



# Internship, Fellowship and Mentorship Programs Proving Beneficial to Laboratories and Participants

Creating a pipeline that fuels the public health laboratory workforce was the goal when the Association of Public Health Laboratories (APHL) and the US Centers for Disease Control and Prevention (CDC) teamed up to establish the Career Pathways in Public Health Laboratory Science Initiative in 2021 through the Enhancing Public Health Laboratory Capabilities and Increase Capacity cooperative agreement (Co-Ag).

The program included creating an internship program as well as building upon APHL's existing fellowship program. Since 2021, the pathway has become well-established, and the numbers are providing a measure to its success.

APHL, through its Quality Systems and Analytics (QSA) team, rigorously evaluates the fellowship and internship programs. One key way is through post-experience surveys, which are distributed to fellows, interns, and mentors at the end of their fellowship or internship experience. Fellowship alumni are surveyed one year after completion of their program. The data collected in the fellow and intern post-experience surveys include satisfaction, knowledge gained, career preparation, and career intent.

The post experience surveys were distributed for the first time in Year Three of the Co-Ag (July 1, 2022 through June 30, 2023) and the alumni survey was first distributed in Year Four of the Co-Ag (July 1, 2023 through June 30, 2024).

The surveys have found that the number of fellows who would recommend the program to other potential candidates rose from 78 percent in Year Three to 93 percent in Year Four.

## Key Survey Insights

### Fellowships

Indicator	Year 3 (July 1, 2022 - June 30, 2023)	Year 4 (July 1, 2023 - June 30, 2024)
Fellows who were able to network with public health laboratory leadership.	100% (9 out of 9)	93% (37 out of 40)
Fellows that would recommend the program to other potential candidates.	78% (7 out of 9)	93% (37 out of 40)

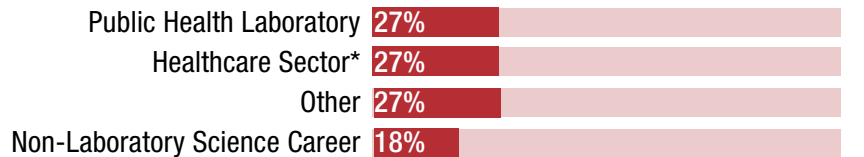
### Mentors

Indicator	Year 3 (July 1, 2022 - June 30, 2023)	Year 4 (July 1, 2023 - June 30, 2024)
Fellowship host laboratories that would recommend the fellowship program to others.	100% (12 out of 12)	98% (42 out of 43)
Internship host laboratories that would recommend the internship program to others.	100% (2 out of 2)	100% (29 out of 29)

### Fellowship Alumni

Indicator	Year 4 (July 1, 2023 - June 30, 2024)
<b>100%</b> of fellowship alumni reported finding a job within a month of completing the program.	

### Alumni Employment Sectors



n=11

\*including private and clinical laboratories

### Internships

Indicator	Year 3 (July 1, 2022 - June 30, 2023)	Year 4 (July 1, 2023 - June 30, 2024)
Interns who were able to network with public health laboratory leadership.	100% (6 out of 6)	97% (33 out of 34)
Interns that would recommend the program to other potential candidates.	100% (6 out of 6)	97% (33 out of 34)

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A third of fellows from both Year Three and Year Four participated in a Fellowship Immersion Experience, which allowed the fellow to visit another laboratory for up to two weeks. That opportunity was well received by the participants, with one saying, “My immersion experience was once-in-a-lifetime and taught me so much about adaptation in the laboratory. I’ll carry those lessons with me for the rest of my career.”

While the experience gained through the fellowship and internship program is significant, the ultimate goal is to increase staffing at public health laboratories. In that regard, the program is finding measurable success as well.

## Post-Fellowship Employment

Post experience surveys show the response rate and the number of fellows who accepted a laboratory position are improving.

The first fellow alumni survey was distributed in February of 2024, approximately one year after the completion of their program and highlights the successful placement of fellows into laboratory positions.

### Additional Analysis

For additional qualitative analyses on impact please refer to APHL’s fellowship and internship success stories:

[Missouri State PHL Fellowship Success Story](#)

[Tennessee State Public Health Laboratory Internship Success Story](#)

[Trailblazing to Support Public Health Laboratory Science Careers](#)

Early outcomes show that fellowship alumni are employed and found employment in less than one month after finishing their fellowship experience.

## Mentors Make an Impact

Mentors and the host laboratories were supportive of the Fellowship program. In Year Three, all participating laboratories that completed the post experience (12 of 12) survey would recommend the program to other laboratories. In Year Four, 98 percent (42 of 43) of survey respondents would recommend the program to other laboratories.

Mentors involved in the internship programs showed a willingness to recommend the program. All the mentors who completed the post-internship survey said they would recommend the program to other laboratories.

## Internships Show Success, Growth

Data from the internship post-experience survey shows that interns are consistently having a positive experience. Furthermore, approximately 18 percent of interns have accepted laboratory positions, most of which are at a public health laboratory.

Networking with public health laboratory leadership was rated highly by interns leaving the program. Ninety-seven percent of interns leaving the program as of June 30 would recommend the program to other potential candidates.

“The APHL internship is a great starting point for students who wish to learn more about research whether it is laboratory, in the field, or a combination. It will also provide you with a way to begin networking which is a valuable resource in scientific fields and build upon your public speaking skills,” said Trey Zinsmeister, a biological sciences



**Trey Zinsmeister pulls a drag cloth to collect tick samples for study at one of the Northern Kentucky University field sites.**

student at Northern Kentucky University (NKU), and an intern at NKU’s Medical Entomology Laboratory.

The data suggests that Career Pathways Initiative is a well-received program among fellows, interns and mentors. Increases in the number of fellows, along with a high percentage of interns and near unanimous consensus of mentors who would recommend the program attest to the success of the programs.

In addition, the employment of fellows and interns suggest Career Pathways is fulfilling its goal by supplying candidates to fill vacancies at public health laboratories.

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