

# Public Health Strengths During the COVID-19 Response

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The COVID-19 pandemic has caused immense hardship and suffering across our nation and the globe. It tested the capacity and resilience of the US public health system, which has been long neglected and underresourced, and put great personal and physical strain on the public health workforce. There have been missteps, errors, and lessons for improvement. Despite intense scrutiny and critique by the media and the general public, public health leaders and the public health system performed well in many areas. This commentary reviews specific aspects of response and readiness, workforce expansion and resilience, and public health policy and regulatory actions that demonstrate strengths our national public health system should build on for the future. While there will be ample time to review what did not work in the overall COVID-19 response, it is equally important to assess what is working and continue to build upon prior successes into the future.

## State, Territorial, and Local Response and Readiness

State, territorial, and local (S/T/L) health agencies have been planning and responding to disasters for decades, although a formal national program was not funded until after September 11, 2001, and the subsequent anthrax attacks. The Centers for Disease Control and Prevention's Public Health Emergency Preparedness (PHEP) program supports extensive influenza pandemic planning efforts that enabled public health agencies to assertively posture for the onset of the COVID-19 pandemic. The combination of planning and exercising, supported by the PHEP program, informed decision making during a time when data and knowledge about the emerging COVID-19 novel virus were scarce. Relying on these jurisdictional pandemic plans and lessons learned from previous

infectious disease outbreaks, state and territorial governments followed National Incident Management System guidance and stood up coordinated emergency operations centers to support the complexities of large-scale response and recovery. Acknowledging increased demands, health agencies forged alliances that fostered coordination in multiple areas, one of which was to strategically offset supply shortages and avoid bidding wars over personal protective equipment and other supplies in limited availability nationwide.

An overlooked component of public health preparedness is the overall management of operations, referred to as administrative preparedness.<sup>1</sup> Building on lessons learned from the 2009 H1N1 influenza pandemic, S/T/L health agencies have spent years improving policies and processes to better streamline areas of response such as the acquisition of human resources and procurement of professional services. During COVID-19, these policies and processes supported efforts to navigate the strained supply chain, a challenge that persisted despite the Administration's invoking of the Defense Production Act to help expand access to needed equipment. S/T/L health agencies have maximized established relationships with emergency management, federal agencies, and state and local partners, engaging with peers to share best practices and credible supply sources throughout the pandemic.

## Workforce Expansion and Resiliency

The public health workforce has shown extraordinary capability and resilience during the COVID-19 response. S/T/L public health leaders emerged as trusted experts and advisors for governors and policy makers across the nation. Recognizing the profound impact that the economy ultimately has on health and well-being, public health leaders reached compromises, and sometimes common ground, with business leaders while enacting mitigation interventions to limit disease spread. Despite intense criticism and pushback from a vocal minority of citizens, health officials regularly communicated with the public about the state of the pandemic, evolving measures to bring it under control, and the hardships the virus wrought on families and communities. Health officials also led

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other state and local leaders in efforts to maximize limited testing capacity, track and trace infections, monitor outcomes, increase hospital capacity, enforce restrictions, distribute new therapeutic advances, and plan and implement efficient and fair vaccine distribution systems.

S/T/L health agencies quickly stood up an impressive expansion of the workforce during the COVID-19 response. Tens of thousands of new and contract personnel were trained and integrated into the contact tracing workforce nationwide, and while this effort continues to be a work in progress, the extent of state efforts cannot be underestimated. At the outset, approximately 2200 public personnel at US health agencies were trained in case investigation and contact tracing, primarily within tuberculosis, HIV/AIDS, and sexually transmitted infection (STI) programs.<sup>2</sup> As of December 2020, state and territorial health agencies reported an estimated workforce of more than 70 500 contact tracers—representing more than a 30-fold increase in under a year.<sup>3</sup> While this number may be an underestimate due to a lack of a uniform national survey to enumerate the contact tracing workforce during COVID-19, it serves as an indicator of the magnitude and progress of this effort. These nascent contact tracing programs adapted to numerous challenges, including the evolution of COVID-19 science, guidelines, and phases of response, which impacted operational definitions, quarantine recommendations, and workforce capacity to respond to surging caseloads. COVID-19 contact tracing serves as an example for how core public health infrastructure can be expanded in a manner that is responsive and potentially disease-agnostic for future response.

While battling the international COVID-19 crisis, the US public health workforce endured multiple other challenges as the nation faced an awakening to systemic racism, politicization of scientific decision-making, and threats to the personal security and safety of public health leaders. Health officials and their staff displayed impressive resilience, advancing evidence-based public health practice, working to maintain continuity of other core public health program and service efforts, and battling coexisting disasters such as wildfires and hurricanes. Routine public health activities were also sustained: for example, as COVID-19 impacted routine food safety inspections, public health agencies pivoted to develop protocols to support virtual inspections.

### Public Health Policy and Regulatory Action

In the early stages of the pandemic, state and local jurisdictions enacted policies and regulations—including requiring the use of face coverings in public

settings, restricting social gatherings, and limiting movement through stay-at-home orders—that protected the majority of the population.<sup>4</sup> States have continued to take actions to restrict gatherings and activities as additional infection surges have occurred in specific regions of the country, while those most hard-hit early in the pandemic have maintained strict adherence to mitigation protocols. Jurisdictions exercised these regulatory powers in a challenging environment that featured inconsistent federal messaging and opposition from a vocal subculture focused on personal freedom and limited government. Despite the opposition, health officials used emerging evidence to support mitigation efforts, relying upon sound science and evidence to support the development of public health policy.

In addition, S/T/L governments used regulatory powers to enact policy and environmental controls in worksite settings to manage and ultimately control a spate of outbreaks occurring in congregate settings including meatpacking plants, poultry processing centers, and correctional facilities.<sup>5</sup> States also took regulatory measures to reduce infection and death rates in long-term care facilities, implemented policy and environmental changes to limit disease transmission in the 2020 election,<sup>6</sup> and took a cautious and measured approach to in-person public school attendance. These efforts were not easy, but they did prevent transmission and avert greater morbidity and mortality.

Attention to health equity has figured prominently in state health program and policy work. As COVID-19 morbidity and mortality disproportionately impacted racial and ethnic minority communities, jurisdictions took steps to develop a contact tracing workforce that reflects the racial and linguistic diversity of the communities they serve. Jurisdictions leveraged partnerships with community-based organizations to create jobs and long-term career pathways for members of impacted communities.<sup>2</sup> Finally, in anticipation of limited vaccine supply early in the immunization effort, states attempted to address equity and maximize infectious disease control by adopting phased eligibility tiers prioritizing groups at greatest risk or most to likely spread infection. However, they immediately faced intense public and political pressure to expand these eligibility criteria and their ability to maintain these standards has been attenuated.

### Conclusion

There is ample need for productive critique of the public health system and response to the COVID-19 pandemic. There is also critical need to highlight strengths and successes of the system that must be

recognized and protected as we take steps to better prepare for the future. Previous investments in preparedness programs through the PHEP program made a difference in allowing the system to quickly and efficiently posture early in the pandemic. This program should continue and expand for the future. A considerable workforce has been recruited and trained for contact tracing, in many cases using paraprofessionals who have intimate and trusted relationships with communities most affected by public health issues. This workforce expansion must also be sustained. Once the pandemic is controlled, these contact tracers—hired because of their acceptance and trusted relationships within the community—can bolster public health capacity to control infectious diseases like HIV/AIDS and other STIs. Cross-training may also provide on-ramps for this workforce to engage in other areas, including control of chronic disease risk factors such as diabetes, hypertension, and tobacco use. Finally, while many of the regulatory and policy interventions to control the pandemic have been difficult and controversial, it was imperative that S/T/L public health systems had the authority to enact these interventions early in the pandemic. These public health powers are now being challenged in a number of state legislatures.<sup>7</sup> Many of these actions would drastically undermine the most effective public health infection control interventions in our arsenal, and they must not be weakened. Finally, we believe the most notable aspect of this response has been the perseverance—despite tremendous adversity—of dedicated scientists, civil servants, and leaders who comprise the governmental public health workforce. Efforts to support the workforce and expand capacity to respond to public health emergencies must be prioritized in the future.

The COVID-19 pandemic strained the public health system and tested the limits of underresourced

public health programs. Despite the strain, public leaders rose to the challenges posed by COVID-19. Certainly, there were mistakes made, especially early in the pandemic when the understanding of the virus was still emerging. However, there were also many successes. These bright spots should be analyzed as well, as these illustrate parts of the system that were conducive to success. A significant asset of the system are the dedicated public health leaders and practitioners who have devoted countless hours to assure the health of their jurisdictions. In the rush to critique their work, we should not forget the many accomplishments they achieved in responding to a global pandemic of historic proportions.

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