

## **NNPHI PUBLIC HEALTH LEADS:**

# Exploratory Report on Public Health Data Science & Leadership for Recent Graduates

**INFOGRAPHIC**

We developed a follow-up report that focused on the needs of early career public health professionals and recent graduates within their first six months to two years of employment or currently seeking to start a career in public health. This report highlights insights based on a survey of **31 recent graduates** and a listening session with **13 recent graduates**. These individuals include early-career public health professionals and recent graduates within their first **6 months to 2 years** of employment as well as those seeking public health roles but not yet employed.

These findings provide valuable guidance for addressing critical workforce needs, identifying areas for curriculum improvement, and strengthening recruitment and retention strategies. Specifically, these insights will help academic leaders and institutions and public health leaders more effectively:

1. **Identify recruitment and retention facilitators and barriers,**
2. **Identify gaps in academic curricula compared to skills needed on the job,**
3. **Identify current gaps in data science and the leadership capacity, accessibility, training, and education needs of new public health workforce members, and**
4. **Align workforce needs and current public health programs with data science and leadership curricula.**

1.

## Recruitment & Retention: Facilitators and Barriers



**72%**

**OF PARTICIPANTS**

cited a desire to help people as their **primary motivation** to work in public health.

### TOP BARRIERS:

- **Entry-Level Mismatch:** Job postings for entry-level roles often require two or more years of experience and advanced technical skills.
- **Low Compensation:** Pay for early roles is considered insufficient when compared to living expenses.
- **Lack of Guidance:** Limited access to mentors or career advisors exacerbates challenges during job searches.



**KEY TAKEAWAY:** To improve retention, institutions and agencies should prioritize mentorship, fair recruitment processes, and wages that reflect the cost of living.

## 2. Academic Gap vs. Job Needs



### Essential Skills Gaps:

While coursework included foundational topics, participants reported lacking critical applied skills such as:

- **Data Management Tools:** GIS, Tableau, Power BI, R.
- **Leadership and Communication:** Workforce development, grant writing, budgeting, and program management.

### Real-World Practice:

**OVER**

**60%**

**OF PARTICIPANTS**

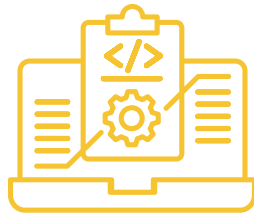
expressed **a need for practical, hands-on experiences** during their academic programs.



**KEY TAKEAWAY:** Institutions should integrate applied skill development, mentorship programs, and workforce-aligned curricula.

### 3. Data Science & Leadership Capacity

ONLY  
**35%**  
OF PARTICIPANTS  
felt confident in their  
data science skills.



TESTIMONIAL

*"When I came into the job, there were a lot of people just gone. They had left, and lots of us were fairly new. We supported each other to get things right."*

#### TOP NEEDS for Data Science:

- Interpreting and visualizing data for decision-making
- Coding, data cleaning, and statistical analysis

#### TOP NEEDS for Leadership:

- "How to be a manager," program budgeting, and fostering team collaboration.

**Financial and accessibility barriers** limited post-graduation training opportunities for many participants.



**KEY TAKEAWAY:** Increasing access to affordable, post-graduation training in leadership and data science will bridge key workforce gaps.



### 4.

### Aligning Workforce Needs with Programs



#### High-Quality Mentorship:

Participants emphasized that mentorship and career guidance should be a key academic offering.



#### Practical Training:

Suggestions included mini-courses on job search skills (e.g., resume writing, networking), real-world practicums, and career boot camps.

#### TOP SKILLS for Public Health Programs:

- Data science tools (GIS, Tableau, R)
- Communication and leadership
- Grant writing and budgeting



**KEY TAKEAWAY:** Schools of public health/academic institutions should evolve their curricula to include applied leadership and data science training, enabling new graduates to meet workforce demands.

# KEY FIGURES



## NEARLY ONE IN THREE (32%)

of survey respondents reported that they were not currently employed after graduation, indicating ongoing challenges in finding public health roles.

ALMOST  
TWO  
OUT OF  
THREE



# 60%

of listening session participants expressed that entry-level positions often required two or more years of experience, creating a barrier for recent graduates.



## Nearly half of (14 out of 31)

respondents identified “using data analysis tools and processes” as the most critical additional training needed to be more effective in their roles.



ONLY

# 35%

of listening session participants felt confident in their data science skills upon entering the workforce, highlighting a significant skill gap.

OVER

# 60%



of participants cited a need for practical, hands-on experiences during their academic programs to better prepare them for workforce demands.

# DEMOGRAPHICS

## SURVEY RESPONDENTS



- The **average age of survey respondents was 27 years**, with ages ranging from **22 to 40 years**.
- Respondents represented **16 U.S. states and 3 countries outside the United States**, highlighting the diverse geographical reach of participants.



# 84%

of respondents **attended academic institutions that were CEPH-accredited**, emphasizing the importance of accreditation in public health education.

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Please reach out to our **Climate and Crisis Preparedness portfolio** at [ccp@nnphi.org](mailto:ccp@nnphi.org) with any questions or to learn more.

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