ASSESSMENT OF THE TRAINING AND CONTINUING EDUCATION NEEDS OF A REGIONAL PUBLIC HEALTH WORKFORCE

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Introduction

The Department of Health Education and Recreation (DHER) at a large Midwestern university received Council on Education for Public Health (CEPH) accreditation of its Masters of Public Health program in Community Health Education in 2011. The program is relatively small, enrolling cohorts of approximately 10 students each year. Workforce education and development is a required and important component of maintaining CEPH accreditation, but, as Demers (2011) points out, "meeting CEPH requirements presents a particular challenge to small Masters in Public Health (MPH) programs in higher education, which often have limited staff and resources" (p. 65).

CEPH outlines its requirements for workforce development in Section 3.3 of its *Public Health Programs Accreditation Criteria (*2011). The criteria states that "although the primary educational function of a public health program is the preparation of qualified professionals; a program should also address the needs of the large numbers of personnel engaged in public health practice without formal training and previously trained professionals who seek to maintain and advance their knowledge and skills" (p. 5). The CEPH accreditation materials go on to state that a periodic assessment of professional needs must be conducted, and trainings should be developed in various locations and formats. CEPH also stresses the importance of collaborating with other institutions and professionals in the community health education field to inform the needs assessment and to also "extend continuing education opportunities beyond the program's own market area" (CEPH, 2011, p. 5).

Administrators from CEPH-accredited MPH programs have an important role to play in building competencies among the public health workforce. But even beyond accreditation requirements, ensuring a skilled regional workforce should be a priority for academic institutions in an age where they are increasingly required to show how they contribute to outcomes.

This study chose to focuses both on broader public health training needs of the regional public health workforce as well as a more narrow set of competencies related to community health education training needs. Community health educators are the subset of the public health workforce which provides health education to the community. They are often referred to as "health educators" or "community health educators." They work in a variety of settings, including K-12 school districts, higher education, public health departments, and healthcare organizations. The public health workforce in the study region is well connected, with 7 community health coalitions bringing together all sectors of the public health workforce, including community health educators.

This study had three primary objectives: (1) to describe (both broadly and narrowly as mentioned above) the training and continuing education needs of the public health education workforce in the region in which DHER is located, (2) to determine preferred locations, length, and delivery format of trainings and continuing education, and (3) to develop recommendations for the provision of the training and continuing education needs identified through this research.

Background

The research literature examining the training needs of the public health workforce is extensive, especially post-September 11th (see Institute of Medicine, 2003; Chauvin, Anderson, & Bowdish, 2001; Gebbie & Turncock, 2006; Harrison, et al., 2005). A much smaller amount of the literature has focused specifically on the public health workforce's needs related to community health education. That small of body of literature is reviewed here and also informed the development of the study survey instrument (see Methods for more details).

Borders, Blakely, Quiram, & McLeroy (2006) surveyed the broader public health workforce in Texas using the 10 essential public health services as a framework for their survey instrument. Looking specifically at health educators' responses they found that the highest identified needs were: 1) evaluating effectiveness, accessibility, and quality of personal and population-based services, 2) informing, educating, and empowering people about health issues, 3) developing policies and plans that support individual and community health efforts, and 4) mobilizing community partnerships to identify and solve health problems.

Lindley, Wilson, & Dunn (2005) surveyed Kentucky's health education workforce. Like Borders et al.(2006), they also used the 10 essential public health services as a framework for their survey instrument. The survey sought to profile the workforce and to determine respondents' perceived level of mastery and desire for additional training in the core competencies listed as well as their preferred delivery format and time frame. Trainings interests included 1) using presentation software, 2) managing controversy, 3) formative program evaluation, and 4) using the Internet as an educational tool. Respondents preferred workshop series throughout the year or an annual workshop on concurrent days.

Allegrante, Moon, Auld, & Gebbie (2001) took a different approach to their examination of the continuing education needs of the "currently employed" health education workforce. They convened panels consisting of between 15 to 25 leading health education professionals to examine key issues, training needs, and action steps for further workforce development and quality assurance. Panels identified 8 broad areas of competency that were most needed: 1) advocacy, 2) business management and finance, 3) communication, 4) community health planning and development, coalition building and leadership, 5) computing and technology, 6) cultural competence, 7) evaluation, and 8) strategic planning.

Price, Akpanudo, Dake, & Telljohann (2004) surveyed a national sample of 500 health educators to assess their perceived continuing education needs and preferred modes of delivery. The survey framework was based on the National Commission for Health Education Credentialing's (NCHEC) graduate competencies for health educators and a comprehensive review of the literature on continuing education in health education and public health. Subcompetencies which were perceived by 25% of more of the public health educators as topic in which they needed considerably more training included 1) developing health education programs using social marketing, 2) developing and managing fiscal resources, 3) utilizing computerized health information retrieval systems

effectively, 4) analyzing and interpreting needs assessment data use of appropriate qualitative and quantitative research, and 5) developing and managing human resources.

Methods

Input from community-based stakeholders and basic survey methodology was employed in this three phase descriptive research study. The three phases included Phase One: Preparation, Phase Two: Data Collection, and Phase Three: Future Planning. Twenty-five public health departments and 7 community health coalitions in the region were selected as cluster samples. Institutional Review Board approval was received for this study.

PHASE ONE: PREPARATION

The final survey instrument was comprised of 28 questions, including, in order of appearance, 7 demographic questions, 1 question on public health priority topic areas, 16 questions on competency level and priority training areas aligned with community health education responsibilities, 3 questions on training length and format, and 1 optional open-ended response field. The survey was created using Google Forms software.

In order to develop a survey instrument with face and content validity a number of measures were used. During Phase One, researchers attended a meeting of the regional Southern Illinois Public Health Administrators Coalition (SIPHC) to introduce the study and solicit feedback to use in survey development. Along with this feedback, the first draft of the survey was also informed by the survey methodologies of the research studies outlined in our literature review. After a draft survey was created it was reviewed by the Chair of DHER. The final version of the survey integrated the Chair's suggestions, importantly the addition and exclusion of several topics in the public health priority question as well as changes to the survey layout to make it more user-friendly.

The 7 demographic questions were pared down from a larger list of demographic questions because SIPHC members stressed the importance of a brief survey. Additional demographic questions related to the number of years a respondent had been in the workforce or when they planned to retire may have been helpful in planning for future needs, but were not included in this survey in order to ensure brevity.

The survey question on public health priority topic areas was adapted from Zusevics, Gilmore, Jecklin and Swain (2009). In addition, the 16 questions related to competency level and priority training areas were modeled after Lindley et al. (2005) and Price et al., (2004) who also based their survey questions on the NCHEC competencies for health educators.

The final section of the survey asked the respondents to indicate their preferred time-frame, format and credit options for training and continuing education. The survey also provided an optional open-ended response field for additional comments.

PHASE TWO: DATA COLLECTION

In Phase Two, the survey was distributed to 25 public health administrators in the regional SIPHC and the 7 regional community health coalition leaders. Administrators and coalition leaders were sent an email which included a research request and survey link. They were asked to forward the survey to staff and coalition members. The survey was accessible for one month; two email prompts were sent to the leaders during the month and 3 of the coalitions received in-person prompts once during that month. Following the initial data collection, SIPHC members were asked to clarify top priorities from a data set of preliminary survey results.

PHASE THREE: FUTURE PLANNING

In Phase Three, the researchers compiled survey results into an executive summary and technical report which was shared with regional SIPHC members and coalition representatives via email or in-person during four coalition meetings. Networking was conducted with individuals who provide professional development for the public health workforce, including the statewide Public Health Institute. Follow-up emails were sent to several key contacts made during coalition meeting interactions, including personnel from a local community college and the regional agricultural extension office. Finally, results and recommendations for future trainings were presented to the Chair of DHER.

Results

Table 1 is a snapshot of the fifty-eight individuals who completed the survey (n=58). The majority worked in Illinois (93%), were neither a public health administrator nor a coalition representative (43%), 24% were Registered Nurses (RN) while 64% had a certification or credential that wasn't listed in the demographic question. The majority of respondents (72%) indicated that they worked on health education for less than 50% of their time in the past year.

Table 1: Demographic Characteristics of Survey Respondents

Demographic Characteristics	Response Options	% (n)
State of employment		
	Illinois	93 (54)
	Missouri	3 (2)
	Kentucky	3 (2)
Job title		
	Neither administrator NOR Coalition representative	43 (25)
	Coalition representative	26 (15)
	Public health administrator	19 (11)
	Public health administrator AND coalition representative	12 (7)
Current licensures, certifications or credentials		
	Registered Nurse (RN)	24 (14)
	Master of Public Health (MPH)	10 (6)
	Associates Degree in Nursing (AND)	5 (3)
	Certified Health Education Specialist (CHES)	5 (3)
	Master of Social Work (MSW)	5 (3)
	Licensed Practical Nurse (LPN)	2 (1)
	None	19 (11)
	Other	64 (37)
Percent of time spent doing health education during previous 12 months		
	0-24%	55 (32)
	25-49%	17 (10)
	50-74%	14 (8)
	75-100	14 (8)

Participants were then asked to identify their priority training needs in two different sets of questions: one related to public health topic areas and the other related to community health education competencies and skills. The list of 23 public health topics followed the demographic section. Chronic Diseases (52%), community-based planning and interventions (50%), special population's health (45%), health policy and administration and leadership (38%) and grant writing (34%) were the leading public health topic priority training areas respondents indicated for the next year (See Table 2).

Table 2: Training Needs by Public Health Topic

Public Health Topic	% of Respondents Identifying Training Need
Chronic disease	52
Community-based planning and intervention	50
Special population's health	45
Leadership	38
Health policy and administration	38
Grant writing	34
Public health administration and financial management	29
Public health law	28
Nutrition	26
Assessment	22
Advocacy	22
Computing and technology for public health	22
Cultural competence	19
Environmental health	17
Health literacy	16
Bioterrorism	10
Public health ethics	10
Geographic Information Systems (GIS)	10
Epidemiology	9
Health informatics	7
Research methodology	5
Biostatistics	3
None	2
Global health	0
Other	16

Following the survey question related to priority public health topical training needs, participants were asked to select priority training needs from 43 skills within eight public health education competencies. The results are displayed in Table 3. The skills with 40% or more of respondents indicating interest are indicated with an asterisk (*). Of note are skills with more than 50% of respondents indicating a need for training, those included: use social media (60%), plan evaluation design (55%), manage controversy (53%), promote cooperation between program personnel (53%), identify evaluation criteria (52%), and conduct social marketing activities (50%). Also of interest

is the number of skills above 40% which fall under the competency "Evaluate effectiveness, accessibility, quality of services."

Table 3: Percentage of Respondents Who Indicated Interest in Specific Priority Training Areas (Listed by Health Education Competency)

Competency: Monitor health status/investigate community health problems

Analyze health related behavior (43%)*
Use the Internet as a tool/access online resources (34%)
Identify data sources (33%)
Conduct needs assessment (29%)
Find health information (29%)
Set program priorities (28%)
Facilitate focus groups (26%)
None (19%)

Competency: Develop policies and plans

Write goals and objectives (48%)*
Write competitive grants (45%)*
Develop program plans (38%)
Identify funding sources (38%)
Budget development/management (36%)
Apply health education theory (29%)
Prepare for specific audiences (28%)
Assess resource availability (28%)
Design instructional programs (24%)
None (16%)

Competency: Inform, educator, empower

Use social media (60%)*
Apply coordinated school health programming (34%)
Apply ed. techniques across ages (34%)
Conduct formative program evaluation (31%)
Select effective materials (29%)
Use presentation software (26%)
Develop school lesson plans (17%)
Speak in public or group setting (16%)
Manage students/classrooms (10%)
None (10%)

Competency: Cultural competence

Apply multicultural understanding (48%)*
None (31%)
Serve low-literacy populations (34%)
Utilize Spanish language skills (24%)
Other (3%)

Competency: Mobilize community partnerships

Manage controversy (53%)*
Conduct social marketing activities (50%)*
Work with coalitions (43%)*
Recognize social/health values (36%)
Collaborate with public agencies (34%)
Facilitate groups/meetings (22%)
Foster provider/consumer communication (21%)
None (12%)

Competency: Link people to personal health services

Promote cooperation between program personnel (53%)*
Identify service gaps (43%)*
None (31%)
Other (0%)

Competency: Assure a competent workforce

Consult with other agencies (43%)*	None (34%)
Organize in-service training (41%)*	Other (0%)
Obtain continuing education (34%)	

Competency: Evaluate effectiveness, accessibility, quality of services

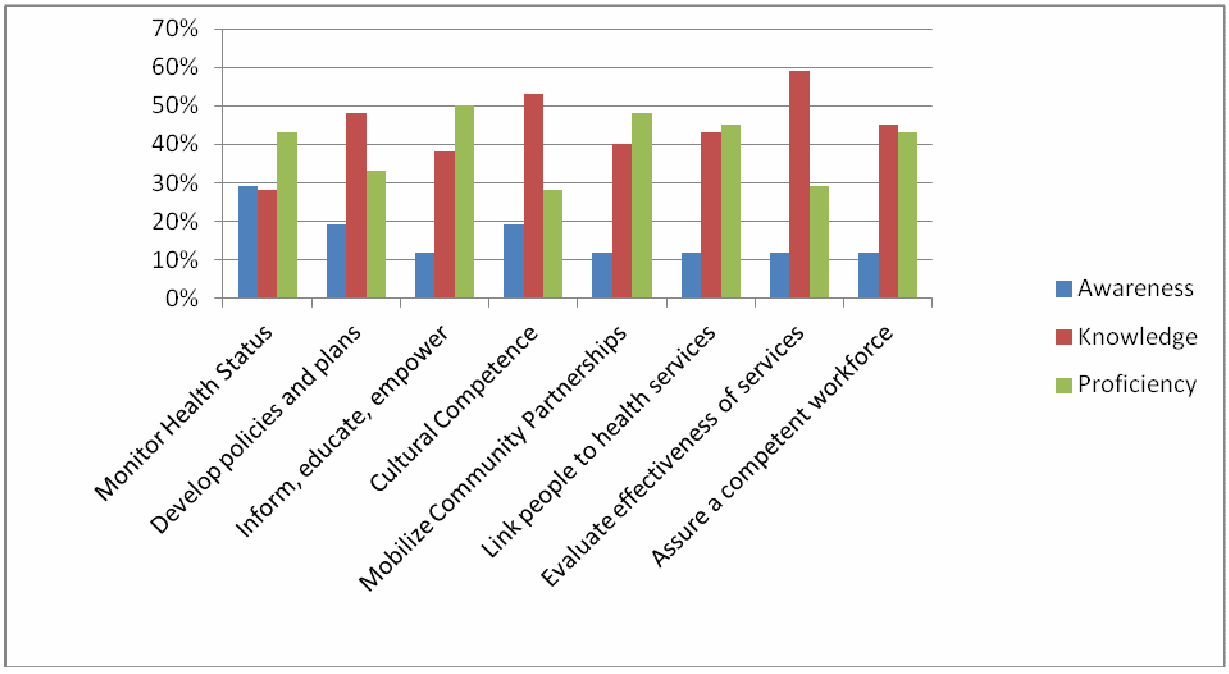
Plan evaluation design (55%)*	Implement evaluation results (43%)*
Identify evaluation criteria (52%)*	Use computer spreadsheets (41%)*
Data collection methods (47%)*	Report evaluation findings (38%)
Analyze evaluation data (47%)*	None (17%)

Participants were also asked to rate their perceived mastery of the eight competency categories on three levels: awareness (minimal familiarity with skills), knowledge (working understanding of how to apply the skills), or proficiency (ability to perform the skills). Within the eight competencies areas surveyed related to community health education (Table 4):

- Respondents had the ***highest level of perceived proficient mastery*** in "educate, inform and empower" (50%).
- Respondents had the ***lowest level of perceived proficient mastery*** in "cultural competence" (28%) and "evaluate effectiveness, accessibility, quality of services" (29%).

- Respondents had the ***greatest variance of perceived mastery*** in "monitor health status/investigate community health problems" (proficiency 43%, awareness only 29%).

Table 4: Respondents Perceived Level of Mastery of Community Health Competencies



In the final section of the survey, participants were asked to indicate their preference for format, time-frame and credit options of training and continuing education. Preferences for standard, off-site, face-to-face training sessions in a series of half or full day workshops for non-credit CEU's are highlighted in the results (See Table 5 through 7).

Table 5: Preferred Delivery Method

Delivery Method	% (n)
Standard face-to-face workshop or training session off-site (not at respondent's place of employment)	69 (40)
Standard face-to-face workshop or training session on-site	43 (25)
Self-directed training on the Internet (archived video or modules)	43 (25)
Interactive television or web-based video course broadcast to several sites	36 (21)
University course offered at a regional college (list college_____)	2 (1)
Other	3 (2)

Table 6: Preferred Time-Frame

Time-Frame	% (n)
A series of 1-3 hour topic-specific sessions provided regularly through the year	59 (34)
A series of 1-day topic-specific workshops provided at different times through the year	50 (29)
Self-paced (correspondence or web-based) topic-specific- less than 10 hours	38 (22)
An extended workshop of several concurrent dates annually	17(10)
Self-paced, (correspondence or web-based) topic-specific- 10-20 hours	9 (5)
A formal course taught on weekly basis (evenings or weekends)	2 (1)
other _____	0 (0)

Table 7: Preferred Credit Option

Credit Option	% (n)
Non-credit continuing education units (CEU's)	36 (62)
Graduate Credit	15 (26)
Non-credit continuing education contact hours (CHES)	11 (19)
None	8 (14)

Other	7 (12)
Undergraduate Credit	5 (9)

Discussion and Recommendations

Periodic needs assessments such as this study can assist CEPH accredited program in becoming an educational hub for their region's public health workforce. Such is the case, the results of this descriptive research study should be used by DHER to guide the building of a strong outreach and training program for the workforce. By specifically focusing on DHER's strengths in community health education, the department can capitalize on its already strong professional preparation program. Building professional development into its outreach efforts will ensure that DHER maintains highly connected to the practice of community health education. The results of this study also outline community partners with whom DHER could partner with to offer these training and continuing education opportunities. Other CEPH accredited programs should consider developing similar relationships in their efforts to provide outreach.

In the future, DHER researchers may wish to conduct a periodic follow-up survey (e.g., every 2 or 3 years) in order to get a clear picture of the current workforce's training needs. Specific recommendations for further research include adapting survey fields that include "check all that apply" to save respondents and researchers time as well as adding demographic fields related to education level and number of years employed in public health. Future research should also consider other options for generating a sample population to increase the number of respondents across all sectors of the public health workforce engaged in community health education.

DHER should offer training and continuing education related to the following 15 priority areas, with a focus on priority areas identified with an asterisk (* denotes emphasis given by public health department administrators during the follow-up feedback session):

1) Chronic disease (diabetes, obesity, heart disease, smoking and cancer)*
2) Community-based planning and intervention*
3) Health policy and administration*
4) Grant writing*
5) Planning evaluation design and identifying evaluation criteria*
6) Employing data collection methods and analyzing evaluation data*
7) Analyzing health related behavior*
8) Using social media
9) Managing controversy
10) Promoting cooperation between program personnel
11) Conducting social marketing activities
12) Applying multi-cultural understanding
13) Special population's health
14) Leadership
15) Writing goals and objectives

DHER should offer these trainings as face-to-face off site sessions (not at respondent's place of employment) in either half-day or full-day workshops with a series of several throughout the year with the option for non-credit CEU. DHER should also incorporate two half-day training sessions into its annual research symposium and offer CEU's and CHES contact hours for these sessions. Trainings should be marketed through the regional coalition members who participated in this study. DHER should also identify current departmental course offerings that align with priority training and continuing education needs as determined by this research and market those to the regional workforce. DHER should also develop a process by which to offer non-degree graduate credit for such courses and market the course offerings annually through these coalition members.

DHER should also consider including a link or web portal to "Public Health Workforce Training and Continuing Education" on its website in order to market educational opportunities to the regional community health workforce. DHER should also continue quarterly contact with the statewide Public Health Institute in order to stay informed of trainings they offer as well as opportunities to apply for funding to offer additional regional training independently and/or to co-sponsor a regional training. DHER should also work to leverage partnerships with key regional community agencies and groups through consistent DHER faculty and student involvement.

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