

Appendix
Public Health Workforce Development Needs: A National Assessment of Executives' Perspectives
Leider et al.

Appendix Table 1. Importance of Skills in Day-to-Day Work, by Affiliate or Peer Network (Somewhat or Very Important)

Network	Communicate in a way that different audiences can understand	Collect valid and reliable data for use in decision making	Identify evidence-based approaches for addressing public health issues	Deliver programs and customer service in a culturally competent manner	Assess the drivers in your environment	Use community assets and resources to improve health in a community	Support application of quality improvement strategies for agency programs and services
AMCHP, %	100	100	100	100	90	95	100
APHL, %	78	96	74	81	67	33	89
ASPHN, %	100	100	100	100	100	100	100
CSTE, %	100	100	100	96	78	78	83
DPHP, %	100	94	97	100	87	97	97
Informatics, %	100	100	100	100	83	83	100
LAW, %	100	100	100	100	100	100	100
Legislative Liaisons, %	100	100	83	83	100	83	100
NACDD, %	100	100	100	100	100	100	100
SEHD, %	100	100	100	96	91	91	100
Safe States, %	100	100	100	100	100	95	90
TCN, %	100	100	100	100	96	92	92
Average, %	97	99	96	96	89	85	95

Notes: Skills derived from a workgroup convened by the Association of State and Territorial Health Officials (ASTHO) and the de Beaumont Foundation convened to redesign the training needs assessment for the 2017 fielding of the Public Health Workforce Interests and Needs Survey to ensure that the training needs assessment was useful, standardized, and built upon best practices.

AMCHP, Association of Maternal and Child Health Programs; APHL, Association of Public Health Laboratories; ASPHN, Association of State Public Health Nutritionists; CSTE, Council of State and Territorial Epidemiologists; DPHP, Directors of Public Health Preparedness Peer Network; NACDD, National Association of Chronic Disease Directors; SEHD, State Environmental Health Directors Peer Network; TCN, Tobacco Control Peer Network.

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Appendix Table 2. Percent of New Supervisors Required to Undertake Supervisor-Related Training, and Number of Hours of Training Required

Network	Percent requiring training	Mean number of hours	Median number of hours
AMCHP	60	20	16
APHL	70	20	15
ASPHN	90	30	32
CSTE	60	10	9
DPHP	80	18	16
Informatics	70	18	14
LAW	70	17	17
Legislative Liaisons	50	12	12
NACDD	70	25	18
SEHD	70	21	16
Safe States	70	26	30
TCN	60	21	8
Total	70	21	16

AMCHP, Association of Maternal and Child Health Programs; APHL, Association of Public Health Laboratories; ASPHN, Association of State Public Health Nutritionists; CSTE, Council of State and Territorial Epidemiologists; DPHP, Directors of Public Health Preparedness Peer Network; NACDD, National Association of Chronic Disease Directors; SEHD, State Environmental Health Directors Peer Network; TCN, Tobacco Control Peer Network.

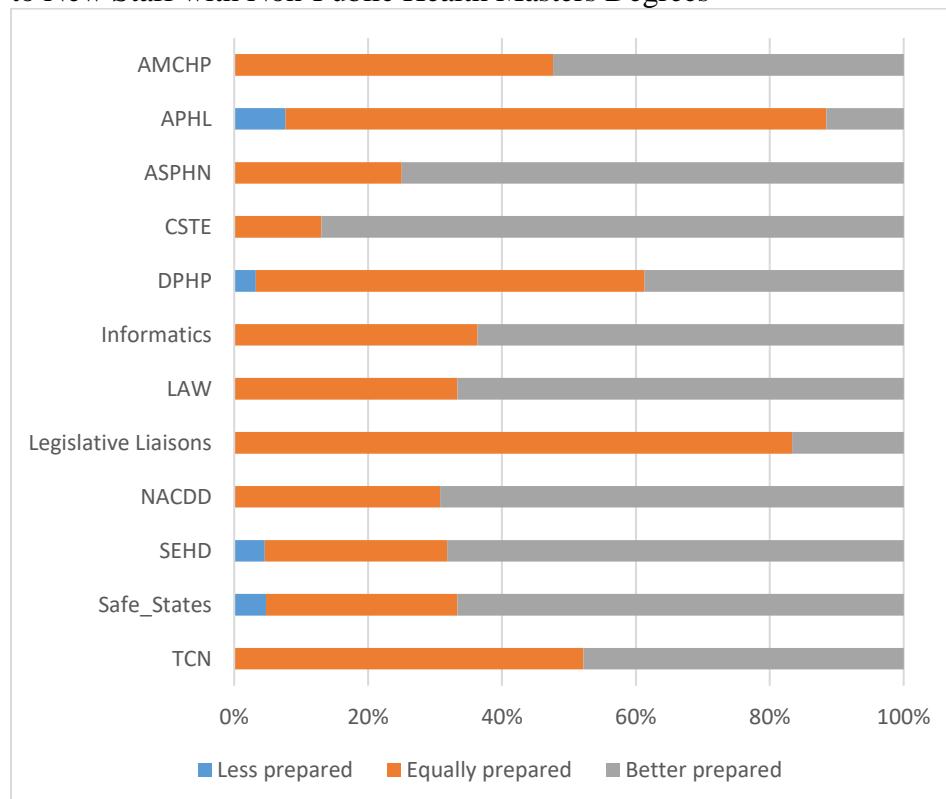
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Appendix Table 3. Number of Months New Hires Take to Become Independent, on Average

Network	New Bachelor's	New Public Health Master's	New other Master's
AMCHP	11	9	9
APHL	8	7	7
ASPHN	12	8	11
CSTE	9	6	8
DPHP	9	8	9
Informatics	10	7	9
LAW	7	8	9
Legislative Liaisons	10	7	7
NACDD	11	7	8
SEHD	10	8	9
Safe States	11	8	9
TCN	11	8	10
Average	10	8	9

AMCHP, Association of Maternal and Child Health Programs; APHL, Association of Public Health Laboratories; ASPHN, Association of State Public Health Nutritionists; CSTE, Council of State and Territorial Epidemiologists; DPHP, Directors of Public Health Preparedness Peer Network; NACDD, National Association of Chronic Disease Directors; SEHD, State Environmental Health Directors Peer Network; TCN, Tobacco Control Peer Network.

Appendix Figure 1. Preparation of New Staff with Masters of Public Health Degrees Compared to New Staff with Non-Public Health Masters Degrees



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2017 Directors Assessment of Workforce Needs Survey (DAWNS)

Q1.1 ***Directors Assessment of Workforce Needs Survey (DAWNS)***

About the Survey

You have been selected to participate in a national survey focused on identifying public health workforce needs from a manager's perspective. The survey is being conducted by the Association of State and Territorial Health Officials (ASTHO). Your participation is voluntary. Your responses are important to help determine opportunities for workforce development. The results of the survey will provide important leadership perspectives regarding the capacities and development needs of the state governmental public health workforce.

This survey is distinct from, but complementary to, the upcoming Public Health Workforce Interests and Needs Survey (PH WINS).

Instructions for Completing the Survey The survey has been sent to you specifically. Potential participants were identified from their participation as members of ASTHO's Affiliate Council organizations or peer networks. We ask that you complete the survey and not delegate it to a staff member.

Clicking "Continue" will be interpreted as your informed consent to participate. Your responses will remain confidential and only aggregate results of survey responses will be reported unless you specifically provide permission for your state to be identified in reports and publications.

Have Questions? If you have questions about the survey, please contact Kyle Bogaert, Director of Workforce Research at kbogaert@astho.org, (571) 522-2313, or Caitlin Langhorne, Senior Analyst of Workforce Research at clanghorne@astho.org, (571) 318-5442.

We recommend completing the survey on a desktop or laptop computer, and not on a mobile device.

Defining Terms In this survey, we will use several terms specific to public health practice. In several questions, you will see these terms displayed in blue. If you hover your mouse over them, the definition of that term will appear.

Q1.2 Please enter the following information for the primary contact for this survey. This is for response tracking only; your name will not be reported alongside responses.

- Your Name (1) _____
- Agency name (2) _____
- Job title (3) _____
- Email address (4) _____

Q1.4 In the course of this survey, we will be asking you to think about recruitment, readiness, retention, and training needs for your professional staff, including all staff who are **not supervisors** (i.e., exclude supervisors, managers, or executives you may oversee).

Please also exclude support personnel (e.g., clerical or facilities staff) and staff in other non-public health areas you might oversee, like social services or Medicaid.

Overall, approximately how many professional public health staff do you oversee that are **non-supervisors**, excluding support staff and staff working in other (non-public health) areas? *Note: If you do not oversee any staff, please select "0" and the survey will end once you proceed to the next page.*

[dropdown list]

Display This Question:

Overall, approximately how many professional public health staff do you oversee that are non-supervisors, excluding support staff and staff working in other (non-public health) areas?... Over 100 Is Selected

Q1.6 Please specify how many staff you oversee as direct reports (whole numbers only)

Q1.7 Which program area(s) do you oversee? Select all that apply.

- Communicable Disease - HIV (118)
- Communicable Disease - STD (119)
- Communicable Disease - Tuberculosis (120)
- Other Communicable Disease (121)
- Non-Communicable Disease (122)
- Injury (123)
- Environmental Health (124)
- Maternal and Child Health (125)
- Maternal and Child Health - WIC (126)
- Clinical Services (excluding TB, STD, family planning) (127)
- Clinical Services - Immunizations (128)
- Oral Health/Clinical Dental Services (129)
- Administration/Administrative Support (130)
- Mental Health (131)
- Substance Abuse, including tobacco control programs (132)
- Public Health Genetics (133)
- Vital Records (134)
- Medical Examiner (135)

- Animal Control (136)
- Emergency Preparedness (137)
- Epidemiology Surveillance (138)
- Program Evaluation (139)
- Health Education (140)
- Health Promotion/Wellness (141)
- Community Health Assessment/Planning (142)
- Training/Workforce Development (143)
- Global Health (144)
- Other Program Area (specify) (145)

Recruitment

Q2.1 Recruitment and Retention The following questions focus on recruitment and retention process and challenges within the programs you oversee.

Q2.2 Please indicate how significant each of the following barriers is to recruiting non-supervisory professional public health staff for programs you oversee (exclude support personnel and non public health staff).

	Not a barrier (1)	A small barrier (2)	A large barrier (3)	A very large barrier (4)
Too few candidates (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Candidates are not fully qualified (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Not a barrier (1)	A small barrier (2)	A large barrier (3)	A very large barrier (4)
Time to hire is too long (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wages/Salaries too low (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Benefits too low (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Position's geographic location (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sufficient funding to cover positions (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Unable to create appropriate position types (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Competition from private sector (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hiring freeze (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Civil service/union considerations (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q2.4 What drives staff turnover in the programs you oversee?

	Not a driver (1)	A small driver (2)	A large driver (3)	A very large driver (4)
Lack of acknowledgement/recognition (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Job satisfaction (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Not a driver (1)	A small driver (2)	A large driver (3)	A very large driver (4)
Lack of opportunities for advancement (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of training (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leadership changeover (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other opportunities within agency (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other opportunities outside agency (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pay (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Retirement (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Supervisor satisfaction (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of flexibility (flex hours/telework) (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Weakening of benefits (e.g., retirement contributions/pensions, health insurance) (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Work overload / burnout (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stress (15)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q2.6 Which of the following drivers of turnover would you say your agency is **adequately** addressing?

- Lack of acknowledgement/recognition (1)
- Job satisfaction (2)
- Lack of opportunities for advancement (3)
- Lack of training (4)
- Leadership changeover (5)
- Other opportunities **within** agency (6)
- Other opportunities **outside** agency (7)
- Pay (8)
- Retirement (9)
- Supervisor satisfaction (10)
- Lack of flexibility (flex hours/telework) (11)
- Weakening of benefits (e.g., retirement contributions/pensions, health insurance) (12)
- Work overload / burnout (13)
- Stress (14)
- Other (15) _____

Workforce capacity and training needs

Q3.1 For the following activities, please indicate if the decision whether or not to conduct each of the activities is primarily your decision, primarily your agency leadership's decision, or primarily a different state agency's decision.

	Primarily my decision (14)	Primarily my agency leadership's decision (15)	Primarily a different state agency's decision (16)
Require continuing education (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Include education and training objectives in performance reviews (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Allow use of working hours to participate in training (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pay travel/registration fees for trainings (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provide on-site training (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have staff position(s) responsible for internal training (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provide recognition of achievement (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q3.3 For the following activities, please indicate if you do any of the following for your staff. Select all that apply.

- Require continuing education (1)
- Include education and training objectives in performance reviews (2)
- Allow use of working hours to participate in training (3)
- Pay travel/registration fees for trainings (4)
- Provide on-site training (5)
- Have staff position(s) responsible for internal training (6)
- Provide recognition of achievement (7)
- Other (8) _____

Q3.4 Are your new supervisors required to take supervisor-related training?

- Yes (1)
- No (2)

Display This Question:

If Are your new supervisors required to take supervisor-related training? Yes Is Selected

Q3.6 How many hours are required?

[dropdown list]

Display This Question:

If How many hours are required? Over 100 Is Selected

Q3.7 Please estimate how many hours of training are required of new supervisors (whole numbers only).

Q3.8 What proportion of your new supervisors end up participating in supervisor-related training?

- <25% (1)
- 25%-49.9% (2)
- 50%-74.9% (3)
- 75% or more (4)

Q3.9 Are you aware of a leadership development program / institute / training series (or similar) accessible to staff in your state?

- Yes (1)
- No (2)

Display This Question:

*If Are you aware of a leadership development program / institute / training series (or similar) acce...
Yes Is Selected*

Q3.10 What is it called?

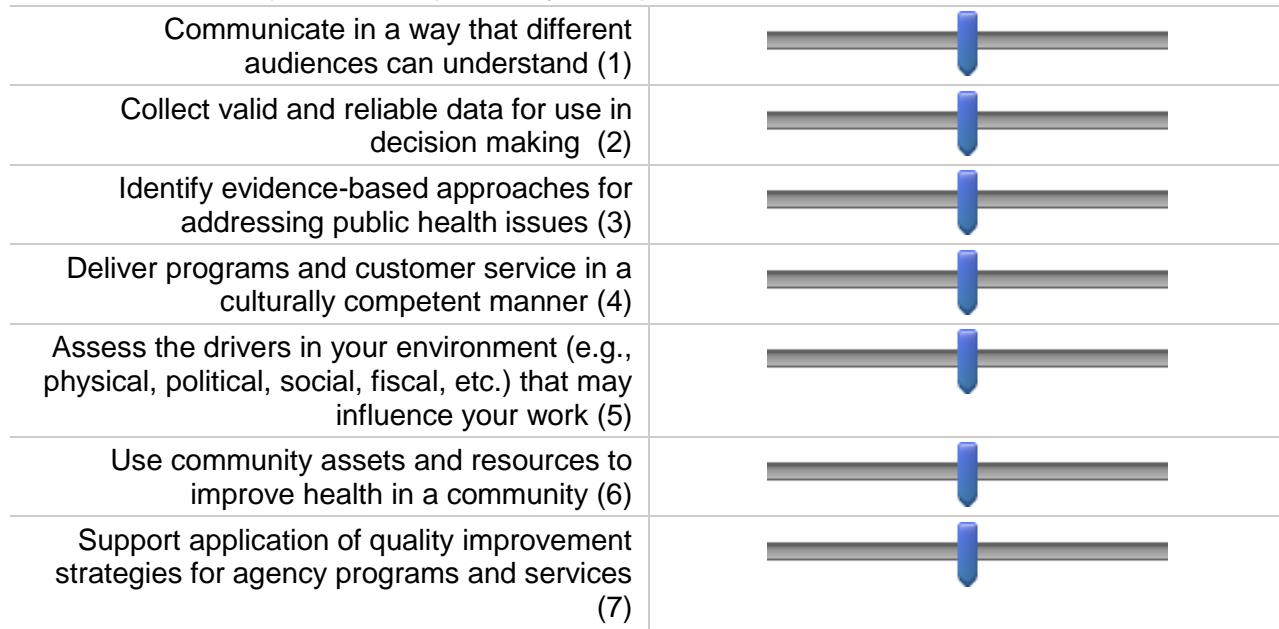
Q3.12 Please rate the importance of the following skills for the day-to-day work of the professional **public health staff**, including **all non-supervisors** in your purview. Please do not include support personnel, such as clerical or facilities, or social services staff.

	How important is this item in your non-supervisory staff's day-to-day work?			
	Not important (1)	Somewhat unimportant (2)	Somewhat important (3)	Very important (4)
Communicate in a way that different audiences can understand (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Collect valid and reliable data for use in decision making (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Identify evidence-based approaches for	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	How important is this item in your non-supervisory staff's day-to-day work?			
	Not important (1)	Somewhat unimportant (2)	Somewhat important (3)	Very important (4)
addressing public health issues (9)				
Deliver programs and customer service in a culturally competent manner (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Assess the drivers in your environment (e.g., physical, political, social, fiscal, etc.) that may influence your work (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use community assets and resources to improve health in a community (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Support application of quality improvement strategies for agency programs and services (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q3.13 What percent of the non-supervisory professional public health (and non-clerical/support/social services) staff are Proficient or Expert for each skill?—

Proficient: able to perform independently -- Expert: able to assist or teach others

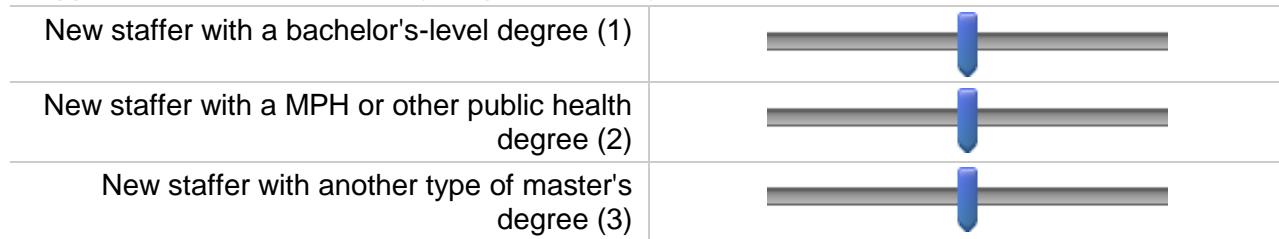


Q3.14 Please list any other cross-cutting skills, knowledge, or abilities not listed above that you believe are required of the employees you directly supervise whose highest level of education is a master's degree. Cross cutting skills, knowledge, and abilities are those that are broadly applicable (i.e., are not specific to a particular programmatic area).

Readiness

Q4.1 Readiness

Q4.2 In your experience, how long, on average, does it take to fully train a newly-hired professional public health staffer to perform his/her job duties independently? Do not include support staff or those in other (non-public health) areas.



Q4.3 Overall, on average, would you say newly-hired public health professional staff with formal public health education (e.g., an MPH) are better prepared, less prepared, or equally prepared for their new position compared to those who have a non-public health masters?

- Less prepared (1)
- Equally prepared (2)
- Better prepared (3)

Q4.4 In what ways are newly-hired public health professional staff with a formal public health degree (e.g., MPH) **better prepared** for their position when they are hired compared to other new staff with a non-public health masters?

Q4.5 In what ways are newly-hired public health professional staff with a formal public health degree (e.g., MPH) **less prepared** for their position when they are hired compared to other new staff with a non-public health masters?

Section IV: Demographics

Q5.1 Demographics

Q5.2 What is your gender?

- Male (1)
- Female (2)
- Non-binary/ third gender (3)

Q5.3 Are you Hispanic or Latino?

- No (1)
- Yes (2)

Q5.4 Please select the racial category or categories with which you most identify.

- White (1)
- Black or African American (2)
- Native Hawaiian or other Pacific Islander (3)
- Asian (4)
- American Indian or Alaska Native (5)
- Two or more races (6)

Q5.5 What is your age in years? Please round to the nearest whole year.
[dropdown list]

Q5.7 Please move the sliders to indicate how long you have been in each of the following (in years). Please round to the nearest year.

In your current position (1)	
With your current agency in total (in any position) (2)	
In public health practice in total (in any agency, in any position) (3)	

Q5.8 In years, please indicate how long you have been in public health management in total (in any agency, in any public health Manager or Executive position). Please round to the nearest year.

In management (0)	
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5.10 Please indicate which degrees you have attained. **Check all that apply.**

- Associate's degree in nursing (1)
- Other associate degree (2)
- BS/BA (3)
- BSN (4)
- Other baccalaureate degree (5)
- MA/MS (19)
- MBA (20)
- MHSA (15)
- MPA (18)
- MPH (14)

- MSN (17)
- MSW (16)
- Other masters degree (21)
- DDS/DMD (8)
- DrPH/PhD/ScD/other public health doctorate (10)
- DNP (9)
- DVM/VMD (7)
- JD (13)
- MD/DO, or international equivalent (6)
- PharmD (12)
- PhD/ScD/other non-public health doctorate (11)

Display This Question:

If Please indicate which degrees you have attained Is Greater Than 0

Carry Forward Selected Choices from "Please indicate which degrees you have attained. Check all that apply."

Q5.12 Please indicate the primary major/concentration associated with your degrees, "e.g. BA Biology, MPH Health Policy, MD Internal Medicine". Write "N/A" if this is not applicable.

[Carry forward choices from Q5.10]

End

Q6.1 Thank you for participating in the survey. If you would like to review any of your answers, please hit the "Back" button at the bottom of this page. Otherwise, hit "Submit."