



## Commentary

## Prioritizing incarcerated populations for COVID-19 vaccination and vaccine trials

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Correctional settings have become the epicenter of COVID-19 outbreaks across the globe. Decarceration of thousands of individuals and increased infection and prevention control measures have helped to mitigate SARS-CoV-2 in correctional facilities; however, case- and mortality rates remain several-fold higher than most surrounding communities [1]. Explosive transmission rates in correctional settings highlight the need for additional mitigation strategies including vaccination. Despite this, incarcerated individuals have largely been absent from the discourse on priority populations for vaccination and COVID-19 vaccine trials [2].

People in correctional facilities should be considered high priority for COVID-19 vaccination for several reasons. First, correctional settings are at high risk for SARS-CoV-2 outbreaks due to overcrowding, poor ventilation, and unsanitary conditions. Such conditions jeopardize the effectiveness of basic preventative measures. Mass screening of 16 US prisons and jails found a SARS-CoV-2 prevalence of up to 87% [3] – a prevalence that rivals the hardest hit long-term care facilities [4, 5]. Second, people in correctional settings are disproportionately affected by poor social determinants of health leading to a higher prevalence of chronic diseases such as hypertension and diabetes, resulting in increased risk for severe COVID-19-associated disease and mortality. Third, the borders between correctional settings and surrounding communities are porous; inter-institutional transfers, staff cross-deployment, and the constant daily movement in and out by both staff and visitors risk propagating the virus both within and outside correctional facilities.

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Given the propensity of SARS-CoV-2 to propagate in congregate settings, correctional facilities could be ideally positioned for COVID-19 vaccine trials. Low attack rates are often a challenge in vaccine trials; therefore, correctional settings could be leveraged to generate real-world data both efficiently and rapidly. Moreover, given the overrepresentation of racial and ethnic minorities in correctional settings, the inclusion of incarcerated populations may improve the generalizability of COVID-19 vaccine results. Despite this, conducting COVID-19 vaccine trials in correctional settings is ethically, legally and logistically complex, and warrants further reflection [6].

The reasons for failing to include incarcerated individuals in COVID-19 vaccine trials are likely multifactorial. First, due to a history of forced exploitation of incarcerated populations for health research, regulations were introduced to promote the “safety and security” of incarcerated individuals. However, a perhaps unintended consequence is that incarcerated individuals are classified as a vulnerable population, making it particularly difficult to conduct research in correctional facilities. Currently, incarcerated individuals in the United States are categorically excluded from vaccine trials [7]. Second, a unique set of system-level barriers (e.g. gaining access to the study site) and ethical challenges (e.g. ensuring confidentiality and autonomy) exist in correctional settings, resulting in delayed study initiation and completion. Third, recruitment is challenging due to lockdowns, restricted movement, and the unavailability of participants due to competing priorities. Fourth, while correctional research should seek to be patient-oriented, ensuring the representation of people with lived/living experience of incarceration in the design and implementation of correctional studies is difficult.

Beyond vaccine effectiveness, critical lessons stand to be learned from COVID-19 vaccine trials in correctional settings if hurdles can be overcome. For example, a significant proportion of the world’s incarcerated population is sentenced for less than one month [8]. Given competing priorities post-release, studies among pre-trial or short-sentenced individuals would need to design and evaluate innovative strategies to maximize follow-up after release. If effective, these strategies could be translated to interventions for other diseases that are disproportionately represented in correctional settings, including HIV, tuberculosis, and hepatitis C. Correctional vaccine research would also require that study sites have the necessary infrastructure and supplies needed to conduct a trial. These prerequisites would

facilitate future correctional research, where there is a critical need for more rigorous studies.

Individual countries will be responsible for overseeing the phased distribution of COVID-19 vaccines. The US National Academies of Sciences, Engineering, and Medicine recently released a tiered approach, whereby people in prison were included in Phase 3, proceeding health care workers (Phase 1), and people with underlying comorbidities and older adults in densely populated settings (Phase 2) [9]. The European Commission recently outlined “communities unable to physically distance, e.g. prisons” as a priority population to be considered by Member States [10]. However, vaccination of incarcerated individuals is conditional on successful vaccine trials, and we argue that it is unethical to not provide clinical trial participation to those incarcerated [7]. Although incarcerated populations still need to be protected from coercion and exploitation, respect for those who are incarcerated also requires recognition of their autonomy in decision-making and respect for basic human rights [11].

Inclusion of incarcerated populations in COVID-19 vaccine trials and their prioritization for vaccination will require concerted efforts. Beyond vaccine efficacy and safety, we must seek to understand and solve the unique implementation challenges associated with vaccine testing and distribution in correctional settings.

### Contributors

Both authors contributed equally and approved the final version of the manuscript.

### Declaration of Interests

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