

# NACCHO's 2019 Profile Study: Local Health Department Capacity to Prepare for and Respond to Public Health Threats



## Introduction

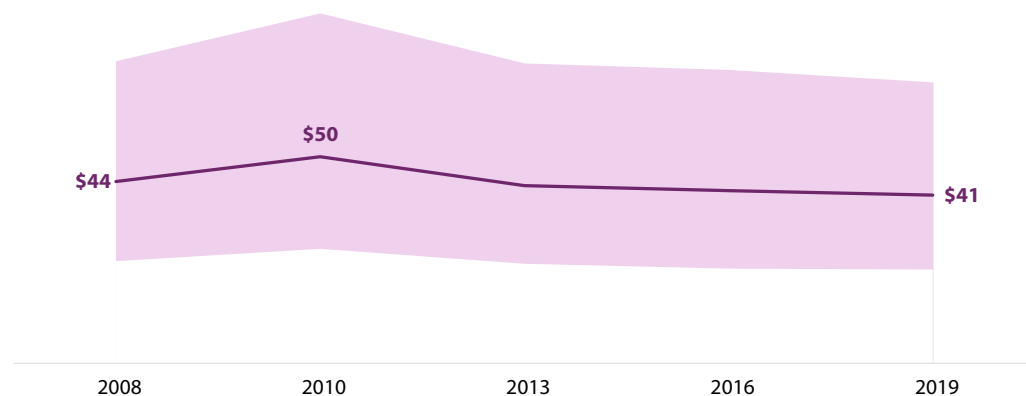
Local health departments (LHDs) play a critical role in their communities during a national pandemic. They are on the frontlines conducting disease surveillance, monitoring outbreaks, coordinating resources with healthcare partners, and sharing information with the public. However, LHD emergency preparedness and response programs have been chronically underfunded and understaffed,<sup>i</sup> hindering their ability to quickly mobilize in times of crisis. The public health system's already limited capacity is presently being further strained as priorities rapidly shift and resources fluctuate during COVID-19 response. This research brief outlines LHD capacity to conduct pandemic response and preparedness prior to COVID-19, using data from the National Profile of Local Health Departments (Profile) study.

## LHD Emergency Preparedness Programs Face Financial and Staffing Constraints

### Financial Capacity

Over the past decade, the local public health system experienced an overall decline in LHD financial capacity. Median annual per capita expenditures represent the amount of funding available to LHDs for spending on public health efforts. Although strong evidence shows that an increase of as little as \$10 in per capita public health spending can significantly improve population health,<sup>ii</sup> median per capita expenditures among LHDs decreased by nearly the same amount over the past nine years—from a peak of \$50 in 2010 to \$41 in 2019 (Figure 1). Median expenditures have remained at this low amount since 2013, despite a growing and aging population. With less financial capacity, LHDs must adjust their spending and reprioritize resources at the cost of bolstering critical public health services.

**Figure 1. Median annual per capita expenditures over time**

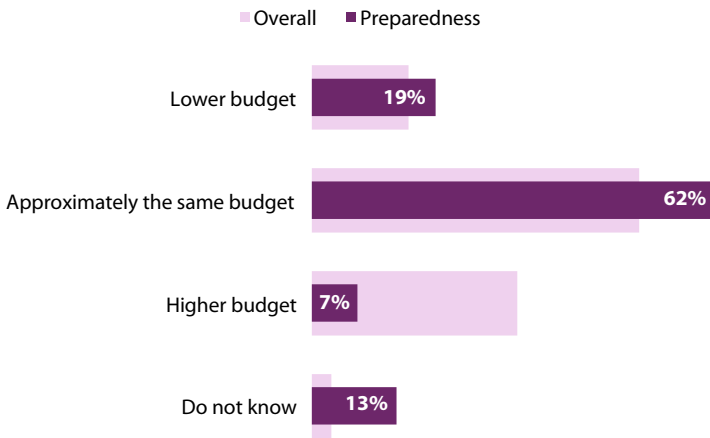


*n=712–2,097. All numbers reported have been adjusted for inflation. Shadow depicts 25th and 75th percentiles.*

Budget shortages especially affect LHD emergency preparedness and response programs. In 2019, more than 80% of LHDs experienced either a decrease in their preparedness budget or no preparedness budget changes compared to the previous fiscal year (Figure 2). However, more than 80% of LHDs reported overall budgets that were greater or approximately the same in 2019 as in the previous fiscal year, with just one-third of LHDs reporting a higher budget. This shift in distribution when assessing changes in emergency preparedness-specific versus overall budgets is an indication that, although some LHDs are receiving more money overall, their preparedness and response services may not be financially benefiting from these increased resources.

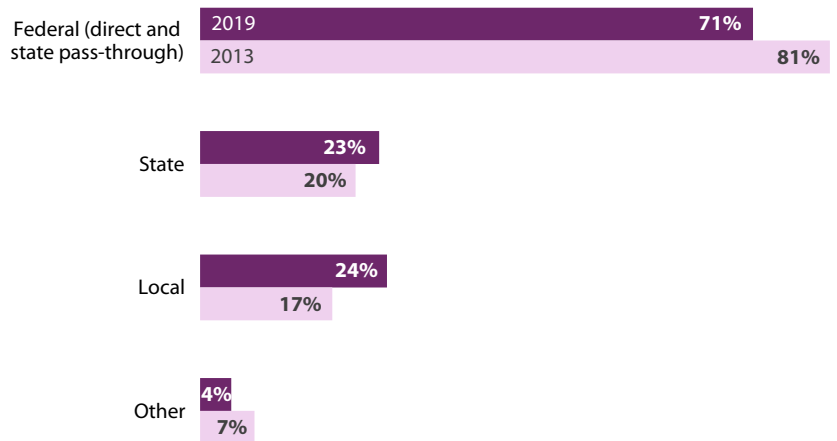
This is especially noteworthy because preparedness and response is one of the few public health areas almost entirely funded by the federal government.<sup>iii</sup> In 2019, most LHDs received federal funding—which is often passed through state agencies to localities—for preparedness activities (Figure 3). However, this funding from federal sources has decreased since 2013. Conversely, LHDs increasingly rely on state and local sources of funding, such as taxes and fees, to support preparedness and response efforts, which can exacerbate the challenging economic situation communities experience during pandemics such as COVID-19.

**Figure 2. Budget changes, overall and for emergency preparedness activities**



*n(overall)=1,211  
n(preparedness)=371*

**Figure 3. Funding sources for preparedness activities compared to 2013**

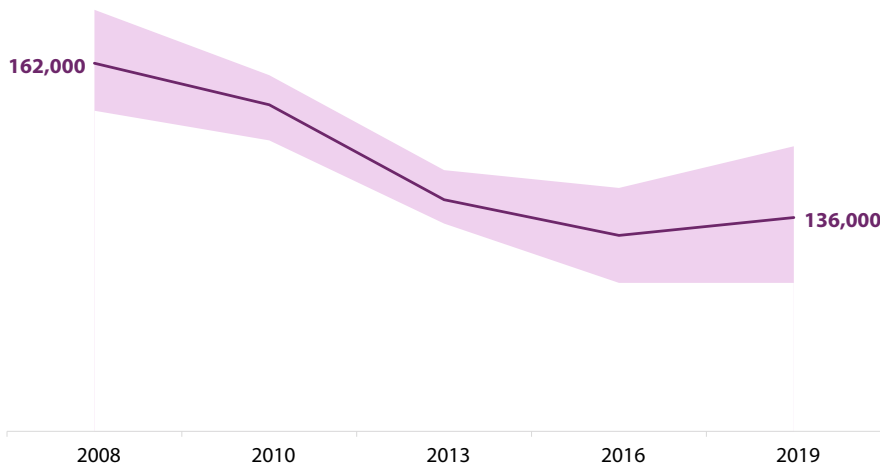


*n(2019)=370  
n(2013)=457*

## Workforce Capacity

In addition to budget cuts, LHDs experienced steady cuts to the workforce over the past decade, hindering a timely and robust local public health response. A measure of LHD full-time equivalents (FTEs) depicts the level of staffing capacity allocated to providing local public health services. Since 2008, the estimated number of FTEs employed by LHDs decreasing by approximately 16% (Figure 4). Between 2016 and 2019, LHD staffing capacity began to stabilize, with an estimated 3,400 FTEs joining the workforce—the first increase since 2008.

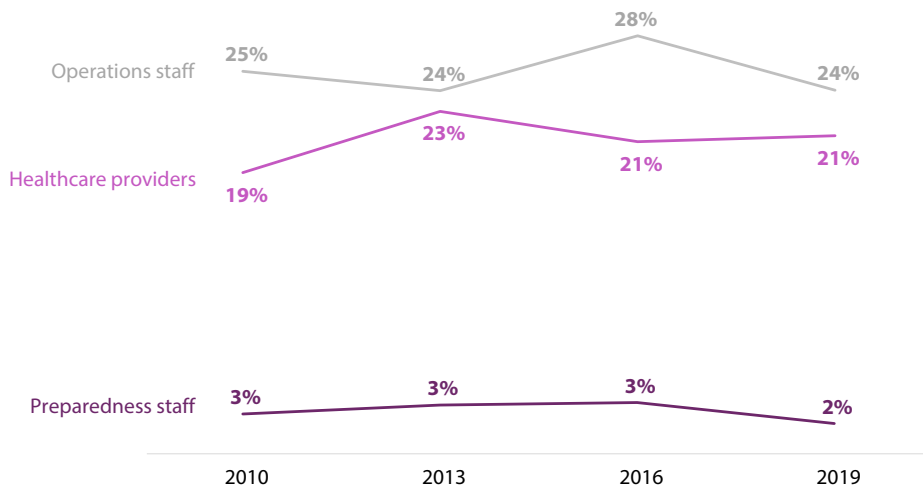
**Figure 4. Estimated number of full-time equivalents (FTEs) over time**



*n=1,467–2,232. Shadow depicts 95% Confidence Interval.*

Over the past decade, some occupations critical to pandemic response experienced minor fluctuations despite population growth and recent global health threats, including Ebola and Zika. In particular, the composition of preparedness staff, including epidemiologists and statisticians, in the total workforce decreased very minimally between 2016 and 2019 (Figure 5). Furthermore, the proportion of LHD staff that are healthcare providers, which includes nurses and public health physicians, marginally increased since 2010. Meanwhile, operations staff continue to comprise one-fourth of the workforce. LHD staffing trends are often a result of funding priorities, which have seemingly not attended to the needed growth in preparedness and response as a critical local public health service.

**Figure 5. Workforce composition of select occupation categories over time**



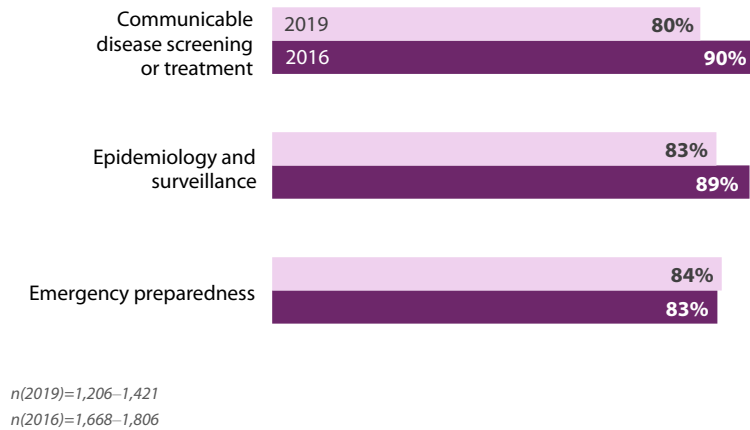
*n=1,468–2,031*

## LHDs Adapt to Resource Constraints to Protect Communities

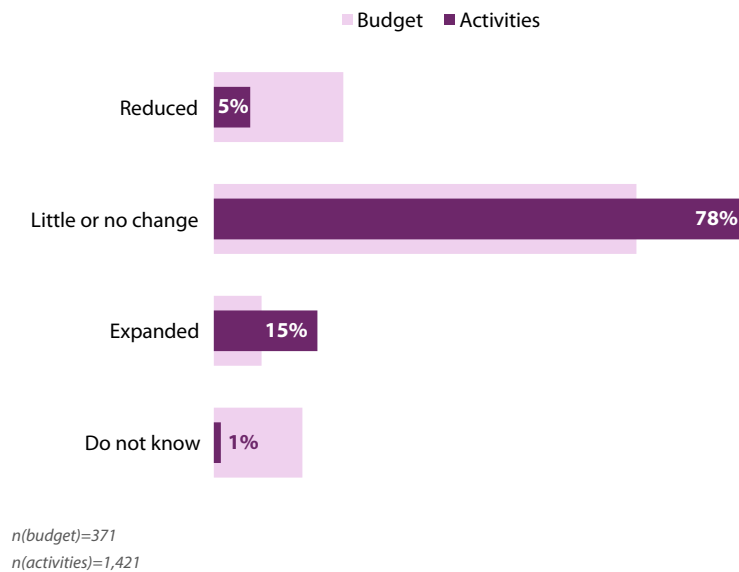
In 2016 and 2019, LHDs reported the effects of budget and staffing changes on their level of service delivery. In both years, the majority of LHDs provided pandemic-related services at either reduced levels or experienced little/no changes (Figure 6). Although these effects were felt to a lesser degree in 2019 than in 2016, the prolonged lack of financial and human resources allocated to bolstering the work in these areas pose a challenge for LHDs.

As a result, they must adapt to resource constraints to protect the health of their communities. For example, more than three-fourths of LHDs provided emergency preparedness services at similar levels in 2018 compared to 2017 and had to do so regardless of the reductions in and limited availability of dedicated funding (Figure 7). In addition, the need for them to address infectious disease outbreaks remains, with 41% of LHDs responding to at least one outbreak event in the previous year. This highlights the critical role LHDs play in the local emergency preparedness and response infrastructure. Even without sufficient resources, LHDs must provide essential emergency preparedness and response services to their communities. Furthermore, LHDs have been decreasingly involved in policy activities related to emergency preparedness and

**Figure 6. Reductions or no changes in provision of services compared to 2016**



**Figure 7. Budget and service provision changes for emergency preparedness**



response since 2016—with 72% of LHDs reporting involvement in 2016 compared to only 62% in 2019. Together these data show that, although LHDs are key players on the frontlines of a national pandemic, they lack agency in the direction of relevant policies that inform their work and must contend with limited resources to continue providing essential public health services.

## Implications

LHDs work diligently to protect the health of their communities from threats such as COVID-19, and having resources that can be rapidly mobilized in the face of an emergency is vital to a timely public health response. However, inadequate funding and staffing capacity has challenged jurisdictions' emergency preparedness and response capabilities. Even without the infusion of these resources, LHDs shift priorities to ensure they are equipped to play a key role in pandemic response. Yet, LHDs are unable to prepare as robustly as is necessary, and activities that strengthen the public health infrastructure, including policy development, may become secondary to the more critical frontline response efforts. Therefore, priorities at the state and federal levels should focus on proactively bolstering LHD capacity, as well as amplifying the voice of LHDs in policy work that informs public health programs.

## Methodology

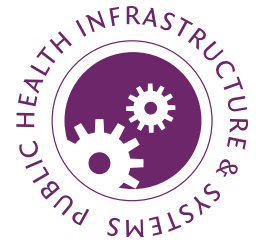
The National Association of County and City Health Officials (NACCHO) National Profile of Local Health Departments (Profile) study is conducted every three years to develop a comprehensive and accurate description of LHD infrastructure and practice. NACCHO distributed the census-style Profile questionnaire to 2,453 LHDs in the United States from March through August 2019.

The Profile survey includes a core questionnaire (sent to all LHDs) and two module questionnaires (sent to statistical samples of LHDs). A total of 1,496 LHDs completed the survey (response rate of 61%). Data are self-reported. National estimates were computed using appropriate estimation weights to account for differential non-response and sampling.

Longitudinal workforce estimates differ from previous reports due to an enhanced data review revealing a small number of LHDs with ongoing reporting errors that were removed from analysis over the past years to enhance comparability through 2019.<sup>iv</sup>

# [RESEARCH BRIEF]

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## References

<sup>i</sup>Trust for America's Health. (2020). The Impact of Chronic Underfunding on America's Public Health System: Trends, Risks, and Recommendations, 2020. Retrieved from <https://www.tfah.org/report-details/publichealthfunding2020/>

<sup>ii</sup>AcademyHealth. (2018). The Return on Investment of Public Health System Spending. Retrieved from <https://www.academyhealth.org/publications/2018-06/return-investment-public-health-system-spending>

<sup>iii</sup>Leider, J. P., Resnick, B., Sellers, K., Kass, N., Bernet, P., Young, J. L., & Jarris, P. (2015). Setting budgets and priorities at state health agencies. *Journal of Public Health Management and Practice*, 21(4), 336–344.

<sup>iv</sup>National Association of County and City Health Officials. (2020). NACCHO's 2019 Profile Study: Changes in Local Health Department Workforce and Finance Capacity Since 2008. Retrieved from <http://nacchoprofilestudy.org/>

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