VERSION 2.0 WORK IN PROGRESS:
Evidence Related to Public Health Workforce
November 2019

This document represents findings from a scan of the literature related to public health workforce-related activities by health departments. It is not meant to be an exhaustive search. If there are other resources on this topic of which you think PHAB should be aware, please contact Jessica Kronstadt at jkronstadt@phaboard.org.

Public Health Workforce Enumeration and Recruitment and Retention

One of the common subjects of research on workforce focuses on enumerating and classifying the public health workforce and describing turnover and workforce shortages.[1,2,3,4,5,6,7] According to 2017 data from state and Big Cities Health Coalition health departments, nearly half of the current workforce intend to leave their organization within the next 5 years; 22% due to retirement, and 25% for other reasons. The most common reasons cited for leaving are: inadequate pay (46%) and lack of advancement (40%).[8]

Findings like these have prompted many to call on health departments to prioritize comprehensive recruitment, retention, and succession planning efforts.[8,9] Despite this, studies have found that many health departments do not consider a full range of potential recruitment strategies and few have formal succession planning processes.[10,11] To the extent that health departments are engaging in activities to promote leadership development, successful strategies include: performance evaluation, leadership training, mentoring, stretch assignments, and periodic job rotations/cross-division training and opportunities.[10]

Various studies have sought to understand the reasons behind worker shortages and some have pointed to the salary gap between governmental and public health sector jobs.[8,12,13] Others have focused on the drivers of employee engagement. For example, analysis of PH WINS 2017 data from state health agency central offices found that while respondents generally agreed with statements about employee engagement measures, less than half agreed that "creativity and innovation are rewarded" and that "communication between senior leadership and employees is good." These findings are significant, because another analysis revealed that respondents who consider that creativity and innovation are rewarded were more likely to have higher job and organization satisfaction and less likely to report intent to leave their jobs.[14]

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These are areas where health departments can take action to improve. For example, the Boston Public Health Coalition used a PDCA cycle to address poor communication between leaders and employees and saw an improvement in their survey results related to satisfaction between 2014 and 2017.[15] Studies have also pointed to the need for a diverse and representative workforce to serve the public, and the necessity for leadership to cultivate that.[8]

Knowledge, Competencies, and Training

Understanding the gaps in public health workforce knowledge and competences[16] is another focus for research. For example, one study found that the fact that only 17% of state public health workers have a degree in public health, "demonstrate(s) a need for on-the-job-training and distance learning options for the public health workforce."[17] Another noted that even MPH graduates were "underprepared" for some aspects of their jobs, including quantitative data analysis, scientific writing, and management.[18] A recent study using the PH WINS 2017 data found that having a public health degree translated to lower odds of reporting a competency gap for 8 of 22 skills for employees in nonsupervisory roles.[19] This benefit of a public health degree decreased as employees moved into higher levels of management. At the supervisory/manager level, having a public health degree was associated with a reduced likelihood of having a skill gap among only 3 of 22 skills. At the leadership level, having a public health degree was not associated with a reduced likelihood of reporting any skill gap.

Other skill gaps that have been documented in the literature include:

- Budgeting /financial management;[20]
- Systems/strategic thinking;[20]
- Influencing policy;[21]
- Syndromic surveillance;[22] and
- Community design.[23]

The need for leadership competencies has also been noted.[24] One study recommended that "Leadership development initiatives should engage students at various levels and be practice-based, process focused, interdisciplinary, diversity based, adaptive, experimental, innovative, and empowering, and they should encourage authenticity."[25(ppS64)]

To help articulate the needed skills, there are a number of competencies sets that have been developed or are under development, including the Core Competencies for Public Health Professionals,[26] legal competencies,[27] public health preparedness and response competencies,[28] and competencies for CDC project officers.[29]

Outcomes Associated with Workforce Development Efforts

A 2012 systematic review found a lack of empirical studies about the association between public health workforce characteristics and effectiveness and population health outcomes.[30] The review found one study that noted increases in staffing were associated with decreases in cardiovascular disease mortality, but not other health outcomes.[31] However, workforce development has grown as an area of focus. As the public health field recognizes that as community health needs change, so must workforce training and competencies. "An empowered, satisfied, diverse, competitively compensated, well-trained workforce is arguably the key element that can enable agencies to drive improvements in health outcomes."[8]

Several recent studies have looked at the link between workforce development efforts and job satisfaction and retention in public health:

- In a survey of state health department employees, the item "supervisors/team leaders in my work unit support employee development" was associated with the highest mean Job in General Scale job satisfaction score among the supervisory support options. In multi-variate regression the Organizational Support Index (which includes several workforce development items including: employees have sufficient training to fully utilize technology needed for their work; my training needs are assessed) was associated with greater job satisfaction.[32]
- Among state health department employees, support for employee development is associated with higher job satisfaction, which in turn is associated with less intent to leave.[33]

Evaluations of specific training programs have found increases in self-reported competencies or knowledge. As examples:

- One study found that availability of evidence-based decision-making competencies increased more among participants of a training program than a control group. In addition, in a follow-up survey almost half the participants indicated that their agency had increased its used of evidence-based decision making.[34]
- A comparison of pre- and post-test data showed increases in knowledge following a workshop on community health assessments and data use. Furthermore, an evaluation administered nine months later showed more than 80% of participants had shared data with local health department staff and community health councils, and half had shared with hospitals.[35]
- Participants in the Linking Education and Practice for Excellence in Public Health Nursing Project had higher increases in perceived competencies over time than those who did not participate in the domains of linking, policy and planning, evaluating, and ensuring workforce.[36]
- Participants in the Great Plains Public Health Training Center's field placement program self-reported increases in three competency domains: policy development and program planning, communication skills, and community dimensions of practice.[37]

In addition, one study found that higher scores on a training environment index were associated with higher perceived business competencies.[38] A comparative case study noted that local health departments that were considered "high-capacity" reported better access to training than health departments deemed as low-capacity.[39]

Additional studies have explored:

- Workforce needs assessments, in particular, one study "found it important to seek input from all organizational levels, including frontline staff members, whose input ensured language and reading levels were appropriate."[40(pp20S)]
- Various components of workforce development plans and approaches;[41,42,43]
- Succession planning;[44]
- Formal training of public health graduates available to the workplace;[45]
- Projections for the retirement and loss of substantial numbers of senior leaders;[46]
- Training motivations, specifically personal growth as a key training motivator;[47]
- Effectiveness of workforce wellness programs;[48] and
- Incorporation of distance learning opportunities.[49,50]

Studies about Workforce and Accreditation

The inclusion of standards related to workforce in the PHAB Standards & Measures makes it likely that additional information about the public health workforce will be forthcoming.[51] For example,

one study looked at how accredited health departments are demonstrating conformity with accreditation measures related to workforce and identified common opportunities for improvement. [52]

In addition, analysis of the PH WINS survey of health department employees found a few areas where staff at accredited health departments indicated greater familiarity with several concepts, including QI for both state and local employees and health in all policies among state employees.[53]

An analysis of data from the 2014 Public Health Workforce Interests and Needs Survey found that employees of local health departments that were engaged in accreditation reported higher levels of job satisfaction than those who were not.[54] This finding is consistent with the evaluation of the PHAB beta test that found that the 30 participating health departments reported an increase in staff morale.[55] Several case studies highlight the effect that accreditation has in boosting staff pride[56] and removing silos and increasing collaboration within agencies.[57]
While the 2017 PH WINS data did not replicate that result, it also found no significant differences in burnout or intention to leave across accreditation status after controlling for individual and agency characteristics—thus debunking a concern that the pursuing accreditation would be seen as a burden.[53]

Evaluation data also points to the link between accreditation and workforce. In response to an evaluation survey sent to health departments one year after they were accredited,

- 90% reported that accreditation has improved their health department's ability to identify and address gaps in employee training and workforce development; and
- 75% reported that as a result of being accredited, they expanded staff training (written communication with M. Heffernan, April 9, 2019).

One commentary observed that accreditation has "jump-started" public health workforce development and noted the rise in the number of public health workers taking course related to Core Competencies for Public Health Professionals, among other topics.[58]

Interviews with several state health departments revealed that accreditation has helped drive the implementation of workforce development plans.[41] Similarly, one local health department described how accreditation prompted the agency to conduct an employee satisfaction survey and develop a plan to address the concerns that arose from the survey responses.[59] Another described how both staff and leadership felt that undergoing accreditation helped them to assess their workforce needs to plan for the future of public health.[10]

Furthermore, "accreditation is a driver for both academic programs and health agencies to develop formal affiliations."[60(pp295)] Indeed, there are some examples about how academic HDs have helped HDs prepare for accreditation.[61,62,63] Several studies have quantified the economic impact of forming these formal collaborations, or academic health departments,[64] while others have sought to characterize these academic-practice collaborations.[65,66]

A review of the workforce requirements in Version 1.0 of the Standards and Measures acknowledged the role of the accreditation standards in emphasizing the importance of workforce and recommended potential improvements, particularly around the strategic nature of workforce development planning and the need for references to workforce throughout the Standards and Measures.[67]

There have been several suggestions for the workforce requirements in PHAB, including:

- Asking health departments to include workforce goals and objectives in their workforce development plans and to report on progress towards those goals in their Annual Reports.[68]
- Using PH WINS data to develop system-wide workforce goals (e.g., focusing on innovation, improving retention rates, addressing identified training goals) and asking health departments to consider the national goals in their workforce development efforts. As Castrucci and Fraser explain, "This could be in addition to what is currently required providing a needed balance between national engagement and health department customization. Identifying and advancing specific national workforce development needs through PHAB brings consensus standards and some degree of uniformity and direction to workforce development efforts by moving multiple health departments in an aligned direction."[69(ppS185-S186)]

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