



## Short Communication

# Anticipating Change in the Preparation of Public Health Practitioners; A Study of Local Health Departments

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### Abstract

To evaluate current public health practice workforce skills and needs in Kansas, and to anticipate future public health practice training at the local and state levels, this study was conducted with Kansas public health practitioners. This study used surveys, interviews, and a thematic analysis to gather data from public health practitioners, including local health department and Extension employees, from nine Kansas counties regarding their perceptions of workforce skills and needs required and lacking for public health practice. We identified that the local public health practice workforce was lacking proficiencies such as managerial and financial skills, similar to national limitations. We also found that Kansas public health practitioners value skills of effective communication and collaboration more than the nationally identified financial management and systems thinking. Public health practitioners in Kansas identified anticipating change, adaptability, and flexibility as both required but lacking, indicating an important direction for practical public health training. These findings suggest that public health practitioners can use this study to plan for future workforce training at the local and state level.

**Keywords:** Workforce; Local health department; Extension; Public health practice

### Introduction

Public health practice constantly adapts, both locally and globally, to volatile and complex environments. This is not a unique situation, as public health practice has adapted to changing policy landscapes for several decades. Over the last two decades, efforts have focused on determining necessary skills for public health practice, and how academic preparation can contribute to the improvement of recruitment, development, and retention of public health practitioners [1,2]. The Public Health Workforce Interests and Needs Survey (PH WINS) provides a public data source for understanding the current state of the public health workforce in the United States (U.S.). Results from the PH WINS have been utilized to identify gaps, strengths, and opportunities for the public health workforce [3,4].

Nationally, the PH WINS has identified serious concerns in the LHD workforce. From the 2017 PH WINS survey, national training gaps included budgeting and financial management (55%), systems and strategic thinking (49%), developing visions for healthy communities (45%), change management (43%), cross-sectoral partnerships (38%), and effective communication (18%) [3-5]. Almost a fifth of the 26,533 LHD respondents to the PH WINS planned on leaving their organization for reasons outside of retirement. The majority of individuals who planned on leaving held nonsupervisory positions. The top three reasons for leaving were pay, lack of opportunities to advance in their jobs, and workplace environment, respectively. Skill gaps of practitioners were identified as tasks needed for daily work, but the individual has little to no ability in that skill. The two

greatest responses for lacking at least one skill were budget and financial management and system and strategic thinking. Excluding individuals in executive positions, over half of all LHD respondents listed a minimum of one skill gap in budget and financial management (this was the only skill gap to exceed 50% response) [6].

The Council on Linkages between Academia and Public Health Practice developed eight public health core competencies commonly used to evaluate the public health workforce [7]. However, results from workforce assessments are not always relevant for public health professionals in all regions or for all levels of the profession. While the PH WINS provides national results pertinent to the U.S., this project contributed to the current understanding of a local public health workforce in Kansas, a rural state with a decentralized public health system, as it relates to transferable skills and preparation of agile public health practitioners for a changing environment in public health practice.

Public health training and preparation of future workforce initiatives will require novel and transdisciplinary methods, learning from other industries, and anticipating change, which are of particular importance for a decentralized public health system such as that in Kansas [8-11]. This project examines local public health practice skills and gaps, to inform efforts to improve preparation for public health practice at the academic level [1].

### Methods

#### Study participants

The study population included public health practitioners

from local health departments (LHD) and Extension offices within nine counties in Kansas. The counties for this project were selected based on past internship locations for Kansas State University Public Health graduate students. Prospective participants were contacted via email and telephone calls. The study protocol was approved by the institutional review board (IRB#9802) of Kansas State University and informed consent was obtained for all participants.

An online survey was developed and distributed via Qualtrics to assess public health workforce needs, gaps, and skills based on past studies and the core competencies for public health professionals [3,7]. Sixteen skills were assessed for importance and their presence/absence in current practitioners. Face-to-face meetings were conducted with 26 public health practitioners to collect qualitative data not captured by surveys. Participants were asked what skills were needed to be successful in public health practice, and perceptions of important skills that were lacking.

### Data analysis

The written interview transcripts and notes were reviewed by the first and co-responding author immediately after the interviews were conducted and corrected to assure accuracy. The transcripts and notes were read again independently by all authors, and codes were assigned for qualitative analysis of thematic content, with themes related to public health workforce skills, skill gaps, and career preparation. To assure accurate coding of the data, the authors discussed and confirmed agreement for the identified recurring patterns and emerging themes. The corrected, typed transcripts and notes were entered into NVivo12 Plus software (QRS International LTD, 2018) to classify, sort and analyze the data. Five major themes were developed: effective

communication and collaboration, specialized skills, transferable skills, public health knowledge, and passion. Effective communication and collaboration, as a single major theme, was then divided into sub-themes.

### Outcomes

A total of 21 public health practitioners completed the survey, 16 staff members from LHDs and five agents from Extension offices. Participants identified communication, teamwork, problem solving, and adaptability/flexibility as major skills required in their fields. Participants identified foreign language proficiency and management skills as minor skills in their fields. Participants were asked to identify gaps in the identified skills they perceived to exist in their own agency, whether they had determined them to be major or minor skills. Foreign language proficiency was the only skill that was lacking in all agencies. Other skill gaps identified in a large percentage (>68.75%) of agencies included (from greatest to least); management, numerical, computer literacy, leadership, adaptability/flexibility, showing initiative, team working skills, and communication skills. The identification of communication, teamwork, and adaptability/flexibility as skills both lacking and required demonstrates a training opportunity for practicing strategic agility and anticipating change for Kansas public health.

Face-to-face interviews with 26 public health practitioners, including ten Extension agents and 16 LHD employees, identified skills most important for a successful public health practitioner. Most skills identified during interviews fit into five broad themes: passion, public health knowledge, specialized skills, transferable skills, and effective communication and collaboration (Table 1).

Theme	Findings	Frequency <sup>1</sup> (#/% <sup>2</sup> )
Communication and Collaboration <u>Sub-themes</u> General Communication Persuasive Communication Interprofessional Practice	Understanding of the interconnectedness of public health. Ability to communicate in an effective manner with others. The ability to work well with other agencies, other professionals, and specialties in order to reach a goal.	52 (26, 100%) 24 (12, 46%) 8 (4, 15%) 20 (10, 38%)
Specialized Skills	Public health skills required to be successful, typically learned through professional experience or training.	42 (18, 69%)
Transferable Skills	Talents, abilities, attributes and behaviors important for all successful practitioners.	37 (19, 73%)
Public Health Knowledge	Subject matter knowledge as it applies to a specific position in the field of public health.	19 (11, 42%)
Passion	The drive, desire, and attitude to make a difference in the lives of others through one's dedication to public health.	15 (8, 31%)

<sup>1</sup>Frequency was measured as how many separate times this skill was identified by interviewees; each interviewee identified at least one skill more than once.

<sup>2</sup>Number of Interviewees identifying specific skill and as a percentage of the total number of interviewees.

**Table 1:** Workforce Skills Identified from Interviews with Public Health Practitioners.

Effective communication and collaboration were identified by all public health practitioners as essential and overlapping skills in the field, as public health does not function through individual efforts. Due to the high

identification frequency of this theme, and overlapping explanations of communication and collaboration, this theme was further divided into sub-themes for more developed results, including the ability to effectively communicate with

others (46%), verbally persuasive communication skills (15%), and interprofessional practice (38%). Teamwork was described in the major theme of communication and collaboration as the ability to work well with other agencies in order to reach a goal, which has been defined in public health and other industries as an essential component of interprofessional practice. Skills were separated by public health practitioners into three major skills areas, including transferable skills, specialized skills, and knowledge. All of these themes were explained as essential to delivering quality work in a public health environment. A passion for public health was identified by eight public health practitioners. Other skills identified that did not align with the five major themes included adaptability/flexibility and leadership skills which are vital parts of practicing strategic agility and anticipating change, particularly for public health in an uncertain and complex environment.

## Discussion

Effective communication and collaboration have been identified as vital skills for public health practice [1,4]. The results from this study conducted with local public health practitioners indicate that communication and collaboration skills are highly valued and include abilities to communicate well and persuasively, and effectively engage in interprofessional practice. This was also reflected nationally where effective communication was considered a vital skill in the U.S. [3]. Other important skills for training and preparation of the public health workforce included public health knowledge, transferable and specialized skills [1]. The results of this survey of Kansas public health practitioners indicated that transferable and specialized skills are not as highly valued as effective communication but still valued highly. This is also reflected in multiple national surveys and studies, including the PH WINS [1,3,7].

One of the greatest current struggles in the public health sector is the mass exodus of employees, displayed by up to one-third of individuals surveyed in the 2017 PH WINS [2]. However, there are solutions, including innovative programs allowing for retired and veteran employees to stay involved with their respective health departments as consultants and trainers. Such a program would allow for retention of experienced employees and unique opportunities for employee mentorship and training. On-the-job training would allow for workforce development while sharing the cost burden of education with universities [2]. With an investment of resources into training and fellowship programs, future workforce losses may be prevented. Other studies have found that local health departments have better retention rates than state departments [7]. Based on this knowledge, the model of LHDs may be more sustainable for future employee retention. To ensure that employees are retained after training, health departments must also do more to make employees want to stay. Counseling and social support programs would ensure that employees are not overworked would ensure that employees feel more comfortable staying in their respective health departments. Public health education programs that require contact hours with a public health institution offer a unique opportunity for local health departments to influence

the education and training of public health students [4]. Contact hours via internships and externships allow students to learn vital skills that may not be taught by their public health classes. These experiences also allow students to impart institutional knowledge to their health department mentors and coworkers. Finally, public health bachelor's degrees could provide early training opportunities for students who wish to enter the public health workforce prior to obtaining a master's degree.

The impact of training gaps in smaller LHDs should not be overlooked. Surveys of health officials at big city health departments (BCHDs) in the U.S. indicated that top skill gaps included implementation of quality improvement, knowledge of political impacts on public health, and anticipation of change [9]. This may indicate a distinct difference in skillset between LHDs and BCHDs, which may require additional training when transitioning between departments of different sizes. One challenge to preparing professionals for the workforce is this potential difference in skill needs between LHDs and BCHDs. While LHDs notice skill gaps in policy and procedure knowledge, BCHDs have noted gaps in adaptability and knowledge of political systems [3,4]. This difference in expectations and needs may further complicate education to prepare professionals by creating additional skill areas for students to demonstrate mastery in prior to entering the workforce. A possible solution to broad requirements for different health department types would be a fellowship program designed to pair students with health departments that fit their interests [5]. Students would be able to learn essential skills for their desired career field while still fulfilling academic requirements [5].

Workforce development must be the first priority for strengthening of public health practice at the local level [5]. Enhanced partnerships with both traditional and non-traditional public health partners, with adequate state and federal funding, should combine on-the-job training with additional training during internships and academic preparation to narrow existing skill gaps. Indeed, globally, public health responds at the local level, but each can learn from practice in all regions [10].

Public health practitioners frequently deal with changing policy circumstances, therefore practicing strategic agility will help LHDs be flexible in dealing with change. Early in a public health career, this may involve reflecting upon how projects align to individual LHD objectives and being able to articulate that alignment. As a more senior public health practitioner or manager, being more directly responsible for long-term strategic planning and policy will require continued training and support in how to operate during volatile, uncertain, and complex environments.

The small sample size of this qualitative study limits the generalizability of the findings for other health departments. We also recognize the limited external validity of this study, and the need for future studies to be expanded to include more LHDs to determine if the findings of this study accurately reflect the needs of other LHDs in Kansas and regionally. This study was limited in scope, but it reflected the findings of the 2017 PH WINS and Kansas Public Health Workforce Assessment Report. More research should be conducted in other LHDs in order to examine the needs of health departments that may not qualify for the PH WINS.

Since effective communication was a major skill identified by all participants, effective and persuasive communication skills for public health students and early-career public health practitioners is essential. Furthermore, leadership, adaptability/flexibility, and interprofessional practice that was identified as major but lacking, should be strongly incorporated into academic training. This study illustrates that a community of collaboration is well established in Kansas between different public health entities and would benefit from innovative programs of practice.

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## Conflicts of Interest

The authors declare no conflict of interest.

## Ethical Approval

The study protocol was approved by the institutional review board (IRB#9802) of Kansas State University and informed consent was obtained for all participants.

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