

PRELIMINARY DRAFT

2010 Survey of Public Health Workers: Findings

Study Population:

In 2010 the Council on Linkages Between Academia and Public Health Practice, which is staffed by the Public Health Foundation, and the University of Kentucky joined together on the National Pipeline Survey to ask governmental public health workers employing Training Finder Real-time Affiliate Integrated Network (TRAIN), an online training system developed by the Public Health Foundation (PHF). TRAIN currently serves as the most widely used online learning system in public health. Currently 22 states' public health departments use TRAIN with more than 300,000 individual users located in all 50 states and a number of other countries.

Sampled governmental public health workers responded online to the Council of Linkages National Pipeline Survey, a recruitment and retention survey conducted in the spring and summer of 2010 and focusing on factors influencing the workers' decision to join and remain in the public health field. Drawing upon over 300,000 past and present users of the TRAIN online learning and training system, the researchers applied a filter to extract 82,209 users who could be identified in the system as governmental public health workers. Survey invitations to 11,820 of these users' email addresses, however, proved to be undeliverable. This left a sampling frame made up of 70,315 U.S. governmental public health workers identified among TRAIN users. The researchers then approached each of the 22 states who use TRAIN to seek the states' participation in the survey.

Additionally, a systemic random sample of 3,000 users was drawn from the 70,389 users in the sampling frame. These 3,000 invited participants were tracked and sent a special web address to access the online survey. The goal of the sampling approach was to achieve a minimum of 400 completed responses so as to have a nationally representative sample with a confidence level of 95% with a margin of error no greater than +/-5%. The sample of 3,000 invited participants represents an over-sampling to account for low response rates and inactive email accounts. This cross-sectional study employed descriptive statistics and multivariate analyses using SPSS version 18.0. In total 11,637 individual participated in the survey with 7559 indicating themselves as governmental public health workers as indicated by Table 1. Generally there were no significant differences between the large group and random sample population.

Table 1: Response Rate

Survey Deployed to	82,209
Survey Received by	70,315
Number of Respondents	11,637 (7559)
Target Response Rate	20%
Actual Response Rate	17%

Governmental Respondents

Demographics of Survey and Governmental Respondents:

The most typical respondent of the Pipeline Survey consisted of a 48 year old, white, non-Hispanic, female, nurse who has worked a mean of 12.61 years as a public health professional including a mean of 11.06 years at her current public health agency. Thus, respondents' mean age are 47.27 years, and 78% of the respondents report being female. In terms of ethnicity, 7% of respondents self-identify as Hispanic, Latino or of Spanish origin and, as shown in Table 5, almost 4 out of 5 respondents describe themselves as White. Respondents answered from 40 of the 50 states as well as the District of Columbia. The majority of respondents were registered via the 22 states which regularly utilize the TRAIN system. Of these respondents 55% were from the states of AR, KS, KY, OH, OK, TX, VA, WI.

Table 2: Current Work Setting

Work Setting	N=11637
State Government	46% (55%)*
Local Government	27% (33%)*
Healthcare	26% (19%)*
Nonprofit Organization	10% (5%)*
Academia	7% (4%)*
Private Industry	3% (1%)*
Federal Government	3% (4%)*
Self Employed	2% (1%)*
Tribal or Territorial	1% (1%)*
Unemployed	3% (1%)*

Governmental Respondents

Over half of governmental respondents work for a state public health agency. Another third works for a local public health agency. Almost a third of respondents (31.4%) reports working in an agency serving fewer than 50,000 people.

Table3: Current Professional Roles

Nurse	26%
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Administrator/Director/Manager	21%
Administrative Support	15%
Health Educator	12%
Non-clinical Public Health Service Provider	12%
Emergency Responder/Planner	10%
Allied Health Professional	7%
Environmental Health Specialist	6%
Faculty/Educator	4%
Data Analyst	4%
Biostats/Epi, Lab Prof., Researcher	3% each
Physician, Student	2% each

Making up 26% of respondents, nursing represents the most common professional role held by surveyed workers with over a fifth (21%) of respondents also listing they serve as an administrator or manager. The mean length of service in public health is 12.61 years with respondents reporting they have worked a mean of 11.06 years for their current agency. Prior to taking their current position, respondents report being in a range of activities with higher education (26.4%) and healthcare services (20.0%) the most commonly listed. The most commonly reported setting prior to entering public health for governmental public health respondents included healthcare services (31%) and private sector organizations (23%).

Table 4: Where Respondents Were Prior to Entering Public Health

School	High School – 2% (4%)* Associate Program – 3% (5%)* Undergraduate Program – 9% (14%)* Graduate Program – 8% (12%)* Doctoral/Advanced Program – 2% (4%)*
Employment	Healthcare – 20% (31%)* Private Sector Org – 15% (23%)* Governmental Agency – 7% (10%)* Nonprofit Org – 7% (10%)* Academic Org – 4% (6%)* Self-Employed – 3% (4%)*
Retired	1% (1%)*
Unemployed	4% (6%)*

Governmental Respondents

Sixty-five percent of workers report they had a bachelor's degree or higher when starting their careers in public health. By the time of the survey, 70% of workers report they have completed a bachelors degree or higher. In terms of a graduate degree, 26% of respondents began their public health careers with a masters degree or higher. At the time they answered the Pipeline survey, an additional 9% had completed a graduate degree. The highest increase in education was for those receiving a Master's degree (Table 5). These findings suggest that workers continue to pursue education during their careers in public health.

Table 5: Demographic Characteristics of Pipeline Survey Respondents

Race and Ethnicity	Percentage
American Indian or Alaska Native	2%
Asian	2%

Black or African American	8%	
Native Hawaiian or other Pacific Islander	1%	
White	78%	
Hispanic/Latino/Spanish	7%	
Educational Level	Highest Level Completed When First Became a Public Health Professional	Highest Currently Completed
High School	16% (13%)	13% (10%)
Associate degree	20% (17%)	19% (15%)
Bachelors degree in public health	4% (5%)	3% (4%)
Other bachelors degree	36% (40%)	32% (34%)
Masters degree in public health	5% (6%)	8% (10%)
Other masters degree	13% (13%)	18% (19%)
Doctoral degree in public health	<1% (<1%)	1% (1%)
Other doctoral degree	2% (2%)	2% (3%)
Other advanced degree (e.g. MD, JD, etc.)	4% (4%)	5% (5%)

Governmental Respondents

Recruitment:

As shown in Table 6 of rank of mean respondent ratings, respondents list specific work function/activities involved in their current position as the highest rated reason behind initially taking their current job. Respondents' rate job security, competitive benefits, and identifying with the mission of the organization among the greatest influences on their decision to initially take their current job. The ability to telecommute rated least important in recruitment among total respondents, but this factor did rate higher among younger workers in their 20s. Factors external to the position and agency such as a desire to live in a particular climate or close to family also rated fairly high. Perhaps in part influenced by the timing of this survey's administration during a national recession, job security has the second highest mean for recruitment influences and the highest mean for retention factors. Interestingly, benefits also rate considerably higher than competitive salaries for public health workers. In fact, competitive salaries rate 12th out of 19 factors.

Table 6: Factors Influencing Decision to Work with Current Employer

FACTORS	Entering	Remaining
➤ Specific Work Functions or Activities Involved in Current Position	1	2
➤ Job Security	2	1
➤ Competitive Benefits	3	3
➤ Identifying with the Mission of the Organization	4	4
➤ Enjoy living in the area (e.g. climate, amenities, culture)	5	6
➤ Personal commitment to public service	6	5
➤ Wanted to live close to family and friends	7	8
➤ Wanted a job in the public health field	8	9
➤ Future Opportunities for Training/Continuing Education	9	10
➤ Flexibility of Work Schedule	10	7
➤ Ability to Innovate	11	11
➤ Competitive Salary	12	14
➤ Future Opportunities for Promotion	13	15
➤ Autonomy/Employee empowerment	14	13
➤ Needed a job, but it didn't matter if it was in public health	15	16
➤ Immediate Opportunity for Advancement/Promotion	16	17

➤ Wanted to work with specific individual(s)	17	12
➤ Family member/role model was/is working in public health	18	19
➤ Ability to Telecommute	19	18

Retention:

The same factors highly influencing recruitment remain highly rated in terms of influencing retention (Table 6). Of note, however, are several trends. First, the workers answering this survey have been retained in public health. This survey lacks information on those individuals who have left the public health field. Retained workers rate their personal commitment to public service higher compared to when they initially took their jobs. The data reveal a trend towards valuing stability in terms of other highly rated factors: a) job security, b) enjoying living in an area, and c) living near family. Perhaps because many of these respondents are mid-career, they now rate opportunities for advancement future and immediate- lower now compared to when they began work.

Gender Differences:

Analysis of the data using a Chi-square procedure finds several statistically significant differences between female and male respondents. Women rate opportunities for training ($p = .013$) significantly more important as a recruitment factor. Women likewise rate several retention factors as more important than male respondents: autonomy/employee empowerment ($p = .047$), specific work functions ($p = .003$), and wanting a job specifically in public health ($p = 0.23$). On the other hand, men rate living near family and friends ($p = .024$), working with a specific person ($p = .033$), and personal commitment to public service ($p = 0.33$) highly as retention factors.

Age and Length of Employment Differences:

Younger workers rate several factors as more important to their recruitment and retention than older workers. The factors that were more important to those in their 20s and 30s included the ability to advance and job security. While older workers rate three factors –1) personal commitment to public service 2) identification with an agency's mission, and 3) specific duties related to job higher than their younger co-workers. These trends were also reflected in comparison in the factors influencing decision to work with current government employer by years spent as an employee of a governmental public health agency (Tables 7 and 8).

Table 7 - Average rating factors influencing decision to work with current government employer by years spent as an employee of a governmental public health agency

How much did these factors influence your decision to take your first position with your current employer decision to work with current employer	In total, how many years have you spent as an employee of a governmental public health agency					
	<5	5-9	10-19	20+	F	p-value
Job Security	6.69	6.81	6.94	6.85	2.176	0.089
Flexible work schedule	5.45	5.10	5.06	4.88	7.911	<0.001
Ability to work from home	1.51	1.33	1.13	0.85	21.524	<0.001
Autonomy/Employee empowerment	4.55	4.19	4.06	3.79	14.859	<0.001
Specific duties and responsibilities	6.99	6.89	6.91	6.88	0.519	0.669
Identifying with the mission of the organization	6.61	6.39	6.46	6.46	1.670	0.171
Ability to innovate	5.42	5.18	5.04	5.03	5.652	0.001
Immediate opportunity for advancement/promotion	3.80	3.50	3.61	3.44	4.364	0.004
Future opportunities for promotion	5.03	4.62	4.56	4.40	11.521	<0.001
Opportunities for training/continuing education	6.07	5.52	5.50	5.38	16.684	<0.001
Competitive salary	4.89	4.67	4.40	4.44	8.436	<0.001
Competitive benefits	6.78	6.76	6.93	6.83	1.204	0.307
Enjoy living in the area (e.g. climate, amenities, culture)	5.82	5.11	6.06	6.39	7.473	<0.001
Wanted to live close to family and friends	5.66	5.79	5.79	6.00	2.245	0.081
Wanted to work with specific individual(s)	3.13	3.13	3.07	2.93	1.316	0.267
Wanted a job in the public health field	5.88	5.70	5.97	6.16	4.526	0.004
Needed a job, but it didn't matter if it was in public health	3.99	3.94	3.77	3.87	1.236	0.295
Personal commitment to public service	6.23	6.10	6.17	6.14	0.404	0.750
Family member/role model was/is working in public health	1.51	1.51	1.58	1.73	2.199	0.86

Table 8-Average rating factors influencing decision to work with current government employer by years spent as an employee of a governmental public health agency

How much did these factors influence your decision to take your first position with your current employer decision to remain working with current employer	In total, how many years have you spent as an employee of a GOVERNMENTAL public health agency				F	p-value
	<5	5-9	10-19	20+		
Job Security	7.20	7.31	7.60	7.80	15.001	<0.001
Flexible work schedule	6.12	5.92	6.15	6.00	1.512	0.209
Ability to work from home	1.98	2.01	1.80	1.60	6.124	<0.001
Autonomy/Employee empowerment	5.13	4.92	5.04	4.10	1.106	0.345
Specific duties and responsibilities	6.79	6.84	6.97	7.18	6.376	<0.001
Identifying with the mission of the organization	6.60	6.45	6.82	7.00	9.910	<0.001
Ability to innovate	5.53	5.50	5.53	5.77	2.496	0.058
Immediate opportunity for advancement/promotion	3.56	3.19	3.00	2.76	19.539	<0.001
Future opportunities for promotion	4.62	4.03	3.55	3.12	61.395	<0.001
Opportunities for training/continuing education	6.17	5.51	5.56	5.37	19.413	<0.001
Competitive salary	5.02	4.88	4.79	4.77	1.963	0.117
Competitive benefits	6.77	6.75	6.90	7.08	3.939	0.008
Enjoy living in the area (e.g. climate, amenities, culture)	6.14	6.47	6.60	6.93	14.691	<0.001
Wanted to live close to family and friends	5.94	6.09	6.33	6.48	6.930	<0.001
Wanted to work with specific individual(s)	5.10	4.91	5.14	5.09	1.264	0.285
Wanted a job in the public health field	5.99	5.88	6.40	6.67	17.934	<0.001
Needed a job, but it didn't matter if it was in public health	3.92	3.70	3.26	3.03	21.313	<0.001
Personal commitment to public service	6.47	6.48	6.88	7.17	19.411	<0.001

Family member/role model was/is working in public health	1.55	1.47	1.42	1.41	1.003	0.390
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Differences by Race:

Analysis of the data by race also finds some statistically significant differences among workers, but these differences only emerge among retention factors. No differences by race emerge in terms of recruitment factors. Also, too few Native Hawaiian and Pacific Islander workers responded to include in analyses.

African-American respondents significantly rate the ability to work from home as more important than Native American workers with Asian and White workers' responses. The other three statistically significant differences reflect higher ratings by Asian respondents than the other three racial groups. Asian workers rate immediate opportunities for promotion, future opportunities for promotion and living near family and friends significantly higher than other groups.

Differences between Hispanic and non-Hispanic Respondents: Analysis by a Chi-square procedure of the data found six statistically significant differences between respondents who report their ethnicity as Hispanic or not. Hispanic respondents report flexibility of work schedule the ability to work from home, and having a family member or role model working in public health, are more important recruitment factors than for their non-Hispanic peers. In terms of retention, Hispanic workers rate the ability to innovate wanting a job in public health and having a role model or family member in public health as more important.

Other Findings:

There were some differences in regional importance in recruitment and retention factors. The Midwest and Southeast rated flexibility of work schedule more important than any other region. The West had a significantly younger proportion of respondents than other regions and ranked competitive salary, ability to telecommute and opportunities for promotion and advancing professionally higher than any other region. Also, competitive salary seemed to be more important for respondents who worked in larger health departments. Further analyses including length of public health employment by professional and organizational leadership by current job settings are included in the appendices.

Organizational Leadership, Management, Professional Development Characteristics:

Organizational leadership characteristics was determined by rating based off a 5 point Likert scale with the categories of strong agree, somewhat agree, neither agree or disagree, somewhat disagree, and strongly disagree. This was determined by rating of how strongly agree or disagree with the statements about their organization. While the majority of respondents rated that strongly agree or agree with all leadership characteristics as contained in table there was a over a third who did not agree that there is atmosphere of trust and mutual respect within their organization and that the management and staff have a shared vision (Table 9).

Table 9: Organizational Leadership Characteristics

	Strongly Agree or Agree	Strongly or Somewhat Disagree
Trust/Respect	56% (53%)*	33% (36%)*
High Professional Standards	65% (63%)*	22% (24%)*
Appropriate Performance Evaluations	53% (51%)*	28% (29%)*
Constructive Feedback	55% (52%)*	28% (29%)*
Shared Vision	56% (53%)*	31% (33%)*

Governmental Respondents

The majority of respondents rated that strongly agree or agree with all management characteristics to address employee concerns. However, there was over a third who did not agree that there is that management had properly addressed employee concerns about autonomy/employee empowerment and leadership issues (Table 10). Additionally, there was almost a third who did not feel like management properly addressed concerns about professional development which may be problematic in retaining employees.

Table 10 : Over the past 12 months, management in the organization has made a sustained effort to address employee concerns about:

	Strongly Agree or Agree	Strongly or Somewhat Disagree
Tools Needed to do Job	63% (60%)*	22% (24%)*

Professional Development	60% (58%)*	24% (26%)*
Autonomy/Employee Empowerment	47% (45%)*	29% (31%)*
Leadership Issues	45% (44%)*	32% (34%)*
New Employee Support	48% (46%)*	23% (23%)*
Safety and Security	64% (62%)*	14% (15%)*

Governmental Respondents

Finally, when asked to rate the professional development of organization. There were only two areas where a majority of respondents agreed these included opportunities to learn from one another and provides employees with most needed knowledge and skills (table 11). An overwhelming majority felt that the organization did not have resources available for employees and over a third disagreed that there is adequate time provided and training to fully use technology for professional development. This suggests that even if an employee wants to pursue professional development opportunities for themselves there may neither resources or time.

Table 11: Please rate how strongly you agree or disagree with the following statements about professional development in your organization:

	Strongly Agree or Agree	Strongly or Somewhat Disagree
Resources Available for Employees	36% (33%)*	51% (55%)*
Adequate Time Provided	45% (43%)*	38% (41%)*

Training to Fully Use Technology	48% (45%)*	35% (39%)*
Opportunities to Learn from One Another	66% (65%)*	18% (19%)*
Provides Employees with Most Needed Knowledge and Skills	60% (58%)*	21% (23%)*

Governmental Respondents

Discussion:

The public health workforce represents a critical link in the nation's healthcare system. Like the American workforce as a whole, the public health workforce represents an aging group of employees with a deficit of trained professionals to fill roles vacated by retirements. Developing strategies to recruit and retain trained professionals who are eligible for retirement or who are attractive to potentially more lucrative private healthcare jobs offer important tools for public health agencies. The Council on Linkages and PHF are pursuing a second phase of the National Pipeline Survey among the 28 states that do not use TRAIN. This second survey will use the same questions but will employ a different methodology to reach workers.

While not generalizable to all public health workers nationally, the Pipeline Survey represents an important first step and the largest survey recruitment and retention survey of public health workers to date. Several potential strategies emerge from these data:

1. **Linking the Individual Worker and the Public Health Mission:** Respondents report the activities associated with a particular job rate the highest in job recruitment. Linked to these activities are other highly rated factors around identifying with the agency's mission, commitment to public service, and a desire to work in this field –factors which respondents rate higher actually now than when they began their job. Strategies which inculcate a stronger link between the agency's mission in improving public health and the personal commitment of the employee to this mission could help recruit and retain workers.
2. **Benefits:** Respondents consistently rate benefits higher than competitive salaries. With respondents rating job flexibility and proximity to family and friends higher in importance in retention, attractive benefits packages incorporating flex time, elder care, on-site daycare and similar benefits allowing workers greater flexibility to care for loved ones may be beneficial.
3. **Training and Education:** In terms of recruitment and retention, emphasizing training and educational opportunities may also offer attractive options for some workers. Five percent of workers who had not completed a bachelor's degree when they began their public health career did so by the time they answered the survey. Additionally, another 8.7% of respondents report they completed a graduate degree while working in public health. Respondents overall rate opportunities for training as moderately important (5.8 on a scale from 0 to 10) in their decisions to take and stay in a public health job. Offering workers trainings, tuition credits, and

scheduling flexibility to pursue more education is likely to be attractive to this segment of workers.

Beyond the information on individual public health workers gathered by this study, it also offers an important first venture into using the TRAIN system to research public health workers. As the largest database of public health and emergency responders in the country, it offers researchers an imperfect but possibly best current mechanism for studying the national public health workforce at the individual worker level.

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Appendices:

Primary professional role by years spent as employee of governmental public health agency

Primary Professional Role				
	<5	5-9	10-19	20+
Administrative Support staff	281 (26.9%)	228 (21.9%)	301 (28.9%)	233 (22.3%)
Administrator/Director/Manager	282 (15.5%)	331 (18.2%)	612 (33.6%)	598 (32.8%)
Allied Health Professional	146 (27.4%)	93 (17.4%)	159 (29.8%)	135 (25.3%)
Biostatistician/Epidemiologist/Statistician	115 (32.2%)	98 (27.5%)	96 (26.9%)	48 (13.4%)
Data Analyst	86 (27.6%)	84 (26.9%)	85 (27.2%)	57 (18.3%)
Environmental Health Specialist	104 (15.8%)	133 (20.2%)	186 (28.2%)	236 (35.8%)
Emergency Responder/Planner	229 (29.8%)	179 (23.3%)	212 (27.6%)	148 (19.3%)
Faculty/Educator	70 (27.8%)	62 (24.6%)	68 (27.0%)	52 (20.6%)
Health Educator	300 (31.0%)	213 (22.0%)	291 (30.1%)	163 (16.9%)
Laboratory Professional	60 (25.5%)	45 (19.1%)	66 (28.1%)	64 (27.2%)
Nurse	446 (22.7%)	399 (20.3%)	616 (31.3%)	507 (25.8%)
Physician	49 (28.8%)	36 (21.2%)	49 (28.8%)	36 (21.2%)

Public Health Service Provider (non-clinical)	257 (29.3%)	160 (18.2%)	267 (30.4%)	194 (22.1%)
Researcher	71 (38.0%)	47 (25.1%)	47 (25.1%)	22 (11.8%)
Student	57 (51.4%)	27 (24.3%)	18 (16.2%)	9 (8.1%)
Total	1884	1561	2181	1835

Number of respondents who agreed or strongly agreed with positive statements about organization or leadership within their workplaces by primary professional role of respondent

Please rate how strongly you agree or disagree or with the following statements about leadership in your organization:

Agree or Strongly Agree with	Primary Professional Role														
	Admin Support	Admin	AH	Bios tat /Epi /Stat	Data Analyst	Env iron	Em erg . Res po n	Fac ulty Edu cato r	Hea lth Edu cato r	Lab Pro f	Nu rse	MD	PH Ser vice Pro vid er (no n-clini cal)	Rese arch er	Stu den t
There is an atmosphere of trust and mutual respect with the organization	918 (52.9%)	1455 (61.1%)	469 (55.9%)	200 (51.9%)	194 (46.8%)	384 (52.6%)	686 (60.4%)	280 (61.1%)	825 (57.7%)	194 (55.4%)	1719 (57.4%)	153 (63.0%)	762 (56.2%)	165 (59.3%)	903 (58.3%)
Management and staff have shared	903 (52.1%)	1485 (61.9%)	467 (55.6%)	193 (50.3%)	196 (47.4%)	354 (48.7%)	643 (56.7%)	282 (61.6%)	815 (57.2%)	175 (49.8%)	1785 (59.6%)	146 (60.6%)	725 (53.5%)	155 (55.9%)	141 (56.2%)

vision															
Employees are held to high professional standards for the work they do	981 (56.9%)	163 0 (68.5%)	547 (65.2%)	222 (57.6%)	218 (52.7%)	476 (65.1%)	785 (69.4%)	320 (69.9%)	951 (66.7%)	230 (65.5%)	209 2 (69.8%)	164 (68.0%)	874 (64.9%)	183 (65.6%)	159 (63.6%)
Employee performance evaluations are handled in an appropriate manner	877 (50.7%)	129 8 (60.4%)	443 (53.1%)	188 (48.8%)	196 (47.2%)	350 (48.0%)	543 (47.8%)	258 (56.5%)	789 (55.3%)	171 (48.9%)	173 9 (58.1%)	124 (51.2%)	693 (51.2%)	142 (50.9%)	128 (51.0%)
The procedures for employee performance	852 (49.3%)	124 7 (52.4%)	432 (51.7%)	197 (51.2%)	178 (42.9%)	351 (48.2%)	516 (45.7%)	248 (54.4%)	764 (53.8%)	169 (48.3%)	165 9 (55.5%)	123 (51.2%)	669 (49.6%)	138 (49.9%)	125 (50.0%)

e evaluations are consis tent															
Emplo yees receiv e constr uctive feedb ack that can help them impro ve their perfor manc e	882 (51.0%)	140 (59.0%)	453 (53.9%)	198 (51.5%)	196 (47.2%)	360 (49.2%)	611 (54.0%)	276 (60.3%)	816 (57.3%)	174 (49.7%)	173 (58.0%)	123 (51.0%)	709 (52.4%)	141 (50.5%)	140 (55.8%)

Number of respondents who agreed or strongly agreed with positive statements about organization or leadership within their workplaces by primary professional role of respondent

Over the past 12 months, management in the organization has made a sustained effort to address employee concerns about:

	Primary Professional Role														
Agree or Strongly Agree	Admin Support	Admin	AH	Biostat /Epi/ Stat	Data Analyst	Environ	Emerg. Respon	Faculty Educator	Health Educator	Lab Prof	Nurse	MD	PH Service Provider (non-clinical)	Researcher	Student
Tools needed to do my job	1042 (60.3%)	1525 (64.1%)	526 (63.0%)	220 (57.3%)	216 (52.7%)	439 (60.1%)	754 (66.5%)	306 (67.3%)	911 (64.2%)	196 (56.0%)	193 (64.2%)	143 (58.9%)	847 (62.8%)	171 (61.2%)	160 (63.5%)
Professional development	923 (53.7%)	1488 (62.6%)	507 (60.7%)	218 (56.8%)	216 (52.5%)	414 (56.8%)	721 (63.7%)	289 (63.4%)	933 (65.6%)	166 (47.7%)	189 (63.4%)	148 (61.4%)	794 (58.9%)	171 (61.3%)	161 (63.8%)
Autonomy/Employee empowerment	656 (38.2%)	1263 (53.1%)	391 (47.1%)	154 (39.9%)	155 (37.9%)	306 (42.0%)	574 (50.7%)	248 (54.3%)	727 (51.2%)	125 (35.9%)	158 (52.9%)	111 (46.2%)	594 (44.2%)	135 (48.8%)	124 (49.8%)
Leadership issues	702 (40.9%)	1321 (55.5%)	366 (43.9%)	135 (35.3%)	149 (36.3%)	277 (38.2%)	566 (50.1%)	237 (52.5%)	670 (47.3%)	130 (37.4%)	147 (49.2%)	128 (52.6%)	570 (42.4%)	117 (42.0%)	113 (44.8%)
New employee support	492 (46.3%)	1337 (56.2%)	385 (46.3%)	160 (41.8%)	158 (38.5%)	295 (40.5%)	593 (52.6%)	222 (48.8%)	689 (48.6%)	148 (42.4%)	155 (52.0%)	117 (48.5%)	619 (45.9%)	128 (46.2%)	120 (48.0%)
Safety and security	1116 (64.9%)	1551 (65.3%)	528 (63.3%)	217 (56.5%)	239 (58.3%)	400 (54.7%)	734 (65.2%)	274 (60.2%)	920 (64.9%)	234 (67.0%)	199 (66.7%)	152 (63.0%)	849 (63.0%)	158 (56.9%)	154 (61.4%)

Number of respondents who agreed or strongly agreed with positive statements about organization or leadership within their workplaces by primary professional role of respondent

Please rate how strongly you agree or disagree with the following statements about professional development in your organization:

	Primary Professional Role (Question 19)														
Agree or Strongly Agree	Admin Support	Admin	AH	Biostat /Epi/ Stat	Data Analyst	Environ	Emerg. Respon	Faculty Educator	Health Educator	Lab Prof	Nurse	MD	PH Service Provider (non-clinical)	Researcher	Student
Sufficient fund/resources	556 (32.2%)	881 (37.1%)	337 (40.3%)	130 (36.0%)	135 (33.0%)	232 (31.7%)	481 (42.5%)	190 (41.6%)	622 (43.8%)	79 (22.6%)	113 (37.8%)	89 (36.9%)	529 (39.1%)	107 (38.6%)	103 (41.0%)
Adequate time	651 (37.7%)	1097 (46.2%)	416 (49.8%)	176 (45.8%)	153 (37.4%)	319 (43.7%)	573 (50.6%)	233 (50.9%)	711 (49.9%)	107 (30.6%)	138 (46.4%)	119 (49.4%)	666 (49.1%)	132 (47.7%)	130 (51.5%)
Employees have sufficient training to fully utilize technology needed for work	742 (43.2%)	1156 (48.8%)	443 (53.0%)	151 (39.6%)	152 (37.3%)	331 (45.4%)	593 (52.4%)	245 (53.8%)	712 (50.3%)	178 (51.4%)	151 (50.9%)	120 (50.2%)	672 (49.8%)	132 (48.0%)	126 (50.2%)
Employees are provided with opportunities to learn from one another	1078 (62.3%)	1673 (70.5%)	555 (66.4%)	250 (64.9%)	252 (61.5%)	477 (65.5%)	799 (70.4%)	316 (69.4%)	951 (67.0%)	220 (63.1%)	208 (75.5%)	157 (65.7%)	867 (64.2%)	191 (68.9%)	160 (63.5%)
Professional development	926 (53.8%)	1496 (63.1%)	533 (64.4%)	225 (58.6%)	205 (50.6%)	437 (60.3%)	731 (64.4%)	288 (63.4%)	923 (65.0%)	192 (54.4%)	188 (63.4%)	136 (53.9%)	837 (62.1%)	158 (57.1%)	151 (60.0%)

ment	%)		0%)		0%)	0%)	9%)	%)	%)	9%)	2%)	1%)	%))	%)
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Number of respondents who agreed or strongly agreed with positive statements about organization or leadership within their workplaces by work setting

Please rate how strongly you agree or disagree with the following statements about leadership in your organization:

Agree or Strongly Agree with	Current Work Setting (Question 17)										
	Academic Institution	Gov't Federal	Gov't State	Gov't Local	Gov't Territory	Gov't Tribal	Healthcare Services	Non-Profit	Private Industry	Self-employed	Unemployed
There is an atmosphere of trust and mutual respect with the organization	489 (66.0%)	178 (56.0%)	2431 (48.1%)	1809 (61.1%)	9 (60.0%)	21 (55.3%)	1684 (59.5%)	669 (64.1%)	177 (59.2%)	62 (55.4%)	6 (46.2%)
Management and staff have shared vision	489 (66.1%)	164 (51.9%)	2442 (48.3%)	1763 (59.6%)	7 (73.3%)	21 (55.3%)	1691 (59.9%)	663 (63.6%)	170 (57.5%)	62 (55.4%)	9 (60.0- %)
Employees are held to high professional standards for the work they do	549 (73.9%)	202 (63.7%)	2941 (58.3%)	2083 (70.5%)	9 (64.3%)	19 (50.0%)	1940 (68.8%)	750 (72.2%)	209 (69.7%)	74 (66.1%)	10 (71.4%)

Employee performance evaluations are handled in an appropriate manner	415 (56.0%)	158 (50.1%)	2488 (49.3%)	1605 (54.4%)	5 (33.3%)	21 (55.2%)	1643 (58.2%)	601 (57.9%)	159 (53.4%)	47 (41.9%)	5 (35.7%)
The procedures for employee performance evaluations are consistent	407 (55.2%)	150 (47.9%)	2452 (48.6%)	1537 (52.1%)	6 (40.0%)	19 (50.0%)	1594 (56.5%)	569 (54.8%)	150 (50.2%)	49 (43.7%)	7 (50.0%)
Employees receive constructive feedback that can help them improve their performance	442 (59.7%)	154 (48.9%)	2523 (50.0%)	1700 (57.4%)	7 (46.7%)	21 (55.3%)	1659 (58.8%)	6331 (60.8%)	168 (56.4%)	60 (53.5%)	6 (42.9%)

Number of respondents who agreed or strongly agreed with positive statements about organization or leadership within their workplaces by work setting

Please rate how strongly you agree or disagree with the following statements about leadership in your organization:

Agree or Strongly Agree with	Current Work Setting (Question 17)	Academic Institution	Gov't Federal	Gov't State	Gov't Local	Gov't Territory	Gov't Tribal	Health care Services	Non-Profit	Private Industry	Self-employed	Unemployed
Tools needed to do my job		515 (70.1%)	188 (59.7%)	283 (56.3%)	2041 (69.3%)	12 (80.0%)	22 (59.4%)	1833 (65.4%)	708 (68.6%)	191 (65.2%)	59 (54.1%)	10 (62.6%)
Professional development		517 (70.5%)	192 (61.3%)	264 (52.6%)	1965 (66.8%)	7 (46.6%)	23 (63.9%)	1725 (61.6%)	684 (66.1%)	179 (61.3%)	64 (58.2%)	12 (75.1%)
Autonomy/Employee empowerment		430 (58.6%)	145 (46.4%)	193 (38.5%)	1583 (53.8%)	6 (40.0%)	18 (48.6%)	1385 (49.5%)	568 (55.2%)	150 (51.0%)	50 (45.9%)	8 (50.0%)
Leadership issues		393 (53.8%)	145 (46.2%)	194 (38.8%)	1512 (51.5%)	8 (53.3%)	12 (33.3%)	1344 (48.0%)	548 (53.0%)	143 (48.7%)	41 (37.6%)	8 (50.0%)
New employee		378 (51.7%)	140 (45.6%)	221 (44.6%)	1539 (52.4%)	5 (33.3%)	17 (45.6%)	1472 (52.7%)	545 (52.6%)	147 (50.0%)	45 (41.3%)	7 (43.8%)

support	%)	0%)	2%)	%0	%)	9%))	7%)	%)	%)	
Safety and security	479 (65.2 %)	196 (62.4 %)	301 3 (59.9 %)	1984 (67.7 %)	12 (80.0 %)	23 (62.1 %)	1902 (68.0 %)	696 (67.5 %)	187 (63.8 %)	57 (52.3 %)	11 (68.8 %)

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Number of respondents who agreed or strongly agreed with positive statements about organization or leadership within their workplaces by work setting

Please rate how strongly you agree or disagree with the following statements about professional development in your organization

Agree or Strongly Agree with	Current Work Setting (Question 17)	Academic Institution	Gov't Federal	Gov't State	Gov't Local	Gov't Territory	Gov't Tribal	Health care Services	Non-Profit	Private Industry	Self-employed	Unemployed
Sufficient fund/resources		351 (48.1%)	137 (44.4%)	1436 (28.6%)	1201 (41.0%)	4 (28.5%)	20 (55.6%)	1098 (39.5%)	481 (46.9%)	138 (47.7%)	39 (35.8%)	5 (31.3%)
Adequate time		409 (56.2%)	149 (48.9%)	1865 (37.3%)	1502 (51.4%)	7 (46.7%)	18 (50.0%)	1275 (45.9%)	556 (54.2%)	140 (48.3%)	47 (43.5%)	7 (43.8%)
Employees have sufficient training to fully utilize technology needed for work		428 (59.1%)	154 (50.4%)	2052 (41.1%)	1525 (52.3%)	10 (73.3%)	20 (55.5%)	1465 (52.8%)	594 (58.0%)	164 (56.8%)	45 (41.3%)	7 (43.8%)
Employees are provided with opportunities to learn		508 (69.8%)	203 (66.6%)	3052 (61.0%)	2104 (72.0%)	11 (73.3%)	21 (58.3%)	1913 (69.0%)	734 (71.5%)	217 (74.8%)	72 (66.1%)	9 (56.3%)

from one another											
Professio nal developm ent	496 (68.4%)	190 (62.1 %)	2642 (52.9 %)	1934 (66.4 %)	9 (60.0 %)	23 (63.9 %)	1750 (63.2%)	684 (66.9 %)	186 (64.4 %)	66 (60.0 %)	8 (50.0%)

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Positions held by public health workers immediately prior to entering your current governmental public health position

Where were you before entering your current governmental PH position?	Current Professional Role														
	Admin Support	Admin	Allied Health ...	Bio-stat /Epi /Stat	Data Analyst	Environment	Emergency Response	Faculty Educator	Health Educator	Laboratory	Nurse	MD	PH Service Provider (non-clinical)	Researcher	Student
High School	75	47	14	5	9	24	48	10	32	7	38	3	32	4	4
Associate Degree	72	68	32	4	14	13	61	10	40	12	143	1	44	6	11
Undergrad PH program.	9	59	18	12	6	82	26	7	58	6	26	1	29	3	7
Other Undergrad program	65	224	68	30	37	124	88	18	124	50	160	2	79	28	19
Graduate	19	120	21	140	39	33	57	32	92	12	29	22	55	36	14

program in public health															
Other graduate program	27	133	66	23	27	49	48	19	70	20	66	2	58	21	7
Doctoral program in public health	0	8	2	15	4	1	0	9	3	2	1	0	2	11	1
Other doctoral program	6	33	17	5	7	8	7	12	6	5	1	33	9	7	2
Other advanced degree program (eg MD, JD, etc)	5	39	11	14	3	7	5	17	6	3	9	44	9	10	4
Other governmental agency	173	239	42	19	49	84	107	19	85	15	79	8	111	19	8

Healthcare Services	147	549	191	65	32	51	224	77	300	72	1356	73	256	30	28
Nonprofit Organization	72	232	84	36	26	23	98	27	175	147	14	11	135	26	11
Private Industry	405	385	82	46	89	253	202	34	169	63	309	14	225	29	38
Academic employment	30	125	33	60	34	33	45	41	104	20	68	22	68	30	10
Retired	12	25	5	0	3	11	17	1	5	4	12	4	13	2	0
Self Employed	52	71	27	11	13	36	56	16	54	6	40	21	59	11	5
Unemployed	125	62	24	20	28	45	32	7	50	15	63	3	43	11	8
Total	1294	2419	737	1891	417	861	1121	356	1373	326	2547	264	1227	284	177