



OPEN FORUM

NEXT GENERATION

SHAPING THE FUTURE TOGETHER

SEPTEMBER 18-20

📍 CHICAGO, IL

Madelyn Gustafson

Program Analyst, NNPHI

Cultivating Data Science Leaders in Public Health

**Public Health Leadership and Education, Advancing Health Equity
and Data Science (PH LEADS)**

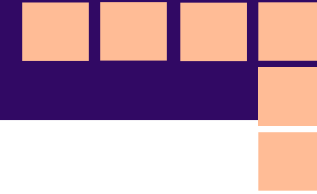
Open Forum - September 2024

Chicago, IL

NNPHI Climate & Crisis Preparedness Staff

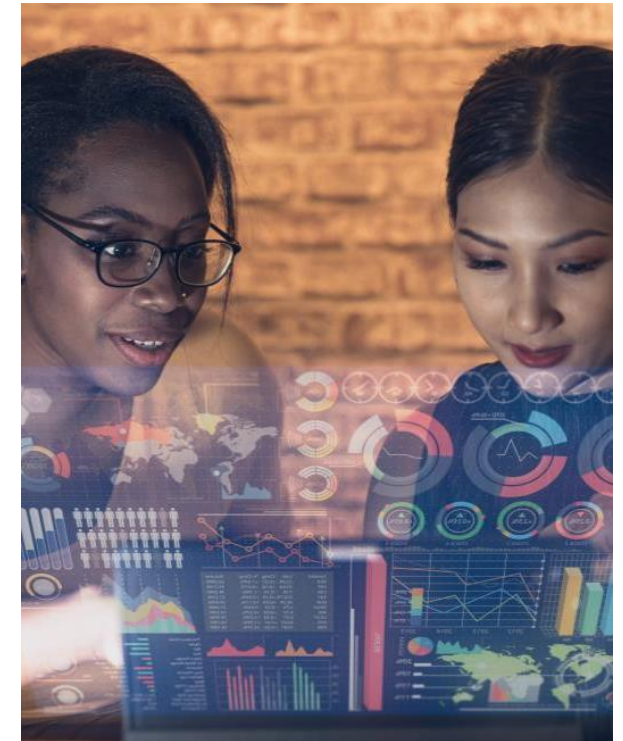
- **Diana Hamer**, PhD, Director, Climate & Crisis Preparedness (CCP)
- **Francesca Toledo-Alexander**, MS, Senior Program Manager, CCP
- **Madelyn Gustafson**, Program Analyst, CCP
- **Jennifer Ventura**, Program Assistant, CCP

Public Health Leadership and Education, Advancing Health Equity and Data Science



Strengthens Population and Public Health Workforce Pathways

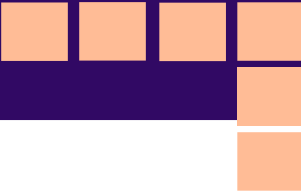
- Increase the effectiveness of data science training
- Increase leadership and data science competencies of emerging public health professionals
- Increase the diversity and effectiveness of the public health workforce
- Enhance the capacity of the workforce to address disparities and advance health equity



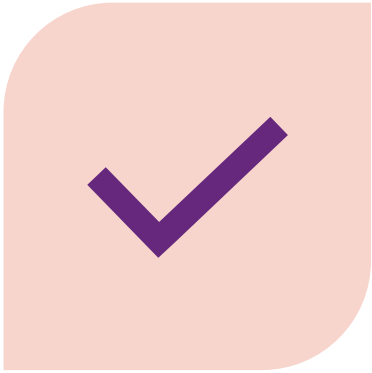
OPEN FORUM
NEXT GENERATION

SHAPING THE FUTURE TOGETHER

The Breakdown



DATA SCIENCE AND
LEADERSHIP LANDSCAPE



PROJECT ACTIVITY
FINDINGS



NEXT STEPS AND
RESOURCES



OPEN FORUM
NEXT GENERATION

SHAPING THE FUTURE TOGETHER



Understand the Landscape

OPEN FORUM
NEXT GENERATION

SHAPING THE FUTURE TOGETHER

Data definitions

Data Science

- Data intake
- Data storage
- Data analytics
- Data communication

Data Literacy

- Data quality assessment
- Data logic
- Data communication

Data-informed Leadership

- Data governance
- Data operations
- Strategic thinking
- Data communication
- Leadership modeling



PH Program Environmental Scan

- Scan on CEPH and non-CEPH programs
- Database:
 - Undergraduate & Graduate Programs
 - HBCU, Tribal Colleges, and other Minority Serving Institutions
 - Data science and leadership offerings
 - Type of Public Health Degree offered
 - Distanced vs In-person learning
 - Concentrations
 - State funded/Private
 - Placement requirements (Internships, Capstone, etc.)

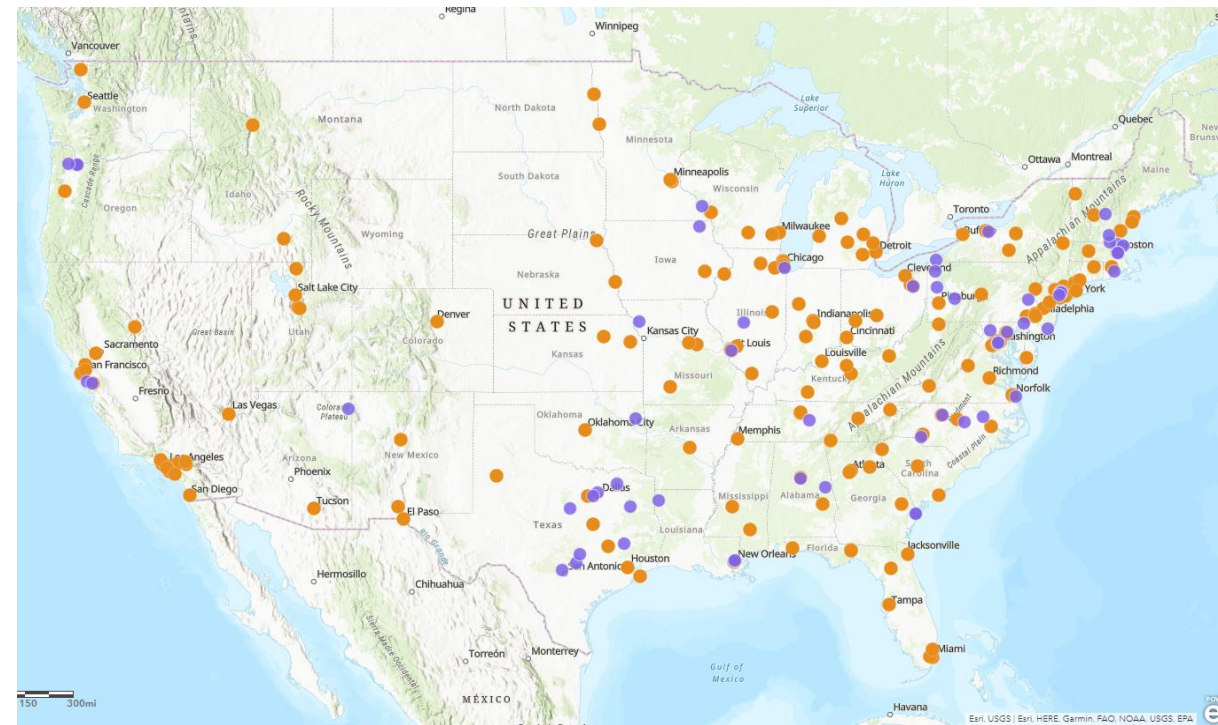
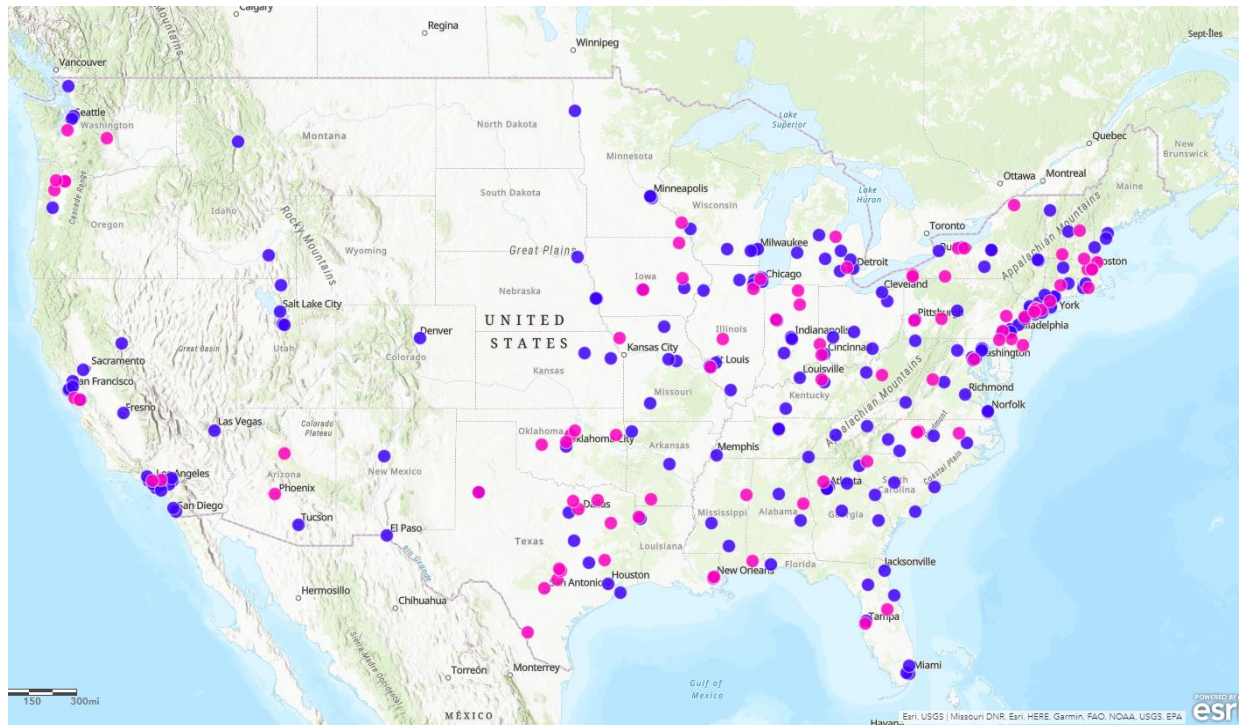
Information was collected from the National Center for Education Statistics's College Navigator, CEPH member directory, and ASPPH member directory.



Data Science and Leadership programs across the country

437 Public Health Programs

Environmental scan data mapped: Undergraduate & Graduate Programs





Workforce Skills

TRAINING OPPORTUNITIES

OPEN FORUM
NEXT GENERATION

SHAPING THE FUTURE TOGETHER

Listening Sessions Round One

WHY PARTICIPATE?

You are a valued member of the Public Health Workforce.

You have experience in public health leadership, workforce development, data science, recruitment and retention, or leadership curricula.

You want to contribute to a National Network of Public Health Institutes (NNPHI) and CDC Public Health LEADS project to inform and transform the training of the public health workforce.

You want to contribute your voice to improving the diversity of the public health workforce.

You want to contribute your knowledge to helping understand the gaps in public health data science, leadership capacity, accessibility, training, and education in the public health workforce.

HELP US BUILD THE PUBLIC HEALTH WORKFORCE OF TOMORROW!

WHO CAN PARTICIPATE?

Adults 18 years or older with access to the internet and a device with video conferencing capability.

Professionals in academia (curriculum developers, professors/faculty, coordinators/staff, and current students in public health programs).

Professionals in state, local, tribal, and territorial health departments and federal agencies (directors & managers, administrative staff, recent graduates).

Professionals at national public health non-profits and other related organizations (programmatic staff, directors & managers, administrative staff).

If you are interested in participating, you will first complete a brief survey to determine your eligibility for inclusion in a 1.5 hour sharing and learning session.

WE WANT TO HEAR FROM YOU!

The **NNPHI** and **CDC'S** Public Health LEADS have partnered with Health Communications Consultants, Inc. to conduct virtual, small group sharing and learning sessions.

Sessions will take place in July 2023 and will focus on the public health workforce needs, gaps in capacity, training and education, barriers and challenges, and innovative practices as they relate to a) public health data science and b) public health leadership.

Your experience and insights are important to us and to the field of public health; we hope you can join us for one of these sessions!

INTERESTED?

Please fill out the brief eligibility survey at this [Survey Link](#).

QUESTIONS ABOUT THE STUDY

Please contact the Principal Investigator:
Sarah D. Matthews, PhD at Sarah.Matthews@healthcommunicationsconsultants.com

This project is supported by the Centers for Disease Control and Prevention of the U.S. Department of Health and Human Services (HHS) as part of a financial assistance award (NUS60E000016-01-00, titled Strengthening Environmental Health - Building Capacity for a More Diverse and Representative Workforce) totaling \$366,000 with 100 percent funded by CDC/HHS. The contents are those of the author(s) and do not necessarily represent the official views of, nor are they endorsed by, the U.S. Department of Health and Human Services, the Centers for Disease Control and Prevention, or the National Network of Public Health Institutes.

Health Communications Consultants
Promoting Innovation & Equity

Summer 2023 Recruitment Flyer

- Selected Health Communications Consultants via RFP process
- Four sessions conducted in July 2023
- Audience: **mid/senior professionals** with any level of experience in public health leadership, public health workforce development, data science education, public health recruitment and retention and/or public health leadership curricula.



Listening Session Data

TRAINING THAT WOULD HELP BE MORE EFFECTIVE AND CONFIDENT IN YOUR CURRENT JOB



Figure 4: Recruitment Survey Respondents' Trainings that Would Help Them be More Effective and Confident in Current Job



Workforce Training

Recommendations: Socio-ecological model

- Individual Level
 - Coping with rejection
 - Communicating data
- Interpersonal/
Organizational Level
 - Recruitment
 - Competency checklists
 - Career pathways
 - Skill-building in low-risk environments
 - Centralized public health data teams
- Systems Level
 - Federated architecture & accomplishing shared objectives
 - Addressing the impacts of politics on data science
 - Collaboration & cross sector partnerships
 - Improving training infrastructure
 - Financial support



Recruitment & Retention

WORKFORCE REQUIREMENTS

OPEN FORUM
NEXT GENERATION

SHAPING THE FUTURE TOGETHER

Listening Sessions Round Two

- Recruitment October
- Sessions October
- Analysis November
- Report December
- Audience: **Newly graduated students** in data science and leadership who are within their first 6 months to 2 years of employment or who want to work in public health but have not found employment yet

WHY PARTICIPATE?

You are a valued member of the Public Health Workforce.

Within the past 2 years you have recent experience in academic programs in public health, public health data science, or leadership.

You want to contribute to a National Network of Public Health Institutes (NNPHI) and CDC Public Health LEADS project to inform and transform curricula and training of the public health workforce.

You want to contribute your voice to improving the diversity of the public health workforce.

You want to contribute your knowledge to helping understand the facilitators and barriers to recruitment and retention, gaps in academic curricula compared to skills needed on the job, gaps in data science, leadership capacity, accessibility, training and education in the new public health workforce.

RECENT PUBLIC HEALTH GRADUATES HELP US BUILD THE PUBLIC HEALTH WORKFORCE OF TOMORROW!

WE WANT TO HEAR FROM YOU!

WHO CAN PARTICIPATE?



Adults 18 years or older with access to the Internet and a device with video conferencing capability.

Newly graduated students in public health, public health data science, or leadership who are within their first 6 months to 2 years of employment or who want to work in public health but have not found employment yet.

If you are interested in participating, you will first complete a brief survey to determine your eligibility for inclusion in a 1.5 hour virtual sharing, learning and listening session.

The **NNPHI** and **CDC'S** Public Health LEADS have partnered with Health Communications Consultants, Inc. to conduct virtual sharing, learning and listening sessions.

Sessions will take place on October 24, 25, or 26 and will focus on recruitment and retention facilitators and barriers, gaps in academic curricula compared with skills needed on the job, gaps in data science and leadership capacity, accessibility, training and education.

INTERESTED?

Please fill out the brief eligibility survey at this [Survey Link](#)



QUESTIONS ABOUT THE STUDY

Please contact the Principal Investigator:

Sarah D. Matthews, PhD at Sarah.Matthews@healthcommunicationsconsultants.com



This project is supported by the Centers for Disease Control and Prevention of the U.S. Department of Health and Human Services (HHS) as part of a financial assistance award (NUS60000016-01-00, titled Strengthening Environmental Health - Building Capacity for a More Diverse and Representative Workforce) totaling \$366,000 with 100 percent funded by CDC/HHS. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement by, CDC/HHS or the U.S. Government.

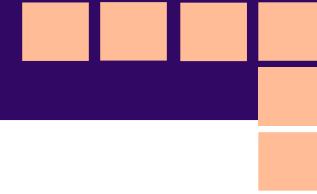
 National Network
of Public Health Institutes

 HCC
Health Communications Consultants
Knowledge. Innovation. & Equity.

Fall 2023 Recruitment Flyer



Post Listening Session Objectives



1

Objective 1: Identify recruitment and retention facilitators and barriers.

2

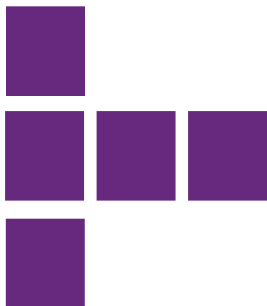
Objective 2: Identify gaps in academic curricula compared to skills needed on the job.

3

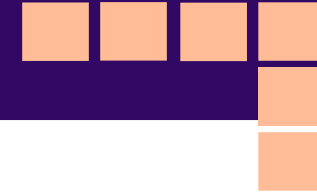
Objective 3: Identify current gaps in data science and leadership capacity, accessibility, training, and education needs of new public health workforce members.

4

Objective 4: Align workforce needs and current public health programs with data science and leadership curricula.



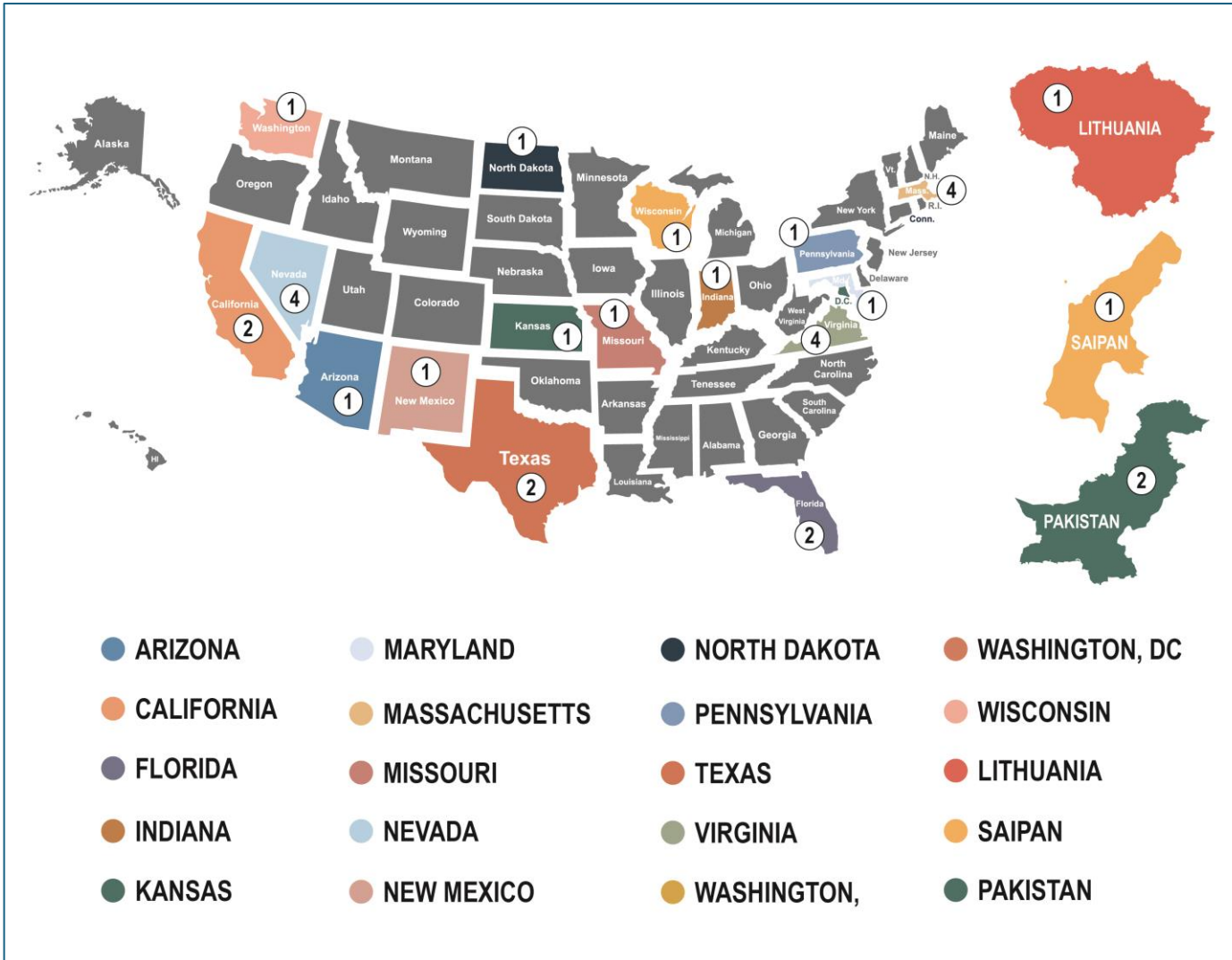
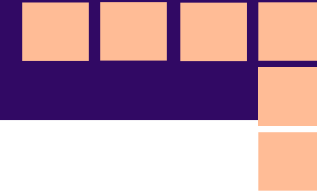
Methods



- 3 data collection tools: recruitment survey, listening sessions, post listening session survey
- Descriptive analysis
- Sociological thematic coding
- Emerging themes inform the development of conceptual model



Geographic Distribution



- 16 states, 3 countries outside US
- 18 organizations
- Work settings
 - local health agencies (7)
 - educational/academic institution (3)
 - personal health service industry (3)
 - private nonprofit organizations (2)
 - state health agency (1)
 - private for-profit organization (1)
 - Ten (10) respondents advised that they were not currently employed



Listening Sessions Data: Themes

Sociological Thematic Exploration:

- recruitment and retention barriers and facilitators
 - barriers and impediments to employment*
 - verbalized frustration with all aspects of job search
 - rejection and resilience
 - alignment and misalignment between academics and practice*
 - guidance and lack of guidance in curriculum at academic programs
 - flexibility of having a public health degree
 - post academic training
 - need for public health to market the field of public health
 - financial accessibility
-
- *Two most frequently expressed by survey respondents and listening session participants.

Listening Session Data

Twenty-nine (29) respondents had an affirmative response to the screening questions “Are you a newly graduated student in data science and leadership who is within their first 6 months to 2 years of employment?” **Thirteen (13) of the 29 respondents selected “I would like to be working in the public health field but have not gained employment yet.”**



BARRIERS FACED WHEN TRYING TO FIND A JOB IN PUBLIC HEALTH

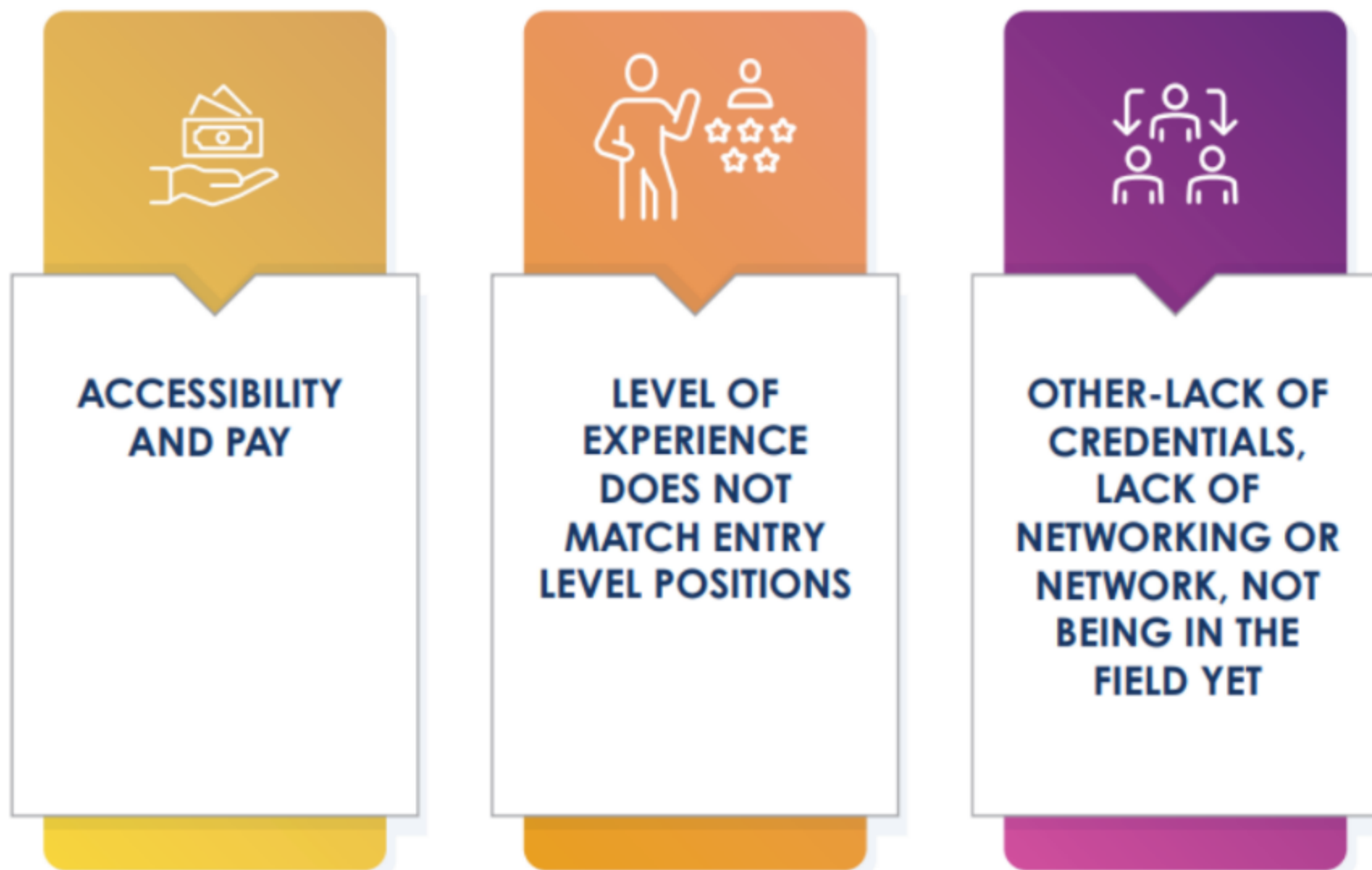


Figure 3: Recruitment Survey Respondents' Barriers to Finding a Job in Public Health



Bridging the Gap

SOLUTIONS & RECOMMENDATIONS

OPEN FORUM
NEXT GENERATION

SHAPING THE FUTURE TOGETHER

How do we get students into the workforce?

Matching academic
and workforce needs

Entry level positions

Workforce training



Implement person-centered recruitment & training practices

Recommendation

- Developing roles intended for workers with little experience
- Maintain respectful, empathetic and humane recruitment practices
- Training practices for recruiters must include skills to align appropriate experience levels to the job description

Take Home Thoughts

- *What steps can we take to personalize the recruitment process?*
- *How might you streamline recruitment processes?*
- *What challenges you have faced with recruitment?*



Access to an effective and accessible career-specific advisor or mentor

Recommendation

- Students to be matched with advisors to guide through:
 - Academic
 - Career
 - Professional development
 - Self-care paths

Take Home Thoughts

- *How has your health department mentored recent graduates or staff?*
- *How might mentoring a public health student or recent graduate support the health department?*



Improve alignment between academic curricula and needs of non-research public health work

Recommendation

- Prioritize "boots-on-the-ground" skills over theoretical application or research-oriented skills.
- Training on how to navigate rapidly changing data science technology and technical skills that can transfer across software/programs.
- Improvements to in-school mentorship programs.
- Expand paid faculty time dedicated to activities that support students career transition.

Take Home Thoughts

- *What specific skills and competencies are most needed in non-research public health roles?*
- *What are the barriers to aligning academic curricula with the needs of non-research public health work, and how can they be overcome?*



Develop integrated workforce development paths, bridging academia, industry and government



Develop integrated workforce development paths, bridging academia, industry and government

Recommendation

- Provides professionals with a better understanding of the interconnectedness of specialties and their applications in the workforce
- Helps recruiters better understand realistic experiential requirements for entry-level positions
- Supports organizations by providing insight into their roles in developing more advanced expertise throughout a professional's career

Take Home Thoughts

- *How have experiences with academia and mentorship worked at your health department?*
- *How might we facilitate a matching process that considers students' academic interests, career goals, and personal development needs?*
- *What professional development opportunities should be emphasized by advisors and mentors (e.g., conferences, certifications, workshops)?*





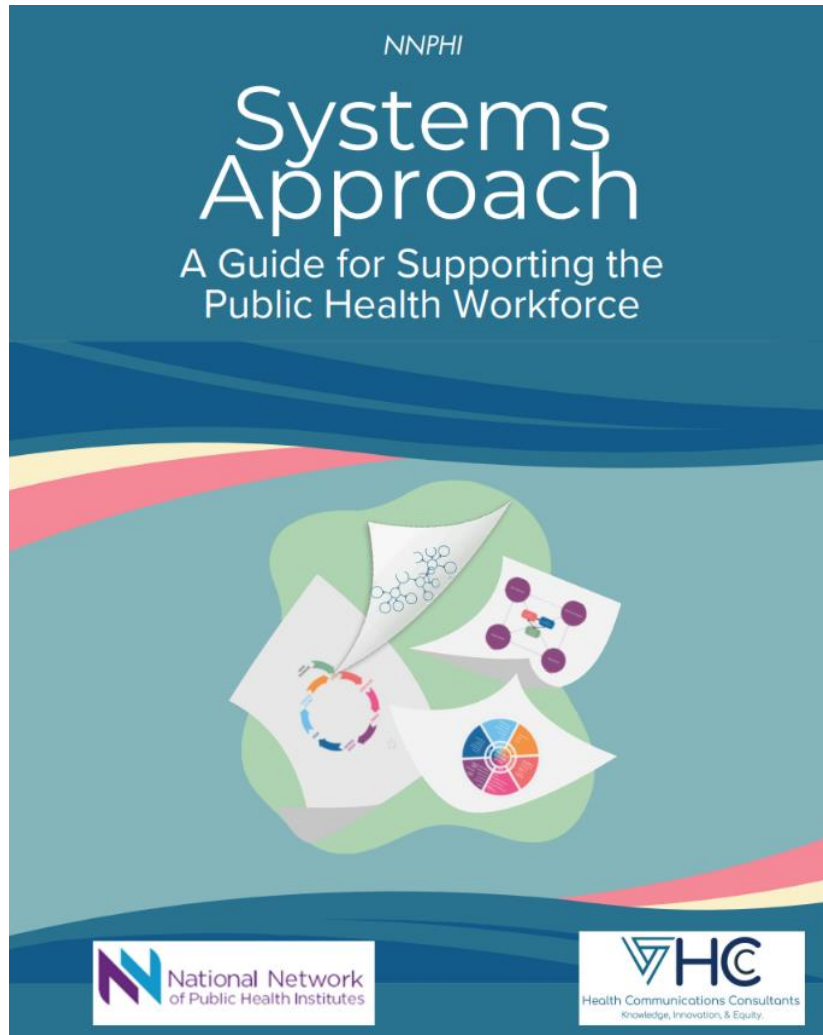
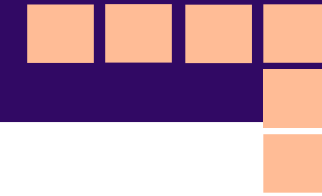
Next Steps

RESOURCES

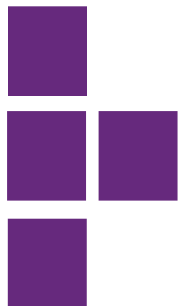
OPEN FORUM
NEXT GENERATION

SHAPING THE FUTURE TOGETHER

Systems Approach: A Guide for Supporting the Public Health Workforce



- After further analysis of the listening session data, developed a resource to support the public health workforce
- Utilize to guide through professionals to solutions
- Recruitment, retention, coping with rejection and communication



Next Steps

Design Leadership program

Design a leadership training strategy

Steering Committee

Develop curricular recommendations to expand leadership and data science educational opportunities within Public Health programs

Handbook & Workshops

Qualitative methods approach to identify barriers to recruitment and retention





National Network
of Public Health Institutes

Climate and Crisis Preparedness



**CHECK OUT OUR
PORTFOLIO AND
CURRENT PROJECTS**

THANK YOU



National Network
of Public Health Institutes



OPEN FORUM

NEXT GENERATION

SHAPING THE FUTURE TOGETHER

SEPTEMBER 18-20

📍 CHICAGO, IL