

ated populations in research as a means of expanding access to the potential benefits of participation.²

For various reasons, we believe that researchers should carefully consider whether to include incarcerated people in multisite trials. Correctional facilities have failed to meet minimum clinical care and public health standards. Although some researchers may believe that expanding access to vaccine trials could extend the benefits of research participation to an underserved population, benefits are not guaranteed — investigational vaccines are more likely to fail than to succeed. Furthermore, risks associated with research participation may be heightened in settings with limited or no on-site clinical resources for participants who have Covid-19 symptoms, complications of Covid-19, or severe adverse events. There are insufficient data to understand the full spectrum of risks and benefits associated with current vaccine candidates, and fast-paced Covid-19 trials might raise unexpected safety concerns. Although the possibility of adverse effects represents a risk to all participants, the uncertain nature of this risk particularly calls into question whether investigators should make an exception to the long-standing practice of excluding vulnerable populations from this type of research. Efforts to conduct vaccine trials in correctional facilities, without proportionate efforts to implement recommended public health measures in these settings (e.g., releasing some incarcerated people and providing soap in facilities), would raise questions about exploitation and neglect. Such questions would also arise if incarcerated people as a population are asked to bear the risks and bur-

dens of trial participation without assurance that they would be prioritized for vaccination after the trial if the vaccine candidate is shown to be safe and effective.

Understanding the opinions of incarcerated people about participation in Covid-19 research is essential. A 2016 study showed that only a minority of incarcerated people surveyed thought that their inclusion in clinical research was exploitative, and nearly all believed that they should have greater access to research participation.³ Another study led by the same author, however, showed that 84% of incarcerated people who were participating in research chose to do so because they believed their other medical options were constrained and 24% enrolled out of desperation for treatment — findings that raise questions about whether research capitalizes on the neglect of incarcerated people.⁴ In the absence of definitive data, we can hypothesize that some incarcerated people may be willing to take on the risks and burdens associated with research enrollment because of the prospect of receiving an experimental vaccine that might be effective. On the other hand, others may see an offer of enrollment as taking advantage of their circumstances and prefer to avoid the risks and burdens associated with research and to wait until a fully developed vaccine is available. It is vitally important to engage with incarcerated people and ensure that their voices are heard and their rights respected.

There are additional concerns related to voluntary consent and data collection. Within correctional facilities, there may be real or perceived pressure from authorities to enroll in research. Although

some incarcerated people may be willing to take on substantial risk to receive an experimental vaccine, desperation and fear of Covid-19 may lead others to underestimate the level of risk involved in trial participation. In addition, daily routines within correctional facilities are highly regimented, and entry into and exit from facilities is restricted. A research team would need to ensure that equipment that is typically scarce or banned in facilities but is necessary for a trial (e.g., electronic tablets or computers) is available and that the trial's scientific objectives can be met. Finally, participants may fear reporting symptoms to designated authorities because of consequences such as placement in a crowded or unsanitary Covid-19 ward. Such concerns could reduce the scientific validity of studies and potentially harm participants.

Pursuing Covid-19 research in correctional facilities would therefore be an enormous challenge and would require many currently unmet ethical conditions to be met. Study sites would have to meet the clinical care and public health standards necessary for minimizing risk and ensure that participants at such sites aren't put at greater risk of harm than participants outside correctional facilities. Community-engagement efforts should be used to elicit information about the conditions under which incarcerated people might consider trial participation. Studies would need to be designed in such a way that incarcerated people would not be enrolled in disproportionate numbers as compared with their representation in the overall population, would undergo a robust informed-consent process, and would have access to a safe and effective vaccine

once one is developed. Finally, conducting Covid-19 vaccine research in correctional facilities would require that study sites have the infrastructure and basic supplies necessary to host a trial. Meeting some of these conditions would require long-term changes to correctional facilities that, as a practical matter, will probably not be accomplished during this pandemic.

Research aimed at developing a vaccine is just one component of a much larger public health effort to combat Covid-19. It's clear that the interests of incarcerated people would be better served by public health measures such as the provision of personal protective equipment, improved sanitation, and reductions in facility populations to permit increased physical distancing than by research participation.⁵ These improvements

should be implemented regardless of whether incarcerated people are ultimately recruited for vaccine trials. Still, we believe that issues related to the inclusion of incarcerated people in vaccine trials deserve more discussion and attention among activists, ethicists, medical researchers, and policy-makers. From a researcher's perspective, the broader goal of increasing access to research for all populations merits consideration of how to radically modify correctional-facility operations so that ethical conditions for research can be met.

The views expressed in this article are those of the authors and do not necessarily reflect the views or policies of the Department of Health and Human Services, the National Institutes of Health, the Vaccine Research Center (to which the authors have provided ethics consultation), or the Department of Bioethics.

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

From the Department of Bioethics, National Institutes of Health, Bethesda, MD.

This article was published on October 21, 2020, at NEJM.org.

1. Williams T, Seline L, Griesbach R. Coronavirus cases rise sharply in prisons even as they plateau nationwide. *New York Times*. June 16, 2020 (<https://www.nytimes.com/2020/06/16/us/coronavirus-inmates-prisons-jails.html>).
2. Institute of Medicine. *Ethical considerations for research involving prisoners*. Washington, DC: National Academies Press, 2007 (<https://www.nap.edu/catalog/11692/ethical-considerations-for-research-involving-prisoners>).
3. Christopher PP, Stein MD, Johnson JE, et al. Exploitation of prisoners in clinical research: perceptions of study participants. *IRB* 2016;38:7-12.
4. Christopher PP, Garcia-Sampson LG, Stein M, Johnson J, Rich J, Lidz C. Enrolling in clinical research while incarcerated: what influences participants' decisions? *Hastings Cent Rep* 2017;47:21-9.
5. Strassle C, Berkman B. Prisons and pandemics. *SSRN*. July 6, 2020 (<http://dx.doi.org/10.2139/ssrn.3644635>).

DOI: 10.1056/NEJMp2025955

Copyright © 2020 Massachusetts Medical Society.