

NGA Public Health Leaders Call: Modernization of the Public Health Workforce was the second session in a series facilitated by COVID Academy's **Margaret Bourdeaux, MD, MPH** and hosted by the NGA's **Brittney Roy, MPA**. These sessions aim to help state leaders craft public health system reforms by sharing lessons learned and emergent model practices so state public health systems can prevent and mitigate future public health crises.

The **Issues** and **Considerations** outlined below are based in part on the presentation of **Rachel Hare Bork, PhD**, Director of Research and Impact at the de Beaumont Foundation.

This brief was written and edited by **Flavia Chen, MPH, Parsa Erfani, MD, and Margaret Bourdeaux, MD, MPH**.

Governmental public health needs to hire a minimum of 80,000 more full time employees in state and local health departments – an increase of 80% – to provide adequate infrastructure and minimum public health services to the nation, according to the 2021 de Beaumont Foundation report, "[Staffing Up: Determining Public Health Workforce Needs to Serve the Nation](#)." Modernizing the public health workforce requires collaboration between federal, state, territorial, tribal, and local government. While the [American Rescue Plan](#) commits \$7.66 billion towards establishing, expanding, and sustaining a public health workforce for the 21st century, the role of state leadership is critical.

Governors can play a leading role in building a 21st Century public health workforce by:

1. **Reviewing** the state of the state's public health workforce.
2. **Ensuring the public sees the value of public health infrastructure.**
3. **Exploring** models to share public health resources and personnel across jurisdictions.
4. **Engaging** local, territorial, tribal, and federal stakeholders on public health workforce investments.
5. **Reviewing** civil service reforms that may be needed to facilitate capacity building in the state.

Issues

Who constitutes the public health workforce?

The governmental public health workforce is comprised of federal agencies, state health agencies, local health departments, and tribal and territorial health agencies. It is estimated that **200,000 staff** comprise the state and local governmental public health workforce. Tracking changes to the public health workforce over time is complicated by the variation in how states, territories, and tribes organize their public health services and how jurisdictions have changed their approaches to public health over time.

The [Staffing Up](#) project, a collaboration between the [de Beaumont Foundation](#) and the [Public Health National Center for Innovations](#) (PHNCI), sought to provide state and local staffing estimates needed to implement the [Foundational Public Health Services](#) (FPHS) – the capabilities every health department should be able to provide. The FPHS were developed in 2013 and updated in 2022 in response to a recommendation from the 2012 Institute of Medicine report, "[For the Public's Health: Investing in a Healthier Future](#)", which called for the articulation of a "**minimum package of services**" state and local health departments must be able to provide. FPHS capabilities include, Assessment and Surveillance, Community Partnership Development, Equity, Organizational Competencies, Policy Development and

Support, Accountability and Performance Management, Emergency Preparedness and Response, and Communications.

What does “staffing up” entail?

The de Beaumont analysis, conducted in collaboration with the Public Health National Center for Innovations, concluded that the U.S. needs **80,000 more full-time-equivalent (FTE) positions** in state and local health departments to provide the FPHS, with the highest proportional increase of new FTEs needed at the local level. The de Beaumont Foundation is creating a public health workforce estimator for local health departments to determine the number and type of staff needed at the local level to provide public health services, with an estimated release date in fall 2022. Detailed findings from de Beaumont’s 2021 fielding of the Public Health Workforce Interests and Needs Survey ([PHWINS](#)) were released in summer 2022, as reported in CDC’s [MMWR](#).

Other organizations have conducted similar analyses but looking only at specific jurisdictions or professional elements within the public health sector. For example, the National Association of County and City Health Officials (NACCHO) 2019 National Profile of Local Health Departments [report](#) concluded that local health departments experienced a loss of 21 percent of their workforce capacity over the past decade, which coupled with decreased or stagnant preparedness budgets, hindered counties’ COVID-19 response.

Organizations such as the [Association for State and Territorial Epidemiologists](#) (CSTE) and the [Association of Public Health Laboratories](#) (APHL) have also conducted profession-specific workforce capacity and needs assessments.

CSTE’s 2021 Epidemiology Capacity Assessment indicated a 23% increase in epidemiologists nationwide since 2017 to 4135 for a per capita rate of 1.26/100,000. This rate represents **65% of the estimated need overall**, with specific disciplines of epidemiology differentially in need of development. An estimated 922% increase in genomic epidemiologists, a 656% increase in mental health epidemiologists, and a 155% increase in oral health epidemiologists are required to reach goals. The CSTE capacity assessment also found that federal funding (including included COVID-19 funds) constitutes 83% funding for all epidemiologic activities in state programs. States contributed an average of 12% of funds for epidemiologic activities. Only in the program areas of vital statistics and generalist programs did state funding contribute >50% of funding.

APHL identified the need to increase the **laboratory workforce by 3,000 FTE** across job categories. Survey responses from 84 directors of state, local, large city and territorial public health laboratories demonstrated a range of need from 30-75% increase in FTE staff to meet on-going demands and establish appropriate preparedness and response capabilities.

Whether approached through the lens of the cross-cutting skills and capabilities every health department should provide (FPHS) or through the lens of discipline-specific capacity assessments, staffing up the public health workforce should engage partners across government, academia, professional societies, nonprofits, and the private sector.

Elements to consider include:

- **Educational pipelines** – public health nurses, community health workers, bachelors-, masters- and doctorate-level public health practitioners, etc. all demand different educational foundations
- **Para-professional and volunteer training.**

- **Infrastructure** – data systems, laboratories capacity, genomic sequencing, broadband, cloud computing, etc.
- **Workforce pipelines** – internships, fellowships, field placements, clinical training programs, competitive compensation, and professional incentives such as loan forgiveness programs
- **Administrative processes** to ensure timely recruitment, exploration of models for cross-jurisdictional resource sharing

How do we end the “boom and bust” cycle in public health?

In the past decade, [state and local public health departments have lost 15% of essential staff](#), limiting the ability of health departments across the country to plan for and respond to emergencies and meet community needs. In response to the COVID-19 emergency, the federal government attempted to address this problem through several large, one-time federal funding programs to recruit public health workers. The \$1.9 trillion American Rescue Plan Act (ARPA) signed by President Joe Biden in 2021, for example, includes \$350 billion in new funding for state, local, territorial, and tribal governments through the Coronavirus State and Local Fiscal Recovery Fund.

However, while these influxes of federal funds catalyzed in response to the COVID-19 pandemic have been vital, analysts note that they can perpetuate what is commonly referred to as the “panic-neglect,” or “boom-and-bust” cycle that has frustrated efforts to build a consistent, standing workforce across the public health sector. The boom-and-bust cycle in public health refers to a pattern wherein during times of relative calm, instead of investing in public health capacity and preparing for future emergencies, public health budgets are cut. After adjusting for inflation, funding for [Public Health Emergency Preparedness](#) has been cut by about a half, for example. When emergencies arise, public health departments are asked to surge from a place of weakness, rather than strength, pulling staff from other vital programs, hiring large numbers of inexperienced workers whose training time slows responses, and paying workers from short term funds so they do not plan on staying in public health for their careers.

Ending the “boom-and-bust” cycle means that modernizing the public health workforce **cannot rely on federal funding alone**, highlighting the pressing role for state leadership in public health for years to come. Federal investments in public health have been cyclical, often tracking with emergencies rather than acting as long-term investments in infrastructure and capabilities. As states must balance budgets annually, states that have mobilized federal funds during periods of “boom” without identifying internal sources to sustain investments are often compelled to cut public health programming during periods of federal “busts” in public health funding. Modernizing core public health infrastructure, data systems, and workforce capacity therefore will require concerted state and federal investment.

Considerations for Governors

Governors can play a leading role in building a 21st Century public health workforce by:

1. **Reviewing** the state of the state’s public health workforce.

During the pandemic, states and territories issued executive orders to address labor shortages by, for example, recognizing [professional licenses](#) issued by other jurisdictions, temporarily suspending or modifying laws and regulations to allow [telemedicine](#). Some states enacted [laws to expand the public health workforce](#) during the COVID pandemic.

Governors may use executive authority to mandate statewide review of the public health workforce, identify challenges, situate challenges within appropriate context, and inform policy action.

2. **Ensuring the public sees the value of public health infrastructure.**

The public doesn't see disasters averted. And [the invisible is easy to neglect](#). Governors may use the opportunity of "staffing up" public health in their state to convene stakeholders and make the invisible visible. For example, states may choose to have local health departments provide common services, such as post-natal home visits or childhood vaccinations. This will help the local health departments build rapport and gain the trust of the public, so that during emergencies, they may be more willing to cooperate with health officials. Staffing up will take concerted, long-term vision that governors can articulate and fund.

3. **Exploring** models to share public health resources and personnel across jurisdictions.

Governors should consider exploring models for resource and workforce sharing, such as regional collaboratives, or the [National Network of Public Health Institutes'](#) (NNPHI) hub model developed for hurricane response. The [Association of State and Territorial Health Officials](#) (ASTHO) reports that, "The number of states sharing resources with other states on a continuous, recurring (non-emergency) basis has risen substantially, from 9 percent in 2012 to 27 percent in 2016. In both years, all-hazards response and epidemiology were the top two shared services and functions, laying the groundwork for two areas that often require a multi-state response. Factors leading to this increase may reflect growing recognition of the importance of Mutual Aid agreements of both a formalized and informal nature between states, and incentives produced through supportive language inserted in cooperative agreement objectives issued by the federal government."

Beyond sharing public health resources to meet baseline staff needs, processes should be put in place to ensure sudden surges in staffing demands can be met during public health emergencies. These processes can also lean on similar models of resource sharing across jurisdictions.

4. **Engaging** local, territorial, tribal, and federal stakeholders on public health workforce investments.

States should consider whether the influx of federal funds ultimately helps or hinders the goal of achieving a sustainable public health workforce. Some in public health have articulated that the risk of uncritically accepting the "boom and bust" cycle of public health funding is that it becomes more difficult to persuade stakeholders – whether federal, state, territorial, tribal, or local – to claim responsibility for ensuring sustainability. Once the emergency passes, the urgency (and funding) evaporate. How might public health need to be reconfigured in the US to make the case for the end of "boom and bust" public health funding?

[ASTHO](#) reports that, "With an influx of public health funding to address the COVID-19 pandemic unlikely to continue, many states and territories are working to identify ways to sustain funding to continue supporting their workforce needs. At least four states (California, Connecticut, Montana, and Nevada) considered bills in 2021 to develop a commission or taskforce to assess public health funding needs; Montana and Nevada enacted related laws. Montana's law created a health advisory commission, staffed by the Department of Public Health, and includes of a bipartisan group of legislators and executive branch appointees to make recommendations for spending American Rescue Plan funding. Nevada's new law creates a Public Health Resource Office tasked with assessing the unmet needs within public health services, opportunities for additional federal and private funding, and make recommendations for improving coordination to maximize efficiency within the public health system."

5. **Reviewing** civil service reforms that may be needed to facilitate capacity building in the state.

“Staffing up” will require collaborative actions across levels of state government. Federal funds to support local hiring, for example, may be challenging to efficiently leverage without updates to state hiring systems. Ensuring competitive salaries will be vital to recruiting and retaining the 21st Century public health workforce, which may require states to address civil service reform issues such as job classifications, salary caps, and pay scales.