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To Policymakers, Judicial Officers, Sheriffs, Wardens, and Parole Boards:

The Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) is a newly emerging zoonotic agent initially identified in December 2019 that causes the Coronavirus Disease 2019 (COVID-19), formerly known as the 2019 novel Coronavirus (2019nCoV). Infection with COVID-19 is associated with significant morbidity and mortality, especially in patients with chronic medical conditions and those 55 years of age and older. Based on a recently published systematic review of the literature, of which I am a co-author, at least one-fifth of infected cases required supportive care in medical intensive care units. Equally concerning is the fact that despite the implementation of optimal supportive interventions, case fatality rate among hospitalized patients is higher than 10 percent.

As an infectious disease clinician with a public health degree in the dynamics of infectious disease epidemics and pandemics, I am concerned about the inevitable spread of COVID-19 in jails, prisons, community corrections facilities, and juvenile detention centers. The conditions in these facilities do not allow for appropriate infection control protocols and will make the current COVID-19 pandemic worse. Incarcerated populations have higher rates of underlying illness and, by extension, will have a higher case fatality rate. It is now clear that asymptomatic individuals can spread this infection. With staff traveling between their homes and the facilities, and newly arrested individuals brought in as others are released, containment of the virus is not possible. This epidemic has the potential to become the Coming Prison Plague.

Experience

Over my 20 years of experience as an infectious disease clinician, I have provided care at outpatient clinics and during inpatient consultation services in infectious diseases to a large number of patients residing in jail and prison populations. Based on my conversations with patients, my own observations, and information that exists regarding the resources available within jail, prison, community corrections, and juvenile detention facilities, it is my professional opinion that the medical care available cannot properly accommodate the needs of patients should there be an outbreak of COVID-19 in these facilities.

People who are considered at high risk of severe illness and death should they be infected with the coronavirus include the following:

- People age 55 or older
- Anyone diagnosed with cancer, autoimmune disease (including lupus, rheumatoid arthritis, psoriasis, Sjogren's, Crohn's), chronic lung disease (including asthma, COPD, bronchiectasis, idiopathic pulmonary fibrosis), history of cardiovascular disease (MI), chronic arthritis (rheumatoid, psoriatic), chronic liver or kidney disease, diabetes, hypertension, heart failure, HIV, on chronic steroids or other immunosuppressant medications for chronic conditions
- People with a history of smoking or other substance use disorders
- Pregnant women

I can also certify that incarcerated individuals have a higher prevalence of chronic medical conditions that place them at high risk of developing severe coronavirus disease and potentially dying from this infection. Some of these medical conditions include HIV/AIDS, uncontrolled diabetes mellitus, chronic obstructive pulmonary disease, and other conditions.

Risk Factors Present in Jails, Prisons, and Juvenile Detention Centers

Detention and incarceration of any kind requires large groups of people to be held together in a confined space and creates the worst type of setting for curbing the spread of a highly contagious infection such as COVID-19. To contain the spread of the disease, infection prevention protocols must be meticulously followed. These infection prevention protocols include "social distancing" measures, where individuals maintain a distance of at least six feet from each other, and frequent hand-washing and other good hygiene practices. These protocols apply to both incarcerated and non-incarcerated individuals. In a carceral setting, these protocols would require, for example, that individuals sleep one person per cell, rather than in bunk beds. These protocols are necessary to prevent spread of COVID-19 among otherwise healthy people, and are imperative for high-risk individuals.

The number of private rooms in a typical jail, prison, or juvenile detention facility is insufficient to comply with the recommended airborne/droplet isolation guidelines. Another important consideration that complicates disinfection and decontamination practices is the ability of this novel coronavirus to survive for extended periods of time on materials that are highly prevalent in secure settings, such as metals and other non-porous surfaces. Current outbreak protocols require frequent disinfection and decontamination of all surfaces of the facility, which is exceedingly difficult given the large number of incarcerated individuals, frequent interactions between incarcerated individuals and staff, and regularity with which staff move in and out of each facility. Again, it is critical to

understand that even asymptomatic individuals can spread virus to others. Therefore, merely screening those with symptoms is inadequate to keep COVID-19 out of jail and prison facilities.

Responding to this outbreak calls for highly trained staff to correctly institute and enforce isolation and quarantine procedures and have training on the appropriate utilization of personal protective equipment. It is essential that nursing and medical staff be trained in infection control practices, implementing triage protocols, and the medical management of suspected, probable and confirmed cases of coronavirus infection. These same personnel would have to initiate the management of those with severe disease. Since these are closed facilities, the number of exposed, infected, and ill individuals may rapidly overwhelm staff and resources. As a result, many patients would need transfer to hospitals near these facilities, likely overwhelming the surrounding healthcare systems, which are already functioning at full capacity caring for the general non-incarcerated community.

Likely Outcome if COVID-19 Spreads in Jails, Prisons, and Juvenile Detention

Given the high population density of jails, prisons, and juvenile detention centers, and the ease of transmission of this viral pathogen, the infection rate will be exponential if even a single person, with or without symptoms, that is shedding the virus enters a facility. For every person with the virus, they will infect more than 2 other people – whether they be incarcerated individuals or staff. Of those infected, one-fifth will get so ill that they require hospital admission, and about 10% will develop severe disease requiring treatment only available in the intensive care unit. To illustrate the magnitude of this threat, a jail or prison that holds 1500 individuals can anticipate that 500-650 individuals may acquire the infection. Of these, 100 to 150 individuals may develop severe disease requiring admission to the hospital, potentially to an intensive care unit. Of these, 10-15 individuals may die from respiratory failure. The cost of care in the intensive care unit is on the order of \$5,000 to \$8,000 dollars per day, and often more for those requiring mechanical ventilation.

For the 2,200-inmate Denver Jail, for example, the only hospital that is currently accepting these patients is Denver Health. Denver Health only has a capacity of 525 beds in the entire facility. Intensive care unit capacity at Denver Health is 24 beds in the medical ICU, 23 beds in the surgical/trauma ICU, and 12 beds in a step-down unit (that may be able to support ventilated patients). Therefore, a large outbreak in a jail or prison facility would put a tremendous strain on the medical system in Colorado to the detriment of patients across the region. It is reasonable to anticipate that there will be the loss of additional lives that could have otherwise been saved.

Risk Minimization Through Release from Jails, Prisons, and Juvenile Detention

Reducing the number of incarcerated individuals is necessary for effective infection control and sanitization practices that could dramatically reduce the burden COVID-19 will inevitably place on our health system. Urgent action is needed given the predicted shortage of medical supplies such as personal protective equipment, shortage of staff as medical personnel become ill themselves, and limited life-saving resources such as ventilators.

Conclusion

The COVID-19 virus will inevitably enter and expand exponentially in jails, prisons, community corrections, and juvenile detention facilities. These facilities are not designed to contain the spread of a highly contagious disease or to treat those with significant illness. It is likely that there will be high numbers of ill incarcerated individuals, as well as the staff critical to these facilities. The broader health system does not have the capacity to handle a wave of critically ill patients coming from jails and prisons in addition to the expected community outbreak.

The prompt release of individuals with medical conditions at risk of severe disease and death due to coronavirus infection, and prompt reduction in incarcerated populations overall, is necessary to reduce the impact of this outbreak.

Sincerely,

A handwritten signature in black ink, appearing to read 'C. Franco-Paredes', is written over a light gray circular background.

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