

Perceptions Regarding Importance and Skill at Policy Development Among Public Health Staff

Brian C. Castrucci, MA; Jonathon P. Leider, PhD; Katie Sellers, DrPH, CPH

Context: Policy development is recognized as a core function of public health and a core competency in formal public health education. However, relatively little is known nationally about worker perceptions and competencies related to policy development in the governmental public health workforce. **Objective:** To characterize perceived importance and presence or absence of competency gaps related to policy development. **Design:** As part of the Public Health Workforce Interests and Needs Survey (PH WINS), a nationally representative stratified sample of permanently employed state health agency (SHA) central office staff was created. Descriptive and inferential analyses examined correlates of perceived importance and competency gaps related to policy development. Setting and **Participants:** Permanently employed central office employees of SHAs. Main Outcome Measure: Analyses focus on 2 self-reported measures of perceived importance and ability related to policy development skills, as well as awareness and perceptions regarding Health in All Policies (HiAP). **Results:** Seventy-two percent of SHA central office staff (95% confidence interval, 71-73) indicated "influencing policy development" was somewhat or very important to their day-to-day work. Among that group, 35% (95% confidence interval, 34-36) reported that they were unable to perform this or they considered themselves to be a beginner at this skill. Approximately three-fourths of staff indicated "understanding the relationship between a new policy and many types of public health problems" was somewhat or very important, and 30% of those who did said they were unable to perform this skill or were a beginner at it. Nationally, one-half of staff have not heard of HiAP. Among those who have, 86% indicated it was somewhat or very important to public health, and 41% reported they would like to see more emphasis on

J Public Health Management Practice, 2015, 21(6 Supp), S141–S150 Copyright © 2015 Wolters Kluwer Health, Inc. All rights reserved.

HiAP. **Conclusions:** Workforce development, both formal education and on-the-job training, may benefit from placing a greater emphasis on the development of policy skills. HiAP is an important approach to policy development.

KEY WORDS: policy development, policy needs, Public Health Workforce Interests and Needs Survey (PH WINS), training needs, workforce development

There is increasing recognition that health is shaped not only by individual behavioral choices and access to medical care but also by social and environmental factors.¹ Public policy can change the environmental context to make healthy options the default choice for all people within a specified political unit (city, county, etc). Recent public health policy initiatives include the national movements for clean indoor air policy,²⁻⁴ policy change to encourage physical activity,⁵⁻⁸ elimination of trans fats,⁹ policy supporting the right to breast-feed in public,¹⁰⁻¹² and requirements for newborn screening.¹³⁻¹⁵ Beyond health policies, evidence suggests land use policy,¹⁶ zoning ordinances and licensing requirements,^{17,18} transportation policies,¹⁹⁻²¹ and housing policies,^{22,23} among others,

Author Affiliations: de Beaumont Foundation, Bethesda, Maryland (Mr Castrucci and Dr Leider); and Association of State and Territorial Health Officials, Arlington, Virginia (Dr Sellers).

The Public Health Workforce Interests and Needs Survey (PH WINS) was funded by the de Beaumont Foundation and the Association of State and Territorial Health Officials acknowledge Brenda Joly, Carolyn Leep, Vicki Pineau, Lin Liu, Michael Meit, the PH WINS technical expert panel, and state and local health department staff for their contributions to the PH WINS.

The authors declare no conflicts of interest.

This is an open-access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives 3.0 License, where it is permissible to download and share the work provided it is properly cited. The work cannot be changed in any way or used commercially.

Correspondence: Jonathon P. Leider, PhD, de Beaumont Foundation, 7501 Wisconsin Ave, Ste 1310E, Bethesda, MD 20814 (leider@gmail.com).

DOI: 10.1097/PHH.0000000000000324

all contribute to population health. This broader view of understanding health in and across many types of policy spheres was formalized by the World Health Organization in 1996.^{24,25} By 2006, an approach known as "Health in All Policies" (HiAP) had gained significant momentum in the United States and internationally. HiAP is defined as

an approach to public policies across sectors that systematically takes into account the health and health systems implications of decisions, seeks synergies, and avoids harmful health impacts, in order to improve population health and health equity It emphasizes the consequences of public policies on health determinants, and aims to improve the accountability of policy-makers for health impacts at all levels of policy-making.26

HiAP has become a focal strategy to address the impact of the social determinants of health throughout the United States. 24,27,28

The importance of policy development for public health is reflected in its inclusion as a core public health function and associated essential services.²⁹ The 10 "greatest public health achievements" as identified by the Centers for Disease Control and Prevention were heavily influenced by policy change—for example, seat belt laws, water fluoridation, and workplace safety policies.³⁰ Policy development is also a domain in the Core Competencies for Public Health Professionals (Core Competencies) as developed by the Council on Linkages Between Academia and Public Health Practice (Council on Linkages).31 Several studies have addressed policy activity at the health department level³²⁻³⁴ or assessed policy development as part of a broader assessment of the Core Competencies.³⁵ However, despite the importance of policy development to public health practice, there are few studies that assess the readiness of the state governmental public health workforce to provide these essential services. Furthermore, while interest in the HiAP approach may be growing nationally among public health leaders as well as leaders from other fields, resonance among the state governmental public health workforce is, at present, unclear.

This is the first nationally representative study to document existing competency gaps for policy development among state health agency employees—this represents a critical competency for the current and future state governmental public health workforce. Using data from the Public Health Workforce Interests and Needs Survey (PH WINS), this study explores the perceived ability of state governmental public health staff to influence policy development and the uptake and resonance of the HiAP approach among the state governmental public health workforce.

Methods

PH WINS was conceived and developed in 2013 and fielded in fall 2014. This process has been described elsewhere in this supplement.^{36,37} The instrument was developed under the guidance of a 30-member technical expert panel along 4 domains: training needs, workplace environment, perceptions of national trends and initiatives, and demographics. The training needs related to the core competencies, developed by the Council on Linkages, 31,37 and most other items in the instrument were drawn from previous surveys and/or validated questions.37 The instrument underwent cognitive interviewing, as well as pretesting with 3 groups of public health practitioners at state and local levels. This project received a determination of "exempt" from the Chesapeake institutional review board (Pro00009674).

This article draws on the nationally representative frame of permanently employed central office state health agency (SHA) staff.³⁷ This frame of PH WINS was designed as a sample survey, stratified by 5 (paired HHS) regions. Thirty-seven SHAs agreed to participate. Approximately 25 000 central office employees of a population of 42 000 in the country were invited to participate in a 15-minute, Web-based survey administered through Qualtrics (Qualtrics, LLC, Provo, Utah). This frame of PH WINS achieved a 46% response rate, after accounting for undeliverable e-mail addresses and staff who had left their position.³⁶ Balanced repeated replication weights were used to account for complex sampling.36

Analysis in this article draws heavily on 3 specific questions from the PH WINS instrument, as well as demographic information. The first questions relate to perceptions of the importance of 2 policy-related skills to one's day-to-day work, as well as a self-reported ability to perform that skill (or not). These skills are "influencing policy development" and "understanding the relationship between a new policy and many types of public health problems." Response options were dichotomized to "not important" combined with "somewhat unimportant" and "somewhat important" combined with "very important." Among those who rated the item as somewhat/very important, a "competency gap" was identified if respondents also indicated they were "unable to perform" or were a "beginner" at the skill, as opposed to those with a self-reported rating of "proficient" or "expert" in that competency. Respondents to PH WINS were asked to answer several questions related to national trends in public health. One such trend was "Health in All Policies," which was defined in the survey instrument as "a collaborative approach that considers health as a factor when making policy decisions about sectors such as education, housing, transportation, and neighborhood

safety to improve the health of all communities and people" (adapted from the World Health Organization definition).^{24,26} Respondents were asked to first indicate their level of familiarity with HiAP; those who had heard of it were asked to rate its importance to public health, its impact on their day-to-day work, and whether they thought more, less, or the same amount of emphasis ought to be placed on it in the future.

A logistic regression was performed to examine the correlates of those who self-rated competency proficiency or expertise in "understanding the relationship between a new policy and multiple public health programs." As explicated earlier, "having the policy competency" was constructed from respondents who both felt a particular skill was somewhat/very important to their day-to-day work and felt they were proficient or expert at it. Independent variables included how much the respondent had heard of HiAP, as well as self-reported highest level of educational attainment, program areas as classified by the Foundational Public Health Services,* job classification,† organiza-

*These items were collapsed from a list of program areas respondents were asked to select as best representative of their position. This includes Chronic Disease and Injury—Health Promotion/Wellness, Injury, Noncommunicable Disease; Communicable Disease—Communicable Disease—HIV, Communicable Disease—STD (sexually transmitted disease), Communicable Disease—TB (Tuberculosis); Environmental Health—Animal Control, Environmental Health; Maternal and Child Health-Maternal and Child Health, Maternal and Child Health-WIC; All Hazards-Emergency Preparedness; Assessment—Community Health Assessment/Planning, Epidemiology Surveillance, Medical Examiner; Communications—Health Education; Organizational Competencies—Administration/Administrative Support, Program Evaluation, Training/Workforce Development; Other-Global Health, I work equally in multiple programs, Other Program Area (specify); Other Health Care-Clinical Services-Immunizations, Clinical Services (excluding TB, STD, family planning), Mental Health.

[†]These items were collapsed from a list of job classifications respondents were asked to select as best representative of their position. This includes Administration and Business Support—Accountant/Fiscal, Clerical Personnel (Administrative Assistant, Secretary), Custodian, Grant and Contracts Specialist, Health Officer, Human Resources Personnel, Information Technology Specialist, Other Facilities/Operations worker, Public Health Agency Director, Public Information Specialist; Clinical and Laboratory and Behavioral Health Professional, Community Health Worker, Home Health Worker, Laboratory Aide/Assistant, Laboratory Developmental Scientist, Laboratory Scientist (Manager, Supervisor), Laboratory Scientist/Medical Technologist, Laboratory Technician, Licensed Practical/Vocational Nurse, Medical Examiner, Nutritionist, Other Oral Health Professional, Other Physician, Other Registered Nurse—Clinical Services, Other Veterinarian, Physician Assistant, Public Health Dentist, Public Health/Preventative Medicine Physician, Registered Nurse-Community Health Nurse, Registered Nurse-Unspecified; Public Health Science and Anitional support for training, and supervisory status.[‡] The model also controlled for state-level effects with a state dummy variable.

Results

Approximately 10250 permanently employed SHA central office staff responded to PH WINS. Most staff were women (72%; 95% confidence interval [CI], 70-73) and non-Hispanic white (70%; 95% CI, 69-71). The majority of respondents also held at least a bachelor's degree (75.5%; 95% CI, 74-77) and were nonsupervisors (51%; 95% CI, 50-53). The majority of staff were older than 48 years and had worked in their position for 6.4 years on average (95% CI, 6.2-6.6). Detailed demographics of these staff are detailed elsewhere in this supplement.36

Influencing and understanding policy development

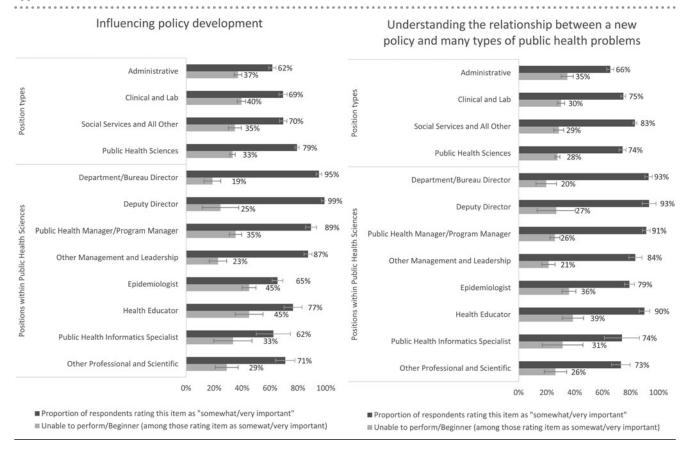
Overall, 72% of staff said "influencing policy development" was somewhat or very important in their dayto-day work (95% CI, 71-73). Among those staff rating it somewhat/very important, 35% said they were unable to perform/beginner at it (95% CI, 34-36). Similarly, 75% of staff said "understanding the relationship between a new policy and many types of public health problems" was somewhat or very important to their day-to-day work. Among those staff, 30% (95% CI, 28-31) said they were unable to perform or a beginner at this skill.

Staff in the Public Health Sciences more frequently perceived "influencing policy development" as somewhat/very important in their work compared with other position types (P < .001 in all comparisons except Public Health Sciences to Social Services and All Other, P = .096) (Figure 1). Competency gaps for this

mal Control Worker, Behavioral Health Professional, Department/Bureau Director, Deputy Director, Engineer, Environmentalist, Epidemiologist, Health Educator, Other Management and Leadership, Other Professional and Scientific, Program Director, Public Health Manager/Program Manager, Public Health Veterinarian, Public Health Informatics Specialist, Sanitarian/Inspector, Technician, Statistician, Student—Professional and Scientific; Social Services and All Other and Social Services Counselor, Social Worker, Other.

[‡]Nonsupervisors were defined as those who did not supervise other employees. All other employees were supervisory. Supervisory classifications includes team leaders (provide employees with day-to-day guidance in work projects but do not have official supervisory responsibility or conduct performance appraisals), supervisors (provide employees' performance appraisals and approval of their leave, but you do not supervise other supervisors), managers (supervise ≥1 supervisors), and executive (member of senior executive service or equivalent).

FIGURE 1 • Staff Perception About Importance of and Self-Reported Ability Related to Policy-Related Skills, by Position



item were not statistically significantly different across the major position types.

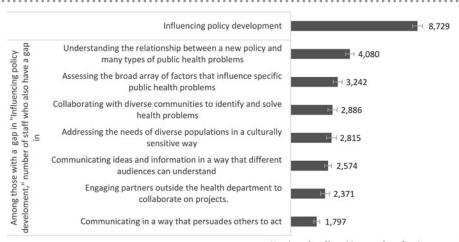
While the vast majority of directors and program managers felt influencing policy development was somewhat/very important (≥89%), other positions had lower proportions of staff rating the item as somewhat/very important in their day-to-day work (Figure 1). This includes epidemiologists (65%), statisticians (58% data not shown), and technicians (46% data not shown). Perceived importance and ability were similar for the skill "understanding the relationship between a new policy and many types of public health problems." Social Services and All Other had the highest perceived importance, about 10 percentage points higher than Public Health Sciences or Clinical and Laboratory Sciences positions. Within the Public Health Sciences, the vast majority of position types rated this item as somewhat/very important to their work. However, between one-fifth and one-half of staff, depending on position type, felt they were unable to perform or a beginner at it.

Nationwide, 12700 staff are estimated to have competency gaps in one or both of the 2 policy-related skills (95% CI, 12245-13149). This includes more than 6400 nonsupervisors (95% CI, 6064-6746), 1900 team leaders (95% CI, 1675-2130), 2400 supervisors (95% CI, 2176-2622), and 352 executives (95% CI, 238-467). These competency gaps are largely distributed evenly geographically, with the exception of the South, which has a larger population than the other regions.³⁶ Overall, approximately 2200 staff in the New England and Atlantic (HHS regions 1 and 2), 2250 in the Mid-Atlantic and Great Lakes (HHS regions 3 and 5), 4300 in the South (HHS regions 4 and 6), 1900 in the Mountain/Midwest regions (HHS regions 7 and 8), and 2000 staff in the West (HHS regions 9 and 10) are estimated to have at least one of the policy-related competency gaps. A related analysis shows that several thousand staff have gaps both in "influencing policy development" and several complementary or synergistic skills, such as communicating persuasively, engaging outside partners, and working with diverse populations (Figure 2).

Awareness and importance of HiAP

Beyond ascertaining perceived importance and ability related to 2 policy-related skills, PH WINS also asked several questions related to national trends and

FIGURE 2 • Estimated Number of State Health Agency Central Office Staff Who Are Unable to Perform/Beginner in Policy-Related Skills Among Those Who Indicate the Skill Is Somewhat/Very Important in Their Day-to-Day Work, by **Paired HHS Region**



Number of staff unable to perform/beginner at a skill that is somewhat/very important to their day-to-day work

initiatives, one of which was HiAP. Overall, about 48% of staff nationally are estimated to have not heard of HiAP at all (95% CI, 47-49). Of those who had heard of it, 86% indicated it was somewhat/very important for public health (95% CI, 85-87), 46% said it would impact their day-to-day work a "fair amount" or a "great deal" (95% CI, 45-48), and 41% said there should be more emphasis on it in the future.

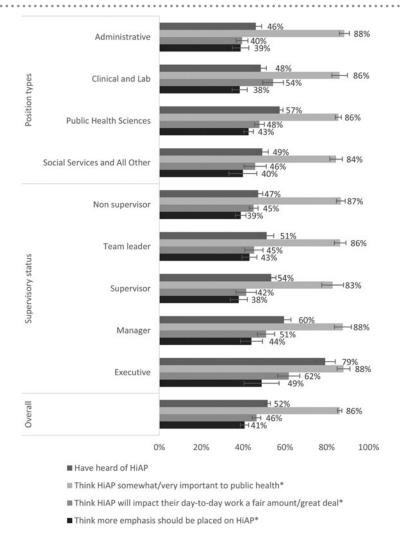
The majority of nonsupervisors had not heard about HiAP (52%; 95% CI, 50-55) compared with 21% of executives (95% CI, 16-26) (Figure 3). Among those who had heard about HiAP, there were no statistically significant differences around perceived importance of HiAP to public health between respondents who were supervisors and those who were not. Managers (51%; 95% CI, 47-55) and executives (62%; 95% CI, 56-67) were most likely to report HiAP impacting their day-to-day work a fair amount/great deal.

Table 1 shows results from a cross-tabulation of HiAP questions and self-reported skills from the conceptually related "understanding the relationship between a new policy and many types of public health problems." One-half of staff who identified a competency gap in this area reported never having heard of the concept HiAP compared with 37% of those rating themselves proficient/expert in the policy skill (P < .001). Similarly, 85% of those with a competency gap indicated HiAP was somewhat/very important to public health compared with 88% of those rating themselves as proficient/experts (P = .0026). Of note, more staff who rated themselves as proficient/expert said HiAP was "very important" to public health compared with those who rated as unable to perform/beginner (42% vs 36%).

Approximately 63% of staff with the policy competency gap said they thought HiAP would impact their day-to-day work "not at all" or "not very much" compared with 45% of staff without the competency gap (P < .001). Approximately 36% of staff with the competency gap and 45% of staff without it said they think there should be more emphasis on HiAP in the future (*P*= .016).

A logistic regression was conducted with dependent variable as both rating "understanding the relationship between a new policy and many types of public health problems" somewhat/very important in one's day-to-day work and rating oneself as proficient/expert in it (ie, no competency gap). Independent variables included familiarity with HiAP, educational attainment, program area under the Foundational Public Health Services model, organizational support for training, and supervisory status. The model also controlled for state-level effects (data not shown). Greater familiarity with HiAP was associated with greater odds of having the policy competency in "understanding the relationship between a new policy and many types of public health problems." Staff with the most familiarity had 160% greater odds of having the policy competency (OR = 2.5; 95% CI, 1.9-3.6) compared with those who had not heard anything about HiAP (Table 2). Higher educational attainment and supervisory status were also associated with greater odds of having the identified policy competency. Staff who indicated that continuing education was required or that their organization had staff positions responsible for internal training had greater odds of having the identified competency compared with staff who indicated their organization did not have these assets.

FIGURE 3 Awareness and Perceptions of Health in All Policies, by Position Type and Supervisory Status



Including education and training objectives in performance reviews was not statistically significantly associated with greater or lesser odds of having the competency. Compared with Chronic Disease and Injury, staff in Environmental Health, Maternal and Child Health, Communications, and All Other had greater odds of having the competency, all else equal.

Discussion

The release of the Ten Essential Services of Public Health in 1994 established policy development as a core function of public health.²⁹ In 2003, the Institute of Medicine, now the National Academy of Medicine, recommended that every public health agency create comprehensive public health policies.³⁸ The Council on Linkages identified policy making as an essential tool to improve the health of the population.³¹ Yet,

several studies have highlighted the continued need for increased policy action in state and local health departments³²⁻³⁴ and the need for public health departments to increase their engagement in this area.³⁹⁻⁴¹

In this first nationally representative assessment of perceived importance and ability in policy development, Public Health Sciences leaders in the governmental workforce recognized the importance of influencing policy development and understanding the relationship between a new policy and many types of public health problems. However, despite the importance ascribed by those leaders, their staff reported significant competency gaps. PH WINS finds that while there is awareness across disciplines, skills are uneven. For example, more than half of all epidemiologists who recognized the importance of influencing policy development reported their proficiency to be at the unable to perform or beginner level. Given these gaps, competency in policy development as a core function of the

TABLE 1 • Familiarity With and Perceptions Regarding Health in all Policies, by Self-Reported Level of Skill in "Understanding the Relationship Between a New Policy and Many Types of Public Health Problems"

How much, if anything, have you heard about the following trend in public health- Health in all Policies?

| | Unable to perform/Beginner | Proficient/Expert | Total |
|--|--|----------------------------|---------------|
| Nothing at | 56% (55%-58%) | 37% (36%-39%) | 48% (47%-50%) |
| Not much | 23% (22%-24%) | 24% (23%-26%) | 23% (22%-24%) |
| A little | 15% (14%-16%) | 23% (22%-25%) | 18% (17%-20%) |
| A lot | 6% (5%-7%) | 15% (14%-16%) | 10% (9%-11%) |
| How important are the following area | as to public health-Health in all Policies?* | | |
| Not important | 6% (4%-7%) | 4% (3%-5%) | 5% (4%-6%) |
| Somewhat unimportant | 11% (9%-13%) | 8% (6%-10%) | 9% (8%-10%) |
| Somewhat important | 48% (45%-51%) | 46% (43%-49%) | 47% (45%-49%) |
| Very important | 36% (33%-39%) | 42% (39%-45%) | 39% (36%-42%) |
| To what extent will each of the follow | wing areas impact your day-to-day work-Health in a | Il Policies?* | |
| Not at all | 26% (24%-28%) | 11% (10%-12%) | 18% (17%-19%) |
| Not too much | 37% (34%-40%) | 34% (32%-37%) | 36% (34%-38%) |
| Impact fair amount | 27% (25%-30%) | 35% (33%-38%) | 31% (30%-33%) |
| Impact a great deal | 10% (9%-12%) | 19% (18%-21%) | 15% (14%-16%) |
| In your opinion, how much emphasis | s should there be on the following areas in the future | e-Health in all Policies?* | |
| Less emphasis | 4% (3%-7%) | 3% (2%-4%) | 4% (3%-5%) |
| About the same emphasis | 34% (32%-37%) | 35% (33%-37%) | 35% (33%-36%) |
| More emphasis | 36% (33%-39%) | 45% (43%-47%) | 41% (39%-43%) |
| Not sure | 25% (23%-27%) | 17% (15%-19%) | 21% (20%-22%) |

Note: * Among staff who report they have heard about this trend

The Overall column also includes estimates from those who did not rate their ability at "understanding the relationship between a new policy and many types of public health problems" (column not shown).

Totals may not sum to 100% due to rounding errors

governmental public health workforce would seem to still be aspirational, rather than practical.

These findings also speak to a need to better define and explain policy to public health staff. PH WINS respondents were asked about "policy" but may not have fully appreciated the breadth of that term as it applies to their jobs. Policy is not just legislatively enacted through a political process. Rather, it encompasses the use of a wide range of tools and levers available to the public health workforce and should be considered a core component at multiple levels. Further research is needed to understand how the public health workforce defines policy to improve training and messaging.

We estimate that there are more than 12000 staff with a self-identified competency gap in at least one of these two policy-related skills. While national discussion of the importance of policy skills to the workforce has clearly resonated with SHA leadership and many staff, it is equally incumbent upon leaders and national organizations who call for greater policy competencies to establish a training agenda that allows those tasked with achieving the standard to be trained to do so. Meeting a training need of this magnitude will require a variety of training modalities such as

asynchronous computer-based learning, toolkits, and just-in-time tools. It will also require us to develop different strategies that are tailored to staff at different levels with different functions.

Similar to calls for improved and expanded policy skills among the public health workforce, the HiAP approach has become a focal strategy to address the impact of the social determinants of health. 24,27,28 This approach builds on public health's strength in intersectoral collaboration, leading to achievements such as reducing drunk driving and fluoridating water.28 Major national membership organizations—for example, the Association of State and Territorial Health Officials, the American Public Health Association, and the National Network of Public Health Institutes—and the Institute of Medicine (recently renamed the National Academy of Medicine)-have communicated the importance of the HiAP approach through resource guides, policy statements, and other means.^{27,28,42-44} The impact of these efforts is found in this study, with nearly 80% of the executives reporting to have heard of HiAP; and of those who had heard of HiAP, most believed it to be important to public health. However, this study finds a gap between perceived importance to the field of public health and perceived impact to one's day-to-day work.

TABLE 2 Logistic Regression Examining Correlates of Staff Self-Identifying as Proficient/Expert in "Understanding the Relationship Between a New Policy and Multiple Public Health Problems" Among Those Who Report It Is Somewhat/Very Important in Their Day-to-day Work

| Variable | Odds Ratio | 95% Confidence interval | p-value |
|---|------------|-------------------------|---------|
| How much have you heard about Health in all Policies? | | | |
| Nothing at all (reference) | | | |
| Not much | 1.32 | (1.07-1.64) | 0.01 |
| A little | 1.62 | (1.28-2.04) | <.001 |
| A lot | 2.61 | (1.9-3.58) | <.001 |
| Highest level of educational attainment | | , | |
| No Bachelors degree indicated (reference) | | | |
| Bachelors | 1.11 | (0.86-1.44) | 0.41 |
| Masters | 1.37 | (1.06-1.77) | 0.02 |
| Doctoral | 2.05 | (1.46-2.88) | <.001 |
| Program area under the Foundational Public Health Services model | | , | |
| Foundational Areas | | | |
| Chronic Disease and Injury (reference) | | | |
| Communicable Disease Control | 1.30 | (0.87-1.93) | 0.20 |
| Environmental Health | 1.59 | (1.13-2.26) | 0.01 |
| Maternal/Child Health | 1.61 | (1.12-2.3) | 0.01 |
| Foundational Capabilities | | , | |
| All Hazards | 1.25 | (0.9-1.75) | 0.18 |
| Assessment | 1.34 | (0.77-2.32) | 0.29 |
| Communications | 1.57 | (0.94-2.62) | 0.08 |
| Organizational Competencies | 1.33 | (0.83-2.13) | 0.23 |
| Other | | , | |
| Other Health Care | 1.12 | (0.72-1.73) | 0.61 |
| All Other | 1.59 | (1.16-2.17) | 0.01 |
| Organizational support related to training | | , | |
| Requires continuing education (reference is "Not required") | 1.13 | (0.97-1.33) | 0.12 |
| Includes education and training objectives in performance reviews (reference is "Not included") | 1.08 | (0.92-1.25) | 0.34 |
| Have staff position(s) responsible for internal training (reference is "No positions") | 1.22 | (1.05-1.42) | 0.01 |
| Supervisory status | | , | |
| Non supervisor (reference) | | | |
| Team leader | 1.39 | (1.13-1.71) | 0.002 |
| Supervisor | 1.03 | (0.83-1.28) | 0.78 |
| Manager | 1.76 | (1.39-2.24) | <.001 |
| Executive | 1.37 | (1-1.89) | 0.05 |
| Constant | 0.76 | (0.47-1.24) | 0.97 |

Note: Not shown are dummies variables that control for state-specific effects

In creating momentum for the HiAP approach, these data indicate that while the importance of HiAP to the field of public health has been established, how HiAP impacts the workflows and objectives of the workforce may have been less clearly communicated. For example, among the 88% of executives who had heard of HiAP, 62% believed it would impact their day-to-day activities. Fewer still felt that HiAP deserved a greater emphasis. However, focusing on HiAP may have expanded benefits. A strong association was identified between the perceived importance of HiAP and understanding the relationship between a

new policy and multiple public health problems, suggesting an important link between knowledge (understanding the relationship between a new policy and multiple public health problems) and tools and approaches (HiAP). This may suggest that training in awareness of HiAP may reinforce existing policy skills or, alternatively, motivate staff to gain greater awareness in order to engage in policy work. These data suggest a need to alter the approach to promoting HiAP to include a greater focus on how it directly impacts the workforce and its specific job tasks.

Limitations

This study has several limitations. PH WINS is crosssectional, so only represents a snapshot of workforce awareness and perception of the issues covered in this article. As with any survey study, nonresponse bias may exist. However, PH WINS achieved a reasonable response rate (46%) and had more than 10 000 responses that were representative of the broader workforce.³⁷ We do not believe that results should necessarily be extrapolated to local health department staff nationally because this study focused solely on SHA central office employees. However, studies both by Shah and Madamala⁴⁵ and Ye et al⁴⁶ have similar top-level findings among a subsample of local health department respondents using PH WINS data.

Conclusions

Any health department's ability to engage better in the policy development process is dependent, at least in part, on the policy skills of its workforce. While this study finds that there is a strong self-reported understanding of and skill in policy development in some parts of the workforce, it equally finds that much work remains. National public health membership associations and federal leaders in workforce training should consider how to ensure that high-quality onthe-job training and distance learning offerings are in place—and those that exist are expanded and/or are used more widely—so the governmental public health workforce might better address this crosscutting competency. Training offerings must also move beyond awareness of a particular topic and ensure that the connection of knowledge to practice is clear, relevant, and specific to the daily tasks of the workforce.

REFERENCES

- 1. Koh HK, Tavenner M. Connecting care through the clinic and community for a healthier America. Am J Prev Med. 2012;42(6)(suppl 2):S92-S94.
- 2. Tauras JA, Chaloupka FJ, Keith JD, Brown DP, Meyer JB. Economic impact of a noncomprehensive smoke-free air law. Health Promot Pract. 2014;15(4):521-529.
- 3. Tung GJ, Vernick JS, Stuart EA, Webster DW. Political factors affecting the enactment of state-level clean indoor air laws. Am J Public Health. 2014;104(6):e92-e97.
- 4. Ma ZQ, Fisher MA. The effect of Philadelphia and Pennsylvania Clean Indoor Air Act on food services and drinking places sales and numbers, 1998-2011. Prev Chronic Dis. 2013;10:E201.
- 5. Chriqui JF, Eyler A, Carnoske C, Slater S. State and district policy influences on district-wide elementary and middle school physical education practices. J Public Health Manag Pract. 2013;19(3)(suppl 1):S41-S48.
- 6. Cradock AL, Barrett JL, Carnoske C, et al. Roles and strategies of state organizations related to school-based physical edu-

- cation and physical activity policies. J Public Health Manag Pract. 2013;19(3)(suppl 1):S34-S40.
- 7. Turner L, Chriqui JF, Chaloupka FJ. Withholding recess from elementary school students: Policies matter. J Sch Health. 2013;83(8):533-541.
- 8. Slater SJ, Nicholson L, Chriqui J, Turner L, Chaloupka F. The impact of state laws and district policies on physical education and recess practices in a nationally representative sample of US public elementary schools. Arch Pediatr Adolesc *Med.* 2012;166(4):311-316.
- 9. Angell SY, Silver LD, Goldstein GP, et al. Cholesterol control beyond the clinic: New York City's trans fat restriction. Ann Intern Med. 2009;151(2):129-134.
- 10. Centers for Disease Control and Prevention. Public health law program—breastfeeding. http://www.cdc.gov/phlp/ winnable/breastfeeding.html. Updated April 13, 2012. Accessed May 14, 2015.
- 11. Heymann J, Raub A, Earle A. Breastfeeding policy: a globally comparative analysis. Bull World Health Organ. 2013;91(6): 398-406.
- 12. Heymann J, Kramer MS. Public policy and breast-feeding: a straightforward and significant solution. Can J Public Health. 2009;100(5):381-383.
- 13. Atkinson K, Zuckerman B, Sharfstein JM, Levin D, Blatt RJ, Koh HK. A public health response to emerging technology: expansion of the Massachusetts Newborn Screening Program. Public Health Rep. 2001;116(2):122-131.
- 14. Kraszewski J, Burke T, Rosenbaum S. Legal issues in newborn screening: implications for public health practice and policy. Public Health Rep. 2006;121(1):92-94.
- 15. Therrell BL Jr. U.S. newborn screening policy dilemmas for the twenty-first century. *Mol Genet Metab*. 2001;74(1/2):64-74.
- 16. Wernham A. Health impact assessments are needed in decision making about environmental and land-use policy. Health Aff (Millwood). 2011;30(5):947-956.
- 17. Chen SE, Florax RJ. Zoning for health: The obesity epidemic and opportunities for local policy intervention. J Nutr. 2010;140(6):1181-1184.
- 18. Kilar S. Support grows for city zoning plan to reduce liquor stores. The Baltimore Sun. January 10, 2013. http://articles .baltimoresun.com/2013-01-10/business/bs-bz-liquorzoning-hearing-20130110_1_liquor-stores-number-of-liquoroutlets-julius-colon.
- 19. Burton L, Stretesky P. Wrong side of the tracks: the neglected human costs of transporting oil and gas. Health Hum Rights. 2014;16(1):82-92.
- 20. Das BM, Petruzzello SJ. Barriers to physical activity in a mass transit population: a qualitative study [published online ahead of print May 12, 2015]. J Phys Act Health. doi:10.1123/jpah.2014-0497.
- 21. Board on Population Health and Public Health Practice, Institute of Medicine. Roundtable on Population Health Improvement. Washington, DC: National Academies Press; 2014.
- 22. Wilson KM, Torok M, McMillen R, Tanski S, Klein JD, Winickoff JP. Tobacco smoke incursions in multiunit housing. Am J Public Health. 2014;104(8):1445-1453.
- 23. Snyder K, Vick JH, King BA. Smoke-free multiunit housing: a review of the scientific literature [published online ahead of print January 7, 2015]. Tob Control. doi:10.1136/tobaccocontrol-2014-051849.

- 24. Wernham A, Teutsch SM. Health in All Policies for big cities. J Public Health Manag Pract. 2015;21(suppl 1):S56-S65.
- 25. World Health Organization. Adelaide recommendations on healthy public policy. http://www.who.int/health promotion/conferences/previous/adelaide/en/index1.html. Updated Published 1988. Accessed May 14, 2015.
- 26. World Health Organization. Framework and Statement: Consultation on the Drafts of the "Health in All Policies Framework for Country Action" for the Conference Statement of 8th Global Conference on Health Promotion. Geneva, Switzerland: World Health Organization; 2013.
- 27. Institute of Medicine. For the Public's Health: Revitalizing Law and Policy to Meet New Challenges. Washington, DC: National Academies Press; 2011.
- 28. Rudolph L, Caplan J, Mitchell C, Ben-Moshe K, Dillon L. Health in All Policies: Improving Health Through Intersectoral Collaboration. Washington, DC: National Academies Press; 2013.
- 29. Centers for Disease Control and Prevention. National Public Health Performance Standards (NPHPS)—the public health system and 10 essential public health services. http://www. cdc.gov/nphpsp/essentialServices.html. Updated May 29, 2014. Accessed May 14, 2015.
- 30. Centers for Disease Control and Prevention. Ten great public health achievements-United States, 2001-2010. MMWR Morb Mortal Wkly Rep. 2011;60(19):619-623.
- 31. The Council on Linkages Between Academia and Public Health Practice. Core Competencies for Public Health Professionals. http://www.phf.org/resourcestools/Documents/ Core_Competencies_for_Public_Health_Professionals_ 2014June.pdf. Updated June 26, 2014. Accessed May
- 32. Harris JK, Mueller NL. Policy activity and policy adoption in rural, suburban, and urban local health departments. J Public Health Manag Pract. 2013;19(2):E1-E8.
- 33. Hearne S, Castrucci BC, Leider JP, Rhoades EK, Russo P, Bass V. The future of urban health: needs, barriers, opportunities, and policy advancement at large urban health departments. J Public Health Manag Pract. 2015;21(suppl 1): S4-S13.
- 34. Suen J, Magruder C. National Profile: overview of capabilities and core functions of local public health jurisdictions in 47 states, the District of Columbia, and 3 U.S. territories, 2000-2002. J Public Health Manag Pract. 2004;10(1):2-12.

- 35. Stewart KE, Halverson PK, Rose AV, Walker SK. Public health workforce training: application of the Council on Linkages' Core Competencies. J Public Health Manag Pract. 2010;16(5):465-469.
- 36. Sellers K, Leider JP, Harper E, Castrucci BC, Bharthapudi K, Liss-Levinson R. Highlights from the Public Health Workforce Interests and Needs Survey: the first nationally representative survey of state health agency employees. J Public Health Manage Pract. 2015;21(suppl 6):
- 37. Leider JP, Bharthapudi K, Pineau V, Lui L, Harper E. The methods behind PH WINS. J Public Health Manage Pract. 2015;21(suppl 6):S28-S35.
- 38. Institute of Medicine. The Future of the Public's Health in the 21st Century. Washington, DC: National Academies Press;
- 39. Honore PA. Aligning public health workforce competencies with population health improvement goals. Am J Prev Med. 2014;47(5)(suppl 3):S344-S345.
- 40. Lichtveld MY, Cioffi JP, Baker EL Jr, et al. Partnership for front-line success: a call for a national action agenda on workforce development. J Public Health Manag Pract. 2001;7(4):
- 41. Honore PA, Scott W. Priority Areas for Improvement of Quality in Public Health. Washington, DC: US Department of Health and Human Services; 2010.
- 42. American Public Health Association. Health in All Polihttps://www.apha.org/topics-and-issues/healthycommunities/health-in-all-policies. Updated 2014. Accessed
- 43. Association of State and Territorial Health Officials. Health in All Policies. http://www.astho.org/Programs/HiAP/. Updated 2015. Accessed June 5, 2015.
- 44. National Network of Public Health Institutes. Health in All Policies. http://www.nnphi.org/program-areas/ health-in-all-policies. Updated 2010. Accessed June 5, 2015.
- 45. Shah GH, Madamala K. Knowing where public health is going: levels and determinants of workforce awareness of national public health trends. J Public Health Manage Pract. 2015;21(suppl 6):S102-S110.
- 46. Ye J, Leep CJ, Robin N, Newman SJ. Perception of workforce skills needed among public health professionals in local health departments: Staff versus top executives. J Public Health Manage Pract. 2015;21(suppl 6):S151-S158.