



Open camera or QR reader and scan code to access this article and other resources online.

Corrections Officers' and Sheriffs' Perceptions of COVID-19 Vaccine Operationalization

Christina Kraus, BS,¹ Rubeen Guardado, MPH,² and Alysse G. Wurcel, MD^{2*}

Abstract

Justice-involved populations are at an elevated risk for infectious disease transmission and have been profoundly negatively impacted by the COVID-19 pandemic. Vaccination is being utilized as a primary tool for prevention and protection from serious infection in carceral settings. We examined the barriers and facilitators to vaccine distribution by surveying key stakeholders—sheriffs and corrections officers—in these settings. Most respondents felt prepared for rollout, although they still identified significant barriers to operationalization of vaccine distribution. Barriers ranked highest by stakeholders were vaccine hesitancy and problems related to deficits in communication and planning. There is enormous opportunity to install practices that will address the significant barriers being faced to efficient vaccine distribution and amplify existing facilitators. These could include, for example, the incorporation of in-person community communication models for discussion of the vaccine (and hesitancy) in carceral facilities.

Keywords: infectious disease, carceral health, vaccine, COVID-19, vaccine hesitancy

Introduction

Jails and prisons are epicenters of infectious disease transmission (Dumont *et al.*, 2012). Despite continued improvements in testing policies and protocols in carceral settings and reduced capacity, COVID-19 outbreaks in jails and prisons continued to be reported through November 2021, with certain outbreaks infecting upward of 50% of residents (Associated Press, 2021; Lewis *et al.*, 2021; Ward *et al.*, 2021). A multitude of intersecting factors, including overcrowding, lack of ventilation, and inability to social distance, synergize in carceral settings to facilitate transmission of respiratory viruses. COVID-19 cases in jails and prisons were >5 times higher compared to the general public, and the death rate in jails and prisons was 3 times as high (Saloner *et al.*, 2020).

People who work in prisons, including but not limited to health care workers (HCWs) and correctional officers, are also at increased risk of COVID-19 infection, with an estimated 3.2 times higher risk than their community members (Ward *et al.*, 2021). People who are incarcerated and people who work at jails and prisons can spread infections to surrounding communities, further adding fuel to the fire of the pandemic (Barsky *et al.*, 2021).

Layered on top of decarceration and increased testing, broad vaccination will decrease transmission, illness, and death from COVID-19 (Barsky *et al.*, 2021). Prioritization schemes have largely been used by states as part of an equitable and efficient vaccine rollout, with several states prioritizing HCWs, people who work in jails, and people incarcerated in jails before other populations.

¹Tufts University School of Medicine, Boston, Massachusetts, USA.

²Division of Geographic Medicine and Infectious Diseases, Department of Medicine, Tufts Medical Center, Boston, Massachusetts, USA.

*Address correspondence to: Alysse G. Wurcel, MD, Division of Geographic Medicine and Infectious Diseases, Department of Medicine, Tufts Medical Center, 800 Washington Street, Boston, MA 02111, USA, Email: awurcel@tuftsmedicalcenter.org

The approval of three COVID-19 vaccines has been seen as a public health panacea, but barriers to vaccination still remain (Akiyama *et al.*, 2020). We sought to better understand the barriers and facilitators for vaccine rollout in jails and prisons from the perspectives of sheriffs and corrections officers.

Method

Survey Development and Distribution

The survey was modified from an Infectious Diseases Society of America Emerging Infections Network survey sent to infectious diseases physicians in January 2021 (Beekmann *et al.*, 2021). Our revised survey was piloted with two jail physicians and five sheriffs who did not participate as survey respondents. The final survey had 11 closed-ended questions about vaccine rollout for three different groups: HCWs, staff, and incarcerated individuals (Supplementary Appendix S1A).

In May 2021, the electronic link for the survey was sent to executive directors at Massachusetts Correction Officers Federated Union (MCOFU) and the Major

County Sheriffs of American association; in June 2021, the leadership of these organizations sent the survey in a link their 3,700 and 104 members, respectively. MCOFU also posted access to the survey on its intranet website in the prisons. The survey was open through June 20, 2021. No incentives were offered for participation. Respondent information was unidentifiable, and consent was given in the survey link.

Quantitative survey responses were analyzed using descriptive tables and summary statistics. All analyses were performed using Microsoft Excel. We received an exemption from the Tufts Health and Sciences institutional review board.

Results

There were 48 responses from sheriffs and 41 responses from correctional officers. The majority of respondents reported that the jails and prisons where they worked were prepared, quite prepared, or extremely prepared for COVID-19 vaccine rollout (Table 1). We found that 86%, 86%, and 90% of sheriffs reported that their facility

Table 1. Sheriffs' and Corrections Officers' Responses to Questions About Vaccine Rollout Operationalization for Health Care Workers, Staff, and Incarcerated People

	Sheriffs			Corrections officers		
	HCWs	Staff	Incarcerated people	HCWs	Staff	Incarcerated people
Are incentives used to encourage vaccination? (%)						
Yes	2 (4)	4 (8)	11 (23)	3 (7)	3 (7)	4 (10)
No	36 (75)	38 (76)	35 (73)	13 (32)	15 (37)	14 (34)
Unsure	6 (13)	4 (8)	1 (2)	18 (44)	15 (37)	16 (39)
No answer	4 (8)	4 (8)	1 (2)	7 (17)	8 (19)	7 (17)
Are there policies to manage postvaccination symptoms? (%)						
Yes	36 (75)	38 (79)	38 (79)	5 (12)	7 (17)	13 (32)
No	7 (15)	7 (15)	5 (11)	9 (22)	17 (41)	9 (22)
Unsure	4 (8)	1 (2)	1 (2)	23 (56)	13 (32)	13 (32)
No answer	1 (2)	2 (4)	4 (8)	4 (10)	4 (10)	6 (14)
Are there plans to stagger vaccinations to avoid workforce shortages? (%)						
Yes	23 (48)	27 (56)	Not asked	4 (10)	6 (15)	Not asked
No	12 (25)	16 (34)		13 (31)	20 (49)	
Unsure	10 (21)	1 (2)		20 (49)	10 (24)	
No answer	3 (6)	4 (8)		4 (10)	5 (12)	
Should COVID-19 vaccination, once a vaccine has full FDA approval, be mandatory? (%)						
Yes	15 (31)	14 (29)	11 (23)	8 (20)	8 (20)	9 (22)
No	26 (54)	29 (61)	30 (62)	28 (68)	28 (68)	25 (61)
Unsure	5 (11)	3 (6)	6 (13)	3 (7)	2 (5)	4 (10)
No answer	2 (4)	2 (4)	1 (2)	2 (5)	3 (7)	3 (7)
How would you rate your facility's preparedness for vaccine rollout for the following groups? (%)						
Not prepared at all	0 (0)	1 (2)	0 (0)	0 (0)	2 (5)	1 (2)
Little preparedness	0 (0)	1 (2)	2 (4)	3 (7)	6 (15)	3 (8)
Prepared	8 (17)	7 (15)	10 (21)	7 (17)	8 (19)	12 (29)
Quite prepared	10 (21)	10 (21)	8 (17)	7 (17)	12 (29)	9 (22)
Extremely prepared	23 (48)	24 (50)	25 (52)	6 (15)	8 (19)	11 (27)
Not applicable	5 (10)	2 (4)	0 (0)	14 (34)	2 (5)	1 (2)
No answer	2 (4)	3 (6)	3 (6)	4 (10)	3 (7)	4 (10)

FDA, Food and Drug Administration; HCWs, health care workers; Staff, correctional facility staff.

was prepared, quite prepared, or extremely prepared for vaccine rollout to HCWs, staff, and incarcerated individuals, respectively. Although by a smaller margin, 49%, 67%, and 78% of corrections officers reported their facility was prepared, quite prepared, or extremely prepared for vaccine rollout to HCWs, staff, and incarcerated individuals. "First come first served" was the most used system of vaccine rollout for HCWs at 52% and correctional staff at 60%.

We assessed the use of three possible facilitation strategies for COVID-19 vaccine rollout: (a) planning for management of postvaccination symptoms (e.g., differentiate COVID-19 from postvaccine illness, determine which individuals need quarantining), (b) planning to stagger vaccinations to avoid staff shortages, and (c) incentive use to promote vaccine uptake. The use of planning for management of postvaccination symptoms was used most often (Table 1). Incentive use was limited overall; the most common form of incentive identified for HCWs and staff was "paid time off." Many respondents were unsure of their facilities' use of incentives, with an average of 30% and 22% unsure of incentive use for HCWs and staff, respectively.

There was a majority opposition to the initiation of COVID-19 vaccine mandates. Of sheriff respondents that provided a response, 56% and 63% responded "no" when asked if a vaccine approved by the Food and Drug Administration (FDA) should be mandated for HCWs and staff, respectively. Of corrections officer respondents, 72% and 74% responded "no" when asked if an FDA-approved vaccine should be mandated for HCWs and staff (Table 1).

Respondents ranked willingness to receive the vaccine as the No. 1 barrier to HCWs and correctional staff. Respondents ranked concerns about adverse reactions, absences related to vaccine side effects, and scheduling multiple doses as the second, third, and fourth strongest barriers, respectively, for HCWs and correctional staff (Fig. 1).

Discussion

To our knowledge, this is the first study reporting on opinions of sheriffs and corrections officers on initial COVID-19 vaccine rollout in carceral settings. Overall, stakeholder input from people who work in jails, especially corrections officers and sheriffs, is rare in health care literature. Having input from these stakeholders helps inform how policy dictates practice in correctional facilities and provides the insight that is critical to creating strategies to overcome barriers to vaccine distribution (Rosenbaum, 2021).

As of June 2021, prison staff vaccination rates were lower than in the general population in almost every state; in New Hampshire, only 58% of prison staff were

vaccinated as of October 2021 (Lewis & Sisak, 2021; Rosenbluth, 2021; Tyagi & Rajeshwar, 2021). The persistence of vaccine hesitancy, despite millions of Americans having received the vaccine and faring well, informs the need for continued communication within these settings to overcome different reasons for refusal (Evans & French, 2021).

One successful strategy used in Massachusetts has been bringing medical students, community clinicians, and faith leaders into jails for "Ask Me Anything" sessions (unpublished data). Other successful strategies have been vaccine education at morning "roll call" and the use of educational videos (Berk *et al.*, 2021). Notably, reported use of incentives with HCWs and correctional staff was limited (Table 1), despite widespread use in other places of employment (Karni & Stolberg, 2021).

Carceral unions and leadership are hubs of social support for corrections officers and sheriffs. As such, they would be powerful tools as a mode of exploring reasons for vaccine refusal with individuals. Building on these discussions with use of aforementioned communication models has the potential to decrease reactant behaviors and serve to prevent workplace staff shortages (Rosenbaum, 2021; Volpp *et al.*, 2021).

Despite the vaccine being approved in January 2021, more than 50% of respondents reported that vaccines were first distributed in March, April, or May (Table 2). The prioritization of people who are incarcerated is a strategy rooted in both epidemiological evidence to protect the most vulnerable and the incarcerated people's right to health care under the U.S. Constitution (Eber, 2009). The clear support from science and law did not protect this policy from inciting some controversy and may have been one factor leading to this delay in distribution (Quandt, 2020).

Interestingly, there has also been public debate about prioritization of people who work in jail. One survey found Americans were less willing to prioritize people incarcerated in jails and prisons and people who work in prisons than other National Academies of Science, Engineering, and Medicine's (NASEM) phase 2 groups such as teachers, grocery store workers, and healthy older adults (Persad *et al.*, 2021).

Collective empathy building and education on the interconnectedness between carceral settings and communities may be necessary to communicate the elevated risks that jail staff and carceral communities face. Repairing the public perceptions of separation from carceral communities, and subsequent public support for adequate health care and disease prevention for such groups, will undoubtedly improve health care outcomes for all (Aviram, 2021).

The first hospital in the United States to mandate COVID-19 vaccination did so in April 2021 and several other institutions have followed (Boyle, 2021). President



Fig. 1. Proportion of respondents that ranked each barrier in the top 4 barriers to vaccine operationalization.

Table 2. Participant Demographics and COVID-19 Vaccine Availability

Profession	<i>N</i> = 89 (%)
Sheriff	48 (54)
Correctional officer	41 (46)
Place of work	<i>N</i> = 88 (%)
County jail/house of corrections	46 (52)
State prison	40 (46)
Other	2 (2)
Region	<i>N</i> = 80 (%)
Northeast	44 (55)
Midwest	3 (4)
South	18 (23)
West	15 (19)
Does your facility provide COVID-19 vaccine?	<i>N</i> = 86 (%)
Yes	81 (94)
No	3 (4)
Unsure	2 (2)
Does your facility provide COVID-19 vaccine to incarcerated individuals?	<i>N</i> = 85 (%)
Yes	82
No	1
Unsure	2
Does your facility provide vaccines to staff?	<i>N</i> = 84 (%)
Yes	77 (92)
No	4 (5)
Unsure	3 (3)
Does your facility provide vaccines to HCWs?	<i>N</i> = 84 (%)
Yes	62 (74)
No	6 (7)
Unsure	16 (19)
Vaccination rollout month	<i>N</i> = 81 (%)
December 2020	4 (5)
January 2021	33 (41)
February 2021	17 (21)
March 2021	12 (15)
April 2021	13 (16)
May 2021	2 (2)

Biden's federal vaccine mandate, as well as mandates in states like Massachusetts, have incited court battles for many unions representing prison corrections officers (Stoico, 2021).

The majority of our respondents disfavored COVID-19 vaccine mandates. The COVID-19 vaccine is politicized, with Republicans less likely to report willingness for COVID-19 vaccination than Democrats (Khubchandani *et al.*, 2021). People who work in law enforcement and corrections are more likely to be White, male, and Republican (Sundt, 2009). In communities with higher

levels of vaccine hesitancy, there may be increased reactant behavior, which can manifest as taking action to avoid COVID-19 vaccination or an increased effort to preserve other freedoms such as avoiding other, unrelated vaccines (Sprengholz *et al.*, 2021).

As lawsuits aiming to push back the vaccine mandate deadline have been unsuccessful, reports show that many corrections officers are not in compliance, have elected to leave corrections, or have been fired. In Washington, 4.5% of the prison workforce quit because of the mandate; many states are feeling pressured to alter course on mandate policies while a looming workforce shortage threatens to send justice systems into crisis (Winton, 2021). Workplace shortages stand to harm the health of staff and incarcerated individuals alike (Winton, 2021). Policy makers and researchers have argued that these mandates will have the detrimental effect of decreasing COVID-19 vaccine uptake across populations due to an undermining of trust (Eden & Coutinho, 2021).

However, other vaccines, such as hepatitis B, are mandated for several types of jail staff, so it could be that with more time and data, the "exceptionalism" of the COVID-19 vaccine will diminish.

Our findings have limitations. Since incarcerated individuals were not surveyed about their experience with the rollout, the survey responses reflect only the perceptions of those working in correctional settings. Our questions were emailed as a poll, so it is difficult to determine the exact number of individuals who received the opportunity to complete them. The correctional staff members who were able to view and chose to respond may differ from those who chose not to answer, and likely reflect individuals who are interested in this topic.

We also collected very limited demographic data, leaving us unable to analyze the relationship between such factors and the responses to questions such as COVID-19 vaccine incentivization and mandates. A majority of respondents (55%) are from the Northeast; their overrepresentation in this analysis may bias our results.

Our assessment of barriers and facilitators is not comprehensive; some respondents selected "other" and specified facilitators such as surveying incarcerated individuals and staff as part of planning for distribution, and barriers such as full FDA approval. Public understanding of FDA approval and its relationship with vaccine uptake should be further explored (Guidry *et al.*, 2021).

Despite these limitations, our research is the only available data on perspectives of vaccine rollout from people who work in jails and prisons—a population underrepresented in the health care literature. Distribution of future COVID-19 vaccines will certainly be improved by the practices of (a) incorporating community communication models in prisons/jails for the discussion of vaccines, (b) using carceral unions and social networks of corrections as partners in investigating reasons for vaccine hesitancy

and reactant behaviors, and (c) deconstructing societal ideation of separation from carceral communities and politicization of carceral health care.

We hope our work informs future institutional policies for vaccine rollout during operationalization of booster doses for COVID-19, influenza vaccines, and other vaccinations. We also hope our work motivates researchers to partner with stakeholders working in carceral settings to engage them in research. Understanding the perspectives of people working in these is integral to improving public health.

Acknowledgments

We thank Philip Polgreen and Susan Beekmann from the Infectious Diseases Society of America Emerging Infections Network for their support in creating the electronic query and collecting query responses.

Authors' Contributions

A.G.W. and C.K. conceived of the presented idea, designed the methods, analyzed the data, and wrote the paper. R.G. assisted with data analysis.

Author Disclosure Statement

A.G.W. receives salary support from the Massachusetts Sheriffs' Association. The authors disclosed no other conflicts of interest with respect to the research, authorship, or publication of this article.

Funding Information

U.S. Department of Health and Human Services, National Institutes of Health, 1KL2TR002545-01, K08HS026008-01A

Supplementary Material

Supplementary Appendix S1A

References

- Akiyama, M. J., Spaulding, A. C., & Rich, J. D. (2020). Flattening the curve for incarcerated populations—COVID-19 in jails and prisons. *New England Journal of Medicine*, 382(22), 2075–2077. <https://doi.org/10.1056/NEJMp2005687>
- Associated Press. (2021, November 17). *Nearly a quarter of St. Cloud prisoners have COVID-19*. U.S. News & World Report. <https://www.usnews.com/news/best-states/minnesota/articles/2021-11-17/nearly-a-quarter-of-st-cloud-prisoners-have-covid-19>
- Aviram, H. (2021). Bottleneck: The place of county jails in California's COVID-19 correctional crisis. *Hastings Journal of Crime and Punishment*, 2(2), 3. https://repository.uchastings.edu/hastings_journal_crime_punishment/vol2/iss2/3
- Barsky, B. A., Reinhart, E., Farmer, P., & Keshavjee, S. (2021). Vaccination plus decarceration—Stopping COVID-19 in jails and prisons. *New England Journal of Medicine*, 384(17), 1583–1585. <https://doi.org/10.1056/NEJMp2100609>
- Beekmann, S. E., Babcock, H. M., Rasnake, M. S., Talbot, T. R., & Polgreen, P. M. (2022). Coronavirus disease 2019 (COVID-19) vaccination preparedness policies in US hospitals. *Infection Control & Hospital Epidemiology*, 43(9), 1256–1258. <https://doi.org/10.1017/ice.2021.181>
- Berk, J., Murphy, M., Kane, K., Chan, P., Rich, J., & Brinkley-Rubinstein, L. (2021). SARS-CoV-2 vaccination uptake in a correctional setting: Cross-sectional study. *JMIRx Med*, 2(3), e30176. <https://doi.org/10.2196/30176>
- Boyle, P. (2021, June 15). *Should hospital mandate COVID-19 vaccination?* AAMC. <https://www.aamc.org/news-insights/should-hospitals-mandate-covid-19-vaccination>
- Dumont, D. M., Brockmann, B., Dickman, S., Alexander, N., & Rich, J. D. (2012). Public health and the epidemic of incarceration. *Annual Review of Public Health*, 33, 325–339. <https://doi.org/10.1146/annurev-publhealth-031811-124614>
- Eber, G. B. (2009). Using the constitution to improve prisoner health. *American Journal of Public Health*, 99(9), 1541–1542. <https://doi.org/10.2105/AJPH.2009.168112>
- Eden, A. R., & Coutinho, A. J. (2021). Mandating clinician COVID-19 vaccination may hinder population-level uptake. *Family Medicine*, 53(6), 404–407. <https://doi.org/10.22454/FamMed.2021.545121>
- Evans, W. D., & French, J. (2021). Demand creation for COVID-19 vaccination: Overcoming vaccine hesitancy through social marketing. *Vaccines*, 9(4), 319. <https://doi.org/10.3390/vaccines9040319>
- Guidry, J., Laestadius, L. I., Vraga, E. K., Miller, C. A., Perrin, P. B., Burton, C. W., Ryan, M., Fuemmeler, B. F., & Carlyle, K. E. (2021). Willingness to get the COVID-19 vaccine with and without emergency use authorization. *American Journal of Infection Control*, 49(2), 137–142. <https://doi.org/10.1016/j.ajic.2020.11.018>
- Kami, A., & Stolberg, S. G. (2021, April 21). *Biden asks U.S. employers to give workers paid time off to get vaccinated*. The New York Times. <https://www.nytimes.com/2021/04/21/world/biden-covid-vaccine.html>
- Khubchandani, J., Sharma, S., Price, J. H., Wiblehauser, M. J., Sharma, M., & Webb, F. J. (2021). COVID-19 vaccination hesitancy in the United States: A rapid national assessment. *Journal of Community Health*, 46(2), 270–277. <https://doi.org/10.1007/s10900-020-00958-x>
- Lewis, N. M., Salmanson, A. P., Price, A., Risk, I., Guymon, C., Wisner, M., Gardner, K., Fukunaga, R., Schwitters, A., Lambert, L., Baggett, H. C., Ewetola, R., & Dunn, A. C. (2021). Community-associated outbreak of COVID-19 in a correctional facility—Utah, September 2020–January 2021. *Morbidity and Mortality Weekly Report*, 70(13), 467–472. <https://doi.org/10.15585/mmwr.mm7013a2>
- Lewis, N., & Sisak, M. (2021, March 15). *"Hell no": Correctional officers are declining the coronavirus vaccine en masse*. Marshall Project. <https://www.themarshallproject.org/2021/03/15/hell-no-correctional-officers-are-declining-the-coronavirus-vaccine-en-masse>
- Persad, G., Emanuel, E. J., Sangermano, S., Glickman, A., Phillips, S., & Largent, E. A. (2021). Public perspectives on COVID-19 vaccine prioritization. *JAMA Network Open*, 4(4), e217943. <https://doi.org/10.1001/jamanetworkopen.2021.7943>
- Quandt, K. R. (2020, December 8). *Incarcerated people and corrections staff should be prioritized in vaccination plans*. Prison Policy Initiative. <https://www.prisonpolicy.org/blog/2020/12/08/covid-vaccination-plans/>
- Rosenbaum, L. (2021). Escaping catch-22—Overcoming COVID vaccine hesitancy. *New England Journal of Medicine*, 384(14), 1367–1371. <https://doi.org/10.1056/NEJMms2101220>
- Rosenbluth, T. (2021, October 1). *Many correctional officers remain unvaccinated as prison cases climb*. Concord Monitor. <https://www.concordmonitor.com/corrections-officers-vaccine-42765312>
- Saloner, B., Parish, K., Ward, J. A., DiLaura, G., & Dolovich, S. (2020). COVID-19 cases and deaths in federal and state prisons. *JAMA*, 324(6), 602–603. <https://doi.org/10.1001/jama.2020.12528>
- Sprengholz, P., Betsch, C., & Böhm, R. (2021). Reactance revisited: Consequences of mandatory and scarce vaccination in the case of COVID-19. *Applied Psychology: Health and Well-Being*, 13(4), 986–995. <https://doi.org/10.1111/aphw.12285>
- Stoico, N. (2021, October 15). *Judge rules against prison guards challenging vaccine mandate*. The Boston Globe. <https://www.bostonglobe.com/2021/10/15/metro/judge-rules-against-prison-guards-challenging-vaccine-mandate/>
- Sundt, J. L. (2009). Good job or dirty work? Public perceptions of correctional employment. *Federal Probation*, 73(3), 40–45. https://www.uscourts.gov/sites/default/files/73_3_5_0.pdf
- Tyagi, E., & Rajeshwar, P. (2021, June 25). *Counting the shots: COVID-19 vaccinations behind bars*. UCLA Law COVID Behind Bars Data Project. <https://uclacovidbehindbars.org/blog/counting-the-shots-the-state-of-covid-19-vaccinations-behind-bars>
- Volpp, K. G., Loewenstein, G., & Buttenheim, A. M. (2021). Behaviorally informed strategies for a national COVID-19 vaccine promotion program. *JAMA*, 325(2), 125–126. <https://doi.org/10.1001/jama.2020.24036>
- Ward, J. A., Parish, K., DiLaura, G., Dolovich, S., & Saloner, B. (2021). COVID-19 cases among employees of U.S. federal and state prisons. *American Journal of Preventive Medicine*, 60(6), 840–844. <https://doi.org/10.1016/j.amepre.2021.01.018>
- Winton, R. (2021, November 5). *Calif. governor seeks pause of prison vax mandates, warning of staff departures*. Corrections1. <https://www.corrections1.com/coronavirus-covid-19/articles/calif-governor-seeks-pause-of-prison-vax-mandates-warning-of-staff-departures-9mY1sdua4mZ8gLEu/>