

Tribunal Estadual do Rio de Janeiro

Ministério Público e Defensoria Pública do
Estado do Rio de Janeiro,

Petitioners-Plaintiffs,

v.

Estado do Rio de Janeiro, Município do Rio de
Janeiro e Associação Filantrópica Nova
Esperança (Pronto Socorro Geral Hamilton
Agostinho),

Respondents-Defendants.

Matter of Ação Civil Pública
#0087229-92.2020.8.19.0001

OPINION OF MEDICAL EXPERTS

**GREGG GONSALVES, PH.D., JASON ANDREWS, M.D., TED COHEN, M.D., M.P.H.,
D.P.H., JULIO CRODA, M.D., ALBERT KO, M.D., JOSÉ ROBERTO LAPA E SILVA,
M.D., PH.D., MARY PETRONE, KATHARINE WALTER, PH.D., MSC.**

1. We, Gregg Gonsalves, Jason Andrews, Ted Cohen, Julio Croda, Albert Ko, José Roberto Lapa e Silva, Mary Petrone and Katharine Walter, hereby declare under penalty of perjury, that the following is true and correct to the best of our knowledge:

RELEVANT BACKGROUND AND QUALIFICATIONS

*Gregg Gonsalves, Ph.D., Assistant Professor in Epidemiology of Microbial Diseases; Associate Professor of Law and Research Scholar in Law
Yale School of Medicine, Yale Law School*

2. I am an Assistant Professor in Epidemiology of Microbial Diseases at the Yale School of Medicine and an Associate Professor of Law and Research Scholar in Law at Yale Law School. I co-direct the Yale Law School/Yale School of Public Health Global Health Justice Partnership. I was the Co-Director of the Yale Law School/Yale School of Public Health/Yale Medical School Collaboration on Research Integrity and Transparency and the Co-Faculty Director of Global Health Studies at Yale College until May 2020. Among others, I also have held appointments at Harvard Medical School, the Institut Pasteur, and the University of Cape Town. I attended Yale College and received a PhD in public health from Yale University. In 2018, I received a MacArthur “genius” grant (i.e. MacArthur Fellowship) from the John D. and Catherine T. MacArthur Foundation.
3. I have worked for over three decades on epidemic diseases, including HIV/AIDS and other

global health problems. My research has focused on the use of quantitative models to improve our response to epidemic diseases. I have published over a dozen articles on epidemic disease, including in *The Lancet*, *Science*, the *New England Journal of Medicine*, and the *Journal of Clinical Epidemiology*. I have received grants for my research from, among others, the National Institute of Allergy and Infectious Diseases, the National Institute on Mental Health, the National Institute on Drug Abuse, the Laura and John Arnold Foundation, the Levi-Strauss Foundation, and the Open Society Foundations. The total amount of the grants on which I have served as principal investigator or co-principal investigator is over \$5.5 million (USD).

4. A copy of my CV is attached as Exhibit A.
5. I am not being compensated for my work on this case.

Jason Andrews, M.D., Associate Professor of Medicine
Stanford University School of Medicine

6. I am a tenured Associate Professor in the Division of Infectious Diseases and Geographic Medicine at Stanford University School of Medicine. I received my undergraduate and medical degrees from Yale, a Masters in Science in Epidemiology and Harvard School of Public Health, and completed my post-doctoral training in infectious diseases at Harvard. I teach two courses in infectious disease epidemiology at Stanford University and have published over 130 scientific articles, many appearing in top tier medical journals (*Lancet*, *Lancet Infectious Diseases*, *PLoS Medicine*, *Proceedings of the National Academy of Sciences*). My work is currently funded primarily by the U.S. National Institutes of Health and Bill and Melinda Gates Foundation. I have served on scientific advisory and working groups for the World Health Organization and U.S. Centers for Disease Control and Prevention.
7. I have studied transmission of infectious diseases on four continents for more than fifteen years and have conducted research in prisons in Brazil for the past seven years. I am currently the principal investigator for two grants from the U.S. National Institutes of Health, one cofunded by Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq), focused on studying tuberculosis in Brazil's prison system. I have published the findings of this work in medical journals and have presented this work to Ministries of Health and at international medical conferences. I am also involved in studying Covid-19 transmission in jails and prisons in the United States.
8. A copy of my CV is attached as Exhibit B.
9. I am not being compensated for my work on this case.

Ted Cohen, M.D., M.P.H., D.P.H., Professor in Epidemiology of Microbial Diseases
Yale School of Public Health

10. I am a Professor in Epidemiology of Microbial Diseases at the Yale School of Public Health. I co-direct the Yale School of Public Health Public Health Modeling Concentration. I also have held appointments at Harvard School of Public Health and Harvard Medical School. I received my MD from Duke University School of Medicine, my MPH from University of North Carolina, Chapel Hill, and my DPH from Harvard School of Public Health.

11. I have worked for twenty years on infectious diseases including tuberculosis, HIV/AIDS, and other viral pathogens such as SARS-CoV-1, SARS-CoV-2, and influenza. My research includes both observational study and the development and application of models to inform more effective control of disease. I have published more than 150 peer-reviewed articles on infectious diseases disease, including in *The Lancet*, *Science*, and *Nature Medicine*. I have received grants for my research from, among others, the US National Institutes of Health (National Institute of Allergy and Infectious Diseases, National Institute of General Medical Sciences, Office of the Director), USAID, Bill and Melinda Gates Foundation. The total amount of the grants on which I have served as principal investigator or co-investigator is well over \$10 million (USD).
12. A copy of my CV is attached as Exhibit C.
13. I am not being compensated for my work on this case.

Julio Croda, M.D., Specialist and Associate Professor of Medicine
Oswaldo Cruz Foundation
Federal University of Mato Grosso do Sul

14. I am an Associate Professor of Medicine at Federal University of Mato Grosso do Sul and Research Specialist at Oswaldo Cruz Foundation. I was former director of the Department of Immunization and Transmissible Disease in the Brazilian Ministry of Health between February of 2019 and march of 2020. I am an infectious disease physician-scientist and serve as the Principal Investigator for a series of studies involving active surveillance, molecular epidemiology and prospective cohort investigations for TB and arboviruses. As a medical student, resident and doctoral student, I was a fellow of the Fogarty Global Infectious Disease (GID) Training Program, which was based in the city of Salvador and coordinated by my former mentor, Dr. Albert Ko. My fellowship research focused on identifying virulence factors in the *Leptospira* pathogen and implementing translational studies to develop rapid diagnostic tests and vaccine for leptospirosis. During my fellowship, I conducted extended training at University of California at Berkeley (Lee Riley), Harvard School of Public Health (Program in Clinical Effectiveness), and Pasteur Institute (Mathieu Picardeau). In 2012, through support from the Brazilian Ministry of Health and National Research Council, I established a tuberculosis research network in 12 prisons, to conduct cohort studies on active case detection. I am also a site mentor (Brazil) for the FIC-sponsored Global Health Equity Scholars program
15. I have studied transmission of infectious diseases in Brazil and have conducted research in prisons in Brazil for the past ten years. I am currently the co-principal investigator for two grants from the U.S. National Institutes of Health, one cofunded by Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq), focused on studying tuberculosis in Brazil's prison system. I have published the findings of this work in medical journals and have presented this work to Ministries of Health and at international medical conferences. I am also coordinator of the Brazilian Research Network in COVID-19 (REBRACOV-19) from Oswaldo Cruz Foundation in 11 sites in Brazil to study the COVID-19 transmission in prison, healthworks and close contact.
16. A copy of my CV is attached as Exhibit D.

17. I am not being compensated for my work on this case.

Albert Ko, M.D., Professor of Epidemiology and Medicine and Department Chair of Epidemiology of Microbial Diseases
Yale School of Public Health

18. I am an infectious disease physician and a Professor and Chair of the Department of Epidemiology of Microbial Diseases at Yale School of Public Health and Collaborating Researcher at the Oswaldo Cruz Foundation, Brazilian Ministry of Health. My research centers on the health problems that have emerged as a consequence of rapid urbanization and social inequity. I coordinate a research and training program on urban slum health in Brazil, which combines multidisciplinary approaches to identify prevention and control strategies for emerging infectious diseases such as Zika, dengue and leptospirosis as well as meningitis and other vaccine preventable diseases. I am also a Program Director for the National Institute of Health-supported Global Health Equity Scholars Program, which provides training opportunities for fellows and students at 21 international sites. I serve as a member of the World Health Organization (WHO) R&D Taskforce for Zika Virus and WHO R&D Blueprint Working Group on Clinical Trial Design. I am coordinating research efforts at Yale in response to the COVID-19 outbreak. I serve as Co-Chair on the Governor's Reopen Connecticut Advisory Group and continue to advise the State on its COVID-19 prevention and control plan.

19. A copy of my CV is attached as Exhibit E.

20. I am not being compensated for my work on this case.

José Roberto Lapa e Silva, M.D. Ph.D., Professor of Pulmonary Medicine
Federal University of Rio de Janeiro

21. I received my MD from the Federal University of Rio de Janeiro (FURJ-1973) and PhD from the National Heart & Lung Institute, Imperial College, UK (1991). I was twice a post-doc at the Pasteur Institute in Paris (1991-1992 and 1999). I am a Full Professor of Pulmonary Medicine at the FURJ (since 1997). I have the 1D status for research excellence awarded by the Brazilian Research Council (CNPq). I collaborate with the Center for Global Health, Weill Medical College of Cornell University, where I am an Adjunct Professor of Immunology in Medicine (since 2003), with Johns Hopkins University School of Medicine, University of California Berkeley School of Public Health, and Vanderbilt University Medical School in USA. I was the Program Director/Principal Investigator of the Fogarty International Center/NIH ICOHR TA AIDS/TB grant in Rio (TW006883) from 2002-2016. My main interest is immunopathogenesis of lung diseases, including tuberculosis/HIV.

22. A copy of my CV is attached as Exhibit F.

23. I am not being compensated for my work on this case.

Mary Petrone, Doctoral Student
Yale School of Public Health

24. I am a PhD student at the Yale School of Public Health in the department of Epidemiology of Microbial Diseases. My doctoral research focuses on integrating molecular and

epidemiological data to improve the surveillance, prevention, and control of diseases caused by viruses, including COVID-19. I have served as a research fellow for the Global Health Justice Partnership (GHJP), which is jointly hosted by the School of Public Health and the Yale Law School. As part of the GHJP, I studied the connection between punitive drug laws, mass incarceration, and the spread of tuberculosis (TB) in Brazil, and I co-authored the report, *Reservoirs of Injustice: How incarceration for drug-related offenses fuels the spread of tuberculosis in Brazil*, explaining how prisons are reservoirs for TB in the country.

25. I began studying infectious diseases five years ago as a member of Dr. Anthony Fauci's Laboratory of Immunoregulation at the US National Institutes of Health. Since then, I have co-authored primary research articles and scientific communications that have been published in *Nature Microbiology*, *Science Translational Medicine*, and the *New England Journal of Medicine*. Most recently, I co-led a study investigating the genomic epidemiology of SARS-CoV-2 in Connecticut, the findings of which were published in *Cell*. In recognition of my research, I have received the Franke Interdisciplinary Research Award and, in conjunction with my doctoral advisor, the Hecht Global Health Award.

26. A copy of my CV is attached as Exhibit G.

27. I am not being compensated for my work on this case

Katharine S. Walter, PhD, MsC, Postdoctoral Fellow
Stanford School of Medicine

28. I am a postdoctoral fellow in the Division of Infectious Disease & Geographic Medicine at Stanford School of Medicine. I received a PhD in Epidemiology of Microbial Diseases, from Yale University, and an MsC in Ecology and Evolutionary Biology from Université Paul Sabatier.

29. My research uses pathogen evolution to investigate the transmission and geographic spread of infectious diseases with the goal of informing public health responses. As a postdoctoral scholar, I study the effect of mass incarceration on the burden of tuberculosis across the Americas and in Brazil. I am taking a genomic epidemiology approach to quantify the proportion of tuberculosis transmission attributable to prisons in Mato Grosso do Sul, Brazil, the state with the highest incarceration rate in Brazil. My research has resulted in papers including in *Nature Ecology & Evolution*, *PLoS Pathogens*, and *Proceedings of the Royal Society B*. Alongside my research, I write about health and the environment for a popular audience.

30. A copy of my CV is attached as Exhibit H.

31. I am not being compensated for my work on this case.

THE COVID-19 PANDEMIC

32. On January 23, 2020, the World Health Organization (WHO) issued a statement warning that every country in the world “should be prepared for containment, including active surveillance, early detection, isolation and case management, contact tracing and prevention of onward spread of 2019-nCoV infection,” and advising the world to “place particular emphasis on

reducing human infection, prevention of secondary transmission and international spread and contributing to the international response....”¹ On January 27, the first suspected coronavirus case in Brazil was identified.² On February 26, 2020, Brazil confirmed its first case of COVID-19.³

33. COVID-19 is an infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), a virus closely related to the SARS virus. In its least serious form, COVID-19 can cause illness including fever, cough, and shortness of breath. However, for individuals who become more seriously ill, a common complication is bilateral interstitial pneumonia, which causes partial or total collapse of the lung alveoli, making it difficult or impossible for patients to breathe. Thousands of patients have required hospital-grade respirators, and COVID-19 can progress from a fever to life-threatening pneumonia with what are known as “ground-glass opacities,” a lung abnormality that inhibits breathing.
34. In about 14 percent of cases of COVID-19, illness is severe including dyspnea, hypoxia, or >50 percent lung involvement on imaging within 24 to 48 hours.⁴ Critical disease with respiratory failure, shock, or multiorgan dysfunction was reported in 5 percent. Among hospitalized patients, the proportion of critical or fatal disease is higher. In a study that included 2,634 patients who had been hospitalized for COVID-19 in the New York City area—the current epicenter of the COVID pandemic in the USA for most of early 2020—14 percent were treated in the intensive care unit and 12 percent received invasive mechanical ventilation, and mortality among those receiving mechanical ventilation was 88 percent.
35. Certain populations of people are at particular risk of developing more serious complications from COVID-19 illness. People over the age of fifty are at higher risk, with those over seventy at serious risk. As the U.S. Center for Disease Control and Prevention (CDC) and WHO has advised, certain medical conditions increase the risk of serious COVID-19 for people of any age. These medical conditions include: those with lung disease, heart disease, diabetes, blood disorders, chronic liver or kidney disease, inherited metabolic disorders, developmental delays, those who are immunocompromised (such as from cancer, HIV, autoimmune diseases), those

¹ World Health Organization, *Statement on the meeting of the International Health Regulations (2005) Emergency Committee regarding the outbreak of novel coronavirus (2019-nCoV)* (Jan. 23, 2020), [https://www.who.int/news-room/detail/23-01-2020-statement-on-the-meeting-of-the-international-health-regulations-\(2005\)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-\(2019-ncov\)](https://www.who.int/news-room/detail/23-01-2020-statement-on-the-meeting-of-the-international-health-regulations-(2005)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-(2019-ncov)).

² Julio Croda et al., *COVID-19 in Brazil: advantages of a socialized unified health system and preparation to contain cases*, 53 *Rev. Soc. Bras. Med. Trop.* (2020).

³ Marcelo De Sousa & Mauricio Savarese, *Brazil confirms first coronavirus case in Latin America*, AP News (Feb. 26, 2020), <https://apnews.com/fd3d0d0120dd10f3d09bad78a4dd9539>.

⁴ Zunyou Wu & Jennifer McGoogan, *Characteristics of and Important Lessons From the Coronavirus Disease 2019 (COVID-19) Outbreak in China: Summary of a Report of 72,314 Cases From the Chinese Center for Disease Control and Prevention*, *JAMA* (2020); see also Safiya Richardson et al., *Presenting Characteristics, Comorbidities, and Outcomes Among 5700 Patients Hospitalized With COVID-19 in the New York City Area*, *JAMA* (2020); Laura Myers et al., *Characteristics of Hospitalized Adults With COVID-19 in an Integrated Health Care System in California*, *JAMA* (2020).

who have survived strokes, and those who are pregnant.⁵

36. There is no vaccine against COVID-19 and no vaccine is expected to be available until mid-2021 at the earliest. The new treatment for COVID-19, remdesivir, is thought to have only small to modest effects on time to recovery, and no effect on survival, which means almost all patients who develop severe disease, particularly those who require mechanical ventilation, face a high probability of death. The only known effective measures to prevent injuries or deaths resulting from COVID-19 are to prevent individuals from being infected with the virus. In fact, young and healthy individuals may be more susceptible than originally thought. Data from the CDC show that up to one-fifth of infected people ages 20-44 have been hospitalized, including 2-4 percent in that age group that were treated in an intensive care unit.⁶
37. Because of its novelty, we do not yet have empirical data on how long immunity to SARS-CoV-2 lasts once developed. Contrary to the way it is sometimes imagined, immunity is not black and white. Instead, there are levels of immunity, often based on the levels of antibodies in the body. At the moment, there are still open questions about whether individuals who recover from COVID-19 will have developed full immunity even in the immediate aftermath. However, even assuming that most people who recover from COVID-19 will have developed immunity, it is still unknown how long this immunity will last. Looking to other betacoronaviruses again allows us to infer that there is a significant risk that immunity will diminish substantially over time; whether that is measured in months or years is uncertain. The coronaviruses that cause the common cold spur only short-term immunity waning after several months. Antibodies to the related coronavirus (SARS-CoV) that caused the SARS epidemic in 2002-2004, likely wane after several years.
38. The number of people infected is still growing quickly across the globe. As of June 7, 2020, nearly 6.8 million people were diagnosed globally with coronavirus, and nearly 400,000 people had died as a result.⁷ As of June 7, Brazil has had over 614,000 confirmed cases, and over 34,000 have died.⁸ This staggering death toll is approximately 325 percent what it was a month ago.⁹ On May 25, Brazil's daily death toll surpassed the United States, reporting the most daily coronavirus fatalities in the world over a 24-hour period.¹⁰ Experts predict that this rapid growth will continue in Brazil, with a recent study predicting Brazil death toll could climb

⁵ See Centers for Disease Control and Prevention, *Coronavirus Disease 2019 (COVID-19): People Who May Be at Higher Risk*, <https://www.cdc.gov/coronavirus/2019-ncov/specific-groups/high-risk-complications.html> (last accessed May 27, 2020).

⁶ Sharon Begley, *New Analysis Breaks Down Age-Group Risk for Coronavirus — and Shows Millennials Are Not Invincible*, (March 18, 2020), <https://www.statnews.com/2020/03/18/coronavirus-new-age-analysis-of-risk-confirms-young-adults-not-invincible/>; Centers for Disease Control and Prevention, *Severe Outcomes Among Patients with Coronavirus Disease 2019 (COVID-19) — United States, February 12–March 16, 2020* (Mar. 26, 2020), https://www.cdc.gov/mmwr/volumes/69/wr/mm6912e2.htm?s_cid=mm6912e2_w/.

⁷ WHO Coronavirus Disease (COVID-19 Dashboard), World Health Org., <https://covid19.who.int/> (last visited June 7, 2020).

⁸ WHO Coronavirus Disease (COVID-19 Dashboard), World Health Org., <https://covid19.who.int/> (last visited June 7, 2020).

⁹ *Id.* (Approximately 8,000 had died in Brazil of COVID-19 as of May 7, 2020).

¹⁰ Pedro Fonseca, *Brazil surpasses U.S. in daily coronavirus death toll*, Reuters (May 25, 2020), <https://www.reuters.com/article/us-health-coronavirus/brazil-surpasses-u-s-in-daily-coronavirus-death-toll-idUSKBN23125X>.

five-fold to 125,000 by early August.¹¹ As of June 7, Brazil has more new confirmed COVID-19 cases per day per million people in the world.¹²

39. For all people, even in countries with advanced economies with very effective health care systems, the case fatality rate of COVID-19 is about ten-fold higher than that observed from a severe seasonal influenza. In the more vulnerable groups, both the need for care, including intensive care, and death is much higher than we observe from influenza infection. In the highest risk populations, the case fatality rate is about 15 percent. For high risk patients who do not die from COVID-19, a prolonged recovery is expected to be required, including the need for extensive rehabilitation for profound deconditioning, loss of digits, neurologic damage, and loss of respiratory capacity that can be expected from such a severe illness.
40. Based on data collected by the CDC, WHO and U.S. National Center for Biotechnology Information on the speed at which SARS-CoV-2 has spread since it is first known to have infected a human in November 2019, the virus is estimated to be twice as contagious as influenza.¹³ Unlike influenza, there are no known vaccines or antiviral medications to prevent or treat infection from COVID-19. Because the coronavirus that causes COVID-19 is passed through respiratory droplets and also appears to be able to survive on inanimate surfaces, it can be transmitted even when an infected person is no longer in the immediate vicinity. Data from China indicate that the average infected person passes the virus on to 2-3 other people at distances of 3-6 feet.¹⁴ Everyone is at risk of infection because our immune systems have never been exposed to or developed protective responses against this virus.
41. The current estimated incubation period of COVID-19 is between 2 and 14 days, meaning that a patient who begins showing symptoms today may have been contagious for as long as two weeks prior. The time course of the disease once symptoms appear can be very rapid. A patient's condition can seriously deteriorate in as little as five days (perhaps sooner) following initial detection of symptoms. The current estimated rate for life-threatening complications is approximately 20 percent, with a fatality rate estimated at between 1 percent and 5 percent. All of these risk assessment numbers, however, appear to be rising.
42. It is clear that, currently, the numbers of people diagnosed reflect only a portion of those likely infected; very few people have been tested, and many are asymptomatic, so they do not even know they should be tested. As a result, thousands of people are likely living day to day and carrying a potentially fatal disease that is easily transmitted—and no one is aware of it.

THE SPECIFIC COURSE OF THE PANDEMIC IN PRISONS

¹¹ The Institute for Health Metrics and Evaluation (IHME), *New IHME Projection Sees COVID-19 Deaths in Brazil at More than 125,000* (May 25, 2020), <http://www.healthdata.org/news-release/new-ihme-projection-sees-covid-19-deaths-brazil-more-125000>.

¹² Max Roser et al., *Coronavirus Pandemic (COVID-19)*, <https://ourworldindata.org/coronavirus> (last accessed June 7, 2020).

¹³ Brian Resnick & Christina Animashaun, *Why Covid-19 Is Worse than the Flu, in One Chart*, Vox (Mar. 18, 2020), <https://www.vox.com/science-and-health/2020/3/18/21184992/coronavirus-covid-19-flu-comparison-chart>.

¹⁴ Knvul Sheikh et al., *How Bad Will the Coronavirus Outbreak Get? Here are 6 Key Factors*, N.Y. Times (Feb. 28, 2020), <https://www.nytimes.com/interactive/2020/world/asia/china-coronavirus-contain.html>.

43. In light of COVID-19, individuals in prisons are at risk of serious harm. Prisons are designed to maximize control of the incarcerated population, not to minimize disease transmission or to efficiently deliver health care. These facilities are enclosed environments, much like the cruise ships that were the site of the largest concentrated outbreaks of COVID-19.¹⁵
44. Prisons have even greater risk of infectious spread than other enclosed environments because of conditions of crowding, the proportion of vulnerable people detained, and often scant medical care resources. People incarcerated in prisons live in close quarters and cannot achieve the “social distancing” needed to effectively prevent the spread of COVID-19. Toilets, sinks, and showers are shared, without regular, repeated disinfection between uses. Food preparation and food service is communal, with little opportunity for surface disinfection. Spaces are poorly ventilated, which promotes highly efficient spread of diseases through droplets.
45. Many prisons lack the supplies and staff needed to perform cleaning procedures such as regular disinfection of high-touch surfaces, which is essential to preventing virus spread. Facilities often do not provide adequate opportunities to exercise necessary hygiene measures, such as frequent handwashing or use of alcohol-based sanitizers when handwashing is unavailable. Jails and prisons are often under-resourced and ill-equipped with sufficient hand soap and alcohol-based sanitizers for people detained in and working in these settings.
46. The medical facilities at prisons are almost never sufficiently equipped to handle widespread outbreaks of infectious diseases. To prevent transmission of droplet-borne infectious diseases, people who are infected and ill need to be isolated in specialized airborne negative pressure rooms. Most jails and prisons have few negative pressure rooms if any, and these may be already in use by people with other conditions (including tuberculosis or influenza). Resources will become exhausted rapidly and any beds available will soon be at capacity. As an outbreak spreads, medical personnel become sick and do not show up to work. Facilities can become dangerously understaffed with healthcare providers.
47. Prisons often need to rely on outside facilities (hospitals, emergency departments) to provide intensive medical care given that the level of care they can provide in the facility itself is typically relatively limited. During an epidemic, this will not be possible, as those outside facilities will likely be at or over capacity themselves.
48. As health systems inside facilities are taxed, people with chronic underlying physical and mental health conditions may not be able to receive the care they need. Failure to provide individuals adequate medical care for their underlying chronic health conditions results in increased risk of COVID-19 infection and increased risk of infection-related morbidity and mortality if they do become infected. Moreover, mental health conditions may be exacerbated by the stress of incarceration during the COVID-19 pandemic, including isolation and lack of visitation.
49. As an outbreak spreads through jails, prisons, and communities, correctional officers and other

¹⁵ See e.g., Jamie Ducharme, *Up to 80% of COVID-19 Infections Are Asymptomatic, a New Case Report Says*, Time (May 27, 2020), <https://time.com/5842669/coronavirus-asymptomatic-transmission/>; *Brazil Isolates Cruise Ship in Northeastern Port After Suspected Coronavirus Case*, Reuters (Mar. 13, 2020), <https://www.reuters.com/article/us-health-coronavirus-cruise-ship/brazil-isolates-cruise-ship-in-northeastern-port-after-suspected-coronavirus-case-idUSKBN2101OG>.

security personnel become sick and do not show up to work. Absenteeism poses substantial safety and security risk to both the people inside the facilities and the public

50. Due to the crowded conditions and scarcity of sanitary and medical resources, transmission of infectious diseases in prisons, is incredibly common. These risks are magnified for those diseases, like COVID-19, that are transmitted by respiratory droplets. The experiences of other nations fighting COVID-19 outbreaks demonstrate the particular risk that COVID-19 transmission presents in prison settings. For instance, at the early stages of the pandemic, prisons in China reported more than 500 cases of COVID-19 spread across four facilities, affecting both correctional officers and incarcerated people.¹⁶ Likewise, in the United States, the coronavirus has spread rapidly in various prison environments. For instance, the jail on Rikers Island in New York City went from a single confirmed case to 287 cases in just over two weeks.¹⁷ Similarly, in Cook County, Illinois, the number of positive cases in the county jail rose from 2 to 291 in just two weeks.¹⁸ At one point, an outbreak at Marion Correctional Institution (CI) in Ohio was the largest-known source of coronavirus infections in the United States.¹⁹ Over 80% of the individuals incarcerated at Marion CI tested positive—in other words, over 2,000 of the 2,500 inmates.²⁰ That county is now experiencing above average rates of community spread outside the prison.²¹ This experience demonstrates that once COVID-19 begins spreading within a prison, it is only a matter of time until the outbreak spreads rapidly with many of those inside eventually infected and with the disease soon spreading to the community.
51. COVID-19 threatens the well-being of incarcerated individuals, the corrections staff who shuttle between prisons and outside communities, and members of those outside communities. Staff, visitors, contractors, and vendors who pass between communities and facilities and can bring infectious diseases into facilities. Moreover, rapid turnover of jail and prison populations means that people often cycle between facilities and communities. People often need to be transported to and from facilities to attend court and move between facilities. Strains on the medical systems of prison facilities have implications for the outside hospitals and emergency departments on which those facilities already depend for intensive medical care services. Prison health is public health.
52. Because of the heightened risk of congregate settings, the course of the pandemic in prisons will likely differ in certain ways from the course of the pandemic in society at large. Like

¹⁶ Evelyn Cheng & Huileng Tan, *China Says More than 500 Cases of the New Coronavirus Stemmed from Prisons*, CNBC (Feb. 20, 2020), <https://www.cnbc.com/2020/02/21/coronavirus-china-says-two-prisons-reported-nearly-250-cases.html>.

¹⁷ COVID-19 Infection Tracking in NYC Jails, The Legal Aid Society, *available at* <https://legalaidnyc.org/covid-19-infection-tracking-in-nyc-jails/>.

¹⁸ Tyler Kendall, *“We’re at war with no weapons”*: Coronavirus cases surge inside Chicago’s Cook County jail, CBS NEWS (Apr. 5, 2020), *available at* <https://www.cbsnews.com/news/chicago-cook-county-jail-coronavirus-life-inside-covid-19-cases/>.

¹⁹ Rick Rojas & Michael Cooper, *Georgia, Tennessee and South Carolina Say Businesses Can Reopen Soon*, N.Y. TIMES (Apr. 20, 2020), *available at* <https://www.nytimes.com/2020/04/20/us/coronavirus-us-hot-spots-reopening.html>.

²⁰ Sarah Volpenhein, *Marion prison coronavirus outbreak seeping into larger community*, MARION STAR (Apr. 25, 2020), <https://www.marionstar.com/story/news/local/2020/04/25/marion-prison-ohio-coronavirus-outbreak-seeping-into-larger-community/3026133001/>.

²¹ *Id.*

nursing homes and meatpacking plants, prisons are institutional amplifiers creating “super-spreading events” (SSE) for SARS-CoV-2. This makes them particularly dangerous for accelerating the spread of the disease both within the facility and to the wider community. In fact, new community-wide outbreaks have been documented in several communities worldwide where these institutional amplifiers are located.

53. There are two primary ways in which the course of the pandemic in prisons will be specific to their role as institutional amplifiers of SSEs: (1) absent significant and sustained reductions of the population of prisons, these institutions are likely to increase the risk of further outbreaks of SARS-CoV-2 in communities at large; and (2) further outbreaks will be more dangerous to individuals in prisons than if they were not detained, which in turn increases the risk to the broader community.
54. Prisons can serve as reservoirs of COVID-19 and can increase the risk of future outbreaks. Because it is impossible for prisons to be disconnected from the communities around them, the persistence of SARS-CoV-2 in these facilities will pose a continual risk to the public. The risk of SARS-CoV-2 persisting in these facilities will only decrease to the extent the population in these facilities is reduced and remains reduced, something that is particularly true when it comes to individuals at high risk from COVID-19. Though many corrections departments have tried to combat COVID-19 through other kinds of measures (e.g. infection control, limited social distancing), the continuing and growing outbreaks in these facilities show the difficulty in containing SARS-CoV-2 in these environments. It can only take one weak link to undermine society-wide efforts to combat COVID-19. Prisons threaten to play a similar role, and thus from the standpoint of public health in the society as a whole it is crucial that steps be taken to reduce the risk posed by these facilities as much as possible.²² Due to under-testing and the lag time in obtaining and reporting test results, the discovery of new outbreaks in prisons may be delayed as well.
55. Prisons can serve as an accelerant to the spread of SARS-CoV-2 and people in these facilities will be significantly more at risk from COVID-19. Prisons are tinderboxes for infectious disease. Once SARS-CoV-2 is in such facilities, it will spread rapidly. This will also likely require significant resources from nearby hospitals. Because of the inevitable circulation between prisons in particular at the outside community, both in terms of new arrests but also staff and vendors coming and going, there is a high risk that once SARS-CoV-2 is introduced into these facilities—an outbreak within a facility will then serve as a springboard for further spread to the outside community. Furthermore, transferring individuals between facilities will also increase the risk of transmission between facilities, meaning that COVID-19 could be introduced to a prison in a community that has significantly reduced community spread.²³

²² Hillary Leung, *Singapore Was a Coronavirus Success Story—Until an Outbreak Showed How Vulnerable Workers Can Fall Through the Cracks*, Time (Apr. 29, 2020), <https://time.com/5825261/singapore-coronavirus-migrant-workers-inequality/> (“If we forget marginalized communities, if we forget the poor, the homeless, the incarcerated... we are going to continue to see outbreaks,” says Gavin Yamey, Associate Director for Policy at the Duke Global Health Institute. “This will continue to fuel our epidemic.”).

²³ See, e.g., Dianne Solis, *Virus began spreading in Texas detention center as positive immigrants were quickly transferred in from Northeast*, Dallas Morning News (Apr. 27, 2020), <https://www.dallasnews.com/news/public-health/2020/04/27/virus-began-spreading-in-texas-detention-center-as-positive-immigrants-were-quickly->

56. Even if a prison were able to successfully eliminate an outbreak of SARS-CoV-2 in a facility, increasing the population of that facility—particularly by returning individuals at high risk of COVID-19—poses substantial risks both to those individuals and society at large. Once again, by the time a facility realizes there are new cases, it may well be too late to prevent a full-blown outbreak.

PRISONS CONDITIONS IN BRAZIL AND COMMUNICABLE DISEASE

57. Tuberculosis (TB) is a communicable disease caused by bacteria (*Mycobacterium tuberculosis*) that most often affect the lungs. TB is spread from person to person through the air. Both TB and SARS-CoV-2 are highly contagious and can present with respiratory symptoms and cause infection-related morbidity and mortality. Older people and those with comorbidities are at increased risk of severe disease and adverse outcomes in both diseases.

58. The Yale Global Health Justice Partnership of the Yale Law School and School of Public Health, developed in collaboration with researchers at the Oswaldo Cruz Foundation (FIOCRUZ), a major public health research institution in Brazil, published a 46-page report in March 2019 entitled *Reservoirs of Injustice: How incarceration for drug-related offenses fuels the spread of tuberculosis in Brazil*.

59. Our report found that prisoners in Brazil are especially vulnerable to contracting communicable diseases, and are “on average 23 times as likely to contract TB as members of the general population.”²⁴ Brazil’s “runaway growth of the incarcerated population has led to severe overcrowding in Brazil’s prisons...[as] there were nearly twice as many prisoners as spaces officially available in prison facilities.”²⁵ Such “[r]ampant overcrowding has [] led to extremely poor health and hygiene conditions within the prison system, which a former Minister of Justice has called ‘medieval.’”²⁶ The “combination of unsanitary conditions, intermittent water supply and poor provision of basic necessities contribute to negative health outcomes overall and increased risk of...TB [that] spreads easily in overcrowded, poorly ventilated, and dimly lit spaces—conditions which are all too common.”²⁷ “Since proper ventilation is critical for reducing the risk of TB transmission (TB spreads through the air), those living in poorly ventilated, crowded spaces, such as prison cells, are at a higher risk of becoming infected.”²⁸

60. Overcrowding within a prison worsens ventilation for inmates, thereby increasing the risk of TB transmission. A study conducted in three medium-security prisons in Central-West Brazil found that only three of the 141 cells included in the study met WHO standards for per-person

transferred-in-from-northeast/ (describing how transfer of around 20 individuals from detention in one facility likely triggered rapid spread of COVID-19 in another facility).

²⁴ Yale Global Health Justice Partnership, *Reservoirs of Injustice: How incarceration for drug-related offenses fuels the spread of tuberculosis in Brazil* 3 (March 2019), available at https://law.yale.edu/sites/default/files/area/center/ghjp/documents/reservoirs_of_injustice-how_incarceration_for_drug-related_offenses_fuels_the_spread_of_tb_in_brazil_ghjp_report_2019.pdf [hereinafter, *Reservoirs of Injustice*].

²⁵ *Reservoirs of Injustice*, at 11.

²⁶ *Reservoirs of Injustice*, at 13.

²⁷ *Reservoirs of Injustice*, at 14.

²⁸ *Reservoirs of Injustice*, at 14.

ventilation, projecting that under the prevalent prison conditions, over three-fourths of prisoners exposed to an active case of TB for a period of six months would become infected with the pathogen.²⁹ Overcrowding also inhibits efforts to treat the disease, as overburdened medical staff can seldom keep pace with prisoners' needs for treatment. One subject interview for our report "described how prisoners typically only received medical attention once they were on the brink of death."³⁰

61. Altogether, overcrowding sits at the crux of the issue, contributing to high rates of TB within prisons, and inadequate screening and diagnostic tools prevent prisoners with TB from being identified until late stages of the disease. As such, prisons in Brazil act both as reservoirs and amplifiers for TB, facilitating its spread to surrounding communities.
62. These conclusions above extend to the same concerns regarding SARS-CoV-2 transmission and infection in Brazil's prisons. Based on currently available information, SARS-CoV-2 has already entered the Brazilian prison system and is spreading. According to a May 19 report citing Brazil's National Justice Council, 30 prisoners and 17 prison staff have died of Covid-19, and 1,118 staff and 830 prisoners are infected.³¹ A report citing the Public Defender's Office in Rio de Janeiro, stated instead that between March 15 and May 15, 48 prisoners held in Rio de Janeiro jails had died.³² Because the illness can remain asymptomatic for many people and because Brazil does not have regular, reliable, comprehensive testing, the number of people infected with SARS-CoV-2 is likely to be far larger than the number of documented diagnosed cases.

RISK MITIGATION AS THE ONLY VIABLE PUBLIC HEALTH STRATEGY IN PRISONS

63. So far, high degrees of social distancing have proven to be the only effective method at dramatically reducing the spread of SARS-CoV-2. Until the discovery of a vaccine to prevent transmission or antiviral drugs, which can extend survival and save lives, this will remain the case. Thus, the only viable public health strategy available is risk mitigation. In our opinion, from an epidemiological perspective, prisons in Rio de Janeiro and across Brazil should immediately take the steps necessary to provide for the release of any incarcerated persons who can safely be released. Such steps are necessary for the safety of incarcerated individuals as well as the broader community as Brazil addresses the rapid outbreak of COVID-19.
64. Releasing incarcerated persons has a number of valuable effects on public health and public safety: it allows for greater social distancing, which reduces the chance of spread if virus is

²⁹ See Juliana Urrego et al., *The Impact of Ventilation and Early Diagnosis on Tuberculosis Transmission in Brazilian Prisons*, 93 Am. J. Trop. Med. Hyg. 739 (2015), <https://doi.org/10.4269/ajtmh.15-0166>.

³⁰ *Reservoirs of Injustice*, at 15.

³¹ Tom Hennigan, *Coronavirus: Packed Brazilian jails lead to fears of calamity*, Irish Times (May 19, 2020), <https://www.irishtimes.com/news/world/coronavirus-packed-brazilian-jails-lead-to-fears-of-calamity-1.4257430>.

³² Adry Torres, *Deaths in Brazilian prisons increased by 33 percent during the COVID-19 pandemic but only four were tied to the deadly virus as prisoner advocacy group calls for investigation*, Daily Mail (May 22, 2020), <https://www.dailymail.co.uk/news/article-8348507/Brazil-prison-deaths-increase-33-percent-COVID-19-pandemic-four-tied-virus.html>.

introduced; it allows easier provision of preventive measures such as soap for handwashing, cleaning supplies for surfaces, frequent laundering and showers, etc.; and it helps prevent overloading the work of prison or detention staff such that they can continue to ensure the safety of inmates or detainees. The United Nations High Commissioner for Refugees, recognizing the serious public health risks posed by prisons and detention centers, has urged governments to release prisoners and detainees in order to protect their safety and as part of larger efforts to quell the spread of the virus.³³ Releasing older inmates, inmates with underlying medical conditions, and inmates with disabilities and who are at increased risk of contracting, becoming severely ill from, and/or dying from COVID-19 due to their disability or any medical treatment necessary to treat their disability is even more critical. Such individuals are by definition at greater risk if they remain incarcerated under conditions necessarily present in any detention setting.

65. Reducing these risks requires decreasing prison populations, particularly when it comes to individuals at highest risk from COVID-19. To mitigate the major risks identified above—it will be crucial to avoid increasing the population of prisons, especially when it comes to individuals at high risk of COVID-19. Such individuals are likelier to get sick, infect others, and suffer serious consequences requiring more medical care. From a public health perspective, keeping these individuals out of prisons while the risk of COVID-19 remains present will reduce the danger to them, their families, facility staff, and the community at large. Inversely, if high-risk individuals are returned to jails and prisons prematurely, this likely increases the danger of all of the above. Because these dangers include triggering or accelerating further outbreaks, by the time this has happened it will be too late to undo the harm through re-releasing people.
66. Because alternatives to detention are significantly less expensive, maintaining social distancing through release will both reduce the strain on detention facilities and allow them to direct their resources where they are needed most. When it comes to decisions about detention, the economic calculus weighs in the opposite direction: studies find that it is considerably more cost-effective for individuals in detention to be placed on alternatives to detention than to remain detained.³⁴ This is likely only more true during a pandemic since the prevention and healthcare costs associated with detention will likely skyrocket. Release and social distancing are the most effective remedies to control the spread of COVID-19 in prisons. In addition, prison administrations need to undertake multiple measures such as constant cleaning and disinfection of all common areas and surfaces; regular provision of masks, gloves and PPE to all incarcerated individuals, staff and prison officials; the creation of sufficient dedicated negative pressure rooms for medical isolation of all confirmed or suspected cases; regular testing with PCR tests and painstaking contact tracing for both staff and people in detention; increasing the number and hours of medical staff. As such, the continued use of alternatives to detention will reduce the strain on facilities and agencies, increasing their ability to direct resources to those who remain detained. This will have both individual benefits for those in detention and broader public health benefits, since the safer these facilities and the people

³³ Michelle Bachelet, *UN High Commissioner for Refugees, Urgent Action Needed to Prevent COVID-19 “Rampaging Through Places of Detention”* (Mar. 25, 2020),

<https://www.ohchr.org/en/NewsEvents/Pages/DisplayNews.aspx?NewsID=25745&LangID=E>.

³⁴ See, e.g., Congressional Research Service, *Immigration: Alternatives to Detention (ATD) Programs*, at 13 (July 8, 2019), <https://fas.org/sgp/crs/homesecc/R45804.pdf>.

within them are, the less the risk to staff and surrounding communities.

67. For those inmates not released, it is critical to take measures that, while markedly insufficient in comparison to release, have at least some chance of slowing down the otherwise rapid spread of COVID-19 within the prison setting. These present the barest minimum with respect to such measures, which must necessarily include at least:

- a. *Intensified cleaning and disinfecting procedures, even in those facilities where COVID-19 cases have not yet been identified.* Frequently touched surfaces and objects should be cleaned and disinfected several times per day, especially in common areas. Such “surfaces may include objects/surfaces not ordinarily cleaned daily (e.g., doorknobs, light switches, sink handles, countertops, toilets, toilet handles, recreation equipment, kiosks, and telephones).”³⁵ In addition to regular cleaning routines, prison staff should also “thoroughly clean and disinfect all areas where [a] confirmed or suspected COVID-19 case spent time.”³⁶ Prison authorities should ensure that places and objects, like yard equipment, furniture, holding tanks, and transport vans, are cleaned and disinfected several times per day with disinfectants effective against the coronavirus.
- b. *Provision of adequate cleaning supplies and personnel.* Facilities should ensure adequate supplies to support intensified cleaning and disinfection practices.³⁷
- c. *Provision of a no-cost supply of soap and other hand washing materials to incarcerated persons, sufficient to allow frequent hand washing.* Liquid soap should be provided where possible, and if bar soap must be used, prison authorities should “ensure that it does not irritate the skin and thereby discourage frequent hand washing.”³⁸ Facilities should also provide inmates with running water and hand drying machines or disposable paper towels for hand washing; tissues and no-touch trash receptacles for disposal; and alcohol-based sanitizer with “at least 60% alcohol where permissible based on security restrictions.”³⁹ Prisons should implement a facility-wide protocol, and effectively train residents and staff to use it, whereby a resident who runs out of soap can obtain more promptly.
- d. *Social distancing.* Prison facilities should implement “social distancing strategies to increase the physical space between incarcerated/detained persons...regardless of the presence of symptoms.”⁴⁰ Prescribed measures for implementation of social distancing include enforcing increased spacing between individuals in holding cells and other common spaces, such as dining halls, recreational areas, intake and waiting areas, and medical examination rooms.⁴¹ In housing units, prison administrators should reassign

³⁵ CDC, *Guidance for Correctional & Detention Facilities*, <https://www.cdc.gov/coronavirus/2019-ncov/community/correction-detention/guidance-correctional-detention.html> (accessed May 28, 2020).

³⁶ *Id.*

³⁷ *Id.*

³⁸ *Id.*

³⁹ *Id.*

⁴⁰ *Id.*

⁴¹ *Id.*

units to provide more space between individuals.⁴²

- e. As of June 5, the World Health Organization now recommends that the general public wear cloth masks made from at least three layers of fabric “on public transport, in shops, or in other confined or crowded environments.”⁴³ It also says people over 60 years of age, or with preexisting conditions, should wear medical masks in areas where there is community transmission of the coronavirus and physical distancing is impossible, and that all workers in clinical settings should wear medical masks in areas with widespread transmission.⁴⁴ Congregate facilities such as prisons fulfill the conditions of a confined or crowded environment and thus prisoners should have access to cloth masks as described above. Because of the potential for widespread transmission in prisons and jails, the difficulty in physical distancing, the use of medical masks may have to be considered as well.
- f. *Provision of up-to-date information about COVID-19.* Prison authorities should “communicate clearly and frequently with incarcerated/detained persons about changes to their daily schedule and how they can contribute to [COVID-19] risk reduction.”⁴⁵ They should “[p]rovide up-to-date information about COVID-19 to incarcerated/detained persons on a regular basis” from reputable scientific sources (e.g. in Brazil, FIOCRUZ) and in simple language so that even those with less educational opportunities can understand the risks of COVID-19.⁴⁶ Authorities should post signage throughout the prison facility that (1) identifies the symptoms of COVID-19, (2) provides hand hygiene instructions, and (3) instructs incarcerated people to report symptoms to staff; they should also ensure that “signage is understandable for...those with low literacy[.]”⁴⁷ Finally, authorities should “communicate [COVID-19] information verbally on a regular basis[.]”⁴⁸ and “consider having healthcare staff perform rounds on a regular basis to answer questions about COVID-19.”⁴⁹
- g. *A reliable means by which incarcerated people report symptoms of coronavirus and be seen the same day by medical staff, even if no guards or few guards are on duty in their housing units.* “As soon as an individual develops symptoms of COVID-19, they [...]should be *immediately* placed under medical isolation[.]”⁵⁰ Immediate action decreases the possibility that a person with the virus will transmit it to others in the unit. For immediate action to occur, a means must exist for residents to inform staff

⁴² *Id.*

⁴³ WHO Director-General's opening remarks at the media briefing on COVID-19, WHO (June 5, 2020), <https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19--5-june-2020>.

⁴⁴ CDC, *Guidance for Correctional & Detention Facilities*, <https://www.cdc.gov/coronavirus/2019-ncov/community/correction-detention/guidance-correctional-detention.html> (accessed May 28, 2020).

⁴⁵ *Id.*

⁴⁶ *Id.*

⁴⁷ *Id.* Corine S. Meppelink et al., *Should we be afraid of simple messages? The effects of text difficulty and illustrations in people with low or high health literacy*, 30 *Health Communication* 1181 (2015).

⁴⁸ CDC, *Guidance for Correctional & Detention Facilities*, <https://www.cdc.gov/coronavirus/2019-ncov/community/correction-detention/guidance-correctional-detention.html> (accessed May 28, 2020).

⁴⁹ *Id.*

⁵⁰ *Id.* (emphasis added).

who will take prompt action.

- h. *Temperature checks.* Prison authorities should implement daily temperature checks in housing units where COVID-19 cases have been identified, especially if there is concern that incarcerated/detained individuals are not notifying staff of symptoms.⁵¹
- i. *Reporting of violations.* Effective written policies mean nothing if they are not enforced. Facilities should provide an anonymous mechanism for incarcerated individuals to report ineffective implementation of policies, including if staff violate protocol, so that appropriate corrective action may be taken.
- j. *Medical isolation unique from solitary confinement.* Solitary confinement and quarantine do not provide the protections of medical isolation and should not be used as an alternative.⁵² Moreover, use of solitary confinement can greatly exacerbate mental health conditions, further putting inmates at risk.⁵³

CONCLUSION

- 68. It is our professional opinion that from a public health perspective, the detention of individuals will significantly increase COVID-19 health risks to them, others in the facility, the staff, and the surrounding community. Prisons are kindling for the fires of epidemics. They are the perfect place for outbreaks to take hold, take off, and spread. We have seen it with tuberculosis and other infections in the context of prisons around the world, we are now seeing it with SARS-CoV-2.
- 69. Therefore, from a public health perspective, it is our strong opinion that the population of Rio de Janeiro's and across Brazil prisons must be dramatically reduced as soon as possible. As such, reducing the size of the population in prisons is crucially important to reducing the level of risk both for those within those facilities and for the community at large. A single weak link in the chain can lead to a surge of COVID-19 infections in the broader community. Thus to stop the SARS-CoV-2 epidemic, it must be stopped in prisons and jails. A necessary component of this is reducing the population of these facilities and keeping it reduced.
- 70. This is especially important—indeed a matter of imminent life or death—for individuals with preexisting conditions (including those with lung disease or weakened lungs due to smoking or asthma, heart disease including hypertension, diabetes or prediabetes, blood disorders, chronic liver or kidney disease, inherited metabolic disorders, developmental delays, those who are immunocompromised (such as from cancer, HIV, autoimmune diseases, or immunosuppressant medications), those who have survived strokes, and those who are pregnant) or who are over the age of 50. This list is merely illustrative and not comprehensive.

⁵¹ *Id.*

⁵² See David Cloud, et al., *The Ethical Use of Medical Isolation – Not Solitary Confinement – to Reduce COVID-19 Transmission in Correctional Settings*, Amend (April 9, 2020), https://amend.us/wp-content/uploads/2020/04/Medical-Isolation-vs-Solitary_Amend.pdf.

⁵³ Keramet Reiter et al., *Psychological Distress in Solitary Confinement: Symptoms, Severity, and Prevalence in the United States, 2017-2018*, Am. Pub. Health Ass. (Jan. 22, 2020), available at <https://ajph.aphapublications.org/doi/full/10.2105/AJPH.2019.305375>.

71. Nonetheless, it remains the case, given the conditions in these facilities and the infectiousness of SARS-CoV-2, that *everyone* in those facilities is right now at serious risk of contracting SARS-CoV-2 and at risk of serious disease and death. It is now a matter of hours not days for decisive action to be taken to save lives. In the span of weeks, one case at one facility can mushroom. With current conditions, total spread is sure to follow because of under-resourced, minimally-implemented or impossible infection prevention and control measures.
72. In our opinion, from an epidemiological perspective, the Court should immediately take the steps necessary to provide for the release of any detainees in these facilities, absent extraordinary circumstances. By the time a prison realizes there are new cases it will likely already be too late to prevent a full-blown outbreak in the facility and to prevent it from spreading to the community at large. For this reason, from a public health perspective, it is crucial to err on the side of caution when determining whether to continue to detain someone.
73. Conditions related to COVID-19 are changing rapidly and may change, albeit likely worsen, between the time we execute this Opinion and when this matter appears before the Court.

We declare under penalty of perjury that the foregoing is true and correct.

June 7, 2020
New Haven, Connecticut, United States



Gregg Gonsalves

June 7, 2020
Stanford, California, United States



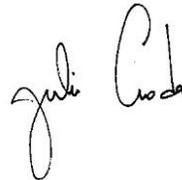
Jason Andrews

June 7, 2020
New Haven, Connecticut, United States



Ted Cohen

June 8, 2020
Campo Grande, Mato Grosso do Sul, Brazil



Julio Croda

June 7, 2020
New Haven, Connecticut, United States



Albert Ko

June 7, 2020
Rio de Janeiro, Brazil



José Roberto Lapa e Silva

June 7, 2020
New Haven, Connecticut, United States



Mary Petrone

June 7, 2020
San Francisco, California, United States



Katharine Walter