

**Facing page: Michigan Medicine Human Data and Biospecimen Release Committee Rubric.**

An asterisk indicates a National Institutes of Health definition. The Michigan Medicine Human Data and Biospecimen Release Committee includes faculty and staff with a broad range of patient-related, clinical, research, legal, ethical, conflict-of-interest, technical, and industry-partnership expertise. Biweekly meetings involving use of a standardized checklist have enabled review of 70 projects over the past 12 months (approximately 3 projects per meeting). Types of data and biospecimens and actions that are exempted from the review process include summary data statistics without any individual-level data elements; “send-out” data or biospecimens intended for processing only when there are no third-party claims to the samples or derivatives; data or biospecimens generated during a clinical trial governed by our explicit study-specific research consents; and sharing of data or biospecimens with state or federal agencies or other academic medical centers. HIPAA denotes the Health Insurance Portability and Accountability Act, IRB institutional review board, PI principal investigator, and U-M University of Michigan.

ary research, how to manage known limitations regarding written informed consent as an indicator of effective communication, and how to handle selection bias owing to disparities created by the recruitment and consent process. More research, dialogue, and participant engagement are needed to achieve the correct balance between risk to individual participants and benefit to medical centers and society.

Disclosure forms provided by the authors are available at NEJM.org.

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## Flattening the Curve for Incarcerated Populations — Covid-19 in Jails and Prisons

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Because of policies of mass incarceration over the past four decades, the United States has incarcerated more people than any other country on Earth. As of the end of 2016, there were nearly 2.2 million people in U.S. prisons and jails.<sup>1</sup> People entering jails are among the most vulnerable in our society, and during incarceration, that vulnerability is exacerbated by restricted movement, confined spaces, and limited medical care. People caught up in the U.S. justice system have already been affected by the severe acute respiratory syndrome coro-

navirus 2 (SARS-CoV-2), and improved preparation is essential to minimizing the impact of this pandemic on incarcerated persons, correctional staff, and surrounding communities.

Populations involved with the criminal justice system have an increased prevalence of infectious diseases such as HIV and hepatitis C virus (HCV) infections and tuberculosis. Disparities in social determinants of health affecting groups that are disproportionately likely to be incarcerated — racial minorities, persons who are unstably housed, persons with sub-

stance use disorders or mental illness — lead to greater concentrations of these illnesses in incarcerated populations. Yet implementation of interventions to address these conditions is often challenging in correctional settings owing to resource limitations and policy constraints. Therefore, comprehensive responses that straddle correctional facilities and the community often need to be devised.

For example, HCV, which is the most prevalent infectious disease in incarcerated populations, is most commonly spread through

injection drug use. Transmission can be reduced using measures known to reduce high-risk behaviors, such as opioid agonist therapy and syringe exchange. Although much of the country has yet to implement these strategies in correctional settings, managing transitions in care to and from the community and providing such services to people after incarceration has a large impact. Similarly, we have learned that controlling infections such as HIV and HCV in correctional settings can have positive effects both in these settings and on surrounding communities, as a form of treatment as prevention.

Highly transmissible novel respiratory pathogens pose a new challenge for incarcerated populations because of the ease with which they spread in congregate settings. Perhaps most relevant to the Covid-19 pandemic, the 2009 H1N1 influenza pandemic exposed the failure to include jails in planning efforts. By the spring of 2010, vaccine was plentiful, yet most small jails never received vaccine, despite the presence of high-risk persons, such as pregnant women, and the increased risk of transmission among unvaccinated persons who spent time detained in close proximity to one another.<sup>2</sup>

“Social distancing” is a strategy for reducing transmission and “flattening the curve” of cases entering the health care system. Although correctional facilities face risks similar to those of community health care systems, social distancing is extremely challenging in these settings. Furthermore, half of all incarcerated persons have at least one chronic disease,<sup>3</sup> and according to the U.S. Department of Justice, 81,600

are over the age of 60, factors that increase the risk of poor outcomes of infection. With limited ability to protect themselves and others by self-isolating, hundreds of thousands of susceptible people are at heightened risk for severe illness.

To date, the Federal Bureau of Prisons and certain states and municipalities have opted to suspend visitation by community members, limit visits by legal representatives, and reduce facility transfers for incarcerated persons. To reduce social isolation and maintain a degree of connectedness for incarcerated people, some correctional systems are providing teleconferencing services for personal and legal visits. Irrespective of these interventions, infected persons — including staff members — will continue to enter correctional settings. By March 14, some U.S. correctional staff members had tested positive for SARS-CoV-2, and the first Covid-19 diagnosis in a detained person was announced on March 16. A recent SARS-CoV-2 outbreak among cruise-ship passengers and crew in Yokohama, Japan, provides a warning about what could soon happen in correctional settings.<sup>4</sup>

To operationalize a response for incarcerated populations, three levels of preparedness need to be addressed: the virus should be delayed as much as possible from entering correctional settings; if it is already in circulation, it should be controlled; and jails and prisons should prepare to deal with a high burden of disease. The better the mitigation job done by legal, public health, and correctional health partnerships, the lighter the burden correctional facilities and their surrounding communities will bear. We have

learned from other epidemics, such as the 1918 influenza pandemic, that nonpharmaceutical interventions are effective, but they have the greatest impact when implemented early.<sup>5</sup>

Therefore, we believe that we need to prepare now, by “decarcerating,” or releasing, as many people as possible, focusing on those who are least likely to commit additional crimes, but also on the elderly and infirm; urging police and courts to immediately suspend arresting and sentencing people, as much as possible, for low-level crimes and misdemeanors; isolating and separating incarcerated persons who are infected and those who are under investigation for possible infection from the general prison population; hospitalizing those who are seriously ill; and identifying correctional staff and health care providers who became infected early and have recovered, who can help with custodial and care efforts once they have been cleared, since they may have some degree of immunity and severe staff shortages are likely.

All these interventions will help to flatten the curve of Covid-19 cases among incarcerated populations and limit the impact of transmission both inside correctional facilities and in the community after incarcerated people are released. Such measures will also reduce the burden on the correctional system in terms of stabilizing and transferring critically ill patients, as well as the burden on the community health care system to which such patients will be sent. Each person needlessly infected in a correctional setting who develops severe illness will be one too many.

Beyond federal, state, and local

action, we need to consider the impact of correctional facilities in the global context. The boundaries between communities and correctional institutions are porous, as are the borders between countries in the age of mass human travel. Despite security at nearly every nation's border, Covid-19 has appeared in practically all countries. We can't expect to find sturdier barriers between correctional institutions and their surrounding communities in any affected country. Thus far, we have witnessed a spectrum of epidemic responses from various countries when it comes to correctional institutions. Iran, for example, orchestrated the controlled release of more than 70,000 prisoners, which may help "bend the curve" of the Iranian epidemic. Conversely, failure to calm incarcerated populations in Italy led to widespread rioting in Italian prisons. Reports have also emerged of incarceration of exposed persons for violating quarantine, a practice that will exacerbate the very problem we are trying to mitigate. To respond to this global crisis, we need to consider prisons and

jails as reservoirs that could lead to epidemic resurgence if the epidemic is not adequately addressed in these facilities everywhere.

As with general epidemic preparedness, the Covid-19 pandemic will teach us valuable lessons for preparedness in correctional settings. It will also invariably highlight the injustice and inequality in the United States that are magnified in the criminal justice system. As U.S. criminal justice reform continues to unfold, emerging communicable diseases and our ability to combat them need to be taken into account. To promote public health, we believe that efforts to decarcerate, which are already under way in some jurisdictions, need to be scaled up; and associated reductions of incarcerated populations should be sustained. The interrelation of correctional-system health and public health is a reality not only in the United States but around the world.

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## Blood Ties

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The expansive window of the ICU room looks out over a gorgeous Sunday sunset. The room is pristine and organized. Monitors beep reassuringly. An incentive spirometer and a paper menu rest — comically, given the situation — on the bedside table. Everything in the room is familiar to me; I'm a doctor.

I've known him a long time,

but the disheveled man before me with the hunted look in his eyes seems unfamiliar. His handkerchief makes repeated trips from his mouth to his lap, and each time his look of horror at the increasing amount of bright red blood intensifies. He can barely breathe, let alone talk, and the metallic smell of blood mingles with the smell of raw fear.

The screen behind me suddenly starts to glow, and a face appears: the tele-ICU physician. Backup. Thank goodness. Maybe he'll have some ideas. I spring into calm-doctor mode. I've done this countless times, faced emergencies with a calm exterior even as I wracked my brain for differential diagnoses, last-ditch treatment plans, and comforting words for