



U.S. SENATE COMMITTEE ON

**HEALTH, EDUCATION,
LABOR & PENSIONS**

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Preparing for Future Public Health Threats: Improving and Sustaining Foundational Public Health Capabilities in Response to COVID-19

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POLICY BRIEF

In the United States, public health is a shared responsibility between local, state, and federal governments. Local and state actors are the boots on the ground and the first line of defense in addressing any emerging public health threat, as well as maintaining the day-to-day operations of public health agencies. Our nation's robust public health efforts rely on experts – such as nurses, doctors, epidemiologists, and state and local public health officials – closest to the emergence of a problem to identify, track, treat, and contain public health threats.

Since the establishment of what is now the U.S. Public Health Service more than 200 years ago, the federal role has grown to support, but not supplant, local and state efforts to keep the American people safe and healthy. There is a long history in Congress of bipartisan support for foundational public health programs and supporting state and local health departments, including efforts to address infectious and chronic diseases, prevent cancer, and improve public health preparedness.

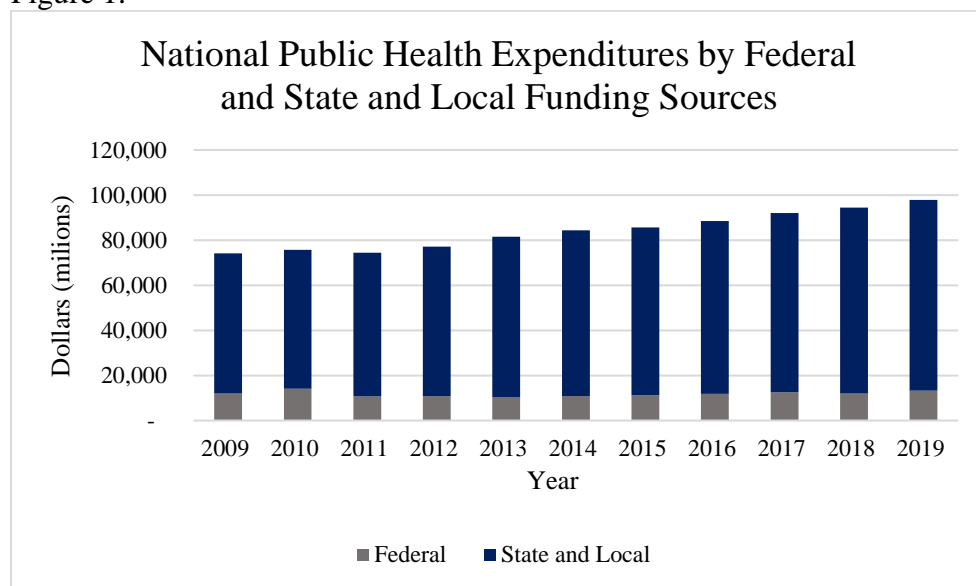
Following the events of 9/11 and Hurricane Katrina, Congress established a comprehensive framework to be better prepared for public health threats. Each public health threat faced by the United States over the past 20 years, such as Ebola, H1N1, Zika, and now COVID-19, have pressure tested our foundational public health and preparedness efforts, requiring adjustments and improvements to better protect Americans from the next threat. For decades, these programs have provided a strong base of support for state and local health departments to increase foundational capabilities, many of which were utilized during the COVID-19 response. The ability to detect infectious diseases and support laboratory capacity through the Epidemiology and Laboratory Capacity (ELC) program, support all-hazards preparedness planning at the local level through the Public Health Emergency Preparedness (PHEP) Cooperative Agreements, and the ability to process information through existing situational awareness systems were all envisioned in this architecture and all played a role in the pandemic response.

Recently, many proposals have surfaced in an effort to improve our readiness that set aside our historical, bipartisan architecture, creating new, duplicative programs and providing new, redundant responsibilities without taking into account the existing funding, programs, or authorities and decades of partnerships that already exist. The pandemic demands Congress to take a hard look at the failures in the function of these existing programs, taking into account the cracks that surfaced in our foundation under extreme pressure and examining how they can be improved to better prepare state and local health departments in the future.

A Long History of Robust Federal Public Health Spending

National public health expenditures from federal, state, and local funding sources were \$97.8 billion in 2019, with the federal government funding almost \$13.3 billion (13.6 percent) and state and local sources supporting \$84.5 billion (86.4 percent).^{1,2} This funding reflects the importance of the state, territorial, local, and tribal partnership with the federal government. Within the statutory guidelines for federal programs, localities lead the direction of spending on public health programs because each community around the country has unique public health needs that should be addressed in a tailored fashion.

Figure 1.



Source: CMS, National Health Expenditure historical data and by type of service and source of funds, 2019, <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical>

These partners often make funding decisions to best meet their individual needs, resulting in fluctuations in the types of programs funded. For example, the Medicaid program is operated and partially financed by states, meaning increasing program costs can impact broader state budgets. As states spend more money on Medicaid due to policy changes in benefit design and eligibility, decreases are seen in other areas of health spending, such as those related to public health.

Data from the Association of State and Territorial Health Officials (ASTHO) Profile of State and Territorial Public Health shows that, from 2010 to 2018, federal and state funding on all activities fluctuated up and down, most dramatically within state sources.³ In 2018, states reported that federal sources funded \$12.9 billion in activities for state public health agency

¹ CMS, National Health Expenditure historical data and by type of service and source of funds, 2019, <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical>, <https://www.cms.gov/files/document/definitions-sources-and-methods.pdf>

² Of note, these amounts do not include biomedical research, maternal and child health funding, and other related spending, which would have increased this total.

³ Association of State and Territorial Health Officials. ASTHO Profile of State and Territorial Public Health, Volume Five. Arlington, VA: Association of State and Territorial Health Officials. 2020.

expenditures, compared with \$13.3 billion in 2010. This fluctuation is minimal when compared with state funding changes of \$6.85 billion in 2018, and nearly \$8.9 billion in 2010.⁴ In looking at more recent funding levels within certain areas, there are different levels of federal and state support.⁵

Table 1.⁶

Dollars (millions)	2015	2018	Difference
All-Hazards Preparedness and Response			
Federal	\$748.7	\$741.6	(\$7.1)
State	\$144.9	\$111.5	(\$33.4)
Other	\$88.0	\$6.9	(\$81.1)
Total	\$981.6	\$860.0	(\$121.6)
Health Data Activities			
Federal	\$92.5	\$141.4	\$48.9
State	\$57.0	\$100.8	\$43.8
Other	\$29.3	\$18.9	(\$10.4)
Total	\$178.8	\$261.1	\$82.3
Administrative Activities			
Federal	\$1,463.9	\$168.9	(\$1,295.0)
State	\$1,404.2	\$754.6	(\$709.3)
Other	\$250.4	\$159.7	(\$90.7)
Total	\$3,118.5	\$1,083.2	(\$2,095.0)
Chronic Disease Activities			
Federal	\$799.8	\$926.2	\$126.4
State	\$808.8	\$582.5	(\$217.3)
Other	\$249.9	\$498.3	\$248.4
Total	\$1,858.5	\$2,007.0	\$157.5
Infectious Disease Activities			
Federal	\$908.2	\$984.6	\$76.4
State	\$640.2	\$445.4	(\$462.8)
Other	\$466.5	\$521.6	\$55.1
Total	\$2,014.9	\$1,951.6	(\$331.3)

Source: Association of State and Territorial Health Officials. ASTHO Profile of State and Territorial Public Health, Volume Five. Arlington, VA: Association of State and Territorial Health Officials. 2020.

⁴ Ibid.

⁵ Ibid.

⁶ For further information on what is included in each category, see the Dashboard Technical Notes for the ASTHO Profile of State and Territorial Public Health - <https://www.astho.org/profile/technical-notes/>

Foundational Public Health Capabilities: Leveraging Existing Programs

A number of programs at the Centers for Disease Control and Prevention (CDC) provide the base for federal support for public health activities at the state and local levels. Built up in the late 1990s and early 2000s, these programs have evolved over the past two decades with a goal of helping state and local health departments and their staff address the public health needs of their communities. According to the CDC, the long-term purpose for these programs supporting states, tribes, localities, and territories is to “improve the capacity and performance of state, tribal, local, and territorial public health agencies to more efficiently and effectively manage and deliver high quality program services to protect the public’s health.”⁷

In 1994, a framework for 10 essential public health services was released by the Department of Health and Human Services (HHS), and this framework was updated in 2020.⁸ The examples provided below include some of the existing, funded programs at HHS, primarily CDC, that provide funding for health departments to achieve these foundational capabilities in a manner that best meets the needs of their states and communities.

Public Health Emergency Preparedness (PHEP) Cooperative Agreements

The CDC’s PHEP cooperative agreements provide support to 62 health departments from 50 states, four large metropolitan areas, and eight U.S. territories to improve their ability to respond to public health threats by supporting foundational capabilities and workforce of public health departments.⁹ Specifically, according to CDC, over 80 percent of PHEP funds are used to support, in whole or in part, the salaries of more than 2,400 state, local, tribal, and territorial health department employees, such as epidemiologists, data analysts, nurses, and response exercise and drill planners.¹⁰ The PHEP cooperative agreement program supports 15 key capabilities needed during a public health response, which are organized within six domains: community resilience, incident management, information management, countermeasures and mitigation, surge management, and biosurveillance.

In Fiscal Year (FY) 2021, the CDC awarded over \$636.8 million in PHEP funding.¹¹ The PHEP program has been critical to supporting foundational public health capabilities for improved biosurveillance, all-hazards preparedness and response, improving communications, strengthening community partnerships, and ensuring clear leadership and structure during a public health response.

Epidemiology and Laboratory Capacity (ELC) Program

CDC’s Epidemiology and Laboratory Capacity for Prevention and Control of Emerging Infectious Diseases (ELC) program strengthens state capacity to detect and track a wide range of infectious diseases. The program provides funding through cooperative agreements and technical assistance to all 50 states, several localities, and territories to improve public health surveillance and improve capabilities to identify, report, and respond to potential public health threats.

⁷ <https://www.cdc.gov/budget/documents/fy2022/FY-2022-CDC-congressional-justification.pdf>

⁸ <https://www.cdc.gov/publichealthgateway/publichealthservices/essentialhealthservices.html>

⁹ <https://www.cdc.gov/budget/documents/fy2022/FY-2022-CDC-congressional-justification.pdf>

¹⁰ Source of this information is correspondence between CDC and Committee staff and is current as of July 2020.

¹¹ <https://www.cdc.gov/budget/documents/fy2022/FY-2022-CDC-congressional-justification.pdf>

Since its beginning in 1995, the ELC program has grown from awarding less than \$2 million to more than \$200 million each year and serving as a critical source of support for emerging infectious disease epidemiology, surveillance, and laboratory capacity.¹² More than \$238 million was awarded to state, local, and territorial health departments through the ELC cooperative agreement in FY 2020, not including COVID-19 emergency supplemental funding.¹³ During the COVID-19 response, more than \$19 billion was distributed through the ELC cooperative agreements to all 64 recipients.¹⁴ The 2019-2024 cooperative agreement aims to “strengthen core public health program growth while providing crucial flexibility needed to address emerging infectious disease issues.”¹⁵

CDC Biosurveillance and Public Health Data Systems Modernization

In partnership with state and local health departments, CDC manages over 100 public health surveillance systems.¹⁶ In 2016, approximately one-third of CDC’s grant awards were made primarily to state and local health departments for surveillance-related programs.¹⁷ These grants reflect a range of programs, including specific surveillance systems and disease-specific programs with a data collection component to improve the capacity of health departments to detect, track, respond to, prevent, and control diseases.

In March 2020, despite over two decades of funding, the CDC Director acknowledged the dire state of the CDC’s data systems that help to inform surveillance capabilities, stating “[w]ouldn’t it be nice if we had a data system that every health department in this country could see in real-time so that we can predict what’s going on and where to go, where to put assets. We don’t have that.”¹⁸ He explained that CDC was working to address this glaring vulnerability, through the agency’s launch of the Public Health Data Modernization Initiative (DMI) in 2019, with a vision of “bringing together state, tribal, local, and territorial (STLT) public health jurisdictions and our private and public sector partners to create modern, interoperable, and real-time public health data and surveillance systems that will protect the American public.”¹⁹ The three priority areas outlined in the DMI Roadmap of Activities and Expected Outcomes include coordinating people and systems, accelerating data for action, and supporting strategic innovation.

Effective utilization of data is a cornerstone of public health programs and relies on collaboration between federal agencies and state, territorial, tribal, and local health departments and technology and systems. Congress provided the funding for this, but CDC failed to deliver.

Preventive Health and Health Services (PHHS) Block Grant

Along with preparedness efforts, the CDC administers programs focused on the daily public health mission. The PHHS Block Grant Program is a formula grant administered by CDC’s

¹² Ibid, p. 139.

¹³ Ibid, p. 112.

¹⁴ Ibid, p. 111.

¹⁵ <https://www.cdc.gov/nceid/dpei/elc/history/elc-awards-by-grantee-2020.html>

¹⁶ <https://crsreports.congress.gov/product/pdf/R/R46588>

¹⁷ <https://www.cdc.gov/surveillance/pdfs/Surveillance-Series-Bookleth.pdf>

¹⁸ Centers for Disease Control Coronavirus Response and Fiscal Year 2021 Budget Request: U.S. House of Representatives Labor, Health and Human Services, Education, and Related Agencies Appropriations Subcommittee, 116th Congress. (2020) (Testimony of Dr. Robert Redfield)

¹⁹ <https://www.cdc.gov/surveillance/surveillance-data-strategies/dmi-investments.html>

Center for State, Tribal, Local, and Territorial Support. It provides funding to all 50 states, the District of Columbia, two American Indian tribes, five U.S. territories, and three Freely Associated States. Grant recipients set their own goals and program objectives for prioritizing the unique public health needs in their jurisdictions using evidence-based methods and interventions, with an emphasis on certain populations, including “adolescents, communities with little or poor health care services, and disadvantaged populations.”²⁰

The grant program supports core public health activities such as workforce training, data surveillance, emergency medical response, outbreak control, public education, and program evaluation. For the last four years, grant recipients have invested almost 30 percent of their funding into their foundational public health capabilities to improve their workforce, laboratory services, data and information systems, and epidemiology capacity.²¹

Additional Federal Support for Public Health Programs

CDC also provides support for a number of other public health programs that maintain foundational public health capabilities, including state immunization programs, disease-and condition-specific programs, maternal and infant health programs, scientific integrity and quality activities, and environmental health.

CDC administers the Strong Systems, Stronger Communities (SSSC) initiative in collaboration with ASTHO, the National Association of County and City Health Officials (NACCHO), and the National Indian Health Board to assist public health departments in improving performance and activities to support voluntary accreditation by the Public Health Accreditation Board (PHAB). CDC also entered into a cooperative agreement with the PHAB to strengthen the public health system through a voluntary accreditation program. In FY 2019, 30 sites received awards through the SSSC initiative and 31 new sites received support in FY 2020.²² According to CDC, 39 states, four tribal health departments, and 276 local health departments have applied for and received accreditation.²³

Performance Measurement Challenges: Achieving Program Goals through Accountable and Flexible State and Local Support

There are a number of different accountability tools to assess these programs. Over the past decade, these tools have shown that challenges remain within core public health and medical preparedness programs.

Better Metrics for Evaluating Core Programs: According to a Government Accountability Office (GAO) study issued in 2013, both the Hospital Preparedness Program (HPP) and PHEP cooperative agreement lacked consistent performance metrics and related targets to determine whether awardees were achieving associated preparedness goals.²⁴ In a more recent report, GAO assessed the United States’ capacity to respond to an infectious disease threat by evaluating

²⁰ <https://www.cdc.gov/phhsblockgrant/faqs.htm>

²¹ <https://www.cdc.gov/budget/documents/fy2022/FY-2022-CDC-congressional-justification.pdf>

²² Ibid, p. 465.

²³ <https://www.cdc.gov/publichealthgateway/accreditation/departments.html>

²⁴ <https://www.gao.gov/products/gao-13-278>

performance data for HPP, PHEP, and ELC, which GAO describes as “HHS’ three key preparedness and capacity-building programs.”²⁵ In the report, GAO evaluated 20 performance metrics across the three programs and organized these metrics into four categories: electronic laboratory reporting, epidemiology capacity, laboratory capacity, and responder protection. While awardees generally met performance measures related to responder protection, achievement of performance targets for the other three categories was inconsistent despite HHS awarding a total of \$21.2 billion through these programs from 2002 to 2017.^{26,27}

Examples of using those metrics to refine programs: In 2018, CDC took steps to address inconsistencies identified in the PHEP program by issuing specific standards for each of the 15 PHEP capabilities.²⁸ Under the 2018 update, each PHEP capability now includes specific tasks that must be performed and “priority resources” that must be in place in order to ensure the capability can be effectively operationalized during a public health emergency response. According to CDC, these priority resources “are relevant to both routine public health activities and essential public health services. This helps support an ‘everyday use’ model in which applying the capability standards to improve day-to-day effectiveness builds a stronger foundation from which a jurisdictional public health agency can surge when an emergency incident occurs.”²⁹ Despite these improvements, the public health and medical response to COVID-19 fell significantly short of the goals established under PHEP and other foundational programs.

Case Study: the PHEP Program

The COVID-19 pandemic demonstrated that local, state, and federal jurisdictions were not adequately prepared to respond to such a large-scale, national event. This prompts questions about whether the current structure of local, state, and federal programs that support core public health capabilities, including performance metrics for each program and the ways in which these metrics are evaluated, are appropriately designed to ensure that jurisdictions can respond to all-hazards public health threats. While other foundational public health programs have different objectives, the PHEP experience is illustrative of similar challenges that exist in evaluating the performance of award recipients for other programs as well.

In the case of the PHEP program, CDC primarily utilizes Operational Readiness Reviews (ORR), which are rigorous and extensive assessments involving site visits from federal personnel, pressure testing the ability of awardees to respond to a public health emergency that requires the distribution and dispensing of medical countermeasures.³⁰ Of the 15 PHEP capabilities, only three relate to medical countermeasures, which means that awardee performance in the other 12 PHEP capabilities are not evaluated through the ORR mechanism. CDC has stated that it intends to expand ORRs to evaluate all PHEP capabilities by 2024.³¹

²⁵ <https://www.gao.gov/assets/gao-18-362.pdf>, p. 2.

²⁶ Ibid, p. 22-28.

²⁷ Ibid, p. 10.

²⁸ https://www.cdc.gov/cpr/readiness/00_docs/CDC_PreparednesResponseCapabilities_October2018_Final_508.pdf

²⁹ Ibid, p. 1.

³⁰ https://www.cdc.gov/cpr/readiness/00_docs/CDC_ORR_Guidance_September2018_Final_508_9.11.18.pdf

³¹ <https://www.cdc.gov/budget/documents/fy2022/FY-2022-CDC-congressional-justification.pdf>, p. 333.

However, even in the context of the capabilities that ORR does evaluate, the metrics may not be appropriately targeted at the reality on the ground during every type of emergency. The ORR and related PHEP capabilities evaluate the provision of countermeasures through Points of Dispensing, which are sites managed and operated by the state or local government.³² Yet, during COVID-19 and other recent emerging infectious disease responses, federal, state, and local governments leveraged a variety of sites to dispense countermeasures, including hospitals, primary care offices, mobile units, and workplaces, as well as mass vaccination sites and other sites supported by federal funds and managed by health departments.

In addition to the ORR process, CDC utilizes grant recipient-reported data based on drills and other assessment tools to document progress toward PHEP program metrics. One of the primary metrics reported for the PHEP program is the percent of directly funded jurisdictions that are able to “convene, within 60 minutes of a notification, a team of trained staff that can make decisions about appropriate response and interaction with partners.”³³ In FY 2017, the most recent year for which data is available, 85 percent of PHEP jurisdictions were able to achieve this target, which fell short of the program goal of 96 percent of jurisdictions.³⁴

Again, this metric may not match the needs in practice as it does not provide information on how jurisdictions responded beyond the initial notification of an event. It also does not provide insight into the capabilities of localities that do not directly receive PHEP funding, which consists of the vast majority of cities and counties in the United States. Based on readily available performance information about PHEP, it is difficult to determine whether the program is truly operating as intended and making a meaningful impact to improve public health preparedness.

Moving Forward: Addressing Gaps in Public Health Capabilities, Strategic Program Design and Measurement

You do not know what you do not measure: While the challenges that health departments faced during the response to COVID-19 were unique, the core capabilities supported through these programs should have provided a strong foundation from which states and localities could mount a better response. The programs described in this brief, particularly the PHEP, ELC, and biosurveillance programs, provide the foundation in public health that is intended to be “technologically advanced, flexible, rapidly deployed, and easily brought to scale to address a full range of potential public health threats.”³⁵ Before deciding to create or fund new programs that duplicate these core activities, we must first review the requirements of these existing programs in light of lessons learned during the COVID-19 response to determine whether existing program design and performance measures and objectives are meaningful and programs are implemented and assessed in an appropriate manner.

In cases where performance measures do not reveal or inform the actual ability to respond to an emergency, CDC and its partners should take steps to appropriately retool, reprioritize, or

³² https://www.cdc.gov/cpr/readiness/00_docs/CDC_ORR_Guidance_September2018_Final_508_9.11.18.pdf

³³ Ibid, p. 465.

³⁴ <https://www.cdc.gov/budget/documents/fy2021/FY-2021-CDC-congressional-justification.pdf>, p. 409.

³⁵ <https://www.cdc.gov/budget/documents/fy2022/FY-2022-CDC-congressional-justification.pdf>

recalibrate these measures. Further, if programmatic objectives are not met, CDC should work with states and localities to identify areas where CDC can increase efforts to provide technical assistance to improve state and local capabilities and performance. Congress must also do its part by assessing what is currently required of federal public health programs and identifying areas that may need to be refocused, including reviewing the efficiency and effectiveness of other public health programs that are not targeting core public health capabilities, so that more room can be created both in budgets and personnel bandwidth to support core public health activities and ensure readiness for effective programs.

- **RECOMMENDATION:** HHS and Congress, in collaboration with states, localities, and other stakeholders, should ensure that each program meets the mark through appropriate performance measurement and programmatic requirements, and address silos that may exist within and between programs to achieve core public health capabilities.

Maintaining Constant Vigilance

In order to achieve the daily urgency required to support core public health preparedness programs, areas of focus need to be identified to keep the importance of these programs at the forefront of Congressional efforts to protect the public health of our nation.

More regular oversight: Additional strategic planning and oversight activities are necessary to appropriately prioritize public health preparedness programs that support foundational capabilities. Specifically, Congress should follow the example of the Intelligence Community and require annual hearings in which HHS leadership updates Congress on the status of these programs; implementation of lessons learned from previous public health responses, exercises, and other assessments; and, the overall state of public health preparedness.

Identifying and addressing areas of need: In some areas, implementation of key programs did not come to fruition quickly enough to have an impact on the COVID-19 response. One example of this situation is the recognition for desperately needed improvements to our public health data collection and situational awareness capabilities.

- In 2019, the President signed into law the Pandemic and All-Hazards Preparedness and Advancing Innovation Act of 2019 (P.L. 116-22), which made important updates to require implementation of biosurveillance capabilities that would provide timely and actionable information.
- Going into 2020, Congress provided \$50 million in public health data systems modernization in the Further Consolidated Appropriations Act, 2020.
- Once COVID-19 emerged, these needs were more fully recognized. The Coronavirus Aid Relief and Economic Security (CARES) Act of 2020, provided an additional \$500 million to CDC for public health data modernization, and the Consolidated Appropriations Act, 2021, included \$50 million in appropriations and also bipartisan language authorizing public health data systems modernization activities.

Consistent federal support: A recurring challenge that hinders public health responses is a seemingly inevitable shift in priorities away from preparedness efforts during “peace time.” In a 2018 GAO report, federal officials responsible for administering PHEP, ELC, and HPP noted that, while these programs are intended to support core capabilities, they may not fully support the maintenance of surge capacity. Decreased PHEP funding, for example, has “limited state and local preparedness capacity... [which], in turn, has increased the importance of awards from supplemental appropriations to respond to infectious disease threats.”³⁶ This phenomenon is not unique to the federal government and reflects broader challenges in striving to support the foundational public health programs instead of attractive, new programs on temporary or fleeting priorities. Taxpayer funds are necessarily limited, and Congress should prioritize funding for foundational programs and responsibilities before focusing on new programs and additional responsibilities. This reality requires each level of government to be strategic in how it prioritizes its efforts, identifies efficiencies, and structures programs to achieve meaningful outcomes.

- **RECOMMENDATION:** Maintain a strategic focus on public health preparedness by increasing the visibility of public health programs and better characterizing the impact they have on day-to-day public health to encourage continued support.

Conclusion

Local, state, and federal efforts together provide the framework of public health response in our nation. Whether in the midst of an emergency response or during routine day-to-day operations, it is clear that public health preparedness programs need to be updated and improved to secure public health and to prevent the next pandemic. Improving the strategic focus, oversight, and sustained visibility of the foundational federal programs will increase overall public health capacity and better position us to address public health threats today and in the future.

The recommendations listed above are designed to build on the original, bipartisan intent of the federal public health programs. Reaffirming the partnership between local, state and federal governments will improve accountability, strengthen coordination, and leave our country better prepared for the future.

³⁶ <https://www.gao.gov/assets/gao-18-362.pdf>, pp. 15-16.