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US COVID-19 LESSONS

Legal infrastructure for pandemic response: lessons not learnt in the US

Michelle Mello and colleagues argue that state legal reforms have generally exacerbated rather than improved weaknesses in US emergency powers revealed by covid-19, jeopardizing future responses

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Covid-19 related mortality in the US was higher than in every western European country.[1] Compared with its closest neighbour, Canada, also a federated country with a decentralised health system, the US fared far worse.[2] With over 1.1 million dead at the end of 2023,[3] leaders and academics have begun a painful postmortem. What went wrong, and what can be done to make authorities in the US better equipped for the next pandemic?

In this article, part of a BMJ series examining US covid-19 lessons (http://bmj.com/collections/us-covid-series), we focus on the role of legal infrastructure, including both the law itself and the capacity to wield it effectively.[4,5] A web of federal, state, and local laws determines what officials can do to respond to emergencies. These laws are helpful only to the extent that officials are willing and able to use them effectively. From almost the beginning of the pandemic, criticism was levelled at the White House and some state governors for failing to implement or maintain essential interventions to combat covid-19. Even where legal powers were wielded, trouble arose.

Governmental powers proved too fragmented and limited in some respects, making it difficult to erect a nationwide net of community mitigation measures such as stay-at-home orders; school and business closures; mask, vaccination, and testing requirements; and restrictions on gatherings. Many Americans, however, saw the powers as too expansive in other respects, objecting to protracted health orders that impinged on religious freedom and other personal liberties.[6] Both problems need fixing, but this lesson is only half learnt. Political forces have pushed reform efforts strongly in one direction—weakening public health legal powers—with potentially dangerous consequences for present and future health crises and preparedness.[6,7]

Federal versus state emergency powers

For public health, state law matters a great deal in the US.[8] Although the country's constitution grants public health powers to both the federal government and the states (which can delegate responsibilities to local jurisdictions), the national government can regulate only where it can tie its action to one of the federal powers in the US constitution. For public health, the most important of these are the power to regulate interstate commerce (for example, distribution of controlled substances) and the power to spend federal money. States, on the other hand, have broad powers to adopt laws to promote health and safety, as long as they do not reach into other states.

This federalist design is a considerable impediment to implementing nationwide community mitigation measures for pandemics.[9] For example, although there is a constitutional, and in some cases statutory, basis for the US federal government to require disease control measures (such as vaccines) for the people and businesses it employs, contracts with, or funds, only state and local officials can require residents of a particular locality to stay at home or get vaccinated.

During health emergencies, special federal and state laws allow specified units of government to limit individual rights in ways that the constitution would not normally allow, if this is necessary for an effective emergency response. These laws describe a suite of emergency powers that are triggered when an executive official (eg, the president or a state governor) declares a state of emergency, including both coercive powers and facilitative measures such as the authority to withdraw funds and stockpiled supplies from strategic reserves, speed new vaccines to market, and waive regulations that could impede emergency response.

Executives, such as the president, are given expanded powers because it is recognised that legislative bodies cannot be relied on to act quickly in an emergency. The primary legal checks on executives' exercising of power involve limiting the duration or renewal of a state of emergency, allowing a legislative body to end it, and providing ways for individuals who have been ordered into isolation or quarantine to obtain judicial relief.

Failures of legal infrastructure during the pandemic

Because laws are interpreted and legal interventions deployed by policy makers juggling the pressures of particular political and social contexts, law cannot guarantee an effective response.[5] However, legal design can improve or decrease the chances of effective emergency management. The legal infrastructure contributed to three problems with the US covid-19 response.

First, nothing in the constitution or any emergency powers statute requires officials to act in response to health threats, or helps them choose the optimal interventions. Some officials delayed action or made ill considered policy choices. For example, some states did not close schools or issue stay-at-home orders for several weeks, a decision that was associated with substantial excess mortality.[10] The federal response was also slow and riddled with missteps,[11 12] leaving states to fill the gap. This reliance on states for action had predictably varied results, in many respects along lines that reinforced pre-existing socioeconomic and health inequalities and contributed to the pandemic's disproportionate burdens on disadvantaged communities.[9 13] For example, states with Republican governors were less likely than Democrat led states to institute community mitigation orders,[13] and Republican led states are also less likely to have strong laws in areas such as injury prevention, tobacco control, and health insurance coverage for low income residents.[14]

Relatedly, there was insufficient legal protection to ensure protective health interventions such as mask or vaccine requirements were not ended too soon. For example, under growing public pressure, the Florida governor began lifting stay-at-home and business closure orders in early May 2020, finding it politically expedient despite the disease continuing to circulate in the community and growing death tolls. The delayed introduction and early lifting of orders that the legal infrastructure permitted were associated with higher growth in covid-19 cases, especially in areas with higher representation of minority populations.[15]

The broader political context was important, as it is in all epidemics, in determining the extent to which covid-19 related interventions were introduced.[16] Anti-vaccine and anti-government sentiment, fuelled by misinformation in mass and social media, stoked distrust in community mitigation measures and health officials. Political alliances between "health freedom" groups and some conservative politicians helped translate this sentiment into policy decisions and platforms for politicians.[17] This was the "dark side of federalism" emerging[9]: the US governmental structure gives state officials latitude to do what they think is necessary to respond to emergencies, which can empower them to step in as a backstop when national responses are inadequate[9]; however, it also includes the latitude to do too little.

Second, when the federal government did attempt to mount a robust response to covid-19, it found itself constrained by the courts. The Supreme Court sharply limited federal agencies' ability to institute community mitigation measures, saying Congress needed to state more clearly that it intends to give these agencies such authority.[18] Congress hasn't, and the Supreme Court's narrow interpretations of agency powers impeded an effective, national response to covid-19 and jeopardized responses to future pandemics or crises.

Third, state emergency powers laws proved inadequate to meet the challenges of a multiple year pandemic.[6] The laws were designed for short term, localized emergencies such as a bioterrorist incident.[19] Most do not clearly provide authority to impose orders that limit the activities of large groups of people for extended periods.[20] Additionally, the laws' accountability checks are modest. They typically allow governors to renew emergency declarations repeatedly, with few requirements to justify such decisions. State legislators can vote to terminate emergencies, but this switches off not just burdensome health orders but other helpful measures such as suspending healthcare regulations that make it hard to quickly expand hospital capacity.[6]

In the wake of covid-19, new problems confront officials seeking to respond to epidemics. Federal agencies can't comfortably predict how courts will view their health interventions. At the state level, governors and health officials face challenges from within, including factionalism in public sentiment and legal reform efforts. Whereas previously, emergency powers laws gave them broad legal authority to combat epidemics should they choose to do so, in a post-covid-19 world that discretion has been narrowed in many states by the legislature.

Legal reform of emergency powers laws

Despite the evident need, it is currently unclear whether any reform of federal emergency powers will take place. Windows of opportunity are open in 2024 and beyond because Congress must reauthorise an important federal statute, the Pandemic All-Hazards Preparedness Act. But it seems unlikely that the current, deeply polarized Congress will agree on expanding governmental powers to impose disease control measures.

State legislatures have energetically taken up the project of legal reform. Unfortunately, most of their efforts have tilted in the direction of restricting officials' emergency powers. A key lesson of covid-19 has been overlooked: state emergency powers need to be expanded in some areas while also being revised to provide more meaningful checks on their use.[6 20] We take a closer look at state legislation proposed or adopted during the pandemic to illustrate this problem, and chart both lessons and a way forward.

A previous analysis of state legislation from January 2021 through May 2022 found that 1500 bills were introduced that addressed public health authority, 191 of which were adopted in 43 states and the District of Columbia.[7] Just 17 of the adopted laws represented expansions of authority—as modest as establishing a task force or authorizing dissemination of information. The remainder generally imposed constraints on powers, the most common of which was to restrict authority to implement specific community mitigation measures such as vaccination requirements and business closures (95 laws in 29 states). Many of these restrictive laws could have considerable negative effects on future pandemic preparedness.

We identified 65 laws adopted in 24 states from 1 January 2021 to 23 April 2023 (see web appendix for details) with restrictions that extend beyond the pandemic period. The restrictions imposed in these laws fall into two categories (table 1, web appendix table A1), the first of which is substantive restrictions on state and local officials' powers to institute community mitigation measures. Four states adopted new prohibitions on requiring vaccines or proof of vaccination, four expanded exemptions to vaccination requirements, seven limited officials' ability to close businesses, and four limited school closures.

Table 1 | Legal reforms imposing substantive restrictions on powers to institute community mitigation measures in future health emergencies, 1 January 2021 to 23 April 2023

Restriction	No of states	States
Prohibitions or limitations on vaccination requirements:		
Requiring religious exemptions	2	Alabama, New Hampshire
Requiring personal belief exemptions	2	Arizona, Kentucky
Banning vaccination certification requirements or new vaccination mandates	4	Alabama, Montana, North Dakota, Utah
Other	2	New Hampshire, South Carolina
Prohibitions or limitations on business or school closures:		
Businesses generally	7	Arizona, Florida, Idaho, Kansas, Kentucky, Montana, Ohio
Firearm related businesses specifically	4	Idaho, Kansas, Montana, West Virginia
Schools	4	Florida, Kansas, Kentucky, Ohio
Prohibitions or limitations on restricting religious gatherings:		
Adopting "most favored nation" rule	8	Arizona, Indiana, Kentucky, Montana, North Dakota, New Hampshire, Utah, West Virginia
Adopting strict scrutiny standard	7	Arizona, Indiana, Kentucky, Montana, North Dakota, New Hampshire, Utah
Other	5	Idaho, Kansas, Kentucky, Montana, Tennessee
Prohibitions or limitations on mask requirements	6	Arkansas, Iowa, Kansas, North Dakota, Oklahoma, Utah
Other substantive restrictions on what emergency health orders may do	12	Florida, Idaho, Kansas, Kentucky, Montana, North Dakota, New Hampshire, Ohio, Tennessee, Texas, Utah, West Virginia
Reductions in penalties for violating orders	5	Hawaii, Kentucky, Montana, Ohio, Utah
Prohibitions on enforcement of federal mandates	3	Montana, South Carolina, Utah
Pre-emption provisions	8	Florida, Indiana, Iowa, Kansas, Ohio, Tennessee, Utah, West Virginia

Table excludes specific provisions within the listed laws that apply only to covid-19 or the covid-19 pandemic period. "Most favored nation" rule refers to the principle that religious organizations must be treated no less favorably than secular organizations, such as "essential" businesses. "Strict scrutiny standard" refers to constitutional principle that a government action that "substantially burdens" religious exercise is unconstitutional unless "narrowly tailored" to advancing a "compelling state interest." Pre-emption row includes only express pre-emption provisions.

Eleven states restricted authority to limit activities of religious organizations. Most commonly, they enshrined a rule recently articulated by the Supreme Court that religious organizations must be treated no less favorably than secular organizations (eg, "essential" businesses). The restrictions also often provided that substantial burdens on religious practice are permissible only if they constitute the least restrictive means of advancing a compelling state interest. That development is critically important because it enshrines a standard of judicial review that, in practice, very few policies survive.

Five states banned and one imposed procedural hurdles to mask mandates. Six limited governors' power to suspend statutes—though generally with exceptions allowing waiver of regulatory statutes to facilitate emergency response. Three adopted language that has the effect of barring stay-at-home orders for a class of people (eg, a county's residents). Eight adopted pre-emption provisions, which establish whether state or local law governs when they conflict; all appear aimed at precluding local governments from adopting stricter community mitigation measures than their state. Collectively, these laws impose both broad and deep restrictions on state and local officials' ability to use community mitigation measures to fight disease outbreaks.

The second category of reforms comprises laws tightening time limits on use of community mitigation powers or altering the processes for extending, terminating, or challenging them (table 2, web appendix table A2). Again, these reforms will affect future preparedness and response. Many states imposed or reduced the number of days that an executive official's declaration of emergency (eight states) or orders issued pursuant to emergency declarations (seven) can last before the state or local legislative body must vote to extend them. In some cases, time limits were as short as seven days.

Table 2 | Legal reforms affecting duration and processes for renewing, terminating, and challenging exercises of community mitigation powers, 1 Jan 2021 to 23 April 2023

Restriction	No of states	States
Processes for emergency orders:		
Time limits and legislative involvement in renewal	7	Arkansas, Florida, Kentucky, Ohio, Utah, Virginia, Wyoming
Legislative termination	7	Florida, Kansas, Kentucky, Montana, New Hampshire, Ohio, Utah
Establishing expedited process for legal challenges	3	Idaho, Indiana, Kansas
Processes for emergency declarations:		
Time limits and legislative involvement in renewal	8	Arkansas, Arizona, Idaho, Kentucky, Montana, Ohio, Texas, West Virginia
Legislative termination	5	Arkansas, Kentucky, North Dakota, New York, Ohio
Requirements to satisfy substantive standards:		
Officials required to explain actions	6	Arkansas, Arizona, Florida, Idaho, Louisiana, West Virginia
In legal challenges, courts will apply heightened scrutiny	10	Arizona, Florida, Idaho, Indiana, Kansas, Kentucky, Montana, North Dakota, New Hampshire, Utah
Reduced discretion in appointing health officers	2	Montana, Tennessee

Table excludes specific provisions within the listed laws that apply only to covid-19 or the covid-19 pandemic period.

Several states added provisions stating that the legislative body could terminate emergency declarations or orders at any time. Six required that officials articulate the reasons for emergency declarations or orders, and 10 required that courts apply a heightened standard of scrutiny when reviewing orders. For example, Idaho requires that orders be narrowly tailored and not place "unnecessary restrictions" on people's ability to work.

Covid lessons and looking forward

Covid-19 surfaced flaws in the design of emergency powers laws in the US that interacted perniciously with a polarized political environment, leading to poor and inequitable health outcomes for Americans. Legal reforms adopted since the pandemic do not fully address these problems and, as our analysis shows, may exacerbate them. Unevenness in state responses to future epidemics seems inevitable. Change is needed in several areas to assure effective pandemic response in the future.

Legislatures that have shifted power over emergency response from executive officials to themselves need to prepare for the task they have shouldered. To succeed in future emergencies, they will need to become more nimble in their decision making and more stalwart in the face of public pressure to lift community mitigation orders that are unpopular with vocal segments of the public but necessary to control the threat. Many states' legal reforms shift control to legislatures quite quickly, typically within a few weeks of an emergency being declared. In Florida, for instance, local health officials lose control after just seven days. In such circumstances, a great deal rides on legislative bodies' ability to function effectively under extreme conditions. To do so, some state legislatures may require new processes, and all must cultivate commitments from legislators to perform the kind of tireless, around-the-clock service that health officials gave during the pandemic.

Future legal reforms need to restore the range of legal tools available for officials to meaningfully combat emergencies. Blanket bans on community mitigation measures, and laws making it nearly impossible to restrict gatherings in religious buildings, sweep away critical tools for pandemic response. Emergency powers laws were designed to give officials broad discretion to choose the means to combat threats because of the impossibility of knowing what may be needed. Dissatisfaction with how this discretion was wielded during the covid emergency should inspire conversations about procedural checks—not elimination of crucial public health legal tools. Many state reforms have added helpful procedural checks, such as allowing legislative bodies to terminate specific emergency orders rather than the entire emergency declaration.[6] Others have overstepped by imposing substantive constraints, leaving those states in a weaker position to combat virulent pathogens.

The legal reforms also contort federalism in ways that may undermine emergency response and exacerbate inequities. In three states (Montana, South Carolina, and Utah) federal orders will not be enforced if state officials think they are unconstitutional (regardless of whether courts agree). In several others, pre-emption provisions undermine communities' ability to defend themselves in the face of inaction at the state level—for example, by deciding that their schoolchildren must wear masks. Future legal reforms should reflect a coherent vision of federalism. In contrast, these reforms merely advance a political ideology privileging "health freedom" over health protection.

In other respects, our review of legal reforms is reassuring. Most of the adopted laws we analysed apply only to covid-19; just 65 extend beyond this pandemic. Thus, many state legislatures showed restraint in limiting new strictures to a context with which they were familiar—covid-19—and preserved fuller discretion over actions needed for future pandemics. Further, among laws that do have long term effect, many shift power in ways that will make emergency management more cumbersome but not impossible. Some reforms may help build public support for burdensome health orders (eg, requirements that executive officials consult legislative bodies or explain the reasons for their decisions). Cultivating support and trust is crucial to effective emergency response,[6 21] especially because punitive enforcement of health orders isn't viable. The enterprise of building trust—and the project of modernizing emergency powers laws to incorporate lessons about balancing flexibility and accountability—is an enduring one.

Key messages

- Covid-19 revealed deficiencies in the US legal infrastructure for responding to health emergencies

- The covid-19 response relied heavily on action by the country's 50 states and consequently varied
- Legal reform initiatives have mostly taken powers away from state and local officials, jeopardising their ability to effectively respond to future emergencies
- Future reforms should focus on accountability rather than reducing powers

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1 Johns Hopkins Coronavirus Resource Center. Morality analyses. 16 Mar 2023. https://coronavirus.jhu.edu/data/mortality
2 Bubela T, Flood CM, McGrail K, Straus SE, Mishra S. How Canada's decentralised covid-19 response affected public health data and decision making. *BMJ* 2023;382:e075665. doi: 10.1136/bmj-2023-075665 pmid: 37487604
3 Centers for Disease Control and Prevention. Covid data tracker. 19 Dec 2023.
4 Commonwealth Fund Commission on a National Public Health System. Meeting America's public health challenge. 2022. https://www.commonwealthfund.org/publications/fund-reports/2022/jun/meeting-americas-public-health-challenge
5 Anderson E, Burris S. Imagining a better public health (law) response to COVID-19. *Univ Richmond Law Rev* 2022;56:-1005.
6 Mello MM, Gostin LO. Public health law modernization 2.0: rebalancing public health powers and individual liberty in the age of COVID-19. *Health Aff (Millwood)* 2023;42:-27. doi: 10.1377/hlthaff.2022.01292 pmid: 36877897
7 Platt E, Moran-McCabe K, Cook A, Burris S. Trends in US state public health emergency laws, 2021–2022. *Am J Public Health* 2023;113:-96. doi: 10.2105/AJPH.2022.307214 pmid: 36791354
8 Mello MM, Parmet WEUS. US public health law—foundations and emerging shifts. *N Engl J Med* 2022;386:-8. doi: 10.1056/NEJMp2200794 pmid: 35213103
9 Haffajee RL, Mello MM. Thinking globally, acting locally—the US response to covid-19. *N Engl J Med* 2020;382:e75. doi: 10.1056/NEJMp2006740 pmid: 32240580
10 Olney AM, Smith J, Sen S, Thomas F, Unwin HJT. Estimating the effect of social distancing interventions on covid-19 in the United States. *Am J Epidemiol* 2021;190:-9. doi: 10.1093/aje/kwaa293 pmid: 33406533
11 Slavitt A. *Preventable: the inside story of how leadership failures, politics, and selfishness doomed the US coronavirus response.* St Martin's Press, 2021.
12 Council on Foreign Relations. *Improving pandemic preparedness: lessons from COVID-19.* Council on Foreign Relationship, 2020.
13 Adolph C, Amano K, Bang-Jensen B, Fullman N, Wilkerson J. Pandemic politics: timing state-level social distancing responses to COVID-19. *J Health Polit Policy Law* 2021;46:-33. doi: 10.1215/03616878-8802162 pmid: 32955556
14 How red state politics are shaving years off American lives. *Washington Post* 2023 Oct 3. https://www.washingtonpost.com/health/interactive/2023/republican-politics-south-midwest-life-expectancy/
15 Singh S, Shaikh M, Hauck K, Miraldo M. Impacts of introducing and lifting nonpharmaceutical interventions on COVID-19 daily growth rate and compliance in the United States. *Proc Natl Acad Sci U S A* 2021;118:e2021359118. doi: 10.1073/pnas.2021359118 pmid: 33658331
16 Navarro JA, Markel H. Politics, pushback, and pandemics: challenges to public health orders in the 1918 influenza epidemic. *Am J Public Health* 2021;111:-22. doi: 10.2105/AJPH.2020.305958 pmid: 33476227
17 Carpiano RM, Callaghan T, DiResta R, etal. Confronting the evolution and expansion of anti-vaccine activism in the USA in the COVID-19 era. *Lancet* 2023;401:-70. doi: 10.1016/S0140-6736(23)00136-8 pmid: 36871571
18 Mello MM, Parmet WE. Public health law after Covid-19. *N Engl J Med* 2021;385:-5. doi: 10.1056/NEJMp2112193 pmid: 34469644
19 Gostin LO, Sapsin JW, Teret SP, etal. The Model State Emergency Health Powers Act: planning for and response to bioterrorism and naturally occurring infectious diseases. *JAMA* 2002;288:-8. doi: 10.1001/jama.288.5.622 pmid: 12150674
20 Wiley LF. Democratizing the law of social distancing. *Yale J Health Policy Law Ethics* 2020;19:-121.
21 Han Q, Zheng B, Cristea M, etalPsyCorona Collaboration. Trust in government regarding COVID-19 and its associations with preventive health behaviour and prosocial behaviour during the pandemic: a cross-sectional and longitudinal study. *Psychol Med* 2023;53:-59. doi: 10.1017/S0033291721001306 pmid: 33769242