NAM Leadership Consortium

Collaboration for a Value & Science-Driven Health System

NAM Leadership Consortium Members Meeting

March 31, 2021 | 11:00 AM – 2:30 PM EST

Share your thoughts!

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NATIONAL ACADEMY OF MEDICINE

NAM LEADERSHIP CONSORTIUM

Stakeholder leaders in private, public, and independent organizations from key health sectors, collaborating under the auspices of the National Academy of Medicine for action on their common interests in advancing effectiveness, efficiency, equity, and continuous learning in health, medical care, and biomedical science.

NAM LEADERSHIP CONSORTIUM

Advancing the Learning Health System

A learning health system is one in which science, informatics, incentives, and culture are aligned for continuous improvement, innovation, and equity—with best practices and discovery seamlessly embedded in the delivery process, individuals and families active participants in all elements, and new knowledge generated as an integral by-product of the delivery experience.

Leadership Consortium Charter 2006

focus:

COLLABORATIVE ACTION

COLLABORATIVE ACTION

SCIENCE: Evidence Mobilization Action Collaborative

FOCUS: *continuous learning through real-world evidence*

INFORMATICS: Digital Health Action Collaborative

FOCUS: *digital infrastructure & data as a core utility*

INCENTIVES: Value Incentives & Systems Action Collaborative

FOCUS: *payment based on health outcomes for people and populations*

CULTURE: Culture, Inclusion & Equity Action Collaborative

FOCUS: *full and equitable health engagement for people and communities*

CORE ELEMENTS FOR EACH COLLABORATIVE

ORGANIZATIONAL NETWORKS

ANCHOR PRINCIPLES

KEY PROGRESS INDICATORS

COLLABORATIVE PROJECTS

EXAMPLES OF COLLABORATIVE PROJECTS 2021

- COVID-19 Sector Impact Assessments
- Integrated Payment Strategies for Individual & Population Health
- Artificial Intelligence and Machine Learning in Health & Health Care
- Priorities on the Health Horizon Research Terrain Mapping
- Governance Framework for Health Data as a Core Utility
- Health Equity & AI Algorithmic Integrity
- Metrics for Assessing Community Engagement
- Technologies to Enhance Individual & Community Engagement

DISCUSSION PAPER

Public Health COVID-19 Impact Assessment: Lessons Learned and Compelling Needs

Karen DeSalvo, MD, MPH, MSc, Google; **Bob Hughes, PhD,** Missouri Foundation for Health; **Mary Bassett, MD, MPH,** Harvard University; **Georges Benjamin, MD,** American Public Health Association; **Michael Fraser, PhD, CAE,** Association of State and Territorial Health Officials; **Sandro Galea, MD, MPH, DrPH,** Boston University School of Public Health; **J. Nadine Gracia, MD, MSCE,** Trust for America's Health; and **Jeffrey Howard, MBA, MPH,** former Public Health Commissioner, Kentucky

April 7, 2021

About the Emerging Stronger After COVID-19: Priorities for Health System Transformation series
This discussion paper is part of the National Academy of Medicine's Emerging Stronger After COVID-19: Priorities for Health System Transformation initiative, which commissioned papers from experts on how 9 key sectors of the health, health care, and biomedical science fields responded to and can be transformed in the wake of the COVID-19 pandemic. The views presented in this discussion paper and others in the series are those of the authors and do not represent formal consensus positions of the NAM, the National Academies of Sciences, Engineering, and Medicine, or the authors' organizations.
Learn more: **nam.edu/TransformingHealth**

Introduction

Gains in life expectancy and quality of life over the course of American history can be attributed to forward-looking investments in public health infrastructure [1]. For example, the creation of municipal public health authorities in the 19th century supported improvements in sanitation and reduced the mortality burden from infectious diseases such as typhoid and cholera. Likewise, strategies to promote healthier environments and improve access to clinical services have improved the prevention and management of chronic diseases such as cardiovascular disease and cancer. In addressing each population health challenge, the public health sector has played a multifaceted role, from surveilling the causes and consequences of disease (e.g., the National Notifiable Diseases Surveillance System), to convening stakeholders across sectors to develop coordinated solutions (e.g., historical collaborations with housing authorities), to informing policymakers and the public about best practices (e.g., resources to promote tobacco cessation) [2,3,4].

These interdisciplinary functions are more important than ever due to the complexity and scope of population health challenges in the modern era. For the first time in generations, life expectancy in the United States (U.S.) has begun to decline, with primary driv-

Coming April 7, 2021

Public Health COVID-19 Impact Assessment: Lessons Learned and Compelling Needs

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Care Systems COVID-19 Impact Assessment: Lessons Learned and Compelling Needs

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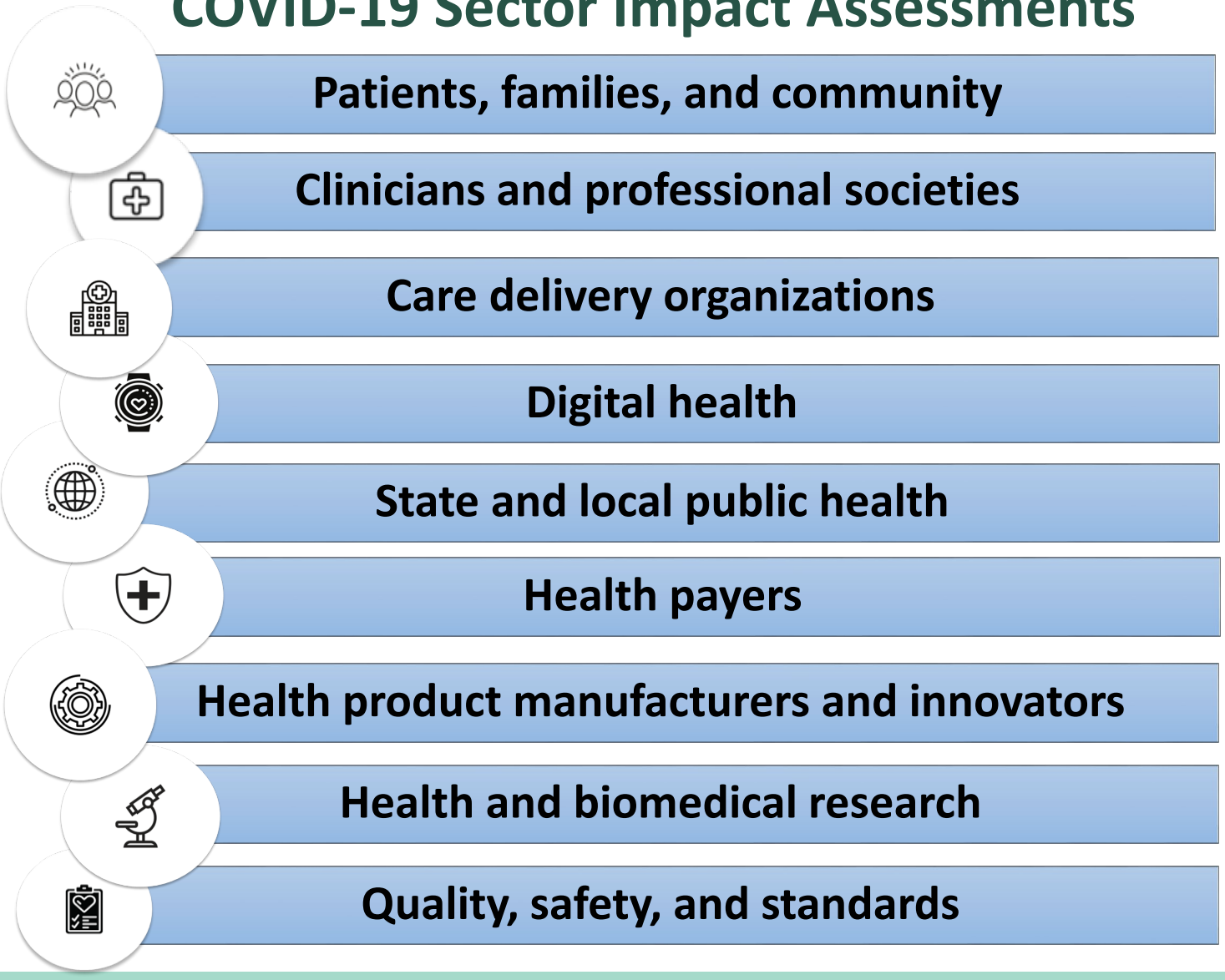
Leadership Consortium Chair Member

Mark McClellan
Duke University

COVID-19 Sector Impact Assessments:

Common Challenges and Next Steps

COVID-19 Sector Impact Assessments



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COVID-19 Sector Impact Assessments

Common Challenges and Next Steps

Patient, Families, & Communities Sector Assessment

Frederick Isasi, JD, MPH
Executive Director, Families USA

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Experience of Patients, Families, and Communities During COVID-19

Disparities in Infection Rates	• Elevated risk for essential workers • Increased transmission in congregate settings • Disproportionate infection rates among low-income individuals and minority populations
Mental and Behavioral Health	• Unprecedented increase in anxiety, depression, and suicidal ideation • Exacerbation of existing behavioral health issues, such as substance use disorder
Disparities in Outcomes	• Greater incidence of severe illness and fatalities among the elderly population • Increased risk for those with chronic diseases • Disproportionate burden of mortality and morbidity for communities of color
Non-COVID-19 Health Conditions	• Reductions in diagnostic screenings (e.g., colonoscopies, mammograms) and preventive health services (e.g., pediatric vaccinations) • Disruptions to chronic disease management
Testing, Therapies, and Vaccines	• Unequal access to diagnostic testing sites and longer waiting times for certain communities • Uneven distribution of therapies • Racial disparities in vaccination rates
Community-Based Services	• Disruptions to home- and community-based care and services • Greater demand for social services and strain on community-based organizations
Caregivers and Families	• Emotional toll of visitation restrictions • Variation in COVID-19 discharge practices • Added burdens of new home and childcare responsibilities during lockdowns
Health Inequities	• Exacerbation of COVID-19 by structural and institutional racism • Economic inequality of the pandemic recession • Ageism and neglect of long-term care

The Disparate Impact of COVID-19 on Marginalized Populations

COVID-19 Impact Area	Pre-Pandemic Disparities	Pandemic-Era Disparities
Risk of Infection	• Racial and ethnic minorities were disproportionately affected by infectious diseases (e.g., HIV/AIDS, meningitis) and respiratory illness (e.g., asthma)	• COVID-19 infection rates were significantly higher for communities of color
Risk of Severe Illness	• The prevalence of chronic illnesses such as cardiovascular disease and diabetes was higher among communities of color	• The burden of morbidity and mortality from COVID-19 was higher among Black and Latinx patients
Population-Specific Needs	• People of color were overrepresented in essential jobs, justice-involved populations, and homeless populations, and more likely to live in poorer-quality nursing homes	• Racial minorities had higher rates of COVID-19 hospitalizations and fatalities in the subgroups of the elderly, nursing home residents, adults, and children
Access to Health Services	• Racial and ethnic minorities are more likely to be uninsured and live in a primary care shortage area	• Communities of color lacked ready access to diagnostic testing and were vaccinated at slower rates compared to white patients
Mental and Behavioral Health	• People of color have less access to mental health services than white patients	• Incidence of symptoms of anxiety or depressive disorder during COVID-19 were higher for people of color
Non-COVID-19 Care	• Black and Latinx patients at increased risk of early incidence and progression of chronic diseases	• Black and Latinx patients were more likely to defer or delay non-COVID-19 care during the pandemic
Social Needs	• Income inequality, ageism, gender pay gaps, and environmental disparities were prevalent throughout different facets of American society	• The pandemic exacerbated economic (e.g., financial security) and social (e.g., housing, food) needs among marginalized populations

Overarching Domains of Transformative Policy, Regulatory, and Legal Changes

- Facilitating active, continued, and meaningful engagement with patients, families, and communities
- Building and restoring trust through improving communication, working with trusted sources, and translating scientific practices
- Prioritizing investment in solutions designed to advance health equity
- Realigning care approaches to meet the needs of patients, families, and communities
- Examining critical intersections and implementing aligned solutions between patients, families, and communities and other sectors

Considerations for Facilitating Active, Continued, and Meaningful Engagement with Patients, Families, and Communities

- Orient transformation efforts across all sectors of the health care system around the experience and needs of patients, families, and communities

- Affirm commitment to and investment in programs for patient-centered research, measurement, and care delivery

- Leverage incentives and regulatory guidance to improve the representation of patients, families, and communities in decision-making and governance across the health care system

Considerations for Building and Restoring Trust through Improved Communication, Trusted Sources, and Translation of Scientific Practices

- Divorce scientific and medical messaging from political aims and incorporate the CDC's best practices for crisis communication
- Empower scientists, doctors, and public health officials and dedicate resources and training to improve communication to different segment of the public
- Partner with community leaders beyond health professionals and invest in diversifying the pipeline of health care leaders to improve communication with marginalized populations

Considerations for Prioritizing Investment in Solutions Designed to Advance Health Equity

- Empower patients, families, and communities as active partners in the design, implementation and evaluation of health equity policy solutions
- Invest in robust digital tools and data systems for collecting and measuring health inequities
- Develop and structure multi-sector partnerships around health equity
- Engage with leaders outside the health care system to develop strategies for addressing the social, economic, and environmental drivers of health

Considerations for Realigning Care Approaches to Meet the Needs of Patients, Families, and Communities

- Support the expansion of prevention programs focused on both physical and behavioral health
- Increase investment in home- and community-based services, including supporting the ability of patients to age in place and increasing resources available to Medicaid-financed caregivers
- Implement payment reforms to increase coverage and access for mental health services
- Expand networks of community health workers and peer providers to improve care coordination
- Enhance the health professions workforce through a greater focus diversity, cultural sensitivity, and scope of practice

COVID-19 Sector Impact Assessments

Common Challenges and Next Steps

Digital Health

Amy Abernethy – on behalf of Peter Lee, David Shaywitz, Subha Madhavan, Kevin Shulman, Adi Gundlapalli, Jim Weinstein & Murali Doraiswamy

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Digital Health
Common Challenges & Issues

- Telehealth became real, practical, and essential during COVID-19 response.
- Data proved critical for coordination, forecasting, and quality, but also a time-consuming, and sometimes chaotic, burden on clinicians and administrators.
- Data interoperability and scaling proved to be more theory than reality in health and public health.
- Effective public-private partnerships proved essential in crisis response.
- The digital divide was occasionally bridged but more frequently contributed to and often exacerbated health inequities.
- Digital and AI tools became key to advancing knowledge and coping with information

Digital Health
Common Challenges & Issues

Sectors	Digital Health Challenges and Opportunities					
	Telehealth became real	Data proved critical for coordination, forecasting & quality	Need for data interoperability	Effective public-private partnerships	Addressing health inequities	AI tools to address information overload
1. Health product manufacturers	X	X		X		
2. Clinicians & Professional Societies	X	X	X		X	X
3. Payers		X	X			
4. Care delivery organizations	X	X	X		X	
5.Quality & Safety		X	X			
6.Patients/Families/Communities	X		X		X	
7. Public Health		X	X	X		
8. Research	X		X			X

Digital Health
Common Challenges & Issues

- Data without architecture leads to data silos

> One is reminded of the poem, *The Rime of the Ancient Mariner*, which contains the verse, "Water, water, everywhere, nor any drop to drink." Despite nearly complete digitization, and so many tools at our disposal for data analysis, machine learning, AI, and visualization, the health care community remained thirsting for the high-quality, actionable data upon which these technologies, patients, and caregivers foundationally depended, including data not only from health systems, but from all other relevant sources -- personal, social, infrastructural, biological, population-wide, and more. Thus, the tremendous advances in computer science that today powers global supply chains, massive retail markets, internet search, social media, and more, remained and still remains a stark contrast to the ongoing creation of yet more inaccessible data silos in health care. The ongoing challenges encountered in vaccine distribution and monitoring are only the most current and urgent example of the existing limitations of data visibility, fluidity, transparency, and access.

Digital Health
Priority Actions and Actors

- Data architecture, modularity, and data infrastructure

> Imagine for a moment that we are setting out to build a house. We would, of course, need good tools and an adequate supply of lumber. And we would need to understand the architecture of the house we are trying to build. But if we lacked the skilled tradespeople, heavy equipment, building inspectors, and other infrastructure that support the process of construction, it would be impossible to connect the tools and lumber to the architecture and realize a completed house. Furthermore, without modularity that is both intentionally designed and agreed upon, for example in industry standards and building codes, orchestrating the construction of components such as electrical systems, plumbing, roofing, heating, doors and windows, appliances and more, would be wildly complex and unwieldy. Even more important, innovators who make technological advances in those component systems would find it hard to survive in the marketplace, because they would not have standard places to "plug in" their new ideas at industrial scale. Instead, home construction would be a low-productivity, artisanal activity, much like, say, early automobile production – or today's health care data ecosystem.

Digital Health
Priority Actions and Actors

- Data architecture, modularity, and data infrastructure – **proposed Office of Health and Health Care Digital Integration (OHDI)**
  - Government's role in advancing such a modular architecture includes several elements, including:
    - Fostering the regulatory conditions for innovation and establishing the relevant ground rules, while avoiding excessive specification of what the "right" solutions should be
    - Ensuring a commitment to public trust, equity, and health
    - Facilitating vital private-public partnerships
    - Embracing incremental innovation, recognizing that solutions will emerge gradually

Digital Health
Collaborative Initiatives Within and Across Sectors

- Data architecture, modularity, and data infrastructure – **proposed Office of Health and Health Care Digital Integration (OHDI)**
  - **Many of the identified priority actions are dependent on this step**
    - Incentivize novel clinical evidence generation approaches
    - Harness AI and other capabilities dependent on a coherent data infrastructure
    - Get individuals the healthcare they need (e.g., reduce bias in AI, match treatments to patients, generalizable clinical research)
    - Realize the potential of a learning health system
- Advancing telehealth by right-sizing healthcare regulation
  - Example actor = Office of Civil Rights
- Business solutions are needed
  - Example actor = public private partnerships
- Cybersecurity
- Digital health training

COVID-19 Health Product Manufacturers and Innovators Sector Impact Assessment

Lessons for Health System Change

March 2021

Mathai Mammen, M.D., Ph.D.,
Global Head, Janssen Research & Development

janssen | PHARMACEUTICAL COMPANIES OF Johnson & Johnson

Introduction and Context

End to end sector assessment…

Perspectives of HPMI* sector draw from co-author experience in the following segments:

- Diagnostics
- Hospital supplies and equipment
- Therapeutic medical devices
- Therapeutic medicines
- Vaccines

…that identified several key challenges & vulnerabilities

HPMI sector was able to deliver effective vaccines and therapeutics, and a substantial supply of masks, ventilators and tests within one year

HPMI faced several systemic challenges during COVID-19, including:

- Constraints for data sharing and application
- Lack of coordination on communication across stakeholders
- Slow ramp up of availability of diagnostics, devices and equipment
- Prevalence of substandard, counterfeit, or falsified offerings

In addition, challenges arose from structural inequities and lack of trust

- Difficulty recruiting clinical trial populations representative of the general public
- Lack of trust in biomedical science among subsets of minority communities

*Health Product Manufacturers and Innovators

Common Areas of Opportunity Identified For HPMI

Pandemic highlighted these opportunities, but potential goes far beyond

Support for Science

Accelerate R&D in areas that are critical for pandemic response to lay the groundwork for more rapid and robust future response

Supply Chain Coordination and Surge Capacity

Establish supply chain and infra-structure redundancy, including the availability of "ever warm" manufacturing capacity and stockpiling

Data and Information Sharing

Create an environment where industry parties, global health bodies, and governments can efficiently and effectively share data in a pandemic

Regulation and Reimbursement

Establish a regulatory landscape that incentives adoption of innovative approaches and technologies, while maintaining safety and quality

Coordination and Communication

Increase domestic and international (private sector and government) stakeholder coordination for consistent and transparent communication

Substandard Offerings

Mitigate substandard, falsified, and counterfeit PPE, treatments and diagnostics during a public health crisis

Selected Critical Actions to Drive Change

Support for Science

- **Sustained funding** (e.g., to NIH, FDA, CDC, NSF, VA, DOD, DARPA) with guidance for allocation across research areas of greatest need
- Reduced barriers to **clinical trial enrollment for diverse populations**
- **Increased numbers of diverse investigators**, coordinators, and site staff

Data and Information Sharing

- Framework for industry stakeholders to enter **data sharing agreements** during national emergencies
- **Guidelines and data standards** for health authorities and industry stakeholders to report and accept data, in cooperation with FDA, CDC, and ONC

Regulation and Reimbursement

- **Regulatory and reimbursement flexibility** in defined circumstances to encourage greater use of innovative approaches
- **Transparent regulations with clear guidelines** on when flexibility is permitted, such as during national health emergencies

Actions must also support **reducing structural inequities in the system** and **increasing trust in health product manufacturers and innovators** in order to sustain the transformation

Call to Action

One year into the pandemic, **it is critical that we put into action the lessons we have learned**

As key stakeholders across the healthcare industry, we must all work together to take the necessary steps to **ensure next time we are far better prepared**

Collaboration will be critical to implement and amplify the impact of these actions:

- **Within-sector collaboration** (e.g., COVID R&D Alliance – Information sharing and collaborative work for therapeutics; preclinical data, protocols, and broad information sharing for vaccines)
- **Cross-sector collaboration** (e.g., identifying opportunities for increased regulatory flexibility)
- **Sector and government agency collaboration** (e.g., sustained funding of critical research areas; increased public-private partnerships such as BARDA/HHS; aligned and consistent communication)

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Chief Operating Officer,
Optum Care Solutions

Karen DeSalvo, MD, MPH, MSc
Chief Health Officer,
Google Health

COVID-19 Sector Impact Assessments

Lessons from the Payer Sector

Rahul Rajkumar, MD, JD
COO, Optum Care Solutions

COVID-19's Impact on Health Care Financing

1. Patients: Changes in coverage status, barriers to accessing COVID-19 and non-COVID-19 care

2. Providers: Financial challenges of delayed and deferred care

3. Health Plans: Actuarial uncertainty from insurance churn and disruptions in utilization

4. Policy: Evolving requirements and recommendations for coverage, coding, and payment

Key Elements of the Payer Response

Patient Outreach	• Focus: Providing patients with latest COVID-19 information • Example: Web portals, direct outreach
Provider Finances	• Focus: Addressing risk of insolvency for physician practices • Example: Advanced payments
Access to Care	• Focus: Coverage flexibilities and policy changes • Example: Telehealth reimbursement, cost-sharing waivers
Delivery System Support	• Focus: COVID-19 specific services • Example: Coordination of testing and tracing, patient identification and outreach for vaccines
Non-Medical Needs	• Focus: Exacerbation of social determinants of health • Example: Coordination of non-medical services (e.g., food, transport)
Health Equity	• Focus: Disparate outcomes for marginalized populations • Example: Resource and program commitments to health equity

Emerging Lessons from COVID-19

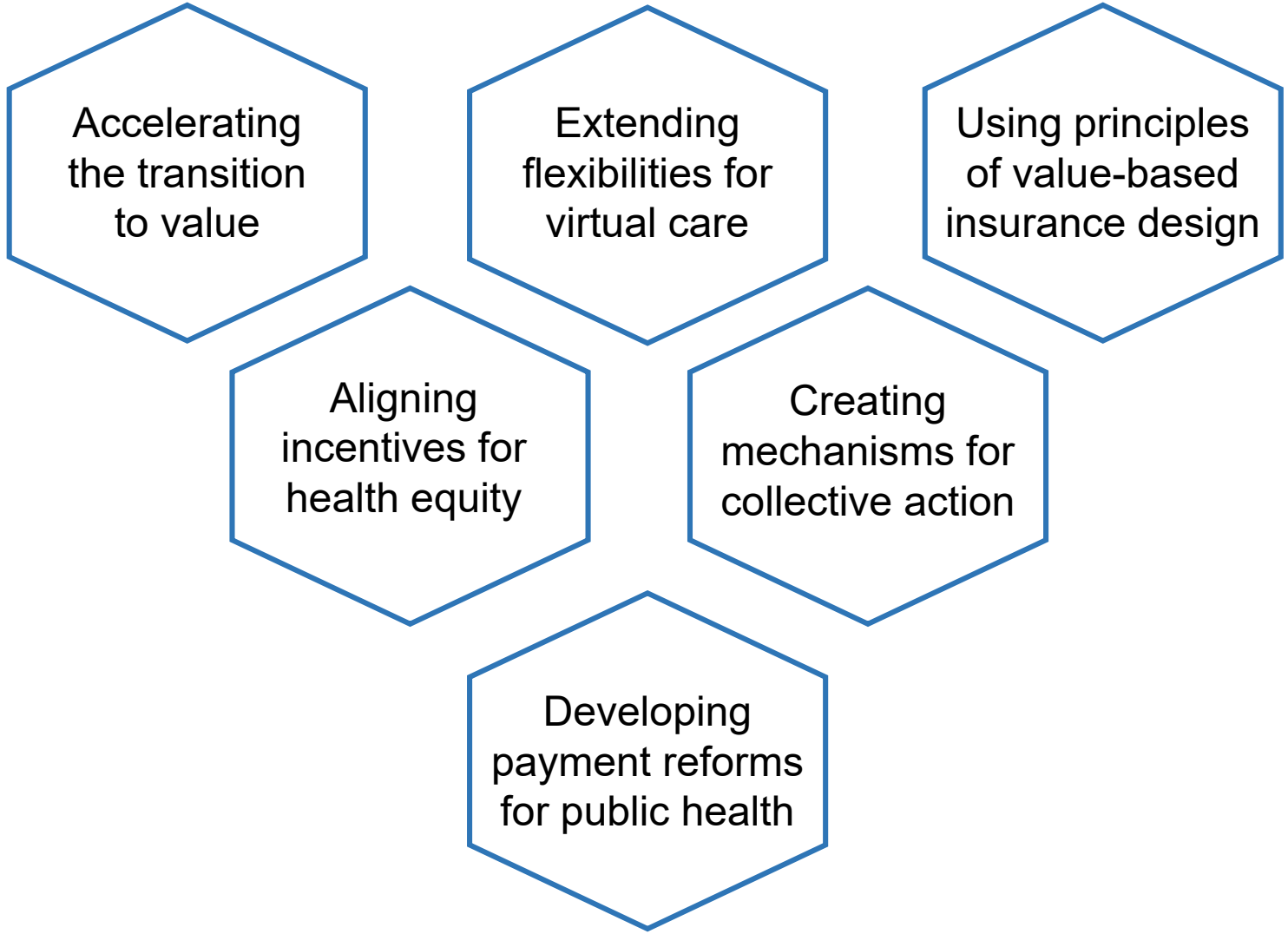
1. Instability of Fee-for-Service: Need for more resilient approaches to health care financing

2. Acceleration of Delivery System Changes: Realignment of financial incentives creates opportunities for change

3. Benefits of Public Health Partnerships: Examples of innovation spanning testing/tracing, clinical trials, and vaccination

4. Prolonged Uncertainty: Persistence of high infection rates into 2021 affects forecasting

Priority Actions & Policy Considerations



COVID-19 Sector Impact Assessments

Common Challenges and Next Steps

State and Local Public Health

Karen DeSalvo, MD, MPH, MSC

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NATIONAL ACADEMY OF MEDICINE

State and Local Public Health

Common Challenges & Issues

Workforce

- Retention and recruitment
- Limited staff bandwidth
- Need for resources to provide training for 21st century skills

Foundations

- Underfunding of core public health capabilities and programs
- Insufficient resources to maintain cross-sector partnerships

Technology

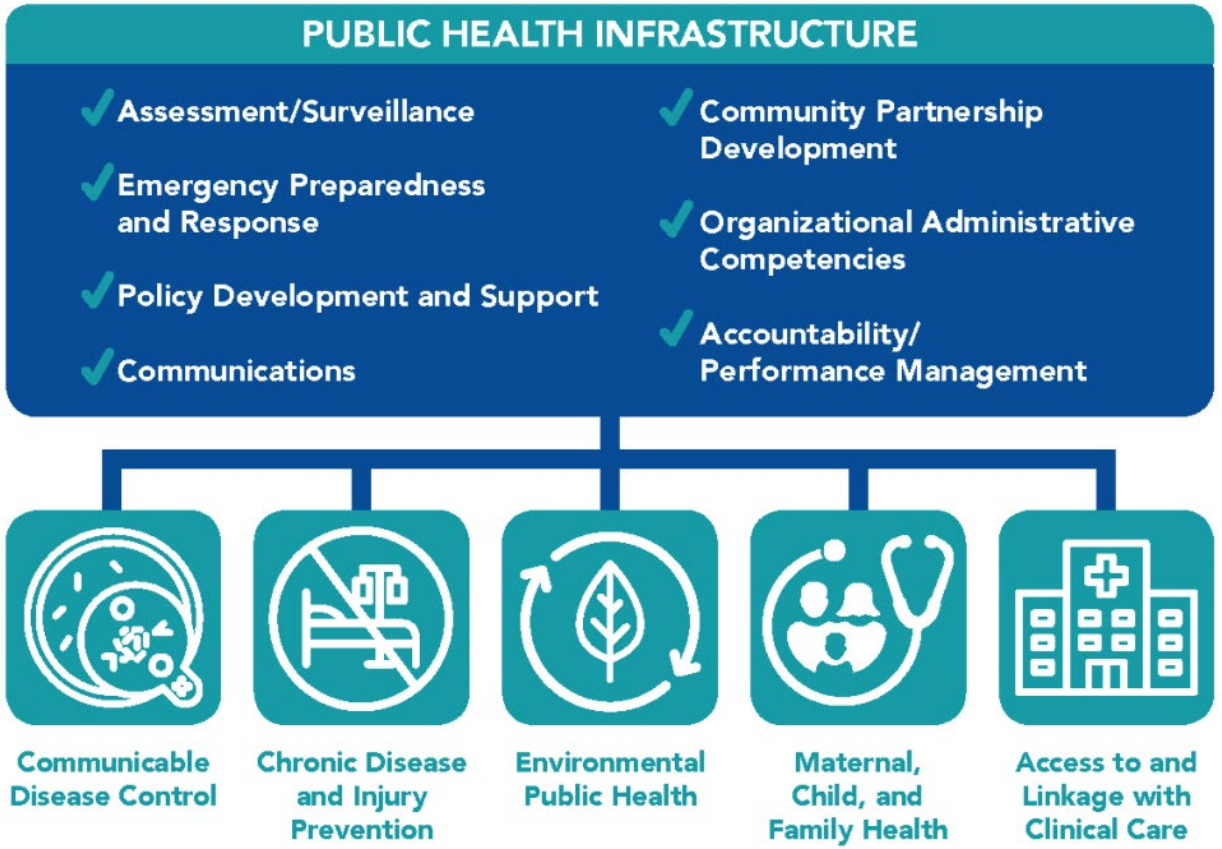
- Gaps in funding and support
- Outdated infrastructure
- Lack of interoperability

Emergency

- Cuts to emergency preparedness programs
- “Boom and bust” funding cycle

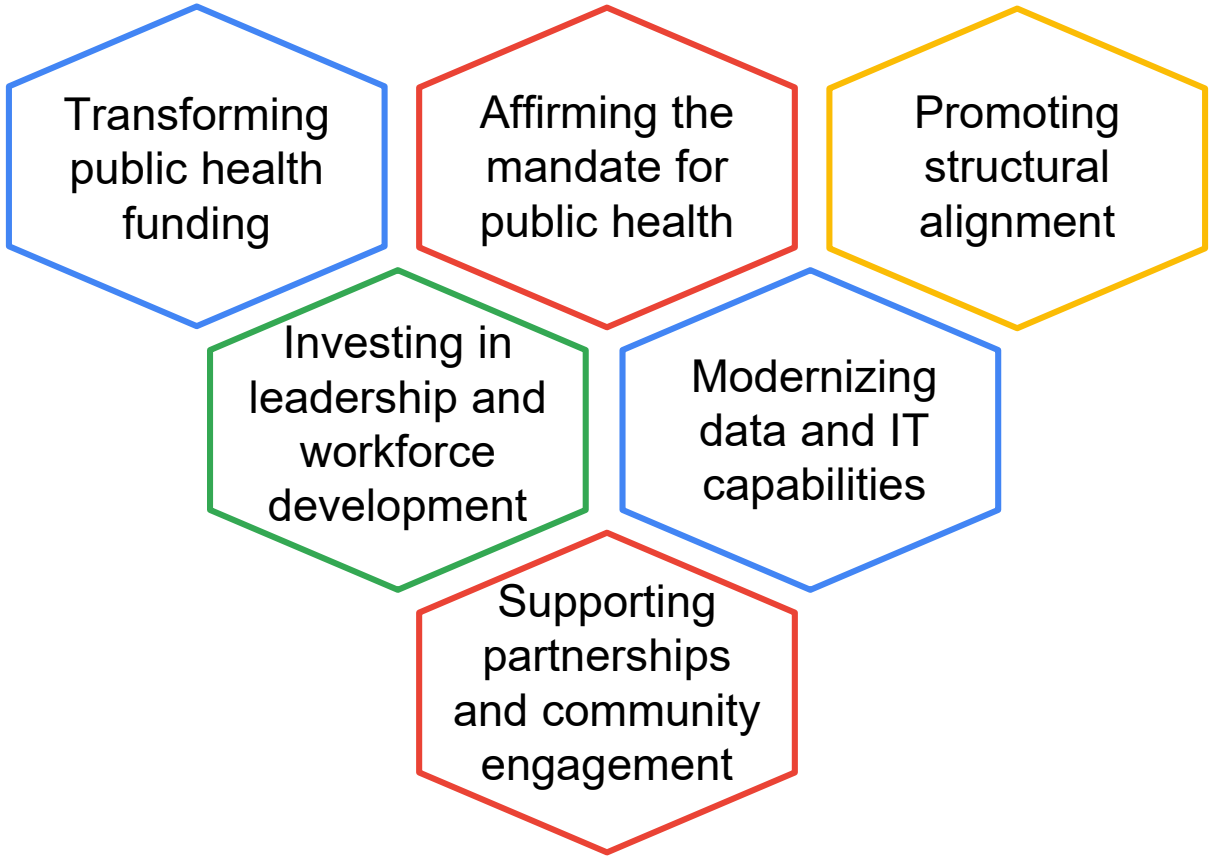
State and Local Public Health

Essential Services & Foundational Capabilities



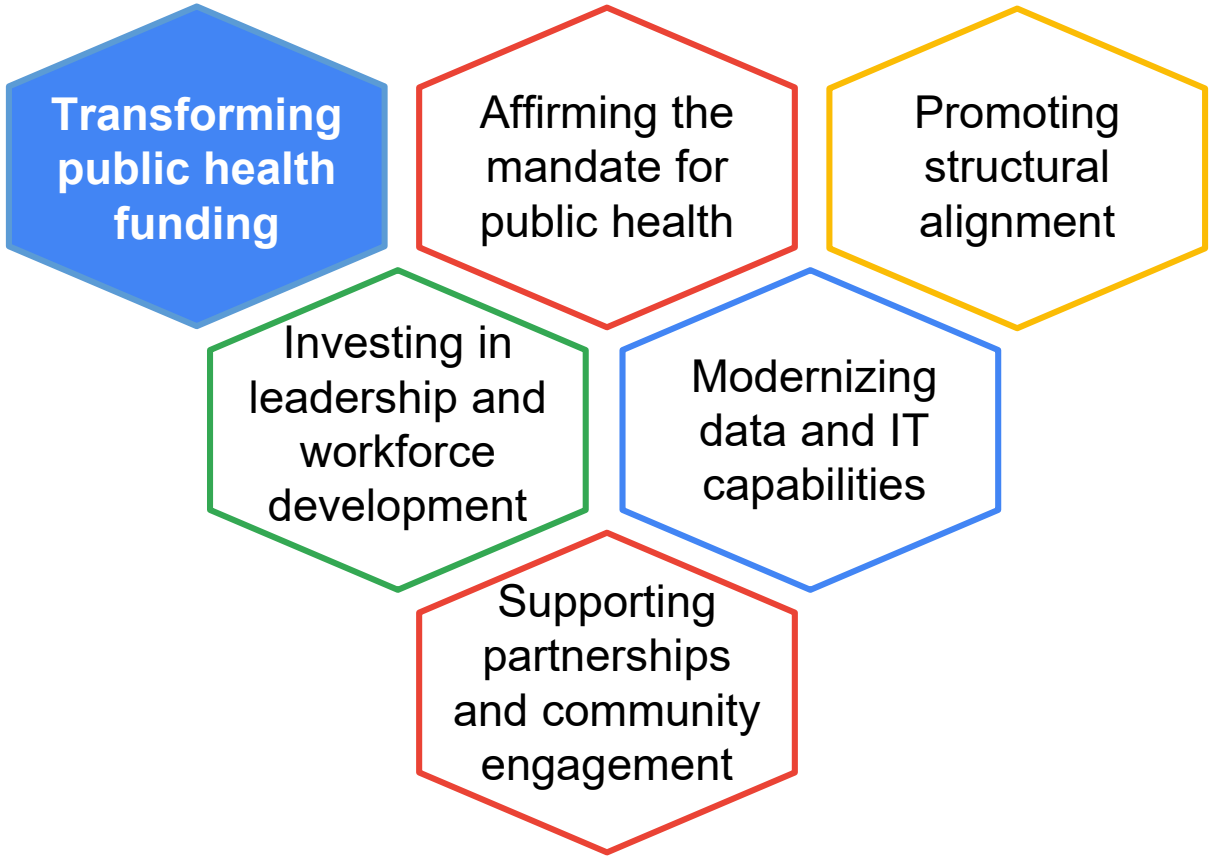
State and Local Public Health

Priority Actions and Actors



State and Local Public Health

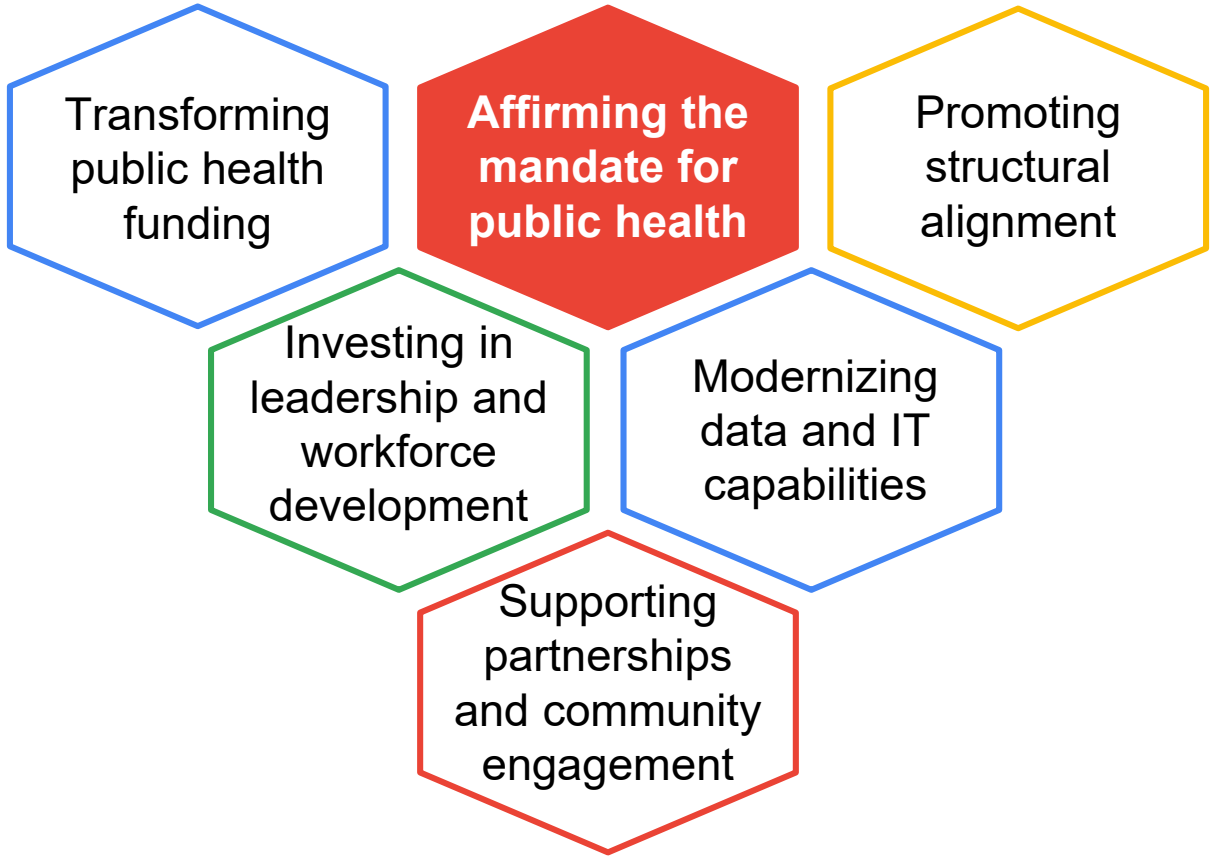
Priority Actions and Actors



a. Allow for more flexibility in routine and emergency program funding streams to enable jurisdictions at all levels to directly meet the needs for public health surge capacity during times of crisis, in response to evolving epidemiological challenges, or to address the specific needs of vulnerable populations
b. Establish adequate, reliable, flexible, and sustainable funding mechanisms to support the foundational capabilities of public health via federal, state, and local mechanisms benchmarked to the populations and communities which a given department serves
c. Invest in the upstream drivers of health, including the social determinants of health, to create more resilient communities with systems to support the full scope of health needs
d. Create adequate, reliable, and sustainable funding sources to support jurisdictions at all levels to participate in established public health accreditation and/or quality improvement processes

State and Local Public Health

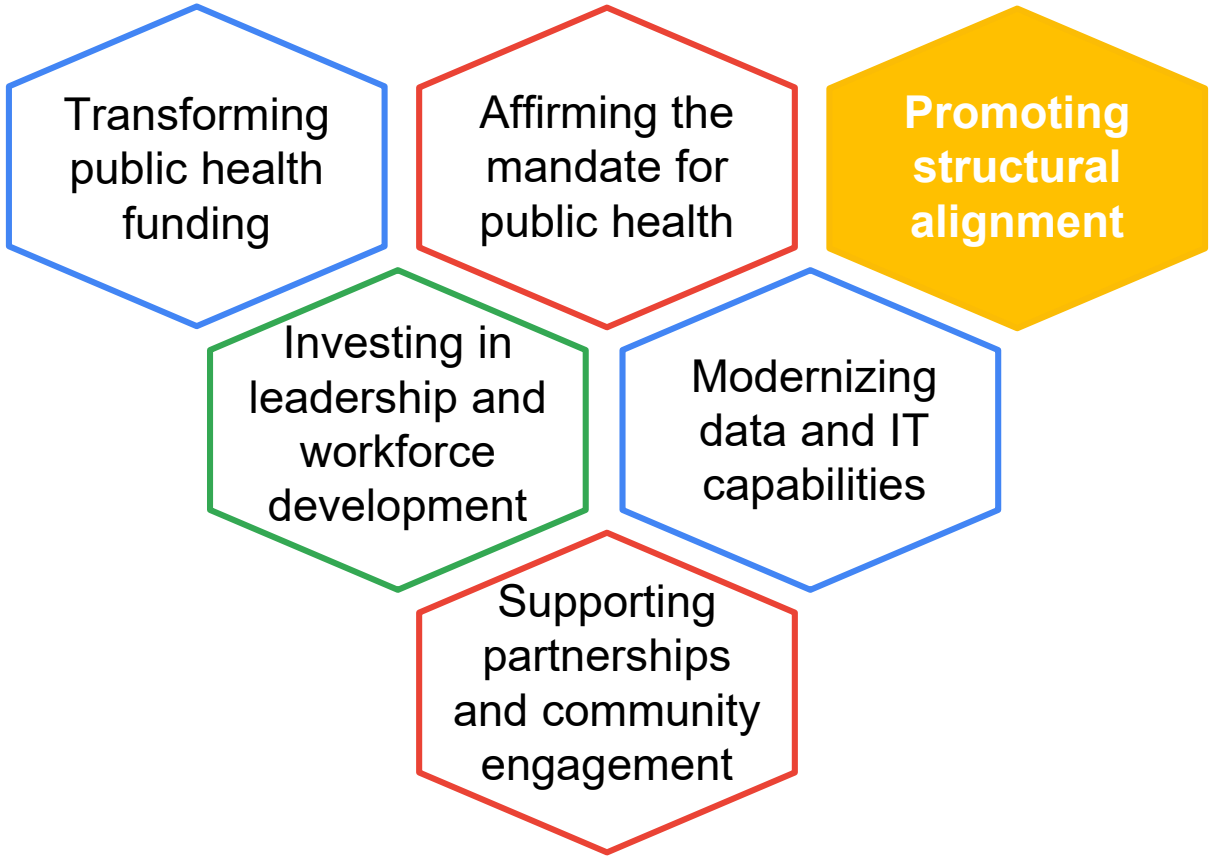
Priority Actions and Actors



a. Harmonize statutory authorities across jurisdictions
b. Allocate resources to fund a mandate for accountability across all jurisdictions for performance via established national public health accreditation entities or equivalent state and local quality improvement bodies within five years
c. Require better coordination with and support for tribal governments and territorial health departments

State and Local Public Health

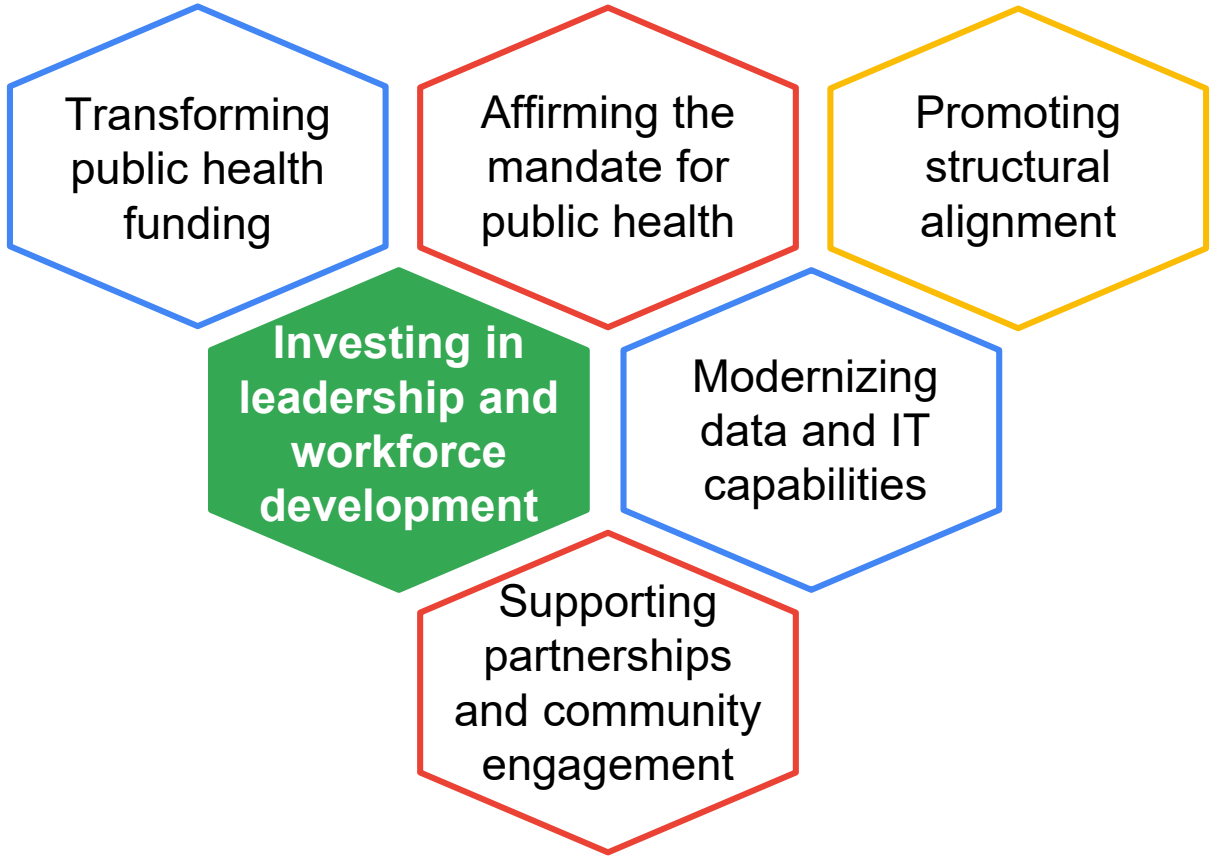
Priority Actions and Actors



a. Align the structure and function of health departments to ensure all residents are protected by agencies possessing the foundational capabilities needed to perform the 10 Essential Public Health Services
b. Define the ideal size and structure for health departments at the local level to have optimal performance, and reduce redundancy by addressing overlapping jurisdictions
c. Transition to models of shared services across jurisdictions and/or regionalization to improve effectiveness and efficiency

State and Local Public Health

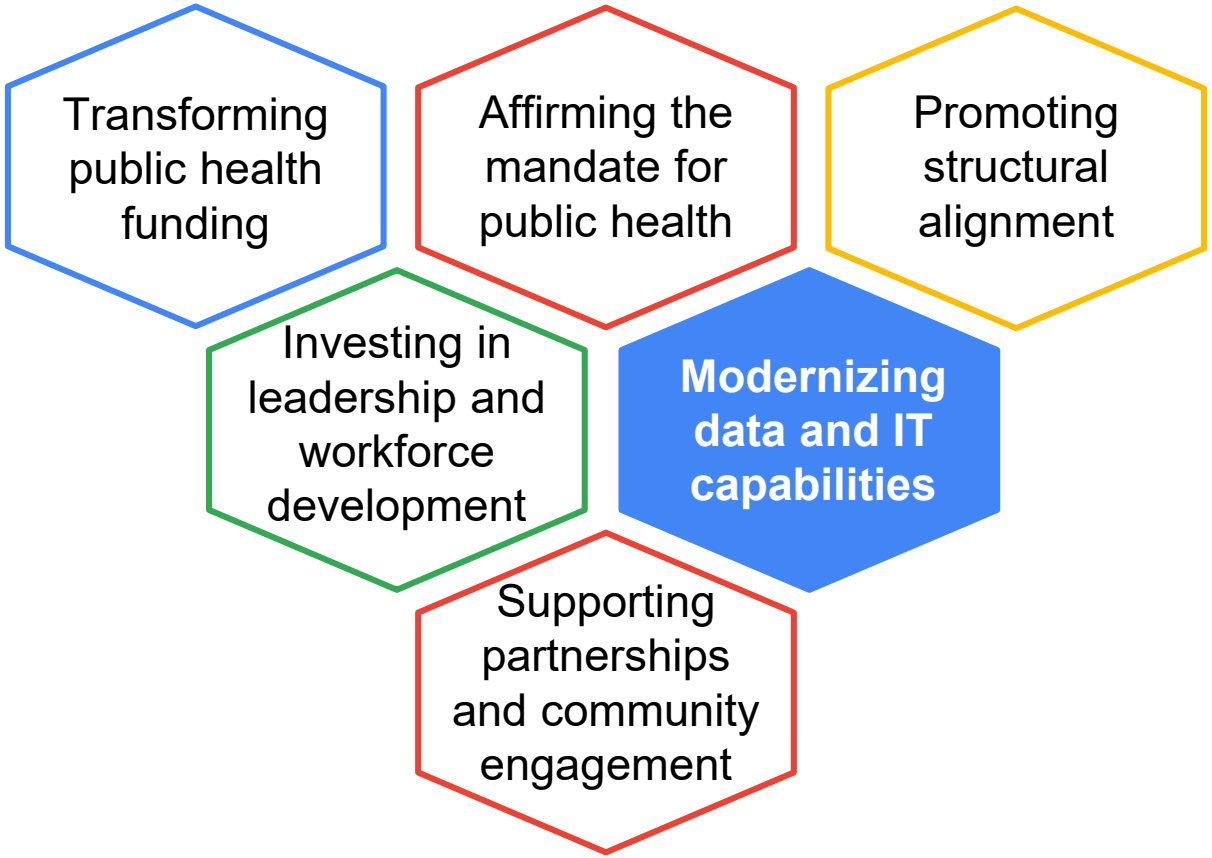
Priority Actions and Actors



a. Adopt the Chief Health Strategist model for health department leadership
b. Support the retention and recruitment of diverse public health professionals and leaders who are representative of the community they serve, with updated mechanisms to ensure appropriate compensation and recognition
c. Develop programs and resources to support the ongoing professional development of the incumbent and pipeline workforce to meet the population health needs of the 21st century

State and Local Public Health

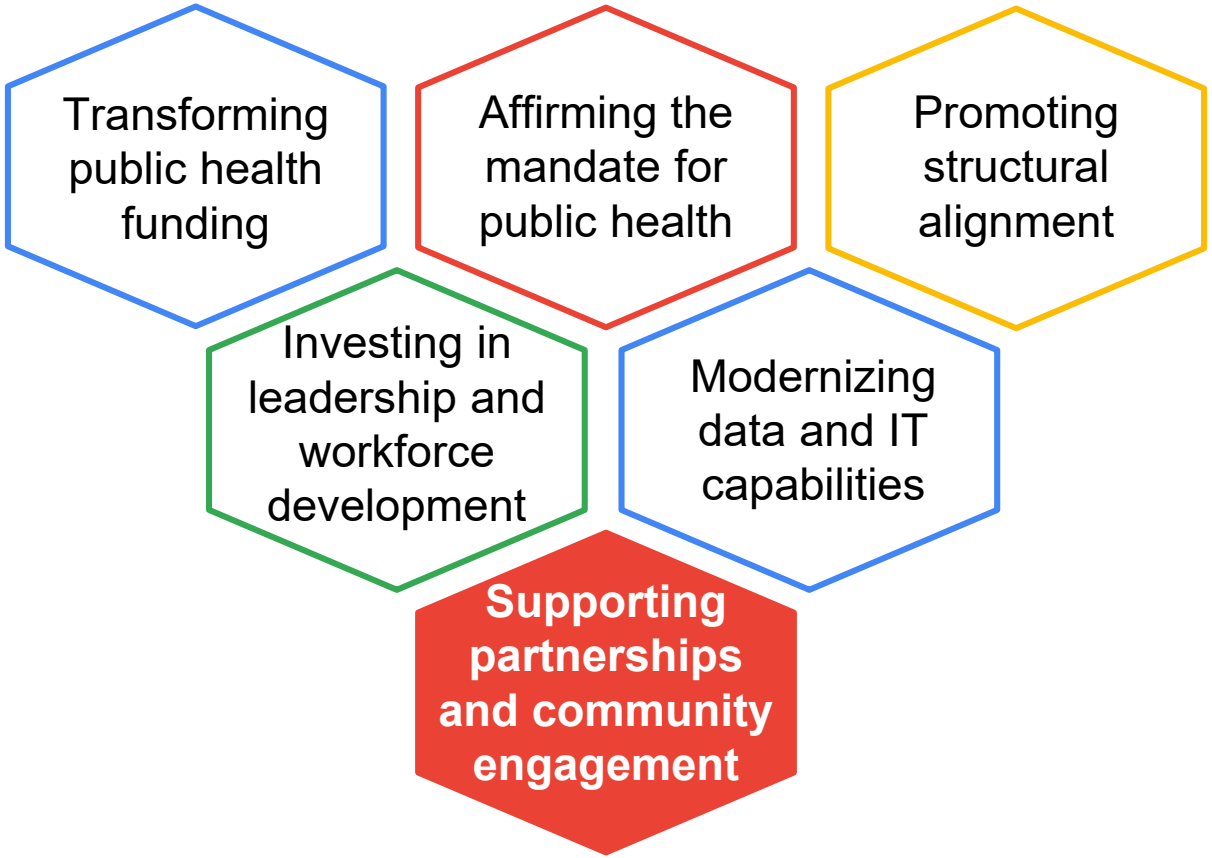
Priority Actions and Actors



a. Build a 21st century digital infrastructure for public health at the local, state, and federal levels
b. Establish national standards to enhance public health IT system interoperability
c. Modernize surveillance approaches to include novel signals from data sources such as social media, electronic health records, and crowdsourcing
d. Set national standards to ensure that health data is routinely disaggregated by race, ethnicity, and other key stakeholders, and other key sociodemographic characteristics to the community level (as appropriate to ensure anonymity) to identify disproportionate health impacts and outcomes

State and Local Public Health

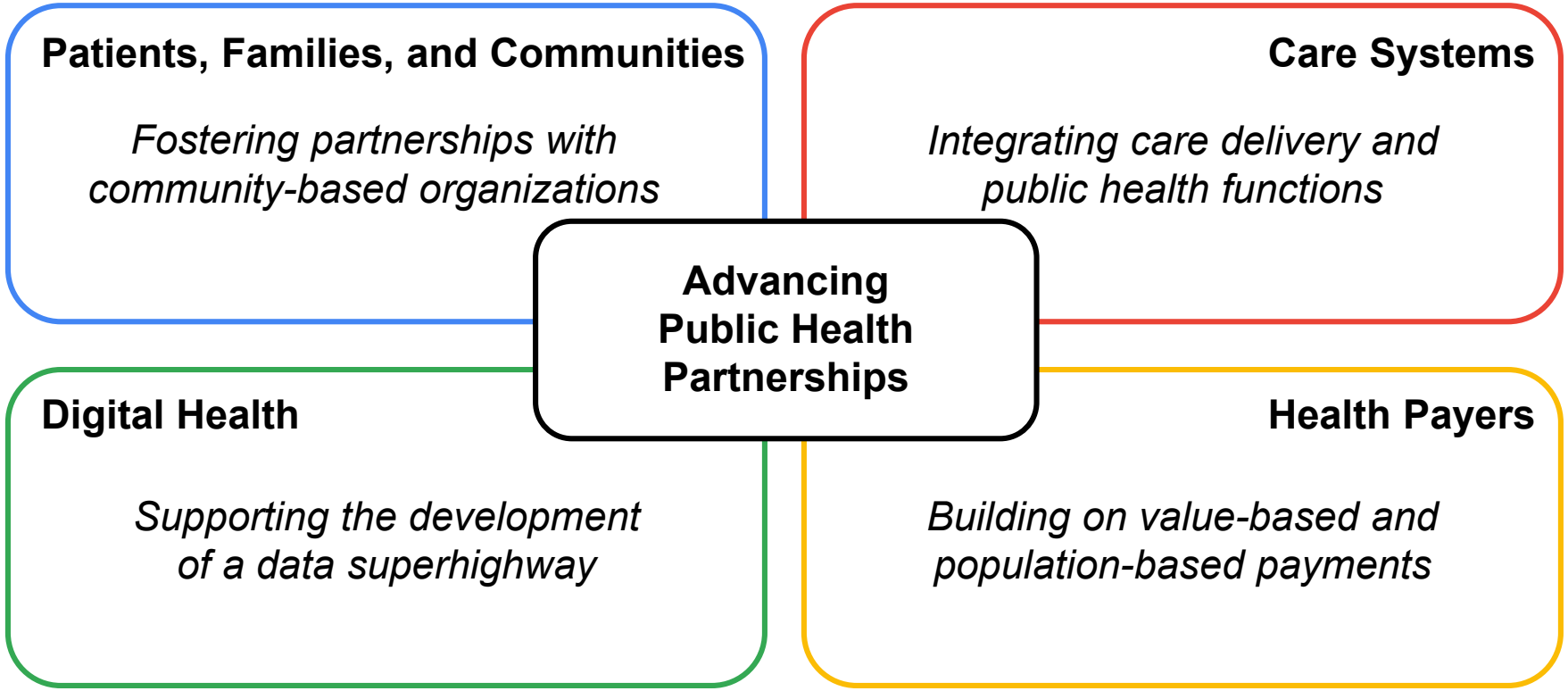
Priority Actions and Actors



a. Establish and maintain regional and/or state-level backbone entities that can be leveraged during crises for shared action
b. Cultivate relationships with non-traditional partners including employers, the business sector, and technology
c. Identify a new backbone national entity that can support collaboration to achieve unified policy recommendations from all the core components of the public health sector
d. Enhance trust and credibility through improved risk communication with public health authorities

State and Local Public Health

Collaborative Initiatives Within and Across Sectors



State and Local Public Health

The Road Forward

DISCUSSION PAPER

Public Health COVID-19 Impact Assessment: Lessons Learned and Compelling Needs

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Closing Remarks

Thank you for joining!

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NAM Leadership Consortium

Collaboration for a Value & Science-Driven Health System

Leadership Consortium Members Meeting

For more information about the
Leadership Consortium
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