Changes in the State Governmental Public Health Workforce: Demographics and Perceptions, 2014-2017

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ABSTRACT

Context: Workforce is a critical cog in the governmental public health enterprise in the United States. Until 2014, workforce research was largely conducted at the organizational level. However, the fieldings of the Public Health Workforce Interests and Needs Survey allow for nationally representative comparisons with individual respondents.

Objective: Using data from agencies that participated in 2014 and 2017, we conducted multi–cross-sectional comparisons of the Public Health Workforce Interests and Needs Survey data.

Design: The Public Health Workforce Interests and Needs Survey participants at the State Health Agency Central Offices were surveyed using a Web-based platform. Balanced repeated replication weights were used to account for differential designs between 2014 and 2017.

Setting: Thirty-three state health agency central offices that participated in both 2014 and 2017.

Participants: Permanently employed governmental public health staff.

Main Outcome Measures: We examined changes in perceptions of the workplace environment, job and pay satisfaction, intent to leave, awareness of emerging concepts in public health, and demographic/worker characteristics. Pearson and Rao-Scott–adjusted χ^2 analyses were used to compare changes between 2014 and 2017.

Results: The percentage of staff who are people of color increased from 29% (95% confidence interval, 28%-30%) to 37% (95% confidence interval, 36%-38%) from 2014 to 2017 across 33 states. Approximately 26% of staff were younger than 40 years in 2014 compared with 29% in 2017 ($P < .001$). Job satisfaction increased in 17 states overall ($P < .05$, n = 5) and decreased in 16 states ($P < .05$, n = 5) but did not change in aggregate. Overall, the percentage of staff considering leaving the organization in the next year or retiring within 5 years is up from 44% to 48% ($P < .001$).

Conclusions: Global measures of satisfaction are relatively high and consistent between 2014 and 2017. Demographics are shifting toward a marginally younger workforce as many retire, and a significant portion of staff indicates that they are considering leaving their organization or planning to retire.

KEY WORDS: governmental public health, public health workforce interests and needs survey (PH WINS), workforce development

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A substantial demographic shift is underway in the United States' workforce as baby boomers, those 65 million persons born from 1946 to 1955, are largely all eligible for retirement or have begun retiring.[1] For years, the aging boomers were viewed as a harbinger of challenging public sector workforce issues.[1] This was somewhat allayed temporarily because of the Great Recession, with millions of retirement-eligible staffers choosing to delay retirement.[2-4] However, workforce planning concerns have returned in force because of substantial waves of retirement, particularly across the public sector.[5]

The financial health of public sector organizations has improved somewhat after the Great Recession. This is evidenced by the decline in hiring freezes observed in 42% of responding agencies in 2009 compared with 8% in 2018, and layoffs are down from 42% to 8% in the same period.[5] Conversely, delayed

retirements have also decreased considerably from 44% of retirement-eligible employees in 2009 to 21% in 2018.[5] The decline in delayed retirements may pose significant challenges for the public sector workforce as the size of the workforce has itself shrunk with state and local staff rolls, excluding education, decreasing from 8.4 million full-time equivalent positions in 2009 to 8.1 million in 2016.[6] State public sector full-time equivalent totals are still down several hundred thousand from their peak in 2008-2009, while local full-time equivalent counts have returned to prerecession levels, as has the federal government.[5,7]

The general stressors of anticipated staff turnover in the public sector are compounded by increased competition from the private sector and a shortage of certain staff types relative to demand. Engineers, IT staff, and nurses are exemplars of the former, whereas police are of the latter.[5] Reductions in salary growth and benefit generosity, coupled with relatively robust needs from the health care sector and low unemployment overall, have made recruitment and retention the 2 major defining issues of this decade for public sector workforce planners.[3,5]

Governmental public health is positioned much the same as the rest of the public sector with respect to workforce planning. The size of the workforce has decreased by 50 000 since 2008, down to 197 000, with one-quarter of the workforce eligible to retire.[8] Recruitment, retention, and succession planning have been identified as major needs by leadership.[9-17] While the drivers behind recruitment and retention are well documented in the literature,[12,13,18-20] prior to 2014, there existed no national resources to track these data points. This changed with the inception of the Public Health Workforce Interests and Needs Survey (PH WINS). PH WINS tracked intent to leave, plans to retire, and a number of determinants of voluntary turnover identified by the Federal Employee Viewpoint Survey and the literature.[21-26] The first PH WINS found relatively high levels of job satisfaction but mixed levels of employee engagement, supervisor satisfaction, and perceived organizational support, all of which are determinants of turnover.[23,27-29] This corroborated and expanded upon related studies in the workforce, though those had not been nationally representative previously.[30-37]

PH WINS has since been fielded again in 2017. With 2 comparable surveys, the objective of this article is to compare changes in demographics and relevant outcomes of the governmental public health workforce using PH WINS in 2014 and 2017. The focus is on demographics, worker engagement items, and emerging public health concepts. Subanalyses will explore the changes in these factors by supervisory status.

Methods

PH WINS was fielded for the first time in 2014; it is the largest national survey of the governmental public health workforce in the United States. This article draws on the 2 fieldings of PH WINS to examine changes at the state health agency (SHA) level between these 2 years for participating organizations. Surveys were fielded in fall/winter of 2014 and 2017 via a Web-based platform to public health staff. Captured in these analyses are 33 agencies that participated in 2014 and 2017 PH WINS, and agencies with no response in a given year or fewer than 50 responses (n = 3) were excluded from analysis. From the 33 agencies, 10 216 staff responded in 2014 and 14 527 staff in 2017. Staff were included in the analytic sample whether they responded in 1 year or both years—fundamentally, we were looking at whether the agency itself had sufficient participation in both years. As such, this should be viewed as a multi–cross-sectional study of the agencies and their staff, rather than a longitudinal examination of a particular set of respondents.

The complex sampling design used in the national frames, as outlined in other articles in this journal, is not employed in this analysis. Instead, we use a balanced repeated replication weight set that primarily addressed any sampling and nonresponse within state health agencies, as opposed to across regions. This approach allows us to look at agencies as units of analysis from year to year. We included data from all staff working in SHA central offices in both years, regardless of whether they participated in 1 or both years of the survey. We also included district/regional staff from decentralized states, per an updated central office classification beginning in 2017; this definition was applied to 2014 and 2017. The response rate in 2014 for these 33 agencies was 48%, and 45% in 2017.

In both 2014 and 2017, the instrument focused on 4 primary domains: workplace engagement, training needs assessment, emerging public health concepts, and demographics. These are the areas of inquiry in this article. Workplace environment variables were dichotomized to strongly disagree/disagree/neutral versus agree/strongly agree, and satisfaction variables were similarly dichotomized (very dissatisfied/somewhat dissatisfied/neither vs somewhat satisfied/very satisfied). Data were managed and analyzed in Stata 15.1 (StataCorp LLC, College Station, Texas). Rao Scott design-adjusted χ^2 analysis was used for inferential comparisons, and descriptive statistics are provided. The full methodological approach to PH WINS in 2014 and 2017 is available elsewhere.[38]

Results

Demographics and workforce characteristics

Analysis of demographic trends between 2014 and 2017 shows several substantial differences (Table 1). Although the fundamental structure of position types across agencies participating in both 2014 and 2017 is fairly constant, demographic shifts in the staff occurred in a number of states. The percentage of staff who are people of color increased from 29% to 37% ($P < .001$) from 2014 to 2017. In 28/33 states, the percentage of staff who were people of color increased 18% on average, though in only 7 states were those changes statistically significant ($P < .05$). The workforce in these 33 agencies was also somewhat younger in 2017 than in 2014, with 26% younger than 40 years in 2014 compared with 29% in 2017 ($P < .001$). Educational attainment remained relatively constant. Salaries have increased modestly; 54% of staff earned $55 000 or more in 2014 compared with 57% in 2017 ($P = .001$).

The workforce was somewhat less experienced in these agencies in 2017 than in 2014; 41% of staff in 2017 compared with 33% of staff in 2014 ($P < .001$) have been in their position for 6 years or more (Table 2). In 2014, 64% of respondents had been at

TABLE 1
Demographics for SHAs With Respondents in 2014 and 2017[a]

	2014	2017
Gender		
Men	28% (27%-29%)	26% (25%-27%)
Women	72% (71%-73%)	73% (72%-74%)
Nonbinary	…	1% (0%-1%)
Race/ethnicity		
American Indian	1% (0%-1%)	0% (0%-0%)
Asian	5% (4%-6%)	6% (5%-7%)
Black/African American	11% (9%-13%)	15% (14%-16%)[b]
Hispanic/Latino	7% (7%-8%)	9% (9%-10%)[b]
Native American	0% (0%-0%)	0% (0%-0%)
White	71% (70%-72%)	63% (62%-64%)[b]
≥2 races	5% (5%-5%)	6% (6%-6%)[b]
Age, y		
21-30	9% (8%-9%)	10% (9%-10%)
31-40	19% (18%-20%)	22% (21%-23%)[b]
41-50	25% (24%-27%)	25% (24%-25%)
51-60	32% (32%-33%)	29% (28%-29%)[b]
61+	14% (13%-15%)	14% (14%-15%)

[a]Estimates shown as estimate (95% confidence interval) by year.
[b]Statistically significant differences, in aggregate, across years for a given item at P < .05. Respondent counts range from n = 24 046 to n = 24 252.

TABLE 2
Workforce Characteristics for SHAs With Respondents in 2014 and 2017[a]

	2014	2017
Supervisory status		
Nonsupervisor	70% (68%-71%)	72% (71%-72%)
Supervisor	15% (15%-16%)	15% (14%-16%)
Manager	12% (11%-13%)	11% (10%-11%)[b]
Executive	3% (3%-4%)	3% (3%-3%)
Highest degree		
No college	16% (15%-16%)	13% (13%-14%)[b]
Associate	10% (9%-10%)	11% (11%-12%)[b]
Bachelor	34% (32%-35%)	34% (34%-35%)
Masters	32% (31%-33%)	33% (32%-34%)
Doctoral	9% (8%-10%)	8% (7%-9%)
Tenure in current position, y		
0-5	59% (58%-60%)	67% (67%-68%)[b]
6-10	22% (21%-23%)	15% (14%-16%)[b]
11-15	10% (9%-11%)	9% (8%-9%)
16-20	5% (4%-5%)	4% (4%-5%)
21+	4% (4%-5%)	4% (4%-4%)
Tenure in current agency, y		
0-5	36% (35%-37%)	47% (47%-48%)[b]
6-10	21% (20%-22%)	17% (17%-18%)[b]
11-15	15% (14%-16%)	13% (13%-14%)[b]
16-20	10% (9%-11%)	9% (9%-10%)
21+	18% (17%-18%)	13% (13%-13%)[b]
Tenure in public health practice, y		
0-5	27% (25%-28%)	33% (32%-34%)[b]
6-10	20% (19%-21%)	19% (18%-19%)
11-15	16% (15%-17%)	14% (14%-15%)[b]
16-20	12% (12%-13%)	13% (12%-13%)
21+	25% (25%-26%)	22% (22%-22%)[b]
Tenure in management, y		
0-5	31% (28%-33%)	36% (34%-38%)[b]
6-10	25% (22%-27%)	22% (20%-24%)
11-15	17% (16%-19%)	17% (16%-19%)
15-20	12% (11%-13%)	11% (10%-12%)
21+	15% (14%-17%)	13% (13%-13%)[b]
Annualized salary		
<$25,000	2% (2%-2%)	2% (1%-2%)
$25 000-$35 000	10% (9%-10%)	9% (8%-9%)
$35 001-$45 000	15% (15%-16%)	14% (13%-15%)
$45 001-$55 000	19% (18%-20%)	19% (18%-19%)
$55 001-$65 000	17% (16%-17%)	16% (16%-17%)
$65 001-$75 000	14% (13%-15%)	14% (13%-15%)
$75 001-$85 000	10% (9%-11%)	11% (10%-11%)
$85 001-$95 000	6% (6%-7%)	7% (6%-7%)
$95 001-$105 000	3% (3%-4%)	4% (4%-5%)[b]

(*continues*)

TABLE 2

Workforce Characteristics for SHAs With Respondents in 2014 and 2017[a] (Continued)

	2014	2017
$105 001-$115 000	1% (1%-2%)	2% (2%-2%)[b]
$115 001-$125 000	1% (1%-1%)	1% (1%-1%)
$125 001-$135 000	0% (0%-1%)	1% (0%-1%)
$135 001-$145 000	0% (0%-1%)	0% (0%-1%)
>$145 000	1% (1%-1%)	1% (1%-1%)
Job classification		
Administration	34% (32%-35%)	42% (41%-43%)[b]
Clinical or laboratory	15% (15%-16%)	16% (16%-17%)
Public health sciences	45% (44%-46%)	38% (37%-39%)[b]
Social services/other	6% (6%-7%)	4% (4%-5%)[b]

[a] Estimates shown as estimate (95% confidence interval) by year.
[b] Statistically significant differences, in aggregate, across years for a given item at P < .05. Respondent counts range from n = 21 795 to n = 24 689.

their agency for 6 years or more, compared with 53% in 2017 (P < .001). Seventy-three percent had been in public health practice for 6 years or more, compared with 67% in 2017 (P < .001). Of note, approximately 26% of respondents said that they had joined their agency since 2014 (the first fielding of PH WINS). Sixteen percent said that they had joined public health practice within the last 3 years. Those who have recently joined in public health practice are somewhat more likely to be people of color (39% vs 36%, P = .003).

Workplace engagement

As in 2014, PH WINS 2017 asked respondents a number of questions related to their workplace environment (Table 3). The largest changes overall were observed in "Creativity and innovation are rewarded" (40% agree/strongly agree to 43%, P < .001), "Communication between senior leadership and employees is good" (43%-47%, P < .001), "I recommend my organization as a good place to work" (64%-67%, P < .001), and "My training needs are assessed" (45%-52%, P < .001). Stratified analyses suggest that these aggregate changes may be due to SHA-based effects. For instance, "Creativity and innovation are rewarded" increased across 22 SHAs (P < .05, n = 14), "Communication between senior leadership and employees is good" increased across 21 SHAs (P < .05, n = 14), and "My training needs are assessed" increased across 27 SHAs (P < .05, n = 17). Changes were also observed across supervisory status, though most were not statistically significant between 2014 and 2017.

Satisfaction: Job, organization, pay, and job security

Respondents in both 2014 and 2017 were asked to rate how satisfied they were with their job, organization, pay, and job security (Table 4). Results are relatively flat across all measures, with the exception of organizational satisfaction, which increased from 65% to 69% (P < .001). Organizational satisfaction increased across 19 states (P < .05, n = 5) and decreased in 14 states (P < .05, n = 5). Job satisfaction increased in 17 states overall (P < .05, n = 5), and decreased in 16 (P < .05, n = 5). Pay satisfaction was relatively stable, although down 2% overall (P = .25). The percentage of staff somewhat/very satisfied with their pay increased in 14 states (P < .05, n = 7) and decreased in 19 states (P < .05, n = 6). The percentage of nonsupervisors and supervisors somewhat/very satisfied with pay decreased 1.5% and 7.5%, respectively. Conversely, managers and executives who were somewhat/very satisfied with their pay increased 2.6% and 5.6%, respectively, although no changes by supervisory status were statistically significant. Perceptions of job security were stable in aggregate but differed substantially state by state. In 13 states, job security satisfaction increased (P < .05, n = 8) and in 20 states, it decreased (P < .05, n = 8).

Intent to leave

Staff were asked whether they were leaving their organization in both 2014 and 2017. If they indicated they were, the respondents were also asked for how long they had been considering leaving, if they had taken steps, and reasons for potentially leaving. The percentage of staff saying that they are considering leaving their organization in the next year (excluding retirements) has increased substantially (Table 5), up from 22% in 2014 to 31% in 2017 (P < .001). Statistically significant increases were observed across all levels of supervisory status. Conversely, the percentage of staff who say that they are planning to retire within 5 years (by 2023) decreased across the 33 agencies in aggregate, from 25% to 22% (P = .001). Intentions to retire were on the decline at all levels of supervisory status, though none of the differences was statistically significant. Overall, the percentage of staff considering leaving the organization in the next year or retiring within 5 years is up from 44% to 48% (P < .001), with statistically significant increases among nonsupervisors (up to 48% from 44%) and supervisors (up to 47% from 41%) but not among managers and executives. This increased across 26 states (P < .05, n = 9) and decreased in 7 states (P < .05, n = 2). In total, an estimated 37 000 staff say that they are considering leaving their organization in the next

TABLE 3
Workplace Engagement (Percentage of Staff Who Agree/Strongly Agree)[a]

Workplace Environment	% Agree/Strongly Agree		% Change From 2014-2017				
	2014	2017	Overall	Nonsupervisor	Supervisor	Manager	Executive
My training needs are assessed.	45% (44%-46%)	52% (51%-53%)	15.2%[b]	14.5%[b]	12.2%	21.4%[b]	15%
Communication between senior leadership and employees is good.	43% (41%-44%)	47% (46%-48%)	9.7%[b]	14.3%[b]	−0.6%	5.5%	−7%
Creativity and innovation are rewarded.	40% (38%-41%)	43% (42%-44%)	8.7%[b]	10.7%[b]	1.4%	12.3%[b]	2.4%
I am satisfied that I have the opportunities to apply my talents and abilities.	65% (63%-66%)	67% (67%-68%)	4.1%[b]	7%[b]	−1.1%	1.9%	−1.7%
I recommend my organization as a good place to work.	64% (63%-66%)	67% (66%-68%)	4%[b]	5.1%[b]	1.1%	4%	1.3%
Employees have sufficient training to fully utilize technology.	50% (49%-51%)	51% (51%-52%)	3.1%[b]	3.6%	0.1%	6%	−8.5%
I know how my work relates to the agency's goals and priorities.	85% (84%-86%)	87% (87%-88%)	3%[b]	3.8%[b]	0.8%	3.3%	−0.2%
My supervisor provides me with opportunities to demonstrate my leadership skills.	66% (65%-68%)	68% (67%-69%)	2.3%	4.4%	0.1%	1.1%	−4.8%
Supervisors in my work unit support employee development.	70% (69%-71%)	72% (71%-73%)	2%[b]	3.3%	−2%	4.8%	−3.8%
I am determined to give my best effort at work every day.	92% (92%-93%)	94% (93%-94%)	1.6%[b]	2.3%[b]	−0.3%	1.2%	−1.5%
My supervisor treats me with respect.	83% (82%-84%)	84% (83%-85%)	1.6%[b]	2%	2.2%	1%	−6.3%
I feel completely involved in my work.	79% (78%-80%)	80% (79%-81%)	1.5%[b]	3.4%[b]	−1.5%	−1%	−2.5%
The work I do is important.	93% (92%-93%)	93% (93%-94%)	0.8%[b]	1.2%	1.7%	−0.6%	−4.3%
Employees learn from one another as they do their work.	82% (81%-82%)	82% (81%-84%)	0.7%	1.7%	−2.1%	0.5%	−0.3%
Supervisors work well with employees of different backgrounds.	71% (70%-72%)	71% (71%-72%)	0%	1.4%	−3.2%	−3%	0.9%
My supervisor and I have a good working relationship.	83% (82%-84%)	83% (82%-83%)	−0.6%	−0.4%	−0.1%	−0.5%	−4.7%

[a] Shown as estimate (95% confidence interval). Estimate represents percentage of staff who say they "agree/strongly agree" with a particular item in a given year. Percent change was calculated as: (2017 estimate - 2014 estimate)/(2014 estimate). Respondent counts vary from n = 24 558 to n = 24 609.
[b] Differences are statistically significant between 2014 and 2017 at P < .05.

year or retiring within 5 years across the 33 SHAs included in this analysis. There were not considerable differences by program area, with the exception of all hazards preparedness, which saw a large increase in intent to leave, from 28% in 2014 to 44% in 2017.

Emerging concepts in public health

Beyond workplace environment, training needs, and demographics, the respondents were also asked about their awareness and the perceived importance of

TABLE 4
Percentage "Somewhat/Very Satisfied" With Job, Pay, Organization, and Job Security by Supervisory Status[a]

	Overall		Nonsupervisor		Supervisor		Manager		Executive	
	2014	2017	2014	2017	2014	2017	2014	2017	2014	2017
Satisfaction with job	79% (78%-80%)	79% (79%-80%)	77% (75%-78%)	78% (77%-79%)	83% (81%-84%)	82% (80%-83%)	84% (82%-86%)	84% (82%-86%)	91% (87%-94%)	90% (85%-95%)
Satisfaction with pay	50% (49%-52%)	49% (48%-50%)	47% (46%-48%)	46% (45%-48%)	55% (53%-58%)	51% (49%-54%)	58% (55%-62%)	60% (58%-62%)	69% (64%-75%)	73% (68%-78%)
Satisfaction with organization	66% (65%-67%)	69% (68%-70%)[b]	65% (63%-66%)	68% (67%-69%)[b]	67% (64%-69%)	67% (65%-69%)	68% (66%-71%)	70% (66%-74%)	82% (77%-88%)	85% (79%-90%)
Satisfaction with job security	73% (72%-74%)	73% (72%-74%)	72% (71%-73%)	71% (70%-72%)	77% (75%-79%)	76% (74%-79%)	75% (71%-78%)	79% (77%-82%)	71% (65%-77%)	78% (73%-84%)

[a] Estimates shown as estimate (95% confidence interval). Estimates represent staff who are "somewhat/very satisfied" with a given item.

[b] Statistically significant change at P < .05 between 2014 and 2017. Respondent counts vary from n = 24 506 to n = 24 597.

TABLE 5
Intent to Leave by Supervisory Status, 2014 to 2017[a]

	Overall		Nonsupervisor		Supervisor		Manager		Executive	
	2014	2017	2014	2017	2014	2017	2014	2017	2014	2017
Considering leaving organization in next year (excluding retirement).	22% (21%-23%)	31% (30%-32%)[b]	25% (23%-26%)	32% (31%-33%)[b]	18% (16%-20%)	28% (26%-30%)[b]	16% (14%-19%)	26% (24%-29%)[b]	12% (8%-17%)	22% (18%-27%)[b]
Planning to retire within 5 y.	25% (24%-26%)	22% (22%-23%)[b]	23% (21%-25%)	20% (19%-22%)	27% (25%-29%)	24% (23%-26%)	33% (30%-36%)	31% (27%-34%)	30% (22%-37%)	28% (23%-33%)
Considering leaving organization in next year or planning to retire within 5 y.	44% (42%-45%)	48% (47%-48%)[b]	44% (42%-46%)	48% (47%-48%)[b]	41% (39%-43%)	47% (45%-48%)[b]	46% (43%-48%)	50% (47%-53%)	39% (31%-48%)	46% (40%-51%)

[a] Estimates shown as estimate (95% confidence interval).

[b] Statistically significant change from 2014 to 2017 at P < .05. Respondent counts vary from n = 23 022 to n = 23 864.

several emerging concepts in public health. Five concepts were asked about in 2014 and 2017 (Table 6). First, the respondents were asked whether they had heard of the concept. If they indicated that they had, they were asked how much the concept impacted their day-to-day work. Table 6 shows what percentage of respondents who had heard of a particular concept said that the concept impacted their work "a little" or "a lot" (as opposed to "not too much" or "not at all"). While cross-jurisdictional sharing, fostering a culture of quality improvement, and public health and primary care integration remained relatively stable (including by supervisory status), 2 concepts did see substantial changes. The percentage of staff who said that they had heard of evidence-based public health increased (from 75% to 79%, $P < .001$), as did the percentage of staff who said that it impacted their work (58%-62%, $P < .001$). Awareness of Health in All Policies increased from 51% to 57% ($P < .001$), while perceived impact decreased from 46% to 44% ($P = .007$).

Discussion

The second fielding of PH WINS presented a new opportunity to assess changes in the governmental public health workforce in the 33 SHAs that participated in both years of the survey and provides a call to action for leaders and the public health field more broadly. Generally, there was a large amount of stability as it relates to the demographics, workplace environment, satisfaction, and awareness of emerging concepts in public health. In particular, job and pay satisfaction have remained relatively stable from 2014 to 2017. However, there were noteworthy changes in a number of areas. Demographically, the workforce appears to be increasingly diverse racially and ethnically, with a statistically significant increase in the proportions of the workforce identifying as black or African American as well as Hispanic. Given the importance of diversity and its impact on effectiveness of service delivery, this change may have significant implications for the field of governmental public health. Additional research is needed to assess whether such a large demographic change in the workforce is feasible over the course of 3 years, or whether it is possibly due to chance error or nonresponse bias during either fielding of the survey. In addition, the workforce in 2017 was younger and had fewer years of experience at the agency and in public health more broadly. Finally, there have been a number of statistically significant changes in a number of key indicators related to workplace environment that are associated with engagement, including increasing percentages of staff who agree with statements such as "I know how my work relates to the agency's goals and priorities" (85% in 2014 to 87% in 2017), "Communication between senior leadership and employees is good" (43% in 2014 to 47% in 2017), and "My training needs are assessed" (45%-52%, with significant increases among nonsupervisors and managers). In addition, organizational satisfaction increased from 2014 to 2017 (from 66% to 69%).

An intriguing finding is that while there was a statistically significant increase in staff awareness of the concept of Health in All Policies from 51% in 2014 to 57% in 2017, the percentage of those staff aware of the concept who indicated that the concept impacted their work "a little" or "a lot" declined from 46% in 2014 to 44% in 2017. With increased recognition in the public health field as a whole about the interconnectedness of other sectors (eg, education, transportation, and housing) among others on health,[39,40] the perception that the concept of Health in All Policies has less of an effect on employees' work is surprising and worth further investigation.

TABLE 6				
Emerging Concept Awareness and Impact Between 2014 and 2017				
	Heard of Emerging Concept		**Emerging Concept Impacts Day-to-Day Work**[a]	
	2014	**2017**	**2014**	**2017**
Fostering a culture of quality improvement	83% (82%-84%)	83% (83%-83%)	70% (69%-70%)	69% (68%-69%)
Evidence-based public health	75% (74%-76%)	79% (78%-79%)[b]	58% (57%-59%)	62% (61%-63%)[b]
Public health and primary care integration	74% (73%-75%)	74% (73%-75%)	48% (47%-49%)	47% (46%-48%)
Cross-jurisdictional sharing of public health services	71% (70%-72%)	70% (69%-71%)	50% (48%-52%)	49% (48%-51%)
Health in All Policies	51% (50%-53%)	57% (56%-57%)[b]	46% (45%-48%)	44% (43%-45%)[b]

[a]Among those who said that they had heard about concept "not too much," "a little," or "a lot." "Heard of" varies from n = 24 491 to 24 531. Impact varies from n = 9332 to n = 19 759 (based on whether respondents said that they had heard of the concept).

[b]Statistically significant difference between 2014 and 2017 at P < .05.

Implications for Policy & Practice

- PH WINS has now been fielded for a second time, with 33 SHAs participating in both years.

- While job satisfaction and pay satisfaction are stable, perceived satisfaction with workplace environment and organization is modestly improved.

- Leadership can continue to focus on increasing job and organizational satisfaction, especially with an eye toward improving supervisor satisfaction, employee engagement, and perceived organizational support.

- The percentage of staff considering leaving their organization in the next year, excluding retirement, increased from 25% in 2014 to 31% in 2017, while those planning to retire in the next 5 years decreased from 25% to 22%.

- Public health leaders should prioritize succession planning and ensuring transfer of institutional knowledge.

The most concerning finding is the substantial potential turnover in the SHA staff for nonretirement turnover as the percentage of staff intending to leave, excluding for retirement, increased from 22% in 2014 to 31% in 2017, while the percent planning to retire declined slightly during that time (25% in 2014 to 22% in 2017). In addition, there is a significant increase in the percentage of executives considering leaving for reasons other than retirement from 12% in 2014 to 22% in 2017. While combined estimates of considering leaving for reasons other than retirement and the percentages of staff considering retirement may appear to be somewhat close due to decreased plans to retire, intent to leave may be even more pressing in 2017 than in 2014, due to the increase in voluntary turnover. Other research, including items presented in this supplement, suggests that approximately half of those who plan to leave actually do.[8,41]

Limitations

There are several significant limitations worth noting. The first is that this is a multi–cross-sectional study. As such, causal inferences should not be drawn from any of the analyses. Second, only 33 SHAs participated sufficiently in 2014 and 2017 to have their staff included in analyses described in this article. Generalizability may be a concern. In addition, data points are drawn from self-reported responses.

Conclusion

These findings are a call to action for additional, coordinated efforts for workforce development, as we are seeing increasing potential voluntary turnover and flat job/pay satisfaction, even as a number of engagement items appeared to have changed for the positive in the 3 years between fieldings. This research suggests that staff are disengaged or pursuing other opportunities, and that there are critical needs in the field both for (1) employee retention and engagement efforts and (2) knowledge management/transfer and succession planning on the SHA level nationally to ensure continuity of operations with what appears to be significant levels of staff turnover. In particular is a need to engage and support staff working in all-hazards preparedness, with a nearly 20% increase in the proportion of staff working in this program area who indicated that they are considering leaving their role in 2017. These staff are critical to responding to public health emergencies and are a first line of defense in times of crisis. The potentially large turnover in this population could pose significant challenges to the public health system nationally.

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