

Lessons from the mismanagement of the COVID-19 pandemic: A blueprint to reform CDC

Roy Guharoy, PharmD, MBA, FCP, FCCP, FASHP

Department of Pharmacy

Baptist Health

Montgomery, AL, USA

University of Massachusetts Medical School

Worcester, MA, USA

rguharoy@baptistfirst.org

Edward P. Krenzelo, PharmD, FAACT, DABAT, FEAPCCT

School of Pharmacy

University of Pittsburgh

Pittsburgh, PA, USA

Corresponding author: Roy Guharoy, Email: Syracusedoc@gmail.com

Disclosures: The authors have declared no potential conflicts of interest. Additional information:

The comments of this article are exclusively from the authors and do not reflect the views or opinions of the Baptist Health System, University of Massachusetts Medical School, or University of Pittsburgh.

Keywords: Centers for Disease Control and Prevention, communication, independence, pandemic, reform, trust

Accepted Manuscript

Before assuming office, Dr. Rochelle Walensky, the incoming director of the Centers for Disease Control and Prevention (CDC), authored an opinion piece in which she stated that “restoring public trust in the CDC is crucial, and, as the new director, I will tell you the truth.”¹ Historically, CDC has been a credible and trustworthy institution, and, had it not been for the coronavirus disease 2019 (COVID-19) pandemic in the United States and the mishandling of the pandemic by CDC, there would have been no reason for a prospective CDC director to issue this statement proactively.

CDC is regarded as the gatekeeper of public health in the United States and is recognized throughout the world for the detection and prevention of communicable and noncommunicable diseases. The agency worked admirably during the past H1N1 influenza pandemic, *Salmonella* outbreaks, and crises related to severe acute respiratory syndrome (SARS), human immunodeficiency virus, Ebola virus, poliovirus, zika virus, smallpox, and anthrax, among many other crises over the years. During those crises, CDC experts communicated directly with the public and provided timely, consistent, and accurate information on risk, progression, and mitigation as well as guidance, earning trust. Public health and medical professionals in the United States and abroad have relied upon CDC for the unvarnished truth. CDC works closely with the World Health Organization (WHO) to combat public health crises abroad and has built a stellar reputation in many parts of the world. Six decades of successful experience in managing numerous public health crises prepared CDC to lead efforts to control the COVID-19 pandemic in the United States. However, CDC experts were relegated to the sidelines while COVID-19 cases exploded.

CDC's role was largely marginalized in the United States during the COVID-19 pandemic when the public needed them the most.

Why did CDC appear to be irrelevant during the public health crisis of the century in the United States? The agency's unquestionable record was tarnished by technical blunders, lack of leadership, and contradictory messages throughout the pandemic. For example, the faultiness of a CDC-developed test kit for COVID-19 diagnosis during the early stages of the pandemic took weeks to recognize.² The failure to provide an effective test kit to state laboratories in the early waves of the pandemic caused the loss of valuable time, which could have been used to track the spread of the virus in the first weeks.³ Additionally, CDC acquiesced to probable pressure from the presidential administration to encourage the use of unvalidated treatments.⁴ Early in the pandemic, on February 25, 2020, the director of the National Center for Immunization and Respiratory Diseases at CDC warned of impending community spread of the virus and major disruptions to daily life and asked Americans to prepare for a pandemic.⁵ The director's prediction was correct, as reflected by the high number of COVID-19 cases and deaths to date in the United States as compared to other countries. As a consequence, there was a precipitous decline in the US stock market. The director was blamed for the stock market slide, and all federal health officials were banned immediately from speaking to the public without permission from the office of the vice president.⁶

Timely, consistent, relevant, and fact-based information is critical to gain public trust during a public health crisis. For CDC, direct communication with the public is critical for its mission to protect public health. During the COVID-19 pandemic, the tradition of reliable information and guidance from CDC experts during every public health crisis in the past was

replaced by often inaccurate, misleading, inconsistent, and confusing messages from US government officials, often without scientific or medical expertise, thereby creating chaos, confusion, and distrust among the public and media. CDC's guidance often deviated on fundamental issues, including asymptomatic transmission and aerosolized transmission of SARS-CoV-2 and wearing of masks.⁷⁻¹⁰ Rather than leading, the agency became nearly invisible during the crisis. Guidance documents developed by experts on testing, mask wearing, and reopening were altered by individuals without medical training or public health experience.⁷⁻¹⁰ Veteran experts were marginalized, silenced, or reassigned for doing their jobs.^{10,11} Mishandling of COVID-19 and politicization of the agency also led to an exodus of badly needed experts. Ineffective and incoherent pandemic responses were rampant throughout the COVID-19 ordeal in 2020. For example, the administration stripped CDC of its lead role in managing hospital data, a vital tool to identify emerging hotspots in the middle of the pandemic.¹⁰ The administration instead engaged a private contractor who struggled to gather reliable information, which ultimately led to a reversal of the decision to strip CDC of its authority as the lead agency in the management of hospital data.

Demand for COVID-19-related information skyrocketed during the pandemic. A vacuum in place of reliable information resulted in medical misinformation, which proliferated at an exponential rate on social media.¹² An analysis of 38 million English-language publications in the mainstream media by Cornell University researchers reported that the president was the single largest driver of misinformation on the COVID-19 pandemic.¹³ CDC became nearly paralyzed as the administration tended to politicize its messaging while minimizing the agency's scientific credibility. For example, the president stated that he would not wear a mask on the day that CDC advised the public to wear

masks.¹⁴ Both the National Academy of Sciences and National Academy of Medicine expressed their concerns over ongoing reports and incidents regarding the politicization of science, particularly the overriding of evidence and advice from public health officials and derision of government scientists.¹⁵ The pandemic exposed the dangers of political leaders who did not recognize the significance of the crisis, failed frequently to follow expert-based advice, and, at times, actively misled the public.

CDC was “punished” for the failure of the diagnostic test kit and for not syncing with the “magic bullet mythology” of the administration. While there is no doubt that CDC made mistakes, minimizing the role of the agency was the wrong solution. CDC is staffed with world-class scientists, epidemiologists, researchers, clinicians, public health experts, and others serving in many facets of public health, not limited just to developing test kits.

The pandemic has exposed vulnerabilities and structural weaknesses at CDC. Direct political interference in public health policy and resultant acquiescence of scientists must be minimized to protect public health in the context of current and future pandemics. CDC and presidential administrations should work cooperatively to convey consistent messages to the public and healthcare professionals. The negative influence of the previous administration and the agency itself requires a comprehensive effort to repair and restore trust in CDC. Framing science before politics should be the first order of priority for this reform. President Biden’s pledge to put “scientists and public health leaders front and center” is a refreshing departure from the pandemic-related policies of the previous administration.¹⁶ The new administration must be held accountable and resist the temptation to allow politics to infiltrate and invalidate science. At the risk of losing her job, the new director must not tolerate any such overtone or attempt at politicization. The

following recommendations should be considered by Congress to reform CDC and to protect it from future political challenges to its integrity.

- Establish a structure within the government that strengthens the role of CDC in disease prevention and management. It is abundantly clear that political influence played a significant role in the way that the pandemic unraveled in the United States. The failure highlights the dangers when political leaders fail to follow expert-based advice and mislead the public.
- Provide adequate, consistent funding. The agency with a mammoth public health task to address health, safety, and security threats both at home and abroad is chronically underfunded by Congress and subjected to frequent budget cuts. For example, CDC's Public Health Emergency Preparedness (PHEP) program, which supports states in their preparations for pandemics and other emergencies, had its budget decreased from \$940 million in 2002 to \$675 million in 2020.¹⁶ Adequate funding will allow the agency to allocate money for CDC-identified priorities.
- Make it unlawful for political appointees and elected officials to alter CDC recommendations.
- Consider elevating CDC to the status of an independent agency like the Federal Reserve or the Federal Trade Commission. Currently, CDC is structured under the Department of Health and Human Services executive branch, which is potentially subject to political pressures. This will allow CDC to remain depoliticized and carry out swift decisions during a public health crisis without executive branch or Congressional approval.

- Allow CDC experts, in conjunction with other governmental public health agencies, to coordinate federal public briefings on the current state, evolving science, and government response during public health crises to minimize misleading and inaccurate messages from politicians.
- Invest in building a sophisticated epidemiological surveillance system. Real-time data are critical in managing a public health crisis to understand the biology of the causative agent, how it spreads and infects, and how it can be treated. There are many pieces of the puzzle that need to come together to provide a clear picture of the causative agent. CDC must collect and integrate data from numerous sources to solve such a puzzle. The current surveillance system collects data from many sources, including email, faxes, and telephones, but needs to be replaced by a sophisticated integrated electronic system to obtain information in real time. In addition, CDC must leverage the unprecedented private-public and private-private collaborations that led to digital innovations such as forecasting the spread of infection, building health apps, and vaccine development during the COVID-19 pandemic. CDC needs to lead and foster cross-sector collaboration among leaders in health care and technology at home and abroad to implement the best ideas in digital and data analytics.
- Invest in modernization and expansion of laboratory testing capacity and genome analysis capabilities. The attention on genomic sequencing is long overdue. This is an extremely powerful tool that enables experts to identify an agent's source and trace lineage, transmission, and rate of evolution, which are essential for public health action. With expanded testing capacity at both the federal and state level, CDC will be able to lead a

national coordinated response via leveraging a broad swath of information from sequence data to patient metadata, allowing targeted and timely actions in hotspot areas.

- Appoint an independent commission to evaluate why the COVID-19 test kit failed and implement the commission's recommendations on corrective action.

The pandemic exposed CDC's weaknesses but also provides a unique opportunity to build a safer and healthier nation. We can mitigate the current and future pandemics with proper planning and guidance from the experts at CDC. CDC's role as the nation's coordinating body with regard to disease prevention and management is more critical than ever in the context of the curves for current and future pandemics.

The current administration is developing a national strategy that is driven by scientists and public health experts to combat SARS-CoV-2 and to rebuild the US public health infrastructure.^{17,18} Scientists and public health experts are encouraged to speak directly to the public, free from political interference, as they make decisions that are based on science and public health expertise.¹⁷ This in itself is refreshing and a radical departure from the actions of the previous administration. The president's nomination of a highly competent leader of CDC was the first step to establish transparency, accountability, and restored trust at the embattled agency. The Biden administration must provide support for the fundamental structural changes needed to transform CDC into an organization that can act independently in the best interests of public health and science. The new director must restore the agency and public confidence by pushing through reforms to revitalize CDC and rebuild the culture of science and evidence-based decision-making. Such promises cannot be just hollow rhetoric.

References

1. Walensky RP. As the new C.D.C. chief, I'll tell you the truth: even when the news is bleak. *New York Times*. Published January 11, 2021. Accessed January 12, 2021.
<https://www.nytimes.com/2021/01/11/opinion/rochelle-walensky-cdc-director.html?referringSource=articleShare>
2. Patel NV. Why the CDC botched its coronavirus testing. *MIT Technology Review*. Published March 5, 2020. Accessed January 12, 2021.
<https://www.technologyreview.com/2020/03/05/905484/why-the-cdc-botched-its-coronavirus-testing/>
3. Wilman D. Contamination at CDC delayed rollout of coronavirus tests. *Washington Post*. Published April 18, 2020. Accessed January 5, 2021.
https://www.washingtonpost.com/investigations/contamination-at-cdc-lab-delayed-rollout-of-coronavirus-tests/2020/04/18/fd7d3824-7139-11ea-aa80-c2470c6b2034_story.html
4. Guharoy R, Krenzelok EP. Searching for COVID-19 treatments: first do no harm. *Am J Health-Syst Pharm*. 2020;77(22):1899-1905.
5. Belluck P, Weiland N. C.D.C. officials warn of coronavirus outbreaks in the U.S. *New York Times*. Published February 25, 2020. Accessed January 5, 2021.
<https://www.nytimes.com/2020/02/25/health/coronavirus-us.html>
6. Dyer O. Trump claims public health warnings on COVID-19 are conspiracy against him. *BMJ*. 2020;368:m941.

7. Kaplan S. White House blocked C.D.C. from requiring masks on public transportation. *New York Times*. Published October 9, 2020. Accessed January 12, 2021.

<https://www.nytimes.com/2020/10/09/health/coronavirus-covid-masks-cdc.html>

8. Dearen J, Stobbe M. Trump administration buries detailed CDC advice on reopening. *Associated Press*. Published May 6, 2020. Accessed January 12, 2021.

<https://apnews.com/article/7a00d5fba3249e573d2ead4bd323a4d4>

9. Freking K, Stobbe M. CDC compiles new guidelines to help organizations to reopen. *Associated Press*. Published April 28, 2020. Accessed January 12, 2021.

<https://apnews.com/article/2a1cf36c0ad1ae31938351f6f74abe28>

10. Santamaria L. Inside the fall of the CDC. *ProPublica*. Published October 15, 2020. Accessed January 12, 2021. <https://www.propublica.org/article/inside-the-fall-of-the-cdc>

11. Vigilone G. Four ways Trump has meddled in pandemic science—why it matters. *Nature*. Published November 3, 2020. Accessed January 12, 2021.

<https://www.nature.com/articles/d41586-020-03035-4>

12. United Nations. Misinformation and cybercrime in COVID-19 crisis. Accessed January 5, 2021. <https://www.un.org/en/un-coronavirus-communications-team/un-tackling->

[infodemic'-misinformation-and-cybercrime-covid-19](https://www.un.org/en/un-coronavirus-communications-team/un-tackling-infodemic-misinformation-and-cybercrime-covid-19)

13. Conrow J. What drove the COVID misinformation 'infodemic'? *Cornell Alliance for Science*. Published October 1, 2020. Accessed January 5, 2021.

<https://allianceforscience.cornell.edu/blog/2020/10/what-drove-the-covid-misinformation-infodemic/>

14. Yamey G, Gonsalves G. Donald Trump: a political determinant of Covid-19. *BMJ*. 2020;369:m143.
15. National Academies of Sciences, Engineering, and Medicine. NAS and NAM presidents alarmed by political interference in science amid pandemic. Published September 24, 2020. Accessed January 5, 2021. <https://www.nationalacademies.org/news/2020/09/nas-and-nam-presidents-alarmed-by-political-interference-in-science-amid-pandemic>
16. *Ready or Not: Protecting the Public's Health From Diseases, Disasters, and Bioterrorism 2020*. Trust for America's Health; 2020. <https://www.tfah.org/wp-content/uploads/2020/01/2020ReadyOrNotFINAL.pdf>
17. White House. National strategy for the COVID-19 response and pandemic preparedness. Published January 21, 2021. Accessed March 27, 2021. <https://www.whitehouse.gov/wp-content/uploads/2021/01/National-Strategy-for-the-COVID-19-Response-and-Pandemic-Preparedness.pdf>
18. Tanne JH. Covid-19: Biden launches national plan based on "science and public health alone." *BMJ*. 2021;373:n210.