POLICY FORUM

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PUBLIC HEALTH

Create a COVID-19 commission

We need a definitive public reference for the history of events

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The 2019 Global Health Security Index concluded that although "no country is fully prepared for epidemics or pandemics," the United States scored highest among all countries in pandemic preparedness (*1*). Yet in the COVID-19 outbreak as of October 2021, measured in deaths per 100,000 population, the United States did worse than 30 of the 35 countries defined by the International Monetary Fund as having "advanced economies," and worse than all but 18 of 184 countries ranked (*2*). Many have now called for a US COVID-19 commission to provide a definitive reference for the history of the events, to enlarge the public's understanding of them, and to prescribe strategies that might prevent, or at least mitigate, future pandemics. Drawing on our experience as members of the President's Council of Advisors on Science and Technology (PCAST) under President Obama, we present recommendations for the topics to be examined by a US COVID-19 commission (*3*, *4*).

The US Congress has created national commissions in the past to investigate events that have severely affected life, such as the 9/11 Commission. That commission gave the country a shared, bipartisan account of what had gone wrong, and why, and its recommendations led to the restructuring of the US intelligence community and the creation of the Department of Homeland Security. Similar efforts to critique national COVID-19 responses have been undertaken in other countries. For example, both the British House of Commons and the French Sénat have released detailed and critical accounts of their country's response to the pandemic (*5*, *6*).

Eight bills have been introduced in Congress so far, proposing the creation of

A nurse walks into a temporary emergency room in a parking garage at Providence Cedars-Sinai Tarzana Medical Center, Tarzana, California, 3 January 2021.

such a commission (*7*). Most include only broad requirements for the issues to be investigated by the commission. Others outside of government have made similar proposals. A privately funded nongovernmental "Covid Commission Planning Group" has been formed (*8*), but has yet to offer detailed recommendations. We recognize that establishing a COVID-19 commission could be challenging in the current US domestic political environment. Nevertheless, now is an appropriate time to consider plans for the commission.

The design, composition, and resources of a national commission can determine the depth of its inquiry and the credibility of its conclusions. Congressional proposals for a COVID-19 commission have been modeled after the 9/11 Commission (*7*). Key features of the 9/11 Commission—robust budget and staffing, subpoena power, and access to previous senior officials at all levels, as well as to classified material, should be features of the COVID-19 commission.

In addition to drawing on lessons from the 9/11 Commission experience, the COVID-19 commission may wish to examine the findings of the House Select Bipartisan Committee on Hurricane Katrina, because many issues raised by the Katrina catastrophe also provide echoes of the COVID-19 experience: failed responses by the federal government despite longstanding plans, warnings, and similar recent events; failure to act on lessons from simulations; tardy exercise of federal authority; and contentious relationships between the federal and state governments.

PUBLIC HEALTH INFRASTRUCTURE

The COVID-19 Commission will surely encounter a general issue: the undervaluing and underfunding, in the United States, of public health capabilities and practices. A prominent manifestation of this attitude has been the chronic underfunding of the Centers for Disease Control and Prevention (CDC), as well as underfunding of state and city public health agencies. The COVID-19 Commission should address how to place public health agencies in the United States on a more effective and stable footing, and it should recommend means to repair budgetary shortfalls, expand training programs for public health professions, and enhance the prestige of public health workers (*4*).

Early in the pandemic, when identification of the first infections with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) was especially important, the CDC was widely criticized for its slow development and certification of a reliable test for the viral pathogen. The commission should examine those events and provide guidance about plans for developing tests for microbial pathogens to detect and monitor future outbreaks. Those tests should include methods to survey large populations for early detection of the proteins and/or nucleic acids of known and novel pathogens; to measure the presence of pathogens in asymptomatic and symptomatic people during an outbreak; and to characterize the genetic variants (like the current Delta variant) that arise and spread during continued propagation. Carrying out these tasks will require funding for the establishment and maintenance of sophisticated technical platforms, as recommended in previous reports (*3, 4*).

The adequacy of the public health informatics infrastructure and the management of public health data should be particular focuses of the commission's attention. Public health methodology for managing data is still often manual and antiquated (*3*, *4*).

WARNING AND ORIGINS

The pace of emerging disease outbreaks such as the 2002–2004 SARS-CoV-1 pandemic, the 2009 H1N1 influenza pandemic, and the 2012 Middle East respiratory syndrome coronavirus (MERS-CoV) epidemic had been anticipated by microbiologists and epidemiologists. In 2004, the US National Intelligence Council warned that "Some experts believe it is only a matter of time before a new pandemic appears [that] would be devastating and could spread rapidly throughout the world" (*9*). A 2008 study cataloged the emergence of 335 infectious diseases in humans between 1940 and 2004 (*10*). Nearly all subsided quickly. But it was clear that the threat was ever-present, and likely increasing.

A COVID-19 commission should review those earlier outbreaks, their causes, and the US responses and determine whether there is a "panic/neglect cycle" of increased preparedness after each episode that then lapses until the next outbreak induces another burst of attention. If so, the commission should propose mechanisms to ensure more consistent attention to such threats.

It is important to understand and report on the roles played by the scientific community, other governments, and international organizations at the early stages of the COVID-19 pandemic. When and how did the United States receive warning from China of the initial cases in Wuhan and of the threat they might pose? How did this information move through the US government, and how and when did it reach the White House and the president? Since 2017, reportedly more than 30 staff members had been pulled out of the CDC's office in China, including a US epidemiologist embedded in China's equivalent to the CDC (*11*). If they had still been in place, could these personnel have provided earlier warnings about

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the COVID outbreak in Wuhan and its character? Was there appropriate communication among US health, diplomatic, and other agency personnel, and with the World Health Organization (WHO)?

It will be important to decide whether the commission's mandate includes a review of public and classified information about the origin of the pandemic. This topic risks dominating the attention paid to the commission's final report, potentially undermining other important findings. At the same time, if there were policy conclusions and recommendations to be made regarding gain-of-function experiments or high-containment laboratory practices, these could be of importance and standing regardless of the resolution of the COVID-19 origins issue.

PREPAREDNESS

The commission should review the adequacy of pandemic planning in the United States prior to the COVID-19 outbreak, including the adequacy of the nation's strategic stockpile inventory and its governing strategy, the supply chain's readiness to meet manufacturing standards and demands, and the availability of research and clinical trial methodologies to respond to a new infectious agent by developing, testing, and producing tests, therapeutics, and vaccines in a coordinated and rapid fashion (*4*).

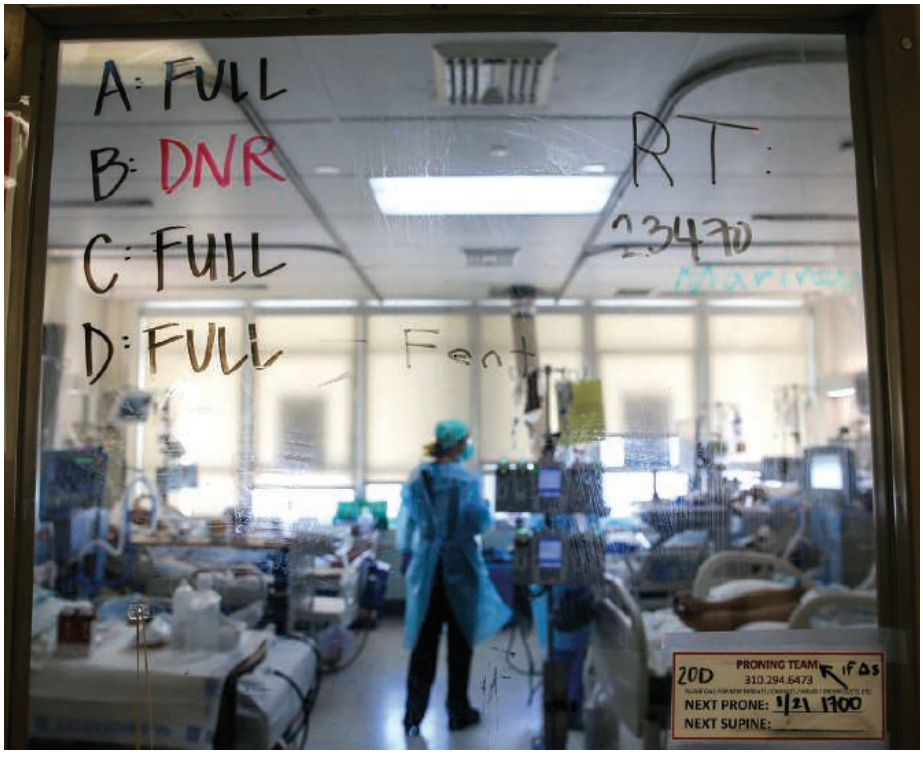
In 2019, the US government, in cooperation with state, local, and tribal health authorities, conducted an outbreak simulation exercise. The after-action report from the exercise presciently highlighted many challenges that emerged in practice in the COVID-19 case; it has now been released under a Freedom of Information Act request (*12*). The commission should examine lessons learned from the exercise, evaluate the impact of its findings within the US government, and recommend how to make it more likely that findings from future exercises are acted upon.

It has long been argued that preparations for bioterrorism or biological attack by a state adversary should have many synergies with preparedness for naturally occurring disease, a point reemphasized by PCAST in its biodefense report to President Obama (*3*). The commission should consider the proper balance, synergies, and potential risk trade-offs among strategies for protection against natural occurring disease, laboratory accident, and biological attack. The commission should also ask whether the US government had this balance right at the time of the COVID-19 outbreak.

Actions taken by the federal government well before the appearance of COVID-19 warrant close examination. For example, in May 2018, the Directorate for Global Health Security and Biodefense within the National Security Council staff, which had been created in 2015, was disbanded (*4*). How consequential was this reorganization with respect to US ability to anticipate and respond to the COVID pandemic? Similarly, in 2017, the incoming administration reportedly was provided with the National Security Council's "Playbook for Early Response to High-Consequence Emerging Infectious Disease Threats and Biological Incidents" (*13*). To what extent were key members in the new administration aware of the document, and to what extent were its prescriptions followed? To the extent they were not, was that because they were judged to be flawed, or for other reasons?

Other events affected the capacity of the United States to be prepared to provide needed supplies for patient care and personal protection during the COVID-19 pandemic. The Strategic National Stockpile (SNS) was depleted during the H1N1 epidemic in 2009. In March 2013, Congress reauthorized the SNS for financial year (FY) 2014–FY 2018 (*4*). Why did this authorization not lead to appropriations? Why was the authorization not renewed after 2018? SNS planning assumed that state stockpiles would be in place. For the most part, however, those stockpiles were also not replenished and maintained after the 2008 financial crisis (*4*). This failure should also be understood, with lessons drawn for future readiness. Could greater attention to supply-chain issues have helped to replenish the stockpile? Was the United States too dependent on foreign manufacturers for items in its stockpile, and, if so, how could this vulnerability have been mitigated—for instance, by better use of the Defense Production Act?

A major component of the Commission's attention to the question of preparedness should be an examination of the extent to which the CDC was unprepared for an epidemic of COVID-19's scale, and if so, why.



A clinician cares for COVID-19 patients in a makeshift Intensive Care Unit at Harbor-UCLA Medical Center, Torrance, California, 31 January 2021.

PHOTO: MARIO TAMA/GETTY IMAGES

RESPONSE TO THE ARRIVAL OF THE PANDEMIC IN THE UNITED STATES

A COVID-19 commission will need to evaluate the ways in which various components of the nation's medical infrastructure—public health agencies, health care facilities, public and private research institutions, and regulatory bodies—responded to the emergency.

The commission should examine the decision-making process that led to restrictions prohibiting travelers from entering the United States and should assess their public health effectiveness. Should there have been all-inclusive bans, including indirect travel through other countries? Or should there have been no bans? Should there have been mandatory quarantine? The commission should also examine the effi-

cacy of domestic actions that were taken by individual states within the United States, such as travel advisories and recommended quarantine after arrival from certain states.

In the absence of effective vaccines or therapies to curtail the spread and morbidity of a novel viral pathogen, all nations were obliged to depend on traditional means to combat the pandemic by limiting the spread of the pathogen, such as social distancing and mask wearing. Each of these strategies and the means to impose it has been debated widely and will be important subjects for the commission's study. The commission should also examine the nation's capacity to provide the funds and trained personnel to perform contact tracing, whether there were deficiencies that had a notable role in the failure to control the pandemic, and whether resources were inappropriately expended on contact tracing after high case rates had rendered it infeasible (*4*).

The commission should examine US government efforts to quickly establish a vaccine research initiative and provide financial incentives to private industries, in hopes of accelerating the development, testing, and production of a vaccine. The inquiry should identify the previous research underlying capacity to develop, produce, and distribute vaccines, together with production and distribution efforts (nationally and globally), and draw lessons both for future outbreaks and for vaccine production under noncrisis conditions.

Public health measures failed to prevent widespread transmission of SARS-CoV-2 in the United States. At its peaks, this situation placed enormous stresses on US hospitals, other health care delivery sites, frontline personnel, and provision of materials. The commission should examine how well the challenge of caring for so many patients seriously affected by COVID-19 was met, how the pandemic affected the fiscal status of hospitals, and how the nation's health care facilities can be better prepared for future pandemics. It should also address what information should be offered to patients and families in times and places where standard-of-care is compromised because of overload.

The therapeutic arsenal that might have reduced the severity of COVID-19 and its mortality rates remains small, despite extensive efforts to identify existing US Food and Drug Administration (FDA)–approved drugs, to find new ones, or to develop immunological therapies that are beneficial and safe. The commission will need to review these efforts and examine whether the FDA's approval processes were properly free of political influence.

One unexpected aspect of COVID-19 has been the complexity of its pathogenic process. The commission should evaluate the efforts made by the biomedical research community to evaluate the mechanisms of pathogenesis and to identify both genetic and environmental factors that contribute to the severity and longevity of the illness.

The role and effects of the US and state governments, news programs and websites, scientists and doctors, and social media in spreading information, misinformation, and unsupported claims regarding the pandemic should be examined and illuminated. The commission should produce a classified annex on the role of any foreign nations' misinformation campaigns targeted at government leaders, news programs, or the public.

HEALTH EQUITY ISSUES

The outcome of infection is now known to be adversely affected by advanced age, obesity, and immune systems already compromised by cancer and other afflictions, among other patient characteristics. Populations with a high prevalence of these conditions are at special risk. For example, nearly one-third of COVID-19 deaths in the United States through June 2021 were linked to nursing homes (*14*). The commission should examine how these institutions could better have protected their residents and staff. Similar questions should be asked about front-line workers in hospitals, essential workers in other professions, and prison staff and inmates.

An especially high burden of disease has been recorded among some ethnic minorities. Black, Hispanic, and Indigenous Americans have been twice as likely to die from COVID-19 as white or Asian Americans (*15*). The commission should probe the nature of and reasons for these disparities, investigate the extent to which they result from broader health inequity issues, examine whether the United States collects the type of public health and social demographic data needed to adequately address these issues, and make recommendations aimed at reducing these disparities.

CONCLUSION

The task of a nonpartisan COVID-19 commission will be to produce a clear-eyed assessment of why and how the United States fared so poorly in this pandemic, as well as how particular successes were achieved. Where possible, it will be valuable to make this assessment in a comparative context, both with respect to previous pandemics and with respect to the experiences of other advanced-economy nations (*2*, *5*, *6*). The commission should identify how the relevant US institutions can be improved (potentially by both legislative and executive action) and better work together to ensure superior outcomes when future pandemics occur, as they surely will. ■

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