Coronavirus disease 2019 (COVID-19) response has placed an unprecedented burden on local health departments (LHDs) in a year of civil unrest in the run-up to the presidential election, Hurricane Isaias assaulting the East Coast in July, and wildfires destroying more than 100,000 acres in California. The US public health emergency preparedness (EP) infrastructure is currently taxed beyond capacity, and local public health systems working to control COVID-19 in their communities face fewer resources than ever before.

The National Association of County and City Health Officials (NACCHO’s) 2019 National Profile of Local Health Departments study (Profile study, hereafter) provides the most recent nationally representative snapshot of local public health funding and preparedness capacity preceding the declaration of COVID-19 as a national public health emergency. These data provide valuable context about LHD resources when COVID-19 response efforts were activated. They can also inform efforts toward bolstering local public health’s footing for future preparedness activities. In this article, 2019 Profile study data are used to examine how LHD funding for EP activities changed in 2019 relative to changes in overall LHD funding. This demonstrates how the prioritization of EP funding fluctuates in the context of overall funding at the local level.

Methods

The Profile study represents the largest, most reliable data source on LHD workforce, funding, and activities across the United States. The study is conducted every 3 years by NACCHO in partnership with the Centers for Disease Control and Prevention and the Robert Wood Johnson Foundation. The 2019 Profile study includes a set of core questions that are sent to a census of LHDs in the United States, and 2 module questionnaires sent to statistically representative samples of that LHD population. In 2019, a total of 1496 LHDs completed the survey, with an overall response rate of 59%. Questions specific to EP capacity were included in module 1, which was sent to 625 LHDs and received a 61% response rate. Estimates are weighted to account for differential nonresponse by size of population served. All data are self-reported by LHD staff and are not independently verified. LHDs may have provided incomplete, imperfect, or inconsistent information for various reasons.

LHD responses to 2 questions were used to create an indicator of prioritization of EP funding relative to overall funding. In the core questionnaire, LHDs were asked to characterize their current fiscal year budget relative to the previous year’s budget as one of the following: “Less than the previous year’s budget”; “Approximately the same (within ±1%) as the previous year’s budget”; or “Greater than the previous year’s budget.” In addition, respondents who received module 1 were asked to characterize their LHD’s budget for preparedness activities during the current fiscal year the same way. Table 1 indicates how 3 prioritization categories (ie, “prioritized,” “deprioritized,” “no change in priority”) were defined using LHD responses to these 2 questions. LHDs were categorized as having prioritized EP funding when they reported...
that EP funding was greater than the prior year or that it had remained stable despite cuts to their overall budget. LHDs that reported EP budget cuts in the context of overall budget stability or growth, or those that reported no change to their EP budget despite overall budget growth, were categorized as having de-prioritized EP funding. LHDs that reported EP budget cuts or stagnation alongside overall budget cuts or stagnation, respectively, were categorized as having not changed how EP funding was prioritized.

Statistics are compared by various LHD jurisdiction characteristics, namely, size of population served, type of governance, and degree of urbanization. LHDs are classified as small if they serve fewer than 50,000 people, medium if they serve between 50,000 and 500,000 people, and large if they serve 500,000 or more people. LHDs’ governance is determined by the department’s relationship to their state health agency. Some LHDs are agencies of local government—referred to as locally governed. Others are local or regional units of the state health department—referred to as state governed. Some are governed by both state and local authorities (called shared governance). Finally, each LHD in the Profile study population was classified as serving either an urban jurisdiction or a rural jurisdiction using the National Center for Health Statistics Urban-Rural Classification Scheme definitions and the Economic Research Service Frontier and Remote Area Codes. Each LHD was coded as urban or rural based on whether the majority of people it served were from urban or rural settings (calculated for each census tract the LHD serves).

Findings and Discussion

Local public health workforce and funding capacity decreased in the wake of the 2008 US economic recession and may have only now begun to stabilize. For example, more than half of LHDs (52%) had stagnant funding from the 2018 to 2019 fiscal years, while 15% experienced a decrease in funding and 33% experienced an increase. Furthermore, 62% expected budget cuts or stagnation for the upcoming fiscal year. Although median annual per capita expenditures—another metric of LHD funding capacity—increased between 2008 and 2010 (from $44 to $50), spending has decreased 18% since then (from $50 to $41 in 2019). The full picture is captured by examining this metric by the size of the population served. For instance, median annual per capita spending among small LHDs follows a similar pattern over the past decade, with $44 in 2008, $53 in 2010, and decreasing since then to $45 in 2019—nearly identical to 2008 levels after adjusting for inflation. However, medium and large LHDs report a different trend, with 14% and 22% decreases in median annual per capita expenditures from 2008 to 2019, respectively. In addition to the overall decline in financial resources, LHDs also contend with limited workforce capacity. Nationally, the number of full-time equivalents (FTEs) employed by LHDs decreased by 16% from 2008 to 2019 (from 162,000 to 136,000 FTEs) and the number of employees decreased by 17% (from 184,000 to 153,000 employees).

Against this backdrop of a decade of staffing and funding shortages, 2019 Profile data paint a national picture of recent LHD public health EP capacity. LHDs are often called upon to respond to public health threats. For instance, 67% of LHDs responded to an all-hazards event in 2019. The most common events were noninfluenza infectious disease outbreaks (41% of LHDs), natural disasters (35% of LHDs), and foodborne outbreaks (32% of LHDs).

### TABLE 1

| Definitions of EP Funding Prioritization Categorya | “My LHD’s current fiscal year budget is . . . compared to the previous year’s budget” | Prioritization category |
|--------------------------------------------------|----------------------------------------------------------------------------------|------------------------|
| “My LHD’s budget for preparedness activities during the current fiscal years is . . . compared to the previous year’s budget.” | “No change to prioritization of EP funding relative to overall funding” | Less Less |
| | “Greater than the previous year’s budget” | Greater |
| | “Same as the previous year’s budget” | Same |
| | “Less than the previous year’s budget” | Less |

Abbreviations: EP, emergency preparedness; LHD, local health department.

*aCategories to characterize the prioritization of EP Funding relative to Overall Funding were defined using LHD responses to two items on the 2019 Profile questionnaire. All budget changes were reported in 2019 relative to the prior fiscal year. LHDs that reported that they did not know the answer to either question were excluded from the analysis.

1. My LHD’s current fiscal year budget is . . . (select only one)
   a. Less than the previous year’s budget
   b. Approximately the same (within plus or minus one percent) as the previous year’s budget
   c. Greater than the previous year’s budget
   d. Do not know
2. My LHD’s budget for preparedness activities during the current fiscal year is . . . (select only one)
   a. Less than the previous year’s budget
   b. Approximately the same (within plus or minus one percent) as the previous year’s budget
   c. Greater than the previous year’s budget
   d. Do not know
TABLE 2
Prioritization of EP Funding, Relative to Overall Funding, by LHD Characteristics (N = 316)

|                      | No Priority Change | Deprioritized | Prioritized |
|----------------------|--------------------|---------------|-------------|
| All                  | 41%                | 39%           | 21%         |
| Size of Population Served\(^a\) |                    |               |             |
| Small                | 42%                | 34%           | 23%         |
| Medium               | 38%                | 45%           | 17%         |
| Large                | 38%                | 44%           | 18%         |
| Degree of Urbanization\(^b\) |                    |               |             |
| Rural                | 38%                | 36%           | 26%         |
| Urban                | 43%                | 42%           | 15%         |
| Type of Governance   |                    |               |             |
| State                | 54%                | 31%           | 15%         |
| Shared               | 45%                | 22%           | 34%         |
| Local                | 38%                | 42%           | 20%         |

Abbreviations: EP, emergency preparedness; LHD, local health department.

\(^a\) Small (<50,000); Medium (50,000 - 500,000); Large (500,000+).

\(^b\) Per the National Center for Health Statistics Urban-Rural Classification Scheme and the Economic Research Service Frontier and Remote Area Codes definitions. LHDs were classified as either Urban or Rural based on whether the majority of people it served were from urban or rural settings, calculated for each census tract the LHD serves.

Compared with small and medium LHDs, large LHDs were more likely to respond to many all-hazards events, with nearly all (98%) reporting they responded to at least one event in 2019.\(^2\) Despite the ubiquity and magnitude of EP services provided at the local level, only 7% of LHDs experienced an increase in EP funding from 2018 to 2019. Meanwhile, 62% reported stagnant funding and 19% experienced a decrease in EP funding. The remaining LHDs (12%) reported that they did not know about changes in EP funding from the prior year.

Changes in overall LHD budgets from 2018 to 2019 were not strong predictors of changes in LHD preparedness budget. However, comparing changes in overall funding relative to changes in preparedness funding may be a valuable indicator of how funding for preparedness is prioritized at the local level. Table 2 describes the prioritization of EP funding relative to overall funding by LHD characteristics.

Twenty-one percent of LHDs prioritized EP funding, while 80% deprioritized or did not change the prioritization. Small LHDs reported prioritizing EP funding more often than medium or large LHDs did (23% of small LHDs compared with 17% and 18% of medium and large LHDs, respectively), and they were more likely to report stagnation than they were to report deprioritization of EP funding. Conversely, medium and large LHDs that did not report prioritizing EP funding in their overall budgets reported deprioritizing more often than they reported stagnant prioritization of EP funding.

More than a quarter of rural LHDs (26%) experienced a prioritization of EP funding, while only 15% of urban LHDs did so. LHDs with shared governance reported a prioritization of EP funding more often than those who are governed locally or by the state (34%).

Emergency response activities are incredibly common, but EP budgets stagnated or declined for nearly all LHDs. Importantly, large and urban LHDs were most likely to deprioritize EP funding, although public health emergencies are more frequent than in smaller, more rural jurisdictions. These findings indicate that funding prioritization within LHDs may not align with the need for program-specific funding. Although Profile data do not highlight the reasons for misalignment, one hypothesis is that individual LHDs prioritize funding to address the immediate needs in their communities rather than the threats observed at the national level. Another reason may also be a lack of federal or state guidance to inform effective prioritization of public health funding. At the national level, it is clear that public health EP funding is stagnant, and its prioritization is misaligned. This contradicts the growing need for EP driven by extreme climate change and emerging infectious diseases exacerbated by increasing globalization. Public health policy makers and researchers need to clarify the flow of preparedness funding to LHDs. Finally, federal, state, and local public health decision makers must closely collaborate to develop a coordinated approach to public health preparedness strategy at all levels.

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