

# **Training Needs Assessment of Local Health Department Professionals for Hampton Roads and Western Virginia**

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## **Introduction**

Changes in the American health care delivery system have raised concerns that the public health workforce is inadequately prepared to meet current and future public health needs. Several reports have recently focused on the need to perform training assessments but to date few assessments have been done (<sup>1,2,3,4</sup>). One of the most comprehensive assessments was a Workforce Development Project for the State of Washington published by the Northwest Center for Public Health Practice (<sup>5,6</sup>). The intent of this assessment was “To increase the competency of the public health workforce in Washington to perform essential services of public health, including bioterrorism and informatics and to meet the state public health standards”. This survey: 1) characterized employees of the Washington State Department of Health, the local health departments (LHDs) and several community, migrant, and Indian health clinics and 2) identified training needs as specified by the employees. Based on the responses to this survey, the public health workforce in Washington State is predominantly white (85%) and college educated (89%) with 25% speaking a language in addition to English. The average length of public health working experience is 8.8 years, however 30% had worked in public health for over 10 years. The ratio of those with management responsibilities to those indicating they were managers was greater than 2:1. Forty-three percent of the employees in LDHs were clinicians and almost three-quarters engage in two or more occupational activities. In terms of training needs, the surveyed workforce identified improvement in communication skills as the greatest need. Other desired areas of training included: interpersonal communication; cross-cultural and cross-age communication; electronic communication; and participatory teaching/training skills. The most desired method of training delivery was on-site with an instructor, followed by regional training with an instructor.

To better identify the training needs for the State of Virginia, the Graduate Program in Public Health at Eastern Virginia Medical School and Old Dominion University undertook Public Health Training needs assessment of selected health departments in Hampton Roads and western Virginia. The purpose of this assessment was: 1) to determine the education and occupational background of public health professionals in the area; 2) to identify those areas of training, both current and future, specified as most important by the surveyed workforce; and 3) to identify the types of training (i.e. degree/non-degree seeking) and the desired method for delivery of such training. To facilitate comparison with other public health training assessments, the questionnaire used for this survey was a modification of the questionnaire used first by the State of Washington and then by the Maine Turning Point program.

## **Methods**

*Assessment Tool:* The survey was conducted by means of a self-administered questionnaire distributed in both a pencil and paper and an Internet format. The questionnaire was adapted, with permission, from the Northwest Center for Public Health Practice and Center for Health Education and Research, School of Public Health and Community Medicine, University of Washington. A copy of the survey questionnaire and IRB approval are given in *Appendix One*. The questionnaire included questions about: 1) position: occupational titles, job responsibilities, and managerial responsibilities; 2) training needs, including topics of current and future interest; 3) types of training: (certificate, MPH, or non-degree continuing education) and desired method for training delivery (on-site, computer based, etc.); 4) educational background; and 5) standard demographic information (age, race, and gender).

*Survey Locations:* The survey was conducted at local public health departments in the Hampton Roads region of Virginia and was distributed to representatives of health departments in western Virginia. Hampton Roads includes several medium-sized cities, as well as significant rural areas. The area has a large military presence, as it hosts the world's largest Naval base and

several Army and Air Force facilities. Personnel employed by eight city/region health departments largely address public health needs. Four of these eight health departments participated in the survey, including Chesapeake, Hampton, Portsmouth, and Western Tidewater. Western Tidewater serves an area that includes the cities of Suffolk and Franklin as well as Isle of Wight and Southampton Counties. For the purposes of this report Western Tidewater will be referred to as Suffolk. Hampton and Portsmouth are primarily urban areas and Chesapeake is a community in transition with a mix of suburban and rural areas. The Western Tidewater district is primarily a rural, farming area with several small towns.

Western Virginia includes the geographic region to the south and west of Richmond, Virginia. Health departments in this region serve a rural population and would have responsibilities similar to those of Western Tidewater (Suffolk).

No sites were surveyed in northern Virginia, an urban area that is generally considered to have different population and income characteristics from urban Hampton Roads and no surveys were distributed to private organizations (both for profit and not-for-profit) that may be involved in the delivery of public health care. Both northern Virginia and the private organizations may have different training needs than those identified in this survey.

*Survey Distribution and Response Rate:* Questionnaires were distributed to representative of Health Departments in western Virginia during the Virginia Public Health Association annual meeting in late November 2000 and to the Health Departments in Hampton Roads in January and February 2001. For Hampton Roads, all public health professionals at the four-targeted agencies were given the opportunity to complete the questionnaire. Each health department defined the phrase 'Public Health Professional' and distributed the questionnaires accordingly. Therefore some differences between health departments may be related to how this phrase was define and who received the questionnaire. Participation rates varied between the four health departments

and are summarized in Table 1. The overall response rate was 62.2%, ranging from 37% to 97%.

**Table 1. Response Rate for Surveyed Public Health Departments in Hampton Roads**

<i>Health Department</i>	<i>Questionnaires Sent (n)</i>	<i>Questionnaires Completed (n)</i>	<i>Response Rate (%)</i>
Chesapeake	100	37	37.0
Hampton	78	41	52.6
Portsmouth	75	57	76.0
Western Tidewater	62	60	96.8
Overall	315	196	62.2

The method used for distributing the questionnaires in western Virginia did not permit an estimate of the response rate. Questionnaires were distributed to health department representatives attending the Virginia Public Health meetings in November of 2000. A record of the total number of questionnaires distributed was not kept therefore a response rate cannot be estimated. A total of 48 questionnaires were returned from western Virginia. The total number of questionnaires evaluated for this survey was 244.

*Data Analysis:* For this report questionnaire data were either downloaded from Internet files or transcribed into a dataset. Site specific and overall data summaries were compiled for demographics, occupational categories, training needs, and methods for training delivery standard data management software. No statistical analysis of the data was done for this report.

## **Results**

**Demographics:** Site specific and overall demographic data are given in Tables 2-6. Overall summary data may not add up to the number of surveys returned for a given location because some questions were left blank or multiple answers were given.

*Gender:* The surveyed workforce was predominantly female (82.2%), with urban health departments having a higher proportion of female workers (81.6-92.9%) than the more rural

areas (western Virginia 65.2%). While this may reflect a selection bias, it may also reflect the different emphasis or responsibilities of urban and rural health departments. These data are slightly higher than those reported for LHDs in Washington State (75.9% female).

Table 2. Workforce Gender

<i>Gender</i>	<i>Overall</i>		<i>Hampton</i>		<i>Portsmouth</i>		<i>Suffolk</i>		<i>Chesapeake</i>		<i>Western Virginia</i>	
	<i>Number</i>	<i>Percent</i>	<i>Number</i>	<i>Percent</i>	<i>Number</i>	<i>Percent</i>	<i>Number</i>	<i>Percent</i>	<i>Number</i>	<i>Percent</i>	<i>Number</i>	<i>Percent</i>
Female	194	82.2	31	81.6	52	92.9	50	84.8	31	83.8	30	65.2
Male	42	17.8	7	18.4	4	7.1	9	15.3	6	16.2	16	34.8

*Race/ethnicity:* Whites (77.4%) and African American (20.5%) were the predominate racial groups in the workforce. Workers from those health departments representing the more rural districts (Suffolk and western Virginia) had a greater proportion of whites, (91.5 and 97.7%, respectively). For Washington State, whites comprised 90% of the workforce for LHDs followed by Asians (4.5%) and African Americans (2%) and Hispanics (1.2%). For Virginia ethnic groups other than Whites and African Americans represented less than 3.0% of the surveyed work force.

Table 3. Race/Ethnicity

<i>Race/ Ethnicity</i>	<i>Overall</i>		<i>Hampton</i>		<i>Portsmouth</i>		<i>Suffolk</i>		<i>Chesapeake</i>		<i>Western Virginia</i>	
	<i>Number</i>	<i>Percent</i>	<i>Number</i>	<i>Percent</i>	<i>Number</i>	<i>Percent</i>	<i>Number</i>	<i>Percent</i>	<i>Number</i>	<i>Percent</i>	<i>Number</i>	<i>Percent</i>
Hispanic	1	0.4	0	0.0	1	1.8	0	0.0	0	0.0	0	0.0
White	181	77.4	26	68.4	26	47.3	54	91.5	31	83.8	44	97.8
Black	48	20.5	11	29.0	26	47.3	5	8.5	5	13.5	1	2.2
Asian	2	0.9	1	2.6	1	1.8	0	0.0	0	0.0	0	0.0
Am Indian	1	0.4	0	0.0	0	0.0	0	0.0	1	2.7	0	0.0
Other	1	0.4	0	0.0	1	1.8	0	0.0	0	0.0	0	0.0

*Age:* Employees over 41 years of age made up 70.8% of the respondents with 32.2% over the age of 51. The age distribution was similar for both Hampton Roads and western Virginia. Different age groupings were used for the Washington State study. In that study 50% of the workforce in LHDs was over 45 and 34.9% between 25-44. These data suggest that for both

Virginia and Washington State there will be a substantial turnover in the LHD workforce in the next 10-15 years.

Table 4. Workforce Age

Age Range	Overall		Hampton		Portsmouth		Suffolk		Chesapeake		Western Virginia	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
18-30	19	8.1	4	10.5	1	1.8	5	8.5	3	8.1	6	13.0
31-40	50	21.2	8	21.1	17	30.4	13	22.0	5	13.5	7	15.2
41-50	91	38.6	13	34.2	20	35.7	21	35.6	15	40.5	22	47.8
51-65	75	31.8	12	31.6	18	32.1	20	33.9	14	37.8	11	23.9
65+	1	0.4	1	2.6	0	0.0	0	0.0	0	0.0	0	0.0

*Academic Training:* Approximately 56% of those surveyed indicated they had a college degree.

A higher percentage of respondents from Suffolk, Chesapeake and western Virginia had college degrees than those from Hampton and Portsmouth. This in part may reflect the population surveyed for those health departments. The level of training was lower that that reported for LHDs in Washington State were 89.7% of the LHD workforce had college degrees.

Table 5 Academic Training

Educational Training	Overall		Hampton		Portsmouth		Suffolk		Chesapeake		Western Virginia	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
High School	30	13.2	7	18.0	14	28.0	2	3.5	5	14.7	2	4.3
Associate	36	15.9	7	18.0	9	18.0	9	15.5	6	17.7	5	10.9
Bachelor	95	41.9	11	28.2	13	26.0	24	41.4	15	44.1	32	69.6
Master	26	11.5	6	15.4	4	8.0	6	10.3	5	14.7	5	10.9
Doctorate	6	2.6	1	2.6	1	2.0	2	3.5	1	2.9	1	2.2
Other	34	15.0	7	18.0	9	18.0	15	25.7	2	5.9	1	2.2
Total <sup>a</sup>	227		39		50		58		34		46	

<sup>a</sup>Total does not include those giving no response to the question.

*Foreign language:* Only 17.8% of respondents indicated that they spoke a foreign language.

The languages represented were French, German, and Spanish and additionally in Hampton Roads, Philippino. In the State of Washington, 21.6% of the LHD workforce spoke a language other than English. This may reflect that in Washington State all ethnic categories were

represented in the workforce whereas in Virginia the workforce was largely Caucasian or African-American. It should be noted that Hampton Roads has been identified as one of the most ethnically diverse regions in the U.S. and language training may be beneficial to the public health workforce.

Table 6. Foreign Language

<i>Foreign Language</i>	<b>Overall</b>		<b>Hampton</b>		<b>Portsmouth</b>		<b>Suffolk</b>		<b>Chesapeake</b>		<b>Western Virginia</b>	
	<b>Number</b>	<b>Percent</b>	<b>Number</b>	<b>Percent</b>	<b>Number</b>	<b>Percent</b>	<b>Number</b>	<b>Percent</b>	<b>Number</b>	<b>Percent</b>	<b>Number</b>	<b>Percent</b>
No	214	82.2	36	94.7	45	83.3	59	100	32	91.4	42	91.3
Yes	18	17.8	2	5.3	9	16.7	0	0.0	3	8.6	4	8.7
Total	232		38		54		59		35		46	

**Job Category:** The distribution of occupational categories is summarized in Table 7 and a more through description of each job category is in the questionnaire in Appendix One. The most frequently reported category was clinician (43.2%) followed by manager (16.6%) and environmental health specialist (14.5%). The large number of clinicians likely reflects the current responsibilities for primary care and health care delivery by Virginia public health departments. The rural health departments (Suffolk and western Virginia) had a greater number of environmental health specialist than the urban health departments, reflecting the role sanitarians have in rural areas. Seventeen workers (7%) reported job descriptions related to health behavior (Health Communications Specialist; Health Care Consultants, and Community Organizer/Health Educator) and only three workers (<1.5%) reported job descriptions focused on epidemiology and biostatistics (Disease investigator (2) and Biostatistician/Epidemiologist (1)). The distribution of occupations in the surveyed workforce was similar to those reported by Washington State for LHDs where clinicians (medical and non-medical) represented 42.5% of the workforce, Managers 14.6%, and Environmental Health Specialist 20%. The combined categories for health behavior and epidemiology and biostatistics represented 9.2% and 2.9% of the workforce respectively.



Table 7. Occupational Category

Category	All		Portsmouth		Suffolk		Chesapeake		Hampton		Western Virginia	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Manager	40	16.6	5	8.8	8	13.3	10	27.0	8	19.5	9	19.6
Administrator	6	2.5	1	1.8		0.0	2	5.4	2	4.9	1	2.2
Clinician	104	43.2	21	36.8	37	61.7	13	35.1	17	41.5	16	34.8
Disease Investigator	2	0.8	2	3.5		0.0		0.0		0.0		0.0
Laboratory Scientist	5	2.1	4	7.0		0.0	1	2.7		0.0		0.0
Occupational health specialist	3	1.2		0.0		0.0	1	2.7		0.0	2	4.4
Environmental Health Specialist	35	14.5	2	3.5	12	20.0	4	10.8	3	7.3	14	30.4
Auditor, Inspector, Surveyor	1	0.4		0.0		0.0		0.0	1	2.4		0.0
Health Communications Specialist	5	2.1	2	3.5	1	1.7		0.0	1	2.4	1	2.2
Health Care Consultant	7	2.9	3	5.3		0.0	3	8.1	1	2.4		0.0
Community Organizer/Health Educator	5	2.1		0.0	1	1.7	1	2.7	1	2.4	2	4.4
Biostatistician/ Epidemiologist	1	0.4		0.0		0.0		0.0		0.0	1	2.2
No Answer	27	11.2	17	29.8	1	1.7	2	5.4	7	17.1		0.0
Total	241		57		60		37		41		46	

**Types of Training:** Survey participants were asked whether they desired educational programs leading to a certificate training (programs consisting of five or more courses covering the core public health competencies or specialty areas), non-degree continuing education programs, or a Masters of Public Health degree (MPH).

**Certificate Training:** For Hampton Roads, certificate programs were the most highly rated option for training and career enhancement in public health with 79% of those responding yes or no favoring certificate training(71.4% total). This was independent of occupational category. Ten percent of the respondents did not answer this question and 18.9% specifically indicated no interest in certificate training. There were no major differences in the response across health departments (Table 8).

Table 8 Desire for Certificate Training

Certificate Training	Overall		Hampton		Portsmouth		Suffolk		Chesapeake	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
No	37	18.9	12	31.6	6	12.2	14	25.9	5	13.9
Yes	140	71.4	26	68.4	43	87.8	40	74.1	31	86.1
No Answer	19	9.7	3	7.9	7	14.3	5	9.3	1	2.8
Total	196		38		49		54		36	

Of the respondents answering “yes” to certificate programs, 57.2% preferred a certificate program that covers the core competencies in public health and 42.8% preferred specialty programs (Table 9). The types of training identified by those respondents indicating a desire for certificates in specialty areas is shown in Table 10.

**Table 9. Type of Certificate Training**

Certificate Training	Overall		Hampton		Portsmouth		Suffolk		Chesapeake	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Core	83	57.2	18	72.0	23	57.5	17	46.0	25	80.7
Specialty	62	42.8	7	28.0	17	42.5	20	54.1	6	19.4
Total	145		25		40		37		31	

**Table 10. Specialty Programs for Certificates**

Biostatistics/Data Management	Health Education
Bloodborne pathogen exposure	Health promotion & disease prevention
Case management	HIV-communicable diseases
Communicable Diseases	Home health
Communication skills	Human Resources
Community Nutrition	Infectious Disease
Conversational Spanish	Innovative and advanced technologies
Dental Public Health	Maternal Child Health
Emerging diseases/trends	Nursing skills
Environmental Health	Onsite waste treatment and disposal
Epidemiology	Pediatric Immunizations
Foodborne illness	Public Health Technologies
Family planning	Safety/Industrial Hygiene
Group Process/Education	TB
Health Administration/Management	Women & Child Health and Nutrition

*Non-Certificate Training:* 66.8% of respondents preferred non-degree, non-certificate continuing education training when offered as an on going basis of training (Table 11). Several suggestion were made regarding topics for non-certificate training. These included: 1. time management; 2. language for health professionals, e.g. patient care terms included labeled visuals; 3. computer skills and reading skills; 4. methods in effective training; 5. vocational counseling training; 6. counseling on death and dying issues; and 7. Training in documentation and one-on-one supervision

Table 11. Non-Certificate Training

Non-Certificate	Overall N %		Suffolk	Portsmouth	Chesapeake	Hampton
No	40	20.4	12	14	5	9
Yes	131	66.8	42	32	30	27
No Answer	25	12.8	5	10	2	5
Total	196		59	56	37	41

*MPH Degrees:* When asked about an MPH degree-training program, 42.4% of respondents expressed an interest (Table 12). Respondents who chose between a general MPH and a concentration MPH chose a general MPH (56.2%) over a concentration MPH (43.8%) (Table 13). The most frequently specified areas of concentration for the MPH program were Health Education/Behavior (29.9%) and Health Administration (29.3%) (Table 14) .

Table 12. Desirability of MPH Training

MPH Training	Overall		Hampton		Portsmouth		Suffolk		Chesapeake	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
No	87	43.9	22	53.7	23	41.1	26	44.1	16	43.2
Yes	83	42.4	13	31.7	23	41.1	30	50.8	17	46.0
No Answer	26	13.8	6	14.6	10	17.9	3	5.1	4	10.8
Total	196		41		56		59		37	

Table 13. Type of MPH Program

MPH Program Type	Overall		Hampton		Portsmouth		Suffolk		Chesapeake	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
General	41	56.2	9	22.0	14	25.0	12	20.3	5	13.5
Concentration	32	43.8	5	12.2	10	17.9	5	8.5	2	5.4
Total	73		14		24		17		7	

Table 14. MPH Areas of Emphasis

Topic	Number of Respondents	Percent of Those Responding
Epidemiology	26	16.6
Health Education/Behavior	47	29.9
Health Administration/Management	46	29.3
Environmental Health	27	17.2
Biostatistics	11	7.0

**Specific Training Topics:** Respondents were asked to identify the areas of training that would benefit them the most in their work. Table 15 shows the list of training topics and Tables 16-18 summarize the selected topics.

Table 15. Training Areas

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1. Best practice – clinical skills
2. Best practice – environmental health skills
3. Best practice - laboratory skills
4. Health promotion and disease prevention - Theory and Application
5. Overview of the community/public health system (systems theory, financing, delivery)
6. Finance and personnel management, and budgeting
7. Group facilitation (including team building, leading meetings)
8. Cross-cultural and cross-age communication
9. Interpersonal communication (including mentoring and coaching)
10. Health and risk communication strategies (e.g., media advocacy, video conferencing)
11. Mediation and negotiation
12. Participatory teaching/training skills
13. Community/program planning (needs assessment, setting goals and objectives)
14. Community involvement/mobilization (underserved populations, public/private partnerships)
15. Legislative and/or policy planning and advocacy
16. Provision of technical assistance/consultation services
17. Electronic communication (including Internet and INPHO)
18. Research design and statistical analysis
19. Survey design and implementation
20. Data analysis and utilization
21. Disease outbreak investigation
22. Written communication (e.g. grant writing, analytic writing and report generation)
23. Quality improvement and assurance strategies
24. Suggested Topics

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Table 16 shows the mean ranking of each of the training areas for each region on a scale of 1-7, with seven representing the highest possible ranking and one the lowest. The two categories receiving the highest ranking were: 1) Participatory teaching/training skills (5.09, #12) and 2) Electronic communication (including internet and INPHO) (5.00, #17). Several topics had mean scores greater than 4.0 for each of the five surveyed locations. These included: Group

facilitation (7), Cross-cultural and cross-age communication (8), Interpersonal communication (9), Participatory teaching/training skills (12), Community/program planning (13), and Electronic communication (17).

Table 16. Ranking of Training Areas

<i>Public Health Skills</i>	<i>Portsmouth</i>	<i>Suffolk</i>	<i>Chesapeake</i>	<i>Hampton</i>	<i>Western Virginia</i>
1	3.27	4.17	4.17	3.71	3.13
2	3.13	3.68	3.30	2.95	4.40
3	2.89	3.30	2.83	2.76	2.98
4	3.98	4.72	4.35	4.21	4.60
5	3.88	3.88	4.06	3.62	4.02
6	3.20	3.38	3.44	3.51	3.64
7	<b>4.75</b>	<b>4.08</b>	<b>4.63</b>	<b>4.33</b>	<b>4.29</b>
8	<b>4.51</b>	<b>4.13</b>	<b>4.83</b>	<b>4.16</b>	<b>4.96</b>
9	<b>4.11</b>	<b>4.00</b>	<b>4.62</b>	<b>4.54</b>	<b>4.92</b>
10	3.68	4.05	4.30	3.53	4.06
11	3.53	3.58	4.08	3.25	4.17
12	<b>4.45</b>	<b>4.36</b>	<b>4.81</b>	<b>4.59</b>	<b>5.09</b>
13	<b>4.09</b>	<b>4.40</b>	<b>4.70</b>	<b>4.08</b>	<b>4.23</b>
14	3.91	4.15	4.62	3.55	4.27
15	3.17	3.73	3.86	3.50	3.42
16	3.00	3.48	3.39	3.05	3.87
17	<b>4.63</b>	<b>4.18</b>	<b>5.00</b>	<b>4.15</b>	<b>4.79</b>
18	3.34	3.10	3.35	2.76	2.50
19	3.47	3.15	3.22	2.76	3.56
20	3.86	3.42	3.89	3.21	3.73
21	3.96	4.22	4.08	3.20	4.77
22	3.94	4.03	4.58	3.59	4.56
23	<b>4.18</b>	<b>4.17</b>	<b>4.64</b>	3.53	<b>4.06</b>

Table 17 summarizes the top five categories by region. A total of 9 topics made up the top five training categories for all regions indicating that the training needs are common across the region. Those 9 categories are were 4, 7,8,9,12,13,17,21, and 23 (see Table 15). There is good agreement between the topics prioritized by the LDHs for Washington State and those in Virginia.

Table 17 Top Five Training Areas

Portsmouth		Suffolk		Chesapeake		Hampton		Western Virginia	
Area	Mean	Area	Mean	Area	Mean	Area	Mean	Area	Mean
7	4.75	4	4.72	17	5	12	4.59	12	5.09
17	4.63	13	4.4	8	4.83	9	4.54	8	4.96
8	4.51	12	4.36	12	4.81	7	4.33	9	4.92
12	4.45	21	4.22	13	4.7	4	4.21	17	4.79
23	4.18	17	4.18	23	4.64	8	4.16	21	4.77

In addition to identifying the preferred areas of training , participants were asked to identify the areas of training that would make the most positive difference in their current job and those that would enhance future career enhancement. These are summarized in Table 18.

Table 18. Current and Future Training Areas

Skill	Chesapeake		Hampton		Portsmouth		Suffolk		Overall	
	Current	Future	Current	Future	Current	Future	Current	Future	Current	Future
1	6		8	1	5		14	4	33	5
2	3		4	1	2	3	9	3	18	7
3			2		2	1		3	4	4
4	1	2	4	7	7	8	5	6	17	23
5	2	4		3	1	6	4	10	7	23
6	3	4	4	7	3	3	1		11	14
7	1	2	2	2	7	2	1	5	11	11
8	2		1		2	1	1	1	6	2
9	2		4		1	1	1	1	8	2
10		2	1			3		1	1	6
11	1	1	1	1		2	1		3	4
12	3	1		2	2	2	2	2	7	7
13	1	6	3	2	4	4	4	2	12	14
14	5	3	2	6		3	2	6	9	18
15	1			1		1		2	1	4
16		1						1	0	2
17	2	2		1	1	1	3	3	6	7
18		2						1	0	3
19									0	0
20	3	1			1		1	1	5	2
21			1	1	3	1	2		6	2
22		2		1	2	2	2	5	4	10
23		1		1	3	1	6	3	9	6
24					1	1	1		2	1

Best practice –clinical skills (#1) was the topic most often identified as the area of training that would make the “most positive difference” in current job performance. This reflects the clinical responsibilities of the health departments. The second most frequently identified topic was Best Practice – Environmental Health Skills (#2), followed by: Community involvement/mobilization (including underserved populations, public/private partnerships) (#14); Community/program planning (including needs assessment, setting goals and objectives) (#13); Finance and personal management and budgeting (#6); and Group facilitation (including team building, leading meetings) (#7).

When asked what topics would be most important for future career enhancement, Health promotion and disease prevention (#4) and overview of the community/public health system (#5) were identified as the most important topics. Other highly ranked topics included: Community involvement/mobilization (including underserved populations, public/private partnerships) (#14); Finance and personal management and budgeting (#6) and Community/program planning (including needs assessment, setting goals and objectives) (#13); Group facilitation (including team building, leading meetings) (#7); and Written communication (e.g. grant writing, analytic writing, and report generation) (#22).

**Training Format:** Participants were asked to identify the most desirable methods for training. The choices included: on-site instruction; regional centers requiring the participant to travel to the site; computer-based training; two-way audio/video conferencing; and satellite downlink conferencing. On-site training received the highest preference followed by regional training, two-way audio/video conferencing, Satellite downlink conferencing and computer-based training (Table 19 – data are a mean summary of the ranking of most (1) to least desired (5) method of training).

Table 19: Preferred Type of Training

Type of Training	Mean	SD
On Site Training	1.48	1.01
Regional training	2.70	1.29
Computer-Based training	3.34	1.30
Two-way audio/video conference	3.71	1.12
Satellite downlink conference	3.59	1.24

Respondents were also asked how far they would be willing to travel to attend a training session. They indicated they would be willing to drive slightly over 80 miles each way to attend a training session.

#### Conclusions:

The summary data suggest that there are similarities between the Virginia LHD workforce and the Washington State LDH workforce, demographically, in areas of training needs, and in methods of training delivery. Demographically the workforces are similar in age, gender, and race, being predominantly white. A larger portion of the surveyed Virginia workforce is African-American, however the Washington state workforce is more ethnically diverse. A greater proportion of the surveyed Washington state workforce had a college degree and more spoke a foreign language than the surveyed Virginia workforce. The predominant occupational categories were similar for both the Virginia and Washington state workforces as were the areas of training identified as the most important. The Virginia workforce indicated that the most desired type of training would be a general certificate program covering the core courses in public health, however, many respondents also favored non- certificate continuing education programs and the MPH degree.

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#### Literature Cited

<sup>1</sup> The Public Health Workforce: An Agenda for the 21<sup>st</sup> Century. U.S. Department of Health and Human Services, Public Health Service

<sup>2</sup> Critical Challenges: Revitalizing the Health Professions for the Twenty-First Century, Pew Health Professions Commission, December 1995

<sup>3</sup> Considering the Future of Health Care Workforce Regulation, Christine M. Gragnola and Elizabeth Stone, MD, Pew Health Professions Commission, December 1997.

<sup>4</sup> O'Neil EH and the Pew Health Professions Commission. San Francisco, CA: Pew Health Professions Commission. December 1998.

<sup>5</sup> A Profile and Training Needs Assessment of Community/Public Health Professionals in Washington State, Northwest Center for Public Health Practice and Center for Health Education and Research, School of Public Health and Community Medicine, University of Washington, January 1998.

<sup>6</sup> Workforce Development Project, 2000 Training Needs Assessment Update, Final Report. Northwest Center for Public Health Practice and Center for Health Education and Research, School of Public Health and Community Medicine, University of Washington, August 2000.