *5000 leaders* have been developed. Since many of the other national and international programs with membership in NLN have been influenced or directly spurred by PHLI, the number of graduates of leadership programs nationally that may be traced back to the direct or indirect influence of PHLI is near 7000.

The total number of current scholars and fellows in NLN member programs is currently 956; this means that nearly 1,000 "developed" leaders are added to this total each year.

In sum, through fostering the development of state, regional, and other national and international leadership development programs, the National PHLI has had wide direct and indirect influences on public health leadership development's growth and contours in the United States and beyond.

The National Public Health Leadership Development Network (NLN)

As we have noted, Wright and Rowitz developed state-based programs while CDC was launching the National PHLI. Tom Balderson, the National PHLI project officer at CDC, introduced Wright and Rowitz to one another at an APHA meeting and they began sharing program and curriculum ideas with one another and with other state programs that were developing in the mid-West in the early 1990's.

In response to the demand for advice, in 1992, Wright submitted an application to CDC to create a Leadership Development Network to be housed at St. Louis University. The Network was funded in 1993 and held its first meeting in 1994 with representatives from five mid-Western programs. In 1995 the Network meeting was expanded to include anyone who was planning or interested in developing a program. As Wright explains, "The [initial] Network grant focus was on providing technical assistance for others by helping them develop a conceptual model and the competency sets for their programs."

Soon, the National PHLI invited Wright and other leaders of regional programs to observe the national program, and Woltring, director of the national program, joined the Network. In this way, the previously independent leadership development "strands"

began to weave themselves into a common "rope" or movement that could pull the field forward together. According to Wright, Tom Balderson at CDC actively wove this rope by linking the National staff with the new Network, and by linking state-level leaders interested in starting programs with the National PHLI and with the Network. In this way, developers of incipient state and regional programs got plenty of advice and support from those who had already walked that road.

Wright puts it this way: "The bottom line for me is that 'collaboration' has created progress in this venture. Our CDC friends had the vision, too; they understood what we were asking support for, and fought the fight for us all every step of the way. And, almost as if it were planned, we started graduating the first state and national graduates to form momentum and advocates, and created the Network to provide a forum for those needing help and support."

Wright notes that most of the programs chose a one-year program model and used a combination of retreats, case studies, and action learning, drawing from the literature of the time.

Today, the web site for the National Public Health Leadership Development Network (NLN) (http://www.heartlandcenters.slu.edu/nln/) explains that its purpose to support the growth of national, state, and regional institutes, and to help expand collaboration among institutes, alumni, and federal, professional, and private organizations. The current stated mission of the Network is "to build public health leadership capacity by sustaining a collaborative and vibrant learning community of leadership programs in order to improve health outcomes."

According to NLN materials, as of August 2007, the Network Membership consists of:

       A. Total Number of Full Members: 33
- State Institutes: 13
- Regional Institutes: 11
- National Institutes: 6
- International Institutes: 3

       B. Total Number of Affiliate Members: 35
- Affiliate Organizations: 10
- Affiliate Individuals: 25

We make special note of several statistics in the above list from NLN: 33 leadership institutes are members, and 24 being at the state or regional level, and 6 being at the national level. The latter includes, of course, National PHLI, plus the specialty institutes for health educators, public health dentists, environmental health specialists, and other professions.

The Network has sponsored an annual conference in St. Louis that includes forums for exchange of promising practices in leadership development, evaluation, and funding. The

Network also sponsors work groups that have helped develop leadership competency statements (Woltring et al., 2000), recommended evaluation methods (Mains et al., 2007), shared practices and ideas, and created the annual "Balderson Award" – named in honor of the late Tom Balderson - given for exemplary leadership and service.

Certainly, many factors have come together to foster the development of the many state and regional leadership development programs, and the NLN. PHLI and these other activities have been riding a national "leadership development" wave that has influenced all sectors of society. Nevertheless, CDC's funding of the National PHLI directly swept many public health leaders into this wave, and many of them in turn propagated the concept by developing state, regional, national, and international programs.

III. Evaluation Questions and Methods

The current evaluation sought to examine the linkages and outcomes shown in the PHLI conceptual models (3 and 4). The main domains included these:

> Domain 1. Individual Leader Development
>
> Domain 2. Leader Actions: Career-Related Outcomes and Voluntary Leadership Positions Taken
>
> Domain 3. Public Health Leadership Network Development and Network Actions
>
> Domain 4. Public Health Systems and Infrastructure Development

In addition, the evaluation examined graduates' and stakeholders' perspectives on:

> Domain 5. PHLI and the Future Direction of Public Health Leadership Development in the United States

Background on Methods: Open Systems Theory and Evaluation

This study used a combination of quantitative data (numbers) and qualitative data (explanations, words). The numbers come from closed-ended survey questions and are intended to measure achievement of program objectives and other key constructs that stakeholders want to know about. The qualitative data come from open-ended questions in the survey and interviews. Current program evaluation theory and well-established practice enjoin evaluators to use qualitative methods to help respondents explain the meaning and context of the numbers received in an evaluation. This combination of methods is particularly useful in evaluations in which outcomes vary widely and are not entirely predictable.

In addition, the study sought to understand the "contribution" of PHLI to scholars and networks, and consequently, the "contribution" of those scholars and networks to public

health practice. We use the word "contribution" intentionally, because it usefully implies that PHLI is only one "force", we might say, among thousands in the complex "blooming buzzing" interactions of human actors and physical, social, and economic forces at local, state, federal, and global levels. We were not looking for changes in individual scholars, networks, organizations, programs, and policies that were "solely attributable" to PHLI. Rather, as with all social interventions, we were looking for the "contributions" that PHLI made to individuals, teams, networks, and infrastructure that were in place long before PHLI arrived on the scene, and which themselves have been shaped by innumerable historical and social forces.

In technical terms, this is known as an "open-systems" view of program evaluation, and it is highly recommended for leadership development programs because of the complexity and interconnectedness of the results at individual and broader levels, and because those results are necessarily being simultaneously shaped by many wider forces. The general approach has been described by well-regarded evaluators working on leadership programs in public health (Grove, Kibel, & Haas, 2007).

In spite of the complexities, it is possible to infer with some confidence the "contributions" a program makes with the kind of evidence that this evaluation marshaled (Mohr, 1999; Eckert, 2000). For one thing, we looked for contributions by asking scholars questions about constructs that the program is specifically designed to influence, such as leader development, network development, and field impacts of leader and network activities. In addition, we seek to understand PHLI's contribution by asking scholars explicitly to describe PHLI's contributions to their personal development, looking for descriptions of personal *change* (movement from state of affairs A to state of affairs B), temporal sequences (changes taking place during and after the program), and examining links to specific program objectives and curricular elements and learning methods (such as projects and specific seminars) that lend plausibility to claims of causality. In that light, when we asked about changes in the survey, we made a point of asking scholars to explain the results "in some detail" (to avoid bland and unverifiable generalities) and to "explain how <u>PHLI</u> contributed." Similarly, in the interviews, when scholars described an impact, we asked them for details on just what it was about PHLI that encouraged that impact to emerge. In addition, our confidence in causal claims about PHLI's personal and other results are strengthened because:

- They seem plausible and fit with common sense and research-supported understandings of social life (such as the influence of social networks on human beliefs and behavior)

- This program has a rather intensive "dose" level and uses multiple learning methods, which are known to strengthen results from training and development programs

- Most respondents, whom we believe to be generally trustworthy in any case, gave their names in case we wanted more information or to verify a result they claim

- Scores of survey respondents and interviewees from different levels and points of observation about the last 15 years of public health leadership describe very similar results and causal chains

- The results comport with previous evaluations of this and other similar programs

- The results graduates claim that PHLI contributed to are often otherwise verifiable and known to have occurred, such as the development of the accreditation movement

- One source of evidence agrees with another. For example, when we checked, the current makeup of the NACCHO Board of Directors indeed has several PHLI graduates, which agrees with claims of dozens of graduates that they have volunteered with NACCHO

With that introduction, we describe the methods in greater detail.

Online survey

NCIPH evaluation staff developed the survey with input from PHLI staff, graduates, and stakeholders around the country about what should be measured, and how to ask the questions. Appendix 1 presents the instrument. The questions sought to ascertain whether the program's basic objectives had been achieved, and to focus on key areas that stakeholders were most interested in.

- The survey did not include "demographic questions" other than the kind of organization the scholar worked in when they enrolled, their state when they enrolled, and whether they had taken the California-based or North Carolina version of PHLI.

- Regarding "career patterns", the survey asked scholars to report their current work status, how many years they had worked in various types of organizations after PHLI, three areas on which they had focused their greatest attention, whether PHLI had influenced any promotions or other changes in position and how, and whether PHLI had influenced any changes in voluntary leadership engagement and how, such as in professional associations. We also asked for examples of new jobs taken or voluntary work undertaken.

- Regarding individual "leader development", the survey asked graduates to rate the influence PHLI had on their leadership-related understanding, skills, interest-levels, confidence, courage, sense of belonging to the national cadre of leaders in public health, self-awareness, openness to the ideas of others, networks, and overall leadership.

- The survey also asked scholars to "explain in some detail one of the most important influences that PHLI has had on your leadership."

- Regarding individual "practices", the survey asked graduates to rate how often they had done a series of items, on average, in the five years before they attended PHLI, and after. This is known as the "retrospective pre-test post-test design." For example, we asked scholar to rate how often they performed these practices:

"I actively worked to improve public health on a national level" and "I served on state-level task forces, boards, or working groups related to public health."

The scale was 1= Never, 3=Occasionally, 5=Often, and 7=Very Often.

This method is similar to a traditional pre-test post-test design, except that the pre-test and post-test are done at the same time – the pre-test asks scholars to reflect back to a certain point in time and rate a certain domain at that point in time, and again rate it "today." This method has been much researched (Howard, 1980), and is often used in training evaluations because scholars may not be able to fully rate themselves before a training course if they do not yet understand the concepts that will be taught. Then, too, in a traditional pre-test, many scholars will over-rate their own skill level before the program, and be more realistic afterwards, which leads to underestimates of training effects. In this case, we used this design because we were doing a retrospective evaluation of a program that has been running for 15 years, and we did not have the luxury performing a true pre-test. The downside of using it in this study would be scholars' difficulty in remembering what they were doing several years back but we believed the method had validity, particularly when mixed with qualitative methods to get more details of any changes being reported.

- For each of the practices that we asked about using the retrospective pre-test post-test design, we also asked scholars to "rate how much PHLI contributed to the leadership actions you took when you were in these roles" using a scale of "no contribution", "some contribution", or "great contribution."

- Regarding specific results of PHLI and improved leadership, we asked graduates whether they had observed PHLI graduates influencing programs, organizations, policies, and "systems" – including collaborations and the use of performance improvement interventions for organizations and communities. If they answered yes, we asked them to pick one of the changes, "describe in some detail the change that was made, explain how PHLI contributed to it, and explain why you view the change as important."

- The survey also asked scholars to rank-order their top four from a list of seven possible main purposes of PHLI, or to describe "other" purposes.

We kept open-ended questions to a minimum to reduce respondent burden, but for the few open-ended questions we did ask, we asked graduates for "some detail" about personal and systems changes seen. This strategy was successful, for it drew detailed answers from hundreds of graduates about a few key domains of great interest to the evaluation – personal "leader" development, leadership positions and voluntary roles taken on, and real-world "results" for policies, programs, organizations, and systems.

The survey was conducted using the proprietary on-line survey tool known as Surveymonkey. Scholars were given the option of giving their name, so that if we wanted more clarity on responses they had given, we could contact them. Very many gave their name, but we only contacted a few for clarifications. This means, in technical terms, that the survey was effectively anonymous, unless a given scholar chose to reveal his/her

name, in which case the responses still remained confidential unless we got explicit permission to cite a name.

At the time of this evaluation, 806 scholars from fifteen cohorts of PHLI (an average of 54 scholars per cohort) had graduated from PHLI between 1991 and 2006. To locate these graduates, we used databases kept by the California program, the UNC program, and the alumni group, PHLS. We sent each graduate an email message and a hard copy letter to announce that they would soon receive a request to participate in the on-line survey. Several hundred of these email messages and letters were returned, indicating that the scholars had changed addresses. We used an on-line search engine (Google), telephone, and network contacts to locate a working email address for 80% (n=646) of the 806 graduates. (A "working" email address was classified as an email address for which our email did not "bounce back" with an error message.) We used these addresses to invite them to complete the online survey. We did not use a financial or other incentive to encourage participation due to costs and logistical considerations, but sent up to five requests to non-respondents asking them to participate. The final response rate was 61% (n=393) out of the 646 for whom we could locate a working email address.

Of the 393 respondents to the online survey, 52% had graduated from the California based PHLI, 48% from the North Carolina based PHLI.

Table 1 above, which presented basic statistics on where graduates worked, shows that the survey respondents were very similar to the entire population of all enrolled scholars with respect to where they worked when they enrolled. This helps us feel more confident that our respondents were similar to all graduates, along with the 61% response rate and the success we had in attaining responses from throughout the history of the program.

Interviews

We conducted 35 telephone interviews with graduates and key informants. Two distinct interview protocols were used. Interviews were digitally recorded and lasted from 30 minutes to over an hour; most lasted 45 minutes to one hour. Interviewers also took notes during the interview. Interviewees were informed that their responses would be confidential, unless we asked for and received written permission from them to quote them by name.

Graduate interviews

To get a deeper knowledge of how PHLI influences specific graduates over their life course, we interviewed 17 graduates with a protocol designed to examine how PHLI may have influenced their leadership knowledge, attitudes, skills, practices, leadership positions taken, and involvement in leadership networks and collaborations. We also asked about changes at organizational and systems levels that they could attribute at least partially to PHLI. These interviews lasted between thirty and sixty minutes. The Interview Guide that we used appears in Appendix B. Interviewees were selected

purposefully, rather than randomly, based on whether they graduated from the California or UNC program, on their sectors of employment, gender, and based on their knowledge about the influence of PHLI nationally and their interest in leadership. Of the 17 scholars interviewed, 8 (47%) were graduates of the California PHLI, while 9 (53%) were graduates of the UNC program. Of the 20 graduates that we asked, 18 (90%) agreed to be interviewed.

Key informant Interviews

Evaluation staff also conducted 18 interviews with key informants within the field of public health leadership. While the interviews with graduates focused mainly on personal and career developments, with some questions about wider system changes, the interviews with key informants focused on systems and national level trends and changes that the informants could trace to PHLI, plus recommendations for the future of PHLI, network development, and leadership development. The Interview Guide that we used appears in Appendix C. These key informants were chosen on the basis of having a national or wide perspective on PHLI and its results. As it turned out, 17 of the 18 key informants chosen were graduates of the California version of PHLI, while the other key informant was not a PHLI graduate. Most of the graduates wanted to comment on their personal benefits that emerged from PHLI. Hence, there was some overlap in the data collected from the two sets of interviews. Of the 18 key informants that we asked, all 18 agreed to be interviewed.

Data Analysis
Survey Data Analysis

Quantitative data from the survey were analyzed using SAS (SAS Institute, Cary, NC). When appropriate, differences in means were analyzed by using paired samples t-tests. Qualitative data from the open-ended survey questions regarding influence on leadership were analyzed using content analysis methods (Patton, 1990). We developed a codebook to code each respondent's entry to each question. Two independent coders coded each response, naming the major themes represented in the data. Subsequently, the lead evaluator studied the responses with great depth and care, re-coded most of the responses to fit them into larger themes in the data, and interpreted the responses into the themes found in this report.

Interview Data Analysis

Each interview was transcribed by one of two evaluation staff members. Then, two staff members conducted a content analysis (Patton, 1990) of the key informant and graduate data using across-case matrices derived from within-case summaries (Miles and Huberman, 1994). Separate matrices were created for key informants and graduates according to the three main content areas: program benefits, program concerns, and future leadership training.

The staff members who conducted the bulk of the interviews consulted with each other to develop a general consensus of the themes in the interviews. One staff member then took primary responsibility for analyzing and drafting the section on benefits of leadership development, while the other took primary responsibility for analyzing and drafting ideas for the future of leadership development.

We also condensed some of the interviews into "stories" and obtained permission from interviewees to present them in this report.

The three PHLI Directors meet at a recent PHLI Alumni Retreat in Chapel Hill.

From left, Carol Woltring (1990-2000), Donna Dinkin (2004-2006), and David Steffen (2001-2004).

IV. Results

To make this lengthy results section easier to follow, we have organized the findings with reference to a Model of PHLI Outcomes. The most basic model (Figure 5) shows that PHLI aids personal leadership development and team and network development. Ensuing personal, team, and network actions produce improvements in public health infrastructure.

To display more detail about the outcomes we have observed in the data, we have also developed an Expanded Model of PHLI Outcomes (Figure 6). While these models resemble the linkages that the program hoped for in its conceptual models (Figures 3 and 4 above), we use the Expanded Model of PHLI Outcomes to organize the results seen in the data.

Each section of the results below expands on one of the "boxes" in the Expanded Model of PHLI outcomes.

Figure 5. Basic Model of National PHLI Outcomes
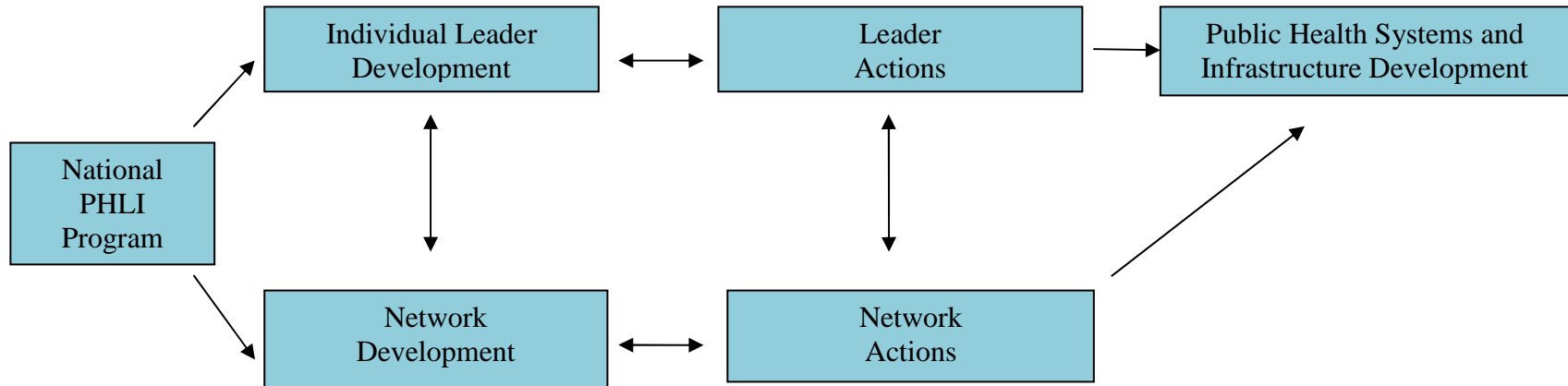
Figure 6. Expanded Model of National PHLI Outcomes

Individual Leader Development	Leader Actions	Public Health Systems and Infrastructure Development
Greater understanding, skills, and valuing of certain approaches in Public Health and Leadership	Career Patterns: Staying Put, Addressing Issues, Taking New Jobs	Program Change and Development
Validation of the Importance of Public Health Leadership	Taking on Voluntary Leadership Roles	Organizational Change and Development
Understanding and Validation: Self as Leader	Everyday Leadership Actions on the Job	Policy Change and Development
Confidence/Courage Motivation/Responsibility	Focused Actions to Achieve Specific Goals	Systems Change and Development
	Developing Others	

National PHLI Program

Network Development	Network Actions
National	National
Organizational, Local, State	Organizational, Local, State

Domain 1: Individual Leader Development

This section deals with PHLI's overall and specific influences on graduates' leadership perspectives and understanding, attitudes, and specific skills.

Summary of Findings

- PHLI's long-term influence on graduates' leadership:
  - 36% of respondents chose "large" while 43% chose "moderate"
  - 18% chose "small" and 2% chose "no influence"

- The majority of respondents reported that PHLI had strengthened these constructs related to understanding and skills to a "moderate" or "large" degree:

  - Understanding useful general principles of leadership (81%)
  - Awareness of best practices and models for public health leadership (68%)
  - Understanding of the breadth of the public health system and their role within it (56%)
  - Openness to the ideas and opinions of others about how to address problems (75%)
  - Skills in leading efforts that require the collaboration of many people or organizations (73%) and other specific leadership practices that are useful in public health (73%)

- PHLI sought to deepen scholars' interest in getting involved with leadership at all levels. The majority reported that PHLI has strengthened their interest in the following areas to a "moderate" or "great" extent:

  - Interest in deepening their involvement with leadership efforts to improve their agency or community (78%)
  - Interest in deepening their involvement with public health leadership efforts at the national level (59%) and at the state level (54%)
  - Their commitment to staying in public health in their work (66%).

- PHLI also sought to deepen scholars' self-awareness, sense of importance and belonging to the national network of public health leaders, and courage and confidence to step forward into leadership roles. The majority reported that PHLI has strengthened these constructs to a "moderate" or "great" extent:

  - Self-awareness as a leader: their strengths, liabilities, and how others view and receive their leadership (82%)

- Sense that as a public health leader, they are important and have a valuable role to play (77%) and belong to the national cadre of leaders in public health (68%)
- Professional network of people they can contact for ideas about how to handle their leadership situations (55%)
- Confidence to take on public health leadership responsibilities (75%)
- Courage to take the initiative and act to improve public health (75%)

Hundreds of survey comments and interview themes reinforced and explained improvements of general understanding of leadership; improved understanding, skill, and valuing of collaborative leadership and systems thinking to address challenges; and other specific skills gained.

Many also emphasized that PHLI connected them to a wide network of leaders with whom they could exchange valuable information. The network helped them feel that they belonged to that national network and were themselves "valid" leaders, improved their self-awareness, and increased their courage and confidence to "step up to the plate" and take on additional leadership responsibilities.

> *PHLI helped to give me the requisite leadership skills, the support group to feel others in my position were making/could make a difference, gave me the confidence to step up to the plate, and impressed upon me the obligation to do so. PHLI was a very limited opportunity and almost all of us in it felt this privilege we had been given should be reciprocated for via active public health leadership in our respective work and personal spheres of influence.*

Question 1.1 How do graduates rate PHLI's long-term, overall influence on their leadership?

By itself, PHLI was only a one-year experience. We wanted to know how participants gauged its overall effect on their leadership in the long run. Was PHLI inconsequential, profoundly life-changing, or somewhere in between?

To begin to examine this, we asked graduates: "Overall, how much long-term influence did PHLI have on your leadership? (Pick one)."

Thirty-six percent responded that "PHLI has had a large long-term influence on my leadership," while 43% chose "moderate" (Figure 7). Combined and rounded to the nearest percentage, 80% responded that PHLI had a "large" or "moderate" long-term influence on their leadership.

About 18% responded that PHLI's influence was small, while 2% responded that PHLI had "no influence."

Figure 7. PHLI's Overall Long-Term Influence on Graduates' Leadership (N=382)
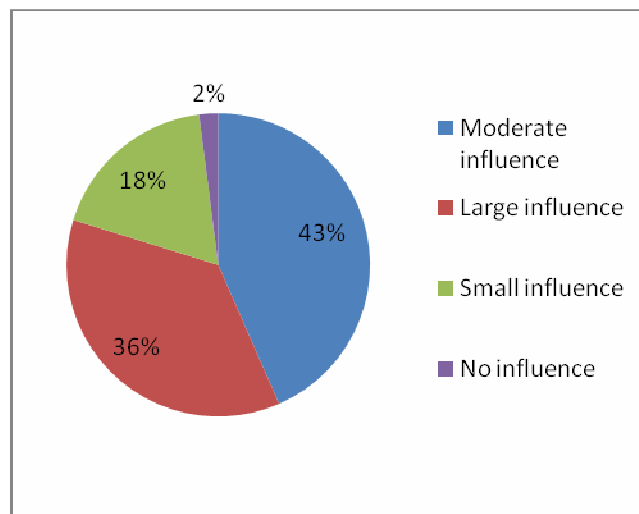
We next asked a number of questions to help us understand in more detail the ways that PHLI influenced participants. First, we asked the questions presented in Tables 2 and 3 to get an overview of a variety of domains that were objectives of the program or which prior evaluations had shown to be important for graduates. These responses provide a sense of the overall perceived contribution of PHLI to participants.

In addition, we asked this open-ended question on the survey: "Explain in some detail one of the most important influences that PHLI has had on your leadership." Over 300 survey respondents answered this question, often giving significant details about PHLI's influences on them in a lengthy paragraph and describing multiple influences. Others

gave simple, short statements of a single influence. Most of the interviewees also provided extensive comments about PHLI's influence on their development. The following sections summarize these data.

Question 1.2 How did PHLI influence scholar's leadership-related knowledge, skills, and the value that graduates place on certain approaches that were taught?

Throughout its history, PHLI has sought to help scholars improve their knowledge and skill in leadership domains that are important to public health practice. In addition, PHLI sought to encourage scholars to highly value and embrace certain approaches, such as collaboration and developing others.

We asked scholars to rate the extent to which PHLI *strengthened* their understanding and skill in several key areas. The majority (Table 2) reported that PHLI had strengthened these constructs related to "understanding" to a moderate or large extent:

- Understanding useful general principles of leadership (81%)
- Awareness of best practices and models for public health leadership (68%)
- Understanding of the breadth of the public health system and their role within it (56%)

Related to more discrete skills, the majority also reported that PHLI had strengthened these constructs to a moderate or large extent:
- Openness to the ideas and opinions of others about how to address problems (75%)
- Skills in leading efforts that require the collaboration of many people or organizations (73%)
- Skills in specific leadership practices that are useful in public health (73%)

When we asked survey respondents to "explain in some detail one of the most important influences that PHLI has had on your leadership," we received extensive comments that were directly related to these and other areas of increased "knowledge" or "understanding" (118 responses), new or increased "skills" (64 responses), along with 31 responses that directly expressed increased "valuing of" or "appreciation of" or "commitment to" specific leadership approaches taught. (We will later describe the large numbers of new or improved leadership *practices* described in these responses, which often imply new knowledge, skills, or values, but here we include only explicit statements related to these constructs.)

These comments show that many participants gained significant levels of understanding and specific skills with the help of PHLI, and clarify the kinds of gains scholars made.

Understanding leadership

A large number of comments related to general principles of leadership taught in the program. These were examples: [Evaluator's note: throughout this report, the evaluator has underlined parts of quotations with special relevance to constructs being discussed in that section of the report]

> The greatest influence is the <u>repeated emphasis that leadership requires cultivation and nourishment of people skills</u>: listening attentively; communicating clearly, directly and honestly; being respectful; letting go of ego's need to be 'right'. These attributes build on a base of scientific, medical and public health knowledge. Without them, no matter how brilliant, one is not a leader.

> There was tremendous value in becoming familiar with the 'leadership' literature and in the structured systems approach to problem analysis and intervention development. My participation came at an excellent time, <u>helping my thinking to mature and move forward from the direct day-to-day tasks <u>to engagement in more strategic forward-looking leadership</u>. It was also particularly helpful for me to <u>understand better how organizations change</u>...or resist change, both to make me more effective within my own organizational framework and to improve my ability to help stimulate other organizations to adopt policies and practices that better protect or improve public health.

> One of the stronger influences in my class [was reading the book]: <u>The Art of the Long View</u>. Gaining a different perspective on <u>sustaining vision as opposed to always dealing with the immediate, which is management</u>. The other piece is the notion of Senge, and the double <u>learning of organizations</u>. Those two mostly influenced [me].

> I have become <u>more willing to let others contribute</u> to a project rather than trying to do it all myself. Consequently I have become more willing to accept leadership in projects because I feel I have more support and resources.

Understanding public health leadership: systems and collaboration

Many comments were focused on learning about effective *public health* leadership, often emphasizing have learned about the interrelated and synergistic concepts of systems thinking, public health as a system, and collaboration as a strategy for public health leadership. Several examples below are typical:

> [PHLI] exposed me to <u>the concept of learning organizations</u> (through Peter Senge's book and his presentation to the PHLI group) and its application to public health agencies. I have attempted to apply this concept in my agency with

some success. We are now much more aware of and utilizing the fact that we are part of a <u>community-wide system</u> trying to improve health in our community. [Evaluator's note: Leadership thinker Senge emphasizes systems thinking].

[PHLI] broadened my perspective of the <u>Public Health System</u> and was facilitative in the implementation of the Public Health Institute of Oklahoma (PHIO) whose mission is to promote positive health practices through collaboration between government, academia and communities.
The PHLI experience provided the necessary training and skill development in <u>systems thinking</u>. This education is invaluable as a resource as we attempt to practice public health from a <u>public health systems perspective</u>. Two landmark IOM [Institute of Medicine] reports, the current literature on contemporary public health practice, and measurements of public health performance all center on public health as a system. In order to be effective as a public health leader/administrator, <u>systems thinking and a vision around a systems approach to our profession is vital</u>; and for me, came from my year in PHLI.

One of the most influential learning experiences was the recognition that leadership is not just the individual, but is <u>collaborative</u> in nature. Working with various organizations and people is the hallmark of effective public health practice, so learning more about <u>collaborative leadership</u> has really benefited my perspective on leadership and has greatly influenced my own leadership style.

PHLI reinforced the tremendous importance of true community-based public health; <u>working with community partners and viewing them as assets</u> irrespective of low SES status, etc; working in <u>collaboration</u> with multiple partners and stakeholders in the community -- the whole is better than the sum of its parts, since we cannot address health disparities alone.

Strengthened my belief that <u>public health is a community affair</u> that requires public health professionals to work with abroad cross section of the community to plan and implement plans. These plans must have relevant goals, objectives and recommended action. Actions must also be responsive to community needs.

An interviewee put it this way:

One of the big things [I gained] is the ability to <u>think strategically</u>…. Sort of raise the eyesight to the horizon and beyond… thinking more strategically and establishing networks and the networks beyond just the personal colleague but then begin to think <u>about networks in terms of how you pull in industry, healthcare, federal government, state government, community partners, into assisting you in your strategic thinking, planning, and then ultimately the delivery of public health</u>. So, I think that sort of approach, in terms of networking, was a huge influence.

Table 2: PHLI's Impact on Scholars' Understanding, Skills, and Involvement Interests (N = 384)

a Based on a scale of 1=not at all, 2 =to a small extent, 3 =somewhat, 4=moderate extent, 5=great extent

	Not at all		To a small extent		Somewhat		To a moderate extent		To a great extent		Average[a]	SD	Unanswered
	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)			N
Understanding and Skills													
Understanding of useful principles in leadership	8	(2.1)	14	(3.7)	52	(13.7)	171	(44.9)	136	(35.7)	4.1	0.91	12
Openness to the ideas and opinions of others about how to address problems	6	(1.6)	20	(5.2)	70	(18.2)	171	(44.5)	117	(30.5)	4.0	0.92	9
Skills in leading efforts that require the collaboration of many people or organizations	1	(0.3)	24	(6.3)	77	(20.1)	172	(44.8)	110	(28.7)	4.0	0.87	9
Skills in specific leadership practices that are useful in public health	4	(1.1)	24	(6.3)	75	(19.8)	171	(45.1)	105	(27.7)	3.9	0.91	14
Awareness of best practices and models for public health leadership	3	(0.8)	27	(7.1)	93	(24.3)	164	(42.8)	96	(25.1)	3.8	0.91	10
Understanding of the breadth of the public health system and your role within it	11	(2.9)	38	(9.9)	119	(31.0)	117	(30.5)	99	(25.8)	3.7	1.05	9
Interest in Deepening Involvement													
Interest in deepening your involvement with leadership efforts to improve your *agency or community*	6	(1.6)	19	(5.0)	58	(15.1)	143	(37.2)	158	(41.2)	4.1	0.94	9
Interest in deepening your involvement with public health leadership efforts at the *national level*	20	(5.2)	53	(13.8)	84	(22.0)	122	(31.9)	104	(27.2)	3.6	1.17	10
Interest in deepening your involvement with public health leadership efforts at the *state level*	33	(8.6)	46	(12.0)	96	(25.1)	111	(29.0)	97	(25.3)	3.5	1.23	10
Commitment to staying in public health in your work	22	(5.8)	28	(7.3)	80	(21.0)	129	(33.8)	123	(32.2)	3.8	1.14	11

Specific skills in public health leadership

In describing their most significant benefits, many graduates also cited changes in specific skills taught. The most frequently cited specific skill was "collaboration" within and across organizations to achieve improvements. While the previous section cited "collaboration" as a key area of general understanding and perspective gained, many graduates also discussed collaboration as a specific skill that was gained and used in specific settings, as in these examples:

> *The ability to build and work with 'teams' contributed greatly to the implementation and expansion of rapid HIV testing in New Jersey. This project has benefited the citizens of New Jersey and been nationally recognized, most recently with the 2006 ASTHO Vision Award.*

> *Developing a sense of how to present and obtain collaboration for important but possibly unfamiliar concepts to a group with a diversity of work experiences and academic backgrounds.*

> *[PHLI] enhanced my ability to work with community stakeholders to establish effective partnerships to improve community health, leading to a regional health coalition and Turning Point grant.*

Additional skill gains cited as very important included creating and motivating others toward a shared vision, effective communication within organizations and with the media, organizational change, negotiation, developing others, and policy development. For example:

> *[PHLI] greatly strengthened my skills in visioning, creating/motivating shared vision, and confidence in creating my own future and motivating others to do so.*

> *[I gained skills in] risk communication and [learned the importance of] having a plan for communicating with stakeholders.*

> *Through my exposure to the 360 analysis [multi-rater feedback] and the leadership tools and concepts, I have been more successful in facilitating the growth of my senior leadership direct reports. In fact several of our senior leaders, have attended leadership development weeks at the Center for Creative Leadership since. I have attended many leadership development courses and PHLI was by far superior to them all.*

> *By exposing me to information and causing me to focus on important differences between management and leadership, PHLI put me in a much better position to assume a senior leadership role in my state public health organization. Within two months after completing PHLI, I successfully competed for a promotion to the*

deputy director level. On a daily basis I rely on training I received in <u>negotiating, networking, and setting high expectations</u>.

Many scholars reported learning a considerable amount about collaborative leadership from "action learning" projects they worked on as part of PHLI.

In this photograph, a team of senior leaders from North Dakota takes a break from discussing their team project in a breakout room at the Rizzo Center in Chapel Hill.

Valuing new approaches to public health leadership

In addition to gaining new understanding and concrete skills, over twenty graduates also indicated that one of their chief gains was an increased appreciation or value placed on an approach.

We have seen that many scholars cited new understanding or skills related to collaboration with others; fifteen others also cited placing more value on this approach as a result of PHLI.

Our team's experience with the leadership institute has solidified our <u>commitment</u> to building coalitions between public health, hospitals, and community based organization's in addressing community health issues.

[I learned] <u>the importance of working with different professionals</u> (MDs, nurses, sociologists, statisticians) at different leadership levels (frontline, OD) locally and all the way to the Federal level.

> *PHLI broadened my perspective of leadership. It helped give me the courage to take on bigger leadership challenges with confidence and helped me truly understand the benefit of collaborative leadership. Working collaboratively is a core value of the non-profit I head.*

Several others stated that they learned to place greater value on developing others. For example:

> *I was a fairly seasoned manager at CDC by the time I participated in the PHLI, so the effects on me were not as great as they might have been for others. I was impressed with the experience and so encouraged the development of, and participation in, leadership training for junior managers I supervised at CDC. Most of these folks have gone on to great things.*

> *PHLI has influenced my efforts, goals, beliefs, and convictions to prioritize mentoring and encouragement of future public health leaders. The need to bring along public health workers to replace us aging workers. A vast amount of knowledge is soon to be lost if we do not start recruiting for the future.*

Question 1.3 How did PHLI influence scholars' leadership-related interests, self-awareness, sense of importance and belonging, and confidence?

Having discussed increased understanding, skills, and valuing of leadership approaches, we now summarize responses about changes in scholars' interests, self-awareness, sense of importance and belonging, and confidence. While these attitudinal areas may appear "soft" and less important to an outside observer, the strength of graduates' responses in these areas show that these gains were among the most important to them.

Interest in deeper involvement in public health leadership

PHLI sought to deepen scholars' interest getting involved with leadership at all levels (Table 3). The majority reported that PHLI has strengthened their interest in the following areas to a *moderate or great extent*:

- Interest in deepening their involvement with leadership efforts to improve their agency or community (78%)
- Interest in deepening their involvement with public health leadership efforts at the national level (59%)
- Interest in deepening their involvement with public health leadership efforts at the state level (54%)
- Their commitment to staying in public health in their work (66%).

Survey comments helped explain this finding:

*It deepened my already strong commitment to playing leadership roles in the
field. Even when I worked in academic family medicine for about 9 years, I
collaborated with Cook County Public Health Department, served on a local
Board of Health and served on the Illinois State Board of Health. Now I am back
in state/local public health in Florida, working to build multiple partnerships and
applying all that I learned in PHLI, other leadership and management courses,
and more.*

*As a result of PHLI I have retained a strong commitment to the public health
profession. This commitment has kept me in the field through career changes by
moving to government at the state level, and into private public health consulting.
And, now--back to local public health. Meanwhile, I have continued to participate
with steering committees, national policy-making panels, and at the state level as
well.*

*[I gained an] understanding [of] the importance of leadership in addressing
difficult or political problems. I gained a perspective that I am in a position to
improve individual and the communities' health, and taking personal professional
risks in doing so can far outweigh the potential downside (including losing a job).
My opportunity to do good things is now, and I need to do them now while I have
the authority and ability.*

*PHLI influenced and motivated me into action at the state [and] local level by
instituting a Local Public Health Leadership Institute in Michigan. Much effort
and collaboration at the local/state level took place due to my involvement in the
PHLI to move this from an idea stage to an operational leadership program in
Michigan. This was done in cooperation with the Michigan Public Health
Institute and local public health in Michigan.*

*PHLI provided me with the 'shot in the arm' to be visionary and move our agency
from 'this is how we have always done it' to the mode of doing our work better
and wiser. Ultimately, PHLI provide me with leadership skills and the confidence
to be a leader in the agency and community.*

Table 3: PHLI's Impact on Scholars' Self-Awareness, Sense of Belonging, Confidence, and Courage (N=384)

	Not at all		To a small extent		Somewhat		To a moderate extent		To a great extent		Average (%)	SD N	Unanswered
	N	(%)	N	(%)	N	(%)	N	(%)	N	%			(%)
Self-awareness, Belonging, Confidence, and Courage													
Self-awareness as a leader: your strengths, liabilities, and how others view and receive your leadership	1	(0.3)	12	(3.1)	58	(15.2)	145	(38.0)	166	(43.5)	4.2	0.83	11
Sense that as a public health leader, you are important and have a valuable role to play	10	(2.6)	21	(5.5)	57	(15.0)	128	(33.6)	165	(43.3)	4.1	1.02	12
Sense of belonging to the national cadre of leaders in public health	10	(2.6)	32	(8.4)	79	(20.6)	120	(31.3)	142	(37.1)	3.9	1.07	10
Professional network of people you can contact for ideas about how to handle your leadership situations	15	(3.9)	56	(14.7)	101	(26.4)	114	(29.8)	96	(25.1)	3.6	1.13	11
Confidence to take on public health leadership responsibilities	7	(1.8)	24	(6.3)	63	(16.5)	148	(38.7)	140	(36.7)	4.0	0.97	11
Courage to take the initiative and act to improve public health	10	(2.6)	26	(6.8)	62	(16.2)	158	(41.3)	127	(33.2)	4.0	1.00	10

Leader self-awareness

Leader self-awareness is widely regarded to be important, so that leaders can adapt to fit the context and people they work with (Kilduff & Day, 1994; Sosik, Potosky, & Jung, 2002). Both versions of PHLI implemented multi-rater (or "360 degree") leadership assessment tools, as well as other assessment tools. Both versions also offered seminars that helped scholars understand their leadership styles, strengths, areas of "weakness" that could be developed or that warrant hiring other people with those strengths. During the California years, informal coaching by request was available at the week long retreat. The North Carolina version offered 1.5-2 hours of personalized professional coaching in concert with multi-rater feedback through the Center for Creative Leadership. Scholars rated this learning activity highly during the California years and consistently rated this as the most valuable single part of the North Carolina program (Miller et al., 2007).

Leader self-awareness was the major goal of the multi-rater (or 360 degree) feedback portion of PHLI. Here, Bob Stolarick, M.D., Chief of Personal Health Services, Memphis-Shelby County Health Department, discusses his results with his personal coach. All coaches were trained and certified by the Center for Creative Leadership, a program partner with UNC.

A large majority (82%) reported that PHLI has strengthened their self-awareness as a leader to a moderate or great extent (Table 3). In response to our open-ended survey question asking graduates to describe one important PHLI influence on their leadership, sixty graduates referred to greater self-awareness and self-understanding as a major or contributing benefit.

Some simply stated that the increased self-understanding was quite valuable, without giving details:

The feedback I received from the '360' assessments was extremely helpful in understanding both my own leadership styles as well as others.

[I made] the (painful) realization that others perceived me differently from how I perceived myself.

It has increased my self-awareness of the strengths and weaknesses in my managerial and leadership style. That is very valuable.

Another group stated that they had used these insights to learn more about how to use their strengths, or to address their weaknesses. Some referred to using multi-rater feedback as an ongoing way to continue to grow.

Most important influence has been in self-awareness, increased awareness of how others see me, and the interest to continue to read, study, practice and work to strengthen my leadership skills and the skills of the managers who report to me.

Better use of information gleaned from 360 evaluation and professional coaching session--had additional [coaching] after the program. I set professional and personal change goals and do self assessment on regular basis and try to gather informal feedback in variety of ways from peers and staff.

Others gave specific examples of how they had used the feedback and coaching session to make concrete improvements in their daily leadership:

I believe my skill set as a leader was strengthened. For example, through self assessment I identified weaknesses (e.g. dealing with the difficult employee) and have systematically set about eliminating this weakness. I relied on others to handle difficult situations and now I do them myself and am a better leader for addressing this issue.

PHLI influenced my perception of myself, including both strengths and weaknesses, and thus I was able to see myself in the context of being a leader. It encouraged me to evaluate how much passion I had for my work. I am more aware now about how to communicate, when and how often during a time of change.

Understanding of my strengths as a leader -- and even more important, a specific area of weakness that I was not aware of prior to PHLI. As a woman of color with great openness toward others, I thought I understood the challenges of diversity a lot more than I did. It has helped me be that much better subsequently.

Several stated that the feedback had encouraged them to recognize and act within their areas of strength:

> *PHLI prepared me to take on additional management responsibilities by helping me to <u>understand, trust, own and 'go with' my strengths and weaknesses</u>.*
>
> *Through the 360 degree evaluation and meeting with a personal coach, I become much more aware of others' perceptions of me. This gave me confidence in the work I was doing - <u>reinforcement</u> in a way I had not received it before.*
>
> *Understanding myself ... my strengths and weaknesses. This has helped me understand where I need to improve, where <u>I can have courage to make a positive impact now, and how to enlist the help of those who are stronger around me</u>. I believe that PHLI really made me understand more about myself, <u>what strengths I have to offer</u>, and how my leadership and communication styles come across to others. This has helped considerably in understanding how to build relationships of trust and to <u>convey to others a sense of confidence</u> in my abilities.*

Others stated that the reflection aspects of PHLI had helped them consider how best to direct their particular gifts within specific jobs or new career directions that seemed warranted. For example:

> *PHLI did the most for me in terms of self awareness. In part as a result of PHLI, I came to <u>some conclusions about next steps in advancing my public health career</u> and what direction to go with that. I also became more familiar with how I personally am as a leader. This has helped me <u>know how my leadership qualities compliment other personalities</u> among leaders and how to maximize different aspects of leadership in a group or among leaders.*
>
> *I gained <u>personal insight into my leadership qualities</u> and style that allowed me to <u>identify my strengths, build my confidence and exercise these</u> both locally and within my State. I joined the board of the State Public Health Association, a National Public Health leadership organization and become President of my Neighborhood Association.*

Sense of belonging, importance, and validation

In pilot interviews before our full study, several interviewees emphasized that PHLI gave them a strong sense of belonging to a public health leadership community that was bigger than themselves and that extended far beyond their agency and community. This sense of membership or belonging helped many graduates more clearly recognize themselves as "leaders", which led to new actions that reflected that "leadership" identity. Simultaneously, PHLI affirmed the importance of public health as a field, and the importance of leadership within that field. By extension, this meant that the graduates, with their identity as public health leaders, were themselves very important, having a vital role to play in communities, states, and the nation. Finally, many graduates also felt personally affirmed in their leadership gifts and abilities, sometimes through interaction with colleagues, and sometimes through the multi-rater feedback and coaching. All of

these influences together provided a strong infusion of "confidence" and "courage" and "support", as many graduates put it, and encouraged many to "take risks" and "step up to the plate" to improve agencies and systems.

We added survey questions to find out if all graduates had received similar benefits. In reply, 77% responded that PHLI had strengthened to a moderate or great extent their "sense that as a public health leader, [I am] important and have a valuable role to play", while 68% agreed that PHLI had strengthened to a moderate or great extent their "sense of belonging to the national cadre of leaders in public health" (Table 3).

Many comments from the survey expanded our understanding of these contributions. Many stated that one of PHLI's greatest benefits for them was "connecting" them to a wider community, which they also variously referred to as a "network," or "support system." One called it a "family."

One of the main functions of professional networks described in recent literature is "professional knowledge-sharing," and scholars clearly had benefited from the availability of knowledge from colleagues (Uzzi, 1997). For example:

> [PHLI] _connected me_ to public health leaders across the country, many of whom I remain in contact with - this _sense of a network_ of public health leaders, and the ability to tap into it, remains the strongest influence of PHLI on my leadership.
>
> Through PHLI, I _met other public health leaders_ across the country, and have maintained _friendships_ with them since 1997. This _network_ of accomplished leaders has been _an invaluable source_ of advice, best practices, referrals, and support. I have held leadership positions at the local (health officer) and state (deputy health secretary) level for almost 12 years, and have found that a _leadership network_ has been essential in my career.
>
> Developing a _broad network of peers_ nationally that has been extraordinarily _helpful in brainstorming approaches_ to a variety of public health system problems, providing _specific assistance_ on various critical public health opportunities and concerns and a _forum_ for staying current on up to date thinking in our field.
>
> [PHLI provided a] _connection to an extended 'family'_ of public health professionals with differing levels of _expertise_ and the willingness to _share_.

This "belonging" also gave them a stronger sense of identity and clarity about their "role", and showed them that they are "not alone." This validated their roles as leaders and increased their "confidence" and "courage" to act. Some referred to their "responsibilities" or their "obligations" as a member of the leadership community. For example:

Selection for NPHLI gave me a <u>sense of being part of the 'national public health leadership team'</u>. I appreciated the <u>breadth and depth of leaders at every level</u>. I developed <u>a greater understanding</u> of frontline public health management/leadership.

PHLI <u>introduced me</u> to national and regional state public health leaders who <u>influenced me</u> in my leadership efforts and <u>helped me understand</u> the broader public health system and my role in it.

As a result of participation in NPHLI, I <u>have relationships with other public health leaders in other parts of the country</u>. I've also developed relationships with peers in other states and we <u>help each [other] out</u> both formally and informally. In sum, I better <u>know both 'my place'</u> as a public health leader, and I <u>know others around the country who share this place</u>.

PHLI helped to give me the requisite leadership skills, the <u>support group</u> to <u>feel others in my position were making/could make a difference</u>, gave me the <u>confidence</u> to step up to the plate, and impressed upon me the <u>obligation</u> to do so. PHLI was a very limited opportunity and almost all of us in it felt this <u>privilege we had been given should be reciprocated</u> for via active public health leadership in our respective work and personal spheres of influence.

I was a small fish in a large pond when I attended the PHLI (from a very small health department) and <u>learned a lot about myself and what leadership was</u> about. PHLI was the first significant leadership training that I'd had. It was an opportunity to interact <u>with other public health professionals who were doing great things, displaying courage and moving the public health agenda forward</u>. It was my first significant exposure [to] visioning and creating alternative scenarios for the future. The experience helped to <u>build my confidence</u>, as a new public health director. I gained a lot of <u>insight into the federal public health landscape</u> which was very important in understanding priorities, policy and funding.

Others emphasized the affirmation or "validation" they had received that they were in fact leaders, and that leaders were very important to public health, and ultimately to society. For example:

[PHLI] <u>connected me</u> to other leaders and showed me that I am on the right track.

The program gave me confidence that <u>my skills and ideas were valuable and on target with the future</u> of public health. The <u>doors were opened to 'playing' a more major role in advancing public health through national contacts and initiatives</u>.

I think PHLI attracts 'self-selected' individuals who have already demonstrated high leadership ability. But participating in PHLI <u>gave me personal and public validation of my role as a public health leader</u>. And because of [the] program's

investment in my development, I have <u>a sustained 'obligation'</u> to be an influential in the field--no matter the focus area.

Because of PHLI, <u>I began to actually view myself as a public health leader</u>. This in turn gave me the <u>courage to actually act on leadership opportunities</u>. I believe because of PHLI, I have been able to contribute much more to the advancement of public health in my state, and <u>I think I am regarded as one of the public health leaders in my state</u>.

It was the first time I had been treated in a fashion which <u>recognized the important role played by a local health department and by those who lead these organizations</u>: speakers were first-class and national in reputation; accommodations were excellent; curriculum was well conceived; PHLI organizers were thoughtful and the program reflected this. <u>I came in contact with many other leaders, was able to compare and contrast myself and ideas with them, and keep them as colleagues</u>. PHLI was a perfect mid/beginning career experience for me and it coordinated well with another leadership training opportunity which I attended simultaneously, The Primary Care Policy Fellowship (DHHS). These two programs were pivotal, practical, and very useful for me.

Others emphasized the "vision" they had received about public health's role nationally which clarified how their efforts at the community and state levels "synergize" with a national "effort" and also gave them a "vision" to be involved in national public health leadership:

[PHLI gave me] an <u>exposure to public health issues on a larger stage</u>, allowing for a <u>better understanding of the bigger picture of our efforts</u> in public health, <u>and how our role at the state level fits into and synergizes with</u> a larger effort and vision.

[I was] given more of a <u>national perspective</u> on public health and <u>vision to be in national public health leadership</u>.

PHLI provided <u>a bigger vision</u> of public health and of leadership in public health.

Confidence and courage

We have just seen that by introducing scholars to the wide community of public health leaders nationally who were taking action, PHLI improved many scholars' confidence and courage to act.

Throughout PHLI's history, one of the most frequently cited benefits has been an increase in confidence – for some in specific skills taught, and for others in the validity of their ideas on "what needs to happen" in public health.

In this survey, 75% of scholars reported a great or moderate increase in their "confidence to take on public health leadership responsibilities" and increased "courage to take the initiative and act to improve public health." In response to the open-ended question about PHLI's most important benefits for them, sixty graduates made comments using the words "confidence," courage," or closely related concepts. While many, as we have seen, were related to an increased sense of being part of a wider community, others stated that their improved confidence had come from greater self-understanding and self-appreciation, sometimes from the multi-rater feedback and counseling:

> *PHLI provided me with much needed <u>confidence</u> at a challenging point in my career and gave me tools (esp. the coaching session) <u>to persevere and find talents I didn't think I had</u>.*

> *PHLI <u>significantly increased my confidence</u> in my leadership skills and abilities. Before PHLI I had been in leadership positions for many years, but never <u>was sure I had what it takes</u> to be an effective public health leader. Through the PHLI experience I felt I was able to bridge the gap and <u>develop trust in my innate abilities</u>. I <u>trust and appreciate myself more</u> and am more relaxed in my role and with my peers and subordinates.*

For others, confidence seemed to have come from newfound understanding, skills, and exposure to innovative models:

> *I think … that PHLI gave me <u>increased confidence</u> in my ability to be a public health leader -- to think out of the box -- to <u>see things beyond the very local level and to bring the broader public health focus</u> to programs activities and local challenges. I believe it also gave me some <u>perceived stature</u> as a person knowledgeable about public health.*

> *PHLI has led me to be <u>open to being on the cutting edge</u> of public health program development and implementation, and to have <u>confidence in my abilities to lead innovative change</u> efforts in my agency and at the state level.*

> *While introducing me to a number of best practices, PHLI gave me the <u>confidence to step out</u> of the mold of local health directors in my state and make changes that have improved health status. It was not necessarily the best career move, but it was the most exciting time of my career.*

> *PHLI gave me the <u>confidence</u>, knowledge and skills to <u>take risks</u> to organize a community based coalition to mutually solve the health problems in our community with business, industry, health care organizations, social service and public health. It also gave me the <u>confidence</u> to perform my duties and responsibilities as Health Officer and to lead outbreak investigations and solve other serious public health threats.*

[PHLI gave me] <u>confidence that my voice is relevant and individual effort and</u> <u>commitment can make a real difference at all levels. Confidence that I don't have</u> <u>to have all the answers</u> or resources before embarking on what I believe to be the right path. Patience to continue on the path and despite the bumps in the road, change does happen in time. Realization that the <u>change can be</u> and results from the dialogue.

Two long-term local health officers who have also been very involved at the national level, Bobby Pestronk and Jody Hershey, expressed related ideas; we present their stories next.

A National PHLI Story: Bobby Pestronk, M.P.H.

Health Director, Genesee County, Flint, Michigan

Mr. Pestronk is a 1993 graduate of PHLI and reflects on some of the intangible contributions the program made to his career.

The year had a profound impact on me.

New frames. *Of course I still make use of the contacts I made with other state, federal and local health officials. The content was stimulating, addressing areas that I had never thought about before. I liked being challenged intellectually, given new frames for thought, and the opportunity to consider how knowledge in a seemingly unrelated field can be applied to my work in public health. I learned I was a boundary spanner!*

We are important. *Just as important, though, was the environment that had been crafted for my learning. Someone realized that local public health officers should be treated professionally and well, like executives of large companies would be treated. It was as though no effort was spared to be certain that the experience was rich in all its attributes.*

Someone understood that our work as governmental public health officials was important, that we were important, and that we should be exposed to cutting edge thought. We were taken seriously and encouraged to speak out intelligently and demonstratively about the things that we believe and that are important to us, because we are the only ones who hold our particular world view or perspective.

The leadership year, for me, was a career enhancing experience. A mid career professional gained a richer understanding of the importance of the work he does. That's an extraordinarily important accomplishment for a leadership development program.

A National PHLI Story: Jody Hershey, M.D., M.P.H.

Director of the New River Health District/Virginia Department of Health

When I entered Year 6 of PHLI in 1996 - 1997, I was a 'retread' coming back into local public health after a stint in the private corporate healthcare sector. I had a solid understanding of basic public health principles and a small cadre of public health colleagues in Virginia--but rare interaction with other colleagues from a national perspective.

PHLI was one of the best decisions that I have made in my professional career!

Throughout my year as a public health scholar, I developed an incredible and permanent personal and professional connection to other scholars across the nation, as well as internationally. And I focused on developing, broadening, and expanding my leadership skills--and in particular, gaining confidence in myself, and my knowledge/skills/abilities as a leader. In fact, I became passionate about my role as a leader.

The year after completing PHLI, I became actively involved in NACCHO--partly on the encouragement of one of my learning group members (an organization that I really didn't even know anything about and that wasn't on my radar screen when I began year 6 of PHLI). And the rest is history! In 2003, I became president of NACCHO. If it wasn't for PHLI, I may never have realized my potential as a national leader. I may still have been a very isolated and narrowly focused local public health director.

I still continue to be involved in the national public health arena and always will. My involvement in the national public health arena has tremendously benefited my effectiveness as a local public health director, and it has benefited my community in so many ways. I now have a tremendous interest in policy, leadership development, systems, visioning, partnering, and mentoring that I never had before entering PHLI. And I feel that I am leaving behind my own public health legacy!

Dr. Hershey's leadership has been widely recognized. He received the 2000 NACCHO Award for Excellence in Environmental Health and the 2001 NACCHO Award for Excellence in Creating Healthy Communities recognizing his local health agency's outstanding, significant, and innovative activities and programs in the area of environmental health and in creating and building healthy communities, respectively. In 2001, he received the Virginia Department of Health's Public Service Career Achievement Award. Dr. Hershey also received the 2002 J. Howard Beard Award from NACCHO that nationally recognized his local public health agency for its outstanding, significant, and exemplary programs and activities. His health district was selected and served as one of 41 *Turning Point* community partners, a national public health reform effort jointly sponsored by the W.K. Kellogg and Robert Wood Johnson Foundations.

Domain 2. Leader Actions: Career-Related Outcomes and Voluntary Leadership Positions Taken

Another major set of questions that stakeholders held for this evaluation revolved around the general subject, "What became of the PHLI graduates after graduation?" For example, "Where did they go? Where did they work? Did they stay in public health, or move to other fields? What kinds of jobs and voluntary leadership roles did they take on? And how did PHLI influence all of this?"

This section presents data on this general set of questions, one step at a time.

Summary of Findings

- Survey respondents closely reflected all PHLI graduates with respect to the sector of employment, with 83% working for governmental public health (39% local, 33% state, and 11% federal). Additional respondents worked for universities and non-profits, and a few for health care agencies and corporations.

- The great majority – 87% - reported that they were still working in public health. Seven percent were working in another closely related field.

- About 20% of all PHLI graduates have now retired, but we found evidence that nearly all of them had remained in public health until they retired.

- Using the construct of "trained leader-years" – full time employment years after PHLI graduation – we found that graduates had invested 1210 trained leader-years in local government, 640 years in state government, and 314 in federal government. In addition, scholars had spent 366 years in academic work, 111 for health care organizations, and smaller amounts for other organizations.

- Main foci for graduates' daily work after graduation included "General administration/organization leadership – governmental agencies", community public health development, bioterrorism and preparedness, policy development and advocacy, and workforce development (both general and leadership development). Other fairly common foci included non-profit leadership, epidemiology, chronic disease, healthcare leadership, and infectious disease.

- About 52% had stayed in the same organization and position since graduation – which interviewees attributed to commitment to a place and organization rather than any form of stagnation.

- About 19% percent said that PHLI had helped them attain new jobs by increasing their skills, confidence, interest, networks, or by impressing the employer that the scholar had attended. Types of jobs that PHLI helped scholars attain included federal bureau or division chief; state health officer, deputy, or division chief; and local health officer, deputy, or division chief.

- 81% had taken on additional "voluntary" leadership roles that were not required by their jobs, such as task forces, boards, professional associations, and informal advocacy; 54% had taken on such roles *and* responded that PHLI had played some role in their doing so. PHLI had helped them take on these roles mainly by increasing their confidence, interest in the work, skills, and networks.

- Examples of voluntary roles scholars had taken on with PHLI's influence included, at the national level, serving on boards and committees with NACCHO, ASTHO, NLN, PHLS, APHA, and other associations. At the state level, roles commonly included helping with or serving on boards with a state public health association or sate association of city and county health agencies. At the local level, many worked with community-level task forces and boards.

- The great majority of scholars responded that PHLI had made some or a great contribution to the leadership actions that they took in these voluntary roles.

> *I was appointed shortly after I graduated [from PHLI] to the Board of the Massachusetts Public Health Association, the nation's largest APHA affiliate, and successfully implemented at MPHA a state wide initiative called the Coalition for Local Public Health which is finally before the Legislature dealing with reform of a fragmented 351 [organization] local health structure… taking on a reform of local public health structure … has taken almost 10 years of steady development to arrive now at active dialog with the state legislature. Without PHLI, I would never have conceptualized developing a state-wide local public health coalition comprising 5 major public health associations to achieve a reorganization of the antiquated Massachusetts local health department structure.*

Question 2.1 What types of organizations had survey respondents worked in, when they originally enrolled in PHLI?

A great majority of respondents - 83% - worked for governmental public health organizations when they enrolled (Figure 8). Thirty-nine percent (39%) worked for a local governmental public health organization, such as a city, county, or district-level health department, while 33% worked for an agency with state-level responsibilities, such as a state health department. In sum, a total 72% of respondents worked in state or local public health. (If a respondent worked and functioned on a local or district level but was on the state payroll, as are all health department employees in some states, they were classified as "local.")

Eleven percent worked at the federal level, the great majority at CDC. Sometimes, particularly in the California program, CDC employees enrolled as solo scholars. In the

UNC version, they usually enrolled in all-CDC teams to work on a strategic priority for CDC, but occasionally on teams with members from other organizations.

Other respondents worked for universities when they applied. A few had worked for non-profit or community based organizations, hospitals or health systems, and corporations. A few "other" responses specified a state association of local health departments and a professional association.

Figure 8: Survey Respondents' Work Organizations When they Enrolled in PHLI, % of Respondents (N=390)
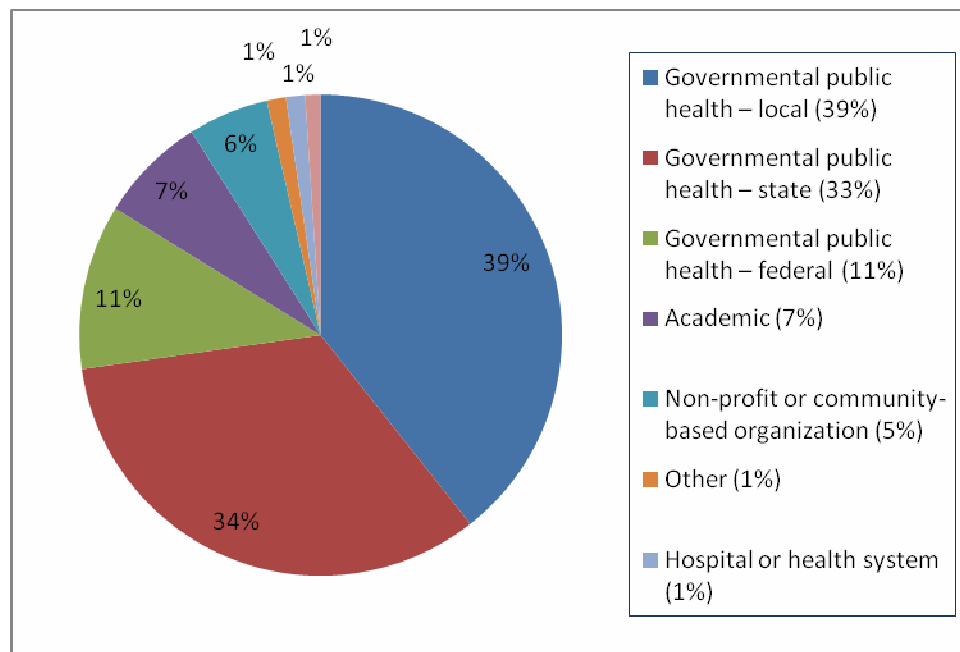
Question 2.2 What are the PHLI graduates currently doing?

The great majority of survey respondents (87%) reported that they were still working in the general field of public health (Figure 9).

Seven percent reported that they were now working in another field. Those who reported working in another field were asked to specify what they were doing. All were in work related to health, such as teaching in a dental school.

About 5% were retired. Of course, this 5% only represents survey *respondents* who were now retired; the proportion of all PHLI graduates who are now retired is 20-25%. The reader will recall that we could not locate a workable email address for 20% of graduates,

but while looking for them by search engines, email, and telephone we found that nearly all of these 20% were now retired.

We found evidence that nearly all of the 20% of graduates who are now retired had remained in public health organizations up to their retirement. Quite commonly, we were able to follow their positions and organizations up through their recent retirements using the Google search engine, and in nearly every such case they had remained in public health. For example, a person might have moved to a different organization to be health director, and left the organization in 2004 for retirement either according to a news article or according to an email from a staff member at the health department where they had most recently worked.

This is important information: nearly all PHLI graduates remained in the field of public health to the present day, or until they retired. This means that any benefits that they received from PHLI would have been applied within public health, rather than within other sectors.

Figure 9. Current Work Status of PHLI Survey Respondents (N=390)

Legend:
- Working in Public Health Field (88%)
- Working in Another Field (7%)
- Retired (5%)
- Other (1%)
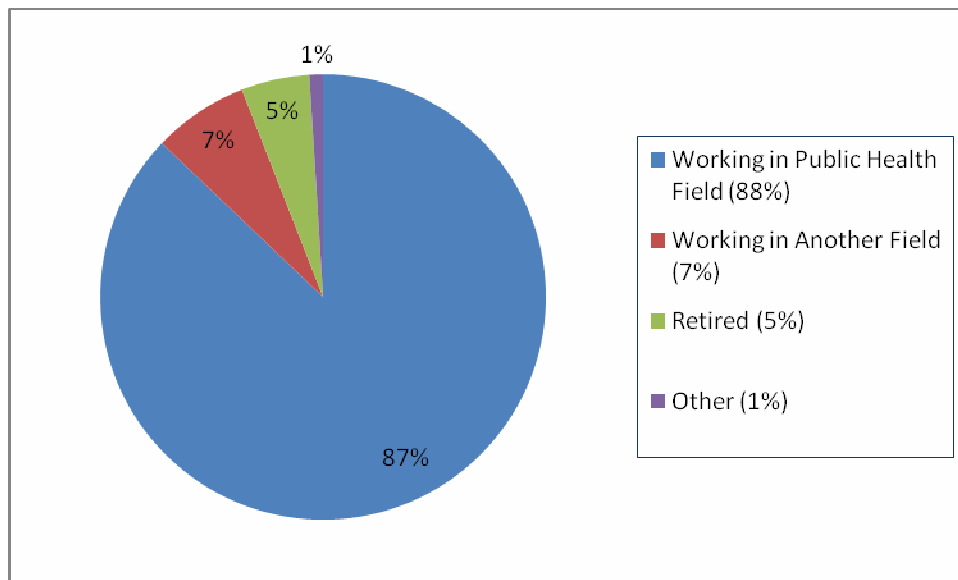
Question 2.3 How many "trained leader-years" did the leaders spend working for different types of organizations?

We developed a construct called "trained leader-years" and asked graduates to report the number of years they worked at various types of organizations *after graduating* from PHLI. Most reported full-time years, but if scholars reported working in a type of organization 50% of the time for 10 years, it was classified as "5" leader-years, for example.

The greatest number of "trained leader-years" were spent working in governmental public health at the local level (1210 leader-years), followed by work at the state level (640 leader-years) (Figure 10). Academic and federal employment had the next highest numbers, followed by smaller numbers in other types of organizations.

Overall, this means that respondents served governmental public health organizations for over 2100 work-years, and other organizations for about 960 years. Remembering that the respondents represent only 60% of all graduates, and assuming that our respondents were a representative sample of all graduates, the actual numbers of years of service extrapolate to much higher numbers, on the order of 5000 trained leader-years, with over 3500 years of service in public agencies.

Figure 10. Number of "Trained Leader-Years" Graduates Worked in Various Types of Organizations after Attending PHLI (N=389)
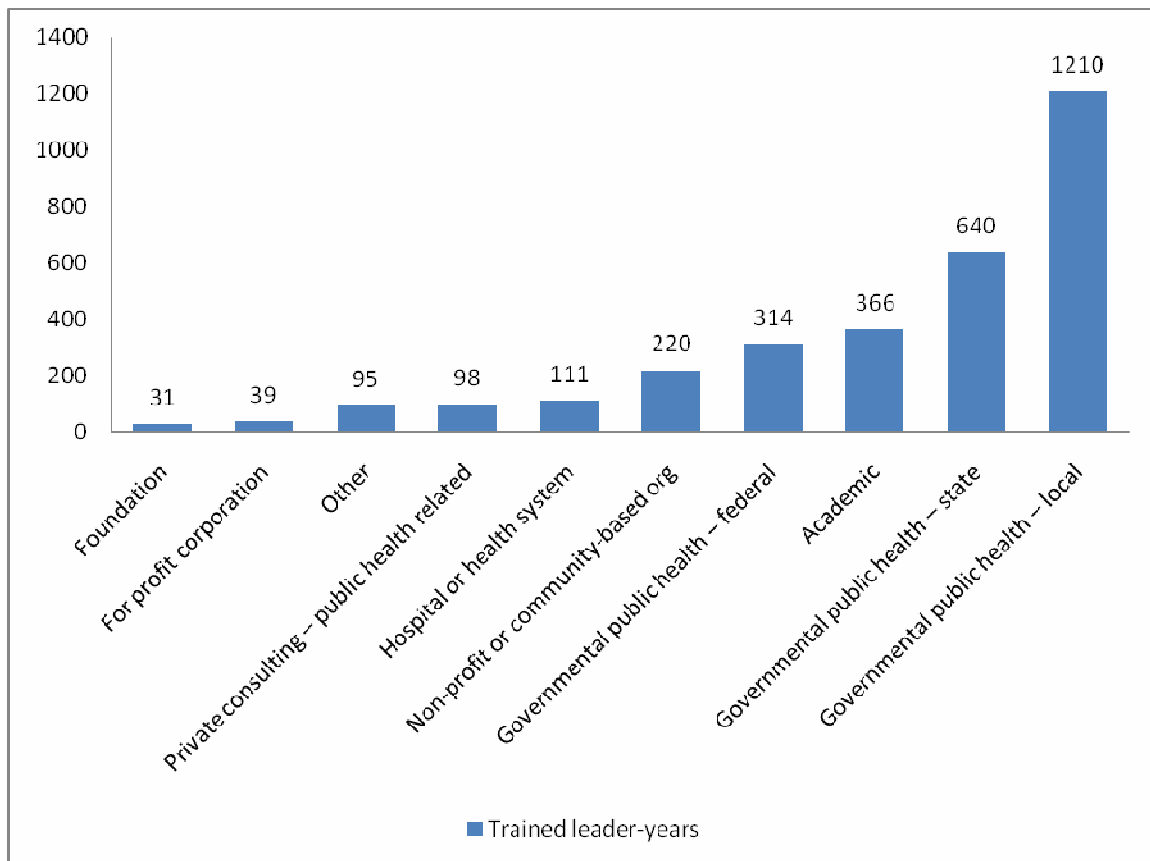
Question 2.4 After graduation from PHLI, what were the foci of the graduates' work?

In addition, we wanted to understand the kinds of issues the graduates had spent their careers addressing. We gave graduates a lengthy list of major topical and work areas in public health and asked them to check "up to 3 areas" on which they had focused their greatest attention since graduating from PHLI, or to specify an "other" area. Some of the areas we listed were general administrative leadership, rather than a specific topical area; these of course overlapped with topical foci that scholars in those positions might have had.

Over half (54%) checked "General Administration/Organizational Leadership – Government" as being one of their three top foci (Figure 11). This would include such roles as state health director or deputy director.

Community public health development (35%) was the next most common focus, reflecting the number of graduates who led local organizations. Bioterrorism and preparedness (24%), policy development and advocacy/law (15%), and workforce development–(specifically) leadership development (14%) also received much attention.

If we combine Workforce Development – General (9%) and Workforce Development-(specifically) Leadership Development into a single category, they total 23% and are the fourth highest. Clearly, many graduates are involved in training, education, and leadership development. Other fairly common foci included general non-profit leadership (e.g. Executive Director), epidemiology, chronic disease, healthcare leadership, and infectious disease.

Figure 11. Top Areas of Focus (N = 389)
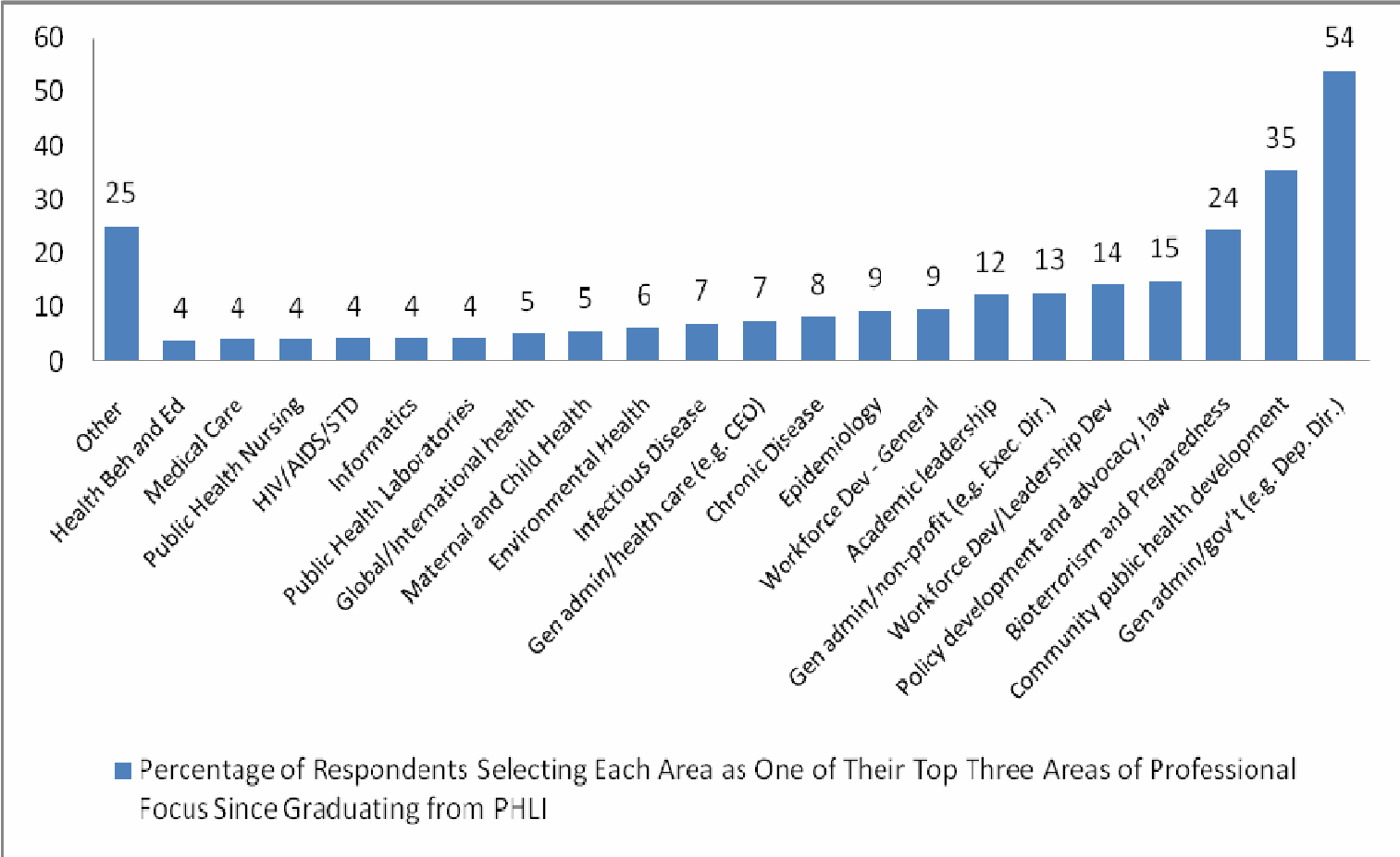
Question 2.5 Did PHLI influence changes in jobs held by graduates? If yes, what were some patterns and examples?

Having ascertained the general types of organizations that graduates worked in and the major foci of their work, we searched for clues about the influence of PHLI on the type of work that they undertook. First, we examined the formal jobs or positions they held.

We asked graduates this question on the survey: "Did participating in PHLI help you attain the paid leadership positions (jobs) that you later took?"

The majority (52%) reported that this question was "not applicable" because "I stayed in the same position I was in when I was in PHLI." In other words, at the time of this survey in 2007, more than half of the respondents were still in the same job they had held when they graduated from PHLI (Figure 12). This shows that many respondents have been quite stable in their organization and position.

What does that mean? First, we must remember that about half of all respondents had graduated from the UNC version of PHLI within the past six years. Depending on the positions they held, one would not necessarily expect large numbers of them to have changed jobs in that period of time. Further, some of our interviewees explained that this must not be interpreted as "stagnation" but rather as commitment to a place organization over the long term – and a mark of leadership that is appreciated. In retrospect, we should have asked those who had stayed in the same position if PHLI had given them leadership skills that had helped them stay where they were!

What of the remaining 48%?
- 19% checked: "No, I took new positions, but PHLI did not help me attain them"
- 10% were not sure whether PHLI had helped them attain a new position they took
- 19% (N = 70) checked "Yes" – meaning that PHLI had helped attain a paid leadership position that they later took

Figure 12. Did PHLI help you attain the leadership positions that you later took? (N=375)
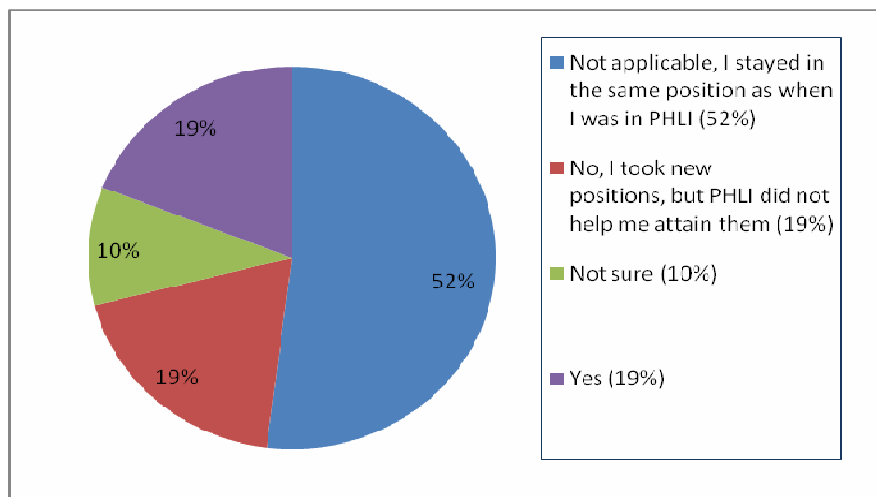
Question 2.6 When graduates took new positions and reported the PHLI had helped them attain the new positions, what types of new jobs had they taken, and with what kinds of organizations? And how had PHLI helped them get these jobs?

We asked those who checked "Yes" to give examples of the kinds of positions that PHLI helped them attain. Table 4 presents a summary of these positions. Of the 72 respondents that named new positions they had taken, 30 (42%) listed positions in state government, including seven for State Health Officer, eight for Deputy State Health Officer, and thirteen for Division/Bureau/Program Director.

Ten cited federal governmental public health positions, including Center and Division Directors at CDC, a Director position at HRSA, Inspector General for the Agency for Health Care Administration, and Chief Medical Officer in the Indian Health Service.

Fourteen cited positions in local/county/district level public health, including eight as health director, three as deputy director, and others as division and program leaders. Nine cited positions in academia, including 6 in academic or continuing education program leadership in schools and colleges of public health and medical schools. Several other positions were cited in non-profit and health care leadership.

Table 4. "Give us one example of a position you took that PHLI helped you attain." (N = 72)

Level of Employment and Type of Position	Number of survey respondents reporting attaining this position with help from attending PHLI[a]	Example Job Titles
Federal Level Governmental Public Health	**10**	
Division/Bureau/Program Chief	9	Center Director, CDC Director, CDC Portfolio Management Project Division Director, National Center, CDC Inspector General, Agency for Health Care Admin. Chief Medical Officer, Indian Health Service Director of Planning, Eval., and Legislation, HRSA
Public Health Advisor-Federal Agency	1	Public Health Advisor
State Level Governmental Public Health	**30**	
State Health Officer	7	State Health Officer and Public Health Commissioner
Deputy State Health Officer	8	Assistant Director of Health (Senior Deputy) Assistant Commissioner of Health
Division/Bureau/Program Director	13	Chief Medical Officer Executive Director -Office of PH Preparedness Director, State Environmental Health Agency Director, PH Nursing and Health Policy Director
Assistant Director-State Unit	2	Assistant Director for the State Unit on Aging Deputy Director, Public Health Laboratory
Local/County/District Gov't. Public Health	**14**	
Health Officer/Director	8	Director of Health at a Local Health Department – (eight times bigger than the one I previously led) Health Commissioner
Deputy Director	3	Associate Director
Division/Bureau/Program Chief- County H.D.	2	Director of Public Health Nursing Director of Health Promotion & Disease Prevention
Program Manager-District	1	Program Manager

Table 4. (continued) "Give us one example of a position you took that PHLI helped you attain." (N = 72)

Level of Employment and Type of Position	Number of survey respondents reporting attaining this position with help from attending PHLI[a]	Example Job Titles
Academic Positions	**9**	
Professor	2	Professor Associate Professor
Program Leader/Administrator	6	Chair, Department of Public Health Director, Preparedness Leadership Development Executive Director, Allied Health Programs Associate Director, Office of Strategy and Measurement, Academic Health Sciences Center
Doctoral Student	1	Doctoral Student, School of Public Health, Michigan
Other Positions	**9**	
Manager/Director-Non Profit Organization	3	Executive Director, PH Leadership Institute Management Officer, National PH Organization CEO, Non-profit public health provider
Deputy Director-Non Profit Organization	2	Deputy level position, non-profit
Deputy Director- Healthcare Institution	2	Vice President of Community Services Vice President, Hospital
Consulting or Corporate Position	2	Healthcare and public health consulting, self-employed Public health specialist, software company

As noted, 19% responded that they had taken on new jobs after graduation, and that PHLI had helped them attain those jobs. But what was it about PHLI that helped them attain new positions? We asked these respondents to "check all that apply" from a list of options, or to give an "other" explanation.

Twenty seven percent reported that PHLI influenced their taking this position by increasing skills that they needed for the job (Figure 13). An equal proportion (27%) reported that PHLI influenced them by increasing their confidence that they could do the work required for the new position. Eighteen percent reported that PHLI increased their interest in taking on the new position, and 13% said that it impressed the employer that the scholar was a PHLI graduate. Ten percent responded that PHLI helped them attain the new position through network ties developed through PHLI.

Figure 13. How did PHLI influence your taking this position? (Check all that apply) (N=92)
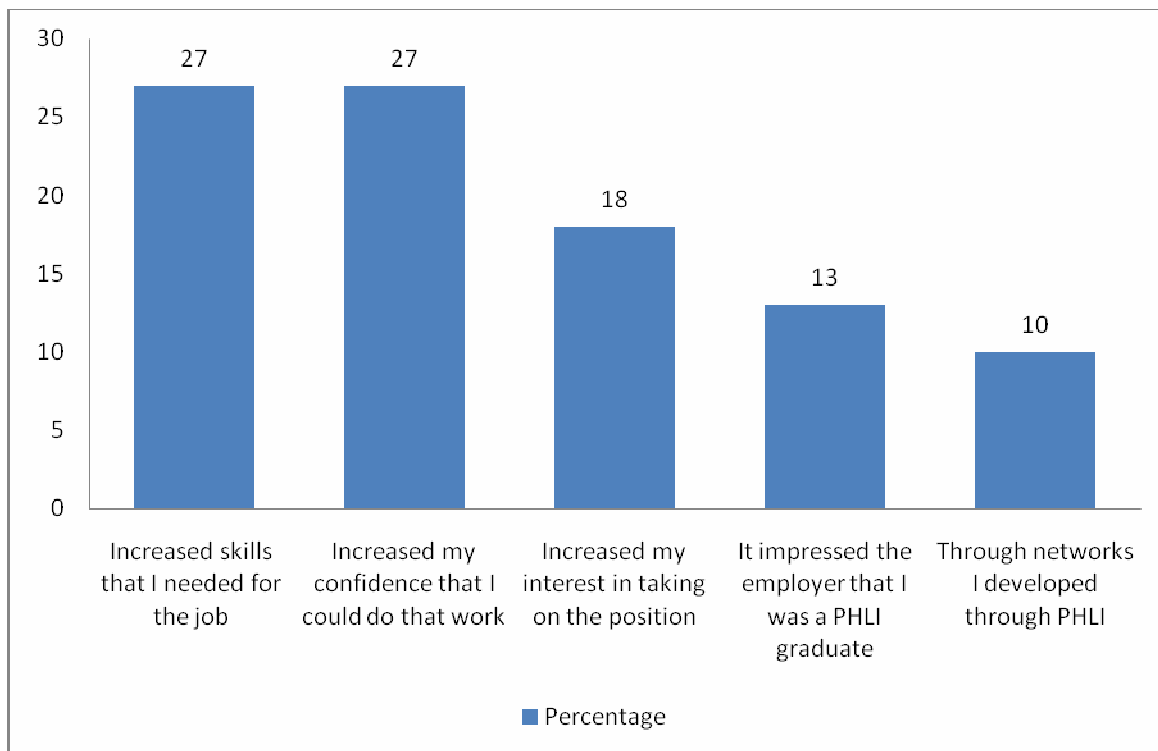
A National PHLI Story: Georges Benjamin, M.D.

President, American Public Health Association

Dr. Benjamin began his public health career as a Health Officer in Washington D.C. from 1990-1991. He returned to the field in 1995 as a Deputy Director at the Maryland State Health Department. Dr. Benjamin currently serves as the Executive Director of the American Public Health Association. He is a PHLI Class of 1995 graduate.

Networking

Dr. Benjamin reflected on the Institute and the role it played in getting acquainted with new colleagues. He comments, "(PHLI) has made collaborating a lot easier. Certainly picking up the phone and talking to people that I know - these are not cold calls anymore. "

Career Decisions

Dr. Benjamin also discussed how NPHLI influenced his early career decisions and ultimately his commitment to public health.

> *I went to the Leadership Institute at a time when I was re-entering public health, having had been a health officer in 90-91 in Washington DC as a DC health official. That was my entrée into core public health. That's actually a high-level entry into public health. The DC health job is a fairly highly visible, engaged job, and I didn't know anybody. I wasn't really knowledgeable about the field at that time. I was there for a couple years and then I left and went off and did some other things... I came back to public health in '95 as a deputy at the Maryland state health department... and frankly, my time in PHLI in many ways served to solidify my entry into public health at a time when I was making career choices about whether I was going to stay in public health or go into the health care side of things – into health care management, hospital management.*

The Mid-Atlantic Health Leadership Institute

Dr. Benjamin and the colleagues he met at NPHLI believed there was a need to create a state leadership institute in Maryland, which resulted in what is now the Mid-Atlantic Health Leadership Institute.

> *We had a unique situation in Maryland....I went to the national PHLI course at a time ...when they were not doing teams – it was all individuals....yet my group just happened to have five people in it from Maryland – we came from different portals – one from Hopkins, a couple came from the state, one local – we just ended up with five people...so when we came back, we decided to set up a Public Health Leadership Institute in the state of Maryland, which ultimately became a regional institute – so Maryland, Pennsylvania, West Virginia, DC, and Delaware were the states that were supposed to participate in that...It still exists ...we in effect created that leadership institute.*

Question 2.7 Did PHLI influence participants to take on voluntary leadership roles that were *not directly required* by their formal paid job?

Leadership in public health can be exercised within the daily, required tasks of one's job, but it is often exercised in voluntary leadership roles on task forces and boards, in professional associations, and through informal advocacy. Several interviewees emphasized that this is indeed a very important way that they have chosen to exercise wide influence in the field.

More than half of all respondents (54%) reported that participation in PHLI influenced them to take on leadership roles not formally related to their jobs (Figure 14). Twenty seven percent replied that they had taken on voluntary leadership roles, but that PHLI did not influence them to do so, while7% had not taken on such roles.

Note that the 54% who reported that PHLI influenced them to take on voluntary leadership is considerably higher than the 19% who reported that PHLI had influenced formal jobs they had taken.

Figure 14. Did participating in PHLI influence you to take on leadership roles that were not directly required by your formal paid job, such as task forces, boards, professional associations, or informal advocacy? (N=372)
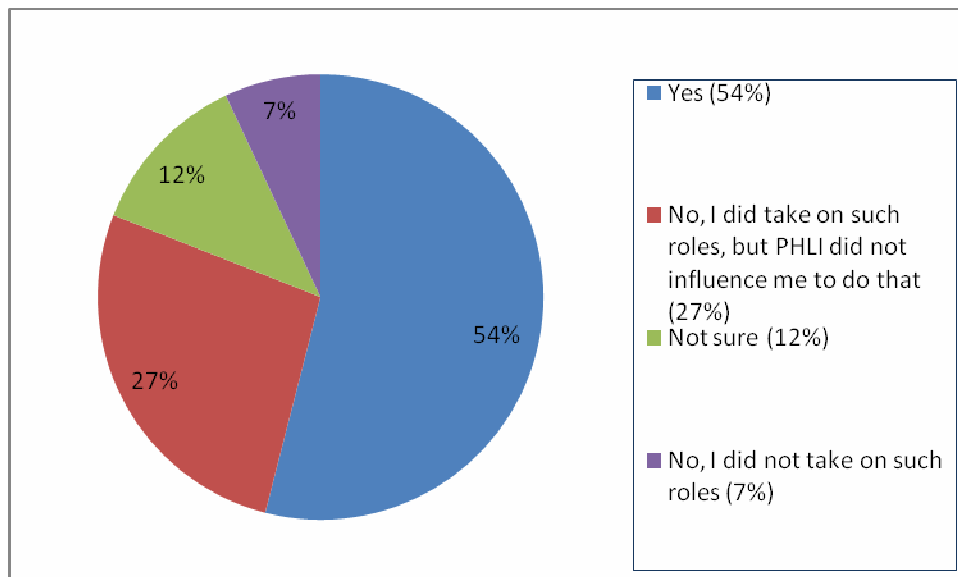
Question 2.8 How did PHLI change the frequency with which graduates took on various types of voluntary leadership roles?

We listed seven leadership roles – two each at the organizational/local, state, and national levels, and one about the leader's general level of initiative in taking on leadership to make changes. We then asked graduates to rate the frequency with which they took on these roles before and after participating in PHLI (Table 5), using a method known as the retrospective pre-test post-test (Howard, 1980).

We combined "organizational/local" because we thought that for many scholars, these would greatly overlap, and because we were trying to keep the survey short. In retrospect, we should have separated organizational and local, because, of course, the meanings are different. But we can still learn a lot from the data.

At each level, we asked about both general "working to improve public health" and the more specific "serving on task forces or boards" because several interviewees stressed that "exercising leadership" is broader than "serving on task forces and boards." They stressed that much of their leadership at any level is through day-to-day informal work, rather than only through task forces and boards.

Several important results may be observed in these results.

- Respondents reported significant increases (P<.001) in the frequency with which they took on all seven leadership roles.

- The baseline and change levels are different for each item, which indicates that the respondents were carefully reading and responding differently to each item, rather than answering all of the questions alike – which is sometimes a problem in surveys. This increases our confidence that the underlying numbers reflect scholars' actual self-ratings, rather than merely a desire to get through the survey or to answer in a socially desirable way.

- The highest baseline or pre-program leadership levels were found in the organizational/community level, followed by the state level, followed by the national level. This is not surprising: we would expect nearly all scholars to be working to improve public health through their agency, with or without a leadership program. We might next expect both local and state level public health staff – who were the majority of PHLI scholars - to become involved at the state level, and last, if they have time, interest, opportunities, and network connections, to get involved at the national level.

- The baseline for "actively worked to improve public health in my agency or community" was in the "often" category (mean of 5.1) and moved up within the "often" category. All other means started in the "occasionally" category, but moved up to the lower end of the "often" category or the upper end of the "occasionally" category.

- At each level (local, state, and national), mean frequencies start higher, and jump more (and more significantly from a statistical standpoint) for "actively working" at that level than for "serving on task forces, boards, or working groups," although all of the changes are significant. The fact that "actively working" starts higher at each level is not surprising: we would expect more scholars to be "actively working" in general ways at any level than to be serving on task forces at that level. We could not have predicted which would jump more, "actively working" at a given level, or "serving on task forces." Again, however, it is not surprising that a leadership development institute would increase general leadership activity – for which opportunities are constant - more than the specific activity of serving on task forces and working groups, which are more intermittent.

- The highest jumps were at the national level for both general leadership activity and serving on task forces and boards. This is true in mean difference scores, and in statistical significances. Again, this is not surprising: the leaders who enrolled in the PHLI were generally already quite active in leadership at the organizational/local and/or state levels, depending on their place of employment. Offering a National PHLI had the explicit goal of increasing their involvement in public health leadership at a national level, and many aspects of the program were designed to do that.

- Generally "taking the initiative to work for changes rather than waiting for someone else to take the lead" also jumped nearly as highly as did national involvement. We can see that this score started fairly high – among the highest of these items – but nevertheless jumped from almost a mean of "often" into the middle of the "often" level.

Table 5: PHLI's Influence on the Frequency with which Graduates took on Voluntary Leadership Roles (N = 343-349)

[a]Scale: 1 = Never, 3 = Occasionally, 5 = Often, 7 = Very Often

Leadership Roles	Before PHLI[a]		After PHLI[a]		Mean difference	Paired t-test statistic	p value
	Mean	SD	Mean	SD			
Local and organizational-level voluntary leadership roles							
I actively worked to improve public health in my *agency or community*	5.1	1.58	6.0	1.30	0.90	13.97	<.0001
I served on *agency or community* level task forces, boards, or working groups related to public health	4.2	1.72	4.9	1.67	0.71	9.23	<.0001
State-level voluntary leadership roles							
I actively worked to improve public health on a *state* level	4.3	1.77	5.3	1.66	1.05	11.93	<.0001
I served on *state* level task forces, boards, or working groups related to public health	3.7	1.74	4.6	1.90	0.90	10.80	<.0001
National-level voluntary leadership roles							
I actively worked to improve public health on a *national* level	3.2	1.79	4.4	1.82	1.31	15.63	<.0001
I served on *national* level task forces, boards, or working groups related to public health	2.8	1.69	3.9	1.98	1.11	12.42	<.0001
General Level of Initiative							
I *took the initiative* to work for changes, rather than waiting for someone else to take the lead	4.6	1.48	5.7	1.25	1.17	15.98	<.0001

Question 2.9 When, due to the influence of PHLI, graduates took on leadership roles that were *not directly* required by their formal paid job, what types of organizations did they work with, and what were the patterns and examples of some of the roles they took on?

A follow-up question gave graduates a list of typical organizations that leaders volunteer with, and asked them to "check all that apply" for the organizations with which they had taken on these voluntary leadership roles; 207 graduates responded to this question. Of them, the greatest single type of voluntary work – reported by 84 (41%) – was taking on leadership roles with a community-level task force or board (Figure 15).

Sixty-seven (32%) had volunteered to serve with the National Association of City and County Health Officials, which often convenes working groups to address national issues affecting local public health, and 64 (31%) with a state public health association (such as the California Public Health Association). Forty-seven (23%) had volunteered with the National Public Health Leadership Development Network or with a State or Regional Public Health Leadership Development Program, while 43 (21%) had done work with PHLS, the alumni group for this program.

Smaller numbers had voluntarily worked with the American Public Health Association, the Association of State and Territorial Health Officials, other professional associations, and other groups. A few worked with a State Association of City and County Health Officials, or SACCHO.

In response to these findings, but unable for this project to do a thorough historical study, we examined the current lists of the Boards of Directors of ASTHO, NACCHO, and two major recent or current infrastructure improvement projects at the national level: the Exploring Accreditation Project, and the ATSHO project, "Understanding State Public Health."

- Of the current ASTHO Executive Committee of 18 members, 7 are PHLI graduates, including the Immediate Past President, the Past President, and the Secretary-Treasurer (3 from the California PHLI, 4 from the UNC-based PHLI).
- Of the 31 NACCHO Board members, 21 are PHLI graduates, including the President, President-elect, and Vice President (14 from the California-based program, 7 from UNC-based PHLI).
- The combined Planning and Steering Committees of the Exploring Accreditation Program numbered 29, and 14 of these were PHLI graduates including three of the four Planning Committee members, and the Chair of the Steering Committee (12 from the California program, 2 from the UNC program).
- The 12-member Advisory Task Force for the major current ASTHO project, "Understanding State Public Health," includes 4 PHLI graduates (1 from the California program, 3 from the UNC program), including the Chair. Two of the five listed authors of their recent White Paper by the same name were PHLI graduates, both from the California program.

Of particular interest in those numbers is that 67% of the NACCHO board are PHLI graduates, including the highest elected officers, and 39% of the ASTHO Executive Committee are PHLI members, again including many of the highest elected officers. Similarly 48% of the combined Planning and Steering committees for the Exploring Accreditation Program were PHLI graduates. We also note that graduates from both the California and UNC versions of PHLI are serving in leadership roles through these associations and projects.

A large majority of PHLS members are graduates of the California program. Reasons that stakeholders give for this vary, but among the reasons was the disjunction of the administration of PHLS from PHLI when PHLI moved to North Carolina in 2000, which produced greater challenges in communication and coordination. Some stakeholders also believe that scholars enrolled in the team-based UNC program were more focused on state and local needs and network development rather than on national needs and network development, and that this may have reduced national network involvement. This evaluation has not focused on answering that questions, and absent a detailed study, we do not have enough evidence to address the claim and its impact on PHLS.

A future study could examine membership of boards and committees from 1991-2007 to examine trends in PHLI graduate participation.

The "chicken and egg" question remains: we cannot tell from these steering committee lists alone whether the kind of people who would already take these roles are also the kind of people who enroll in PHLI, or whether PHLI had some influence on their decisions to get involved. However, in Figure 14 and Table 5 above, graduates attribute increases in involvement at least partly to PHLI. In addition, in Domain 1, we presented consistent themes in survey and interview data in which many graduates stated that their interest, understanding, courage, confidence, sense of identity as a national leader, and sense of membership in a "national cadre of public health leaders" had all been given a boost by PHLI. This had increased their involvement in such roles after attending PHLI. Given the overall emphasis in these data about PHLI's impact on graduates, we believe that many became involved in local, state, and national voluntary work including that just summarized with major associations as a direct or indirect result of the learning and networks they gained through PHLI.

Another perspective is relevant. Apart from whether PHLI led these leaders to become involved, or some of them would have done so anyway, PHLI provided an educational experience that may have helped them once they reached these roles. Data presented below in Figure 16 address this question, showing that PHLI did contribute to scholars' actions once they were in these roles. Comments presented in this study also bolster that claim.

Figure 15. Specific organizations that PHLI influenced graduates to take on voluntary leadership responsibilities with – number of responses (N = 207)
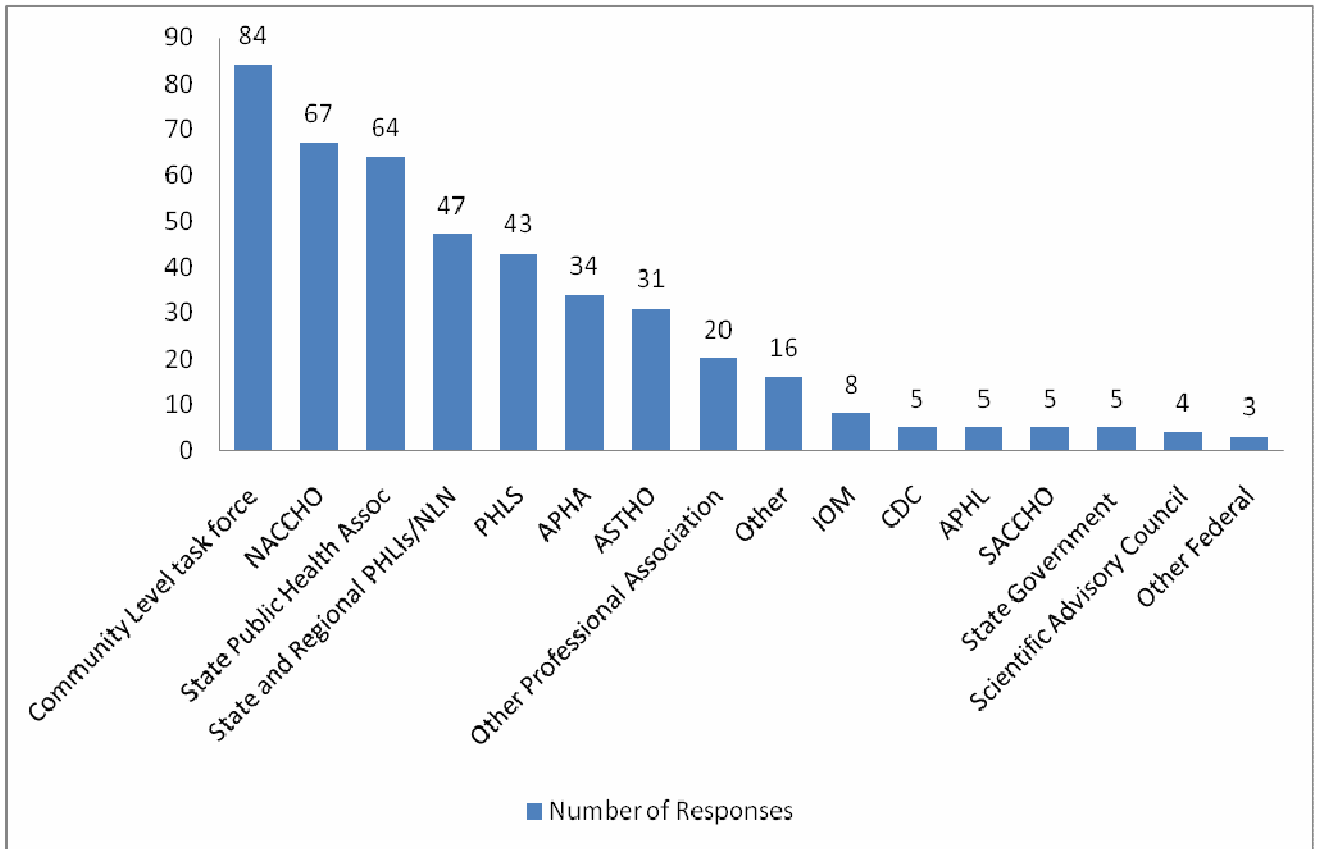
Question 2.10 For graduates who took on new types of voluntary leadership, and reported that PHLI had influenced them to do so, how did PHLI help them attain the formal positions?

We have seen that many graduates took on voluntary leadership roles with various types of local, state, and national organizations. When they did so, and attributed it at least somewhat to PHLI, what was it about PHLI that influenced them to do so?

After we asked graduates to describe one such opportunity and the organization it was with, as summarized above, we asked them to "check all that apply" from a list of possible reasons that PHLI may have helped them take on that opportunity.

The most commonly cited reason was that PHLI had increased their confidence that they could do the work (74%), followed by increased interest in taking on the work (66%) and increased skills needed for the work (60%) (Figure 16). About 36% attributed taking the opportunity to "networks I developed through PHLI."

These reasons for getting involved were very much in line with the types of personal benefits from PHLI that graduates described, as summarized under Domain 1, where we saw many detailed explanations of increased confidence, interest, skills, and network connections. We also see those dynamics at work in the particular quotations given below from the survey and interviews.

The "increased interest" option chosen by so many is also congruent with the results cited in Table 2, which shows that the majority of graduates agreed that PHLI had increased their interest in deepening their involvement with local, state, and national level leadership efforts.

Figure 16. How did PHLI influence graduates' taking on voluntary roles in public health leadership? (N=208)
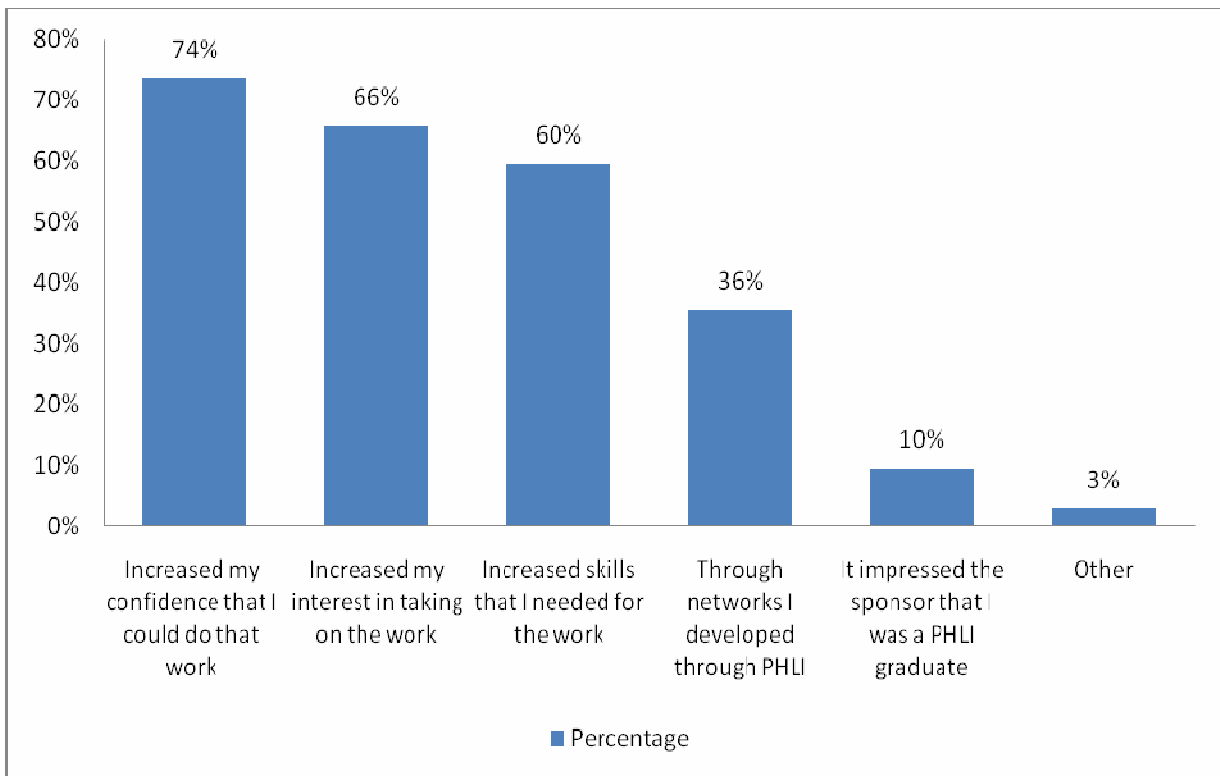
Question 2.11 How much did PHLI contribute to their actions, when graduates took on these voluntary leadership roles?

A follow up survey question asked respondents to indicate how much PHLI contributed to the leadership actions respondents took when they were in the aforementioned roles.

Across the roles, 48-61% of respondents indicated that PHLI made "some contribution" to their actions, while 16-40% indicated that PHLI had made a "great contribution" (Figure 17). This indicates that PHLI made some contribution when graduates took on voluntary roles. The greatest PHLI contribution was to taking "the initiative to work for changes, rather than waiting for someone else to take the lead." This mirrors earlier cited findings about PHLI spurring graduates to take on active leadership roles through increased confidence, courage, a sense of having an important role to play, and support from their networks.

Figure 17. Amount PHLI contributed to leadership actions taken

(Percentage of respondents) (N = 308-315)
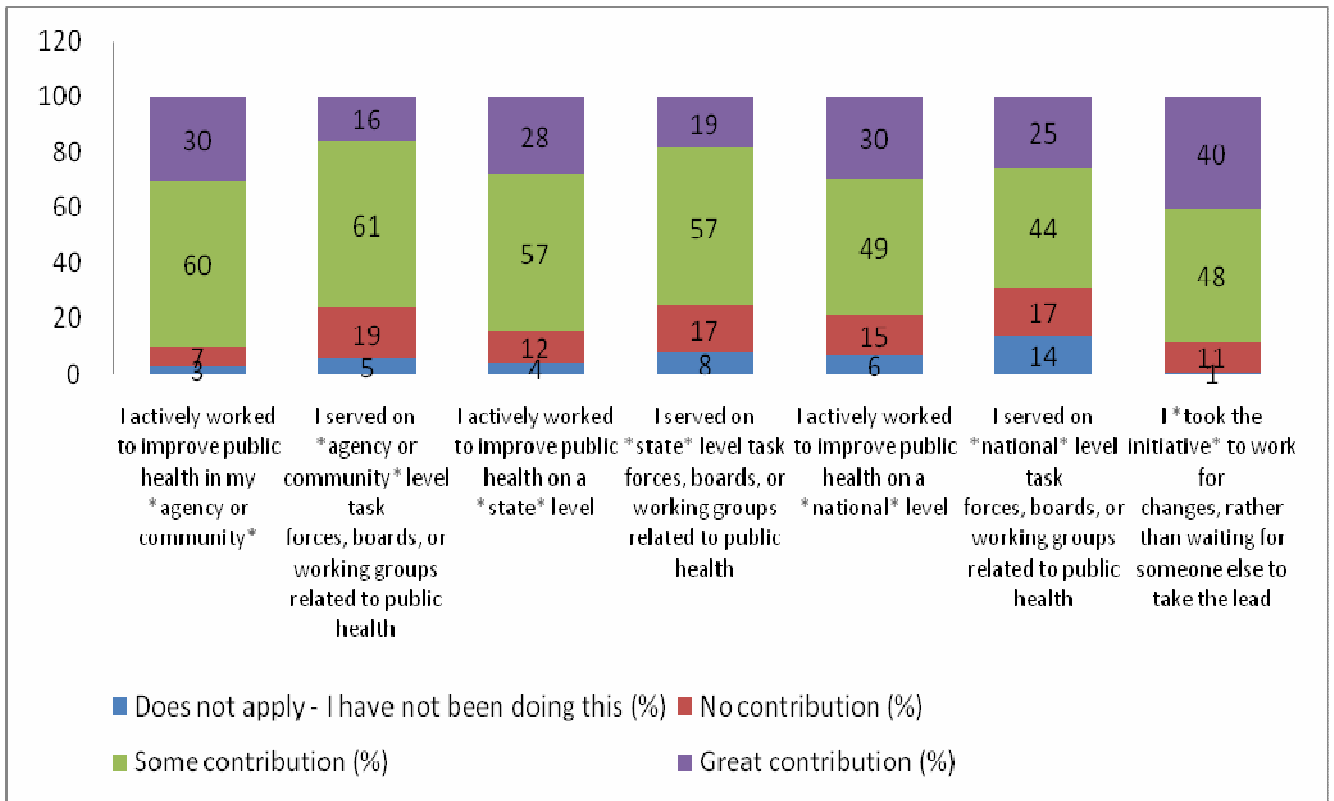
We wanted more details, since this is such an important way to exercise leadership in public health. We asked all respondents who *had* taken on leadership roles that were not related to their formal paid jobs to "give us *one example* of a role that you took on, and the context or situation."

In reply, 192 respondents gave us 231 examples of specific roles that they had taken on. Of these 192 respondents, 45% cited examples at the national level, 35% at the state-wide level, and 9% at the local level, while a few gave internal organizational, global, and more general examples. This section gives examples at each level, starting from the organizational level and working outwards to the global level.

In many cases, the graduates told us within the quotation what it was about PHLI that encouraged them to take on the role, such as increased confidence or a network connection. In other cases, they only told us about the role itself. However, even in those cases, we did have their answer to the closed-ended question in which they checked from a series of options about what encouraged them to get involved with that opportunity, as summarized in Figure 15 above. When we present the quotations below, we sometimes state which of these options the individual had checked before presenting the quotation, particularly in cases in which it was not clear from the quotation itself why the leader had gotten involved.

Organizational level voluntary public health leadership examples

Only six respondents (3%) gave examples of improved organizational leadership they had offered, but this is probably because of the way we worded the question: "Did participating in PHLI influence you to take on leadership roles that were not directly required by your formal paid job, such as task forces, boards, professional associations, or informal advocacy?" Nevertheless, we provide a few of the examples given.

One graduate who worked for CDC noted:

> *One of the most influential learning experiences was the recognition that leadership is not just the individual, but is collaborative in nature. Working with various organizations and people is the hallmark of effective public health practice, so learning more about collaborative leadership has really benefited my perspective on leadership and has greatly influenced my own leadership style....I challenged the Chief of Public Health Practice ... to initiate a 'Public Health Practice Council' as a means to engage CDC leadership across the agency in a constructive dialogue on public health practice, policy, programs, etc. This Council continues to function under the current leadership of Dr. Stephanie Bailey.*

Another "became a Trustee for a [large private charitable] Foundation and advocated for public health as a vital part of 'access to health care.'" Another who worked in a state public health system in the Northwest reported that aided by the confidence s/he had gained in PHLI, s/he had helped to lead an "overhaul of [the] state HR system, [and] participated on several interagency workgroups to guide development of new data system and consolidation of classification systems."

> *PHLI imparted an interest in PH assessment, priority setting and program development. Under my tenure as director, our local PH agency completed APEX I and II, and PACE-EH, as well as developed two 5-year plans. We also initiated courses on PH competency for the staff and modified our job descriptions to reflect needed competency levels for each job. I recently retired, but as I was leaving we were planning to review our PH operations using the local PH agency performance standards. All of these 'global' administrative activities were in large part due to my training in the inaugural class of the PHLI.*

Local and community level voluntary public health leadership examples

Seventeen respondents (9% of all who gave examples of voluntary service) gave local-level examples, largely split between taking on leadership roles in community partnerships and coalitions, and leading specific organizations working at the local level.

One graduate noted:

> *[I] was asked to chair the local partnership for children (SmartStart), which had no chair ladder. Had I not participated in PHLI, I would not have had the confidence to take on this role. No one else wanted to do it.*

Two other graduates cited these examples, which both graduates attributed to increased skills and confidence gained from PHLI:

> *Convening of a community coalition to prepare for a large influenza pandemic.*

> *Helped to develop a Children and Families Council to provide a forum for local agencies, community groups, families and providers to communicate on the improvement of services for children and families.*

Other graduates gave examples of helping to lead organizations at a local level. One noted:

> *PHLI improved my ability to be much more collaborative by demonstrating tools, techniques and positive outcomes. The single best example of a learning experience for me was the seven hats exercise [in a seminar on planning change], with the many lessons built into it.... Working with a neighborhood association*

and the local health department, conducted a needs assessment and developed an educational and advocacy plan to respond to the community's perceived needs.

Another noted that he is a "current member of King County Board of Health" - a large urban county in Washington State - and that PHLI had increased his confidence that he could do this work.

State-level examples

Over seventy respondents gave state-level examples that emphasized general policy and program development, helping plan and run state and regional public health leadership institutes, and service to state public health associations and state associations of county health officials. Many kinds of task forces, boards, and working groups were mentioned within and outside of formal public health associations and organizations.

Leading diverse ad hoc projects

Several mentioned ad hoc projects not obviously connected with a state association. For example, one leader with experience at the state public health department reported that PHLI had influenced her skills, confidence, and informal statewide networks in such a way that encouraged her to lead an important curriculum change at a major state university:

> *The medical school, with urging from me and others in public health, took on the development of a master in public health program. With my and others' urging, they agreed to make it a partially web based educational program. I served as a convener of the workgroup that organized and established the program.*

A second replied that PHLI had improved her skills and confidence in leadership, which had helped to spur her on to take this role:

> *I was the coordinator for the Tobacco Disparities Strategic Planning Workgroup in Colorado funded by the CDC. I was responsible for managing the nine-month process to engage a diverse group of community members and grantees in developing the disparities strategic plan. I was then responsible for ensuring the plan was comprehensively integrated into the statewide tobacco strategic plan in a culturally competent manner with involvement from my workgroup. [One of PHLI's most important influences on me involved increasing my] concern for incorporating collaborative leadership in how the public health 'system' works with populations experiencing health disparities.*

Another described this involvement and result at the state level:

> *[I] helped activate more significant cross border activity with Mexico and this led to the establishment of the NM Border Health Office (the first significant Office*

and located close to the border rather than in a distant state capitol) earlier than other states, with significant money given to border health and the establishment of a NM Border Health Council. This momentum eventually resulted in heightened influence in border health affairs as evidenced by New Mexico hosting the annual US-Mexico Border Health Association Meeting- this also led to additional border funding.

Leading State and Regional PHLI's

Seven mentioned that the National PHLI had helped them lead a state or regional PHLI. One stated that PHLI had given her additional skills, confidence, and interests that had helped prompt her on to take these related roles in her Midwestern state:

> *[I] became chair of the state public health improvement partnership workforce development committee... [In addition] the [National] PHLI experience was instrumental in motivating me to work toward implementation of a PHLI within my state, which was my [National PHLI] team capstone project. This has been accomplished through a successful collaborative effort involving multiple state partners. The state PHLI has been a dynamic force in promoting the development of emerging leaders for public health in the state. For me personally, having a leadership role in the development of our state PHLI has been the single most rewarding experience of my career.*

Leading Through State Public Health Associations and SACCHO's

Thirteen graduates explicitly mentioned important involvements with their state public health associations, while ten mentioned leading through their state association of city and county health officials (SACCHO). One described this contribution over a long period of time and attributed it partly to the skills, confidence, and interests he had gained through PHLI:

> *I was appointed shortly after I graduated [from PHLI] to the Board of the Massachusetts Public Health Association, the nation's largest APHA affiliate, and successfully implemented at MPHA a state wide initiative called the Coalition for Local Public Health which is finally before the Legislature dealing with reform of a fragmented 351 [organization] local health structure... taking on a reform of local public health structure ... has taken almost 10 years of steady development to arrive now at active dialog with the state legislature... Without PHLI, I would never have conceptualized developing a state wide local public health coalition comprising 5 major public health associations to achieve a reorganization of the antiquated Massachusetts local health department structure.*

Others reported:

[I] served on the Board of Directors for the Arizona Rural Health Association, Arizona Public Health Association and the Maricopa Country Family Health Systems. Overall, the PHLI experience brought out my leadership skills particularly in bringing together many different agencies, organizations and communities. Without this experience it would have been much more difficult.

I have become a core member of our State Public Health Association conference planning committee for the past two years, and am entering my third year. I have contributed to the theme selection, keynote and program session selection, evaluation and promotional activities. I have been invited to run for the Education Chair for the Association, as well. Prior to PHLI, I did not give these activities much thought. Through [PHLI] I became engaged with the public health systems and leaders in our state well beyond the level at which I had previously operated. I now have a commitment to producing a high quality and well-functioning statewide public health system. I continue to advocate for actions that strengthen our infrastructure, and I demonstrate actions within my own work, committees and projects that support this type of system building. For example: bringing the Ten Essential Services into all of my work - as the framework for what we all do in public health; insisting upon and developing good measures and evaluation of the work being done; consistently using language that puts activities and efforts in the context of a statewide system (vs. separate programmatic, regional, or topical issues). It was unpredictable, prior to PHLI, that I would be doing any of these things. Now, I can't imagine not!

I was elected President of both the New Jersey Public Health Association (NJPHA) and the New Jersey Board of Medical Examiners (BME). The leadership skills that I learned [in PHLI] contributed to a successful Presidency that culminated in NJPHA receiving the APHA Chapter of the Year Award. At the BME, the skills that I learned [in PHLI] helped me guide a board (with 16 of 21 members having less than six months experience and [in spite of] the sudden death of the lead prosecuting attorney for the board) to continue the policy, regulatory, educational, and disciplinary functions of the Board.

[Since PHLI, I have been] President of the Missouri Public Health Association and Executive Director of the Missouri Association of Local Public Agencies which was comprised of 154 public health departments in the State of Missouri.[PHLI contributed to my] understanding the public health delivery system and being able to influence policy and development.

I took on the role of President of the local public health directors' organization in an effort to unify our activities and work better with other public health organizations in the state. [PHLI] has given me some of the leadership tools needed to mobilize local public health officials in our state to work for a state-wide system of public health since the state department has lacked the ability and

the will to do so over the past 8-10 years. I thoroughly enjoyed my time in PHLI, and think it was beneficial to me in my public health career.

I now serve on the Board of the California Association for Public Hospitals representing my county and am engaged in advocacy work with the state legislature. The self awareness tools we received [in PHLI] were extremely helpful going forward.

A National PHLI Story: Margaret Schmelzer, R.N., M.S.

Director of Public Health Nursing and Health Policy
Bureau of Health Information and Policy
Wisconsin Division of Public Health

As a final example of state-level voluntary leadership involvements, Margaret Schmelzer described this example of her long-term growth and leadership.

[PHLI] provided the published resources and the nation-wide support system to test out leadership knowledge and behaviors. Because of the people I met, including the leadership of PHLI, I discovered a deep sense of courage that I did not know of.

While I've always been brave and a risk taker, there has never been any experience I have ever had that allowed me to reach deep into my heart, soul, and mind to discover the incredible personal and intellectual capacities I possess. As one outcome, I have led and continue to lead a major statewide systems effort to transform Wisconsin's public health system for the 21st Century… [I provided] system leadership to transform Wisconsin's Public Health System for the 21st Century to turn around the following system-attributes: Highly categorical state level public health department with no shared vision but great people; risk-averse culture; and, varying capacity and expertise in developing and sustaining diverse collaborative partnerships. http://dhfs.wisconsin.gov/statehealthplan/...

I was also one of 14 appointed persons in the nation appointed to a USDHHS Technical Expert Panel to advice on Healthy People 2020. In November, I'll be off the National PHLS Council after a decade of service. I have been transformed as a person because of the National Public Health Leadership Institute. I am emblematic of its process and outcomes.

We note from the last paragraph that this leader's influence, honed within the state, later was extended to the national level.

The next section presents examples of national-level voluntary leadership that scholars took on after PHLI, for which they give PHLI at least part of the credit for their efforts.

National-level examples

Over ninety respondents cited examples of national level voluntary leadership, with strong emphases on service through NACCHO (64 mentions) and ASTHO (13 mentions). APHA received seven mentions, PHLS received five, and NLN received two. Others mentioned further service work and associations.

Leading through NACCHO

Eleven mentioned that they have served on NACCHO's Board of Directors, while two mentioned having served as President of NACCHO. Seventeen reported that they have served on a NACCHO committee or workgroup on matters such as "leadership and workforce development," "informatics," "marketing," "finance," and "infectious disease prevention and control." Six of these mentioned that they had at one time chaired one of these work groups, while several others stated that they had served in unspecified "leadership roles" with NACCHO.

For example, one graduate answered that PHLI had strengthened her confidence and skill, and helped her to take on a roll in a NACCHO:

> *[PHLI gave me] the self-confidence to allow the leader in me to emerge, the personal coaching was a once in a lifetime opportunity and so very helpful. [I am] a current member of NACCHO Infectious Disease Prevention and Control workgroup.*

Another reported that she had taken on a role in a NACCHO committee and chaired it partly because of network connections and confidence that emerged during PHLI

> *PHLI connected me to public health leaders across the country, many of whom I remain in contact with - this sense of a network of public health leaders, and the ability to tap into it, remains the strongest influence of PHLI on my leadership. [I] participat[ed] as a member of the original MAPP workgroup (NACCHO), and later chaired the workgroup.*

Many responses showed how PHLI graduates frequently assumed leadership roles in multiple national organizations and associations. One graduate, stating he was prompted by the increased skills, confidence, interest, and networks created by PHLI, took on a number of such roles:

> *I was asked to sit as a member of AIDS Care Education and Training for 3 years and then was nominated to be chair for the next 4 (which I am currently*

engaged). I also began sitting on the Leadership and Workforce Development Committee (now Team) at NACCHO after PHLI. As a member, I sat help shape the PH Ready process and was a member of the Exploring Accreditation effort. I have subsequently been asked to serve as Chair of the Leadership and Workforce Development Team of NACCHO.

On a larger scale, one graduate attributed the development and flourishing of NACCHO itself to the trusting relationships and leadership efforts of PHLI graduates:

NACCHO was formed circa 1994 as a merger between 2 pre-existing national bodies. Leadership in the new NACCHO was heavily weighted with PHLI graduates - people who knew and trusted each other, and who had a great deal of respect for each other's opinions and a shared vision of where local public health practice could go with the support of a national level professional leadership organization. The credibility of local public health, research supporting best practice, connections between local public health and organizations such as CDC, NALBOH, and ASTHO, and initiatives that will enhance public health practice in future (e.g. accreditation) were all results of the learning community of systems thinkers who made up the leadership of NACCHO. PHLI was the single major contributor to the development of these attributes.

Leading through ASTHO

As noted above, thirteen graduates chose ASTHO examples to describe their voluntary leadership work at the national level. Two had been president of ASTHO, another had been on the Executive Board, while others had served on working groups related to vaccines, environmental health, and nursing.

For example, a leader in environmental health from a mid-Western state reported that partly due to increased confidence and interest from PHLI:

[I] assumed co-chair of a national committee convened by ASTHO to market the role of environmental health in the public health system.

Another, who was Director of Public Health Preparedness in her state, reported that partly due to increased skills, interest, and networks forged through PHLI, she had increased her national involvements:

After PHLI I had a better sense of the leadership role I could play in public health at the national level. I have been more involved with ASTHO and national issues related to public health and healthcare preparedness. I am now a member of the Executive Committee of the Directors of Public Health Preparedness, a new group within ASTHO.

Another graduate described major leadership undertaken with ASTHO:

> *I took on the role of state department of health representative to the ASTHO Local Health Liaison Officials, a position that had been left sporadically filled at best. I encouraged and convinced the state director of health to get ourselves back involved in ASTHO in general (getting us to attend) and getting representatives in a variety of the affiliate organizations which brought back models of public health improvement from other states.*

Leading through APHA

Seven mentioned work with APHA as partly attributable to PHLI, including two who have served on the Governing Board and others who had served on committees. For example, one noted that PHLI had increased her skills, confidence, and interest in leadership, which had prompted her take on more national roles. Further:

> *PHLI exposed me to some superb role models and mentors for expanding my leadership skills. It helped my better prioritize where to direct my efforts and to think more broadly about the long-term impact of my efforts and those of my work unit. I am now Chair-Elect of the Oral Health Section of APHA. I have had other roles with the Oral Health Section of APHA including Program Chair, Section Council, and Governing Council.*

Another described this impact on her national (and state-level) voluntary leadership roles:

> *Also, it's hard to say how much this was influenced by PHLI, but since PHLI I have taken on, volunteered for, and been selected/elected for increasing levels of leadership in, for example, APHA and in activities within my state. I would not doubt that PHLI played a part in giving me the confidence, sense of responsibility, and encouragement to do some of these additional leadership activities...I have taken on increasing levels of elected leadership positions in APHA. But also there are some leadership problems among public health nurses throughout my state and I have taken on a lot of formal and informal leadership (and sense of responsibility) in the state in working with public health nursing directors at their request--providing leadership training (formal), developing workforce development research projects (formal & informal), and in developing a new networking and leadership organization to help advance the practice and leadership among this group.*

Other National Leadership Roles

Besides roles with NACCHO, ASTHO, and APHA, several graduates described diverse other examples of national roles. One who was Chief Medical Officer for the Indian Health Service gave these examples as partly resulting from skills and interest he had gained in PHLI:

[First, since PHLI] I have volunteered for two 'acting' assignments at the national level, which I would have been less likely to do prior to PHLI. [Second, since PHLI] I am definitely more aware of the process and dynamics of leadership - although not always able to control or influence them as I would like. [Third, I] volunteered to co-chair a task force to re-design our health care system to be more responsive to chronic care issues. This has become a major effort, now involving at least 50 staff, 14 pilot sites, the Institute for Healthcare Improvement, and many other consultants.

Another stated:

I joined a prestigious national task force re: resilience factors that support individual and community health. Since my background is business/administrative, before PHLI I would not have had the confidence in my knowledge of the discipline to serve on such a body.

As a final example at the national level, another joined a foundation board and stated:

Though I felt others were more qualified to represent public health on a foundation board, PHLI made me feel that I had to step-up when chosen to fill this role. PHLI introduced me to some higher-level thinking about relationships between public health, academia and the community that has been useful as the board has created its mission, purpose and processes.

A National PHLI Story: Susan Allan, JD, MD, MPH

Director, Public Health
Oregon Department of Human Services

Dr. Susan Allan is the Public Health Director for the Oregon Department of Human Services. Previously, Allan worked for 17 years as Director of the Arlington, Virginia County Health Department.

Being Treated Like We Matter. While not attributing all of her actions or achievements to PHLI, Allan cited many examples of both immediate and long term benefits.

> *I enjoyed it immensely. You know, we were treated like we mattered, and in public health practice, you are not often treated like you matter. That by itself was something, like we were actually doing something important and something that people wanted to support and develop. That was exciting by itself.*

Building a Network. Allan spoke extensively about the network that she was able to build through PHLI, citing the value of getting to know prominent leaders in the field as well as "clusters of peers or colleagues that were doing the same thing I was, but it wasn't [exactly] the same thing." She also spoke to the value of getting to know people both inside and outside of governmental public health.

> *At the time…the immediate knowledge and sense of the world just opening up was really powerful…it opened up to other states; it opened up to people who were doing state level work in a different way from what I saw in my own state as a local leader. There were people who were in academics…people who were influencing policy…So I had direct contact with much more of the range of what the field of public health could offer.*

Systems Thinking.

> *The most vivid learning was Peter Senge and systems thinking. It was sort of like when I learned epidemiology, and it was like, 'Of course, this is so obvious and so right,' and I had the same sense with this…and in a way it gave me a new vocabulary to explain things that had always troubled me, because I had never liked a lot of the way problem-solving and systems development was done because it was piecemeal rather than a bigger connected strategy. So that was one [part] that gave me a lot of confidence in trusting my own instincts, actually, trusting what I saw and believed that was different than other people and that there actually was some merit to the way I saw and believed it. And that because I saw it differently than they did, that I needed to say that rather than be cautious about it.*

A National PHLI Story: Susan Allan, JD, MD, MPH (continued)

Serving the Wider Field. Allan has served on NACCHO committees, several key IOM committees, and as the APHA appointee to the Council on Education for Public Health. "I ended up with an opportunity to do things much bigger than my county work." As she tried to describe the connection of this work with PHLI, Allan said, "I know it increased my bravery to take some risks. I think partly it increased my sense of the excitement and value of getting into policy positions or advisory roles…" She explained further:

> *Having the opportunity to get a little closer to people who were stars [in public health] and then also the sense of investment in policy and leadership that was part of the curriculum, I had both a sense of 'well, somebody made a vote that I might be able to do this,' and 'I took up the slot, so I owe it to the field to try.' So those first couple of ventures out actually were more, kind of cautious and tentative, even though they seemed like really big bold moves at the time, and it was a sense of progression from what I had done at the leadership institute.*

Developing Others. Finally, Allan discussed how the principles of PHLI have influenced her input as a member of the Council on Education for Public Health.

> *…I think a lot about public health education. Even though it's not my job, I think about it a lot… I think in terms of training leaders and managers and training for policy and non-academic ways of training and coaching. I gave that more conscious thought, in part, because of my experience there [at PHLI], and I have actually put a lot of professional time into trying to develop ways to continue education for public health professionals, to find ways to provide skills to people who are working in the field and who kind of stumbled into it through a side door, so it's my experience there [with PHLI] that is a key part in my commitment to and involvement with the training of the public health field.*

Domain 3. Network Development and Network Actions

Throughout its history, one of PHLI's key objectives has been to strengthen the national network of public health leaders. Recent scholarship (Uzzi, 1997) has explained that professional networks have three major defining characteristics: trust among members, knowledge-sharing, and collaboration.

Evidence from this evaluation – both quantitative and qualitative – reveals that many respondents felt that PHLI had strengthened public health leadership networks in all three respects.

Summary of Findings

1. When asked to "explain in some detail one of the most important influences that PHLI has had on your leadership," over 80 scholars (24% of respondents who answered this question) cited gaining improved and valuable network connections.
2. The most commonly cited benefits of these connections included enhanced overall understanding of public health leadership's roles and goals; long-term professional knowledge-sharing; social support for taking action – such as ideas, encouragement, good examples set by others; and being introduced to opportunities for formal collaborative work, such as with NACCHO or a State Public Health Association.
3. Forty-five percent of graduates had sought professional "counsel" from another PHLI graduate in the past two years, while 55% had collaborated with other PHLI graduates on projects or activities.
4. Formal network activities that emerged from PHLI included the PHLS, the NLN, the State and Regional PHLI's.
5. In addition, many respondents described how these collaborations had led to specific improvements in organizations, programs, policies, and organizational, community, and state-level systems. The close links between these specific networking and collaborative efforts and infrastructure and systems improvements are presented in Domain 4.

Being part of a national cadre of very outstanding leaders, developing good relationships within that network, had a significant impact on me and my work. It continues to affect how I think, what I ask about and how I approach many challenging situations.

Through PHLI, I met other public health leaders across the country, and have maintained friendships with them since 1997. This network of accomplished leaders has been an invaluable source of advice, best practices, referrals, and support. I have held leadership positions at the local (health officer) and state (deputy health secretary) level for almost 12 years, and have found that a leadership network has been essential in my career.

This section presents the evidence from this evaluation about growth in public health leader networks. It briefly refers to some of the material previously presented under Domain 1 in relation to Individual Leader Development, and points out how those data were also closely related to network development. Then, it presents other relevant data.

Question 3.1 What general benefits did scholars derive from the network "connections" that they made during PHLI?

We have already presented some of the benefits that individual leaders obtained from network development under Domain 1, "Individual Leader Development." Because these influences of the "network" were so deeply and personally beneficial, we included them there.

We noticed that many scholars learned from their network partners more about how to define their roles as public health leaders – both within their jurisdictions and at a national level. The collective conversations about public health systems development and collaboration had strongly influenced their thinking about their local and national roles.

We also described how scholars had felt personally "validated" by PHLI and by their membership in a nationwide "family" and "network" of public health leaders who were courageously and purposefully taking action. Feelings of "belonging" to this "support system" had given many a greater sense of "identity" as public health leaders, and provided a "shot in the arm" of courage and confidence to fulfill their potential as leaders. Furthermore, some found it very valuable that they now had more trusted "professional friends" around the country that they could call on for counsel.

Now, in Domain 1 of the report, Individual Leader Development, we summarized these results in relation to the particular benefits that many scholars claimed, but did not fully present or quantify all of the data about networks that we found when we asked respondents to tell us about "one of the most important influences that PHLI has had on your leadership." We want to expand that discussion here.

When we asked that, over *80 scholars* (more than 20% of all respondents to the survey, and 24% of those who answered this question) cited gaining improved and valuable network connections. Some (n=35) simply mentioned "networks" without explaining specific benefits, for example:

> *Established a network of leaders that I continue to be in connect with today...this is now a long period of time! My class was the first to accept Deputy Directors, and they continue today in several strong leadership roles nationwide. I rate this # 1 in my PHLI experience.*

About forty-five other graduates, however, explained or mentioned specific benefits they had gained through their enhanced network connections. We present these briefly now.

Networks enhanced overall understanding of public health leadership's roles and goals

To give the reader a sense of the relative importance of these benefits, we note that approximately twenty of these more specific responses explained that network connections had helped them grow in understanding and skills. Several of these respondents said that their new network partners had helped them understand in a general sense what leadership and specifically public health leadership are, and what its goals can be. For example:

> *Being part of a national cadre of very outstanding leaders, developing good relationships within that network, had a significant impact on me and my work. It continues to affect how I think, what I ask about and how I approach many challenging situations.*

> *Exposure to my colleagues - networking - was essential in helping me understand my strengths and limitations as a public health official, how public health practice involves a combination of science and politics and a basic understanding of civics.*

> *PHLI provided a cadre of peers who could assist with specific issues. We all have strengths in certain areas; I could assist others concerning my strengths and others could assist me with their strengths.*

> *I entered the program with a high degree of interest and naive vision, but was taught/coached/mentored into more realistic view of how I could influence public health policy, theory, and most importantly practice. The PHLI experience helped me learn about my strengths and growing edges, exposed me to a variety of peers going through similar processes of change, and formed a (loose) learning community which taught me (experientially) how important learning communities are to the development of high-level capabilities.*

Networks led to professional knowledge-sharing

Another group of these respondents described how the networks they built through PHLI provided an ongoing benefit through professional knowledge-sharing, one of the key benefits of professional networks most commonly described in literature. Some explained the network afforded by PHLI had given them "role models" and "mentors." Others put it this way:

> *NPHLI illustrated to me the importance of having mentors and leadership contacts *outside* one's own system. It was very useful to have to explain my organization, my project, and my challenges to other leaders unfamiliar with all of them. I am still using the external insights they provided.* [The evaluator is aware that this scholar, a "solo scholar" in the UNC model, has continued regularly scheduled telephone calls with the peer mentors on his PHLI "team" across the country.]

An absolutely invaluable benefit of my year in NPHLI was 'building my network'--- I have called or emailed my fellow classmates countless times for opinions, experience, knowledge, etc.

Through PHLI, I met other public health leaders across the country, and have maintained <u>friendships</u> with them since 1997. This <u>network of accomplished leaders has been an invaluable source of advice, best practices, referrals, and support</u>. I have held leadership positions at the local (health officer) and state (deputy health secretary) level for almost 12 years, and have found that a leadership network has been essential in my career.

The benefits for me in PHLI are linked to the individuals and relationships I developed in the program. I have been able to <u>brainstorm with people I understand and value but who have differing perspectives</u> or question in important ways. I have had the ability to work with another PHLI graduate who gained from me as well. The important aspects for me are: Personal association with public health leaders in other environments but with similar challenges.

[PHLI helped me] [develop] a broad network of peers nationally that has been extraordinarily helpful in <u>brainstorming approaches</u> to a variety of public health system problems, <u>providing specific assistance</u> on various critical public health opportunities and concerns and a <u>forum for staying current</u> on up to date thinking in our field.

We also found some indication of this result in response to two closed-ended survey questions. One asked: "To what extent did PHLI strengthen your professional network of people you can contact for ideas about how to handle your leadership situations?"

Scholars replied that PHLI had strengthened this professional network to varying degrees. Twenty-five percent answered "5" - "to a great extent", while 30% gave it a 4 – in between "Somewhat" and "To a great extent" (Figure 18). About 26% replied "Somewhat" and the remainder gave it a lower score. Only 4% replied "not at all." These responses indicate that a majority of scholars experienced some gains in the strength of the network *available* to them for professional knowledge-sharing.

Figure 18. To what extent did PHLI strengthen your professional network of people you
can contact for ideas about how to handle your leadership situations? (N=384)
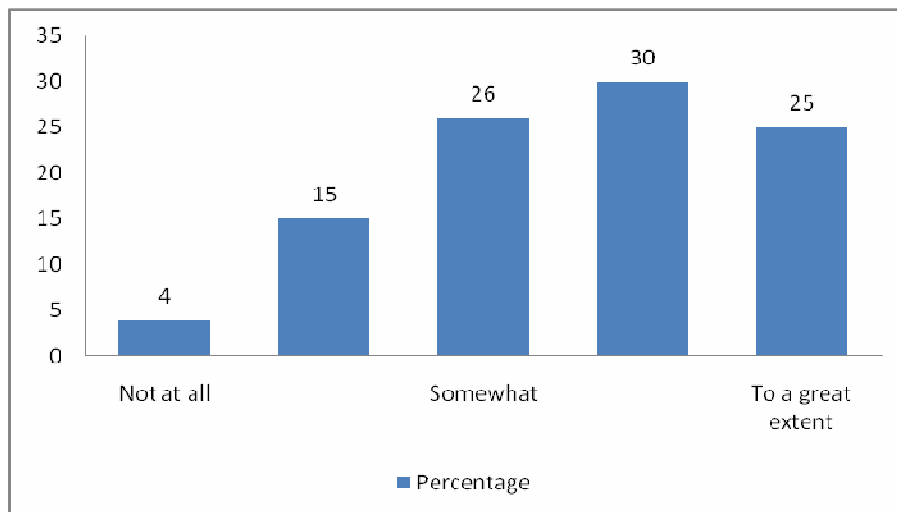
In a related question about actual knowledge-sharing practices, we asked, "In the past 24
months, have you asked for or given another PHLI graduate some 'wise counsel' on how
best to proceed in a leadership situation?" In response, 45% of scholars replied "Yes",
40% replied "No", while 15% were not sure (18) (Figure 19). Clearly, this is a very
general measure of knowledge-sharing behavior: the time frame is long, and it says
nothing about the frequency of such interactions. It does, however, seem to indicate that a
substantial number of PHLI graduates have stayed in touch with one or more other
graduates, and contact one another when they need some wisdom in a leadership
situation.

Figure 19. In the past 24 months, have you asked for or given another PHLI graduate
some "wise counsel" on how best to proceed in a leadership situation? (N=372)
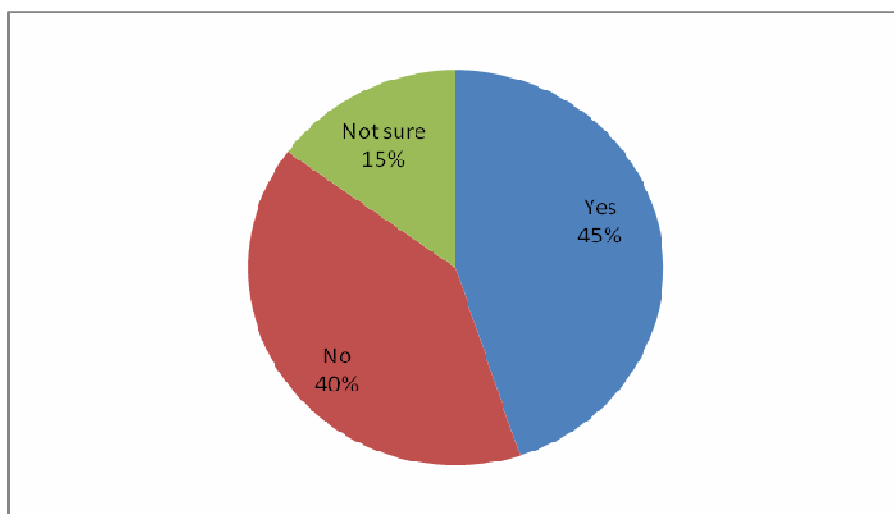
As we have seen above, the open-ended responses to survey questions provided greater information about how graduates valued and received professional knowledge from their PHLI network colleagues.

PHLI scholars said they benefited from the opportunity to build relationships with other scholars from across the country at the retreats.

In this photograph, scholars pose during a break from a meeting at Chaminade.

Networks provided ongoing support for leaders taking action

Others described how the network members provided "support" for providing leadership – implying emotional and "moral support" in addition to ideas for good practice. Some specifically mentioned that the feeling of belonging to a network or team had given them courage to lead. For example:

> [PHLI provided] a network with other scholars [and] *support to stay the course* during tough times.

> PHLI made me aware of the *community of persons interested and dedicated to improving leadership* and it made me *aware of books and resources* that I might use to become a better leader. So it was the sense of there being a community of people that was helpful and has at times I believe *contributed to providing ideas and courage to seek change*. I have been actively involved in promoting significant change for 5 years now and PHLI has had some small part in helping weather this difficult trajectory.

> PHLI helped to give me the requisite leadership skills, the support group to feel *others in my position were making/could make a difference*, gave me the *confidence to step up to the plate*, and impressed upon me the obligation to do so.

Coming from one of the <u>smaller states'</u> public health departments, I was <u>not real sure how effective one could be</u> in addressing issues of state and national importance. PHLI afforded me <u>with peer contacts in other states, helping me to see that one's leadership skills have more to do with accomplishment than size of the organization one represents</u>. In the years since graduation, I have <u>been able to</u> effectively lead community collaborations to influence the adoption of state policy on maternal and child health issues, mental health parity, oral health, CHIP, the uninsured, self sufficient wages studies, perinatal studies, foster children's coverage by Medicaid, and other concerns of public health.

Networks led some into formal collaborative work

Finally, some graduates mentioned that PHLI had led them into formal partnerships or collaborative work with others around the nation. We have already summarized this earlier in the report – under Domain 2 - when we explained how PHLI had led to collaboration by encouraging graduates to take on voluntary leadership roles at local, state, or national levels with public health associations and other groups.

In some cases, it was the *concept* that public health "is a community affair" and requires collaboration – learned through connecting with the general network of thinkers and leaders at PHLI - that encouraged leaders to take on roles of all kinds on their own. For others, it also included a renewed sense of actually being a "leader" and part of the national "leadership team" that encouraged collaborative actions befitting a team member. In still other cases, specific personal network connections forged directly or indirectly through PHLI at the state or national level led graduates to take on certain roles, as we saw, in organizations such as SACCHO's, ASTHO, NACCHO, and APHA.

On the survey, we also asked a question about collaboration involving other graduates: "In the past 24 months, have you collaborated with other PHLI graduates on any projects or activities?" In response, 56% replied "Yes," while 34% replied "No" and 10% were "not sure" (Figure 20).

Again, these results are very general, and the results and open-ended comments we have summarized in Domain 2 provide greater details, *particularly in sections 2.7-2.12*. And, as we will see, Domain 4 shows how very specific collaborative efforts, often facilitated by formal professional networking associations and other partnerships, were closely tied to infrastructure and systems improvements.
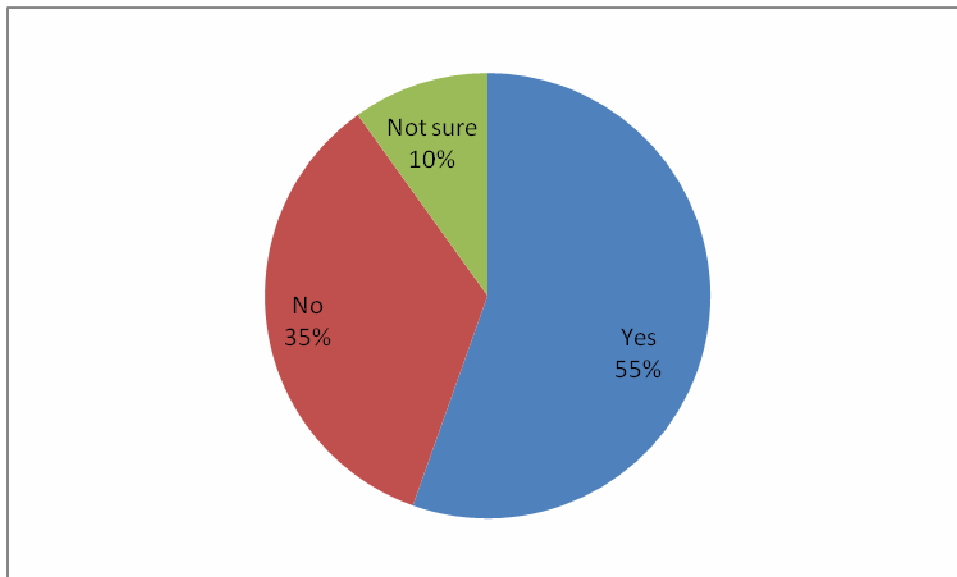
In sum, among the most important benefits for many were the "connections" they had made – and all the benefits that came through those connections.

These findings remind us that leaders are not machines in need only of new practical skills and knowledge, but complex personalities in search of a role and mission, vision, courage and encouragement, validation and confidence, and companions for the journey.

Much of what we have already discussed about the benefits of networks emerged informally. We now discuss findings in the formal networking organizations of professional knowledge-sharing and collaboration, that emerged mainly or partly due to PHLI.

The National Public Health Leadership Society (PHLS)

In the section above entitled "Related Advances in Public Health Leadership Development", we discussed the evolution and work of PHLS. This group was formally established to provide opportunities for knowledge-sharing, support, and collaboration among PHLI alumni. Its activities have included continuing education seminars at meetings and telephone conference calls, public health leadership reading groups, providing the journal Public Health Leadership to all members, and other activities to foster knowledge-sharing.

In addition, PHLS members have collaborated on certain projects. The major project was the development and dissemination of a series of documents called Principles of the Ethical Practice of Public Health and Skills for Ethical Practice of Public Health. In addition, PHLS members have worked together to produce white papers on workforce development, leadership and leadership development, and enumerating the public health workforce.

The National Public Health Leadership Development Network (NLN) and State and Regional PHLI's

In the section above entitled "Related Advances in Public Health Leadership Development", we also discussed the development and work of the NLN. This group was an indirect outgrowth of PHLI. After the founding of PHLI, a number of PHLI scholars and other leaders from around the nation began to start state and regional PHLI's, usually supported partly by CDC. In1994, CDC sponsored a cooperative agreement with the ASPH and Saint Louis University to establish the NLN. The purpose of the NLN was to support the grown of national, state, and regional leadership development institutes, and to help expand collaboration among the institutes, alumni, and federal, professional, and private organizations.

NLN currently has 31 member leadership programs and organizations. It has sponsored a national conference for knowledge-sharing and planning, convened working groups to inform the field on issues such as curriculum and evaluation, developed and published competency statements, and given awards for service and leadership.

NLN is an indirect result of PHLI, and so are many of the leadership institutes that were started by PHLI alumni in an effort to share their experience with leaders in their states. These institutes normally have an explicit or implied objective of improving leadership networks in their states and regions, and are also therefore an outgrowth of PHLI that is formally organized and related to networking. One state deputy observed that the state and regional institutes were a major outcome of PHLI and contributed to networks among emerging leaders at the state level:

> *Development of the state/regional leadership institutes grew out of a group of PHLI graduates and spread across the country. This forum has provided an unprecedented opportunity for our <u>future leaders</u> to be exposed to the latest in leadership skills and thinking, <u>develop a network of peer consultation with ready applicability to solving common public health problems</u> as well as a chance for senior management to see how well these staff perform in a more challenging environment.*

NACCHO and ASTHO

A few respondents described significant influences of PHLI in the reorganization of NACCHO in 1994 as a national organization, and the strengthening of ASTHO in the 1990's. We do not, however, have enough data on those specific histories to discuss those results in detail as PHLI outcomes. These would be valuable future studies.

Summary

At one level, there is a national network of public health leaders that is anchored in members' relationships with PHLI. As we have seen, this includes primarily the formal organization of PHLS. On a more specific but also national and formal level, there is also a substantial network of PHLI graduates and other leaders who run state and regional leadership development programs, the NLN.

In addition, we have heard scholars describe many informal support and knowledge-sharing networks that small groups of PHLI graduates describe having enjoyed since graduation. For example:

> *[PHLI] established a network of leaders that I continue to be in connect with today...this is now a long period of time! My class was the first to accept Deputy Directors, and they continue today in several strong leadership roles nationwide. I rate this # 1 in my PHLI experience.*

> *The benefits for me in PHLI are linked to the individuals and relationships I developed in the program. I have been able to brainstorm with people I understand and value but who have differing perspectives or question in important ways.*

But we have not yet discussed the formal collaborations among network partners, that were facilitated by PHLI directly or indirectly, that led to improvements in the public health infrastructure. How were all of these networks and collaborations specifically linked to national, state, and local changes in organizations, programs, policies, and systematic efforts to improve performance?

In the next Domain, we will discuss how these collaborative movements and projects that groups of PHLI alumni have helped to lead have appeared to influence these aspects of the overall public health system.

PHLI provided educational sessions on current leadership topics and concepts.

Author and consultant Charlotte Roberts presented on "systems thinking" and change theory during many of the North Carolina years.

Domain 4. Public Health Systems and Infrastructure Development

The goal of this domain of the study was to find out if respondents believe that PHLI influenced actual and important events in the real world. In other words, "So what?" This section presents a summary of the copious data that we received in both survey and interviews.

PHLI graduates maintained that PHLI influenced hundreds of specific changes related to programs, organizations, organizational relationships, organization and system performance improvement tools, and policies. This influence was sometimes direct, often through individual or team projects. In many other cases, the influence was indirect and long-term, through the activities of individuals, teams, and collections of graduates – "critical masses" - at all levels.

Summary of Findings

- 40% reported having observed a <u>policy</u> (law) change that PHLI graduates influenced directly or indirectly
- 60% reported having observed a <u>program</u> change that PHLI graduates influenced directly or indirectly
- 66% reported having observed an <u>organizational</u> change that PHLI graduates influenced directly or indirectly
- 67% reported having observed a <u>systems</u> change that PHLI graduates influenced directly or indirectly

- We asked graduates to pick one such change and (a) describe in some detail the change, (b) explain how *PHLI* contributed to it, and (c) tell us why you view the change as important."
  - 96 described improved collaborations, partnerships, coalitions, and relationships at the national (n=25), state (n=42), or local (n=26) levels
  - 76 described developing or implementing methods and tools for improving organizational and system performance, such as Essential Services, Performance Standards, Accreditation, the National Code of Ethics, MAPP, APEX*PH*. Others described substantial restructuring and improvements in local public health services on a statewide level, and more specific state and local efforts in such domains as immunizations and fraud prevention
  - 31 described new policies passed at the national (n=4), state (n=23), and local levels (n=4) in domains such as tobacco control, injury control, public health systems funding, and health insurance
  - 94 described organizational changes including reorganizations (n=26), developing and adopting new approaches to planning for organizational or community public health improvement (n=15), adopting stakeholder or community engagement as a fundamental way of leading an agency (n=10), new priorities (n=8), installation of performance management tools (n=7), quality improvements (n=6), and other diverse changes.

- 68 described improved or new programs at national (n=14), state (n=39) and local/organizational levels (n=15) including workforce and leadership development, HIV testing, worksite wellness, dental public health and other diverse areas

- Many scholars described specific changes they *personally* had initiated, or which their team had initiated through the *applied individual or team project* component of the California or UNC-based PHLI program.

- Many explained that a *"critical mass"* or group of PHLI graduates had accumulated within a state or federal agency, or jurisdiction (city, state, region), or state or national public health association (such as NACCHO) and collaborated to shape a new initiative.

- Very frequently, graduates themselves collaborated with one another to lead *others* through a collaborative process which led to infrastructure and systems improvements – such as leading a community public health system through a MAPP assessment and planning process, or leading an organization through a participatory strategic planning process that engaged a wider group of stakeholders than had previously been engaged.

- A general pattern appeared: a group of "thought leaders" met at PHLI and worked together to reconceptualize how public health systems should be structured and should function, and also how public health leaders should work to improve them. This highly influential group of graduates worked with others in senior positions nationally, and through associations such as NACCHO, ASTHO, PHLS, and NALBOH, to devise and disseminate new tools to help state and local governments define and improve public health infrastructure and systems. These tools included but were not limited to the Essential Services, Performance Standards, Agency Accreditation systems, APEX-PH and MAPP, the Code of Ethics, and state and regional public health leadership development institutes.

- Many PHLI graduates working at national, state, and local levels followed the lead of the early thought leaders and (a) further refined these tools and ideas, (b) led the national, state, and local diffusion and implementation of them, working closely with others of similar mind in state and local networks.

  [A] reconceptualization of the public health system following [the 1988] IOM Future of Public Health report. Early graduates and subsequent graduates have been the "thought leaders" advancing the reconceptualization. [This is important because it] has helped a whole new generation of public health officials rethink their work.

> *Relating to 'systems' change, <u>several key PHLI graduates</u> were directly responsible for the exploration of a new national accreditation program for state and local public health agencies. This was effective and visionary leadership at its best. PHLI contributed in two ways. First, <u>by developing the sense of shared leadership among top public health professionals</u> as the 'standard' for how we would achieve advances in public health practice. Second, and importantly, PHLI <u>brought public health leaders together to share experiences, become true colleagues, and create a common ideal for WHAT public health could become</u>. I do not believe we would have pushed public health in the direction of creating a national accreditation system to assess and improve public health agencies across the Nation without the efforts and vision of PHLI graduates.*
>
> *[PHLI influenced] the growth of local health departments in Nebraska in 2001. Prior to a Local-statewide initiative, there were 16 Local Health Departments covering 22 counties in the state. After the intervention, there were 32 Health Departments covering the ENTIRE state (all 94 counties). <u>Several PHLI alums were involved, along with public health leaders that had participated in the state-level PLHI</u>. These folks served as <u>change-agents and were leaders</u> that help guide & got the process passed. This change was HUGE in that an entire state went from part-time to fulltime coverage of public health services. Health status change-measures are now in place to evaluate & affirm the positive impact that local public coverage DOES make.*

Question 4.1 Did PHLI influence changes in programs, organizations, systems, and policies? <u>Quantitative evidence</u> from the survey.

For this study, we operationally defined the public health system broadly as "the complex network of people, systems, and government and private organizations working to improve population health at the local, state, national, and global levels." This definition is amended slightly from that offered by CDC (undated (a), undated (b)).

By this broad definition, the public health system includes the people, the organizations and their resources, the programs they offer individually or together, the policies which both enable and constrain the organizations and shape their relationships, and the nature and quality of the relationships between the people and organizations.

It is difficult to discuss any single element of the system in isolation, because each part of the system shapes the other parts at any given point in time and over time, and because changes in any one element always means change in another. For example, a new state policy increasing local health department funding will necessarily bring about changes in organizations, programs, and personnel.

Yet, it remains possible to discuss parts of the system, as long as one is not too rigid in drawing boundaries and is able to portray causal links between changes in one element and changes in other elements over time.

For this part of this report, we therefore draw some artificial distinctions between some of these elements of public health systems in order to distinguish analytically between various major types of PHLI outcomes that scholars described, and to show how elements that PHLI influenced also influenced other parts.

In particular, we wanted to know if PHLI had wide influences on programs, organizations, relationships, and policies. We operationalized these concepts to be sure that the graduates knew what we meant, by asking the question in this way:

- Can you think of an *organizational change* that PHLI graduates influenced directly or indirectly? (e.g. revised mission, process, positions, expansion, reorganization, funding, or other)

- Can you think of a *program change* that PHLI graduates influenced directly or indirectly? (e.g. new, expanded, improved, better funded program)

- Can you think of a *systems change* that PHLI graduates influenced directly or indirectly? (e.g. a partnership, collaboration, new cross-organizational system or method for improving practice) [In this particular and narrower use of the word "systems," we were reflecting the specialized way in which it is often used among public health leaders, which is to describe formal and informal relationships between organizations or to describe cross-organizational methods for improving practice, such as accreditation systems.]

- Can you think of a *policy (law) change* that PHLI graduates influenced directly or indirectly?

For each question, the response options were "Yes", "No," and "Not sure." The results were as follows (Figure 21):

- 66% of scholars reported having observed an organizational change that PHLI graduates influenced directly or indirectly
- 60% reported a program change that PHLI graduates influenced directly or indirectly
- 67% reported a systems changed that PHLI graduates influenced directly or indirectly
- 40% reported a policy (law) change that PHLI graduates influenced directly or indirectly

Figure 21. Types of Changes Influenced by PHLI Graduates (% of respondents)
(N=375-378)
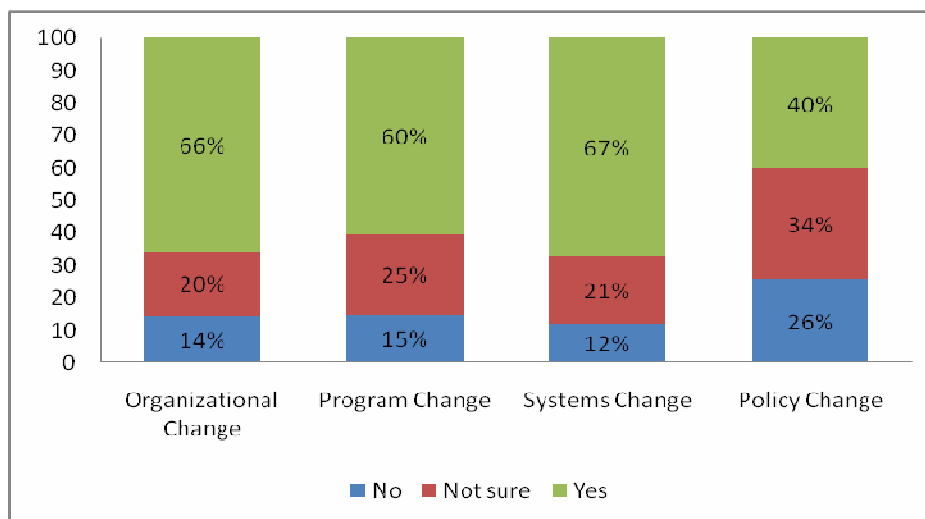
These results indicate that the majority of respondents believe that PHLI graduates had influenced organizations, programs, and systems, and that 40% believed that graduates had influenced policy. This would seem to indicate that PHLI graduates believed that *PHLI itself* had an influence on many real-world changes, but the results must be interpreted with caution based on two problems with the way that we asked the question.

First, this question asked if PHLI *graduates* had influenced a change. We hope that based on our use of the word "graduates" and the timing and context of this survey as an impact evaluation, respondents would have answered with respect to changes that PHLI graduates influenced *after* attending PHLI. Perhaps some answered on the basis of changes graduates influenced before they ever attended PHLI. We think that is unlikely, but we cannot be certain.

A greater problem is that the question makes no reference to whether PHLI *itself* influenced the change that they were referring to in some way. On the plus side, we titled this section of the survey "Specific Results of PHLI", and if respondents saw that and remembered that they were participating in an evaluation of a program's impact, they would have understood the context. It nevertheless remains quite possible that respondents are referring to changes that PHLI graduates influenced directly or indirectly, but that had absolutely no relation to their having attended PHLI. We hope that respondents realized that this was an impact evaluation and would have answered with respect to changes that PHLI would have influenced directly or indirectly, but of that we cannot be certain.

To our advantage, we did observe that in the follow-up open-ended question that was more explicit about looking for *post*-PHLI changes that PHLI *had* influenced, many scholars explicitly referred to boxes they had checked in this immediately preceding question – meaning that they were reading the quantitative and open-ended questions as a unit, as we intended.

In retrospect, we should have added to these questions the phrase, "… *and* that you believe their having attended PHLI had some influence on." However, we are generally confident that graduates understood what we were asking about, and answered these questions with respect to changes that occurred after PHLI and which PHLI had influenced.

As we mentioned, the follow-up open-ended survey question was more precisely worded, and from it we received remarkable stories of PHLI's impact. To those responses we turn next.

A National PHLI Story: Carol Woltring, M.P.H.

Executive Director
Center for Heath Leadership and Practice, Public Health Institute
Oakland, California

Carol Woltring was the co-designer and Director of the CDC/UC Public Health Leadership Institute from 1991-2000. Ms. Woltring currently serves as the Executive Director at the Center for Health Leadership and Practice at the Public Health Institute in Oakland, California. As someone closely involved in the creation, administration, and previous evaluations of the Institute, she shares her unique perspective on how the Institute has affected the field of public health.

Promoting Systems Change in the Field of Public Health
Ms. Woltring described how the Institute played a formative role in promoting systems change in the early 1990s, at a time when the field of public health was undergoing major transition.

> *I think one of the most significant things that happened early on is the fact that people saw public health leaders become much more open to change and much more innovative as a result of PHLI; more willing to work together to lead major initiatives and changes in public health through the national associations; and much more interested in the overall workforce and leadership development issues that were affecting all of public health.*

She elaborated on the shift in thinking and the redefinition of the public health system at that time, and believes that leaders in the field were open to change because the Institute had a major focus on systems-thinking work.

> *Public health was just beginning to frame itself in systems terms in the early 90's. We brought the new systems thinking work of Peter Senge into PHLI (live and in person), which stimulated a lot of new work by public health leaders in leading the nation in meaning-making and dialogue around turning these concepts into reality on the ground... They even went further and created tools for creating local public health systems through MAPP, etc. PHLI helped to create a systems thinking movement in public health – now there were people ready to do the work.*

Leaders at that time were receptive to developing strategies that were evidence-based in response to the transition in the field toward a more business like, results-oriented approach, and to developing tools to help health departments go through processes that were open and inclusive and that involved community. She went on to describe how scholars, many of them state health officials, went back to their communities and started state and regional institutes.

(More on next page…)

A National PHLI Story: Carol Woltring (continued)

The Concept of Leadership

For many people, participating in the Institute created personal awareness about leadership and validated thinking, 'I am a leader.'

> *People, especially women in the early '90s, were very honored to be selected to participate in PHLI and many had not quite thought of themselves as leaders yet. And yet through the experience of the whole year, everyone came together and created a communal awareness of what leadership was, and everyone got something very meaningful and impactful out of the year-long program that was very unique to themselves.*

Networking

Ms. Woltring described NPHLI's effect on networking:

> *The power and importance of networking was one of the biggest things I think that we discovered in the early 90's. We discovered how important it was through them [the PHLI scholars]. The PHLI week long retreat created an opportunity to slow down and really get to know fellow PHLI colleagues on a deeper level. Something special happened that required folks getting away from work and home responsibilities just for a while… The networking that happened was very strong within each class. Even today [2007] you will hear folks talk fondly about their PHLI year… (I was in year 3 – what year were you in? Our year was really good! etc.).*

The Public Health Leadership Society (PHLS) began in the early years of the program as a mechanism to link graduates and capitalize on relationship building. Ms. Woltring comments:

> *So we (staff and graduates) began PHLS and that turned out to be…one of the major, major positive outcomes of nine years of investment in PHLI. It was very visible, this national network of graduates of PHLI. It helped them to stay networked, it helped them to continue peer consulting, and friendships. They helped each other with job searches. They were all over the country so they had their fingers in all kinds of different policy initiatives and shared their work and progress with each other... as well as their challenges. They started the PHLI reception and annual Sunday morning program at APHA, did some concrete policy work on workforce enumeration with HRSA, and some terrific public health ethics work that resulted in the Ethics for Public Health [documents]. In other words, we started something in the early '90s that is sustainable, that they wanted to sustain and have sustained PHLS was the perfect solution to a very strong need to stay networked.*

Organizational Change

> *I know that many of the people went back [to their jobs] with the tools, not just about team building, but leading systems change and organizational change work; they went back with much better ideas and strategies for organizational change initiatives. Many of them reorganized their departments, created strategic plan, and more inclusive processes, more internal collaboration. Lots of new things were happening in the field of management and leadership at that time, but also I think by focusing the content of the curriculum on leading organizational change and collaborative leadership that PHLI graduates were often the leaders in their states around this work. They were some of the early public health leaders that "got it" about the importance of working with partners, organizations and individuals collaboratively.*

Question 4.2 Did PHLI influence changes in programs, organizations, systems, and policies? <u>Qualitative evidence</u> from the survey and interviews.

To understand more about the specific changes that graduates believed that PHLI had influenced, we asked:

- "If 'Yes' to any of the previous four questions, please pick ONE change and (a) describe in some detail the change that was made, (b) explain how *PHLI* contributed to it, and (c) tell us why you view the change as important."

In total, 287 respondents answered this question and described a total of 365 "changes" (Table 6). Since the types of change overlapped conceptually and were highly interrelated, it would have been artificial to label many participants' responses to this question as a single type of change. Thus, we often "coded" a quotation as showing multiple types of change, but gave each quotation a "primary" code that we thought captured the most central idea in what they wrote. Secondary codes and tertiary codes were the overlapping ideas in what they wrote, or the results of the primary code.

For example, consider this response:

> *We developed the Women's Health Coalition as a forum for women in a variety of positions to meet and share common interests and causes. It got funding and sponsored annual conferences with the governor on the program and evolved into broader alliances and cooperative programs such as the domestic violence advocates doing physician training thru the State Medical Society. The common goal of women's health enabled diverse women advocacy issues to be addressed.*

We gave this quotation the primary code of "Collaboration-state level-coalition" since it seemed to be mainly about a new state-level coalition, which we coded as a special type of collaboration. We gave the quotation a secondary code of "Program-state-new-women's health" because the quotation also described new women's health programs that emerged from the coalition.

We must emphasize here that these are just the changes that PHLI scholars listed when they responded to this question, and not (a) all changes that PHLI graduates would have been aware of, exhaustively, or (b) all changes that PHLI scholars reported in this particular evaluation, either in the thirty-five interviews we conducted, or the 393 survey responses we received. (Some reported specific organizational changes in response to other survey questions about their voluntary work experiences, for example, as already presented in Domain 2 of this report). Rather, Table 6 only presents the results from this particular question, occasionally amplified for explanatory purposes by data from the survey questions about the program's impact on individual development. It therefore represents a *sample* of the *major types of changes* that PHLI graduates believe PHLI *contributed to* at the local, state, and national levels. It also portrays the relative number

of the various types of responses at the different levels of infrastructure, in this particular question. Some scholars listed the same changes as others; for example, many mentioned national and state accreditation movements, and several mentioned the same state or regional public health leadership development program.

We also emphasize the these data represent changes that scholars believed that PHLI *contributed to* in the open systems dynamics of the real world, where everything that occurs is a resultant of a multitude of factors and forces and human intentions and schemes, rather than changes for which they believed PHLI was the sole causal agent (Grove, Kibel, & Haas, 2006). In many cases, as we asked them to do, respondents explained how they believe PHLI influenced the "change," either directly or indirectly. In other cases, respondents offered stories of change with no explanation of PHLI's contribution. We still counted those and share some of those in the data that follow. However, we most often give examples that came with explanations of PHLI's influence, to help display the relation between PHLI and the types of outcomes respondents chose to highlight.

The reader will rightly notice that we have already described some of these patterns in the outcomes earlier in the report, specifically in the material on "network development" in descriptions of the results of voluntary associations and task forces that participants joined in Domain 2, and in the collaborative activities of "networks" in Domain 3 above. The section presents additional emphasis of the influence of the program on the development of "collaborations" which lead to specific improvements in programs, policies, organizations, and cross-organizational "systems" or methods for improving practice, such as statewide performance standards and accreditation movements. In addition, it systematically reviews the types of changes at various jurisdictional levels that PHLI graduates attribute partly or in large measure to PHLI's influence.

Table 6. Numbers and Types of Specific Changes Attributed to PHLI – Survey
Responses (Total Respondents = 287, Total Changes Mentioned = 365)

Systems Changes-Collaborations, Partnerships, Coalitions		
	Collaboration-national (e.g. improved, new partnerships, associations, initiatives, task forces)	25
	Collaboration-state (e.g. improved, new partnerships, coalitions, associations) or better relationships between state and local public health agencies	42
	Collaboration-local (e.g. improved, new partnerships, coalitions)	26
	Collaboration-international	2
	Collaboration-not specified	2
	Total systems changes-collaborations, partnerships, coalitions described	**96**
Systems Changes- Specific Methods and Tools for Improving Organizational and System Performance		
	National level performance improvement interventions developed and implemented - Performance Standards, Performance Management, Accreditation	16
	National Code of Ethics	11
	National – general development of public health leadership field and concepts	7
	National – workforce recruitment, development, and competency statements developed	4
	State level performance improvement interventions implemented – Ten Essential Services, Performance Standards, Performance Management, Accreditation, and Quality Improvement	14
	State level – miscellaneous specific systems improvements (e.g. immunization registry, human resources or workforce development systems improvements, Medicaid fraud prevention, trauma prevention and treatment systems, unspecified imp.)	12
	Statewide reorganization or improvement of local public health systems – increasing coverage, strength, funding	4
	Local level systems development (e.g. improved funding, performance standards implemented, community-wide assessment and planning undertaken)	8
	Total systems changes-other described	**76**
Policy Changes		
	National policies passed (e.g. workforce)	4
	State policies passed (e.g. tobacco, injury control, public health systems funding, health insurance, lab systems)	23
	Local policies passed (e.g. tobacco, fluoridation)	4
	Total policy changes described	**31**

Table 6 (continued). Numbers and Types of Specific Changes Attributed to PHLI – Survey Responses (Total Respondents = 287, Total "Changes" Reported = 365)

Main Category of Change	Sub-Category of Change	Number of Changes Mentioned
Organizational Changes		
	Reorganization (e.g. new division, combine two state-level agencies into one, or split one into two, reorganize a state department of health)	26
	Adopt new approaches to planning, major planning initiatives e.g. using strategic planning methods such as APEX*PH*, agency planning	15
	Adopt community and stakeholder engagement as a fundamental approach to all planning and working	10
	New programmatic priority and related expansion of capabilities (e.g. oral health, environmental health, preparedness)	8
	Other new process installed (e.g. Information systems, incident command system, business services)	8
	Performance management process installed	7
	Human resource hiring, management, and training processes improved	7
	Quality or general effectiveness improvements	6
	Improved funding received	4
	New organization started (e.g. non-profit dental clinic)	3
	Total organizational changes described	**94**
Program Changes		
	International-leadership development program	1
	National level programs improved – (e.g. HIV testing, workforce development in epidemiology, research)	4
	National level new programs started – (leadership development, bioterrorism and preparedness)	10
	State and Regional programs started – leadership development	24
	State level programs improved or expanded (e.g. worksite wellness, HIV, training, infectious disease, bioterrorism and preparedness, tobacco control)	15
	Local level programs – improved or expanded (e.g. dental public health, school health)	4
	Local level programs – new (e.g. leadership development, environmental health)	4
	Organization level (internal) programs started – leadership development – federal, state, local	7
	Total program changes described	**68**

Systems Changes: Changes in Collaborations, Partnerships, Coalitions and in Specific Methods and Tools for Improving Organizational and System Performance

Many respondents explained that PHLI substantially influenced the national directions in public health infrastructure and systems development that have followed the issuance of the Institute of Medicine Report on <u>The Future of Public Health</u> in 1988. According to its graduates and other key informants, PHLI appears to have done this through what it taught and what it did.

What it *taught* emphasized the related concepts of systems thinking, systems improvement, collaborative leadership, and the role of public health leaders in fostering systematic change through convening stakeholders to assess and improve organizations, programs, community and state public health systems, and policies. Just as importantly, what it *did* was foster a national network of public health leaders who knew and trusted one another, who thought in similar ways, and who wanted to see public health practice advance in the same general directions.

With fresh and exciting ideas and supported by friends with the same vision, a subset of these trained leaders worked together and with others at a national level through numerous associations, initiatives, and task forces to forge and diffuse conceptual and programmatic advances, such as strategic planning and organizational and system improvement protocols. Key examples of these included essential services, performance standards, and accreditation for strengthening organizations, competency statements, ethical guidelines, and leadership development methods and programs for developing individuals and networks, and the APEX*PH* and MAPP planning methods for bolstering community health systems.

Many of these thought leaders, plus numerous other PHLI graduates and interested state and local leaders that they worked with, also worked at state and local levels to implement the collaborative approaches and systems improvement tools. Thus, the nation saw widespread implementation, with local adaptations, of the various tools for improving systems, networks, and individual performance. These state and local PHLI graduates report that the approaches and tools that they adopted, which had many others PHLI graduates in their ancestry and lineage, had improved relationships and collaborations and led to specific organizational, programmatic, policy, and systems improvements at state and local levels.

Approximately 96 graduates described specific new partnerships, collaborations, or coalitions that PHLI had a hand in producing or strengthening, while approximately 76 described specific new "cross-organizational systems or methods for improving practice," most frequently the statewide implementation of public health agency performance standards or accreditation programs for local or state public health agencies (Table 6).

We now give more detailed examples of these events as explained in survey and interview responses. Since many of these changes were developed at the national level and then diffused to states and localities, we start at the national level and end at the local level. Before doing so, we make these observations:

- Many scholars described specific changes they *personally* had initiated, or which their team had initiated, through the *applied individual or team project* component of the California or UNC-based PHLI program.

- Frequently, scholars also explained that a number of PHLI graduates had accumulated within a state or federal agency, or jurisdiction (city, state, region), or state or national public health association (such as NACCHO) and collaborated to shape a new initiative. Only one graduate referred to a group of accumulated graduates as a "*critical mass*," but that is the term that is often used by training professionals to describe what happens when a training program develops a number of people from the same organization. When a "critical mass" of trainees from one setting is reached, they collectively become strong enough to think up, initiate, and carry through major changes.

- Very frequently, scholars explained that, due to the input of PHLI, and working with or without the direct involvement of other PHLI graduates or team members, they had strengthened collaborations, partnerships, or coalitions. These improved relationships, in turn, were temporal antecedents and at least partial proximal causes of changes in organizations, programs, performance improvement systems, and policies.

Another way of saying this would be that many participants described one type of "systems change" – a new and sustained partnership or coalition or collaboration led by an individual graduate, team, or group of graduates – as an antecedent to a specific "program change" or "policy change." Whether built by one, a team, or a group of PHLI scholars, and whatever their precise form, the enriched relationships provided the soil within which the seeds of performance improvement activities could be developed, planted, watered, and grown.

National-level "systems changes" related to collaborations and systems performance improvement tools

PHLI developed a network of national thinkers and leaders who forged, diffused, and oversaw the widespread implementation of collaborative approaches and tools for public health improvement (Table 6). These "systems" changes – both the collaborations and the tools – are best discussed together because they were closely connected. Among survey respondents who described "systems changes" at the national level:

- Seven respondents described PHLI graduates' general role as "thought leaders" in the development of the new conceptualizations of public health

practice, and new systems approaches to improving it. (Many interviewees expressed this general idea as well).

- Sixteen (including some of the seven just mentioned) described specific methods for improving public health practice that PHLI had influenced in both development and diffusion, including the Ten Essential Services, Performance Standards, and Accreditation movements for local and state public health agencies, often in conjunction with statements about how PHLI graduates had worked together to create them.
- Eleven mentioned the Public Health Code of Ethics developed under the leadership of the Public Health Leadership Society
- Four mentioned other miscellaneous change related to workforce development

Thought Leadership. We begin with the general development of thought leadership and specific tools. One early graduate eloquently described the network as both "a culture of public health wisdom" and "camaraderie", and explained that these networks had facilitated and "cheer led" the development and use of agency performance standards and the document on Ethical Practice of Public Health:

> *[A change that PHLI influenced has been] performance standards as a way of planning and measuring public health -- even at the local level -- that has been an enormous change in my experience -- and I know it has been facilitated -- cheer led -- by PHLI grads who see the bigger picture. Also the discussions and work that have gone into the development of the Principles of the Ethical Practice of Public Health came out of PHLI leaders.... There has developed a culture of public health wisdom – camaraderie of the evolution of a profession beyond the legal, procedural, quantifying of activity -- and I believe in the years I have been associated with PHLI -- that culture has developed, strengthened, and made us all better proponents of public health.*

Similarly, a more recent scholar who has been active on the national scene for many years in developing and diffusing the performance standards and accreditation movements explained that PHLI had (a) developed among senior leaders a common understanding that public health would be advanced by "shared leadership," and (b) produced a network of "true colleagues" that "create[d] a common ideal for WHAT public health could become." Notice that he said "*created* a common ideal", rather than "adopted a common ideal" that had been invented by others. And we also notice that this leader asserts that these colleagues created a common vision for the future of the entire field of public health practice – "a common ideal of WHAT public health could become" (emphasis was in the scholar's original survey comment). This, in turn, had resulted in a subgroup of them – "several" – leading the recent public health accreditation movement. As he put it:

> *Relating to 'systems' change, several key PHLI graduates were directly responsible for the exploration of a new national accreditation program for state and local public health agencies. This was effective and visionary leadership at*

its best. PHLI contributed in two ways. First, <u>by developing the sense of shared leadership among top public health professionals</u> as the 'standard' for how we would achieve advances in public health practice. Second, and importantly, PHLI <u>brought public health leaders together to share experiences, become true colleagues, and create a common ideal for WHAT public health could become.</u> I do not believe we would have pushed public health in the direction of creating a national accreditation system to assess and improve public health agencies across the Nation without the efforts and vision of PHLI graduates.

Several other scholars made similar statements. One early graduate, who speaks from the vantage point of having been a senior officer in both the Public Health Leadership Society and president of NACCHO, observed that a "systems change" has occurred which he described as:

> *[A] reconceptualization of the public health system following [the 1988] IOM <u>Future of Public Health</u> report. Early graduates and subsequent graduates have been the "thought leaders" advancing the reconceptualization. [This is important because it] has <u>helped a whole new generation of public health officials rethink their work</u>.*

While the above survey response does not make clear how or even if PHLI contributed to these graduates becoming "thought leaders", this leader's other responses provide some light. This scholar, whose service in national associations and task forces reveals that he was one of those "thought leaders", states that PHLI "was one of my most influential and important mid-career experiences" that led to "a greatly expanded network of contacts which has proved useful to this day; exposure to practical, high-level, thought-provoking content; an enriched commitment to the public health oriented work I participate and lead in my community, state, and the U.S." These responses in combination imply that this scholar believes PHLI similarly influenced the network connections, understanding, and commitment of other "thought leaders" and with similar benefit. In fact, this scholar also recorded another change which greatly influenced public health systems in the long run - the consolidation of NACCHO in 1994. In his words, PHLI helped leaders of different organizations develop a sense of "comfort" with one another which enabled them to consider consolidating their organizations:

> *[PHLI influenced the] consolidation of NACHO [National Association of County Health Officials] with USCLHO [United States Conference of Local Health Officers]. [PHLI contributed in that the] leaders of both organizations participated in PHLI at the same time, <u>got comfortable with one another [and] recognized redundancy and efficiencies through consolidation</u>. [This was important because it] <u>consolidated the local public health community and created a stronger network</u>.*

In summary, this national leader believed that PHLI educated and brought together a group of leaders who became, together, a cohort of "thought leaders" who worked as a network to develop a new network organization – NACCHO – and to use that

organization to advance a "reconceptualization" of what public health is and how it functions.

Other graduates with similar experience made similar claims. One, who has held senior positions in both state and local government and been active in PHLS and served on the NACCHO Board of Directors, put it this way:

> *PHLI graduates have* <u>*held many of the most influential governmental public health leadership positions at all levels of government impacting [the] evolving public health policy and system transition*</u>*. Referencing the [1988] IOM Report on public health, which by definition, required a dramatic change in thinking and practice, public health leadership was/is essential to success. PHLI graduates have played* <u>*critically important roles in NACCHO at … the Board, committee and staff level[s]. Graduates have been instrumental in formulating policy and strategies forwarded by NACCHO that currently define the roles and responsibilities of local public health*</u> *as an essential element of the Nation's public health infrastructure.* <u>*The development and promotion of the MAPP process is an example of performance*</u>*.*

An interviewee described it this way:

> *The nature of the program attracted leaders who would have been good leaders [anyway]. [But it] gave a* <u>*strong and formal bond and connectivity*</u> *among people working in a variety of sectors at all levels… with PHLI experience. That has influence... Here's a good example. [We have a]* <u>*steering committee*</u> *on accrediting local and state health departments. I bet 7-8 people are PHLI graduates. That is a scenario that gets repeated over and over.*

Elaborating on the value of having committee members with a shared PHLI experience, he said:

> *The social network that is created, there is a value beyond social from that shared experience. [It's] almost implicit, almost unspoken. It's public health as an enterprise. And* <u>*we are in that enterprise together*</u> *regardless of where we are right now…. You're talking about* <u>*a whole generation of leadership*</u>*. What is a generational cohort? 20 years…you have shaped in many ways…greatly influenced a fair amount of practicing public health leaders.*

Reinforcing the power of the network at the national level, another interviewee stated:

> *If you have a network of people that are suddenly interacting and sharing information across the whole country, then you're having an influence on what are the* <u>*issues being talked about, what is the agenda that's being set, how are people moving that agenda forward in their own work. You begin to act as a system*</u> *instead of a collection of individual independent entities and I think that's*

where the benefit is. You suddenly have access to a lot of information, opinions, and wisdom you just didn't have before.

In summary, a number of PHLI graduates believed that PHLI helped develop the network of "thought leaders" that developed the "reconceptualization" of public health systems that emerged in the 1990's on the heels of the 1988 IOM report. By influencing the thoughts of these leaders through the PHLI curriculum and interactions with PHLI faculty and one another, PHLI gave substance and energy to more systematic approaches to practicing public health, and to improving its practice.

Thought Leadership and Specific National Tools. These developments then diffused rapidly throughout the public health system, aided by the scores of other PHLI graduates who may not have been in the main group of "thought leaders" but who, as we have seen, had a new energy and identity as members of the "national cadre of public health leaders."

As seen in Table 6, 16 graduates mentioned the specific tools of performance standards, performance management, and accreditation as having been influenced by PHLI. Other mentioned the MAPP framework for local public health assessment and planning, and the entire Turning Point initiative.

Some noted that PHLI graduates had played important roles, but were circumspect about attributing causation. One, who has been very involved in the leadership of PHLS and NACCHO over many years, wrote:

> *As a public health scientist, it's hard to assign cause and effect; however, I know that PHLI graduates were involved in development of the national performance standards, the Turning Point project, workforce initiatives and the development of the national network of public health institutes and public health leadership institutes.*

Another put it this way:

> *PHLI graduates have been instrumental in the movement toward accreditation of public health agencies to improve state and community health outcomes. It is hard to know, however, how significantly the PHLI experience influenced these leaders to take on this initiative. Certainly, though, most of the leaders in this effort have participated in PHLI.*

Others were more willing to attribute the genesis and movement of these initiatives to the skills or networks that PHLI created. One graduate, who worked for NACCHO when the initiative was launched, wrote:

> *PHLI graduates have explored public health agency accreditation. The networks of colleagues formed through PHLI and maintained through PHLS have been necessary for this important systems change. I think agency accreditation is*

important for 1) better defining public health practice and 2) advocating for the resources necessary to accomplish public health functions.

Similarly, a graduate directly involved in the Exploring Accreditation Project as a staff member remarked that PHLI had increased "collective skills" that in turn shaped its results:

> *[PHLI influenced the] <u>Exploring Accreditation Initiative</u>. <u>Many of the persons involved in the steering committee and some staff were PHLI grads. I think collectively the skills acquired</u> through PHLI and applied to that collaboration had a bearing on the recommendations to move forward with implementation.*

One fairly recent PHLI graduate was directly involved in the NACCHO project on producing a functional definition of a local health department, a connection that flowed directly from her PHLI project work on the same subject in her state. She wrote:

> *Systems change--NPHLI <u>graduates contributed directly to the conversation, impetus, and production</u> of the <u>"functional definition of a local health department",</u> which is likely to result in accountability, certification, improvement for local health departments across the nation--one would hope this would also lead to improved funding.*

We note in that statement a reference to "conversation" and "impetus" and "production" of an initiative, and PHLI influencing all of them. This statement implies that the impetus or energy for this initiative flowed out of "conversations" in the network of PHLI graduates and other leaders who eventually led that project. This highlights how the creation of trusting relationships, one key component of a network, can lead through collective deliberation to new directions. Noting that one such connection can lead to another, this graduate noted that she is now serving on another NACCHO committee.

As for other major initiatives, one graduate noted that PHLI helped by providing leadership training and by enhancing the network of leaders responsible for the development and implementation of MAPP:

> *[PHLI influenced the] Development of a Strategic Decision Making tool with direction and support from NACCHO. PHLI graduates from local, state and federal public health as well as health care organizations and tribal health representatives <u>participated in the development and implementation</u> of the tool. <u>Leadership training and network of leaders from PHLI contributed to the project</u>. As the tool was used throughout the US, it assisted communities in strategic change.*

Regarding the Turning Point Initiative, which was mentioned by several survey respondents and interviewees as benefiting from PHLI, one graduate who played a major role in this initiative wrote:

> *The Turning Point initiative involved organization, program, systems, legal changes in 20 states. <u>Many of the leaders</u> of the state public health agencies involved in Turning Point <u>were Public Health Leadership Institute grads.</u> This affected major change in multiple states.*

Eleven respondents also mentioned the development and widespread adoption of the Code of Ethics for Public Health that PHLS and graduates led. One described the effort:

> *As a team exercise within PHLI the issue of public health ethics was tackled and the team continued through PHLS the pursuit of a Code of Ethics for Public resulting in adoption of a code by APHA and other organizations. This continues to this day as a vital effort of PHLS and is being reflected in the development of curricula, training, and case studies using the code.*

Several other respondents mentioned this development and described using it in their organizations, as with this example:

> *One of the recent PHLI cohorts took it upon themselves to develop a public health code of ethics. We have been going through ethics modules in my leadership team here at work, and find the work on the code of ethics to be very thorough, very applicable, and very fundamental to public health practice.*

To summarize this section, when asked to describe a major change that they believe that PHLI influenced, many chose to describe the development of a national cohort of thought leaders with a greater understanding of leadership and with a strong network within which to define and implement new directions. This group has remained active to this day, and PHLI graduates throughout the history of the program have continued to join this group in its major programmatic initiatives. While some are hesitant to draw causal links between PHLI and these leaders and their initiatives, others that were deeply involved in leading and staffing these initiatives believe that PHLI was important – "needed" - in developing leaders' individual and collective skills, and the network within which leaders "were comfortable with each other" and within which the necessary "conversations, impetus, and production" could flourish.

Systems changes: State-level collaborations, partnerships, and associations

We now turn to evidence related to collaboration and performance improvement initiatives at the state level, and in the next section, at the local level. Just as we have seen at the national level:

- Many of these changes flow out of the collaborative efforts of PHLI graduates.
- In many instances, what graduates described was the statewide or local implementation of essential services, performance standards, MAPP, state and regional leadership development programs that were initially conceived by, or

carried through by, the "conversations, impetus, and production" of PHLI
graduates who were leading at the national level.

- Sometimes, the implementation of new initiatives was the result of a PHLI team.
- At other times, the leadership flowed from a collection or critical mass of PHLI
  graduates from different PHLI cohorts bound together with common vision, skills,
  and relationships with one another stemming from PHLI.
- At other times, graduates describe what appear to be their individual efforts to
  implement change – not mentioning other PHLI graduates per se – especially in
  changes they report at local and organizational levels. In these instances,
  graduates often describe forming other "coalitions of the willing" to implement
  MAPP, performance standards, or other initiatives. This pattern of working with
  and through others is not surprising, since the tools that PHLI graduates
  developed and diffused throughout the nation – MAPP, performance standards,
  accreditation, for example – all at their core both espouse and embody PHLI's
  collaborative leadership ethos.

Forty-two survey respondents described new or enhanced collaborations at the state level,
such as partnerships, coalitions, and associations. Of these:

- Nine described improved or new collaborations that we or they classified as
  coalitions – diverse organizations and individuals banded together statewide
  addressing a specific programmatic or policy initiative
- Nine explained improved or new partnerships or working relationships
  between state-level governmental agencies or entities
- Nine portrayed improved relationships or partnerships between state-level and
  local-level agencies, such as between the state and local public health
  departments
- Seven described general network development at the state level, such as
  enhancement of a state's ASTHO or NACCHO affiliates
- Four described collaborative or knowledge-sharing activities of an
  accumulation of PHLI graduates within a state
- One described being called on by another PHLI graduate to serve on a
  governor's health policy task force, and being the first and only public health
  representative on that task force
- One described an influential annual statewide, relationship-building policy
  development forum that PHLI graduates had contributed to developing
- One described the development of a Regional Health Information
  Organization, a large collaboration to share health information between public
  and private organizations

As for specific performance initiatives, fourteen described implementations of the
Essential Services, Performance Standards Accreditation, or Quality Improvement
initiatives, while twelve described miscellaneous specific systems improvement, such as
an immunization registry, a Medicaid fraud prevention system, and a trauma prevention
and treatment system. Often, as with the national initiatives, the respondent cited

improvements in collaborations and partnerships as antecedent to, simultaneous with, and/or resulting from the performance improvement initiatives.

State-level reorganization or statewide improvement of local public health systems. Most generally, four graduates described statewide reorganization of local public health systems. When discussing personal involvement in state associations in Domain 2, earlier in this study, we described one scholar's leadership of a reorganization of local health in Massachusetts. Another cited the work of a group of PHLI graduates that has grown over time in New Jersey:

> *Redefining the public health system in NJ. It currently is a fragmented system, which several PHLI graduates are involved in working towards changing. PHLI taught to look at the entire system and begin to define a new paradigm to better serve our residents. This is important because it will drastically change the effectiveness and efficiency of the public health system. It will also help to give public health more prominence in the political and public eye*

A second scholar described how National PHLI graduates and regional PHLI graduates had participated in leading important statewide systems development:

> *[PHLI influenced] the growth of local health departments in Nebraska in 2001. Prior to a Local-statewide initiative, there were 16 Local Health Departments covering 22 counties in the state. After the intervention, there were 32 Health Departments covering the ENTIRE state (all 94 counties). Several PHLI alums were involved, along with public health leaders that had participated in the state-level PLHI. These folks served as change-agents and were leaders that help guide & got the process passed. This change was HUGE in that an entire state went from part-time to fulltime coverage of public health services. Health status change-measures are now in place to evaluate & affirm the positive impact that local public coverage DOES make.*

A National PHLI Story: Patrick Libbey

Executive Director
National Association of City and County Health Officials (NACCHO)

Patrick Libbey served as the Director for the Thurston County Public Health and Social Services Department in Washington State for the first 23 years of his public health career. About four and a half years ago, he became the Executive Director of NACCHO. In 1994, mid-way through his tenure in Thurston County, Libbey attended the Public Health Leadership Institute (PHLI)

In our recent interview, Libbey reflected on why he became interested in participating in PHLI.

It was early on in the PHLI experience. It was at a time we were doing some work in Washington State that was opening my eyes to a broader national picture of public health, so [PHLI] became attractive in that sense. It was an opportunity for me to see public health more broadly than the work I was doing in Thurston County uniquely, or Washington State...

Following the 1988 Institute of Medicine Report [The Future of Public Health], we were developing Washington State's approach to a Public Health Improvement Plan... [PHLI] opened my eyes as an opportunity to increase that network and see [our work] put in broader context than the straight operational perspective.

Libbey is reluctant to attribute all changes in his leadership to PHLI, but describes some of its effects:

The better it [leadership development] works, the harder it is to draw a single direct causal relationship. There are multiple influences. I am proud of the work we were doing in Washington State at that time, the Public Health Improvement Plan...it was one of the first states to look at performance measures. I had two [PHLI] classmates from Washington at that time... I think [PHLI] had an influence on the work we were doing in Washington State and then that work, in turn, has influenced work I've done on a National level....

For me, it was the combination of national exposure, and the immediate development of a network...we still have large points of connection within my own [PHLI] class, and then the PHLI experience created a collegial sense across [PHLI classes]. It has reinforced a national informal network that influenced the national leadership in public health at the state and local levels, and federal level... The role PHLI played for me was linking the work that we were doing in a local or a state sense to a larger national picture and a broader context within which I was working. That's probably the biggest key of it.

On a personal level, it was very reinforcing... I think it reinforced, or provided, greater confidence [for me] to follow what heretofore had been an 'instinctive approach' It gave me a framework for how [the way that] I want to work at a community level is reinforced and supported within a more disciplined approach of public health. It influenced my engagement in NACCHO, in becoming an officer and being active in that, and in combination with that, in a number of national projects and advisory boards.

State-level coalitions. For some of the coalitions developed, the graduates did not describe exactly how PHLI had contributed. This example does not clearly describe PHLI's contribution, but it shows how one "coalition" activity led to other "alliances and cooperative programs" and eventually to a new program:

> *We developed the Women's Health <u>Coalition</u> as a forum for women in a variety of positions to meet and share common interests and causes. It got funding and sponsored <u>annual conferences with the governor on the program and evolved into broader alliances and cooperative programs</u> such as the domestic violence advocates doing physician training thru the State Medical Society. The common goal of women's health enabled diverse women advocacy issues to be addressed.*

Others did cite a PHLI influence. One respondent described how a PHLI team project around improving injury control and trauma response systems used a "coalition" approach, which strengthened the ultimate implementation. PHLI had helped this result by teaching the team about the benefits of systematically seeking partners:

> *Organizational analysis and data review have identified the need to strengthen Injury Prevention and response (trauma systems) in the state. <u>Coalitions have been developed (over 40 current partners) and legislation developed to fund a statewide trauma system, injury prevention program, and trauma registry</u>. PHLI contributed to the process. <u>Networking discussion [at PHLI] led to a systematized approach to identifying and including partners</u>. The state has had rules and regulations describing a statewide trauma system since 1995 but it has never been implemented. <u>This 'new' approach to this issue has led to a strong effort to implement this program</u> to prevent injury and prevent death and disability.*

Other coalitions mentioned worked to develop or improve state leadership development and HIV control programs, or were more general in scope.

Relationships between state agencies and their representatives, and systems changes. As for improved relationships between state agencies and their representatives, some of these were across states. We are aware that many such relationships were developed to work on regional leadership institutes. Other inter-state initiatives were also developed:

> *We developed <u>a multistate agreement</u> for data exchange as part of the PHLI project. The project helped to keep focus on this or it might not have been prioritized. It has become a model for other states.*

Within states, another described "a written, formal memorandum of understanding between two state agencies." Two described improved relationships between team members in different state agencies, with one giving a concrete outcome mediated by a "strengthened team":

> *The strengthening of the team that attended PHLI from our state allowed us to push forward a systems change in how infectious disease information systems function across public entities (public hospitals and state office of public health).*

The other, a recent graduate who came on a team representing state agencies, remarked, "I actually wanted to answer 'Not yet' on a couple [of questions above about whether a specific organization, program, or policy change had been achieved]. Our group's project is continuing and, though slower than we might wish, progress is real. The trust, the shared experiences and the consensus on priorities is real. Ask me again in a year and we'll see!" This statement displays the value of improved "trust, shared experiences, and consensus" in possibly laying the groundwork for long-term change, but also shows the need to follow graduates over some time to identify what they were able to accomplish together.

State-local collaboration and systems changes. As for state and local collaboration, the respondents emphasized improved power sharing and mutual understanding. Several described substantial re-definitions of the roles and relationships between state and local agencies in their states that were achieved through the activities of critical masses of PHLI graduates. Some of these involved much stronger "collaboration" and power sharing with local agencies, reflecting PHLI's philosophy of collaborating with system partners. As two examples:

> *Several PHLI graduates, who worked with me at the Washington Department of Health, used the skills they learned as PHLI fellows to fundamentally change the way our State Health Department interacted with local health jurisdictions-- primarily by coming to treat them as equal partners in a wide range of public health activities.*

> *Using the influence of the State Public Health Director and several district directors who were PHLI grads (and many other like-minded public health leaders), the State of New Mexico implemented two processes that were significant shifts in their way of doing business... [We developed]... a 'Directions Document' for the state public health division... This was a combination employee empowerment/strategic planning/continuous quality improvement effort for the agency. It took several years to develop a physical document that outlined the values, vision, mission, strategic directions, objectives and activities for the state. It outlined the way business was being done and empowered the local health offices to be on a much more equal footing with the state level AND obligated the locals to be responsible and accountable for their efforts. For the first time the whole state was viewed as ONE team in it together rather than a collection of regional fiefdoms with a central castle of lords and ladies that operated as independently from one another as possible.*

Another described a similar re-definition of relationships, but around a more specific issue of preparedness, leading to considerable teamwork around specific "systems" projects, which has in turn reduced "fragmentation" in certain systems. PHLI had

contributed by providing tools and "keeping the drive alive" – perhaps referring to what others in this study have called "impetus" or "passion":

> *I would speak to a systems change - <u>a strengthened collaboration and a new cross-organizational governing network</u>. We have made significant inroads <u>connecting the disparate and not always collaborative state and local public and private sector leaders</u> to produce strategic and tactical templates for emergency preparedness and response for vulnerable populations, providing a common foundation for training, using a common language and a common set of procedures. <u>These strengthened ties and understandings have led to subsequent cross-organizational teamwork</u> in the <u>legislative process, request for proposal processes, continued work on strengthening the emergency shelter infrastructure, and shared work in GIS mapping</u>. <u>PHLI, I believe, was key in helping to keep this drive alive, being able to participate in cutting-edge leadership and communication lectures, presentations, activities. The week on-site was exhilarating and provided so many useful tools for navigating complex challenges</u>.… The change <u>is akin to governing by network and has dramatically reduced the fragmentation and territorial imperatives of the many players</u> who are essential in emergency preparedness.*

Two others described improvements in the quality of relationships, which they expected would lead to better outcomes. One described the outcome of her PHLI teamwork, which combined state and local staff, in this way:

> *Local-state cooperation and discussion of common issues began to be established as a priority for both parties. The team approach used for the project submitted during the PHLI year involved both local and state attendees. We chose to use <u>improved cooperation between state and local</u> attendees as the focus of our project - it provided the spark of <u>a long-term improvement in relations</u> that continues today. <u>State-local relations prior to that PHLI year were rocky and often adversarial - now much improved.</u>*

Another, whose team started a regional leadership institute, remarked that the best outcome of that had been "the commitment of the Locals to work as partners with the state Department of Health. This has been the most significant change for us."

Regarding general network development at the state level, two graduates described how PHLI graduates had formed policy forums or task forces forge partnerships and common understanding of key state issues, leading to infrastructure improvements. As one example:

> *PHLI graduates in my state formed a <u>taskforce to convene an annual collaborative leadership forum of public health leaders</u> in the state to address priorities within the state. <u>Public health infrastructure improvements</u> have grown out of this initiative such as <u>collaborative activities</u> to address health disparities and access to care, increased workforce development and ways to address*

emerging public health emergencies. <u>Relationships between representatives of various sectors within the state were strengthened</u> especially between local and state health departments, Indian Health Service, Tribal Health programs and academic institutions.

Finally, some described helping to form or strengthen ASTHO and NACCHO affiliate organizations in their states, while others described general knowledge sharing and collaborative activities of an accumulation of PHLI scholars in a state.

Specific state-level systems performance improvement initiatives. As we noted, fourteen scholars described specific state-level performance improvement initiatives.

One described how a PHLI team had undertaken two projects that were in turn adopted by other entities, with the implication that these entities carried forward sustainable system improvements:

> *The two projects undertaken by the Missouri team were both adopted by either the MO State Health Department or the accreditation agency. We felt that we added benefit to both agencies in our endeavors.*

Two others described specific performance management initiatives, but resulting from team projects. As one put it:

> *PHLI graduates implemented a <u>sustainable performance management program</u> in an organization where such programs had been tried and disappeared many times over the last 20 years. <u>PHLI contributed by motivating the PHLI graduates to implement a system-wide and self-sustaining program of performance management.</u> The change is important because it has the potential to fundamentally alter the way programs assess themselves and perform on a long-term basis.*

One graduate described how a "critical mass" of PHLI graduates in Washington State "greatly influenced" the states Public Health Improvement Plan, which "has moved governmental public health substantially toward a more defined and consistent set of programs and activities at the local and state level. Standards have been developed for these program and activity areas so that all agencies can measure their progress, both against their past level of compliance and against the state average." Another confirmed this observation:

> *In Washington State, many of the early graduates of the PHLI were driving forces for the then Public Health Improvement Plan, which lead to legal changes, funding, and system collaboration between local and state PH partners, academia and others. This has been a reformation for us, and a model for many others.*

We make here the observation that either through the team process that UNC used, or the California process of enrolling individuals, a group of PHLI graduates accumulated

within states and localities over time who worked together on one or more initiatives. A graduate from Florida described the "critical mass" effect like this:

> *Within my state, once a critical mass of public health leaders had attended PHLI two things come to mind: establishment of a Florida PHLI to promote leadership within our state [was a outcome PHLI influenced]. Perhaps even more important: substantial improvements to our QI systems. The system became much more collaborative, predictable, and transformative.*

Lest the "team" or collective efficacy dynamic take exclusive credit, however, we close this section on state-level systems changes with this example of stalwart individual leadership that grew out of a team project, and made use of the team effect:

> *Although it has been 5 years the project that the PHLI Team began has continued through the <u>persistence and determination</u> of one of the team members. While <u>new members joined the team</u> replacing those that had left, she remained and kept the project moving forward. The team has developed a <u>system of quality improvement</u> that assesses the quality of all programs delivered at the Local Health level of the [State] Dept. of Health. Most recently the system was piloted in three district Local Health offices. Because we function under a matrix system of management <u>this new system includes other divisions</u> within the state health department. The results will certainly impact [the Department] at the organizational and systems level.*

Local-level "systems changes" related to collaborations and systems performance improvement tools

Of the 96 respondents who described collaboration as a major influence of PHLI, 26 described diverse forms of *local* collaborations, coalitions, or partnerships that flowed from the efforts of individual graduates, teams, or accumulations of graduates. Eight described the implementation of specific system performance improvement tools, such as MAPP and performance standards.

In one revealing example, a local leader described having learned "the concept of learning organizations (through Peter Senge's book and his presentation to the PHLI group) and its application to public health agencies. I have attempted to apply this concept in my agency with some success. We are now much more aware of and utilizing the fact that we are part of a community-wide system trying to improve health in our community." Then, this leader, who participated as an individual, described how this insight has translated into a specific action through the way that the health department has supported other organizations that were in a better political position to improve access to care for the uninsured:

> *In our local health department jurisdiction the Health Department attempted on several previous occasions to address the problem of the uninsured and access to*

health care. Because it was addressed primarily from a governmental perspective, we had difficulty getting hospital and physician support/participation. More recently, a community faith-based initiative to address this same issue developed and we have been instrumental in providing resources (start-up funds) and on-going financial and policy-level support for this much more successful community based approach. Essentially all area physicians and hospitals now participate. As a result, <u>access to health care is much improved in our community</u>. This concept/program has since been expanded across a 15 county region. <u>The community collaboration and systems approach concepts discussed during the PHLI were key to our willingness to take a 'supportive' rather than 'leadership' role which was key to its success</u>.

Another scholar also worked to improve access to care through comprehensive community assessment in collaboration with other health-related organizations, but in this case, the collaboration also led to a strengthening of the health department's own services, rather than primarily only support of the work of others:

> *After PHLI, I undertook a <u>comprehensive health needs assessment</u> for my health district. The results indicated that lack of access to health services was a major concern. We <u>formed partnerships with the private sector health system, sought grant funding, and added primary care physicians to the staff</u>. We were able to dramatically expand access to primary care and prevention services to the underserved residents of our counties.… While introducing me to a number of best practices, <u>PHLI gave me the confidence to step out of the</u> mold of local health directors in my state and make changes that have improved health status. It was not necessarily the best career move, but it was the most exciting time of my career.*

In yet a different model, a team of PHLI graduates strengthened a pre-existing health coalition into a new non-profit designed to address disparities:

> *The Texas Team strengthened the Healthy Tarrant County Collaboration (HTCC) into a <u>productive 501(c)(3) entity</u> that has completed common needs assessment studies for 14 hospitals and carried out a long term project to improve heart disease in an African-American community that achieved measurable results.*

Several other respondents described extensive coalitions that they had led or participated in, that had apparently produced improved programs and policies. The coalitions had divergent foci including youth risk reduction in collaboration with school districts, and youth health promotion and health care initiatives in collaboration with juvenile justice agencies.

One early graduate described a more general on-going coalition that emerged from her individual PHLI project. The membership of the coalition described is quite diverse, and anticipates later IOM reports that would recommend such wide partnerships:

> *The 'systems' change that was made in my jurisdiction was related my convening a neutral table to bring together a <u>community based coalition</u> to address the public health problems of my community. Business, industry, 10 hospitals, social service agencies, community members, faith based organizations and others formed Health People Healthy Oakland and <u>funded a community health assessment and decided to support several interventions based on health assessment data</u>: substance abuse and childhood obesity. This was my 'project' in PHLI and persists in the jurisdiction to this day…. PHLI gave me the confidence, knowledge and skills to take risks to organize a community based coalition to mutually solve the health problems in our community….*

As a final example of a different kind, a leader described how she led an effort to include community members on an expanded board of health, which had good results for the community. This is an example of a change in the more fundamental governance structure of an organization, reflecting a commitment to community collaboration, building on specific instruction and resources (APEX*PH*) recommended by PHLI:

> *Our 3 elected <u>commissioners agreed to expand their membership to include 2 non-elected community members to serve with them as the expanded board of health</u>. This was the first local health department board in Washington to do so. A community advisory board (formed by us) researched the issue and convinced the commissioners they would make better decisions if they did so. <u>PHLI laid out the process, along with APEX-PH </u>very well. The change gave solid community input to major policy decisions the commissioners had previously had to make, often in a vacuum.*

Policy Changes

When asked to cite a change that PHLI had influenced at the systems, policy (law), program, or organizational levels, 31 graduates described policy (law) changes. Only four were at a national level, while 23 were at the state level and 4 at a local level.

As for national policy, one graduate, who for years was director of a state health department and active in the leadership of ASTHO, connected the "Frist legislation" (which dealt with preparedness funding for public health) with general growth in the field spurred on by the national "network" established through PHLI and PHLS:

> *The whole area of 'field' development including the <u>Frist legislation from 2000, the current accreditation work and the ethical framework that underlies it</u>. Each of these were established because of the network established through PHLI…. PHLS is an opportunity to 'cross generations' and network with people in similar situations over time…. This is an important program for the development of tomorrow's public health leadership.*

Other reports of legal change at the national level in the U.S. were few, but one scholar from Ireland reported that she had successfully established "professional regulation for public health specialists from backgrounds other than medicine - achieved launch of UK Public Health Register in 2003."

Many more were reported at the state level, including policies related to tobacco (5 mentions) and injury control, laboratory systems, public health systems funding, and health insurance.

As examples of personal and collaborative advocacy for more specific and targeted policies, some scholars explained how PHLI helped them gain skills or colleagues to work on policy concerns:

> [I was] legislative liaison to prohibit smoking in State office buildings - passed. [From PHLI I] gained skill in risk communication, policy development, and negotiations. This was the first step in getting a comprehensive smoke free work place law into committees for consideration.

> Collaboration at all levels in Ohio and particularly at the local level involving PHLI graduates had a substantial impact on the passage of a statewide. Smokefree Workplace Act in the state, making Ohio the 15th state to pass a sweeping smokefree initiative. A huge public health policy victory.

This scholar noted that the specific skill of networking learned in PHLI helped forge a policy success:

> [I] obtained approval for and drafted legislation, found a private sponsor, and testified on the bill, drafted amendments and saw the bill passed out of committee. [In PHLI I] learned the importance of networking and identifying other supporters for the bill. This legislation authorizes Maryland's state public health laboratory to enter into mutual aid agreements with state laboratories, maintains liability insurance for state employees working out of their home state, and ensures continued compensation and benefits to employees assigned to temporarily work in another state.

As for more broad and systemic policies, an early graduate reported that PHLI had taught her "how to communicate in low trust, high risk situations" and "how to dress and present myself before the media" plus given her "contacts with public health professionals in other states and localities." She then told an impressive story of advocacy that led to a new policy in California as well as a new position for the graduate:

> Worked with the California Legislature to adopt a more rational approach for considering proposed health insurance benefit mandates, that includes not only the consideration of evidence of medical effectiveness and the impact of new benefits on health care costs, but explicit consideration of the impact of health insurance policy on the public's health. I wrote a published manuscript called:

State Health Benefits Mandates: Politics Trumps Science, and as a result was asked to <u>testify before the State Senate Insurance Committee</u>. As a result of the testimony, the bill was amended and approved and the responsibility for the function of analyzing and reporting on bills was given to the University of California and I was appointed the Vice-Chair for analysis of Public Health Impacts for the state of California.

Another graduate reported that a group of PHLI graduates, also in California, had influenced another major policy initiative:

The Governor supported <u>legislation to split the existing Department of Health Services into a new Department of Healthcare Services (Medicaid) and a new Department of Public Health</u>. This bill was passed and the two new Departments will be established and begin operating separately on July 1, 2007. <u>Several PHLI alumni developed major policy aspects and advocated </u>on this move within the Administration and with stakeholders. This change is important in that it will be the framework in which public health is practiced in California for the next 30 years, and leadership around improvements in customer service, corporate culture, and departmental values is critical to make this transition a successful one for the new Department of Public Health.

Finally, at a local level, a few scholars cited new policies in specific arenas such as fluoridation and tobacco. One scholar explained how the community made several changes after going through an APEX*PH* assessment together, including fluoridating the water supply. This example shows how use of a collaborative system assessment tool, as encouraged by PHLI, led to a policy improvement. The entire example is presented in the next section, because it was a result of a more fundamental organizational change toward community engagement.

Organizational Changes

Ninety-four graduates described specific organizational changes that they believed PHLI influenced (Table 6).

Reorganizations

Twenty-six described reorganizations, mainly of state or local agencies. One graduate made a clear link between reorganization that she led in a state agency and her use of a performance improvement tool, and explained that the process had begun through the PHLI applied team project requirement. The scholar also stated several important benefits that this change had brought for her agency:

The <u>project I</u> started in PHLI resulted in the <u>reorganization</u> of the largest division within my state health department. I lead the division through the national public health performance standards (NPHPS) assessment, and the division is

reorganizing around the four function areas of a state health department as defined by the NPHPS. I never would have initiated this effort, nor continued with it, had it not been for the leadership project that was required through PHLI. This work has been important for my state, as it has served to modernize public health practice, clarify state versus local roles, improve service to local health departments, and make more efficient use of scarce state resources.

Another graduate attributed a change to a commissioner who was a graduate of PHLI, and reported that he himself was also a team leader. This does not describe a critical mass *per se*, but it does describe a change initiated by one graduate, and supported by another. The change initiated involved a "realignment" that reflects the systems thinking emphasis in the PHLI program:

> *Our department is undergoing a realignment to create an organizational structure that is cross-functional and collaborative. Work teams have been developed to undergo assessment and planning evaluations, including proposed organizational structures for each unit.   [PHLI contributed in that] our current commissioner is a recent PHLI graduate and initiated the process. I am also one of the designated work team leaders. This change is important as it provides a mechanism to formally assess the organizational structure to enable the department to do it's public health work more effectively now and in the future.*

Another made this statement that reflects the general activities of the accumulated PHLI graduates in two states in orchestrating major organizational changes:

> *[PHLI influenced] establishment of Washington and Florida Departments of Health. PHLI grads were intimately involved in developing a separate state health agency rather than part of an 'umbrella' entity.*

Another graduate explained the role of a number of PHLI graduates in changes in ASTHO:

> *A number of people who were PHLI graduates have become leaders in their states and during a major organizational change at ASTHO, were very engaged in invigorating the organization to becoming a dynamic organization representing states.*

A few others explained that PHLI graduates had assisted in the formation of the new NACCHO organization in 1994, when it was reorganized as a merger of two associations, but for this evaluation, we were not able to clarify this precise history and the people involved. Certainly, as we discuss later under systems changes, PHLI graduates were very important in shaping the direction of NACCHO throughout the 1990's.

Planning

Many graduates described strategic planning that had occurred at the organizational level, and attributed the process and its good results partly to PHLI. One graduate who led at the state level described how the PHLI had influenced her actions in strategic planning:

> *[PHLI helped our organization by helping me with] developing the mission and strategic direction of the organization and finding workable methods for monitoring performance against the strategic plan. I had looked at strategic planning as a centering tool, essentially a cheerleading tool. Through the PHLI process I became much more aware of how to use it to manage and to evaluate the organization's work.*

Several local health directors told remarkable stories of using planning ideas, tools, and skills they had gained through PHLI in their departments. One local director stated that PHLI had helped her organization through an accumulated group of graduates in the organization. We particularly note in this statement the words "essential services" – which are related to the frequently cited public health systems change of the same name, "shared accountability" for process and outcomes, which implies systems thinking and collaboration across organizational units, and leadership. We also note that all staff participated, which is a hallmark of the collaborative leadership philosophy emphasized in PHLI:

> *In 2005, our local public health [agency] underwent an extensive Strategic Planning process. All public health staff were included in the process through a variety of meetings and surveys. We developed a Strategy Map which reflected our strategic themes of Essential Health Services, Community Health Improvement, Shared Accountability and Leadership. An implementation plan was developed with measurable objectives, targets, and initiatives. Three of our upper management staff are PHLI grads and the knowledge we all gained [from PHLI] proved very valuable in this process. Our agency now has a firm sense of direction and the tools to needed to reach the stated goals.*

Another described use of specific tools as an outgrowth of PHLI, but did not explain how PHLI had led to this process:

> *I implemented APEXPH I and II which addressed both organizational improvements and conducted a community health assessment. One organizational improvement was the monitoring and reporting of human resource indicators to our Board of Health. Our community health assessment was intensive and resulted in a 10 year multicounty, multiorganization focus on youth prevention strategies.*

Another local health director, an early PHLI graduate from a mid-sized city, was more specific about how PHLI had influenced his interest and long-term activities in

comprehensive assessment and planning, leading to new programs, partnerships, and policies:

> *PHLI imparted an interest in <u>public health assessment, priority setting and program development</u>. Under my tenure as director, our local public health agency <u>completed APEX I and II, and PACE-EH</u>, as well as developed two 5-year plans. We also initiated <u>courses on public health competency for the staff and modified our job descriptions</u> to reflect needed competency levels for each job. I recently retired, but as I was leaving we were planning to review our public health operations using the <u>local public health agency performance standards</u>. All of these 'global' administrative activities were in large part due to my training in the inaugural class of the public PHLI .... Our local public health agency became more adept at long-term planning based on data analysis and community in-put. Our two 5-year plans identified, <u>with the community</u>, the public health priorities that lead to many joint activities of partnering agencies to accomplish short and long-term objectives. For example, dental health was identified as a priority public health need. In addition to a dental health linkage program, we were able to get the City's water fluoridated... This is just one example of like-minded community partners working together to accomplish a public health goal. PHLI trained me (as director) to think in terms of leading these efforts. <u>It also put me in contact with other public health leaders who offered their support and assistance</u>. These changes were important at the local level because there are never enough resources to support prevention activities, but by <u>joining and leading other like-minded people and agencies, we were able to potentiate the effects of all</u>.*

Another very recent PHLI graduate, also a health director in a mid-sized city, described this series of outcomes that he had obtained through his PHLI applied project work. We recognize concrete outcomes in the creation of a new division, improved human resources and information systems:

> *The <u>strategic planning process</u> that constituted my project required us to review our organizational mission, vision, and values. We found the mission and vision inadequate, and engaged in an ad hoc process to revise them. Beyond this, my project succeeded in creating a strategic plan with <u>actions items</u> that we are implementing -- for example, we are hiring an individual to direct a new division of health promotion and marketing. We are also revamping our employee orientation and training process, and choosing new information systems platforms for environmental health and clinics. PHLI contributed to these accomplishments by <u>challenging me to undertake the process and keeping me on task</u> through deadlines, mentoring, and team activities. The changes we are making now will make us a much stronger, more viable and productive local health department. We will be much more likely to accomplish our mission.*

General leadership philosophy of stakeholder and community engagement

Several respondents made statements indicating changes in the general philosophy by which they led their agencies, showing a stronger orientation toward external stakeholder and community engagement in key activities. For example, one PHLI scholar who was a leader in a local public health agency stated that PHLI had significantly influenced the direction and structure of his agency:

> *PHLI helped strengthen the community of leaders supporting our local health department's transition towards becoming more community responsive and community-based. We took lessons from PHLI and became more closely aligned with the APEXPH process and its evolution into MAPP (Mobilization for Action through Planning and Partnerships). [A top CDC leader] was instrumental in supporting our participation [in this process]. A PHLI colleague recommended my recruitment [into PHLI]. Subsequently our entire department under the leadership of [another PHLI graduate] continued to build momentum in* <u>*expanding our attention more outwardly with community participants and community partners. We created Community Health Teams and housed them in five different location s throughout our county. Each team was charged with developing local partnerships and working more closely with their respective communities. The change was critical to expanding the local health department's influence and impact through new partnerships at all levels within our community.*</u>

On general community engagement, another noted a "systems change" which we have classified here a change in general organizational ethos:

> *A systems change that happened at my own department was an* <u>*expanded focus and policy on relationship building with our stakeholders and partners*</u>*. This was a direct outcome of our PHLI project.*

Another important example of stakeholder engagement at a federal level came from a research leader at CDC's National Institute for Occupational Safety and Health. This leader explained:

> *PHLI grads played a central role in the development of the National Occupational Research Agenda that both directed health and safety research in the US and served as a model for research strategic planning internationally. Increased and better focused research funding followed. Skills in leadership, nominal group process,* <u>*appreciation of stakeholder engagement,*</u> *problem analysis were all supplemented during PHLI and were applied in the design and implementation of the NORA process. This was the first public research strategic planning process for NIOSH (and probably CDC) and* <u>*resulted in redirection of priorities, broad engagement of stakeholders, and expansion of funding*</u>*. The*

process we developed and implemented served as a national and international model for public engagement in public health research planning.

New organizational program priorities and expansions

Several scholars described expanded organizational commitments in a few key domains as resulting from PHLI. These examples describe how a group or team of scholars obtained greater organizational efforts:

> *In the area of oral health, <u>several graduates have worked to strengthen state health department infrastructure for oral health programs</u>. CDC has expanded support for core capacity for state oral health programs, funding 12 states.*

> *The [team] project we worked on was to bring <u>injury prevention more into the mainstream of the state agency</u>. The program has been able to <u>find a permanent home in the Department and increase in staff</u>. It has been able to create an active advisory group and is impacting the state through collaborations throughout the state.*

Installing performance management and improvement systems

A major emphasis in *national* systems change data in this evaluation was the *creation and dissemination* of performance management interventions, such as essential services, performance standards, and accreditation. Many scholars also described organizational changes related to the *implementation* of these changes. These are a few examples:

> *The organizational and systems change are the same thing and relate to our PHLI project, which is the development of a <u>performance management system</u> for the state health agency. We have established a new office with a full time employee whose responsibility is to continue the development of the quality improvement tool that we began during our NPHLI year, and to implement that process agency-wide. We have also developed an advisory group for the process to assure continued support and input into the process from across the agency. It is essential today that we be able to <u>establish clear objectives for our public health efforts, periodically assess progress, and implement changes as needed to meet goals. Our main goal for this effort is to develop a standardized process for performance management/quality improvement and to incorporate it into the fabric of the agency</u>.*

The state health officer from the same state attributed this change to a critical mass of graduates who were members of two PHLI teams:

> *At least 2 sets of graduates from our state focused on Performance Management and have been able to initiate a change in organizational philosophy in relation*

to the implementation of the concepts. It is slow, but the impact has been significant in moving from 'Silos to Systems.'

From a different state, a graduate described a similar initiative:

[Our] PHLI project focused on developing a Comprehensive, System-wide Performance Management System for organization. PHLI provide the nurturing environment ,guidance and support to fully develop the concept, into an initiative within the organization. Change [is] important [as] a necessary means by which to be more accountable to the public, maximize use of limited resources, strengthen the organization and the public health system.

In general, negative outcomes were rare in the data for this evaluation, but one was seen in this regard, pointing out one of the hazards of leadership in concepts that are new to a leader and to an agency:

Not all change inspired by PHLI has been beneficial. One graduate returned to the agency inspired to create a focus on performance measures, but was not equipped to share that vision. As a result, the perception among other members of the leadership team and staff was this effort only created more work without improving health or agency efficiency.

Other organizational changes described: other processes and general culture.

Other changes graduates described (Table 6) included various kinds of specific process improvements in areas such as information systems, hiring, training, and performance management. While diverse, they are very important. We supply just a few examples here:

My project, Forming a State Association of Local Boards of Health Toolkit, has since been adopted by NALBOH and used to change how NALBOH engages with those interested in forming a state association.

With the help of our PHLI Laboratory project, I was able to align human resources classifications of my 12 Toxicologists with those of 10 forensic (crime lab) scientists in a different State department in [my state]. The new HR classifications that were adopted as an outgrowth of this PHLI project have simplified recruiting, created new career pathways, and allowed these two State departments to 'sing with one voice' to our legislature. An immediate result of this 'one voice' (adopted 7/2006) was an agreement to organizationally and physical merge our Crime labs and Toxicology labs in a new facility. I just received notification of State funding for this new laboratory/new mission on 3/1/07.

Finally, one described an organizational priority on leadership development as well as a general change in outlook:

> *The skills learned at PHLI have contributed to my ability to select, train, and motivate staff to perform at a very high level of proficiency. The concepts and practical training of PHLI have influenced my ability to greatly improve the efficiency and effectiveness of my staff in the following ways. Staff have embraced the concepts of teamwork, coalition building and individual leadership in their everyday work and the results have been far reaching. New partnerships have been created with both traditional and non-traditional public health communities. The sense of 'why not' has emerged as an approach to moving public health programs forward. A view of the future permeates this organization. There is a strong cooperative spirit among staff. I have promoted leadership development to staff and have sent over 60% of them to regional health leadership institutes as well as to other CDC sponsored national leadership programs. I myself have joined the Board of Directors of a regional leadership institute.*

Program Changes

Many graduates reported changes that we classified at the program level (Table 6) at the national, regional, state, local, or organizational level. This section highlights key themes and examples.

<u>National level: new programs, improved programs</u>. Fourteen graduates described new or improved programs at the national level, with the majority pertaining to workforce development.

For example, one team of state epidemiologists sponsored by the Council of State and Territorial Epidemiologists sought to identify methods for recruiting more epidemiologists into the public health workforce in the face of baby boomers' impending retirements. One member of this team reported, "The project at PHLI has contributed to the efforts at CSTE to develop our programs for workforce development, including legislative activities at the Federal level." Three graduates cited the new national level leadership development program for public health dentists, explaining how their PHLI project work had led to the successful funding and launch of the program. As one put it:

> *ASTDD [Association of State and Territorial Dental Directors] has for many years seen the need for an oral health specific 'leadership' training program. PHLI gave impetus to this idea in the it was the ASTDD team project to develop and implement the National Dental Public Health Leadership Institute. The kick-off session will be at the National Oral Health Conference in April 2007. This is an important step for dental public health in making leadership training much more accessible to dental public health practitioners and may have a significant impact on workforce development.*

Another described improvements in the research program at the Indian Health Service, which he directed for a time after PHLI:

> *While on detail as Director of IHS Research, I instituted a number of changes in the way that program was organized, using principles I had learned in PHLI. Some of the changes were successful, not all. Changes included substantial process revision, improved communication systems, and process of record keeping.*

Two made very non-specific statements about PHLI improving national systems for bioterrorism and preparedness since 2001. One simply wrote:

> *Both state and local public health leaders were involved in the initiation of the preparedness work that has gone on since 2002.*

State and Regional leadership development programs

Twenty-three graduates chose to describe the advent of state and regional leadership development programs as a significant PHLI influence.

Some described the national movement to establish these programs, and described the benefits of having this national movement:

> *Development of the state/regional leadership institutes grew out of a group of PHLI graduates and spread across the country. This forum has provided an unprecedented opportunity for our future leaders to be exposed to the latest in leadership skills and thinking, develop a network of peer consultation with ready applicability to solving common public health problems as well as a chance for senior management to see how well these staff perform in a more challenging environment.*

Others described the development of specific programs in states and regions as a result of a team project or of the accumulation of a critical mass of graduates in a location. For example, the Wisconsin team recently planned a robust set of leadership development and service for Wisconsin. Two graduates familiar with the work described how the recent Wisconsin PHLI team that planned the program was capitalizing on the momentum, partnerships, and funding previously created by many other National PHLI and Illinois regional PHLI program graduates who worked together to envision and fund the program. This provides an excellent example of how a critical mass of trained leaders in a location can organize to create a significant program to improve public health infrastructure. One put it this way:

> *A public health leadership institute was formed in [Wisconsin] and was driven by the project work of a recent NPHLI team. In addition, 2 other previous NPHLI grads (myself included) were on the advisory committee charged with creating the*

framework and structure of the institute. The end result was a collaborative initiative between 2 medical schools using Blue Cross conversion funds to finance the Institute. We have just completed our first year of the community teams program and have launched policy forums, other leadership trainings as well as starting to plan a mentorship program. This Institute is critical to Wisconsin to grow new leaders in Public Health.

Another graduate involved with the new Wisconsin program described the program's historical development and planned policy-level impact as follows:

This [Wisconsin leadership program] effort is the direct result of a lots of folks either participating in the National or the Illinois leadership program realizing that we need to provide this education to all sorts of people and thus we need to develop a program in Wisconsin. I and may other graduates of the National and Illinois PHLI's are helping to get it started as well as people that have not been able to participate in the PHLI's but have observed the change that in can have on a persons leadership skill. This is important because we need leadership skills to effect policy which in turn can have significantly more impact than just one successful specific program.

Others also attributed new programs in Maryland, Michigan, and other states to the influence of PHLI graduates intent on bringing home the benefits they had experienced.

State level programs improved or expanded

Several graduates chose to describe improved or expanded state-level programs as significant influences of PHLI. As a prominent example, one graduate described how a group of leaders in one state from two different PHLI classes combined their efforts to improve programs through a major policy victory in the state legislature:

Just last year we were successful in developing and ultimately saw funded a new initiative to strengthen our state's infectious disease control and public health emergency preparedness programs. I (a recent PHLI grad) and two of our division's leadership team members (who were currently enrolled in PHLI) spearheaded this effort. It was primarily targeted at the state legislature and requested state funding for a number of areas under the initiative that were ultimately funded, including development of a state immunization and disease registry, creation of a state public health emergency stockpile, and additional staff for epidemiology, public health nursing and public health laboratories. The learning through PHLI about how to approach advocacy with policy makers, application of quality improvement principles, working with media, and negotiation skill development was applied and contributed to the success of this effort. The change is important as it both contributed to policy leader knowledge and appreciation of the role of state public health, and the increased resources and new surveillance tools will ultimately lead to improved health in our state.

Another leader described a collaborative, interorganizational effort to improve a state HIV program, and cited specific improvements in results:

> *[PHLI] gave me the skills and confidence to transition HIV counseling and testing to the new rapid HIV test, to develop a <u>multidisciplinary team incorporating all units in the Division and to collaborate with academia and community based organizations for statewide implementation</u>. This change has increased the proportion of persons testing who know their results from 65% to 99% and has allowed HIV testing in new venues such as emergency departments which have a statistically significantly higher seroprevalence than other sites and at which 70% of those testing positive are newly diagnosed.*

Others more briefly describe these rather large new programs or improvements:

> *We were working as a team on developing a patient safety initiative. We worked collaboratively with advocacy groups, had an Executive Order establishing a patient safety division and subsequently worked with others to get funding for this initiative. I would say PHLI was instrumental in our getting this all done.*

> *In New Mexico we have worked on school nutrition and a state-wide immunization registry. Much of the impetus for these initiatives has come from PHLI graduates.*

A few graduates described new local programs as being strongly influenced by PHLI. Again, the emphasis on collaboration with community partners had improved these program:

> *Attendance at the institute led to a new level of collaborative leadership and structure for our family based services/home visiting program and a much improved contracting process with our partner agencies.*

> *We expanded our efforts at decreasing infant mortality rates to include non-traditional partners in the community. This not only gave us a broader reach into the community to education the community but also brought new resources to address the issue.*

We close the section on local program improvements with this final example of a major change at the local level, again brought about through building partnerships and "trust relationships":

> *The School Health program is under the management of the Health Department in our community. The resources for the program remained stagnant for many years while the number of students enrolling in the school system skyrocketed. <u>Through strong leadership, building solid and committed community partnerships and developing trust relationships with the school administration the funding for</u>*

the program has finally increased dramatically. The lessons and knowledge through PHLI have greatly influenced the direction that has been taken in moving this important program forward. It is very important because it is a well known fact that a healthy child learns better. Having adequate numbers of School Nurses along with a strong program had a huge influence on the health of the students and faculty in the school system.

Organizational-level programs started

Several graduates chose to describe new programs focused on internal organizational development. One described the Leadership and Management Institute at CDC as emerging from the efforts of PHLI graduates who wanted to spread the PHLI concept to their agency. Others described a recent PHLI team from CDC that worked on cross-disciplinary leadership concepts and which plans to integrate this training into future leadership development programs at CDC. Others described new workforce development programs in local health departments as emerging from their PHLI experiences.

Summary

In summary, in Domain 4, we have seen that graduates described particular organizational, program, policy, and organization and systems performance improvement changes at local, state, and national levels when we asked them to describe "in some detail" a specific change. We have also shown that graduates attributed these results to the actions of individual graduates, teams of graduates who worked together on a particular "team project", or to a "critical mass" of graduates working together to produce a change. Many of the specific changes were downstream from the work of "thought leaders" who learned more about "systems thinking" and "collaborative leadership" in PHLI, and who, as a network, created specific tools to help leaders in the field implement new concepts and strategies for improving public health. Finally, we have seen that many of these actions were carried out within a general approach to change that emphasized building relationships, partnerships, and collaborations.

A National PHLI Story: Robert Stolarick, M.D.

Robert Stolarick, M.D.
Chief, Bureau of Personal Health Services
Memphis-Shelby County Health Department

Dr. Robert Stolarick is a senior administrator with the Memphis and Shelby County Health Department. He graduated from the National Public Health Leadership Institute in 2004 and attributes his county's successful Infant Mortality Media Campaign – which was his applied leadership project for PHLI – largely to the skills and knowledge he gained through the program.

Infant mortality in Shelby County came down significantly in 2005. Even though it is still too high, it was the lowest on record in 2005 and I believe my project from PHLI had a part in that. Somehow the Memphis and the Mid-South has missed out and never had a mass media Back- to-Sleep campaign. I found some money from HRSA Maternal and Child Health dollars, about $50,000. The people that we used to produce [the campaign] helped because they had also noticed that this was a problem. We have done a billboard campaign too. [Ours] was the first media campaign/television commercial [series] on this topic in this area. We had a high rate in Tennessee, and in Shelby County we were the highest rate [in the state].

Stolarick's project began as a sequence of television commercials addressing the problem of infant mortality due to Sudden Infant Death Syndrome, Shaken Baby Syndrome and Co-sleeping. The spots ran up to 600 times a month for 6 months. The Memphis <u>Commercial Appeal</u> also ran an award winning series on infant mortality. Stolarick's project and the print series generated interest in the community and State.

Mayor Wharton and Governor Bredesen convened an Infant Mortality Summit in Memphis in April, 2006. The Governor [Tennessee Governor Phil Bredesen] now has a statewide Infant Mortality program called 'One for All'… [meaning we will have] a first birthday for all babies. This is one of the first times we actually made progress on infant mortality and we made significant progress.

<u>Gaining Confidence.</u> Stolarick also credits PHLI for an increase in his confidence, and cites as an example his volunteering to lead the health department's response to the refugee influx after Hurricane Katrina.

Because I had sat with some bioterrorism folks at PHLI, I thought, 'Well, I can do that.' A lot of things we discussed [at PHLI] were homeland security, bioterrorism stuff, so they helped me think about what I would do. This was before we had a section like this in the health department here. The [PHLI seminar on] Risk Communication …was greatly helpful. We opened up several shelters. We did a good job.

Domain 5. PHLI and the Future Direction of Public Health Leadership Development

This section describes respondents' thoughts concerning the future of leadership development. These thoughts came primarily from the eighteen "key informant" interviews, though the seventeen "graduate" interviewees also reflected briefly on this topic during their interview. Some data for this domain also came from survey respondents who answered one close-ended question ranking options for the future purpose of PHLI, and from comments in the final open-ended question in the survey.

Respondents offered thoughts about a wide variety of topics ranging from how to re-design the National PHLI to lifelong learning, network development, and the roles of graduates as advocates and leaders. Although respondents varied in how they conceptualized the future of leadership development, they maintained a strong consensus that public health leadership development is needed and has value.

Summary of Findings - Graduates Suggested:

- Individual leader development and network development are important synergistic efforts that have helped to create a common public health framework and a fertile ground for diffusion of innovation
- Offer a continuum of cutting edge development opportunities including a national institute as well as continuing education and informal development activities to build a culture of lifelong learning and to sustain vibrant networks
- Consider how to support a more integrated and coordinated system of leadership development at the national and state levels
- Consider strategies to strengthen networks beyond the current methods, including enhanced connections to support succession planning and to facilitate opportunities to work on issues of national importance
- Build in an on-going evaluation system, focusing on both process and outcome measures
- Adequate and on-going funding is needed in order to support innovative programming and to enhance the existing leadership development foundation

Leadership Development: Visions and Goals

Respondents expressed a broad vision for the future of leadership development, asking that it be "re-engineered" from its current state into something more "contemporary" and "cutting edge." They requested a program that has an eye toward emerging national health issues, looks toward the future, and offers the latest thinking. Some also asked for a program that reflects the global, diverse, and interwoven nature of public health, that is, a program that gives a "national" or even "worldwide" view of public health leadership, and through that perspective inspires new thinking about the work of leaders. A few suggested a program that creates a national "system improvement" with a broader focus on developing leaders at national, state, and local levels. Many individuals considered leadership development as a multi-level, evolving field that would benefit at this juncture from a more systematic, coordinated approach among the existing programs – such as National PHLI, the State and Regional programs, PHLS, and the internal leadership development program at CDC - and any new leadership activities.

Future leadership development efforts should concentrate on developing and sustaining both leaders and networks, according to most respondents. Influencing national policy, practices and developing leaders who will in turn develop others – to ensure an adequate cadre of leaders in the future - were also named. Each is described below, with further elaboration later.

Respondents described leader development in related ways, saying that we should "identify," "enhance," and "develop" leaders. As one key informant stated, "I think [PHLI's] first focus as a development institute would be to focus on the individuals' capabilities of enhancing or developing their leadership skills." Others linked individual leader development specifically back to competencies. As one put it:

> *Leadership is one of (the core) competencies, one of the eight. And to me, the goal should be for someone, when they finish …that they will be competent in the leadership competency.*

Respondents recognized the importance of collegial relationships, and developing and maintaining networks were goals named hand-in-hand with developing individual leaders. Some respondents believed that a leadership institute should be charged with facilitating the development of networks, while several specifically discussed the importance of keeping networks connected over time as a way to enhance leadership. One commented:

> *I think (PHLI's) main goal should be to strengthen the leadership skills of top level public health professionals, and to facilitate the development of public health networks for the purpose of affecting state and national public health policy.*

> *What I think needs to be more thought through with the Institute is more how it can affect and how it can be a leader in developing a network. And I don't think it's played as much of a role as I think it could…(for) example, connecting the state and regional leadership institutes, connecting the management development programs, identifying individuals who may be the "best and brightest" to move*

up into higher level leadership development…and keep(ing) people networked and connected.

Many believed that leadership program graduates should use their talents and professional networks as a means to take action and affect public health policy and practices. They felt strongly that the leaders and the networks that emerge from leadership development need to have a purpose and commitment in "strengthening the public health system in the US" and "mak(ing) things happen." Interviewees described a host of potential ways that graduates could be active, including influencing state and national policy and leveraging resources and connections. One individual stated:

> *I think what would be most helpful…is to regularly involve [graduates] in national level policy initiatives … you have something that really needs to be worked on – managed care, perinatal health, or some area like that - to utilize them in that way.*

Another suggested that National PHLI graduates contribute to the field through mandatory participation in professional organizations such as PHLS, ASTHO, or NACCHO:

> *Getting people to join PHLS and using that as a vehicle to create a national network is very important … I'd like to have people commit up front to participate in a national network of leaders – PHLS or ASTHO or NACCHO – that [they] will contribute to the field.*

Finally, a few respondents specifically thought future workforce development should be a goal for the National PHLI. Noting the projected shortfall of public health workers in the coming years, they described this goal as a "succession planning piece." One key informant explained:

> *I definitely think the future National Public Health Leadership Institute needs to be one of the many solutions for succession planning in our public health governmental organizations. They need so much help … leaders should be developed in not only why [succession planning] is important, but how to do it – tools for doing it.*

Another commented, "[A PHLI goal should be to] develop a cadre of ongoing public health leaders to replenish a pipeline that is constantly being drained."

Survey respondents were not asked to comment on future program goals, but they provided additional insight by answering a single closed-ended question about the purpose of PHLI (Table 7). As Table 7 shows, survey data are consistent with interview data in supporting individual leader and network development as key priorities, and shed some additional light on target audience in particular, which is discussed below. Particular results we notice in Table 7 are the following:

- When forced to make a choice, respondents tended to choose developing and forming networks among "emerging" leaders – which we defined as "less experienced, high potential" – more highly than developing and forming networks among "senior" leaders – which we defined as experienced and in senior positions. This result is somewhat artificial, because some interviewees explained the value of having both senior and more emerging leaders together in the program. But it does point out that many graduates believe that the program should serve high potential leaders with less experience as well as those who have been in senior positions for some time and are very well established.
- "Developing networks" was nearly as important in rank as developing individual leaders – whether among emerging or established leaders. This might be interpreted to mean that programs of the future should consider it a very strong priority to build strong relationships among their scholars, between their scholars and alumni networks, and perhaps between scholars, alumni, and public health agency and association leaders.
- While "to teach leaders how their agencies can develop other leaders (e.g. through programs, mentoring, networks)" was only in the top two for 27% of respondents, it was in the top four for 69% of respondents, on a par with the numbers for developing senior leaders and networks of senior leaders. In other words, this possible goal was very important to many respondents. This is in line with the interviewees' emphasis on ensuring that a robust leadership pipeline is in place.
- Only 41% had "to develop solutions to problems through action learning teams" as one of their top four PHLI purposes. This does not mean that this potential purpose is not important, but rather that most participants believed it was less important as a *primary* purpose of leadership development. Many interviewees, as we shall see, stated that the leaders of public health associations and networks at the national, as well as those who organize leadership development programs nationally and regionally, should themselves collaborate to enroll the individual leaders and networks in efforts to improve public health programs and systems.

Promoting Leadership Development

Discussions mainly focused on two types of national leadership development; a formal system similar to the existing PHLI model and a system for on-going leadership development. There are some important differences between existing national leadership programming and what is envisioned for the future; for example, some interviewees suggested that new programming be guided by a "central hub" to help coordinate various leadership development efforts. Secondly, they consistently asked for expanded opportunities for "lifelong learning," explaining that as leaders, they need periodic refreshers beyond what is currently offered by PHLI or PHLS to stay current in the field. This section describes ideas for formal leadership development, lifelong learning, and thoughts about the relationship between national and state/regional development.

Table 7. Ranked responses to the survey question: What should be the main purpose of PHLI?

Possible Purpose of PHLI	First choice (%) (N = 374)	Second choice (%) (N = 378)	Third choice (%) (N = 365)	Fourth choice (%) (N = 368)	Rank and percentage of leaders who chose the option as one of their top two choices	Rank and percentage of leaders who chose the option as one of their top four choices
To develop the capabilities of individual *emerging* leaders (less experienced, high potential).	30	23	15	13	1 (53%)	1 (81%)
To develop a national network of *emerging* leaders who can share knowledge and collaborate on national priorities.	18	20	19	19	2 (38%)	2 (76%)
To develop the capabilities of individual *senior* leaders (experienced and in senior positions).	21	16	14	13	3 (37%)	5 (64%)
To develop a national network of *senior* leaders who can share knowledge and collaborate on national priorities.	15	18	15	22	4 (33%)	3 (70%)
To teach leaders how their agencies can develop other leaders (e.g. through programs, mentoring, networks)	11	16	24	18	5 (27%)	4 (69%)
To develop solutions to problems through action learning teams	5	7	13	16	6 (12%)	6 (41%)
Total (%)	100	100	100	100		

Respondents' Recommendations for the Future of a National PHLI

This section describes suggestions for a future national-level public health leadership development program that would be similar in nature to the current PHLI model. A later section describes other kinds of continuing education programs that interviewees recommended.

For the major National PHLI, we discuss respondents' suggestions for program components including target audience, class size, curriculum, learning methods, and certification.

Who should be Developed?

Respondents offered somewhat divergent visions for whom should attend a future national leadership institute, and offered suggestions according to multiple criteria including an individual's level in the organization, work sector, and personal attributes. They were split on whether the Institute should target senior level leaders or emerging leaders. Many believed the Institute should focus on governmental public health leaders, but include other non-governmental parties as well such as healthcare and advocacy organizations. Some suggested focusing on "potential" as a criterion for attendance rather than an individual's position level or sector. These criteria are described in more detail below.

Level in the Organization

Quantitative data from survey respondents (Table 7) suggest respondents' thoughts are somewhat divergent regarding whom the institute should develop, with a greater percentage ranking the development of emerging leaders (53%) rather than senior leaders (33%) in their top two choices of the purpose of PHLI. Many interviewees said senior-level public health professionals such as state health officers or major city/county health officers should attend an institute, however, a few who made this suggestion also noted that focusing on this type of scholar is problematic. Senior-level professionals tend to have a short employment tenure, often because they are political appointees with only 2-3 year stints. Burnout and retirement were also named as reasons why the investment in development senior leaders is not entirely judicious. One individual commented:

> *I think [PHLI] probably should target local directors of health…the state health department directors are only in 18 months. So where do they go, I don't know. At least the locals are more stable, you get 10, 15, 20 years out of local health department directors.*

Others suggested "new senior leaders," those "on the rung right below top leadership," and emerging leaders as target audiences. One person said, "It is important to focus on 'new' emerging leaders given the graying of the workforce and the diversity of the workforce. It is important to have leaders recognized from within and supported to move

up the ranks." Others recognized the desire for professional growth among emerging leaders as a rationale for focusing efforts toward them, saying

> *There's a hunger there, and an openness to leadership skills; and they also have that length of future in front of them to be able to apply what they learned so that the PHLI experience really does have time to gain some fruition.*

Those who did not support recruiting emerging leaders thought they "weren't ready", or because they believe regional institutes are a more appropriate environment for development emerging leaders. One individual commented, "I see PHLI as …a primary vehicle for providing development to senior leaders. Emerging leaders should not be turned away, but the state/regional PHLIs have the capacity to address emerging leader needs." Finally, some advocated for a combination of senior and emerging leaders, saying senior leaders "lend credibility" while emerging leaders "are the future of public health."

Sector

Several interviewees suggested that a future institute primarily should develop governmental public health leaders but also consider enrolling a limited number of scholars from outside government. One explained:

> *I don't think we should lose the focus on the fact that we're dealing with a governmental public health system, and that's the reason [PHLI] started…there haven't been very many [development] opportunities…we want to have some cross-fertilization, but it shouldn't lose sight of the fact that this is about developing public health leaders…this isn't about being exclusive, it's about making sure that you're true to your mission.*

Respondents suggested academicians, non-governmental leaders, private sector leaders involved in public health and health care, and elected officials as some potential others to include.

Professional Attributes

When discussing attributes of scholars to enroll, respondents named "potential" most frequently as a criterion for acceptance into a national leadership program, often in conjunction with other characteristics. For example:

> *Accommodate those who are way out in front, and stretch them because they're leading the transformation.*

> *It should be high potential senior people…the folks that really, if they could get a burst of leadership development and networking, and they got it on their resume and they got better known, that they would end up with more skills, and feel validated.…[and] step up to top leadership positions and be change agents.*

Another individual commented:

> *On emerging [leaders], look for the potential for individuals, maybe not position-wise, as in an organization, but be able to become statewide or national leaders...within the practice.*

Others suggested that scholars should have decision-making, supervisory, programming, or fiscal responsibility, or more generally, "people with long-term experience in public health who are on the cutting edge of where it needs to go."

Beyond these criteria, respondents also consistently expressed a desire for a diverse cohort, but conceived of diversity differently. The most common desire was having a cross-disciplinary body of scholars, from within and outside of government; other requests included working with scholars from all three levels of governmental public health (i.e., local, state, federal), organizational diversity, age diversity, racial/ethnic diversity, and geographical diversity – by the states represented, by a mix of urban and rural communities, and by inviting international scholars. One survey participant summed it up by saying, "Develop change agents from diverse backgrounds working across disciplines to improve health."

Model, Class Size and Program Length

Strong opinions were expressed by respondents when reflecting on past versions of PHLI and whether scholars should enter the leadership institute as "individual" or in "teams", yet only a few respondents expressed an opinion for the future of a national PHLI. No clear consensus emerged among the few individuals who specifically volunteered an opinion, but the arguments followed clear lines. Respondents believed that individual participants are more likely to network with other scholars and to candidly discuss personal leadership issues, since no one else they know well is in the room. However, a few believed that teams are more likely to produce a measurable output. One individual said:

> *There are pros and cons to most things, and this is the case here. The advantage of teams is you pull a group of people together and they focus on a project...it's a proven (training) approach...(with) an output...the downsides are that teams tend to cluster amongst themselves...that diminishes interaction...(and) after they leave the program...they are less inclined to participate in national alumni activities.*

> *When you have a room full of senior executives, and staff people are not present, there's going to be a greater likelihood that they're going to feel comfortable and free to really discuss things that are challenging to them or questions that they have … in a way that you can't do when you have your subordinates or staff there in the room … because you're the boss and when you say something, it is so… it's not up for debate and you can't engage in that kind of challenging discussion and testing your own knowledge base and decision making when you're there with staff.*

On the other hand, another said:

> *I think if you could do it as a group, it would be great. I think it takes more money. And it is harder to pull off, as well...I think you reach a certain effectiveness, and you can demonstrate it when they get home, you can demonstrate things more clearly. They are able to more easily make change by virtue of numbers.*

One participant noted less geographical diversity when scholars come as teams, saying "[teams] dilute the geographical abundance." Others thought the team concept "watered down" the curricular content to the "lowest common denominator" and believed that the individual model allowed more time to study and greater opportunity for "deep reflection."

Among those who supported the team concept, purposively pairing senior and emerging leaders or asking senior leaders to choose a junior leader from their organization or an affiliate (not a direct report) was suggested as a means to promote sustainable leadership. Another suggestion was to target PHLI toward individuals and the regional institutes toward teams, or to use different models for different audiences. For example, one could use an individual model for senior leaders who know public health content but who need to assess and develop their leadership skills, and a team model for new leaders who may not have a strong foundation in public health and who may need to consult with team members with more public health expertise. In the interviewees, there was no support for a *teams-only* model at the national level, but a few interviewees were open to enrolling both teams and individuals.

When envisioning class size, tension exists between the desire to maintain intimacy and promote networking opportunities among scholars, on the one hand, and the recognized need for diffuse development efforts, on the other. As one participant said:

> *It is unfortunate that we can't develop more [people]. I think the original PHLI was to target state and local health department directors and in the first nine years they didn't come close to [developing] the 3,000 [directors]. We only got about 10% of them developed.*

Another commented:

> *I'd say [develop] 40-50 [people]. I think much bigger than that and it becomes very difficult to really get to know people well. A large part of the value of this class in knowing people very well who come from diverse, but at the same time, common backgrounds.*

A survey participant thought shifting efforts by reducing the number of attendees and recruiting more intensively would be valuable to reach a more diverse group of leaders. Although interviewees recognized a need for more diffusion of development, they all suggested developing between twenty and eighty scholars per class, with forty to sixty

being most common. Those who suggested seventy to eighty qualified that number by saying there could be "different tracks" or "two groups of 40" to accommodate a larger group. Class size for the previous programming was 50 scholars, and interviewees seemed comfortable making a similar recommendation for the future. Ideas for how to address the need for development are discussed in more detail later in this report.

A few survey respondents suggested having two programs, one on each coast, to offset the time and expense for individuals who travel long distances to attend the national institute.

A few respondents also recommended building in an alumni component, to help meet needs for updated development among graduates, and as a secondary goal, to build and sustain on-going political support for development efforts. One participant suggested an annual one to two day alumni program, saying it "could be one day during the week-long institute where alumni return" to learn new concepts "at a reasonable price."

Finally, although not specifically asked, a limited number of respondents suggested retaining a year-long program. As one participant said, "I do think that the retreat time, and the year-long development time is an excellent model." However, another participant commented:

> *I would have preferred monthly [or] quarterly face-to-face, multiple day events. I think the more face-to-face time we have, also allows us to build stronger relationships with scholars from other states.*

Curriculum

Some respondents gave broad recommendations for the curriculum, while others offered more specific ideas. Broadly, many respondents suggested that the curriculum should teach leadership skills, include dialogue about issues that have national impact, offer a variety of viewpoints, and use examples that are relevant to many. Respondents also noted that development should draw from the fields of organizational development, public administration, and political science.

One participant said:

> *[We should learn] big things like identifying the critical issues in the field of public health … and move them forward, support them, know about them, invent the next round of changes in the field of public health.*

Another commented:

> *There needs to be a look at the curriculum to bring more variety of viewpoints into the development than strictly public health.*

(The curriculum should) be tied to public health priorities – for example, core functions, Healthy People…it makes public health real.

Others suggested addressing the five core and seven cross-cutting competencies in public health, as have been developed by public health systems scholars.

Some respondents identified specific areas for study; one named "communications development, systems development, and organizational development" in particular. Another suggested "how to use data, how to do financial, how to do strategic planning." Yet another suggested incorporating instruction about performance measures and objectives, saying that it's important to know "how to use data before you get to the end [of an evaluation period]" in order to understand along the way if the project is on track. Additional suggestions included "politics" "policy development" and "skills to manage transitional leadership."

Respondents discussed the merits of having the same development program offered to each cohort versus having a more versatile curriculum with choices. Some respondents suggested offering a core curriculum supplemented by an "optional diverse program" as a means to meet scholars' varied curriculum interests and their desire to develop self-identified areas for improvement, noting "one size doesn't fit all." This respondent stated:

> *What starts hitting my mind is how much money is available to design the program and to deliver it, because that puts parameters around what you can do and what you can't do. But if there were the opportunity to have all senior level public health professionals in one program, I would think that we would need to offer a diverse [program] … a basic program for everyone, first of all, especially on leadership development skills. And then offer an optional diverse program that allows the public health professional to further develop skills that are identified that they need to develop. As an example, I think it's terribly important for a public health professional at a senior level to be articulate, well spoken, have the skills to address the public, address the legislature, create an expressive vision that they have. But some individuals have gotten to a senior level and do not have that skill and need to work very hard on it … you might have a heavy focus for some individuals on speaking, engaging people, learning how to listen and converse more effectively, and so forth. And then another group might have a different field that they need to develop more fully, and so we could specialize that way.*

One interviewee expanded on the general concept of teaching leadership skills and outlined three critical program components: networking, self-assessment, and instructional content. At the same time, this individual addressed the idea of offering a tailored curriculum or optional diverse program, saying,

> *I think there's some core curriculum kind of thing. And I think then that the networking piece is really crucial … If you can do … three things, the self-assessment piece, some kind of content, and some kind of networking time, then*

there can be other things that one could delve in, more specialty kind of things, whether it be communications or crisis leader[ship], whatever your current shtick is, and a bit more of a customized approach ... It's much less resource intensive to just do the same thing for everybody. So you need more resources if you're gonna try to customize things.

Respondents were specifically asked if they thought the curriculum should link to national public health priorities. While respondents in general thought it was important to be familiar with public health priorities and their sources, they were less enthusiastic about incorporating them into the curriculum, maintaining that the institute was about developing general leadership skills rather than specific knowledge or skills around issues.

> *(The curriculum should address)...how do you not only manage change, but create change in a positive direction to enhance the health of the community – encouraging people to think about that.*

In support some said, "If it's a national public health priority, it should be dealt with in the program," elaborating that the curriculum should tie in with Healthy People 2010 objectives, CDC goals, and/or Institute of Medicine reports, and that a national program "should make sure people know about those [reports]." Another noted:

> *Dealing with emerging national issues and international issues is really important. It helps us see what is emerging before we know about it, it helps us see a connection to the world. It's important for us to push the unknown.*

> *We need to constantly review the curriculum of these programs so they're relevant to the changing nature of public health.*

Several respondents suggested it would be appropriate to use cutting-edge topics as applied case studies to discuss leadership principles and "state of the art" practices, particularly if "someone is willing to fund [development of] a case study on x priority."

A greater number of respondents, however, did not think the institute should be about specific issues, saying that "leadership skills are more generic" and noting that "you risk going topical in nature." One emphasized:

> *I don't think the institute should be about an issue, I think it should be about public health practice – not [pandemic influenza], not bioterrorism, not chronic disease. It should be about the tools and the equipping of people to do public health.*

Learning Methods

There was limited discussion about learning methods. A combination of on-site learning and distance learning was suggested by one participant. Another suggested action

learning through teams. Peer coaching and executive coaching, both during the program and post-graduation, were also mentioned.

Most discussion revolved around team projects, with suggestions about their focus and scope. One participant thought an applied project is good, but cautioned it "can't consume our life because we have everyday work responsibilities." A few discussed how the project could be focused, with one suggesting it focus on public health priorities, and a few suggesting that the project link to a "particular outcome."

> *For example, maybe this year the emphasis is on two areas of national CDC [priorities] or national goals – preparedness and X, and the teams are asked to do something about these two issues, and present their results to CDC deputy directors and official high level people about their solutions to big national issues.*

This person also suggested bringing in the business sector or multiple sectors with a common interest in the issue, naming several advantages to this approach including: the development of networks and individuals through problem solving, the opportunity to exercise influence over an area "where you have no direct authority", better preparation for ambiguous authority, and experience for operating in a network.

In contrast however, several respondents said not to "focus too much on the product," saying people already experience this in their daily accountability environments, and asking instead for "time to think" in an academic, rigorous, but not product-driven environment.

Program Credentialing and Scholar Certification

Previous National PHLI's in California and North Carolina have not offered academic credit or other credentials, such as certificates. Several respondents suggested working on these issues, saying that offering a certificate from an accredited university and department would "make it meaningful." Some elaborated, saying a recognized certificate would "make the program more appealing to potential applicants", "serve as an incentive for lifelong learning", "give more weight to being a graduate" and help with evaluation by creating curriculum standards. One person suggested offering credit toward a master of public health degree.

Finally, one person suggested evaluating scholars. This person went on to say that grading could be done pass/fail, and include an exit interview conducted by faculty at the end of the development

How do we create incentives for folks…learning from each other…making sure they're really up to date… I even dreamed of some kind of PHL certificate program. I don't know if we'll get there. Things to encourage people, to give them some points for an MPH… How do you encourage people to continue lifelong learning?

year, where an "honest assessment of leadership potential" is offered.

Continuing Education Opportunities and Informal Leadership Development

Having discussed respondents' ideas for the future of the main National PHLI program, this section describes respondents' thoughts on lifelong leadership learning. These on-going activities would serve as a complement or supplement to the national development institute by providing short-term opportunities for graduates to refresh their knowledge and skills, and by expanding opportunities to a wider audience that could include professionals who did not attend a national program.

Vision

Respondents were highly interested in on-going educational opportunities, expressing a desire to "refresh knowledge" "gain new skills" and "be with others who want to learn." Many saw value in reconnecting with other leaders. Some noted that offering on-going educational opportunities would help keep leaders invested and connected to the national program, in essence creating "lifelong fans." Time constraints appeared to be the greatest barrier to participating in continuing education.

Interviewees desired progressive courses and a diverse menu of course offerings. One individual suggested, "Build a series of career opportunities for people in public health. Build a curriculum that takes someone from their first management job in public health to their senior-most opportunity." Another noted that coordination between national and state/regional institutes would be valuable to create a development program that makes "academic sense over your career."

Target Audience

While opportunities for lifelong learning was a consistent theme, there was some ambiguity with respect to whom should be served and how. For example, some interviewees requested programs for alumni, while others suggested a more inclusive approach by opening opportunities to those who couldn't attend a national development program. Others did not specifically denote a target audience.

One key informant believed that offering shorter continuing education courses could help create more interest in "change" back at National PHLI graduates' organizations, and better facilitate implementation of the new ideas being taught by helping to diffuse a common framework around approaches to public health:

> *It's like throwing seed on hard soil, you know, it's gotta have the right environment in which [new ideas] can thrive, or else it…you know you can drift back to norm too easily, or become frustrated too easily …how do you get, at least within your organization, other people on [the same page]? Now you can*

show them and you can lead by example, and you can try and move your organization, but it is so much easier to do it if you've also got some key people in, or people in some key positions within your organization, that have had an opportunity to get at least a taste of the kind of thought-changing work that can occur through the PHLI experience, themselves. And so little, perhaps more-focused, obviously, because I think they would be shorter experiences. I'm not at all proposing a 12-month or 24-month experience for those management administrator level positions that I could see really benefiting from this – those emerging leaders, so to speak. And some of them may even be career people, who may not ever reach the absolute senior level, but really would be very encouraged and gratified and would have an awakening, so to speak, in the middle of their careers. And have their careers and their minds recharged also by being able to think about things a little bit differently, have their own ah-ha moments, so to speak, by having a PHLI opportunity.

Model

Various ideas emerged for how to offer ongoing development opportunities, ranging from formal residential short courses and self-paced electronic-based instruction, to less formal opportunities such as reading lists and book clubs. Making development available to meet different learning styles and time constraints was a common theme. Respondents suggested distance learning, short courses, teleconferences, conference calls, web-casts and pod-casts.

Formal Development/Continuing Education Courses

Short programs or retreats, ranging from 2-4 days, were most preferred, perhaps on a quarterly or semi-annual basis. "Top notch" faculty, a "nice setting", and "help with the costs" were requested. Others suggested coordinating continuing education opportunities with large meetings, such as APHA or ASTHO/NACCHO.

Some expressed a preference for scheduled rather than self-paced development saying, "The learners that I've been familiar with so far, who are probably 40 [years old]…all need to have a scheduled time to be there, on their calendar, where they can't make the excuse to actually go and do that…get it done. They don't log on to a webpage, they just don't do it." Likewise, another participant said, "I'm personally interested in in-person, ongoing courses and a network too, but I'm not interested in phone calls, teleconferences. Frankly, I don't learn that way. I don't learn in front of the computer and my schedule doesn't allow it."

One key informant noted:

As we continue in our careers it gets harder to get away sometimes … if the program is that compelling and it gives you that needed shot in the arm, and plus

you're with people who are having a similar kind of desire to learn, it becomes very worthwhile … I'd be willing to spend money if it helped me get through the kinds of crises I have to face, but I gotta do it short term, I can't do a full week, or I can't do the three week kind of thing.

Respondents requested continuing education credit, noting that state and regional institutes have been able to provide it. Said one participant, "[Scholars] need a carrot other than a desire to learn … it's a way to encourage attendance for ongoing activities."

Beyond formal courses, another idea that emerged was arranging short-term professional fellowships or internships at policy-making organizations or in a different level of government to increase collaboration and cross-sector or cross-level understanding.

Informal Activities

Interviewees and survey respondents suggested that informal activities would be valuable both for professional growth and for maintaining alumni connections with the PHLI program. They also cited networking benefits stemming from learning with other scholars.

These individuals proposed several ideas. "Book reviews, things to read, new concepts, tools to do one's job" was suggested by one participant. Annual or bi-annual issues sessions, leadership series, or special topics series were requested by numerous respondents. Several specifically noted the value of the PHLS book club. Others suggested sending out an annual reading list to alumni, and sharing cases and documents from the current national development cohort. Another suggestion was a newsletter with useful information for managers, with "tidbits" of lessons learned, in contrast to a newsletter reporting "what's going on" and events.

Web-casts, listservs, teleconferences or on-site meetings were all mentioned as possible modes for communication for such series, as was coordinating with highly attended conferences and meetings. PHLS was named as a possible coordinating center. Although not specifically asked, a few respondents volunteered that they would be willing to pay a fee for these opportunities.

While most respondents expressed interest in activities following graduation from a leadership development program, a few noted barriers, with one saying, "It's hard to get people involved", and another noting that "people are really busy." Funding was also mentioned as a potential issue. One participant summed it up by saying:

People are excited and engaged, but everything else in the world pulls at them…If there are ways that you can link ongoing learning in something that isn't cumbersome, that provides opportunity for people so they can make time, it's convenient, maybe associated with highly-attended meetings, or doing it over the web. Something that would, on a long-term basis, provide a learning opportunity.

The Relationship between State/Regional Institutes and the National Institute

Respondents were asked to discuss how they envision the relationship between national leadership development and state or regional development.

Vision

Many requested a more systematic model of collaboration between state/regional institutes and the national institute. Several thought that the institutes should be more "complementary", mutually "enhancing", and "coordinated." Similarly, others suggested having a good partnership and sharing information such as curricula among institutes, with one person noting a formal link is not necessary. One individual captured the desire to formally conceptualize state and regional institutes as part of a larger system in this way:

> *It would be nice to really rationalize the whole system, and have [it] clearly thought out. It hasn't been. It has moved in that direction, but we never had enough money to develop fully in that way. Everyone wanted it to be developed. We had to be opportunistic [in starting up state/regional institutes].*

Several key informants suggested that more consistency and more networking would strengthen the state and regional development institutes. One person suggested regular meetings, saying:

> *I think that there should be a … better relationship between all of the state and regional PHLI's on the national level. And by that I mean, they should all sit down together on a regular basis and say, "Ok, this year we're gonna work on coming together, on a common ground, for whatever purpose." It could be for the purpose of making sure that the state and regional programs exist, making sure that they have the right kind of faculty and support, making sure that the state and regional people have access to the programs, making sure that there's a diversity of race within the programs, which is barely even looked at, at this point in time.*

Another individual expressed hope that local institutes participate in the public health leadership development network, but noting that "I know that the network of leadership institutes has really struggled" and attributing this to a lack of funding.

Purpose

State/regional institutes, viewed as being "more sensitive to local culture," are recognized as serving scholars who address common issues based on geography as well as shared responsibilities. One person commented, "The national program will give you a national perspective – it will be different from the local perspective." Another respondent recognized a need for distinction between the models:

> *I think we really need to distinguish the model for the national [institute] and its purpose from the state and regional [institutes], so that we can justify a national.*

State and regional institutes were seen as having an important role in supporting vast development needs, helping to meet leadership competencies, and in garnering ongoing program support. One participant said:

> *There's no way that the national program can develop everybody. The local programs become an extension of that, and they ought to be just as good as the national program … if you want this program to have a life of its own, and people chatting it up and talking about it, it's got to be viewed as something good for the masses.*

While respondents recognized and endorsed the importance of state and regional institutes, there were varied opinions about the quality of these institutes. A few expressed concerns about their quality and effectiveness, while others said they were comparable or even better than the national institute.

Target Audience

Many respondents suggested that the state/regional institutes serve "interdisciplinary emerging leaders" who are normally less senior than scholars attending the national institute. Respondents emphasized the importance of having a diverse audience, and specifically requested geographic, level of government, and racial/ethnic diversity.

There was a lack of consensus in terms of whether state and regional institutes should feed into a national program. Some respondents believed that local institutes would "ideally feed into [the national program]" because "it could strengthen the applicant pool at state and regional institutes" and would also support what one called "ecological leadership." However, a greater number thought that it wasn't necessary to go to a local institute prior to attending a national institute.

Curriculum

Respondents offered thoughts about state/regional curricula, recognizing that these institutes reflect local culture and the curriculum should be tailored accordingly. One participant commented:

> *Number one, regional institutes are more sensitive to the culture of the area that they're serving. And so regional institutes can have case studies, can have experience examples that will feel more common to the people who attend them. And so while you're stretching and creating a learning atmosphere around the skill-building, and you're stretching the thinking around those things, there's a*

certain kind of comfort knowledge that has to do with if I'm in the Southeast and I start dealing with hurricanes, I get it real quick. But if I'm in earthquake country, and the example's a hurricane, I can't get my head around that and handle it.

Others talked about curriculum in relationship to the national institute, saying, "Don't teach conflicting material, but maybe at a different level teach something at the national institute and something at a more introductory level at the state and regional." Another suggestion was to share best practices from the national program at the regionals. However, others thought state/regional curricula did not need to be influenced by national curriculum; one individual cautioned against a "top down" approach, saying it could "take away the creativity." Some suggested sharing curriculum between state/regional institutes and perhaps creating a common core, but at the same time noting "they're all very customized, unique institutes, they've got good faculty, and they can develop their own curriculum."

There was limited discussion about how to integrate the two levels of institutes; some suggested that national scholars or alumni serve as faculty, coaches, and mentors at the state/regional institutes. Others suggested having alumni of the national institute participate in planning or facilitating regional institutes.

Finally, key informants were supportive of sending staff to state and regional institutes, saying it was helpful for subordinates to "shake things up and get out of [their] boxes." Other benefits, such as "exposure to ideas you don't get in managerial programs," and "real opportunity" for staff at lower levels were also named. Diffusion of ideas and best practices was another benefit of local development, with one person saying, "I think it would really seed the change in innovation process." However, a few individuals noted that cost may be an issue for some regions that may not have a local institute close by.

Network Development, Maintenance, and Activities

Network development and maintenance were named as primary national program goals alongside leadership development. This section describes ideas to promote this goal. It also presents a related discussion from the interviews about how a strong network can function, and discusses network outcomes such as advocacy efforts and creating practice guidelines and policy.

Many interviewees asked for stronger and more integrated efforts to build and maintain leadership networks in the future. Many recognized the power of their leadership development experience in initially forming networks, but some acknowledged that sustaining the networks over time was challenging.

Lifelong learning, described in the previous section, was offered as one idea to build and sustain a vital network. But respondents also offered additional thoughts on ways to make this happen.

For one, respondents requested a mechanism to stay connected with alumni and with the program, suggesting as examples a "national list of graduates," an "annual list of new projects" or "updates on past projects." One survey participant noted, "It's very difficult to stay in touch without having an up-to-date contact list." Others suggested developing a listserv or an on-demand searchable database of contact information and specialty fields in order to stay connected, enhance recruiting efforts for open positions, and mobilize a broad, diverse network for action. One key informant said:

> On a regular basis, PHLI should send out to each of its graduates an update-your-contact-information form...electronically. And immediately identify those that they don't hear back from, and then go to a second method of trying to pull them back in....it's beneficial to do that, not only from the perspective of to know how to help evaluate the program, but also...to keep your networks going, developing new networks of professionals around topic areas, pulling together professionals to go testify at the national level.

Several people also mentioned the value of social activities, and suggested that social events continue to be coordinated with major meetings.

Coordination

Respondents suggested that PHLS could enhance network development, saying it was an "excellent model" and a group that "provides some forum for exchange." One participant elaborated, saying:

> The Public Health Leadership Society should be the mechanism for keeping folks networked and keeping them engaged in a "policy way."

Some respondents, however, expressed a general need for a greater connection between PHLS and national leadership development efforts. Some suggested that graduates should be required to join PHLS. Others went further, saying greater coordination or connection with PHLS is important for bringing about collective network action:

> You must find ways to continue to network, basically, that there are some opportunities for that. I think the Leadership Society is one way, but surely not the only way. We've got less than 200 members of all the people who have gone. It ends up being a select group, but among that group it provides some forum for exchange. We do a book club and leadership series on some timely topics. It is a way to have some ongoing learning for folks. We have a learning program at APHA. That is about all we have had money to do. This year it will revolve around quality improvement. Last year it was on accreditation, workforce development - some of the key issues.

Others identified a gap in the leadership network and a need for a "main node." One said:

How [do] you keep 'em networked in an issues-oriented kind of way?... If we're going to move forward, as an example, on pan flu preparedness this year, there's a set of leadership issues that have to be engaged in order for us to be more standardized in our approach I guess. And no one really networks the leaders together to talk about that, they network their programs together, but at this time we don't really network the leaders together ... ASTHO and NACCHO do little bits of this, but nothing that's really a kind of a leadership strategy. And I know this kind of gets out of the realm of leadership development, and I think that's kind of where, maybe academic institutions have a little bit of a problem in figuring out what's their role in continuing academic development and leadership development, versus networking, issues-oriented networking and that kind of thing... in the network jargon, there needs to be a main node, you know? And there isn't that right now. And I would I guess like to see whoever plays the national leadership institute role maybe play that node, you know. If it's resourced and all those things ... basically what I'm talking about, [is] how you create mass collaboration.

Some respondents offered thoughts about how to coordinate network activities. Virtual networks were suggested, with email, discussion boards, teleconferences, a website or wikis as mechanisms for sharing thoughts, information, and working documents.

Network Activities

Some respondents spoke passionately about the potential influence of a leadership network, and proposed that graduates of a leadership development program "use ourselves effectively at the national level" to influence policy, advocate for funding, and work on current and emerging health problems. At the same time, they also noted that graduates need a "reason to gather," and that rallying around issues is an effective way to promote network development and maintenance. Respondents acknowledged that a larger budget would enhance the feasibility of this idea. A second key theme emerged during discussion of networks; the network as a mechanism to diffuse ideas to people and organizations who would otherwise not be exposed to these innovations.

Network as Think Tank

Described as a "think tank," network activities could be the "brain trust of forward thinking" and lead to white papers and testimony at congressional hearings, for example. One individual said:

Those bigger issues, crises or whatever, then the think tank should come together and try to present a consensus type of white paper... to affect the policies or practice in some meaningful way... I think [PHLI] should move into some networking thing that begins to change policy, the landscape, the direction; it

should affect legislation, I think it should move in that kind of direction, in a more deliberate way.

Others commented:

> *I can see that, as we have important public health issues that need to be debated at a national level, a group of PHLI graduates that are all interested in working on that topic, could convene themselves, or be convened...participate in some discussion and maybe even some white papers or whatever on a topic, a presentation together at a Congressional hearing, that type of thing.*

> *When we have a special project to do we [could] tap into these alums from all across the country. If you weren't interacting with each other, you wouldn't know who they are. For instance, our national network of public health, we have done accreditation, now we are doing one on quality improvement. Several folks worked part time for national experts that we have identified. I think it is a great way to do business. You don't have to do it all internally.*

The Network as a Mechanism to Diffuse Ideas

A few respondents believe that the network has the responsibility to aid local health departments "that may not have the sophisticated capacity or infrastructure to stay ahead." One alumnus spoke earlier in the report about the difficulty in implementing new ideas in the absence of an environment open to change and colleagues open to innovation.

Another asked that the institute make special efforts to help "translate that transformation, those cutting edge pieces, to the pieces back here [i.e., local health departments] that are dragging, and may not have the sophisticated capacity or infrastructure to stay ahead."

> (Scholars) cannot work on something very innovative and yet come back to a work place that stifles that kind of creativity and innovation… maybe the opportunity for the future, is that…the institute …has to assure that the system is moving forward in some sort of cohesive, transformative way.

A survey participant noted:

> *Good ideas like prevention and increased participatory processes may be rare because they are not preceded by the culture change needed to help them realize their full potential. PHLI could devote itself to identifying and promoting the culture change that is required for more participatory processes to become commonplace in the public health leadership toolbox.*

While respondents repeatedly recognized the difficulties of working in environments that are resistant to change, most did not offer any concrete ideas in terms of how to affect this issue. One participant suggested including "draggers" in the national institute as a means to promote cohesiveness, but did not propose any specific ideas for how to do so.

System Coordination

Throughout their interviews, respondents suggested having a more coordinated or connected system with central leadership to help facilitate a broader spectrum of leadership development efforts, to help disseminate information to alumni of PHLI, to sustain a vibrant alumni network, and to help mobilize and capitalize on the potential influence of a leadership network.

Several individuals suggested linking the "whole leadership institute network, including state and regional" institutes. One survey participant noted, "The future of PHLI needs to be tied to a larger collaborative strategy for leadership development across the public health system." Another individual thought it would be beneficial to link various national leader development institutes, such as PHLI and the development institute for state health officers at Harvard. To accomplish greater system-wide coordination, one person suggested setting up a "council on linkages", with representatives from agencies such as the CDC and HRSA.

One individual discussed setting clear expectations, noting:

> *I think leadership is a lifelong experience. And one institute is not going to solve all those issues. And it really can't, because ... we need to be clearer about what the role is of a particular institute in that the whole lifelong learning perspective that we want to take…. Starting with the model that we have now with the state and regionals, and the few emerging [we need to] create a comprehensive array of programs that are a little bit more integrated than what we have now. And be clear about what we expect people to get at different levels. So that when you choose from the menu of leadership options, what does that look like? Should leadership be offered in distance?... Do emerging leadership programs look different than more advanced leadership programs? What is the relationship between management and leadership? All of those elements I think need to be explored in terms of what are the core curriculum modules that you need at each level. Not that it wouldn't allow a given institute some prerogative in being oriented somewhat to the needs of their local, their local states and so forth, but that there be a better way to make sure that anybody who goes through a leadership institute gets a certain core of leadership knowledge.*

Another explained:

> *Well I think we're in the midst of a process now where we're reviewing what leadership's all about. I think there needs to be some discussion of the funding issues as well as the content issues. But I don't think there's agreement, even at this point, between what should a national program and what should a local [teach]. I'm very concerned when the director of CDC suddenly gives a large amount of money to Harvard, like it did over the last 3 years, without being concerned about how it impacts the rest of what leadership programs have been building for 15 years.*

And another emphasized the need for dialogue and consensus-building saying:

> *It is…kind of like singing from the same hymn book, but learning different things through that hymn book, you know, or learning at different level. Because obviously the work of directors and senior people is not the same as the work of program managers and administrators, but you want them all to be playing the same piece, and how do you make sure that that's what happening. And I think that happens through a lot of dialogue and work and a lot of consensus-building across the regions, the regional institutes and in conjunction with the national institute.*

> *I think people tend to get a little grandiose in their expectations and pretty soon, you know…it's gotta be world peace or you weren't worth anything.*

Evaluation

Respondents had the opportunity to discuss how leadership development should be evaluated in the future, and what outcomes should be measured. Responses varied, with some believing that process measures such as tracking individuals – "where they are and what they're doing" and participant satisfaction are satisfactory. Others suggested intermediate measures such as changes in personal performance or organizational change. Impact measures were not well specified by those interviewed. Table 8 presents a composite overview of suggested evaluation measures.

Several individuals expressed concern about making causal links between leadership development and outcomes and suggested focusing on "realistic" measures. Some acknowledged that it's "hard to figure out what we're measuring" and that outcomes that may result from an investment in leadership development are "multifactorial" and hard to trace to one's development. One person said, "In many ways, we're trying to evaluate things that may not be completely able to be evaluated." Another suggested it may take "years" to measure program impact. False expectations were also mentioned:

> *There was some thought that leadership programs would help us with attrition…I think that's a misplaced expectation. [Stability] has to do with political skills and it has…to do with changes with leadership at the top…political skills are common sense – they're hard to teach.*

Some respondents offered thoughts about how to evaluate the program; methods included surveys, interviews, and scorecards. Timing was also mentioned, as some respondents stated that ongoing and "proactive" evaluation would aid in demonstrating program value to funders. Another individual thought that "establishing performance measures in the beginning" of the program would be helpful. One person suggested keeping updated contact information for graduates via regular electronic reminders to make evaluation methods easier to implement.

To measure individual change, some respondents suggested using multi-method assessment, including a multi-rater (or "360 degree") assessment tool at baseline and

following the program, in addition to a second more objective tool. Post-tests immediately following the program, with two additional post-tests to measure longer term changes were suggested. Another suggested key informant interviews among a sample of graduates and among graduates' superiors. There was also a general suggestion to measure "return on investment."

Table 8. National PHLI Evaluation Measures Suggested by Key Informants

Domain	Possible Process Evaluation Methods and Measures	Possible Outcome Measures
Program	Curriculum evaluation – annual focus groups with alumni	
	Satisfaction with development, perceived value	
Individual Learners	Number of people developed	
	Organizational affiliation	Success -Have roles changed, grown, expanded? -Have graduates achieved their professional goals?
	What are they doing - roles and responsibilities	Knowledge – did people learn?
	Learning outcomes	Confidence Perceptions of performance -How have graduates changed? -Do graduates do business differently? -Do graduates make decisions differently? -Have skill sets changed?
Interpersonal	Have scholars continued to network over a long period of time?	Support – Do I have someone to call for advice or just to chat? Information - Do I know who to call about what issues?
Organizational/Systems	Are there more skilled agency heads?	Have graduates helped their organizations achieve their goals?
	Succession planning	Resiliency of leaders/retention
		Has PHLI built leadership capacity? What is the right dose? What dimensions of leadership are most critical to develop?
		Have graduates taken a lead on national health issues?
	Systems, organizations, programs, policies	What structural changes did PHLI contribute to?

Funding for Leadership Development

Although funding for leadership development was not part of our interview guide, some key informants volunteered ideas and thoughts about this important issue. Limited funding over time and perceptions of unstable funding were key considerations. In particular, a few were concerned that any imminent cuts in funding would impact a long history of building leadership efforts. One participant said:

> *"We've had public health leadership institutes for what, fifteen, sixteen years? And yet, everything seems to be falling apart because of lack of funding."*

Others commented on how limited funding in general prevents the "implementation of great ideas." Lack of perceived value by legislators and lack of support for workforce development were named as factors contributing to funding problems. "It's been very difficult to get people outside of the CDC to fund this thing. But we've had trouble getting any kind of thing to enhance the workforce to get funded," said one participant. Another acknowledged, "Policy makers don't want to pay for governmental employees getting trained."

Respondents discussed potential strategies to sustain or enhance funding, including creating partnerships among agencies with key stakes in leadership development, and moving into leveraged funding opportunities with private parties. Others believed the CDC should remain as the program's sole funder. One participant said:

There needs to be funding at the core level supplemented by dues or a registration fee by people who participate. It has to be funded at the federal level – by the CDC. Something has to be big enough to make that fee affordable.

> *It's a major responsibility of the CDC. CDC is public health. CDC needs for its public health professionals to be adequately prepared to deal with supporting and promoting policy initiatives at the federal, state, and local level.*

Others suggested that agencies such as HRSA, ASTHO and NACCHO fund leadership development in partnership with the CDC. One person noted, "Creating a new program is going to take some pooling of resources. It doesn't have to all come from the CDC."

Another suggested:

> *The way [to design future leadership development] is to have a big break from the CDC-branded institute that's currently at UNC and to reconvene a set of stakeholders and redesign the new PHLI from the vested interests of all the funders and the graduates – the field.*

One participant also suggested capitalizing on leveraged funding from insurers and pharmaceutical companies, saying organizations like Kaiser, Medicare, and Medicaid might be interested in funding demonstration projects that serve mutual interests. He elaborated:

Is there a possible demonstration project [other parties] can fund that can help us determine whether or not we can make headway in these areas that are costing Medicare a lot of money? The pharmaceutical side, let's go back to, obesity... given we're not going to eliminate the problem, our strategies need to include managing the problem, maintaining people in a healthy way, which results in them taking different drugs, a self interest in the pharmaceutical [company] to effectively manage individuals, they'll use medication, they'll be healthy. We're trying to implement a disease management program and strategy which we might do with a managed care organization. We think we could save them money and keep people healthy.

Private foundations, such as the W.K. Kellogg Foundation and the Robert Wood Johnson Foundation were also named as potential funders, with one person noting that it "would be hard to get a state-level foundation involved." Finally, one person thought that charging dues or a registration fee would be feasible to supplement program expenses.
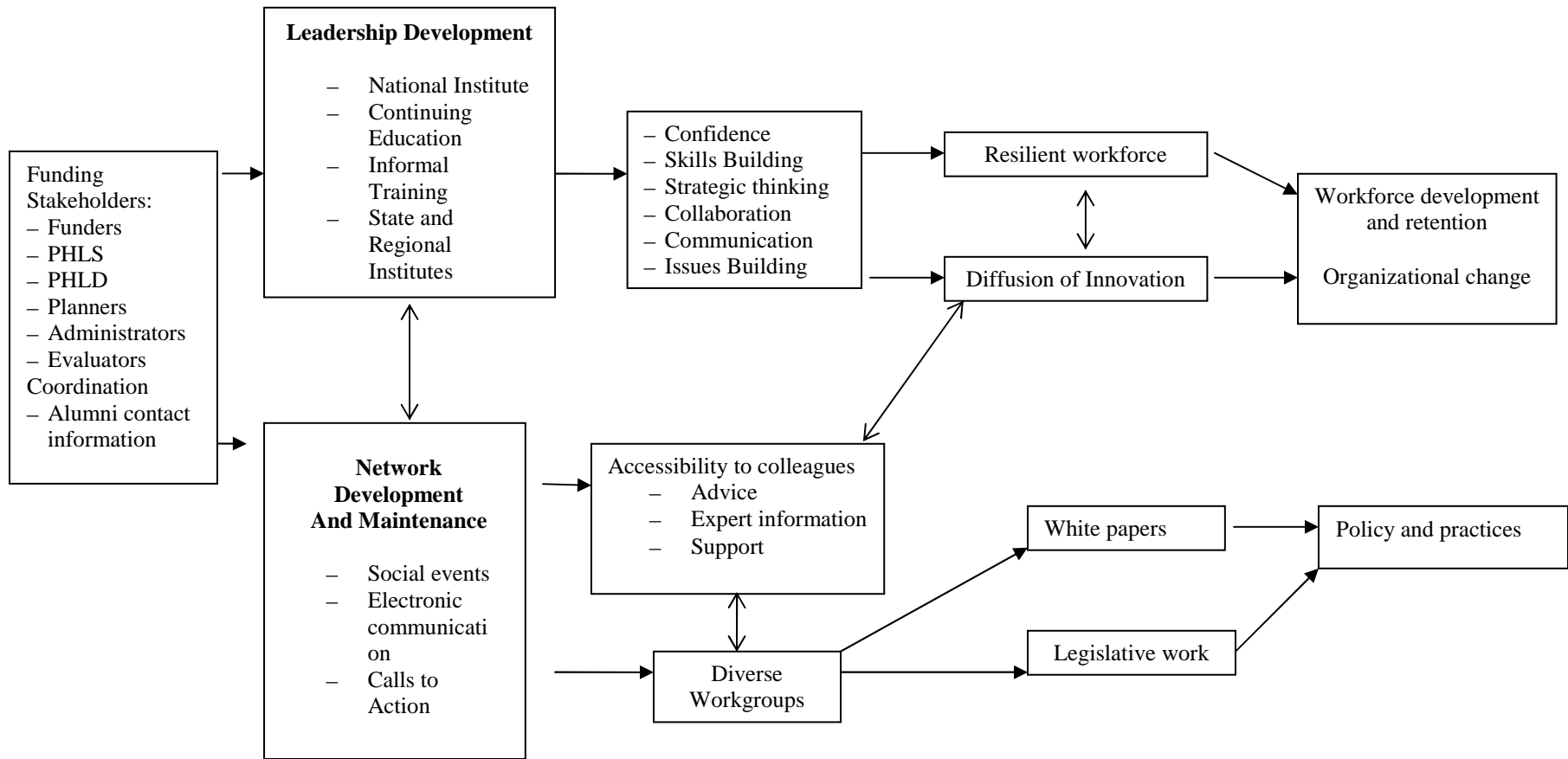
Summary

PHLI alumni and key informants had a unique opportunity to formally share thoughts about the future of leadership development. These thoughts offer important insight to future leadership program planners and funders. Figure 22 provides a logic model that captures how these ideas might appear visually.

Respondents clearly believed that public health leadership development should continue. Although respondents relied heavily on the current model to inform their thoughts about a future model, they suggested that planners should include these ideas, some of which would be new emphases:

Summary of Findings

- Individual leader development and network development are important synergistic efforts that have helped to create a common public health framework and a fertile ground for diffusion of innovation
- Offer a continuum of "cutting edge" or forward-looking development opportunities including a national institute as well as continuing education and informal development activities to build a culture of lifelong learning and to sustain vibrant networks
- Consider how to support a more integrated and coordinated system of leadership development at the national and state levels
- Consider strategies to strengthen networks beyond the current methods, including enhanced connections to support succession planning and to facilitate opportunities to work on issues of national importance
- Build in an on-going evaluation system, focusing on both process and outcomes
- Adequate and on-going funding is needed in order to support innovative programming and to enhance the existing leadership development foundation

Figure 22. Future Public Health Leadership Development Model

Leadership Development

– National Institute
– Continuing Education
– Informal Training
– State and Regional Institutes

Funding Stakeholders:
– Funders
– PHLS
– PHLD
– Planners
– Administrators
– Evaluators
Coordination
– Alumni contact information

Network Development And Maintenance

– Social events
– Electronic communication
– Calls to Action

– Confidence
– Skills Building
– Strategic thinking
– Collaboration
– Communication
– Issues Building

Resilient workforce

Diffusion of Innovation

Workforce development and retention

Organizational change

Accessibility to colleagues
– Advice
– Expert information
– Support

Diverse Workgroups

White papers

Legislative work

Policy and practices

V. Summary and Discussion

When PHLI was founded in 1990, it represented a significant commitment by the CDC to improve public health infrastructure following the influential 1988 Institute of Medicine report, The Future of Public Health, which called for major improvements in the practice of public health in the United States. The program's "theory of action" or "logic model," if you will, was that strengthening individual leaders and building a network of leaders would help the field because by acting individually and (more importantly) together, these leaders could strengthen the nation's public health infrastructure and systems.

We now briefly review what this study has found about whether this program logic was actually achieved over the past 15 years. *The overall answer is that the program had very considerable success in developing leaders, building networks, and improving public health infrastructure and systems*. Moreover, wider programs and movements are in place that are sustainably building on the core successes of PHLI, such as the large accreditation movement, the widespread state and regional leadership development programs, and the movement to define a fully functional state health department underway through ASTHO.

Figure 22, also presented earlier as Figure 6, summarizes study findings and their relationships with one another.

Domain 1. Individual Leader Development

We asked graduates to rate PHLI's long-term influence on their leadership; 36% chose "large" while 43% chose "moderate", 18% chose "small" and 2% chose "no influence." The majority reported that PHLI had strengthened their understanding and skills related to leading public health agencies and communities. The majority also reported that PHLI had strengthened their interest in deepening their involvement with leadership efforts at the national, state, local, and organizational levels, and their commitment to staying in public health work.

In addition, the majority reported that PHLI strengthened their self-awareness as a leader, sense of importance and belonging to the national cadre of leaders in public health, professional network of people they can contact for ideas about how to handle their leadership challenges, and confidence and courage to take on leadership responsibilities.

Figure 22. Model of National Outcomes
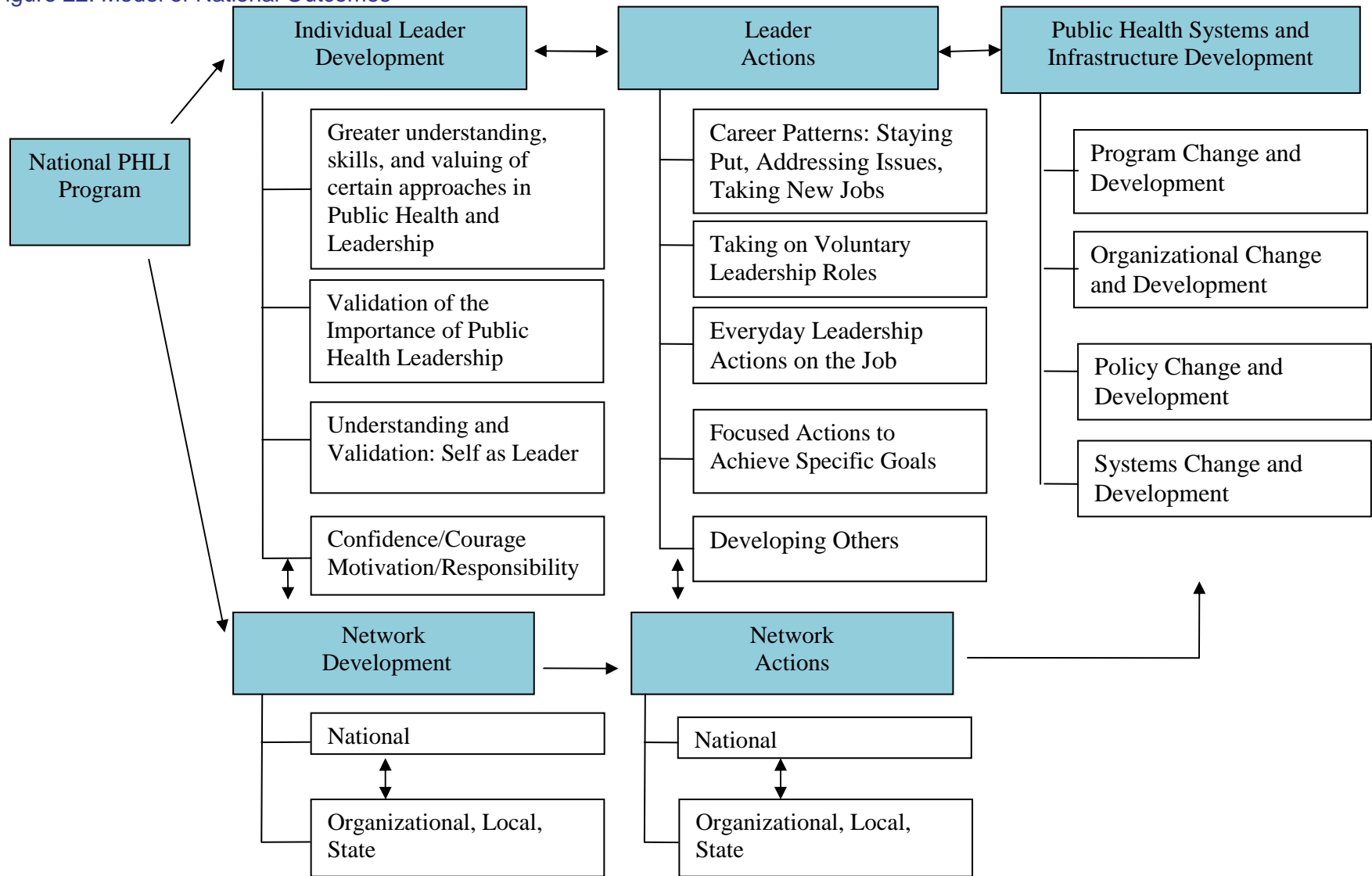
Interview themes and hundreds of survey comments reinforced and explained these changes.

While some of the benefits that learners perceived to be quite valuable may seem "soft" and rather unimportant to a number of readers, they are in direct support of more recent and holistic concepts of competence. "Competence is not to be synonymous with skill. A competence is defined as the ability to successfully meet complex demands in a particular context. Its manifestation, competent performance, depends on the mobilization of knowledge, cognitive and practical skills, as well as social and behavioral components such as attitudes, emotions, values, and motivations. This holistic notion of competence is not reducible to one cognitive dimension" (Hakkarainen et al., 2004, p. 16).

These findings about scholars' perceptions of important gains from PHLI remind us that leaders are not "machines" in need only of new practical skills, but complex personalities in search of a role and mission, vision, courage and encouragement, validation and confidence, and companions for the journey.

Domain 2. Leader Actions: Career-Related Outcomes and Voluntary Leadership Positions Taken

The great majority – 87% - of survey respondents were still working in public health. About 20% of all PHLI graduates have now retired, but nearly all of them had remained in public health until they retired.

Main foci for graduates' daily work after graduation included general organizational leadership in governmental agencies, community public health development, bioterrorism and preparedness, policy development and advocacy, and workforce development (both general and leadership development). Other fairly common foci included non-profit leadership, epidemiology, chronic disease, healthcare leadership, and infectious disease.

About 52% had stayed in the same organization and position since graduation – which interviewees attributed to commitment to a place rather than any form of stagnation. About 19% percent said that PHLI had helped them attain new jobs by increasing their skills, confidence, interest, networks, or by impressing the employer that the scholar had attended. Jobs that PHLI helped scholars attain often included federal bureau or division chief and state or local health officer, deputy, or division chief.

About 81% had taken on additional "voluntary" leadership roles that were not required by their jobs, such as task forces, boards, professional associations, and informal advocacy; 54% had taken on such roles *and* responded that PHLI had played some role in their doing so, mainly by increasing their confidence, interest in the work, skills, and networks.

Examples of voluntary roles scholars had taken on with PHLI's influence included, at the national level, serving on boards and committees with NACCHO, ASTHO, NLN, PHLS, APHA, and other associations. At the state level, roles commonly included serving on

boards with a state public health association or state association of city and county health agencies. At the local level, many worked with community-level task forces and boards. The great majority of scholars responded that PHLI had made "some" or a "great" contribution to the leadership actions that they took when they assumed these voluntary roles.

Domain 3. Public Health Leadership Network Development and Network Actions

When asked to "explain in some detail one of the most important influences that PHLI has had on your leadership," over 80 scholars (24% of the respondents who answered this question) cited gaining improved and valuable network connections.

The most commonly cited benefits of these connections included enhanced overall understanding of public health leadership's roles and goals; long-term professional knowledge-sharing; social support for taking action – such as ideas, encouragement, and good examples set by others; and being introduced to opportunities for formal collaborative work, such as with NACCHO or a State Public Health Association. In addition, many described how these collaborations had led to specific improvements in organizations, programs, policies, and "systems" at organizational, community, and state-levels.

Forty-five percent had sought "wise counsel" from another PHLI graduate in the past two years, while 55% had collaborated with other PHLI graduates on projects or activities. Formal network activities that emerged from PHLI included the PHLS, the NLN, and State and Regional PHLI's.

Domain 4. Public Health Systems and Infrastructure Development

- 40% reported having observed a policy (law) change that PHLI graduates influenced directly or indirectly
- 60% reported having observed a program change that PHLI graduates influenced directly or indirectly
- 66% reported having observed an organizational change that PHLI graduates influenced directly or indirectly
- 67% reported having observed a systems change that PHLI graduates influenced directly or indirectly

Hundreds of respondents gave detailed descriptions of these changes. Many scholars described specific changes they *personally* had initiated, or which their team had initiated through the *applied team project* component of the program. A large number of others explained that a *group* or "*critical mass*" of PHLI graduates had accumulated over time within a state or federal agency, jurisdiction, or association (such as NACCHO) and collaborated to shape a new initiative.

Very frequently, graduates collaborated *with one another* to lead *others* through a collaborative process which led to infrastructure and systems improvements – such as leading a community public health system through a MAPP process, or leading an organization through a participatory strategic planning process that engaged a wider group of stakeholders than had previously been included.

A general historical pattern emerged from the data: a group of "thought leaders" met at PHLI and worked together to reconceptualize how public health systems should be structured and should function, and also how public health leaders should work to improve them. This highly influential group of graduates worked with others in senior positions nationally, and through associations such as NACCHO, ASTHO, PHLS, and NALBOH, to devise and disseminate new tools to help state and local governments define and improve public health infrastructure and systems. These tools included but were not limited to the Essential Services, Performance Standards, agency accreditation systems, APEX*PH* and MAPP, the Code of Ethics, and state and regional public health leadership development institutes.

Many PHLI graduates working at national, state, and local levels followed the lead of the early thought leaders by further refining these tools and ideas, and leading national, state, and local implementation of them. Other scholars made diverse other improvements.

Domain 5. PHLI and the Future Direction of Public Health Leadership Development in the United States

Graduates made these observations and recommendations:

- Individual leader development and network development are important synergistic efforts that have helped to create a common public health framework and a fertile ground for diffusion of innovation
- Offer a continuum of "cutting edge" or forward-looking development opportunities including a national institute as well as continuing education and informal development activities to build a culture of lifelong learning and to sustain vibrant networks
- Consider how to support a more integrated and coordinated system of leadership development at the national and state levels
- Consider strategies to strengthen networks beyond the current methods, including enhanced connections to support succession planning and to facilitate opportunities to work on issues of national importance
- Build in an on-going evaluation system, focusing on both process and outcome measures
- Adequate and on-going funding is needed in order to support innovative programming and to enhance the existing leadership development foundation

Leader Development and Network Development: Warp and Woof

In PHLI, leader and network development were simultaneous, mutually supportive, and parts of one another. We might say that they were "warp and woof", essential parts of the same woven cloth, or a virtuous cycle. Either one without the other would have been less effective.

All of the personal gains that leaders made in PHLI helped them become interested, knowledgeable, skilled, and confident network members. Likewise, being part of a network of trusted colleagues at the vanguard of public health leadership promoted confidence and courage, inspired graduates to imitate their peers and network colleagues, and taught them much more than they could learn in a classroom setting.

This study's observations of the complementary but distinct roles of "leader development" and "leadership network development" reflect wider discussions in the literature. For example, some scholars recently have used "leader development" to refer to initiatives designed primarily to develop individual leaders' capabilities, and reserve "leadership development" for efforts to develop networks of leaders who can work together (Day, 2003). That conception of "leadership development" is becoming more prominent as the concepts of "collaborative" or "shared" leadership have gained favor for use in complex multi-party settings (Chrislip and Larson, 1994, Huxham & Vangen, 2000).

This understanding of individual leader and network development as warp and woof also fits very closely with research that shows relationships between individual and organizational innovation and performance and characteristics of leaders' network positions, network ties, and network structures (Uzzi, 1997; Cross, Borgati, & Parker, 2002; Abrams et al., 2003; Cross & Cummings, 2004; Balkundi & Kilduff, 2005; Johnson-Cramer, Parise, & Cross, 2007). It also fits with theories of workplace learning that locate learning primarily within work and as a result of participating in communities of practice, rather than as primarily separate from work (Brown & Duguid, 2000; Wenger, McDermott, & Snyder, 2002).

It also fits well with models of collective expertise being discussed in current scientific literature about competence, expertise, knowledge creation and management, professional development, and professional performance. "The expertise needed in the knowledge society cannot be understood by referring only to a sum of individual cognitive competencies, but also to joint or shared competence manifest in the dynamic functioning of communities and networks of experts and professionals as well as supporting tools and instruments" (Hakkarainen et al., 2004, p. 8).

Visions for the Future Direction of Public Health Leadership Development in the United States

The data and recommendations from graduates and key informants summarized above endorse the program's historic emphases on both leader and network development, and offer ways to strengthen both.

Future versions of PHLI should integrate "leader development" and "leadership network development" tightly with one another and with applied leadership work on issues of importance to agencies and systems. Such applied work can be quite valuable for both leadership learning and network development during the program itself. In addition, the long-term collaborations that emerge from PHLI can and should be nurtured. This study found that they can have significant impacts.

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Appendix A: PHLI Survey Instrument

National Public Health Leadership Institute Survey

[This is the survey used for National PHLI graduates in 2007. It was designed by Karl Umble and team at the North Carolina Institute for Public Health with help from many graduates. Please mention the NCIPH if you use the survey or substantial parts of it. But anyone can use it.]

Please take about 20 minutes to complete this confidential survey. It builds on the valuable evaluation work done by Carol Woltring in California and the UNC team, and seeks a long term view. These data are being collected by the North Carolina Institute for Public Health on behalf of CDC. Data will be analyzed in aggregate. Got questions? Karl Umble, PhD, MPH umble@email.unc.edu 919.966.8214

Thank you.

1. Your last name and state/country when in PHLI (Optional)
Note: We ask this only so we won't send another email to you asking you to complete this survey. We will remove your identifying info before we look at the data.

Last name:

Your *State or country* when in PHLI:

Part One. Your Work

2. What PHLI location were you enrolled in?

☐ Years 1-9 - California-based program
☐ Years 10-15 - North Carolina-based program

3. What is your current work status? (Check the best answer)

☐ Working in public health-related work

☐ Working in another field

☐ Retired

☐ Currently not employed but expect to return to work

☐ On temporary leave

☐ Other (please specify)

4. When you enrolled in PHLI, what main type of organization did you work for? (Check one that best applies)

☐ Governmental public health – local

☐ Governmental public health – state

☐ Governmental public health – federal

☐ Hospital or health system

☐ Academic

☐ Foundation

☐ Non-profit or community-based organization

☐ Private consulting – public health related

☐ For profit corporation

☐ Other (please specify)

5. Since you graduated from PHLI, about how many *years* have you worked for the following types of organizations? Enter the number of *years*. (Example: Academic 4, Foundation 2)

[_____] Governmental public health – local

[_____] Governmental public health – state

[_____] Governmental public health – federal

[_____] Hospital or health system

[_____] Academic

[_____] Foundation

[_____] Non-profit or community-based organization

[_____] Private consulting – public health related

[_____] For profit corporation

Other (please specify org type and years)

[_____]

6. Please check up to *three* areas on which have you focused your greatest attention since PHLI. (Choose up to 3)

☐ Academic leadership

☐ Community public health development

☐ General admin/org leadership – gov't (e.g. Deputy Director)

☐ General admin/org leadership – non-profit (e.g. Executive Director)

☐ General admin/org leadership – foundation (e.g. Executive Director)

☐ General admin/org leadership – health care (e.g. Chief Executive Officer)

☐ Alcohol, tobacco, other drugs

☐ Bioterrorism and Preparedness

☐ Chronic Disease

☐ Environmental Health

☐ Epidemiology

☐ Gerontology

☐ Global/International health

☐ Health Behavior and Education

- ☐ HIV/AIDS/STD
- ☐ Infectious Disease
- ☐ Informatics
- ☐ Injuries, violence, EMS
- ☐ Maternal and Child Health
- ☐ Medical care
- ☐ Mental health
- ☐ Nutrition
- ☐ Policy development and advocacy, law
- ☐ Population, Family Planning, and Reproductive Health
- ☐ Public Health Laboratories
- ☐ Public Health Nursing
- ☐ Occupational Health and Safety
- ☐ Oral Health
- ☐ School Health Education and Services
- ☐ Social Work
- ☐ Statistics
- ☐ Veterinary public health
- ☐ Vision care
- ☐ Workforce Development - Leadership Development
- ☐ Workforce Development - General
- ☐ Other (please specify)

<u>Part Two. Knowledge, Confidence, and Involvement</u>

7. Some scholars gain much from PHLI, while others report gaining less. Looking back, rate the extent to which PHLI strengthened these domains.

*To what extent did PHLI *strengthen*your:*

	Not at all		Somewhat		To a great extent
Courage to take the initiative and act to improve public health.	□	□	□	□	□
Confidence to take on public health leadership responsibilities.	□	□	□	□	□
Interest in deepening your involvement with public health leadership efforts at the *state level*.	□	□	□	□	□
Sense of belonging to the national cadre of leaders in public health.	□	□	□	□	□
Self-awareness as a leader: your strengths, liabilities, and how others view and receive your leadership.	□	□	□	□	□
Interest in deepening your involvement with public health leadership efforts at the *national level*.	□	□	□	□	□
Professional network of people you can contact for ideas about how to handle your leadership situations.	□	□	□	□	□
Openness to the ideas and opinions of others about how to address problems.	□	□	□	□	□
Awareness of best practices and models for public health leadership.	□	□	□	□	□
Skills in specific leadership practices that are useful in public health.	□	□	□	□	□
Understanding of the breadth of the public health system and your role within it.	□	□	□	□	□

	Not at all		Somewhat		To a great extent	
Understanding of useful principles in leadership.	□	□	□	□	□
Commitment to staying in public health in your work.	□	□	□	□	□
Skills in leading efforts that require the collaboration of many people or organizations.	□	□	□	□	□
Interest in deepening your involvement with leadership efforts to improve your *agency or community*.	□	□	□	□	□
Sense that as a public health leader, you are important and have a valuable role to play.	□	□	□	□	□

Part Three. Reflections – Very important!

8. PHLI's influence depends on many factors and can vary widely. Overall, how much long-term influence did PHLI have on your leadership? (Pick one) (If you are a very recent graduate, answer for the period since you graduated)

☐ No influence

☐ PHLI has had a small long-term influence on my leadership.

☐ PHLI has had a moderate long-term influence on my leadership.

☐ PHLI has had a large long-term influence on my leadership.

9. Explain *in some detail* one of the most important influences that PHLI has had on your leadership.

Part Four. Specific Results of PHLI

The next five questions ask you to think about any changes at the organizational, program, systems, or policy levels that PHLI graduates have directly or indirectly influenced, and to describe one of those changes in detail. (*This could be something that you were directly involved in, or, just something that you observed.*)

10. Can you think of an *organizational change* that PHLI graduates influenced directly or indirectly? (e.g. revised mission, process, positions, expansion, reorganization, funding, or other)

☐ No

☐ Not sure

☐ Yes

11. Can you think of a *program* change that PHLI graduates influenced directly or indirectly? (e.g. new, expanded, improved, better funded program)

☐ No

☐ Not sure

☐ Yes

12. Can you think of a *systems* change that PHLI graduates influenced directly or indirectly? (e.g. a partnership, collaboration, new cross-organizational system or method for improving practice)

☐ No

☐ Not sure

☐ Yes

13. Can you think of a *policy* (law) change that PHLI graduates influenced directly or indirectly?

☐ No

☐ Not sure

☐ Yes

14. If Yes to any of the previous four questions (10-13), please pick ONE change and
(a) describe in some detail the change that was made,
(b) explain how *PHLI* contributed to it, and
(c) tell us why you view the change as important.

Part Four. Practices

You are well more than half way done now. Just a few more questions.

15. *For each item below, first rate how often you did the item, on average, in the five years *before* you attended PHLI. In the "After PHLI column" rate how often you did the item, on average, in the years *after* you attended PHLI. Last, rate how much PHLI contributed to the actions you took when you were in these roles.*

Before PHLI*   After PHLI*   Rate how much PHLI
                                                          contributed to the leadership actions you
                                                          took when you were in this role+

        *pull down response options: +pull down response options:

        never   does not apply – I have not been doing this
        occasionally   no contribution
        often   some contribution
        very often   great contribution

I actively worked to improve public health in my *agency or community*.

I actively worked to improve public health on a *state* level.

I actively worked to improve public health on a *national* level.

I served on *agency or community* level task forces, boards, or working groups related to public health.

I served on *state* level task forces, boards, or working groups related to public health.

I served on *national* level task forces, boards, or working groups related to public health.

I *took the initiative* to work for changes, rather than waiting for someone else to take the lead.

Part Five. Your Leadership Work

16a. Did participating in PHLI help you attain the paid leadership positions (jobs) that you later took?

☐ Not applicable, I stayed in the same position as when I was in PHLI (Skip to Question 17)

☐ No, I took new positions, but PHLI did not help me attain them (Skip to Question 17)

☐ Not sure (Skip to Question 17)

☐ Yes

16b. If yes, give us one example of a position you took that PHLI helped you attain:

Position (e.g. Deputy Director)
Type of Organization (e.g. State Health Dept.)

16c. How did PHLI influence your taking this position? (Check all that apply)

☐ Increased skills that I needed for the job

☐ Increased my confidence that I could do that work

☐ Increased my interest in taking on the position

☐ Through networks I developed through PHLI

☐ It impressed the employer that I was a PHLI graduate

☐ Other (please specify)

17a. Did participating in PHLI influence you to take on leadership roles that were not directly required by your formal paid job, such as task forces, boards, professional associations, or informal advocacy?

☐ No, I did not take on such roles (Skip to Question 18)

☐ No, I did take on such roles, but PHLI did not influence me to do that (Skip to Question 18)

☐ Not sure (Skip to Question 18)

☐ Yes

17b. Please specify the organization(s) that you believe PHLI influenced you to take on such responsibilities with: Check all that apply:

☐ State and Regional PHLI's or National PH Leadership Devel Network

☐ American Public Health Association

☐ ASTHO

☐ Institute of Medicine

☐ NACCHO

☐ National Institutes of Health

☐ Public Health Leadership Society

☐ State Public Health Association

☐ Community-level task force or board

☐ Other (please specify)

17c. Please give us one example of a role that you took and the context or situation.

17d. How did PHLI influence your taking on the role you cited in 17c above? (Check all that apply)

☐ Increased skills that I needed for the work

☐ Increased my confidence that I could do that work

☐ Increased my interest in taking on the work

☐ Through networks I developed through PHLI

☐ It impressed the sponsor that I was a PHLI graduate

☐ Other (please specify)

18. In the past 24 months, have you collaborated with other PHLI graduates on any projects or activities?

☐ No

☐ Not sure

☐ Yes

19. In the past 24 months, have you asked for or given another PHLI graduate some "wise counsel" on how best to proceed in a leadership situation?

☐ No

☐ Not sure

☐ Yes

Part Six. Future Direction for PHLI

Last questions.

20. What should be the main purpose of PHLI? From the list below, please pick the top 4 and rank order them (1= Highest Priority, 2= Second Highest Priority, 3 = Third Highest Priority, 4 = Fourth Highest Priority).

☐ To develop the capabilities of individual *emerging* leaders (less experienced, high potential).

☐ To teach leaders how their agencies can develop other leaders (e.g. through programs, mentoring, networks)

☐ To develop the capabilities of individual *senior* leaders (experienced and in senior positions).

☐ To develop a national network of *senior* leaders who can share knowledge and collaborate on national priorities.

☐ To develop a national network of *emerging* leaders who can share knowledge and collaborate on national priorities.

☐ To develop solutions to problems through action learning teams.

☐..Other purpose (please specify and rank)

21. Optional: Do you have any other comments about PHLI or suggestions for its direction?

22. Completely Optional.
Your Name: (In case we want to hear more about something you have told us in this survey).

<div align="center">End of survey.</div>

Appendix B: Interview Guide for PHLI Graduates

PHLI Graduate INTERVIEW GUIDE   - Interviewer Version

Hello, my name is _____ and I'm with the PHLI evaluation team. How are you today? Before we start the interview, I need to go over some information with you to make sure you fully understand what we'll be doing today. The purpose of this evaluation is to help us evaluate the influence that PHLI may have had on you and on the wider field of public health, and to get your suggestions on the future of PHLI.

 I also want to remind you that your participation in this interview is completely voluntary, and you may stop the interview or skip any question at any time. Simply tell me you'd like to quit the interview or skip a particular question to do this.

This interview should take about 45 minutes and will be recorded unless you tell me that you do not want your interview recorded. Again, you can stop the recording at any time by telling me to do so. All information will be kept confidential. You are one of about fifteen graduates that we plan to interview; and we'll combine the information you give us with their information in our reports. If for any reason we wanted to use your story and identify you by name, we would only do that with your written permission and get your OK on whatever we wrote as your story.

I also wanted to let you know that you can contact Karl Umble, who is the Principal Investigator at (919) 966-8214 with questions about this research study. Do you have any questions? Do you give your consent to participate in this study? Great - let's start. Is it ok for me to turn on my recorder?

Part One: Your Leadership Story and Influence

First, let's talk about the outline of this interview.

- First, I'll ask you basically where you have worked and positions held, to get an overview.
- Then, I'll ask you about the general influences of PHLI on you and your leadership.
- Next, we ask if and how PHLI influenced the jobs or the voluntary leadership you took on in public health.
- After that, we ask you to tell (if possible) any specific stories that how PHLI may have influenced specific organizations or policies or outcomes in public health.
- Finally, we ask for your comments about the future of public health leadership and PHLI. OK?

1.   What are some of the professional positions you have held, and where?

2.   What were some of the main reasons that you applied for PHLI?

3.   Explain some of the most important influences or benefits that PHLI had for you.

        Ask questions to go into the following:

                Personal changes or transformations in attitude, confidence, perspectives, skills, networks?

                How generally or specifically did these changes influence the leadership positions you took on, or the voluntary leadership efforts you took on?

                How generally and specifically did the program influence how you "led" or influenced or acted within your leadership positions or within voluntary positions you took on? Please give some specific examples.

                We know that there are many complex influences in the real world. However, can you describe any impact that you had, that your participation in PHLI may have contributed to? Perhaps through positions or voluntary work you took on, or through how you led or influenced or acted within those positions. Please give some specific examples.

Specific Areas that we would like to get answers to through the above. Ask these if they are not already addressed. If covered well, skip to page 6.

4.   Did participating in PHLI *help you attain* the paid leadership positions (jobs) that you took after PHLI?
                Interviewer: Do not read these options

                ___ Not applicable, I stayed in the same position (Skip to Question 5)
                ___ No, I took new positions, but PHLI did not help me attain them (Skip to Question 5)
                ___ Not sure   (Skip to Question 5)

                ___ Yes (Go to 4B)

   b. If yes, give us at least *one* example of a position you took that PHLI helped you attain.

        Position   _____(e.g. Deputy Director)
        Type of Organization _____ (e.g. State Health Dept.)

        Position   _____(e.g. Deputy Director)
        Type of Organization _____ (e.g. State Health Dept.)

   d. *Briefly,* explain how PHLI influenced your attaining this job or jobs?

        (Don't read these - open-ended - interviewer check all that apply)

        ___ Increased my *skills* needed for the job(s)
        ___ Increased my *confidence* that I could do that work
        ___ Increased my *interest* in taking on the position(s)
        ___ Increased my *courage* to take the position(s)
        ___ Through *networks* I developed through PHLI
        ___ It *impressed* the employer that I was a PHLI graduate
        ___ Other (please specify):

5. a. Did participating in PHLI *influence* the leadership roles you took on that were <u>*not directly required*</u> by your formal paid job, such as task forces, boards, professional associations, or informal advocacy?
Interviewer: Do not read these options

    ___ Not applicable, I did not take on such roles (Skip to Question 6)
    ___ No, I did take on such roles, but PHLI did not influence me to do that (Skip to Question 6)
    ___ Not sure (Skip to Question 6)
    ___ Yes

   No – Go to Question 6
   Yes – Go to 5b

b. Please tell me at least *one* example of a role you took and explain whom it was with and what you did:

    Role _____ Organization _____

    Role _____ Organization _____

    Role _____ Organization _____

c. *Briefly, how* did PHLI influence your taking this work? (Interviewer check all that apply, do not read the options)

    ___ Increased my *skills* needed for the work
    ___ Increased my *confidence* that I could do that work
    ___ Increased my *interest* in taking on the work
    ___ Increased my *courage* to take on the work
    ___ Through *networks* I developed through PHLI
    ___ It *impressed* the sponsor that I was a PHLI graduate
    ___ Other: (please specify): _____

6. Did PHLI contribute to the <u>impact or results</u> you have been able to achieve (or contribute towards)?

          ___ No
          ___ Not sure
          ___ Yes

Probes: organizations, programs, systems (e.g. a partnership, collaboration, new cross-organizational system or method for improving practice), or policies (laws)?

Can you give an example?

- What was the situation?
- What was the impact or result, and why was this important?
- How did PHLI influence this change?
- What do you think would have happened in this situation, without PHLI?

_____

Part Two: Broader Results

7. What broader results or benefits of PHLI have you seen on a national level?

Part Three. The Future of Public Health Leadership Development

Many people are trying to make decisions about the future of public health leadership development in the U.S.
Before we talk about PHLI's specific role, let's talk about the entire system of public health leadership development in the U.S.

8. Let's say federal agencies and foundations wanted to know how to invest in public health leadership development.

   a. What <u>kinds of programs or initiatives</u> would be most beneficial?
   b. <u>For whom</u> should these programs or initiatives be targeted or focused?
   c. <u>Linkage:</u> How might these programs or initiatives be linked together?

Now let's focus on the future of PHLI itself, the major <u>national level</u> leadership development initiative. Draw out negatives if brought up.

9. What should be its main goals?

10. Who should be the main target audience(s)? Why? (Emerging leaders? Senior leaders? Specific fields in public health or general for all audiences?)

11. Is there anything else you would like to add?

<p style="text-align:center">Thank you very much!</p>

Optional if time, in order of priority these questions:

12. What types of leadership development opportunities should the program offer? (One big program like PHLI has been, or a menu?)

13. What kind of follow-on activities would be most helpful after the "program" is concluded?

14. What should be its relationship to the existing State and Regional public health leadership development programs and other similar leadership programs?

15. How, if at all, should the program (or its action learning projects that leaders complete) be linked to national public health priorities (such as specific infrastructure improvement initiatives, or specific public health problems such as avian influenza or heart disease)?

Appendix C: Interview Guide for Key Informants

PHLI Key Informant INTERVIEW GUIDE   - Interviewer Version

Participant ID: _____   Interview Date: _____

      Hello, my name is _____ and I'm a doctoral student in the SPH at UNC. How are you today? The purpose of this evaluation is to help us understand the influence that PHLI may have had on the field of public health, and to get your suggestions on the future of PHLI.

      This interview should take about 45 minutes and we'd like to record the interview. Is that ok? All information will be kept confidential. You are one of about fifteen graduates that we plan to interview; and we'll combine the information you give us with their information in our reports. Do you have any questions? Great - let's start. Is it ok for me to turn on my recorder?

PHLI KEY INFORMANT INTERVIEW GUIDE

Part One. Demographics

1. Are you a PHLI graduate?
    __ No

    __ Yes

2. What type of organization do you work for now, mainly?

   - Governmental public health – local
   - Governmental public health – state
   - Governmental public health – federal
   - Health Care
   - Academic
   - Foundation
   - Non-profit/NGO
   - Private consulting – public health related
   - Other (specify) _____

Part Two. Your Views of PHLI

3. What type of involvement have you had with PHLI over the years?

4. **Benefits:** What are the benefits of PHLI that you have observed, at any level of the public health system?

- Probe for <u>details</u> of things shared. Ask respondent to be specific and to give concrete examples wherever possible.

- For each benefit: <u>Why is this benefit important, in your view</u>?

    If not mentioned by the respondent, ask about any benefits seen at these levels:

    <u>Individual leader development</u>

    <u>Network development and network activities</u>

    <u>Program Improvements or New Programs, Organizational Improvements, or System Changes</u>

5. **Expectations:** a. Overall, would you say that this program is meeting your expectations?
    ___ Yes
    ___ No
    ___ Partly
    ___ Not sure

    b. Why or why not? How do you know?

    c. What evidence would you like to see about its outcomes? What evaluation questions should be addressed in the future?

6. **Concerns:** What concerns have *you* had, or do *others* have, about PHLI? Please tell us in some detail about them.

Part 3. The Future of Public Health Leadership Development

Many people are trying to make decisions about the future of public health leadership development in the U.S.

7. Do you believe that there should be a National Public Health Leadership Development Program like PHLI in the years to come?

    ___ No – Please explain why not.
    ___ Not sure – Please explain
    ___ Yes

    If Yes or Not sure:

        9. What should be its main goals? Why?

        10. Who should be the main target audience(s)? Explain why those audiences are important. (Emerging? Senior? Specific fields? General?)

        11. What types of development opportunities should the program offer to the field? (One big program? Menu of different programs and opportunities? Other?)

        12. After the "program" is concluded? What kind of ongoing activities would be most helpful to the graduates or to the field of public health?

        13. What should be its relationship to the existing State and Regional public health leadership development programs and other similar leadership programs?

        14. How, if at all, should the program be linked to national public health priorities (such as specific infrastructure improvement initiatives, or specific public health problems such as avian influenza or heart disease)?

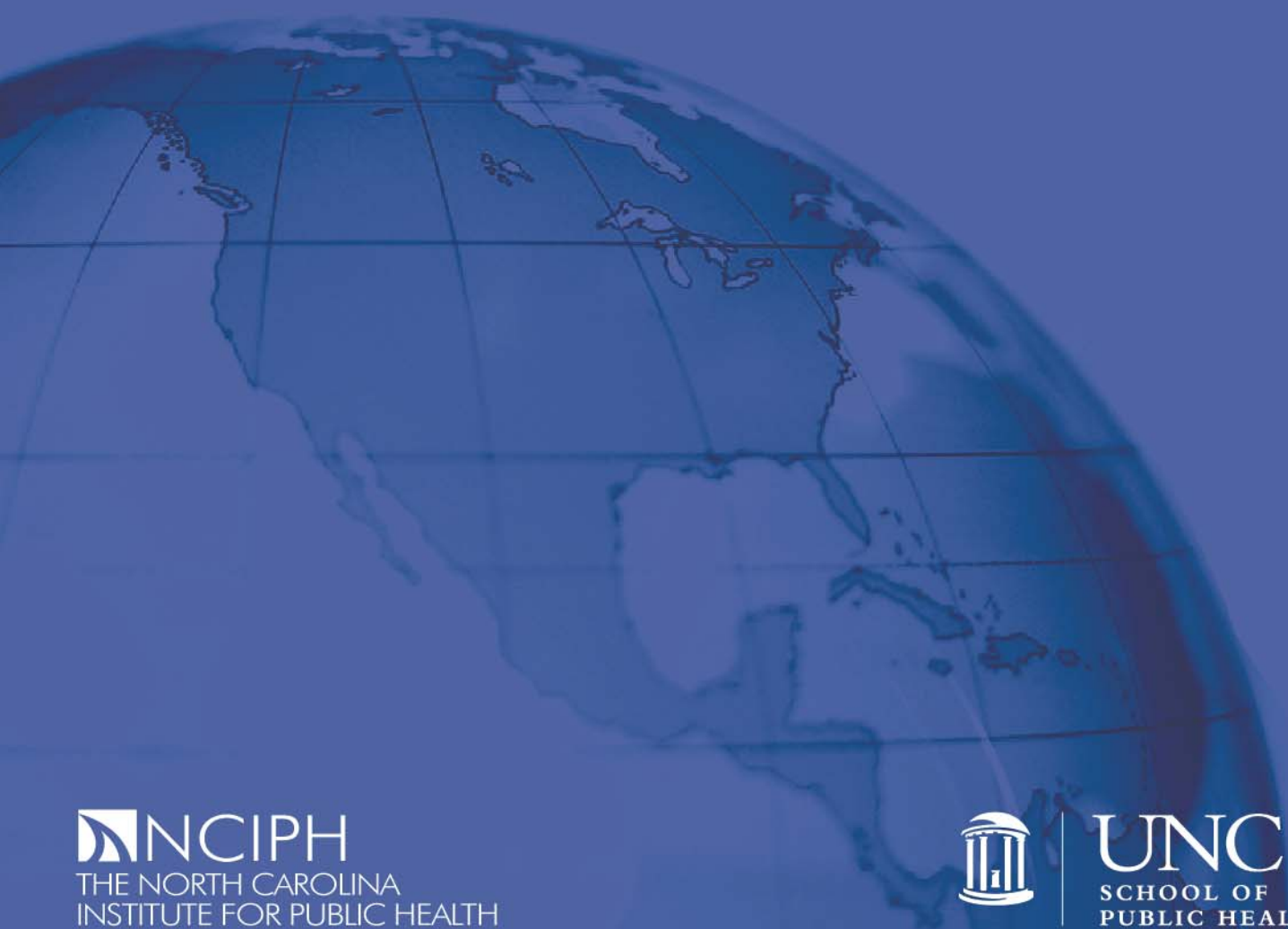   15. Is there anything else you would like to add?

If time permits (for graduates):

You mentioned xx personal benefits. Are there any other benefits you'd like to mention?

I also wanted to let you know that you can contact Karl Umble, who is the Principal Investigator at (919)966-8214 with questions about this research study.

Thank you very much!