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Tracking Public Health Workforce Retention: Observations From CDC's Public Health Associate Program

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Abstract

Objectives.—To describe the career trajectories of 1 cohort of US Public Health Associate Program (PHAP) alumni over 3 years since completing PHAP.

Methods.—We distributed a Web-based survey at 3 time points between 2014 and 2017 (response rate = 76%). We calculated descriptive statistics in SPSS.

Results.—At all time points, most alumni were employed. Of those, the percentage employed in public health was 100% at program completion, 86% at year 1, and 68% at year 3.

Conclusions.—Most alumni were employed in public health jobs at each time point. At the 3-year mark, approximately a third of the alumni had left public health employment, which is in line with documented rates of turnover within the broader public health workforce.

Public Health Implications.—Service learning programs like PHAP are effective at recruiting early career professionals into public health. The extent to which PHAP is effective at retaining workers in public health after the program appears most promising immediately following the program or in the short term after the program concludes. The extent to which workers are retained in the longer term requires further study.

Attracting qualified and talented individuals to the public health workforce, hiring them, and then retaining those individuals can be challenging.^{1–4} Governmental public health agencies in particular struggle to hire and retain employees.^{2–5} This challenge, coupled with a

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CONTRIBUTORS

C. J. Wigington was the primary author, conducted the literature review, designed the study, and collected the data. L. T. Colman conducted the analyses, collected and managed the data, and reviewed and edited the article. R. K. Sobelson helped design the study, managed the project, and reviewed and edited the article. A. C. Young championed and managed the project and reviewed and edited the article.

CONFLICTS OF INTEREST

The authors have no conflicts of interest to disclose. There are no known conflicts of interest or ethical issues associated with this publication. The study sponsors, the leaders of the Public Health Associate Program, did not have any role in the study design; collection, analysis, and interpretation of data; writing of the results; or the decision to submit the results for publication.

HUMAN PARTICIPANT PROTECTION

No institutional review board approval was necessary because this study was determined to be nonresearch.

shrinking public health workforce as a result of retirements,^{3,4} is central to discussions about workforce capacity and development. The public health workforce is vital to sustaining the health and well-being of communities through the delivery of essential public health services.^{6,7} Therefore, it is critical that public health organizations and agencies be able to recruit and retain qualified public health workers.

One potential strategy for fueling the public workforce pipeline is employer-sponsored service learning programs, which recruit and provide experiential learning opportunities to participants. One example is the Public Health Associate Program (PHAP) at the Centers for Disease Control and Prevention (CDC). PHAP is a competitive 2-year paid training program that recruits recent bachelor's or master's degree graduates. Approximately 65% of individuals enter PHAP with a bachelor's degree only and are 25 years old, on average. Participants, referred to as associates, complete 2-year assignments in health departments or nongovernmental organizations (NGOs) across the United States, referred to as host sites. Associates gain on-the-job experience while supporting host sites' unique needs.⁸ Over 10 years, PHAP has recruited and trained more than 1000 associates.

We describe the career trajectories of 1 cohort of US PHAP alumni over 3 years since completing the program. We focus on those who remain employed in public health, highlighting the types of agencies and organizations that employ these alumni.

METHODS

Participants included the 100 associates who started the PHAP in August 2012 and completed the program in August 2014.

We administered surveys at 3 distinct time points: program completion (administered June 2014), year 1 (administered August 2015), and year 3 (administered August 2017; Office of Management and Budget control number: 0920–1078; expiration date: March 31, 2021). Each survey was accessed through a Web-enabled link embedded in an e-mail. Participants were tracked over time via a unique identification number. Participation was voluntary.

Surveys included up to 37 closed-ended and 10 open-ended items. Surveys used conditional branching; therefore, the actual number of items responded to by participants varied. All surveys collected information about participants' professional status—specifically, whether they were employed, enrolled in an educational program, or pursuing something else. For those reporting that they were employed, respondents were asked to describe their work in terms of employer sector (i.e., federal government, nonfederal government, or nongovernment) and focus area (i.e., public health, health care, or other). The items presented were identical across all surveys.

We completed data analysis in June 2018.⁹ We calculated descriptive statistics in SPSS. Response rates were as follows: 100% at program completion (n = 100), 89% at year 1 (n = 89), and 83% at year 3 (n = 83). Only those who participated in all 3 surveys (76 of 100) were included in the final data set (76% response rate).

RESULTS

At program completion, 57% of alumni (43 of 76) were employed. This percentage increased to 67% (51 of 76) at year 1 and to 74% (56 of 76) at year 3. These percentages include both alumni who were employed only and alumni who were simultaneously employed and enrolled in an educational program. At program completion, 28% (21 of 76) of alumni were exclusively enrolled in an educational program. This percentage increased to 30% (23 of 76) at year 1 and decreased to 21% (16 of 76) at year 3 (Table 1).

At program completion, 100% (43 of 43) of employed alumni reported that their jobs were focused in public health. This percentage declined to 86% (44 of 51) at year 1 and 68% (38 of 56) at year 3.

At program completion, 70% (30 of 43) of alumni who were employed in public health were working for the federal government. Most worked at the CDC (29 of 30); 1 alumnus worked at the US Department of Agriculture. The percentage of alumni employed by the federal government decreased to 57% (25 of 44) at year 1 and to 32% (12 of 38) at year 3. Nonfederal governmental public health employment (e.g., employment at a state or local health department) increased over the 3 time points, from 19% (8 of 43) at program completion to 23% (10 of 44) at year 1 and to 55% (21 of 38) at year 3. Public health employment at NGOs (e.g., nonprofit agencies, for-profit companies) fluctuated. At program completion, 12% of alumni (5 of 43) were employed by an NGO. This percentage increased to 20% (9 of 44) at year 1 and decreased to 13% (5 of 38) at year 3.

DISCUSSION

This study described the career trajectories of associates from 1 PHAP cohort over 3 years. Results show that most of the alumni were employed at each time point, with the overall percentage of those employed increasing over the 3 years. At each time point, most employed alumni reported working in public health, but this percentage decreased over time. At the 3-year mark, approximately a third of the alumni (32%) had left public health employment. This is consistent with the rate of turnover (31%) found within the broader public health workforce, according to a national survey of state public health agency employees in 2017.¹⁰ Given that most alumni working in public health at program completion and year 1 were employed by the federal government, administrative factors unique to the federal government may have influenced turnover. One explanation could be the type of federal hiring mechanism—a temporary appointment limited to 5 years—used initially to hire this cohort. This type of appointment is used for short-term work assignments with an expected end date. When the appointment expired, alumni reentered the job market.

These findings are preliminary, and further inquiry is warranted. The alumni in this study will be invited to participate in another survey 5 years after completing PHAP. It will be important to examine whether the percentage employed in public health continues to decline or whether those who were exclusively enrolled in school during previous survey time points add to the public health workforce by year 5. Additionally, career trajectories of other

cohorts are being tracked with these same methods. For these cohorts, it will be important to examine CDC employment. Alumni who completed PHAP in 2015 and beyond were hired with a different hiring authority (*Pathways*),¹¹ allowing for conversion to permanent federal positions immediately post-PHAP, which was not possible for those who graduated in 2014. This hiring difference may result in a higher percentage of alumni employed by CDC moving forward.

This study had some limitations. We included only 1 cohort. All data were self-reported and not validated by other sources. The sample was adjusted to include only those alumni who participated in all surveys.

PUBLIC HEALTH IMPLICATIONS

Service learning programs like PHAP are effective at recruiting early career professionals to public health. The extent to which PHAP is effective at retaining workers in public health after the program appears most promising immediately following or in the short term after the program concludes. The extent to which workers are retained in the longer term requires further study.

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Note. The findings and conclusions in this article are those of the authors and do not necessarily represent the official position of CDC.

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US Public Health Associate Program (PHAP) Alumni Professional Status and Public Health Employment at 3 Time Points: June 2014, August 2015, and August 2017

TABLE 1—

Professional status	Program Completion, % (No./Total No.)	Year 1 Alumni, % (No./Total No.)	Year 3 Alumni, % (No./Total No.)
Employed	57 (43/76)	55 (42/76)	59 (45/76)
Furthering education	28 (21/76)	30 (23/76)	21 (16/76)
Both employed and furthering education	0 (0/76)	12 (9/76)	15 (11/76)
Enrolled in fellowship program	1 (1/76)	0 (0/76)	0 (0/76)
Undecided or looking for a job	14 (11/76)	3 (2/76)	5 (4/76)
Employed in public health	100 (43/43)	86 (44/51)	68 (38/56)
Public health employer type			
Federal government	70 (30/43)	57 (25/44)	32 (12/38)
Nonfederal government	19 (8/43)	23 (10/44)	55 (21/38)
Nongovernmental organization	12 (5/43)	20 (9/44)	13 (5/38)