ACKNOWLEDGMENTS

Thanks to our current and former Centers for Disease Control and Prevention and Louisiana Department of Health colleagues and to every public health professional in our nation who has served through this challenging time.

CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

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Back to the Future of Public Health

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ABOUT THE AUTHOR

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See also Benjamin, p. 542, and Gee and Khan, p. 594.

"Public health in the United States is never static. It must be sensitive enough to signal a new health threat. It must be specific enough to pinpoint problems and focus resources. It must be flexible and connected enough to protect people locally, nationally, and globally. That means public health surveillance in the United States must be responsive to change—and so must we."

—*Centers for Disease Control and Prevention*[1]

The SARS-CoV-2 pandemic has created unprecedented challenges for our nation's public health system. The Centers for Disease Control and Prevention (CDC) alone has engaged more than 8100 employees, conducted deployments to more than 250 communities around the world, created more than 4400 guidance documents, and supported more than 2.2 billion hits to its pandemic Web sites. Together with partners across the state, local, tribal, and territorial public health networks, our entire public health system has been orchestrating a massive response, one that promises to become even more heroic as vaccine launches expand and the virus itself evolves. Despite these achievements, the CDC's performance, the visibility and scientific independence of its leadership, and the adequacy of overall public health and health care system preparedness have created concerns that must be addressed.

Ongoing "Team B" review (systematic external expert review and input) of the pandemic response to correct deficiencies is certainly critical. Gee and Khan (p. 594) have outlined a more sweeping agenda for structural, operational, and financing changes to modernize the CDC, and some of their ideas likely have merit. However, the acute phase of a pandemic is probably not the best time to implement long-term and far-reaching changes to the CDC and our public health system, at least not without thorough assessment and thoughtful deliberation, perhaps via a mechanism akin to that successfully employed in the congressionally authorized Base Realignment and Closure process.[2]

Regardless of the mechanism or timing, undertaking a significant evolution of our public health system might be framed in the context of a few core principles, as follows:

1. People focus: Individuals and local communities are the front line of health protection, and their customized health needs and priorities should be the foundation for planning and resource allocation, as is the intent of community

health assessments. Of course, local planning also has to be prioritized, integrated, and in most cases supported across state and federal jurisdictions, but it must not be undermined by top-down mandates.

2. Integrated health protection strategy: One of the painful lessons from the current pandemic is that optimizing health and health equity is a prerequisite to ensuring health security in the context of emerging threats, and vice versa. The inextricable linkage between these dual imperatives requires their strategic and programmatic integration within the CDC and throughout the entire health system.
3. Science and technology leadership: Public health must be powered by leading-edge science and emergent technologies—and the expert workforce to exploit their value. Gee and Khan highlight data sciences as one major domain of need, and the CDC has already articulated the comprehensive Data Modernization Initiative.[3] Many other investments are needed to support the health protection research agenda, including predictive geospatial modeling, advanced molecular diagnostics, environmental sciences, behavioral economics, communication science, and so forth. Because no single agency or institute can achieve excellence in all of these areas, provision for expanded research alliances with academia and the private sector should be prominent in future CDC strategies.
4. Multisector networks: Gee and Khan place appropriate emphasis on the importance of partnerships with state governments in achieving public health modernization, but as the coronavirus pandemic has taught us, government efforts will never be enough. Much broader multisector networks must be developed, aligned, and empowered to achieve the scale, reach, and influence necessary to solve the complex public health challenges that lie ahead.
5. Political independence and financing: Implicit in Gee and Khan's discussion of governance and financing is the recognition that the CDC's pandemic performance has suffered from political interference and longstanding and severe resource constraints. Ameliorating the former will be challenging and controversial but is essential. Improving the latter is equally important and must be an immediate as well as a long-term strategic national security priority.

Crises can create crucibles for otherwise difficult-to-accomplish change, and this pandemic is no exception. At the very least, it has revealed some serious weaknesses in our current system and highlighted the tight coupling between underlying health disparities and vulnerability to new threats. Our challenge now is to learn from this experience and evolve an even stronger, more equitable, and more resilient health protection front line for all. AJPH

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PUBLICATION INFORMATION

Full Citation: Gerberding JL. Back to the future of public health. *Am J Public Health*. 2021;111(4):596–597.

Acceptance Date: January 18, 2021.

DOI: https://doi.org/10.2105/AJPH.2021.306176

CONFLICTS OF INTEREST

The author is employed by Merck & Co. Inc.

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