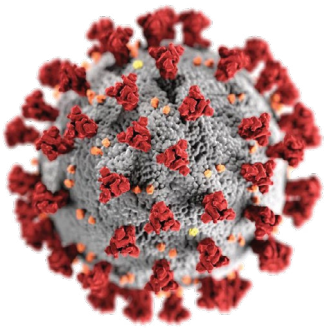

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Public Health Departments Face Formidable Issues During COVID-19 Pandemic

By William Pilkington and Deepak Kumar

Abstract

The COVID-19 has raised serious questions about the pandemic response capacity and capability of local health departments. Workforce issues have made testing and tracing very challenging for these resource-strapped public health agencies. In addition, public health has failed to respond effectively to the disproportionate COVID-19 cases and deaths occurring within minority populations. Leadership issues have also hampered public health efforts to impact coordinated responses in local communities. Given these challenges, new coalitions of academic, private, and public health providers have begun performing traditional public health disease control measures and raised even more questions about the viability of public health.

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Introduction

The current coronavirus pandemic has highlighted several weaknesses in the U.S. public health system. For almost half a century we have been warned that local public health departments are not adequately funded to manage day to day operations, much less a full-scale pandemic. In 1988, the Institute of Medicine published a special report on the future of public health in which the first chapter is entitled, "The Disarray of Public Health: A Threat to the Health of the Public."[1] The report identified serious public health capacity issues affecting both daily operations and emergency preparedness. Almost a quarter of a century later, the Institute of Medicine commissioned a report on public health emergency preparedness. In this 2013 report, Pines, Pilkington, and Seabury made seven recommendations to address and improve public health emergency preparedness and response.[2] Despite these and other calls for increased funding, local public health departments confronted the worst public health disaster since the Spanish Flu pandemic with vastly inadequate personnel and resources.

Local Public Health

According to latest data from the National Association of County and City Health Officials (NACCHO), there are almost 3,000 local public health agencies in the United States.[3] These agencies are typically part of local or state government and are responsible to district boards of health, county boards of commissioners, or mayors and governors. Local health departments provide health promotion and protection services which often vary by geographic location. For example, in the southern portion of the nation, many health departments still provide primary care services while local health departments in the northeast focus on environmental health services. Because the programs and services of local health departments vary widely from department to department, the Public Health Accreditation Board (PHAB) was created in 2007 with the idea that accreditation standards could guarantee a minimum level of essential public health services irrespective of where the department is located or how well it is financed. According to the most recent data, less than ten percent of local health departments have achieved accreditation.[4]

Because public health emergency response is one of the key responsibilities of local public health, NACCHO established Project Public Health Ready (PPHR) which measures the public health emergency response capability of a local health department. Similar to PHAB, PPHR certification has been achieved in only a quarter (slightly over 500) of local health departments.

Almost a year into the coronavirus pandemic, we have multiple examples where public health has struggled to provide testing, contact tracing, and vaccinations.[5] What we do not know is whether PHAB accredited and PPHR certified agencies are performing better or worse than their non-accredited and non-certified counterparts. What we do know is that our local health departments have been overwhelmed during this pandemic and have required assistance to meet their day-to-day obligations in addition to addressing COVID-19 responsibilities. The underlying cause of this problem seems to be a sustained loss of public health workforce that has persisted for decades.

Workforce Issues Exposed By COVID-19

Local public health departments vary greatly in the number of FTE employees and these variations seem to relate more to political support than to the size of a public health jurisdiction. Urban health departments typically have larger numbers of employees, sometimes numbering in the hundreds. Rural health departments sometimes have fewer than ten employees for the entire department.[6] But, it is not difficult to find small public health workforces in urban areas. NACCHO has conducted annual workforce surveys of local health departments and recently published a report showing that local health department staffing declined by 17% or about 26,000 employees from 2008 to 2019.[7]

Given these workforce reductions it is little wonder that local public health departments were ill-prepared for a world-wide pandemic lasting over a year. On any given day local health departments are expected to protect us from communicable diseases, address environmental health concerns, inspect restaurants, schools, and day cares, and respond immediately to all public health emergencies whether large or small. With the job losses public health has experienced it is easy to understand why these departments have experienced difficulty meeting the responsibilities associated with a devastating pandemic.

In responding to workforce concerns, local health departments have been forced to alter traditional work schedules and rely on unconventional methods to compensate for the lack of personnel. COVID-19 response efforts have taken priority and have resulted in vastly reduced services at many local health departments. As the pandemic grew into hundreds of thousands of cases and deaths in the U.S., pressure has mounted on public health to improve their pandemic response.

To further complicate the public health response, many public health leaders throughout the nation have been forced to resign or have been terminated during the pandemic. Public health has always been a political job and public health leaders report to governors, mayors, county commissioners and a variety of other politically appointed officials. A large number of the public have been angered by the closure of businesses, mask mandates, and endless testing lines. This anger has been focused on local public health leaders and an investigation by the Associated Press and Kaiser Health News revealed that almost 200 state and local public health officials have left their jobs during the COVID-19 pandemic.[8]

These workforce issues combined with the loss of experienced leadership have placed public health departments in a precarious position as they fight a once in a lifetime pandemic. Staffs are strained, stretched, and threatened. Their leaders are under constant pressure as they try to convince their

citizenry that public health protections must take precedence over personal interests. To further complicate the public health situation, the disproportionate number of COVID-19 cases and deaths among historically- marginalized populations has resulted in renewed demands for racial health equity and exposed the fact that health departments have continued to fail to address racial health inequities in their communities.

Health Equity in a Pandemic

Quite early in the pandemic it became clear that historically marginalized populations were experiencing COVID-19 cases and deaths disproportionate to their representation in the overall population. These racial health disparities are historical and attributable to slavery and vestiges of institutional racism. The prevalence of many chronic diseases such as diabetes or hypertension is also much higher in historically marginalized populations than in White populations throughout these United States.

Early COVID-19 testing may have contributed to increasing these disparities. A study in New York City looked at COVID-19 testing by zip codes and concluded that testing was most likely being conducted in predominantly white neighborhoods.[9] During the summer of 2020, CDC examined data on historically marginalized populations in 33 states and found that, "a high percentage of cases in hotspot counties are among persons of color."[10] Another study published in September 2020, included these alarming words, "health disparities in the COVID-19 pandemic are glaringly apparent."[11] Given these and other findings, it is apparent that historically marginalized populations have been disproportionately impacted by COVID-19, and testing has been less available and accessible than it has been for White populations.

As previously noted, local public health departments are stretched to keep up with the demands of a COVID-19 pandemic and the associated workload is a tremendous burden on their very limited resources. However, public health continues its efforts to address the social determinants of health-associated racial health disparities and the COVID-19 pandemic and provides additional opportunities to transform this commitment into concrete actions. As the U.S. begins its vaccination efforts, local public health departments can and should assume a leadership role in assuring that COVID-19 vaccinations reach historically marginalized populations in a fair and equitable manner.

Were Health Departments Prepared for COVID 19?

One of the key responsibilities of any public health department is emergency planning, preparedness, and response. Fortunately, major public health emergencies like the COVID-19 pandemic are extremely rare. Even so, local health departments are expected to be able to respond rapidly and effectively to a variety of natural and man-made disasters. Nelson et al. define "emergency preparedness in the public health setting as the capacity of the public health and health care systems, communities, and individuals, to prevent, protect against, quickly respond to, and recover from health emergencies, particularly those whose scale, timing, or unpredictability threatens to overwhelm routine capabilities."[12]

Preparedness requires constant planning and rehearsing for any emergency. With only about 25% of the local health departments certified as PPHR, it is obvious that preparedness has not received priority in most local health departments. A recent report by the Trust for America's Health noted that "years of

funding cuts have left health departments with twentieth- century tools for dealing with twenty-first-century problems."[13] During COVID-19, the lack of preparedness resulted in delays in standing up testing sites and conducting testing in an effective manner.[14]

Recognizing that every local health department cannot be PPHR, efforts have focused on developing minimum standards of acceptable preparedness levels. The CDC and the Association of State and Territorial Health Officials did publish a National Health Security Preparedness Index in 2013, which is updated annually, and provides some comparative data that might be useful as local public health departments continue to navigate through this pandemic.

Public health has faced a number of communicable disease challenges during the past two decades and should have anticipated a pandemic like the one resulting from COVID-19. The resource limitations were all documented, but what continues to be missing is a coordinated public health strategy that allows public health to maintain a state of constant readiness in both normal and emergency conditions. A coordinated strategy could have helped local health departments handle the surge capacity issues of COVID-19 testing, contact tracing, and mass vaccinations. Unfortunately, public health departments have been in a reactive mode throughout the COVID-19 pandemic and without proactive planning and strategies, public health will continue to be challenged to perform both routine and emergency operations.

How Health Departments Can Weather the COVID-19 Storm

To meet the workforce, health equity, and preparedness challenges laid bare by the COVID-19 pandemic, health departments must review their preparedness programs and strategies and adapt them to handle emergencies like the COVID-19 pandemic. This review must be undertaken immediately to improve public health crisis management capabilities for this and future pandemic events.

We have highlighted in this article both the unique role that public health departments play in the response efforts as well as the unique challenges they face in confronting COVID-19. There are solutions to these challenges, and they require innovative thinking about public health service delivery in both urban and rural areas. There is also a role for academia and community-based organizations to play in assisting public health departments to develop and implement plans and processes for managing surge capacity. This role might well include help in workforce development and strategic preparedness planning.

How well our public health departments handle the challenges presented by COVID-19 may determine the structure of local public health in the United States going forward. If COVID-19 demonstrates that public health departments were largely ineffectual in meeting their communicable disease responsibilities during this pandemic, there will likely be a clarion call to examine and overhaul our public health system which might include evaluating the need for an alternative public health delivery system.

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Notes

1. "The Future of Public Health," January 1988, Accessed August 21, 2020. https://doi.org/10.17226/1091.

2. "Value-Based Models for Sustaining Emergency Preparedness Capacity and Capability in The United States," Accessed August 20, 2020.https://www.nap.edu/resource/21809/v2Final-white-paper-Preparedness-FinancingJan14.pdf.

3. National Profile of Local Public Health Departments: 2019 National Association of County and City Health Officials, Washington, DC https://www.naccho.org/uploads/downloadable-resources/Programs/Public-Health-Infrastructure/NACCHO_2019_Profile_final.pdf (accessed August 20, 2020)

4. Healthy People 2020 [Internet] Washington, DC: U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion, Accessed September5, 2020. https://www.healthypeople.gov/2020/data-source/accredited-health-department-list].

5. Eva Clark, Elizabeth Y Chiao, and E Susan Amirian, "Why Contact Tracing Efforts Have Failed to Curb Coronavirus Disease 2019 (COVID-19) Transmission in Much of the United States," Clinical Infectious Diseases, June 2020, https://doi.org/10.1093/cid/ciaa1155.

6. Roger A. Rosenblatt, Susan Casey, and Mary Richardson, "Rural–Urban Differences in the Public Health Workforce: Local Health Departments in 3 Rural Western States," *American Journal of Public Health* 92, no. 7 (2002): pp. 1102-1105, https://doi.org/10.2105/ajph.92.7.1102.

7. "NACCHO's 2019 Profile Study: Changes in Local Health Department and Finance Capacity Since 2008," Washington DC, n.d.

8. Hannah Recht Anna Maria Barry-Jester, "Pandemic Backlash Jeopardizes Public Health Powers, Leaders," AP NEWS (Associated Press, December 15, 2020), https://apnews.com/article/pandemics-public-health-michael-brown-kansas-coronavirus-pandemic-3ae3c9e4eba38a6119895a4c3686d53e.

9. Wil Lieberman-Cribbin et al., "Disparities in COVID-19 Testing and Positivity in New York City," *American Journal of Preventive Medicine* 59, no. 3 (2020): pp. 326-332, https://doi.org/10.1016/j.amepre.2020.06.005.

10. "Disparities in Incidence of COVID-19 Among Underrepresented Racial/Ethnic Groups in Counties Identified as Hotspots During June 5–18, 2020 - 22 States, February–June 2020," Centers for Disease Control and Prevention (Centers for Disease Control and Prevention, August 20, 2020), https://www.cdc.gov/mmwr/volumes/69/wr/mm6933e1.htm.

11. Phillips, Robinson, and Park, "The Perfect Storm: COVID-19 Health Disparities in US Blacks. J. Racial and Ethnic Health Disparities (2020)," n.d.

12. C. Nelson et al. , "Conceptualizing and Defining Public Health Emergency Preparedness," *American Journal of Public Health*, *97 supplement1* April 2007 :S9-11.

13. *The Impact of Chronic Underfunding on America's Public Health System: Trends, Risks, and Recommendations from Disease, Disasters and Bioterrorism,* Washington: Trust for America's Health, April 2020. https://www.tfah.org/wp-content/uploads/2020/04/TFAH2020PublicHealthFunding.pdf (accessed August 12, 2020).

14. Betsy Todd, "The U.S. COVID-19 Testing Failure," *AJN, American Journal of Nursing* 120, no. 10 (2020): pp. 19-20, https://doi.org/10.1097/01.naj.0000718596.51921.f2.

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