Kansas Department of Health and Environment
Workforce Needs Assessment 2003

Prepared by the Heartland Center for Public Health Workforce Preparedness and Community Capacity Development at the Saint Louis University School of Public Health

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Executive Summary

This report summarizes findings from the Kansas Department of Health and Environment (KDHE) workforce needs assessment conducted in Winter 2003/04. Findings are reported for all KDHE employees who completed the survey and provide a breakdown of employees responses by two job groups. Group 1 employees are employed in one of the following job categories: clerical/secretarial or support staff, accounting/fiscal clerks, data entry staff, or laboratory technicians. Group 2 employees are employed in one of the following job categories: direct service, programmatic staff, managers, administrators, laboratory professionals. This grouping was developed by the Emory School of Public Health in order to adequately reflect variation in responsibility with regard to bioterrorism preparedness by job category. The following bullets highlight key findings related to the core public health competencies for both of these groups. Additionally, descriptive data on interest in training as well as motivators and barriers to training are provided.

Response rate:

- The assessment process yielded a 37% (overall) response rate, with 79 respondents in Group 1 and 215 respondents in Group 2.
- Respondents were similar to KDHE employees with regard to gender, race, age, place of employment. Group 1 and Group 2 respondents varied by gender, age and place of employment.

Competencies:

- Overall, participants who indicated their jobs fell into Group 1 job category expressed fewer training needs in the core public health competencies when compared to Group 2 participants.
- The domains with the greatest training needs among Group 1 respondents (from highest to lowest need) were communication skills, analytic skills, policy development and program skills, cultural competency skills, and leadership and systems thinking skills.
- Among Group 2, the domains with the greatest training needs included (in order from greatest to lowest need) analytic skills, policy development and program skills, communication skills, community dimensions of practice skills, basic public health science skills, emergency preparedness skills, cultural competency skills, financial planning and management skills, and leadership and systems thinking skills.

Training:

- Both groups expressed the greatest interest in continuing education courses that are non-degree, non-certificate and provide continuing education credits. Group 2 respondents also expressed interest in certificate programs that cover the core public health areas and certificate programs in areas other than public health.
- Both groups indicated they were most motivated to take training by a sense of increased competency, personal satisfaction and better job or higher pay.
- Barriers to training were similar for each group. Group 1 indicated that lack of agency support for the course fee and paying for the course were the strongest

barriers, while paying for the course and finding time during the work schedule were most significant barriers for Group 2 participants.

- Both groups indicated that Internet-based programs, CD-ROM and interactive video conferencing were the most preferable modes to receive training, but the order of importance was slightly different for the groups.
- Both groups indicated they had a computer at work, as well as Internet and e-mail access.

BACKGROUND

The purpose of this assessment was to determine the perception of employees of the Kansas Department of Health and Environment (KDHE) regarding their level of competency about basic public health functions as well as the importance of competencies in performing their current jobs. This project also assessed training interests, as well as motivators and barriers to participate in training. This information may be used in planning for training activities within the KDHE and in conjunction with the Heartland Center for Public Health and Community Capacity Development.

METHODS

Study Population:

All employees of the KDHE (n= 803) were invited by the Director to complete the assessment.

Instrument Design and Implementation:

The assessment-working group of the Heartland Center for Public Health and Community Capacity Development. (composed of representatives from Saint Louis University School of Public Health, KDHE, University of Kansas School of Public Health, Missouri Department of Health and Environment, Missouri Center for Local Public Health Services, and Kansas Association of Local Health Departments) convened to determine how workforce needs would be assessed. Based on the consensus of the group, the Council on Linkages Between Academia and Practice (COL) set of core public health competencies formed the basis of the survey. These 77 competencies are divided into eight domains that reflect public health skills that are necessary to perform the Essential Public Health Services. Emergency preparedness was assessed using a set of 13 competencies developed by the Columbia University School of Nursing. Finally bioterrorism preparedness was measured using a set of competencies developed by the Emory University School of Public Health. Two competency sets were developed, one for employees with jobs in Group 1 (clerical/secretarial or support staff, accounting/fiscal clerks, data entry staff, or laboratory technicians) and the other for employees with jobs in Group 2 (direct service, programmatic staff, managers, administrators, laboratory professionals.) The number and type of bioterrorism competency varies by the COL domains as well as the job groups.. The differences in competencies by group reflect the variation in required bioterrorism preparedness by job category. Three domains (Financial Planning and Management Skills and Leadership and Systems Thinking Skills for Group 1 and emergency preparedness for both groups) do not have additional bioterroism preparedness competencies. Participants were asked to rate their level of ability and the importance of each competency for their current position. Training needs, barriers, and motivators were assessed using items from existing workforce assessments and others developed by the assessment team. Finally, select demographic information was assessed in order to describe the population (See needs assessment in Appendix A.)

The assessment was implemented via the World Wide Web. Prior to recruitment, Heartland center staff tested the web-based assessment for accuracy and quality.

Recruitment and Response Rate:

Several months prior to implementation, the Project Director presented an overview of the needs assessment, its purpose, use, and project logistics to division and center directors and office chiefs of the KDHE. This meeting was designed to garner support among the department leaders for the assessment process so they would encourage employees to participate. Immediately prior to implementation, employees received a letter from the Secretary of the KDHE that described the purpose of the assessment, a request for their participation, and instructions on accessing the survey via the web-site. A deadline of three weeks was given to complete the survey. Approximately two days into implementation, technical difficulties related to the web administration were encountered and data collection was stopped. When the technical difficulties were resolved, it was near the holiday season; therefore, data collection resumed two weeks after the first of the year. The resumption of the assessment process commenced with a letter from the Project Director that outlined the technical difficulties and the way in which they were resolved. In addition, the Public Health Workforce Development Coordinator made calls or visits to division heads in an attempt to encourage employee participation. The Public Health Workforce Development Coordinator also attended a number of mandatory employee meetings in order to encourage employee participation. A paper/pencil option for the survey was added for those who were uncomfortable with the web-based approach. The final response rate was 37% (n=294; Group 1 n=79; Group 2 n=215.) Table 1 lists the number of employees who completed the survey (and responded to this question) by location of employment in the Department for each of the two job groups.

Table 1 Final Response Rates by Divisions and Centers

Division/Office	Group 1 Number	Group 2 Number
Office of the Secretary	5	4
Division of Health	10	51
Division of Environment	10	63
Division of Health & Environmental Laboratories	5	20
Center for Health & Environmental Statistics	9	6
Total Identified	39	144
Missing	40	71
Grand Total	79	215

Participants were asked to define their current job using the United States Office of Personnel Managements (OPM) occupational categories. The number of participants responses by these job categories are listed in Table 1.1.

Table 1.1 Final Responses (n) Organized by OPM Occupational Categories

Job Categories	Group 1 Number	Group 2 Number
Administrator	9	7
Manager	48	35
Auditor, Inspector or Surveyor	--	22
Behavioral Researcher	1	1
Biostatistician, Epidemiologist	--	9
Community Organizer/Involvement Specialist	--	4
Disease Investigator	--	1
Environmental Health Specialist or Environmental Engineer	8	43
Health Care Consultant	--	7
Health Communications Specialist	--	2
Health Planner/Policy Analyst	--	4
Laboratory Scientist or Technician	4	11
Medical Clinician or Clinical Consultant	--	2
Non-Medical Clinician or Clinical Consultant	--	1
Occupational Health Specialist	--	--
Total Identified	70	149
Missing	9	66
Grand Total	79	215

The overall response rate of 37% makes the interpretation of these findings difficult. In addition to the usual barriers to employee survey completion, e.g., time, not a requirement of employment, concerns about confidentiality, etc., it is likely that the technical difficulties related to the web administration likely reduced the response rate. Additionally, it is very likely that those who chose to completed the survey have a particular interest in training, and therefore may not reflect the perceptions of all employees of the department. In addition, several items in the survey have missing data. A larger response rate would reduce these biases and allow a more representative sample of the KDHE employee pool. Any judgments made from these data must be done with these biases in mind.

FINDINGS

Description of respondents:

Table 2 describes selected demographic characteristics of all respondents and those in each of the two job groups compared to all KDHE employees. Overall, survey respondents were white (92%), between 18-49 years of age (68%), and employed in the Topeka office (71%.) Survey respondents were similar to KDHE employees with regard to gender, race, age, place of employment. Group 1 and Group 2 respondents varied by gender, age and place of employment. A larger proportion of Group 1 respondents were female (74.2%) and employed in the Topeka office (83.9%) when compared to Group 2 respondents (48.7% and 68%, respectively.)

Table 2 Demographic Characteristics

	Total Respondents n (%)	Group 1 Respondents n (%)	Group 2 Respondents n (%)	KDHE Employees N (%)
Gender				
Male	87 (47)	8 (25.8)	79 (51.3)	367 (45.7)
Female	98 (53)	23 (74.2)	75 (48.7)	436 (54.3)
Race				
Black	5 (2.7)	1 (3.2)	4 (2.6)	36 (4.48)
Hispanic	5 (2.7)	1 (3.2)	4 (2.6)	15 (1.87)
White	170 (92)	28 (90.3)	142 (92.8)	728 (90.66)
Other	4 (2.2)	1 (3.2)	3 (2.0)	24 (2.99)
Age				
18-35	42 (23)	10 (32.3)	32 (20.6)	
36-49	83 (45)	14 (45.2)	69 (44.5)	498 (62.01)*
50 and older	61 (32)	7 (22.6)	54 (34.8)	305 (38.09)
Place of employment				
Topeka	130 (71)	26 (83.9)	104 (68.0)	618 (76.97)
District Office	52 (28.3)	5 (16.1)	47 (30.7)	185 (23.03)
County Site	1	0	1 (0.7)	0
Other	1	0	1 (0.7)	0

*represents employees 49 years and younger

Competencies:

The tables and figures that follow reflect the findings from the workforce needs assessment by competencies that include: 1) the Council on Linkages set of core public health competencies (n=77), clustered within eight domains; 2) the Columbia School of Nursing Emergency Preparedness competencies (n=13) as the 9th domain; and 3) Emory School of Public Health bioterrorism preparedness competencies (n=18 for Group 1 employees and n=47 for Group 2 employees.) Employees were asked to assess each competency in terms of their perceived personal ability and importance to their current job. Each was rated on a four-point scale where one was the lowest and 4 was the highest. On face value and separate, these data do not demonstrate important training needs. Therefore, a "needs" score was developed that reflects the difference between the ability and importance scores. The “needs” score is calculated by subtracting the importance score from the ability score. The “needs” score can therefore, range from -3 to +3, with a negative score suggesting a possible “need” for training. The percentage of respondents that had a negative “needs” score is presented for each competency and for each domain. The domain "needs" score is calculated based on the COL core public health competencies only.

Figures 1,2 and 3 provide a graphical representation of the mean domain ability, importance and needs scores for the COL domains and the Columbia emergency preparedness domain for both of the job category groups. As illustrated, participants in Group 2 reported higher mean ability scores (with the exception of emergency prepared ness), higher importance scores, and therefore higher needs scores for all domains when compared to Group 1 employees.

Figure 1: Ability Summary Scores By Domain (COL competencies only)

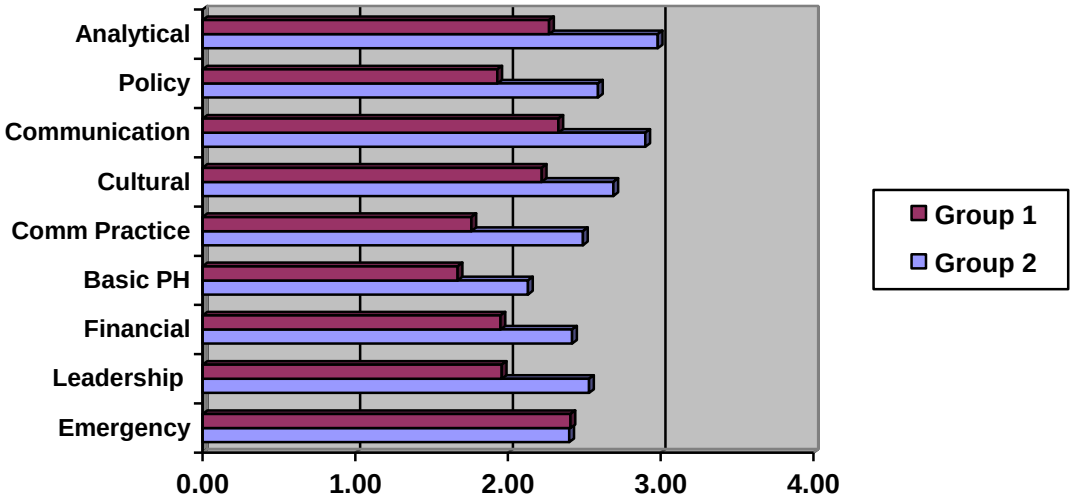


Figure 2: Importance Summary Scores By Domain (COL competencies only)

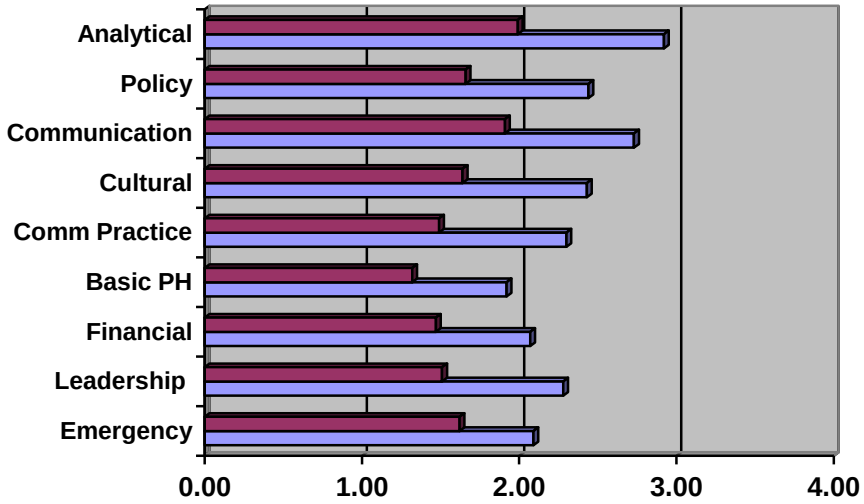
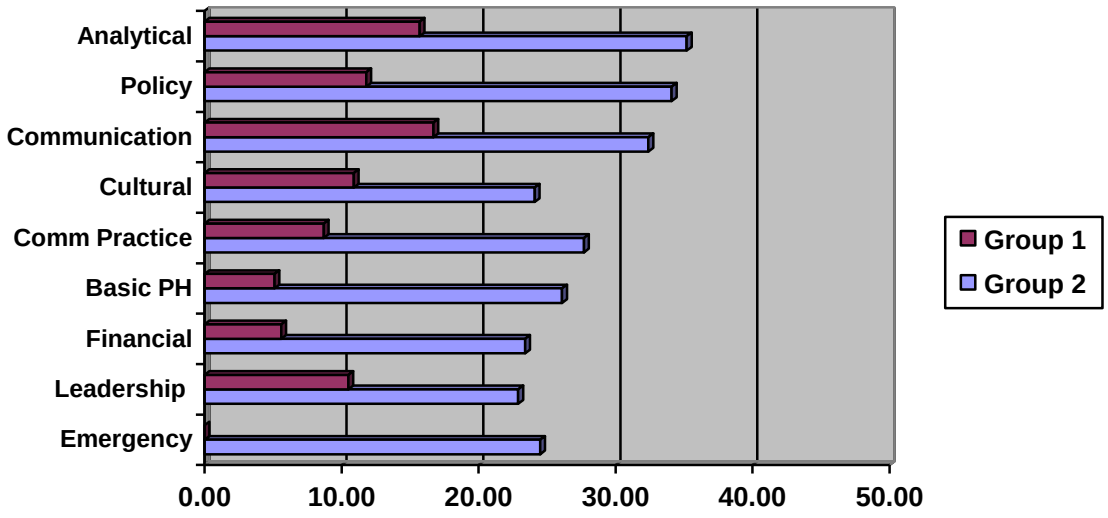


Figure 2: Percent of Staff With Negative Need Score (COL competencies only)



Tables 3-11 list the findings by competencies for Group 1 participants and tables 12-20 list Group 2 competencies and findings. The values in the first column represent the mean ability score, while the values in the second column are the mean importance scores for each competency. The final column represents the need scores and lists the proportion of employees who report, for a given competency, low ability and high importance to complete their job, i.e., highest training needs. The three highest competency need scores within each domain are bolded and numbered. For each of the job groups, the domains are ordered from the highest to lowest training needs based on the domain needs scores.

Group 1 Competencies

Table 3: **Communication Skills (Group 1)**

	Ability Score	Importance Score	% With Negative Need Score
Communicate effectively both in writing and orally, or in other ways	3.38	3.35	**20.0**[1]
Solicit input from individuals and organizations	2.55	2.17	**12.1**[3]
Advocate for public health programs and resources	1.84	1.38	5.3
Lead and participate in groups to address specific issues	2.28	1.60	5.3
Use the media and advanced technologies to communicate information	1.84	1.47	**12.3**[2]
Use community networks to communicate information	1.76	1.41	8.6
Effectively present accurate demographic, statistical, programmatic, and scientific information for professional and lay audiences	1.93	1.55	5.3
Listen to others in an unbiased manner, respect the points of view of others, and promote the expression of diverse opinions and perspectives	2.88	2.34	7.0
Communication Skills Summary Scores	**2.33**	**1.91**	**16.7**
Describe communication procedures for emergency situations	2.25	1.75	8.9
Describe how to receive and send data and information using available communication technologies (e.g., email, radio, fax, telephone)	2.93	2.62	5.3
Describe how to use back-up communication systems	2.16	1.88	8.8
Use appropriate equipment for communication during an emergency (e.g., phone, fax, two-way radio, computer)	2.59	2.07	5.1
Communicate information and procedures to Public Health's partners (e.g., health care providers, first responders, emergency management personnel) to facilitate the response to an emergency	2.02	1.55	7.4
Deliver risk communication messages during an emergency event	1.86	1.49	10.3

Table 4: Analytic Skills (Group 1)

	Ability Score	Importance Score	% With Negative Need Score
Define a problem	3.17	3.06	**14.1**[1]
Determine appropriate uses and limitations of both quantitative and qualitative data	2.55	2.27	**11.5**[2]
Identify relevant and appropriate data information sources	2.81	2.69	8.3
Select and define variables relevant to public health outcomes	1.81	1.55	8.5
Make relevant inferences from quantitative and qualitative data	2.07	1.92	6.9
Partner with communities to attach meaning to collected quantitative and qualitative data	1.75	1.44	3.4
Obtain and interpret information regarding risks and benefits to the community	1.97	1.66	5.2
Apply ethical principles to collection, maintenance, use, and dissemination of data and information	2.44	2.07	6.8
Apply data collection processes, information technology applications, and computer systems storage/retrieval strategies	2.35	2.15	6.7
Recognize how the data illuminates ethical, political, scientific, economic, and overall public health issues	2.04	1.56	3.5
Evaluate the integrity and comparability of data and identify gaps in data sources	2.07	1.80	**8.6**[3]
Analytical Skills Summary Score	**2.27**	**1.99**	**15.7**
Identify successes and failures during an emergency event to improve the response to future emergencies	2.09	1.80	10.3

Table 5: **Policy Development and Program Skills (Group 1)**

	Ability Score	Importance Score	% With Negative Need Score
Collect, summarize, and interpret information relevant to an issue	2.75	2.47	**10.0**[1]
State policy options and write clear and concise policy statements	2.05	1.58	**8.5**[2]
Identify, interpret, and implement public health laws, regulations, and policies related to specific programs	1.84	1.76	**7.0**[3]
Prepare and implement emergency response plans	1.72	1.42	6.9
Develop mechanisms to monitor and evaluate programs for their effectiveness and quality	1.88	1.47	3.4
Articulate the health, fiscal, administrative, legal, social, and political implications of each policy option	1.59	1.38	5.1
State the feasibility and expected outcomes of each policy option	1.54	1.40	5.2
Utilize current techniques in decision analysis and health planning	1.67	1.47	3.4
Decide on the appropriate courses of action	2.30	2.07	**7.0**[3]
Develop a plan to implement policy, including goals, outcomes and process objectives, and implementation steps	1.83	1.58	**8.5**[2]
Translate policy into organization plans, structures, and programs	1.79	1.52	**7.0**[3]
Policy Development Summary Scores	**1.93**	**1.66**	**11.8**
Know written policies, procedures, and plans in an emergency event	2.42	2.12	8.6

Table 6: **Cultural Competency Skills (Group 1)**

	Ability Score	Importance Score	% With Negative Need Score
Utilizes appropriate methods for interacting sensitively, effectively, and professionally with persons from diverse cultural, socioeconomic, educational, racial, ethnic and professional backgrounds, and persons of all ages and lifestyle preferences	2.30	1.75	**8.0**[3]
Identify the role of cultural, social, and behavioral factors in determining the delivery of public health services	2.12	1.60	**10.0**[2]
Develop and adapt approaches to problems that take into account cultural differences	2.24	1.54	6.0
Understand the dynamic forces contributing to cultural diversity	2.02	1.54	6.0
Understand the importance of a diverse public health workforce	2.16	1.81	**12.0**[1]
Cultural Competency Summary Scores	**2.22**	**1.64**	**10.9**
Include the requirements of people with special needs (e.g., language, disability, age) in emergency response planning and activities	2.06	1.58	6.0

Table 7: Leadership and Systems Thinking Skills (Group 1)

	Ability Score	Importance Score	% With Negative Need Score
Create a culture of ethical standards within organizations and communities	2.36	1.87	**9.1**[2]
Identify internal and external issues that may impact delivery of essential public health services (i.e. strategic planning)	1.98	1.57	4.5
Promote team and organizational learning	2.16	1.63	4.7
Contribute to development, implementation, and monitoring of organizational performance standards	1.89	1.57	4.5
Help create key values and shared vision and use these principles to guide action	1.77	1.41	4.5
Facilitate collaboration with internal and external groups to ensure participation of key stakeholders	1.82	1.55	**6.8**[3]
Use the legal and political system to effect change	1.67	1.44	**11.9**[1]
Apply the theory of organizational structures to professional practice	2.00	1.60	**9.1**[2]
Leadership Summary Scores	**1.96**	**1.51**	**10.5**

Table 8: **Community Dimensions of Practice (Group 1)**

	Ability Score	Importance Score	% With Negative Need Score
Establish and maintain linkages with key stakeholders	1.92	1.47	3.9
Utilize leadership and team building skills to build community partnerships	1.76	1.49	6.0
Utilize negotiation and conflict resolution skills to build community partnerships	1.78	1.51	8.0
Collaborate with community partners to promote the health of the population	1.76	1.47	**9.8**[3]
Identify how public and private organizations operate within a community	1.84	1.54	8.2
Accomplish effective community engagements	1.53	1.37	**10.6**[1]
Identify community assets and available resources	1.68	1.43	**10.0**[2]
Develop, implement, and evaluate a community public health assessment	1.90	1.51	7.8
Describe the role of government in the delivery of community health services	1.69	1.51	**10.0**[2]
Community Dimensions Summary Score	**1.76**	**1.49**	**8.7**
Maintain directories and resource materials for use during emergency events	1.78	1.47	6.4
Conduct tests and exercises of emergency response plans at regular intervals with partner agencies	1.55	1.27	6.5

Table 9: **Financial Planning and Management Skills (Group 1)**

	Ability Score	Importance Score	% With Negative Need Score
Develop and present a budget	1.77	1.19	4.8
Manage programs within budget constraints	2.29	1.73	**9.1**[1]
Prepare grant proposals for funding from external sources	2.23	1.73	**7.0**[2]
Apply basic human relations skills to the management of organizations, motivation of personnel, and resolution of conflicts	1.82	1.37	4.4
Manage information systems for collection, retrieval, and use of data for decision-making	2.00	1.48	**6.8**[3]
Negotiate and develop contracts and other documents for the provision of population-based services	2.05	1.48	4.5
Conduct cost-effectiveness, cost-benefit, and cost utility analyses	1.81	1.33	4.7
Apply budget processes	2.13	1.66	6.7
Develop strategies for determining budget priorities	1.98	1.47	6.7
Monitor program performance	1.84	1.48	4.7
Financial Planning/Management Summary Scores	**1.95**	**1.47**	**5.6**

Table 10: **Basic Public Health Science Skills (Group 1)**

	Ability Score	Importance Score	% With Negative Need Score
Identify the individual's and organization's responsibilities within the context of the Essential Public Health Services and core functions	1.73	1.25	4.7
Define and assess health status of populations	1.60	1.29	4.4
Understand determinants of health and illness, factors contributing to health promotion and disease prevention, and factors influencing the use of health services	1.45	1.20	6.5
Apply the basic public health sciences including:			
• behavioral and social sciences	1.59	1.37	4.3
• biostatistics	1.59	1.39	**8.7**[1]
• epidemiology	1.57	1.20	6.5
• environmental public health	1.72	1.37	4.3
• prevention of chronic disease	1.61	1.27	4.3
• prevention of infectious disease	1.70	1.50	**8.5**[2]
• prevention of injuries	1.59	1.41	6.5
Identify and retrieve current relevant scientific evidence	1.66	1.41	4.3
Understand the historical development, structure and interaction of public health and health care systems	1.68	1.32	4.3
Identifies and applies basic research methods used in public health	1.96	1.60	**8.3**[3]
Identify the limitations of research and the importance of observations and interrelationships	1.94	1.50	6.1
Develop a lifelong commitment to rigorous critical thinking	2.31	1.66	4.2
Basic Public Health Science Summary Scores	**1.67**	**1.32**	**5.1**
Perform assigned functional role(s) in emergency response	2.27	1.82	8.2
Act within limits of own knowledge/skill/authority during an emergency event	2.35	1.80	8.3
Access needed resources when situations are beyond own knowledge/skill/authority	1.91	1.55	8.9
Use proper safety and personal protection procedures and equipment	1.77	1.55	8.7
Apply appropriate techniques/procedures for preserving possible criminal evidence	1.63	1.47	8.3
Describe appropriate handling of human and animal remains, including safety, psycho-social, and forensic requirements	2.04	1.45	8.9
Maintain up-to-date identification protocols for biological and chemical agents and radiologic material	2.13	1.69	6.8

Table 11: **Emergency Preparedness Skills (Group 1)**

	Ability Score	Importance Score	% With Negative Need Score
Describe the role of public health in a range of emergencies that might arise (e.g., "This department provides surveillance, investigation and public information in disease outbreaks and collaborates with other agencies in biological, environmental and weather emergencies)	2.00	1.44	0
Describe the chain of command in emergency response	2.20	1.89	0
Identify and locate the agency emergency response plan (or the pertinent portions of the plan)	2.00	1.60	0
Describe your functional role(s) and responsibilities in an emergency response	2.55	1.70	0
Demonstrate your functional role(s) in regular drills	2.45	1.80	0
Demonstrate correct use of all communication equipment used for emergency communication (phone, fax, radio, etc.)	2.55	1.80	0
Describe communication role(s) in emergency response within the agency, using established communication systems.	2.00	1.40	0
Describe communication role(s) in emergency response with the media.	2.00	1.20	0
Describe communication role(s) in emergency response with the general public.	1.91	1.20	0
Describe communication role(s) in emergency response with family or neighbors.	2.55	1.36	0
Identify limits to your knowledge/skill/authority and identify key system resources for referring matters that exceed these limits.	2.82	1.82	0
Recognize unusual events that might indicate an emergency and describe appropriate action (e.g., communicate clearly within the chain of command.)	2.75	1.92	0
Apply creative problem solving and flexible thinking to unusual challenges within your functional responsibilities and evaluate effectiveness of all actions taken.	2.92	1.83	0
Emergency Preparedness Summary Score	**2.41**	**1.62**	**0***

* Based on complete responses from only 9 individuals from Group 1.

Group 2 Competencies

Table 12: Analytic Skills (Group 2)

	Ability Score	Importance Score	% With Negative Need Score
Define a problem	3.50	3.62	**22.8**[2]
Determine appropriate uses and limitations of both quantitative and qualitative data	3.17	3.20	20.0
Identify relevant and appropriate data information sources	3.32	3.34	**21.4**[3]
Select and define variables relevant to public health outcomes	2.77	2.78	20.9
Make relevant inferences from quantitative and qualitative data	3.07	3.01	19.5
Partner with communities to attach meaning to collected quantitative and qualitative data	2.69	2.49	14.3
Obtain and interpret information regarding risks and benefits to the community	2.86	2.73	19.6
Apply ethical principles to collection, maintenance, use, and dissemination of data and information	3.21	3.03	12.6
Apply data collection processes, information technology applications, and computer systems storage/retrieval strategies	2.81	2.82	**23.7**[1]
Recognize how the data illuminates ethical, political, scientific, economic, and overall public health issues	2.67	2.42	14.4
Evaluate the integrity and comparability of data and identify gaps in data sources	2.77	2.67	20.2
Analytical Skills Summary Scores	**2.98**	**2.92**	**35.2**
Describe the signs and symptoms for exposure to Category A bioterrorism agents (i.e., Anthrax, Botulism, Plague, Smallpox, Tularemia, Viral hemorrhagic fevers)	1.70	1.59	13.9
Describe the signs and symptoms to nuclear/radiologic exposure	1.70	1.55	11.6
Describe the signs and symptoms for exposure to chemical agents	1.91	1.79	19.4
Use community health data (e.g., health care utilization data, sentinel events) to detect potential health emergencies	1.76	1.66	13.8
Conduct assessments to determine the scope and severity of emergency events	2.08	1.95	16.1
Evaluate assessment data to determine the scope and severity of emergency events	2.10	1.99	14.4
Incorporate community-specific risk assessments in the preparation of emergency response plans	1.94	1.73	10.8
Prepare after-action (post-emergency event) reports to determine needed plan improvements	1.94	1.76	13.8

Table 13: **Policy Development and Program Skills (Group 2)**

	Ability Score	Importance Score	% With Negative Need Score
Collect, summarize, and interpret information relevant to an issue	3.28	3.21	15.5
State policy options and write clear and concise policy statements	2.78	2.61	19.9
Identify, interpret, and implement public health laws, regulations, and policies related to specific programs	2.87	2.83	19.4
Prepare and implement emergency response plans	2.26	1.91	12.8
Develop mechanisms to monitor and evaluate programs for their effectiveness and quality	2.59	2.54	**27.8**[1]
Articulate the health, fiscal, administrative, legal, social, and political implications of each policy option	2.18	2.08	14.1
State the feasibility and expected outcomes of each policy option	2.28	2.09	10.6
Utilize current techniques in decision analysis and health planning	2.09	1.94	14.1
Decide on the appropriate courses of action	3.00	2.94	**22.2**[2]
Develop a plan to implement policy, including goals, outcomes and process objectives, and implementation steps	2.69	2.59	**21.7**[3]
Translate policy into organization plans, structures, and programs	2.52	2.31	16.8
Policy Development Summary Scores	**2.59**	**2.44**	**34.1**
Interpret public health laws, rules and regulations for directing emergency response	2.18	1.92	12.2
Take steps to ensure that existing or proposed laws and rules and regulations facilitate public health action in emergency response	2.05	1.81	8.3
Determine resources needed to respond to emergency situations	2.27	1.96	11.7
Obtain resources needed to respond to emergency situations	2.08	1.84	14.5
Follow policies and procedures for specimen collection, rapid identification, and electronic reporting of results	2.42	2.17	12.8
Establish policies and procedures for specimen collection, rapid identification, and electronic reporting of results	2.13	1.81	6.2
Develop an emergency response plan, incorporating essential elements (e.g., incident command, communications, command/control, operations, logistics, planning, finance/administration, coordination)	2.05	1.65	9.6
Implement written emergency response plans	2.24	1.80	7.3

Table 14:**Communication Skills (Group 2)**

	Ability Score	Importance Score	% With Negative Need Score
Communicate effectively both in writing and orally, or in other ways	3.44	3.60	**26.8**[1]
Solicit input from individuals and organizations	3.22	3.16	19.1
Advocate for public health programs and resources	2.52	2.29	14.3
Lead and participate in groups to address specific issues	3.02	2.74	15.5
Use the media and advanced technologies to communicate information	2.49	2.30	**20.2**[2]
Use community networks to communicate information	2.44	2.28	**19.8**[3]
Effectively present accurate demographic, statistical, programmatic, and scientific information for professional and lay audiences	2.70	2.57	19.1
Listen to others in an unbiased manner, respect the points of view of others, and promote the expression of diverse opinions and perspectives	3.33	3.04	15.2
Communication Skills Summary Scores	**2.90**	**2.73**	**32.4**
Describe communication procedures for emergency situations	2.36	1.96	10.3
Describe how to receive and send data and information using available communication technologies (e.g., email, radio, fax, telephone)	3.15	2.67	8.5
Describe how to use back-up communication systems	2.15	1.90	9.0
Use appropriate communication strategies for a given audience (e.g., media, other agencies, health providers, general public)	2.69	2.52	17.1
Use appropriate equipment for communication during an emergency (e.g., phone, fax, two-way radio, computer)	2.68	2.18	11.9
Communicate information and procedures to Public Health's partners (e.g., health care providers, first responders, emergency management personnel) to facilitate the response to an emergency	2.31	1.99	11.4
Develop risk communication messages during an emergency event	1.93	1.71	14.1
Deliver risk communication messages during an emergency event	2.03	1.77	14.4
Use specialized emergency management software applications for coordination among the response agencies	1.52	1.53	15.3

Table 15: **Community Dimensions of Practice (Group 2)**

	Ability Score	Importance Score	% With Negative Need Score
Establish and maintain linkages with key stakeholders	2.79	2.71	**16.8**[2]
Utilize leadership and team building skills to build community partnerships	2.77	2.57	**16.2**[3]
Utilize negotiation and conflict resolution skills to build community partnerships	2.61	2.48	**20.3**[1]
Collaborate with community partners to promote the health of the population	2.56	2.33	12.8
Identify how public and private organizations operate within a community	2.54	2.30	14.5
Accomplish effective community engagements	2.47	2.30	15.6
Identify community assets and available resources	2.47	2.22	12.9
Develop, implement, and evaluate a community public health assessment	1.89	1.70	12.9
Describe the role of government in the delivery of community health services	2.36	2.06	15.1
Community Dimensions Summary Score	**2.49**	**2.30**	**27.7**
Plan for responder or public mental health concerns during emergency events	1.68	1.42	7.6
Ensure access to mental health services during emergency events	1.55	1.38	10.6
Ensure access to social services during emergency events	1.63	1.39	8.2
Ensure access to medical assessment and treatment services during emergency events	1.77	1.49	10.1
Maintain directories and resource materials for use during emergency events	2.16	1.77	7.0
Conduct tests and exercises of emergency response plans at regular intervals with partner agencies	1.86	1.72	11.8
Integrate Public Health's emergency response plan into the response plans of partner agencies	1.71	1.62	12.3

Table 16: **Basic Public Health Science Skills (Group 2)**

	Ability Score	Importance Score	% With Negative Need Score
Identify the individual's and organization's responsibilities within the context of the Essential Public Health Services and core functions	2.11	1.91	14.6
Define and assess health status of populations	1.79	1.62	14.5
Understand determinants of health and illness, factors contributing to health promotion and disease prevention, and factors influencing the use of health services	2.07	1.78	11.4
Apply the basic public health sciences including:			
• behavioral and social sciences	2.13	1.89	11.7
• biostatistics	1.77	1.71	15.3
• epidemiology	1.90	1.87	**20.6**[1]
• environmental public health	2.18	2.11	**17.0**[2]
• prevention of chronic disease	2.04	1.71	9.7
• prevention of infectious disease	2.14	1.85	12.7
• prevention of injuries	2.23	1.85	10.4
Identify and retrieve current relevant scientific evidence	2.59	2.45	16.0
Understand the historical development, structure and interaction of public health and health care systems	1.96	1.66	9.6
Identifies and applies basic research methods used in public health	2.07	1.83	13.3
Identify the limitations of research and the importance of observations and interrelationships	2.20	1.97	14.4
Develop a lifelong commitment to rigorous critical thinking	2.85	2.64	**16.2**[3]
Basic Public Health Science Summary Scores	**2.13**	**1.92**	**26.1**
Describe Public Heath's roles and responsibilities in emergency response	1.99	1.73	12.7
Describe the incident command system for emergency management	1.97	1.73	12.0
Perform assigned functional role(s) in emergency response	2.40	2.01	12.7
Act within limits of own knowledge/skill/authority during an emergency event	2.98	2.42	8.9
Access needed resources when situations are beyond own knowledge/skill/authority	3.02	2.69	13.2
Use proper safety and personal protection procedures and equipment	2.98	2.75	17.5
Apply appropriate techniques/procedures for preserving possible criminal evidence	2.10	1.92	16.7
Implement appropriate procedures to isolate and contain persons/areas affected by an emergency event	2.02	1.78	14.4
Describe appropriate handling of human and animal remains, including safety, psycho-social, and forensic requirements	1.65	1.47	12.6
Maintain up-to-date identification protocols for biological and chemical agents and radiologic material	1.74	1.67	13.9

Table 17: **Emergency Preparedness Skills (Group 2)**

	Ability Score	Importance Score	% With Negative Need Score
Describe the role of public health in a range of emergencies that might arise (e.g., "This department provides surveillance, investigation and public information in disease outbreaks and collaborates with other agencies in biological, environmental and weather emergencies)	2.33	1.96	11.2
Describe the chain of command in emergency response	2.35	2.04	**16.1**[2]
Identify and locate the agency emergency response plan (or the pertinent portions of the plan)	2.27	2.14	**18.1**[1]
Describe your functional role(s) and responsibilities in an emergency response	2.43	2.15	**16.1**[2]
Demonstrate your functional role(s) in regular drills	2.32	2.02	**14.5**[3]
Demonstrate correct use of all communication equipment used for emergency communication (phone, fax, radio, etc.)	2.65	2.15	10.1
Describe communication role(s) in emergency response within the agency, using established communication systems.	2.24	2.05	13.9
Describe communication role(s) in emergency response with the media.	2.06	1.81	11.9
Describe communication role(s) in emergency response with the general public.	2.13	1.87	11.9
Describe communication role(s) in emergency response with family or neighbors.	2.25	1.81	8.9
Identify limits to your knowledge/skill/authority and identify key system resources for referring matters that exceed these limits.	2.59	2.17	12.6
Recognize unusual events that might indicate an emergency and describe appropriate action (e.g., communicate clearly within the chain of command.)	2.82	2.48	12.7
Apply creative problem solving and flexible thinking to unusual challenges within your functional responsibilities and evaluate effectiveness of all actions taken.	2.79	2.40	13.9
Emergency Preparedness Summary Score	**2.40**	**2.09**	**24.5**

Table 18: **Cultural Competency Skills (Group 2)**

	Ability Score	Importance Score	% With Negative Need Score
Utilizes appropriate methods for interacting sensitively, effectively, and professionally with persons from diverse cultural, socioeconomic, educational, racial, ethnic and professional backgrounds, and persons of all ages and lifestyle preferences	3.11	2.94	**20.1**[1]
Identify the role of cultural, social, and behavioral factors in determining the delivery of public health services	2.41	2.22	**16.6**[3]
Develop and adapt approaches to problems that take into account cultural differences	2.51	2.28	**18.4**[2]
Understand the dynamic forces contributing to cultural diversity	2.61	2.27	15.5
Understand the importance of a diverse public health workforce	2.83	2.39	9.2
Cultural Competency Summary Scores	**2.69**	**2.43**	**24.1**
Include the requirements of people with special needs (e.g., language, disability, age) in emergency response planning and activities	2.26	1.95	12.6

Table 19: **Financial Planning and Management Skills (Group 2)**

	Ability Score	Importance Score	% With Negative Need Score
Develop and present a budget	2.48	1.90	9.6
Manage programs within budget constraints	2.72	2.19	10.2
Prepare grant proposals for funding from external sources	2.26	1.86	12.0
Apply basic human relations skills to the management of organizations, motivation of personnel, and resolution of conflicts	2.90	2.64	**16.2**[2]
Manage information systems for collection, retrieval, and use of data for decision-making	2.59	2.43	14.9
Negotiate and develop contracts and other documents for the provision of population-based services	2.06	1.75	12.0
Conduct cost-effectiveness, cost-benefit, and cost utility analyses	1.99	1.75	12.5
Apply budget processes	2.29	2.03	**15.2**[3]
Develop strategies for determining budget priorities	2.21	1.87	12.2
Monitor program performance	2.64	2.41	**17.7**[1]
Financial Planning/Management Summary Scores	**2.42**	**2.07**	**23.4**
Develop discipline-specific (e.g., nurse, environmentalist, epidemiologist) protocols for emergency response	1.96	1.61	9.9
Follow discipline-specific (e.g., nurse, environmentalist, epidemiologist) protocols for emergency response	2.34	1.93	9.6
Negotiate mutual aid agreements for the provision of services during emergency events	1.68	1.40	10.3

Table 20: Leadership and Systems Thinking Skills (Group 2)

	Ability Score	Importance Score	% With Negative Need Score
Create a culture of ethical standards within organizations and communities	2.64	2.26	10.9
Identify internal and external issues that may impact delivery of essential public health services (i.e. strategic planning)	2.38	2.10	10.5
Promote team and organizational learning	2.87	2.61	13.4
Contribute to development, implementation, and monitoring of organizational performance standards	2.63	2.36	14.3
Help create key values and shared vision and use these principles to guide action	2.64	2.34	11.7
Facilitate collaboration with internal and external groups to ensure participation of key stakeholders	2.60	2.43	**14.7**[3]
Use the legal and political system to effect change	2.21	2.01	**15.2**[1]
Apply the theory of organizational structures to professional practice	2.29	2.09	**14.8**[2]
Leadership Summary Scores	**2.53**	**2.28**	**22.9**
Assess the agency's capacity to respond to an emergency event, including personnel, resources, and plans	2.07	1.74	9.9

Training Needs:

The following tables reflect the respondent's interest, motivators and barriers to receiving training programs for each of the job groups. In addition, access to technology for training is described. Indicators with the three largest proportion of participant responses are bolded and numbered.

Table 21 lists the proportion of respondents that indicated interest in various training programs for each of the job groups. Participants in Group 2 expressed greater interest in most forms of training. Participants in both groups expressed the most interest in participating in programs that are non-degree continuing education programs. Among Group 1 participants, certificate programs in areas other than public health and masters programs other than public health followed. A large proportion of Group 2 participants expressed interest in certificate programs in core public health and certificate programs in areas other than public health.

Table 21 Training Programs of Interest

	% Somewhat or Very Interested Group 1	% Somewhat or Very Interested Group 2
Kansas Public Health Leadership Institute	30.9	50.7
Certificate programs that cover core public health areas (epidemiology, biostatistics, health education, health policy, or environmental health sciences)	41.8	**66.4**[2]
Program that leads to a master's degree in public health:		
• Traditional format	25.7	43.8
• On-line format or other distance learning format	40.0	56.0
• Computer based (e.g., cd-rom)	48.7	55.5
Courses that can be applied toward a bachelor's program	45.3	16.3
Program that leads to a master's degree (other than public health)	**53.6**[3]	60.7
Continuing education courses that are non-degree, non-certificate but provide professional CE credits	**55.8**[1]	**81.1**[1]
Certificate program in another area	**53.7**[2]	**61.1**[3]

Table 22 lists the factors that motivate employees to participate in training events by each of the job groups. Both groups indicated that increased competency, personal satisfaction and better job or higher pay were the most important motivators to take training programs.

Table 22 Factors that Motivate Training

	% Important or Very important Group 1	% Important or Very important Group 2
Receiving university credit	38.6	33.8
Receiving CE units	27.9	51.0
Personal satisfaction	**77.3**[2]	**86.5**[2]
Time away form work	21.4	25.8
Face to face interaction with other professionals	46.5	64.5
Ability to expand professional network	51.1	71.1
Better job/higher pay	**72.7**[3]	**72.8**[3]
Increased competency	**81.4**[1]	**91.1**[1]
Opportunity to meet other people outside region	46.5	52.6
Licensure/certification requirement	33.4	45.5
Within agency promotion	59.1	64.5
Opportunities for web-based or other electronic programs	45.2	38.3

Table 23 lists the barriers to taking training courses that were cited by participants in each of the job groups. Among Group 1 participants, the most common barriers were lack of agency support for the course fee, paying for the course them selves, and lack of agency support for time off. Among Group 2 participants, paying for the course, finding time during the work schedule, and lack of agency support for the course fee were the most important barriers.

Table 23 Barriers to Training

	% Important or Very important Group 1	% Important or Very important Group 2
Finding time during work schedule	59.1	**68.4**[2]
Family commitments	44.2	53.6
Traveling away from work to take a course	41.9	45.1
Paying for the course	**72.8**[2]	**77.3**[1]
Length of time since being enrolled in school	23.2	20.4
Lack of agency support for time off	**64.3**[3]	59.0
Lack of supervisor support for time off	53.5	42.8
Lack of agency support for course fee	**77.3**[1]	**68.0**[3]
Topic I desire is not available	42.8	46.2

Table 24 lists the modes of training that respondents in both groups indicated they would be interested in using. Group 1 participants indicated most interest in training programs that are provided via the Internet, CD-ROM and video streaming (tied fro second), and interactive videoconferencing. Group 2 participants indicated the greatest interest in training programs that are offered by way of CD-ROM, interactive videoconferencing, and the Internet, for both groups in order of priority.

Table 24 Modes of Training

	Would like to see employed Group 1	Would like to see employed Group 2
Telephone conferencing	19.0	16.7
Audiotapes	16.5	11.2
Videotapes	19.0	20.0
Internet (on-line courses)	**27.8**[1]	**35.8**[3]
Classroom based or workshop program	24.1	34.0
Self-study books	22.8	26.5
Interactive videoconferencing (live video conferences during which you can communicate with the presenter)	**25.3**[3]	**37.2**[2]
Video satellite (one-way communication from presenter; able to e-mail or fax questions during the live broadcast	24.1	28.4
Video streaming (computer-based viewing that requires special media playing software, e.g., Realtime, Windows Media Player, etc.)	**26.6**[2]	30.7
CD-ROM (computer-based program performed at own pace)	**26.6**[2]	**37.7**[1]

Table 25 lists the proportion of employees who reported access to computers and selected software packages at work. These proportions represent the technology access *for those individuals who responded to the question*. Response rates for each question are given in columns 3 and 5 of Table 25. Responding employees in Groups 1 and 2 reported fairly equivalent access to a computer, the Internet, e-mail, and word processing and database software. These results suggest that the KDHE employees have high access to technology, but should take the response rates into consideration when interpreting the data.

Table 25 Technology Access

	% yes at work Group 1	% Responding to question Group 1	% yes at work Group 2	% Responding to question Group 2
A computer	93.8	40	100	72
Internet	93.5	39	100	72
Word processing	100	46	98.7	72
Database/spreadsheet	100	39	97.4	70
E-mail	96.6	37	99.3	71
Statistical analysis software	19.4	39	34.0	44

Summary

This report describes the results of the 2003 KDHE training needs assessment. It presents the findings from all respondents based on job groupings. The domain competency findings are ordered from most necessary for training to least necessary for training. Additionally, competencies found to have the greatest training needs are bolded and numbered. Findings from training motivators, barriers, modes of preference and access are also bolded and numbered. This information may be used to guide the training efforts of the KDHE for the two job groupings. However, the response rate should be considered when using this information to make decisions.