

BRIEF19

A daily review of covid-19 research and policy.

POLICY BRIEFING

Coronavirus and mass decarceration.

On Monday, the National Academies of Sciences, Engineering, and Medicine (NASEM) [released](#) new guidelines in the *Journal of the American Medical Association* (JAMA) on the process of “decarceration,” or decreasing the prison population, during a pandemic. NASEM argued for swift action in this oft-overlooked segment of society, citing a variety of data; by August, 90 of the 100 largest cluster (outbreaks) events were related to prisons and jails. Because such correctional facilities are not routinely included in pandemic planning, and given the susceptibility patterns for incarcerated patients, NASEM expressed concern about the future of these populations.

While the report does acknowledge that jail populations decreased by 22 percent since the start of the pandemic, state prisons had only a four percent population decrease, while federal prisons decreased by 10 percent. The largest legal barrier to expanding this number is limitations on compassionate release. Because of this, the Academies put forth a number of recommendations for clinicians, the healthcare system and insurance companies in hopes of decreasing the number of people exposed to high-risk situations.

First and foremost, clinicians have the ability to advocate for the modernization of “compassionate release allowances” and to make direct appeals for individuals at particular risk of contracting the virus or suffering significant related morbidity.

Furthermore, the Academies highlighted the role of healthcare systems focused on post-incarceration follow up. According to the data, recently released individuals have an increased risk of hospitalization compared to the general public, meaning that there is a need to connect at-risk individuals with health resources prior to release. Important considerations include access to prescriptions and the ability to establish primary care.

Generally speaking, during incarceration, those who have Medicare and Medicaid are ineligible for their benefits. As these benefits are terminated, it adds a logistical hurdle upon release simply to reactivate care. According to the Social Security Administration, however, states have the ability to *suspend* these benefits, rather than fully *terminating* them, which could limit the disruption in coverage. Further, the Centers for Medicare and Medicaid Services (CMS) allow states to initiate programs aimed at covering the cost of coronavirus detection, continuing prescriptions upon release from incarceration, and facilitating access to health resources.

The report ends with a reminder that the incarcerated population will continue to be a potential source of cluster infections, and that a sustained effort must be made by community partners to protect this portion of society. *The National Academies of Sciences, Engineering, and Math. 18 November 2020.*
—Joshua Lesko, MD

Pfizer vaccine implementation limitations. Was last week’s major announcement actually ‘news we can use’? Not if it can’t reach you.

Pfizer and Biontech made headlines last week with their [announcement](#) of a vaccine candidate that they say has demonstrated 90 percent efficacy in preventing covid-19 symptoms in participants who had no evidence of previous infection--though we do not yet know whether this means infections and spread of disease was prevented, as a *Brief19 analysis* showed.

Nevertheless, while the possibility of an effective vaccine remains exciting, it is important to look at the [limitations](#) for this particular vaccine, in particular those relating to its storage requirements. The first is the temperature; this vaccine must be kept at no greater than negative 70

degrees Celsius (-94 degrees Fahrenheit), and specialized freezers are required to maintain this level of cold. The necessary equipment is uncommon or lacking in many locations outside of urban and specialized medical centers both in the US and abroad. When stored at this temperature, the vaccine can last up to six months, but the genetic material (mRNA) that forms the core of the vaccine starts deteriorating (denaturing) after just five days of normal refrigeration. Proper storage also requires a specific type of thermal-resistant glass to avoid shattering, which could lead to shortages during the initial ramp up period.

Aside from the requirements of on-sight storage, transportation logistics also remain a major hurdle. Pfizer has created special storage containers that use dry ice to maintain the proper temperature, buying anywhere from ten to twenty five days of storage, but frequency of opening and replenishment will alter the effective shelf life. Additionally, boxes of the vaccine carry between one thousand and five thousand doses, a number that likely exceeds a physician's or pharmacy's ability to distribute all of the lots before the five day viability expires. This is why some states are considering centralized vaccination centers. Unfortunately, some states lack the resources to fund such an endeavor; this, combined with many of the most vulnerable patients unable to travel long distances to reach such centers, leaves some of the anticipated problems around vaccine rollout unsolved. *Various*. [16 November 2020](#). —Joshua Lesko, MD

Can you test your way out of a second lockdown? Yes.

When SARS-CoV-2 first made international headlines, I did not think we were headed for a year of disrupted life. I was wrong about that because I believed we could test our way out of systemic lockdowns and long-term alterations in life-as-we-know-it. With aggressive enough testing strategies (a test for [every person](#) in the United States) my hope was that we could isolate the cases we detected, have local lockdowns, and get back to life. We'd do [aggressive](#) surveillance testing of asymptomatic people (random tests, especially among workers who interact with the public) and do mini-shutdowns as needed. We never got there. Why? Because we let the virus spiral out of control before we had enough tests to achieve anything close to this vision.

Not so in China. A [new report](#) out of Qingdao, China in the *New England Journal of Medicine* describes a massive testing strategy that was unrolled in just a matter of days after three cases were detected there following a two-month period without any cases. Nearly *11 million people* were tested at 4,090 testing sites in an approximately five-day period. This led to the identification of 12 total cases. Pooled testing was done for efficiency. (For more on that, [read the CDC's guidance](#) on the topic). Residents were not allowed to use public transit until they were tested and had to wear masks when outside. With so few cases, it is clear that they caught the outbreak early. In fact, contact tracing appears to have been *completely* successful, an unprecedented achievement at this scale during the covid-19 pandemic.

This approach was only possible because the region started with zero cases and had the ability to rapidly scale up testing. At the time of publication, the outbreak had been completely controlled, and—as per the authors—this was accomplished “without a lockdown.” Our expert assessment: *hot damn*. [19 November 2020](#). —Jeremy Samuel Faust, MD MS

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Brief19 is a daily executive summary of covid-19-related medical research, news, and public policy. It was founded and created by frontline emergency medicine physicians with expertise in medical research critique, health policy, and public policy.