2021 SUMMARY REPORT:

Epidemiology/Surveillance Workforce

ACKNOWLEDGEMENT & CITATION

The Public Health Workforce Interests and Needs Survey (PH WINS) was developed by the de Beaumont Foundation and the Association of State and Territorial Health Officials to understand the interests and needs of the state and local governmental public health workforce in the United States, and was fielded in 2014, 2017, and 2021. For more information, visit www.phwins.org.

Citation: de Beaumont Foundation and Association of State and Territorial Health Officials, *Public Health Workforce Interests and Needs Survey: 2021 Dashboard.* August 3, 2022.

ABOUT THIS REPORT

This report summarizes key findings about the **epidemiology/surveillance workforce** from the 2021 Public Health Workforce Interests and Needs Survey (PH WINS).

- Key findings are organized by the main sections of PH WINS 2021:
    - Demographics
    - Workforce Characteristics
    - Staying & Leaving
    - Training Needs
    - Engagement & Satisfaction
    - Well-being

WHAT IS PH WINS?

Public Health Workforce Interests and Needs Survey

- PH WINS, a partnership between the de Beaumont Foundation and the Association of State and Territorial Health Officials (ASTHO), was fielded in 2014, 2017, and 2021.

- **First and only nationally representative source of data** about the governmental public health workforce.

- Supports the governmental public health workforce in **understanding their strengths and gaps** and informs future investments in workforce development efforts.

2021 METHODS

- PH WINS 2021 was distributed via web survey to **137,446 state and local governmental public health workers:**

  - 47 state health agencies

  - 29 big city health departments

  - 259 local health departments

- The PH WINS 2021 instrument had five domains: workplace environment, COVID-19 response, training needs, addressing public health issues, and demographics.

- One important change in 2021: non-permanent employees of centralized state health agencies were included in the nationally representative data set.
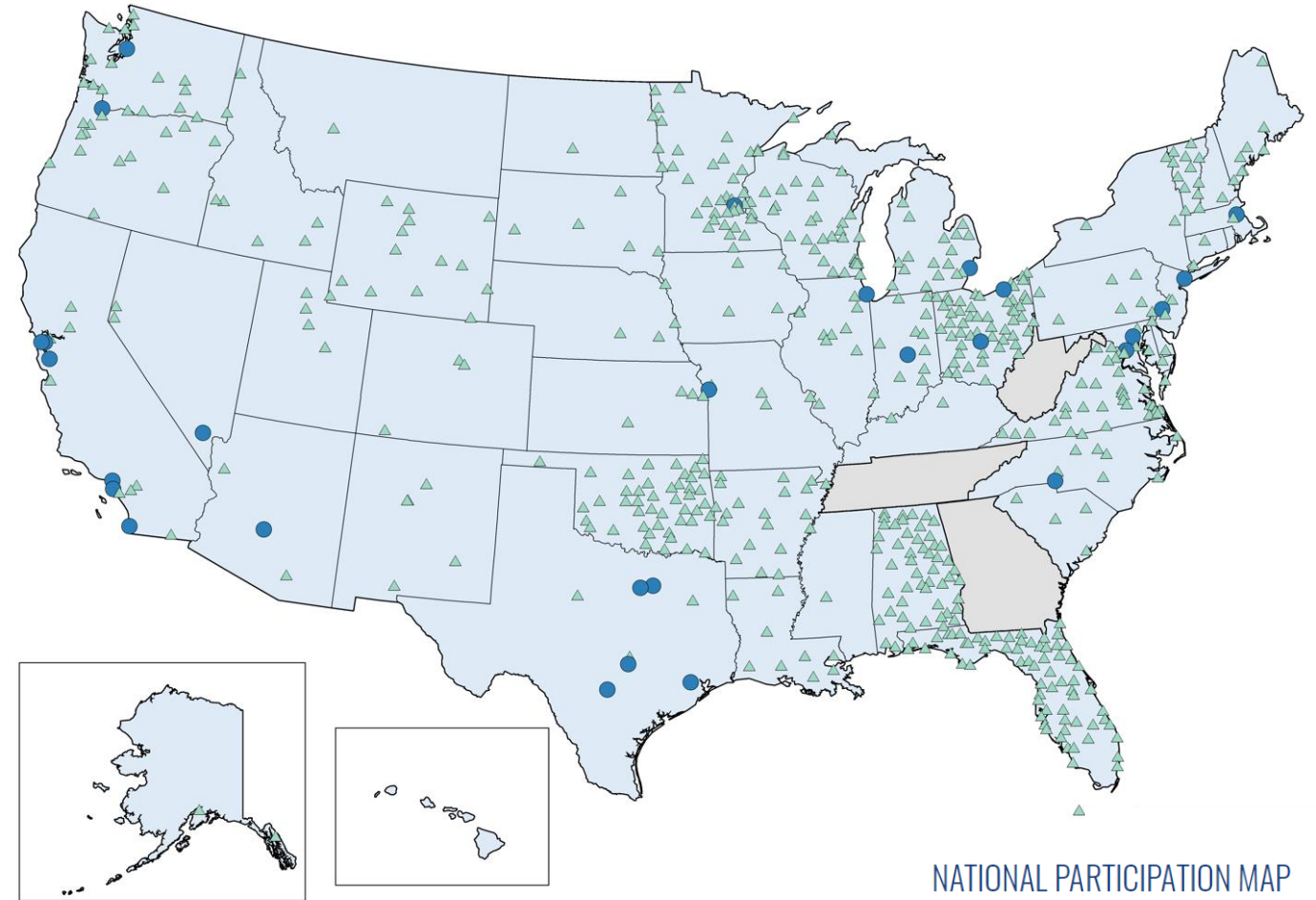
WORKFORCE DEFINITION

- Workforce groups are defined by a combination of responses to PH WINS questions on program area, job classification, education, and certifications.

- **The epidemiology/surveillance workforce** include PH WINS respondents who selected the following job classification(s) or program area(s):

  - Job classification: epidemiologist

  - Program area: epidemiology surveillance

*PH WINS respondents were asked to report all program areas in which they currently serve. Workforce groups that are defined using program area include employees who work for the defining program area and may include employees who also work for additional program areas.

NATIONAL PARTICIPATION

- Nationally, the survey was completed by 44,732 individuals, for a **35% response rate.**

- Response rates varied by frame:

  - **SHA:** 34%

  - **Big Cities:** 28%

  - **Other locals:** 52%

    - **Locals in Regions V and X*:** 56%

*HHS Regions V and X participated in the PH WINS for All pilot programming, recruiting all locals in those regions, regardless of size, to participate in PH WINS.

NATIONAL PARTICIPATION MAP

- PARTICIPATING STATES
- LOCAL HEALTH DEPARTMENTS
- BCHC CITIES

PH WINS
PUBLIC HEALTH WORKFORCE
INTERESTS AND NEEDS SURVEY

de Beaumont
BOLD SOLUTIONS FOR HEALTHIER COMMUNITIES.

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NATIONAL PARTICIPATION

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- Respo~~ns~~ frame:

  - S~~t~~

  - B

  - **Other locals:** 52%

    - **Locals in Regions V and X*:** 56%

*HHS Regions V and X participated in the PH WINS for All pilot programming, recruiting all locals in those regions, regardless of size, to participate in PH WINS.

The epidemiology/surveillance workforce accounts for **8%** of the national governmental public health workforce.

NATIONAL PARTICIPATION MAP

- PARTICIPATING STATES
- LOCAL HEALTH DEPARTMENTS
- BCHC CITIES

PH WINS
PUBLIC HEALTH WORKFORCE
INTERESTS AND NEEDS SURVEY

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2021 KEY FINDINGS: DEMOGRAPHICS

- PH WINS respondents self-reported demographic (personal) characteristics like their gender, race/ ethnicity, and age.

- Respondents also self-reported the highest level of education attained and whether they have a specialized degree in public health.

DEMOGRAPHICS

- **76%** of the epidemiology/surveillance workforce **self-identifies as a woman.**

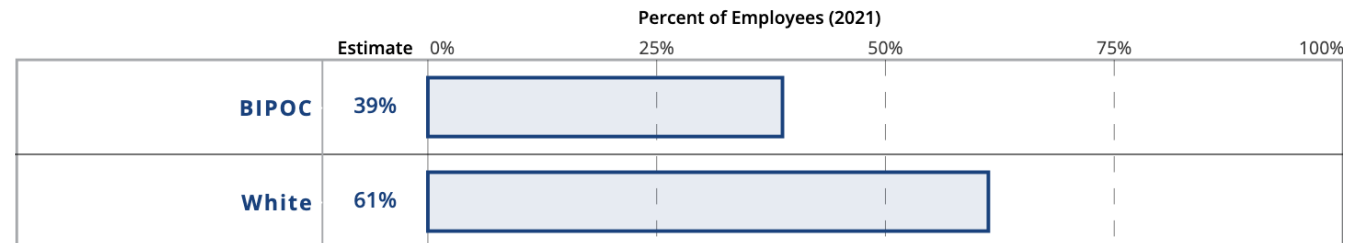- **61%** of the epidemiology/surveillance workforce **self-identifies as White.**

GENDER COLLAPSED
EPI/SURVEILLANCE: ALL EMPLOYEES

Percent of Employees (2021)

	Estimate	0%	25%	50%	75%	100%
Woman	76%					
Not a woman	24%					
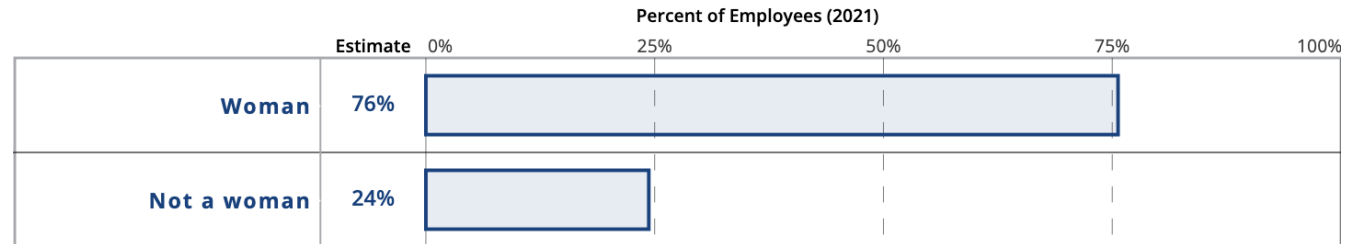
RACE & ETHNICITY COLLAPSED
EPI/SURVEILLANCE: ALL EMPLOYEES

Percent of Employees (2021)

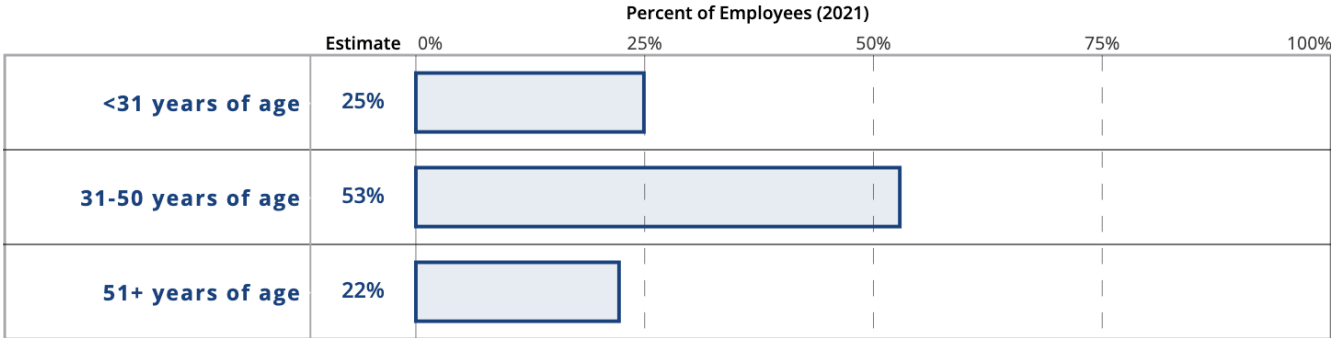|	Estimate	0%	25%	50%	75%	100%
BIPOC	39%					
White	61%					

DEMOGRAPHICS

- **More than half** of the epidemiology/surveillance workforce is between the **ages of 31 and 50 years.**

AGE COLLAPSED
EPI/SURVEILLANCE: ALL EMPLOYEES

Percent of Employees (2021)

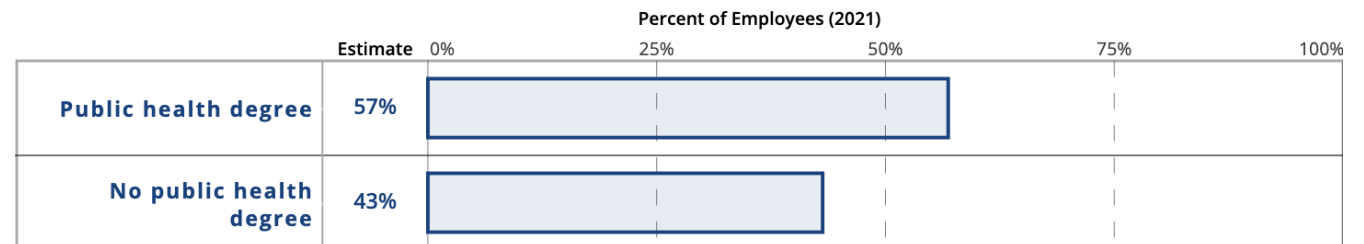|	Estimate	0%	25%	50%	75%	100%
<31 years of age	25%					
31-50 years of age	53%					
51+ years of age	22%					

EDUCATIONAL ATTAINMENT

- **76%** of the epidemiology/surveillance workforce **has an advanced degree.**

  - 60% has a Master's degree.

  - 16% has a Doctoral degree.

- **57%** has a specialized **degree in public health.**

EDUCATIONAL ATTAINMENT
EPI/SURVEILLANCE: ALL EMPLOYEES

Percent of Employees (2021)

	Estimate	0% — 25% — 50% — 75% — 100%
Doctoral	16%	
Master's	60%	
Bachelor's	17%	
Associate's	3%	
No college degree	3%	
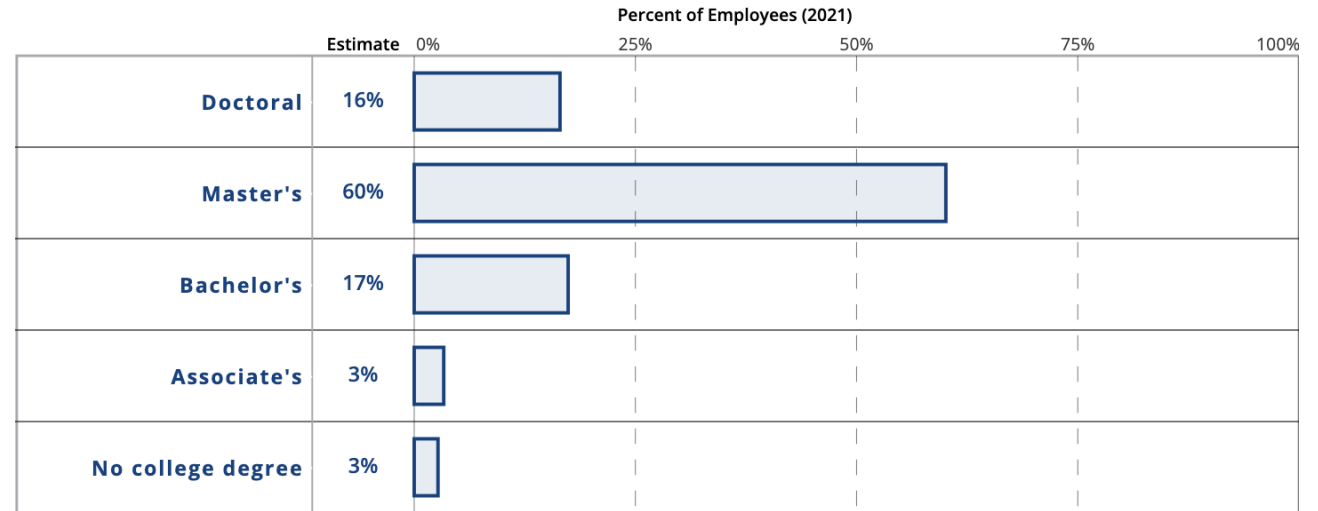
PUBLIC HEALTH TRAINING
EPI/SURVEILLANCE: ALL EMPLOYEES

Percent of Employees (2021)

	Estimate	0% — 25% — 50% — 75% — 100%
Public health degree	57%	
No public health degree	43%	

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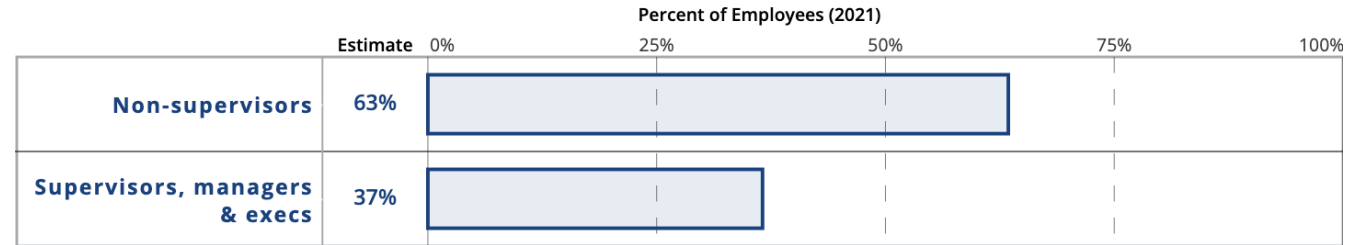
2021 KEY FINDINGS: WORKFORCE CHARACTERISTICS

- PH WINS respondents were asked a series of questions related specifically to their job and the work they do, including:

  - Supervisory status

  - Job role

  - Primary program area

  - Tenure in public health overall, at their agency, and in their current job.

- Respondents also reported full-time/part-time status and salary information.
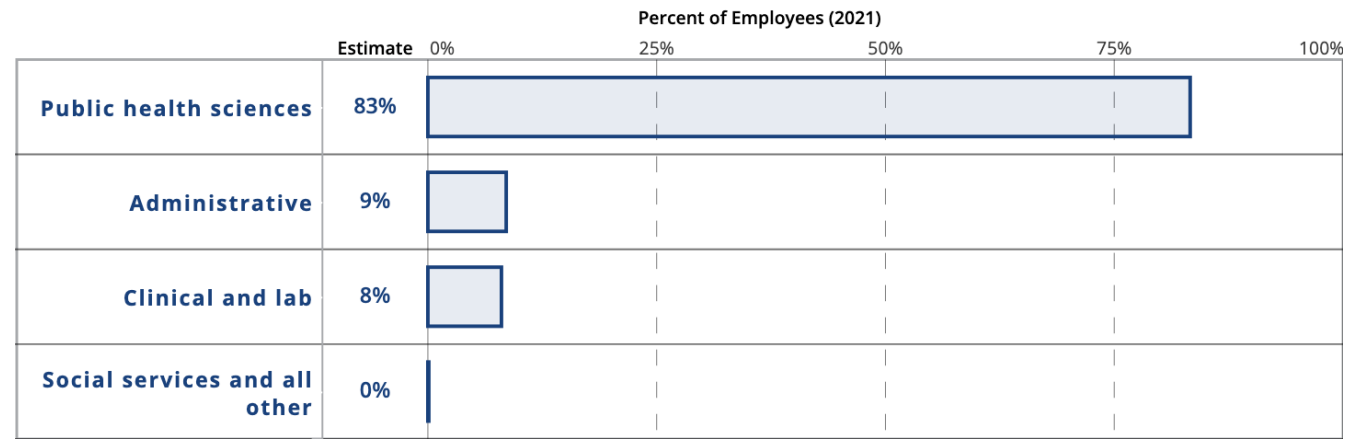
SUPERVISORY STATUS/JOB ROLE

- **63%** of epidemiology/ surveillance staff work in a **non-supervisory role**.

- **83%** of staff work in a **public health sciences job role**, which includes program staff, epidemiologists, and contact tracers, among others.

SUPERVISORY STATUS COLLAPSED
EPI/SURVEILLANCE: ALL EMPLOYEES

Percent of Employees (2021)

	Estimate	0%	25%	50%	75%	100%
Non-supervisors	63%					
Supervisors, managers & execs	37%					

JOB CLASSIFICATION
EPI/SURVEILLANCE: ALL EMPLOYEES

Percent of Employees (2021)

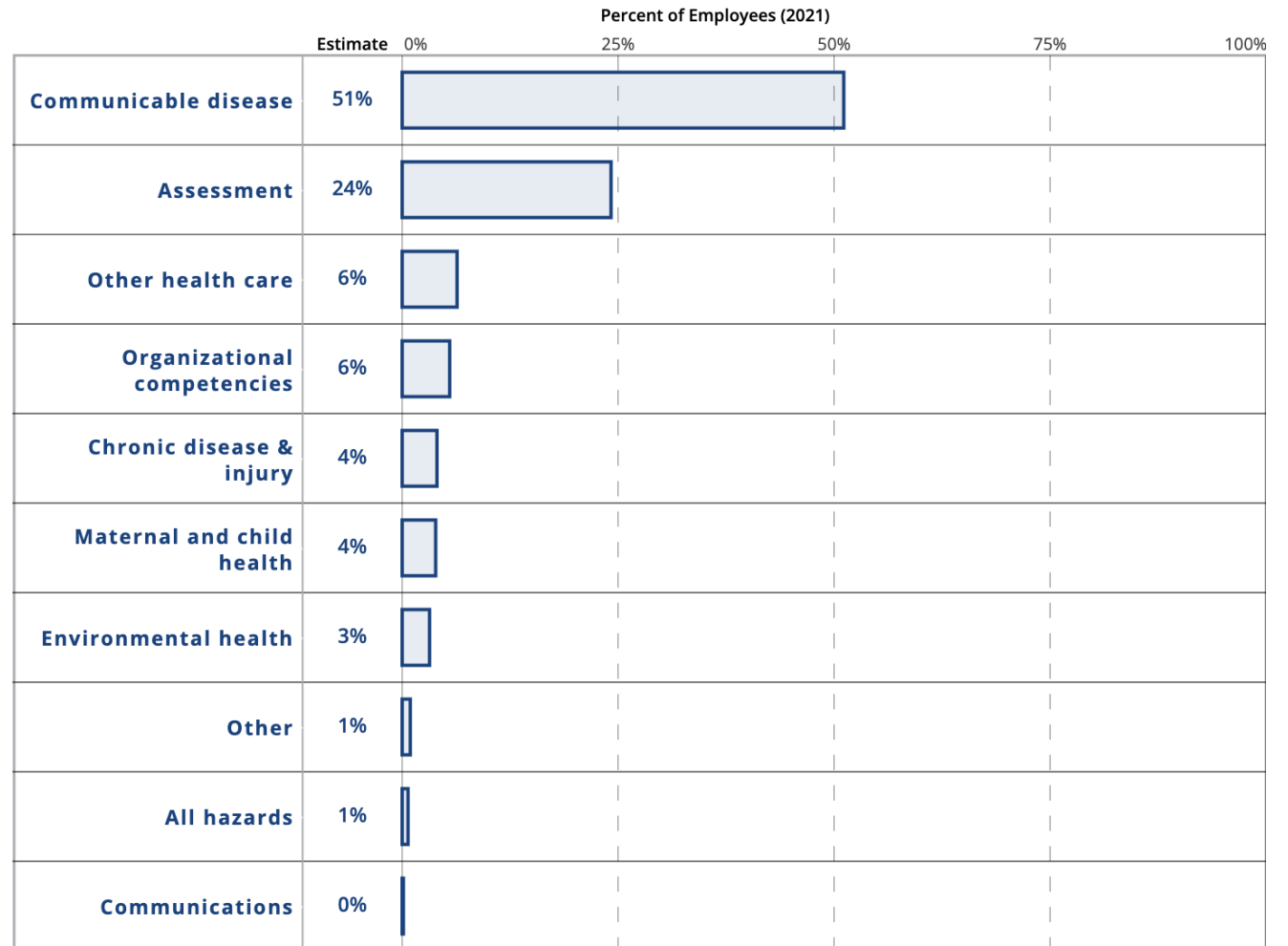|	Estimate	0%	25%	50%	75%	100%
Public health sciences	83%					
Administrative	9%					
Clinical and lab	8%					
Social services and all other	0%					

PROGRAM AREA

- The epidemiology/ surveillance workforce is mainly distributed across **two primary program areas**:

  - **Communicable Disease**

  - **Assessment**

PH WINS respondents were asked to report all program areas in which they currently serve. This graph represents only the primary program area - the area in which a respondent spent the most time serving.
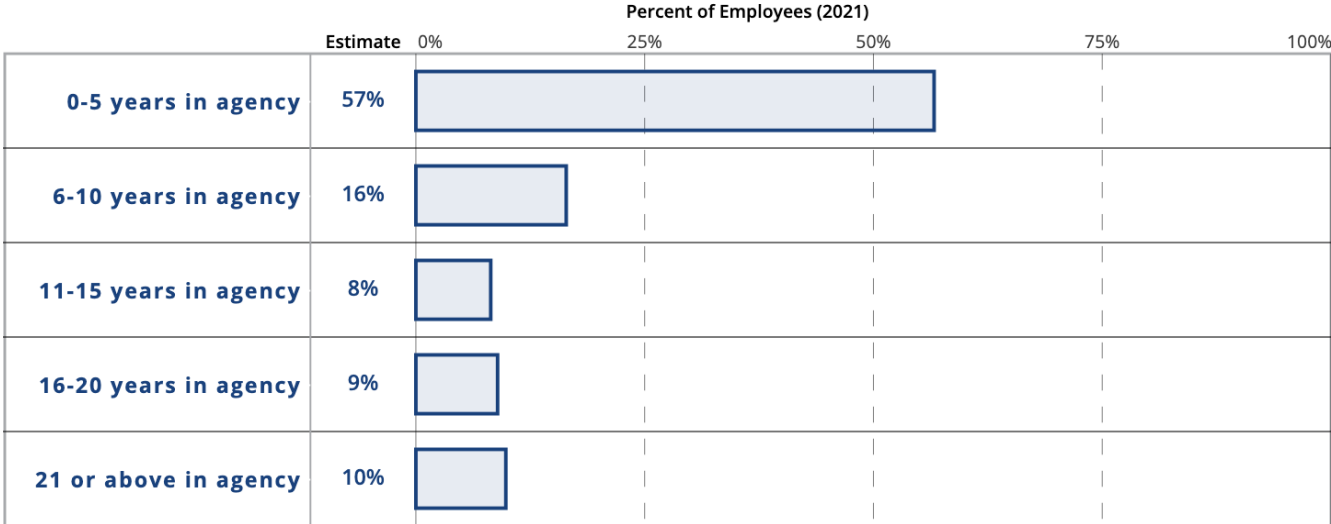
PROGRAM AREA
EPI/SURVEILLANCE: ALL EMPLOYEES

Percent of Employees (2021)

	Estimate	
Communicable disease	51%	
Assessment	24%	
Other health care	6%	
Organizational competencies	6%	
Chronic disease & injury	4%	
Maternal and child health	4%	
Environmental health	3%	
Other	1%	
All hazards	1%	
Communications	0%	

TENURE AT AGENCY

- **57%** of the epidemiology/surveillance workforce in 2021 had served at their agency **for 5 years or less.**

- 10% had served 21 or more years.

AGENCY TENURE
EPI/SURVEILLANCE: ALL EMPLOYEES

Percent of Employees (2021)

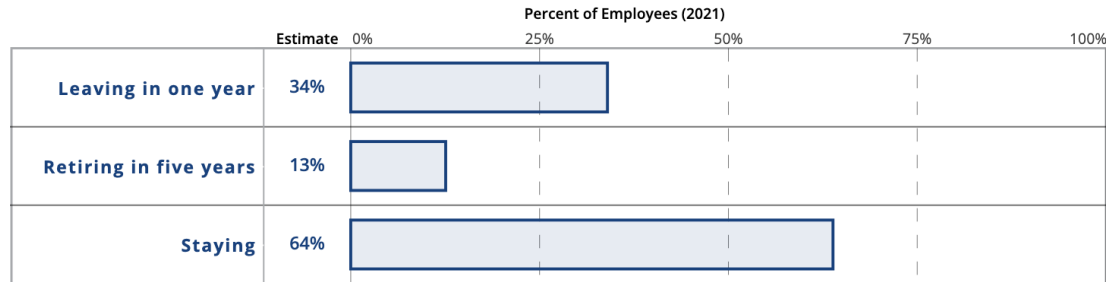|	Estimate	0%	25%	50%	75%	100%
0-5 years in agency	57%					
6-10 years in agency	16%					
11-15 years in agency	8%					
16-20 years in agency	9%					
21 or above in agency	10%					

2021 KEY FINDINGS: STAYING & LEAVING

- PH WINS respondents were asked a series of questions related to their intent to leave or stay at their agency and whether the COVID-19 pandemic affected their decision.

- Respondents were also asked to select reasons why they intend to stay or leave.
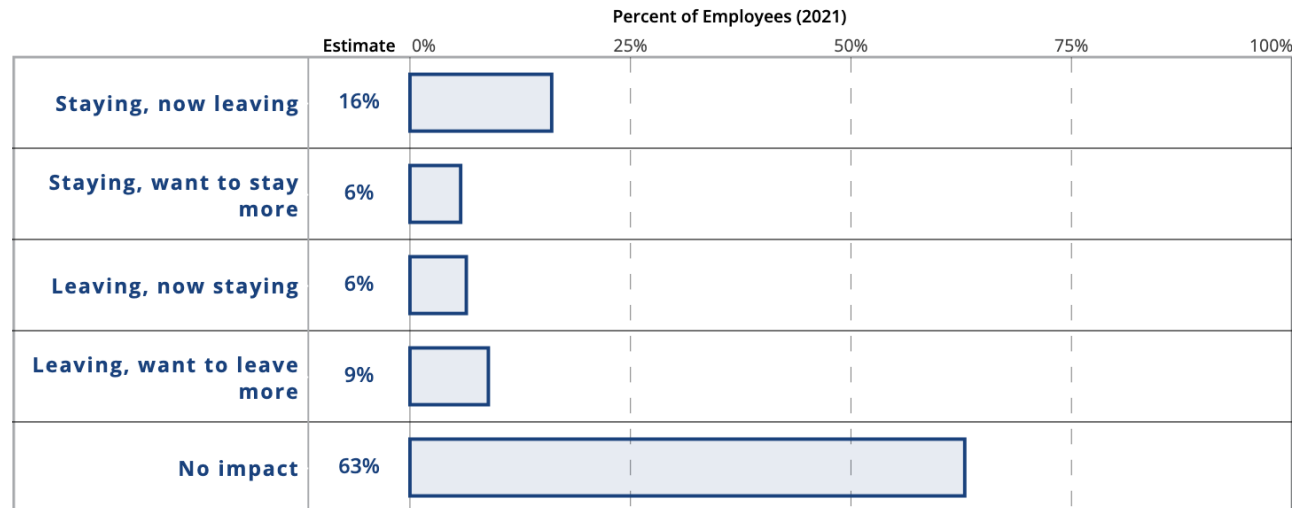
INTENT TO LEAVE/STAY

- **34%** of epidemiology/ surveillance employees **are considering leaving** their organization within the next year.

- 37% reported that the **COVID-19 pandemic impacted their decision** to stay or leave.

  - Among those who intend to leave, 51% said the pandemic impacted their decision (*data not shown*).

INTENT TO LEAVE
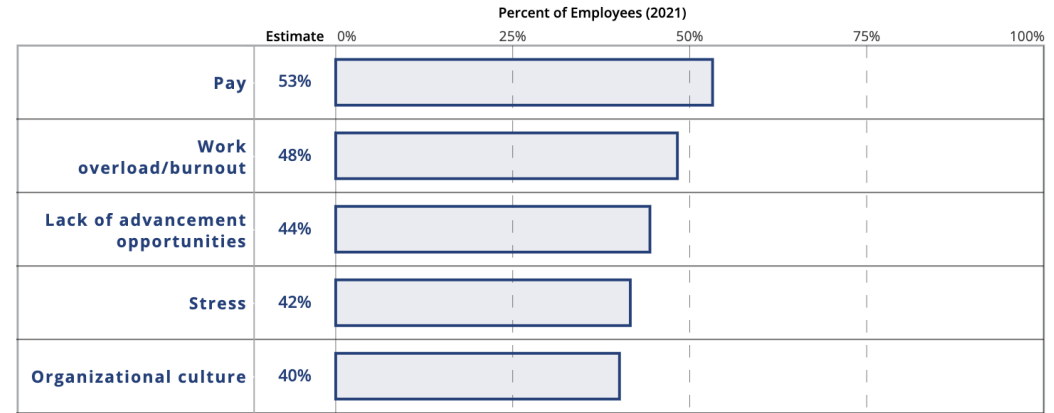EPI/SURVEILLANCE: ALL EMPLOYEES

Percent of Employees (2021)

	Estimate	
Leaving in one year	34%	
Retiring in five years	13%	
Staying	64%	

IMPACT OF COVID ON STAYING & LEAVING
EPI/SURVEILLANCE: ALL EMPLOYEES

Percent of Employees (2021)

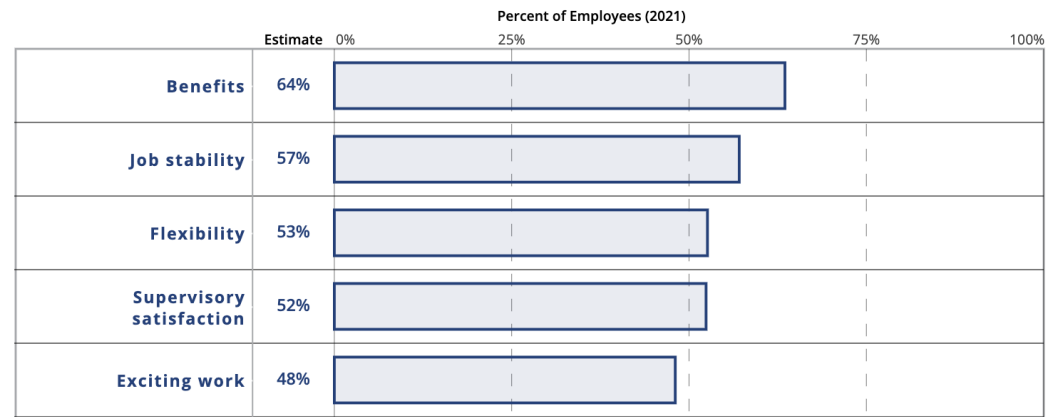|	Estimate	
Staying, now leaving	16%	
Staying, want to stay more	6%	
Leaving, now staying	6%	
Leaving, want to leave more	9%	
No impact	63%	

REASONS FOR LEAVING/STAYING

- Understanding employees' reasons for leaving is critical for improving recruitment and retention.

- **Top reasons for leaving** among epidemiology/ surveillance staff who intend to leave include:
    - **Work overload/burnout** (reported by 46%)
    - **Stress** (reported by 42%)

REASONS FOR LEAVING
EPI/SURVEILLANCE: ALL EMPLOYEES

Percent of Employees (2021)

	Estimate	0%	25%	50%	75%	100%
Pay	53%					
Work overload/burnout	48%					
Lack of advancement opportunities	44%					
Stress	42%					
Organizational culture	40%					

REASONS FOR STAYING
EPI/SURVEILLANCE: ALL EMPLOYEES

Percent of Employees (2021)

	Estimate	0%	25%	50%	75%	100%
Benefits	64%					
Job stability	57%					
Flexibility	53%					
Supervisory satisfaction	52%					
Exciting work	48%					

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2021 KEY FINDINGS: TRAINING NEEDS

- PH WINS respondents were asked to rate the day-to-day importance of and their own proficiency with 25-26 skill items, tailored for their supervisory level.

- Skills were collapsed into 10 strategic skill categories.

- A **training need** is a skill item reported as having **high importance, but low proficiency**.

- Identifying training needs can help support strategies to produce T-employees, or those who have depth in technical skills and breadth in strategic skills.

FIGURE 2.

The Public Health T: Complementing Specialized Skills with a Cohesive Cross-Cutting Skill Framework

STRATEGIC SKILLS + CORE COMPETENCIES

SPECIALIZED SKILLS

Note: T-shaped employees have depth in specialized skills related to a specific program or topic area (e.g., communicable disease control, environmental public health, etc.) and breadth in cross-cutting skills that include the Strategic Skills and Core Competencies.
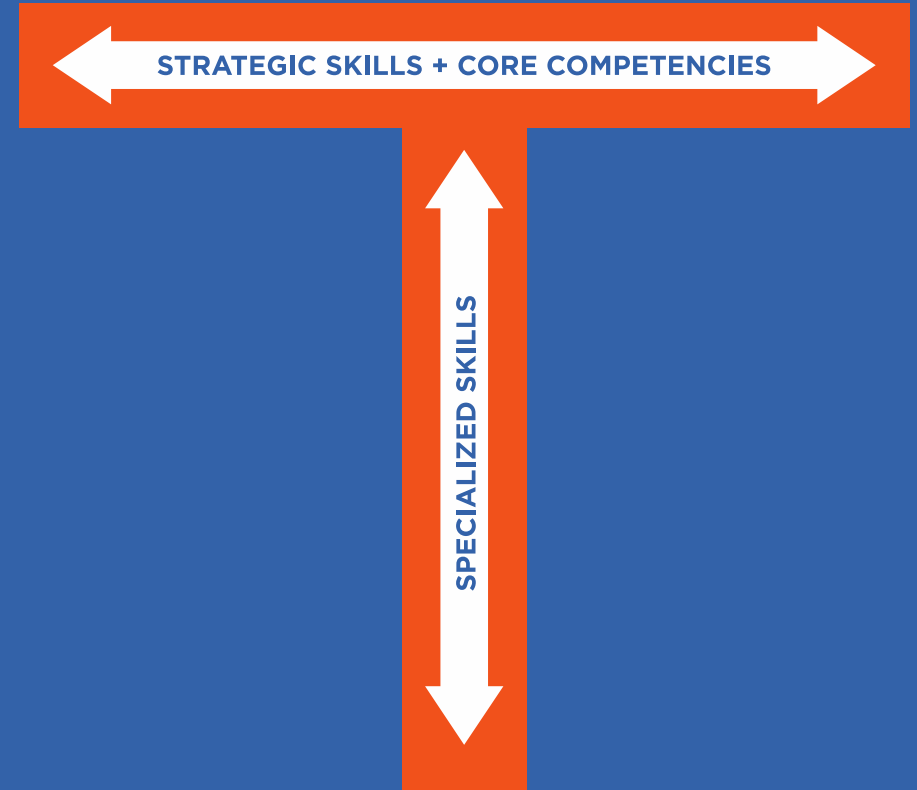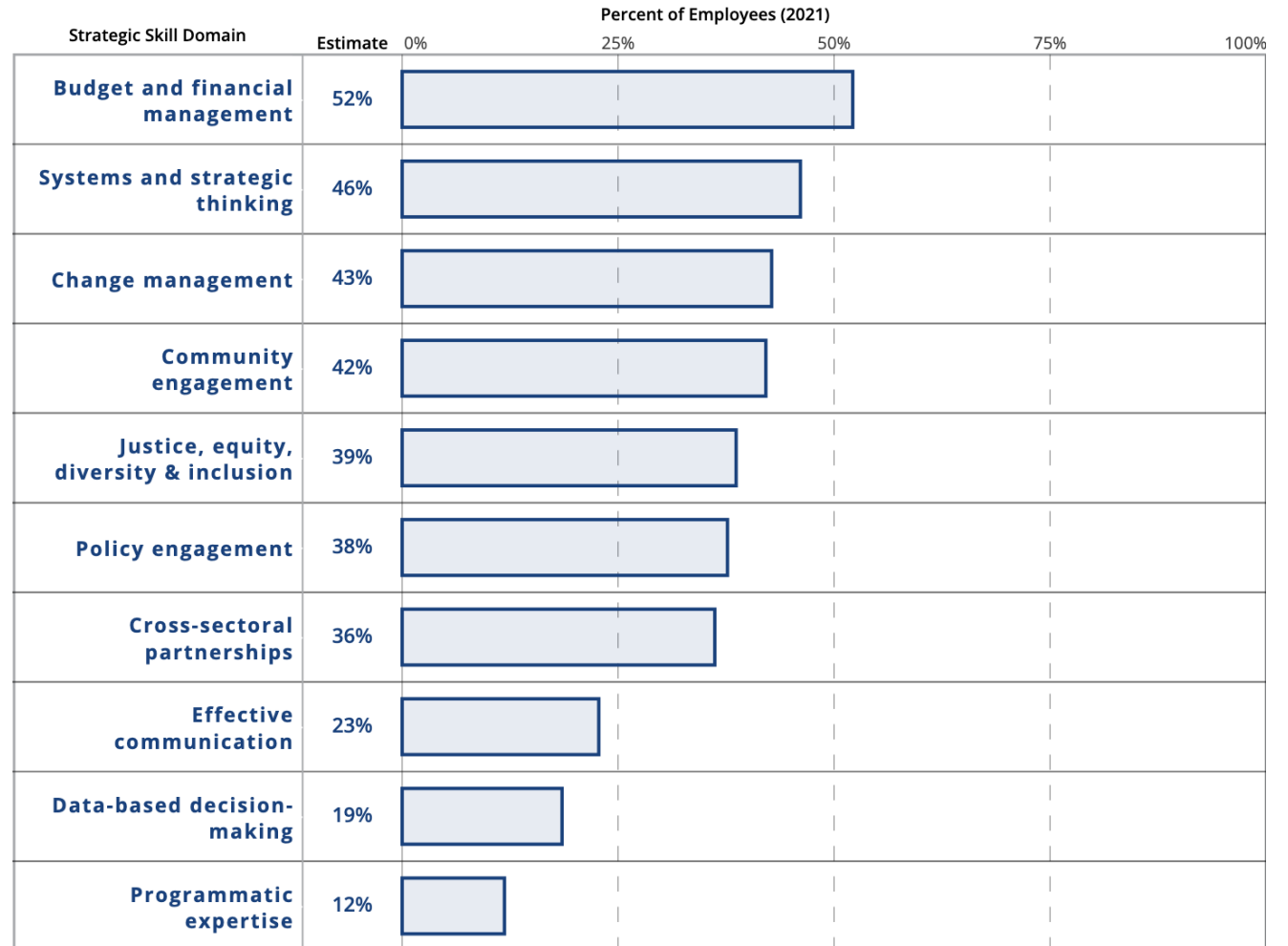
Source: de Beaumont Foundation. "Adapting and Aligning Public Health Strategic Skills,". March 2021.

TRAINING NEEDS: OVERALL

The top 5 areas of training needs **across all supervisory levels** are:

- Budget and financial management

- Systems and strategic thinking

- Change management

- Community engagement

- Justice, equity, diversity, & inclusion

TRAINING NEEDS
EPI/SURVEILLANCE: ALL EMPLOYEES

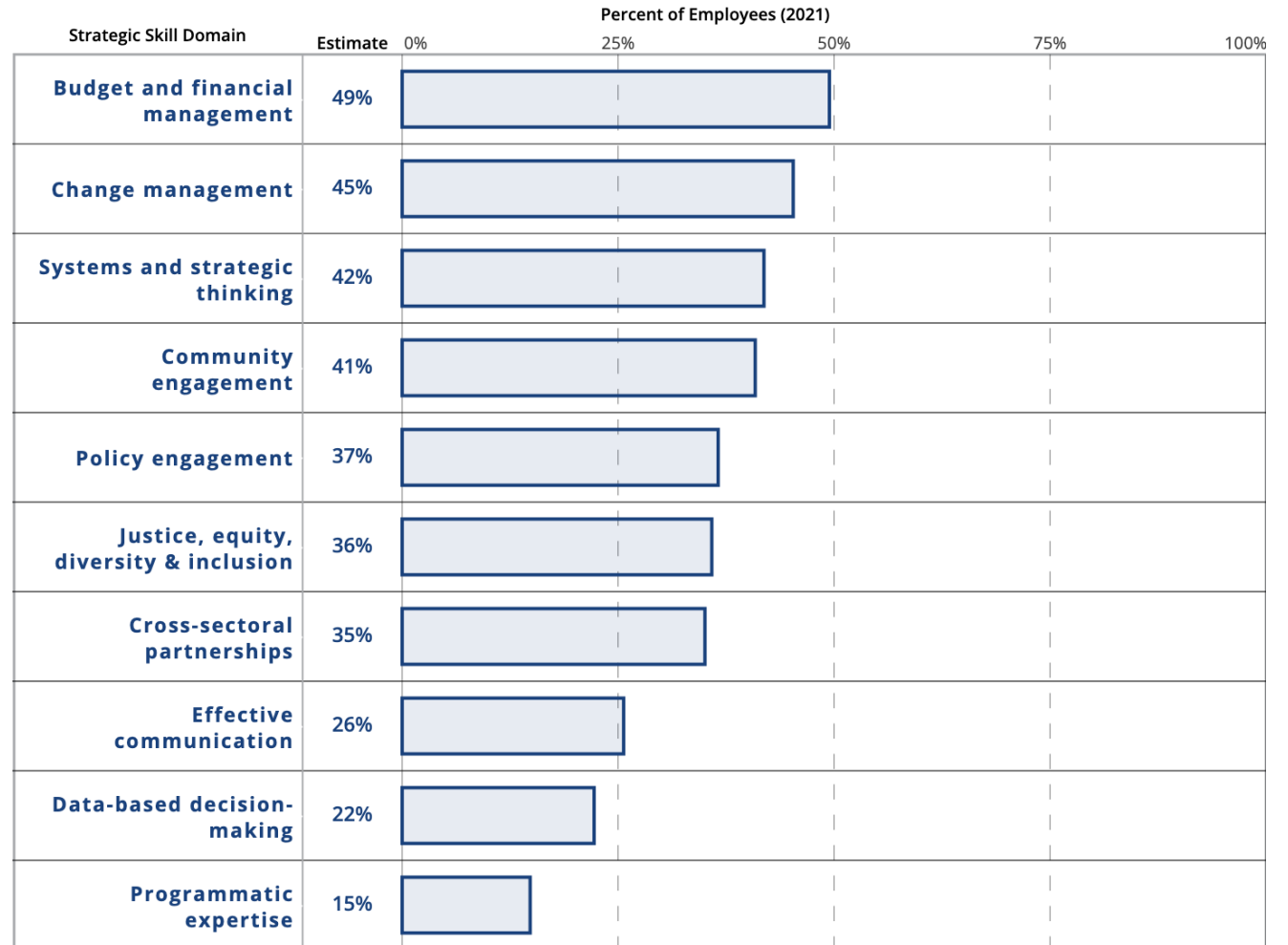| Strategic Skill Domain	Estimate	Percent of Employees (2021)
Budget and financial management	52%	
Systems and strategic thinking	46%	
Change management	43%	
Community engagement	42%	
Justice, equity, diversity & inclusion	39%	
Policy engagement	38%	
Cross-sectoral partnerships	36%	
Effective communication	23%	
Data-based decision-making	19%	
Programmatic expertise	12%	

TRAINING NEEDS: NON-SUPERVISORS

The top 5 areas of training needs **among non-supervisors** are:

- Budget and financial management

- Change management

- Systems and strategic thinking

- Community engagement

- Policy engagement

TRAINING NEEDS: NON-SUPERVISORS
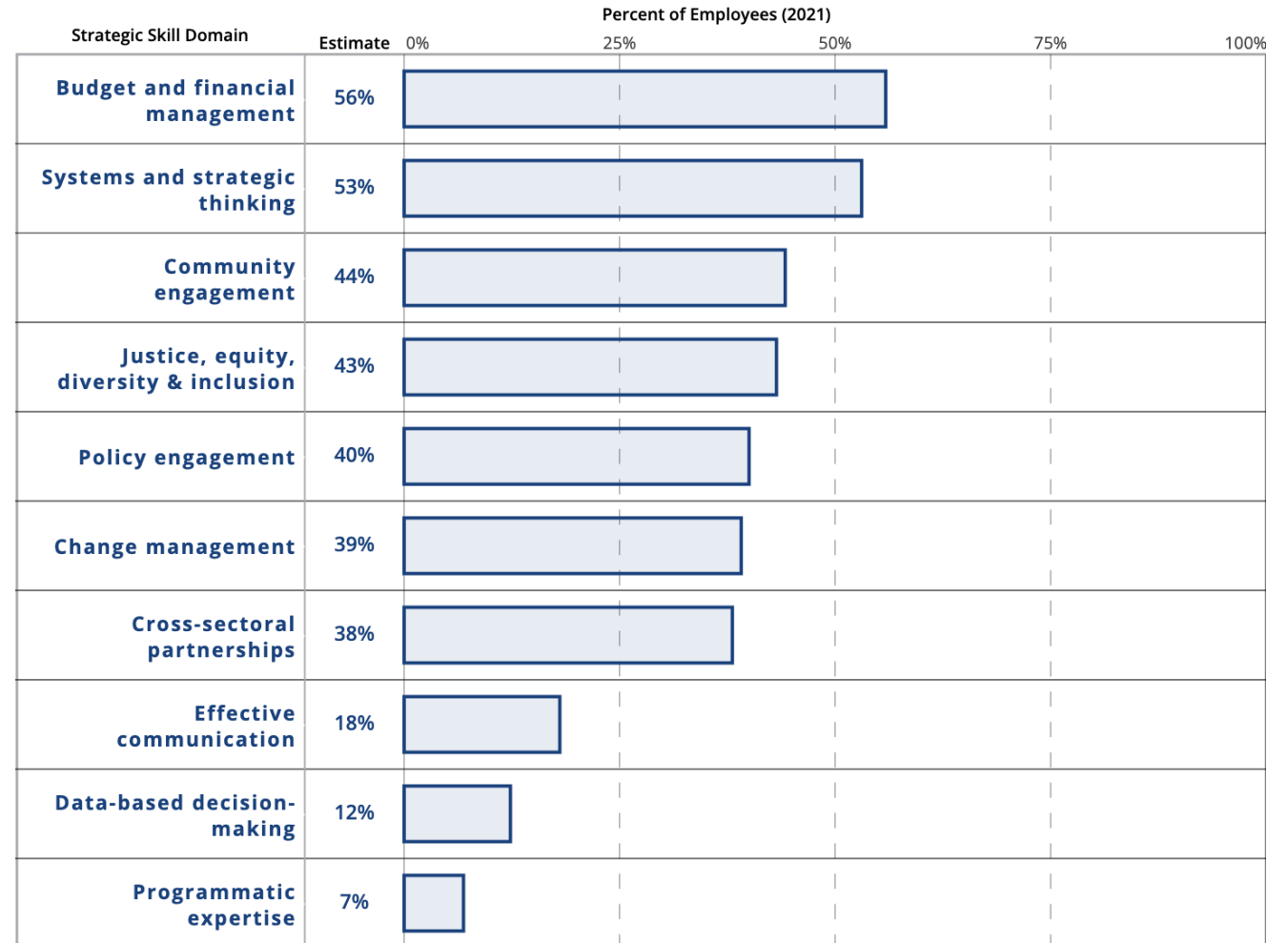### EPI/SURVEILLANCE: ALL EMPLOYEES

| Strategic Skill Domain	Estimate	Percent of Employees (2021)
Budget and financial management	49%	
Change management	45%	
Systems and strategic thinking	42%	
Community engagement	41%	
Policy engagement	37%	
Justice, equity, diversity & inclusion	36%	
Cross-sectoral partnerships	35%	
Effective communication	26%	
Data-based decision-making	22%	
Programmatic expertise	15%	

2021 KEY FINDINGS: ENGAGEMENT & SATISFACTION

PH WINS respondents were asked to rate their agreement with several statements related to:

- Job, organizational, and pay satisfaction
- Perceptions about their workplace
- Perceptions about their supervisors
- Perceptions about their organization

SATISFACTION

- The epidemiology/surveillance workforce is **largely satisfied** with their **job** (78%) and **organization** (65%).

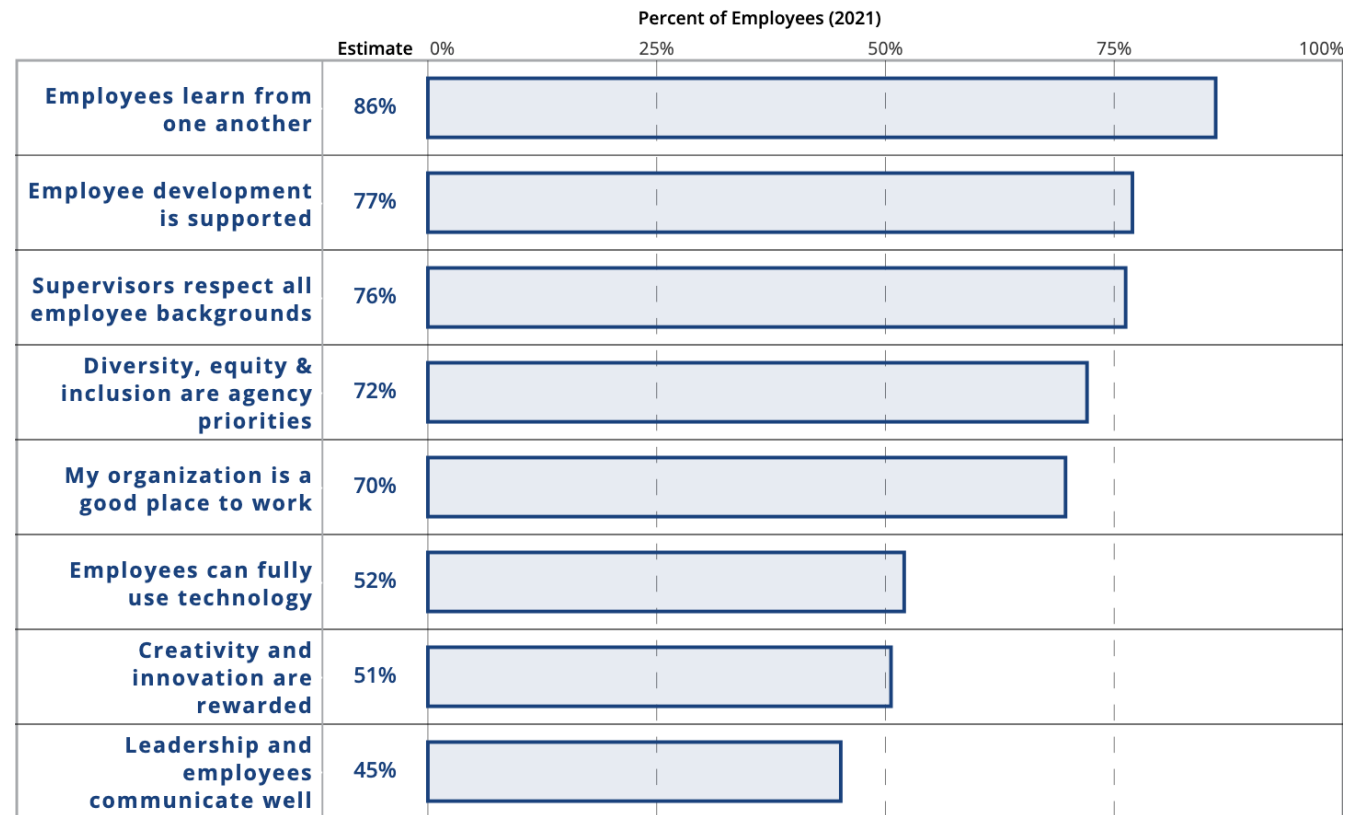- More than half (52%) are satisfied with their pay.

EMPLOYEE SATISFACTION
EPI/SURVEILLANCE: ALL EMPLOYEES

	Estimate	Percent of Employees (2021)
Job satisfaction	78%	
Organizational satisfaction	65%	
Pay satisfaction	52%	
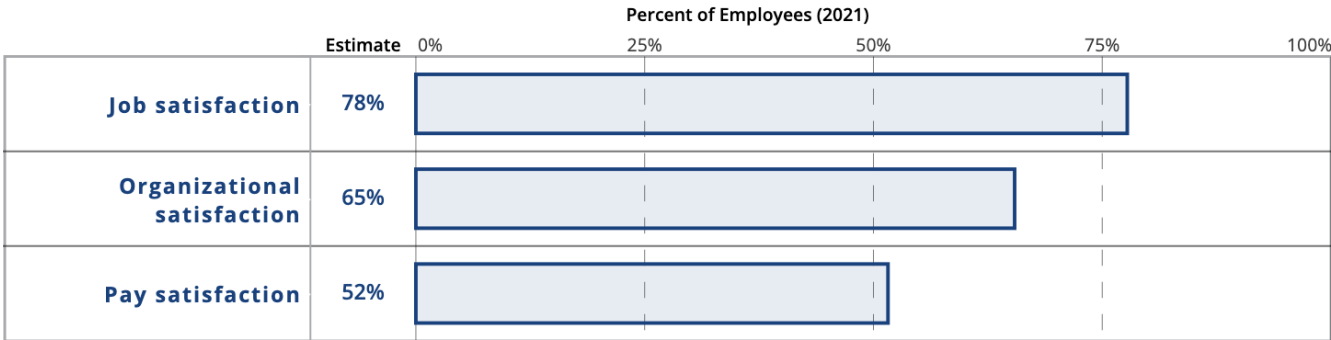
PERCEPTIONS ABOUT ORGANIZATION

- The epidemiology/ surveillance workforce's **overall perceptions of their organizations are positive**.

- However, there is room for improvement:
    - 51% agree that creativity and innovation are rewarded.
    - Less than half of the workforce agrees that leadership staff and employees communicate well.

PERCEPTIONS ABOUT ORGANIZATION
EPI/SURVEILLANCE: ALL EMPLOYEES

Percent of Employees (2021)

|	Estimate
Employees learn from one another	86%
Employee development is supported	77%
Supervisors respect all employee backgrounds	76%
Diversity, equity & inclusion are agency priorities	72%
My organization is a good place to work	70%
Employees can fully use technology	52%
Creativity and innovation are rewarded	51%
Leadership and employees communicate well	45%

2021 KEY FINDINGS: WELL-BEING

- The 2021 PH WINS survey included questions specifically about employees' mental and emotional well-being.

WELL-BEING

- 30% of epidemiology/ surveillance staff rate their mental health as either **"poor" or "fair."**

OVERALL MENTAL & EMOTIONAL WELL-BEING
EPI/SURVEILLANCE: ALL EMPLOYEES

Percent of Employees (2021)

	Estimate	Chart
Poor	7%	
Fair	23%	
Good	32%	
Very good	27%	
Excellent	11%	
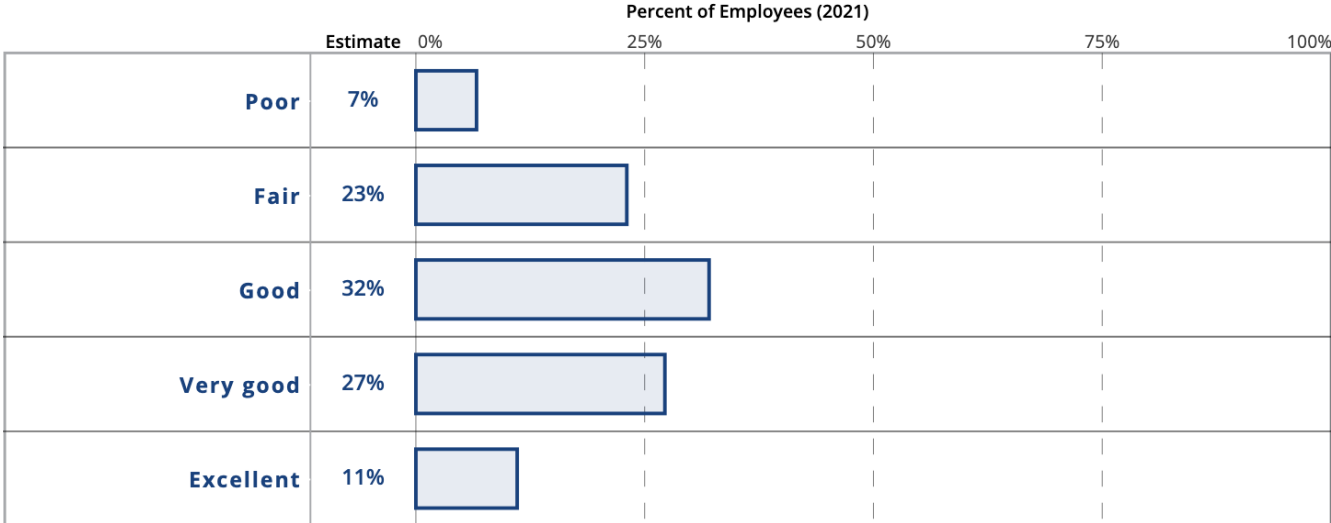
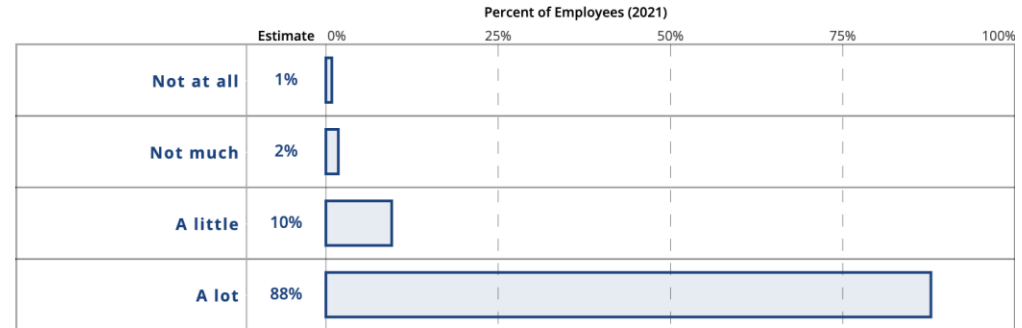# 2021 KEY FINDINGS: HEALTH EQUITY CONCEPTS

The 2021 PH WINS survey asked respondents to rate their level of awareness of and confidence in applying five health equity concepts:

- Health Equity
- Social Determinants of Equity
- Social Determinants of Health
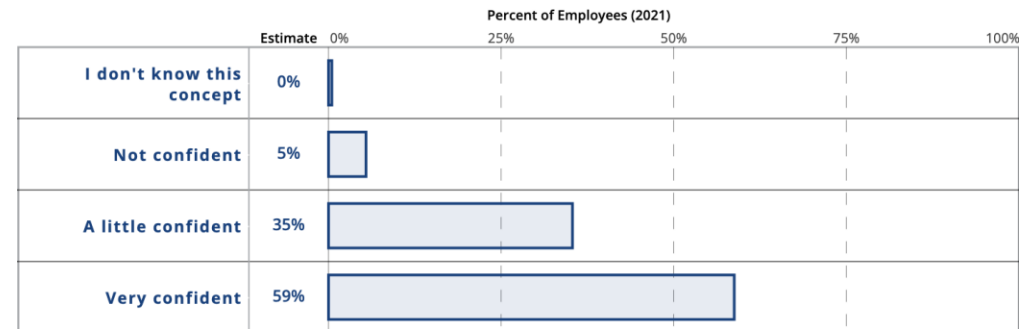- Structural Racism
- Environmental Justice

HEALTH EQUITY CONCEPTS:
HEALTH EQUITY

- **88%** of the epidemiology/ surveillance workforce rated their **awareness** of Health Equity as **a lot**.

- **59%** of the epidemiology/ surveillance workforce is **very confident** in applying the concept of Health Equity to their work.

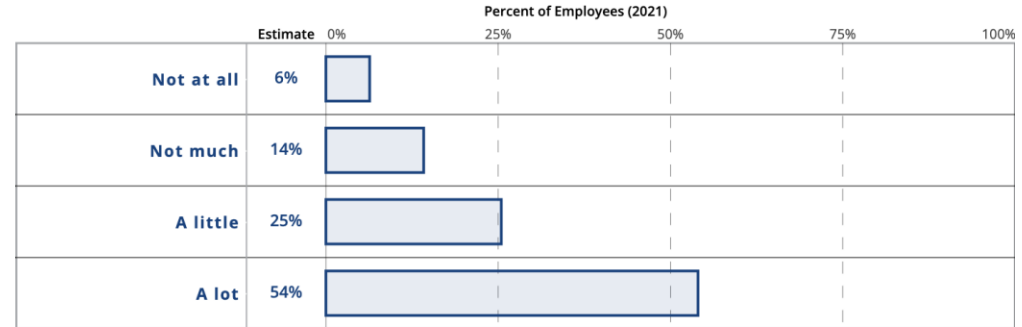## AWARENESS: HEALTH EQUITY
EPI/SURVEILLANCE: ALL EMPLOYEES

Percent of Employees (2021)

	Estimate	
Not at all	1%	
Not much	2%	
A little	10%	
A lot	88%	

CONFIDENCE: HEALTH EQUITY
EPI/SURVEILLANCE: ALL EMPLOYEES

Percent of Employees (2021)

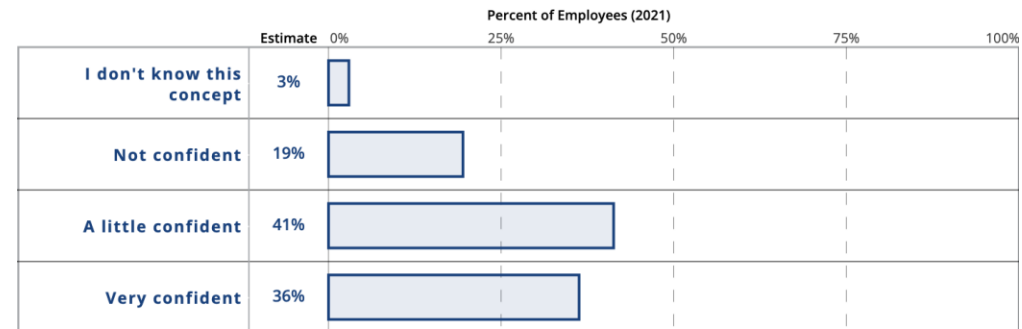|	Estimate	
I don't know this concept	0%	
Not confident	5%	
A little confident	35%	
Very confident	59%	

HEALTH EQUITY CONCEPTS:
SOCIAL DETERMINANTS OF EQUITY

- **54%** of the epidemiology/ surveillance workforce rated their **awareness** of Social Determinants of Equity as **a lot**.

- **36%** of the epidemiology/ surveillance workforce is **very confident** in applying the concept of Social Determinants of Equity to their work.

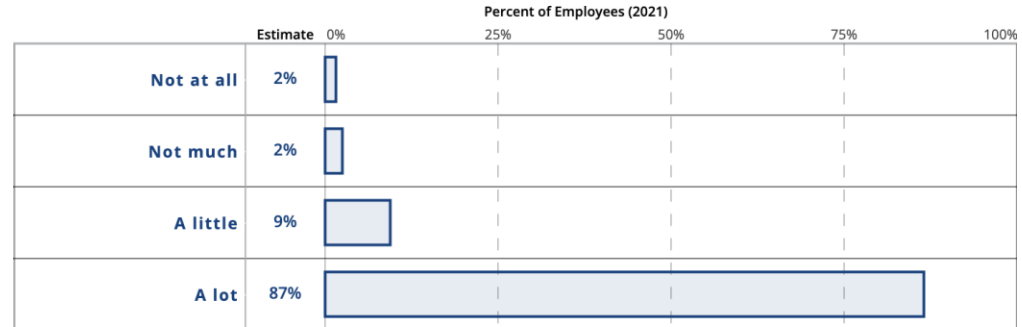**AWARENESS: SOCIAL DETERMINANTS OF EQUITY**
EPI/SURVEILLANCE: ALL EMPLOYEES

Percent of Employees (2021)

	Estimate	0%	25%	50%	75%	100%
Not at all	6%					
Not much	14%					
A little	25%					
A lot	54%					

CONFIDENCE: SOCIAL DETERMINANTS OF EQUITY
EPI/SURVEILLANCE: ALL EMPLOYEES

Percent of Employees (2021)

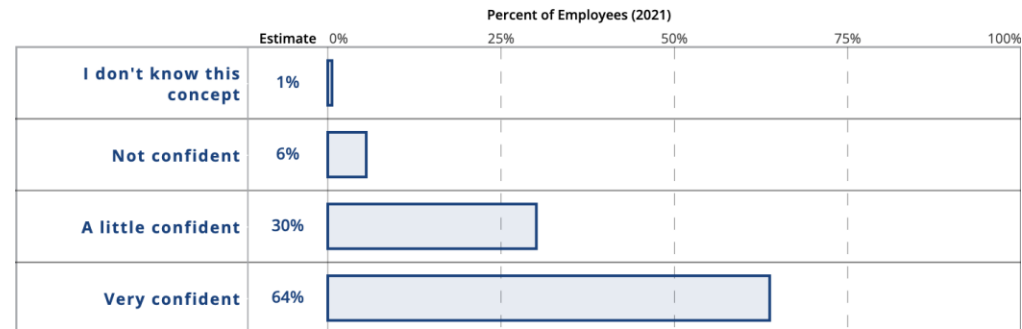|	Estimate	0%	25%	50%	75%	100%
I don't know this concept	3%					
Not confident	19%					
A little confident	41%					
Very confident	36%					

HEALTH EQUITY CONCEPTS:
SOCIAL DETERMINANTS OF HEALTH

- **87%** of the epidemiology/ surveillance workforce rated their **awareness** of Social Determinants of Health as **a lot**.

- **64%** of the epidemiology/ surveillance workforce is **very confident** in applying the concept of Social Determinants of Health to their work.

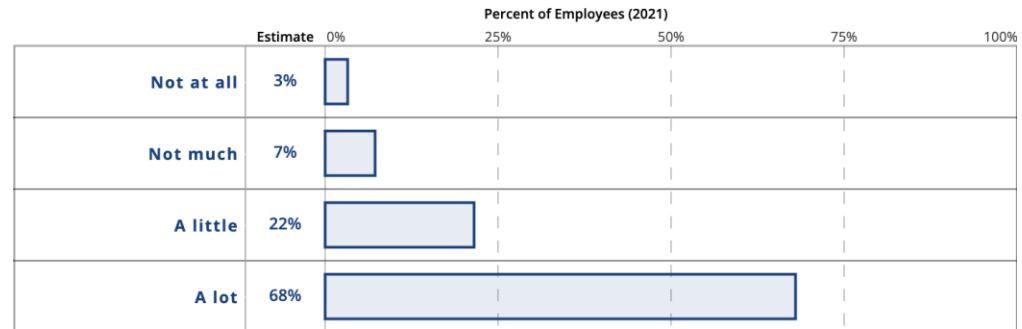### AWARENESS: SOCIAL DETERMINANTS OF HEALTH
EPI/SURVEILLANCE: ALL EMPLOYEES

Percent of Employees (2021)

	Estimate	
Not at all	2%	
Not much	2%	
A little	9%	
A lot	87%	

CONFIDENCE: SOCIAL DETERMINANTS OF HEALTH
EPI/SURVEILLANCE: ALL EMPLOYEES

Percent of Employees (2021)

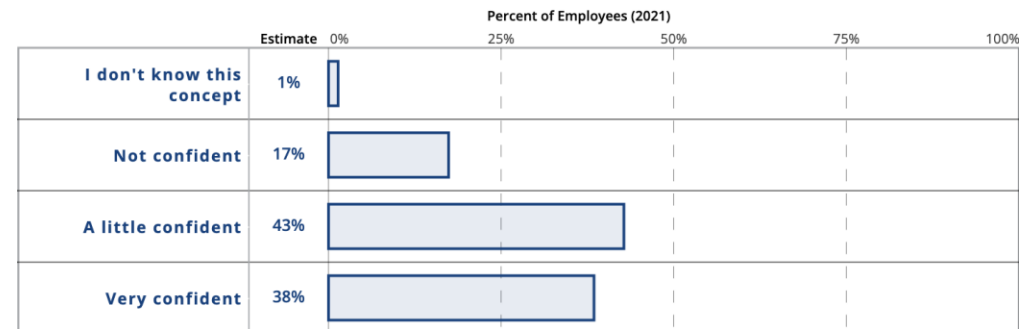|	Estimate	
I don't know this concept	1%	
Not confident	6%	
A little confident	30%	
Very confident	64%	

HEALTH EQUITY CONCEPTS:
STRUCTURAL RACISM

- **68%** of the epidemiology/ surveillance workforce rated their **awareness** of Structural Racism as **a lot**.

- **38%** of the epidemiology/ surveillance workforce is **very confident** in applying the concept of Structural Racism to their work.

AWARENESS: STRUCTURAL RACISM
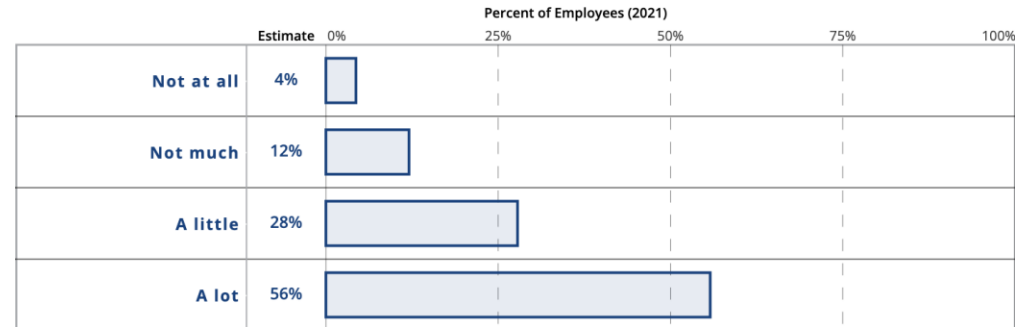EPI/SURVEILLANCE: ALL EMPLOYEES

Percent of Employees (2021)

	Estimate	0%	25%	50%	75%	100%
Not at all	3%					
Not much	7%					
A little	22%					
A lot	68%					

CONFIDENCE: STRUCTURAL RACISM
EPI/SURVEILLANCE: ALL EMPLOYEES

Percent of Employees (2021)

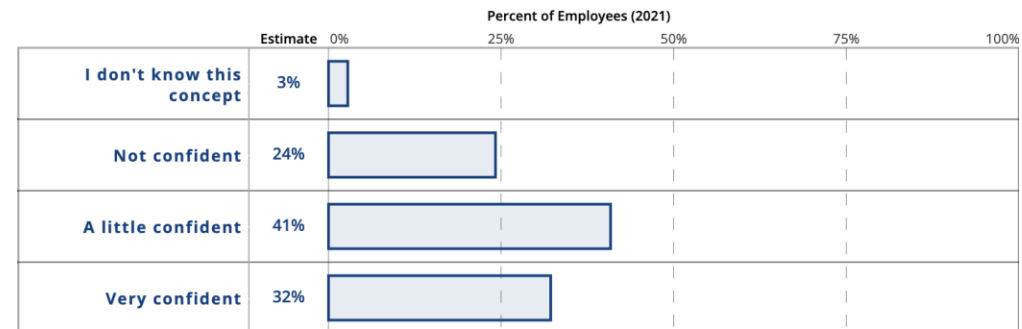|	Estimate	0%	25%	50%	75%	100%
I don't know this concept	1%					
Not confident	17%					
A little confident	43%					
Very confident	38%					

HEALTH EQUITY CONCEPTS:
ENVIRONMENTAL JUSTICE

- **56%** of the epidemiology/ surveillance workforce rated their **awareness** of Environmental Justice as **a lot**.

- **32%** of the epidemiology/ surveillance workforce is **very confident** in applying the concept of Environmental Justice to their work.

AWARENESS: ENVIRONMENTAL JUSTICE
EPI/SURVEILLANCE: ALL EMPLOYEES

Percent of Employees (2021)

	Estimate
Not at all	4%
Not much	12%
A little	28%
A lot	56%

CONFIDENCE: ENVIRONMENTAL JUSTICE
EPI/SURVEILLANCE: ALL EMPLOYEES

Percent of Employees (2021)

	Estimate
I don't know this concept	3%
Not confident	24%
A little confident	41%
Very confident	32%

FIND OUT MORE *(delete this slide before printing or presenting!)*

- **Looking for more data and graphs?**

  - This report represents only a small portion of the data that are available from the 2021 PH WINS.

  - Go to the **national PH WINS Dashboard** to view more data, download graph images, and more. You can find the dashboard at www.phwins.org/national

- **Want to learn more about the survey?**

  - Go to https://debeaumont.org/phwins/2021-findings/ for more information about PH WINS 2021, including key findings, links to publications and survey methods.

- **Have questions?**

  - Contact the PH WINS team at: phwins@debeaumont.org

Click the image to go to the national PH WINS Dashboard.