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UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA, OAKLAND DIVISION

MARCIANO PLATA, et al.,

Plaintiffs,

vs.

GAVIN NEWSOM, et al.,

Defendants.

Case No. 4:01-cv-01351-JST

NOTICE OF FILING OF REPORT OF J. CLARK KELSO, RECEIVER; DECLARATIONS OF DR. JOSEPH BICK, DR. TARA VIJAYAN, AND MS. TAMMATHA FOSS

TO THE COURT AND ALL PARTIES AND THEIR COUNSEL OF RECORD:

PLEASE TAKE NOTICE that Receiver J. Clark Kelso has filed herewith his Report regarding a mandatory COVID-19 vaccination policy for the California Department of Corrections and Rehabilitation in the instant matter. As reflected in the Report, the Receiver recommends that access by workers to CDCR institutions be limited to those workers who establish proof of vaccination (or have established a religious or medical exemption to vaccination). The Receiver further recommends that incarcerated persons who desire to work outside of the institution (e.g., fire camps) or to have in-person visitation must be vaccinated (or establish a religious or medical exemption). The Receiver respectfully requests that the Court issue an order to show cause why the Court should not order CDCR and CCHCS to implement this recommendation.

In support of the Report, the Receiver has filed herewith the Declarations of Dr. Joseph Bick, Dr. Tara Vijayan, and Ms. Tammatha Foss.

DATED: August 4, 2021

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By: _____
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Report of J. Clark Kelso, Receiver

Regarding a Mandatory COVID-19 Vaccination Policy for California Department of Corrections and Rehabilitation Personnel Working within Institutions and for Incarcerated Persons with Outside Contacts

August 4, 2021

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Table of Contents

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This report sets forth (a) the public health basis for adopting a mandatory COVID-19 vaccination policy, with medical and religious exemptions, for staff working in or entering California Department of Corrections and Rehabilitation (CDCR) institutions; and (b) the Receiver's recommendation of such a policy as a matter of public health necessity as to workers who enter institutions and as to incarcerated persons who accept employment outside CDCR institutions or receive in-person visits.

The Receiver believes, based on the advice of medical and public health professionals, including Dr. Joseph Bick, Director of Healthcare Services, California Correctional Health Care Services (CCHCS), that given the rapid and ongoing spread of the Delta variant in California, mandatory COVID-19 vaccination for institutional staff is necessary to provide adequate health protection for incarcerated persons. Once COVID-19 infection has been introduced into a prison, it is virtually impossible to contain, and staff are indisputably a primary vector for introducing into the prison the infection now spreading rapidly in the larger community. Therefore, the only method to ensure adequate protection and care for incarcerated persons is vaccination of all persons who can bring infections into the prison. The Receiver also accepts the view of medical and public health professionals that such a policy protects the health of staff and the surrounding communities.

The arrival of the Delta variant poses enormous risks to incarcerated persons and staff and to the ability of the medical system to care for patients. The best available medical science shows that in populations—particularly in congregate settings—with significant unvaccinated populations, the Delta variant *will* cause new outbreaks, increased hospitalizations, and deaths. Efforts short of a mandatory vaccination requirement have not raised the vaccination rate sufficiently to prevent these consequences.

A mandatory vaccination policy is medically necessary for those individuals who regularly go in and out of CDCR facilities—or receive visitors to those facilities—and so cannot be effectively quarantined with each visit. That group includes institutional staff and other CDCR employees who enter institutions, and incarcerated persons who choose to work outside an institution or receive in-person visitation. Given the medical case for mandatory vaccination in the circumstances, the Receiver respectfully recommends that the Court issue an order to show cause why it should not order CDCR and CCHCS to implement such a policy.

I. The ability of COVID-19 to cause great harm – including death – to those incarcerated in CDCR institutions is beyond dispute.

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The global COVID-19[1] pandemic has resulted in more than 198 million cases and 4.2 million deaths as of July 2021.[2] Because of unavoidable aspects of prison life, infection rates in California prisons – and in prisons around the world – are dramatically higher than in the free population. In CDCR facilities, 49,580 incarcerated people – 50% of all persons incarcerated by CDCR – have had a confirmed case of COVID-19.[3] To date, 232 incarcerated people have died of COVID-19.[4] By contrast, statewide in California there have been 3.87 million confirmed cases, about 9.5% of the state population, and at least 64,085 deaths.[5] Incarcerated persons are five times as likely to be infected in outbreaks and nearly three times more likely to die.

COVID-19 can cause pneumonia and other severe respiratory symptoms, major organ damage, strokes, blood clots, multisystem inflammatory syndrome, sepsis, and death.[6] Patients who survive COVID-19 often suffer long-term effects including fever, chest pains, shortness of breath, diarrhea, vomiting, sudden onset diabetes and hypertension, mood disorders, and

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[1] Coronavirus disease 2019 (COVID-19) is the disease caused by the coronavirus severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). For ease and clarity, this report will use "COVID-19" throughout to refer both to the virus and the disease it causes.

[2] Johns Hopkins University of Medicine, Coronavirus Resource Center, COVID-19 Dashboard, https://coronavirus.jhu.edu/map.html (accessed Aug. 2, 2021).

[3] California Department of Corrections and Rehabilitation, Population COVID-19 Tracking, https://www.cdcr.ca.gov/covid19/population-status-tracking/ (accessed Aug. 2, 2021).

[4] *Id*.

[5] State of California, Tracking COVID-19 in California, https://covid19.ca.gov/state-dashboard/ (accessed Aug. 2, 2021).

[6] Vijayan Decl. ¶ 4; Mayo Clinic, *COVID-19 (coronavirus): Long-term effects*, https://www.mayoclinic.org/diseases-conditions/coronavirus/in-depth/coronavirus-long-term-effects/art-20490351. *See also* Sapna Bamrah Morris, et al., *Case Series of Multisystem Inflammatory Syndrome in Adults Associated with SARS-CoV-2 Infection – United Kingdom and United States, March-August 2020*, 69 MMWR 1450 (Oct. 9, 2020), https://www.cdc.gov/mmwr/volumes/69/wr/mm6940e1.htm; Myoung-Hwa Lee, et al., *Microvascular Injury in the Brains of Patients with COVID-19*, 384 New Eng. J. Med. 481 (Feb. 4, 2021), https://www.nejm.org/doi/10.1056/NEJMc2033369; Alexander E. Merkler, et al., *Risk of Ischemic Stroke in Patients With Coronavirus Disease 2019 (COVID-19) vs Patients With Influenza*, 77 JAMA Neurology 1366 (July 2, 2020), https://jamanetwork.com/journals/jamaneurology/fullarticle/2768098; Tahmineh Mokhtari, et al., *COVID-19 and multiorgan failure: A narrative review on potential mechanisms*, J. Mol. Histol. (Oct. 4, 2020), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7533045/#; Charles Ochieng' Olwal, et al., *Parallels in Sepsis and COVID-19 Conditions: Implications for Managing Severe COVID-19*, 12 Front. Immunol. (Feb. 3, 2021), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7886971/.

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nervous system disorders.[7] Such long-term symptoms are sometimes experienced by patients who had mild COVID-19 symptoms and the impact may be life-long.[8] Approximately one-third of those with severe cases of COVID-19 develop PTSD.[9] Providing adequate care for COVID-19 patients and their long-term conditions presents insuperable challenges for a medical care system already overburdened.

II. Institutional staff are a primary vector for introducing COVID-19 to prisons.

Institutional staff are primary vectors for introducing COVID-19 into CDCR facilities. This is not a criticism, it is simply a fact: "[e]ven when residents rarely leave, these facilities are highly connected to communities through workers and guests."[10] All of CDCR's institutional staff members live outside the prison and regularly come into contact with friends, family, and local service providers in the surrounding community. They bring the risk of these contacts back with them to CDCR institutions. It cannot be otherwise unless staff effectively become prisoners themselves, taking up residence in the prisons and never traveling beyond the walls for the duration of the pandemic.

Incarcerated persons transferred to a new facility may be tested and quarantined with others who arrived on the same day, limiting the risk that any incarcerated persons who are transferred will introduce COVID-19 into the institution at large. But institutional staff come and go from the institution daily and cannot be quarantined with every entrance. When infections rise in the community, visits can be curtailed and limited. Staff ingress, by contrast, is essential to prison operations.

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[7] Angelo Carfi, et al., *Persistent Symptoms in Patients After Acute COVID-19*, 6 JAMA 603 (July 9, 2020), https://jamanetwork.com/journals/jama/fullarticle/2768351. *See also* Vijayan Decl. ¶ 4.

[8] Ani Nalbandian, et al., *Post-acute COVID-19 syndrome*, 27 Nature Med. 601 (March 22, 2021), https://www.nature.com/articles/s41591-021-01283-z; Thomas M. Drake, et al., *Characterisation of in-hospital complications associated with COVID-19 using the ISARIC WHO Clinical Characterisation Protocol UK: a prospective, multicentre cohort study*, 398 The Lancet 223 (July 17, 2021), https://www.thelancet.com/action/showPdf?pii=S0140-6736%2821%2900799-6.

[9] Delfina Janiri, et al., *Posttraumatic Stress Disorder in Patients After Severe COVID-19 Infection*, 78 JAMA Psychiatry 567 (February 18, 2021), https://jamanetwork.com/journals/jamapsychiatry/fullarticle/2776722.

[10] Elizabeth C. Lee, et al., *The engines of SARS-CoV-2 spread*, 370 Science 406 (Oct. 23, 2020), https://science.sciencemag.org/content/370/6515/406 (emphasis added) (identifying prisons and other congregate facilities as particularly vulnerable to COVID).

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While staff members are tested, testing is universally recognized as a far imperfect substitute for vaccination. Staff may be infected between tests. And even when tested, COVID-19 is often not detectible by test in its early incubation period.

The factually obvious and inevitable role of staff in bringing infections from the larger community into the prisons has been borne out by the now-long record of COVID-19 in CDCR facilities.[11] Half of all outbreaks in May, June, and July have been confirmed to have originated with staff.[12] Analysis of the remaining outbreaks during that time is ongoing—genomic sequencing takes weeks or months—and those outbreaks, too, may eventually be traced back to staff.[13]

Because of their job responsibilities, institutional staff infected with COVID-19 are virtually certain to come into contact with incarcerated persons and other corrections officers who will, in turn, come into contact with incarcerated persons. Corrections officers have frequent close contact with incarcerated persons, typically working their entire shifts in the spaces in which incarcerated persons live. They have many responsibilities that place them in close contact with incarcerated persons each day, including supervising incarcerated persons as they get their meals and their mail, performing pat-downs for contraband when entering and exiting the yard each day, and handcuffing and escorting incarcerated persons throughout the institution.[14] Corrections officers often move between various parts of a facility over the course of a day based on the needs of the institution, and frequently work overtime in areas of the institution to which they are not permanently assigned. Infected officers are not only likely to infect incarcerated persons, the spread is unlikely to be contained to one part of the facility.[15]

Frequent testing is insufficient to prevent institutional staff who are unaware that they have COVID-19 from spreading the virus. Under the State Public Health Officer Order of July 26, 2021, unvaccinated corrections officers must be tested for COVID-19 once each week.[16] CDCR has indicated that although the COVID-19 safety measures adopted by the State require only weekly testing, it will test unvaccinated employees twice per week.[17] Tests can detect a positive case only where a certain viral load is present, so a recently infected individual may not

[11] Bick Decl. ¶¶ 15-17.
[12] Bick Dec. ¶ 17.
[13] Bick Decl. ¶ 17, Ex. A at 3-4.
[14] Foss Decl. ¶ 3.
[15] Foss Decl. ¶ 4; Vijayan Decl. ¶ 16.
[16] California Department of Public Health, *State Public Health Officer Order of July 26, 2021*, https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/COVID-19/Order-of-the-State-Public-Health-Officer-Unvaccinated-Workers-In-High-Risk-Settings.aspx#.YQAuOFRMEO4.mailto.
[17] *See* ECF No. 3623 at 7.

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test positive for several days after exposure.[18] Results of COVID-19 tests are also typically available only after a wait of a day or longer.[19] An infected staff member might work two or three days before being tested; a newly infected staff member may test negative, continue working and reach a viral load sufficient to transmit the virus before being tested again and finally receiving a positive test result.

Because as much as 40 percent of transmission is pre-symptomatic,[20] individuals who receive false negative test results or who test too early may be unaware they are contagious throughout this period. As a result, the twice-per-week testing regimen does not effectively prevent asymptomatic staff from introducing COVID-19 to CDCR institutions. Indeed, even daily testing would not do so. Testing is an essential component of any plan, but it is not a substitute for vaccination.

The widely recognized link between community outbreaks of COVID-19 and outbreaks in nearby prisons through institutional staff is why the Federal Bureau of Prisons ("BOP") recommended early in the pandemic that staff vaccination be prioritized when the supply of vaccines was limited:

> Vaccinating correctional staff will serve to decrease the possible introduction of SARS-CoV-2 into institutions and thus protect inmates. In the context of limited quantities of vaccine, the BOP recommends offering vaccination *to staff first as the best way to achieve the greatest public health benefit* to inmates, staff, and communities.[21]

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[18] Bick Decl. ¶ 20; Lauren M. Kucirka, et al., *Variation in False-Negative Rate of Reverse Transcriptase Polymerase Chain Reaction-Based SARS-CoV-2 Tests by Time Since Exposure*, 20 Ann. Intern. Med. 1495 (May 13, 2020), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7240870/#.

[19] Bick Decl. ¶ 20.

[20] Xi He, et al., *Temporal dynamics in viral shedding and transmissibility of COVID-19*, Nature Med. (Apr. 15, 2020), https://www.nature.com/articles/s41591-020-0869-5; Xiang Ren, et al., *Evidence for pre-symptomatic transmission of coronavirus disease 2019 (COVID-19) in China*, 15 Influenza Other Respi. Viruses 19 (January 2021), https://onlinelibrary.wiley.com/doi/full/10.1111/irv.12787. *See also* Vijayan Decl. ¶ 7.

[21] Federal Bureau of Prisons, *COVID-19 Vaccine Guidance: Federal Bureau of Prisons Clinical Guidance* 5 (January 4, 2021), https://www.bop.gov/resources/pdfs/2021_covid19_vaccine.pdf (emphasis added).

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The Receiver and the CDCR medical experts agree: Vaccination of staff is *the best way* to achieve the greatest health benefits for incarcerated persons. There is no other equally effective method.

III. Once introduced, COVID-19 spreads rapidly in prisons.

Studies have repeatedly found that COVID-19 spreads far more rapidly inside jails and prisons than in other environments. The central metric for understanding the spread of COVID-19 is the reproduction rate ("R")—the number of people each infected person, on average, infects over the course of their illness. An R below 1, "subcritical transmission," indicates that each infected person infects less than one other person in turn, on average.[22] If R remains below 1 for a sustained period of time, the disease will disappear.[23] By contrast, when R is above 1, we have "supercritical transmission," and the outbreak will grow.[24]

A project by prominent medical and public health experts to model the reproduction rate of COVID-19 across California estimates that at no time in the pandemic has California's state-wide R exceeded 1.5. Each infected person, on average, infects 1.5 others. The study also estimates that the R has not exceeded 1.5 in any of the six Bay Area counties, nor in Los Angeles or Orange counties, until the arrival of the Delta variant in July 2021.[25]

The transmission rate in prisons is far higher. One modeling study found that, even before the Delta variant, the R of COVID-19 in a large, urban jail in the United States is approximately 8.44.[26] Each infected person infects 8 others. In other words, the reproduction rate in a prison would be expected to be more than 5 times the highest reproduction rate experienced in California and its major metropolitan counties.

The consequence of this greatly elevated rate is inevitable: it produced a staggeringly high incidence of COVID-19 in CDCR facilities and in other jails and prisons. Since the beginning of the pandemic, there have been more than 200 outbreaks of COVID-19 in California jails and

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[22] Lee Worden, et al., *Estimation of COVID-19 transmission rates in California and the U.S. with reporting delays* (May 14, 2020), https://www.medrxiv.org/content/10.1101/2020.05.14.20101162v1.full.pdf.

[23] *Id*.

[24] *Id*.

[25] Lee Worden, et al., *COVID-19 R estimation for California*, https://ca-covid-r.info/ (visited Aug. 2, 2021) (providing updated data to the study at n.22).

[26] Lisa B. Puglisi, et al., *Estimation of COVID-19 basic reproduction ratio in a large urban jail in the United States*, 53 Ann. Epidemiol. 103 (Jan. 2021), https://www.sciencedirect.com/science/article/abs/pii/S1047279720303471?via%3Dihub.

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prisons.[27] A study of federal and state prisons in the United States concluded that the mean daily case growth rate was 8.3% per day in prisons as compared to 3.4% in the country as a whole, and that the fatality rate, adjusted for age, was 3 times higher for incarcerated individuals than the population at large.[28] Another study estimated an age- and sex- adjusted COVID-19 mortality rate for incarcerated persons 2.95 times that of the US population at large.[29] This result has been confirmed in detailed regional studies.[30]

COVID-19 spreads so rapidly in prisons because of the design of facilities, the manner in which they must be operated, population density, and the transmission characteristics of the virus. COVID-19 may be transmitted by close contact with an infected individual or by contact with a surface which contains live virus, each of which is difficult to prevent in prisons. The Director of the California Department of Public Health is in agreement, noting that jails and prisons are "residential facilities where the residents have little ability to control the persons with whom they interact. There is frequent exposure to staff and other residents."[31] Institutions were designed long ago with the goal of building a safe security environment in which incarcerated persons could be housed in a cost-effective manner. One aspect of this design is extreme population density. These facilities were not designed to prevent the transmission of COVID-19, and while CDCR and CCHCS have made substantial efforts to limit transmission where possible, experience shows that it is not possible to change many aspects of institutions that cause a high COVID-19 transmission rate. Improvements on this front are vital, but infection rates will remain high, and the benefits of improvements pale in comparison to the benefits of vaccination.

A. Means of Transmission in Prisons

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[27] California Department of Public Health, *supra* note 16.

[28] Brendan Saloner, et al., *COVID-19 Cases and Deaths in Federal and State Prisons*, 324(6) JAMA 602 (July 8, 2020), https://jamanetwork.com/journals/jama/fullarticle/2768249?resultClick=1.

[29] Brendan Saloner, et al*., COVID-19 Cases and Deaths in Federal and State Prisons* [published online ahead of print, 2020 Jul 8] 324 *JAMA* 2020, 602–603. doi:10.1001/jama.2020.12528 (as of June 6, 2020), https://pubmed.ncbi.nlm.nih.gov/32639537/.

[30] Monik C. Jimenez, et al., *Epidemiology of COVID-19 Among Incarcerated Individuals and Staff in Massachusetts Jails and Prisons*, JAMA Netw. Open. (August 21, 2020), https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2769617?resultClick=1 (documenting in Massachusetts state jails and prisons Massachusetts state prisons an infection rate 2.91 times higher than the state average and 4.80 times the national average).

[31] California Department of Public Health, *supra* note 16.

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COVID-19 is transmitted by inhalation of aerosolized particles; deposition of the virus directly on exposed mucus membranes; and fomite transmission, by touching an object on which the virus has been left by someone shedding virus.[32] The greater the amount of virus to which an individual is exposed, and the more prolonged the exposure, the greater the likelihood that the individual will contract COVID-19.[33] Prison conditions put people in sustained close contact, causing exposure to a greater amount of virus for far longer periods of time, and thus a greater likelihood of contraction.[34]

1. *Close Contact Transmission*

COVID-19 spreads much more in congregate facilities such as prisons because "those who live in congregate residences such as prisons, worker dormitories, and long-term care facilities have intense, long-duration, close contact. . . . The confluence of these factors can lead to high infection rates in outbreaks (attack rate); for example, 66% of residents were infected in a homeless shelter, 62% in a nursing home, and 80% in a prison dormitory."[35] The CDC defines close contact as a cumulative fifteen minutes within six feet of an infected individual over a 24 hour period.[36] In congregate facilities in which people remain in the same spaces with each other for many hours, such contact is inevitable and far more common than in the general population.[37] Incarcerated persons share spaces with one another throughout the day: common areas, gyms and recreational spaces, bathrooms, showers, and cafeterias are all typically communal.[38] Sleeping quarters are typically communal as well.[39]

While communal spaces make social distancing challenging under any circumstances, the crowded nature of CDCR institutions leaves insufficient space to make distancing possible.

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[32] Centers for Disease Control and Prevention, SARS-CoV-2 Transmission (May 7, 2021), https://www.cdc.gov/coronavirus/2019-ncov/science/science-briefs/sars-cov-2-transmission.html.
[33] Bick Decl. ¶ 22.
[34] *Id*.
[35] Elizabeth C. Lee, et al., *The engines of SARS-CoV-2 spread*, 370 Science 406 (Oct. 23, 2020), https://science.sciencemag.org/content/370/6515/406.
[36] Centers for Disease Control and Prevention, Case Investigation & Contract Tracing Guidance, Appendices (updated July 9, 2021), https://www.cdc.gov/coronavirus/2019-ncov/php/contact-tracing/contact-tracing-plan/appendix.html.
[37] Bick Decl. ¶¶ 22-23; Vijayan Decl. ¶¶ 9-11, 14.
[38] Foss Decl. ¶ 7.
[39] Foss Decl. ¶ 5.

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CDCR's population is currently at 109.3% of its design capacity.[40] These design capacities, even when not exceeded, did not anticipate the need to maintain six feet of distance from others at all times. As a result, the bedrooms, common areas, cafeterias, bathrooms, and other spaces incarcerated persons share are too crowded to allow for consistent social distancing.[41]

Prison operations require people from throughout the prison to come into contact with each other, making it difficult to isolate an outbreak to only one housing unit or yard. For example, prisons often share a single cafeteria.[42] And each individual in a prison, even in quarantine, must be visited by a corrections officer on rounds every day.[43] People from different housing units come in close contact with each other in medication distribution, dining areas, the laundry, telephones, transportation, and in performing work assignments throughout the prison.[44] It is typical for an incarcerated person to be required to come into contact with others throughout the prison multiple times per day.

Masking is also less effective in congregate facilities because incarcerated persons and staff cannot wear a mask at all times. The chance of transmitting the virus is increased by removing a mask, including when that person is eating or sleeping, yet those are necessary exceptions to masking requirements.[45] In CDCR institutions, incarcerated persons are indoors and in close proximity to others while they are eating or sleeping.[46]

While sleeping arrangements vary across CDCR facilities, the most common arrangement is for incarcerated persons to sleep in bunk beds placed within a few feet of each other.[47] This arrangement can allow for transmission between incarcerated persons sharing a bunk bed, and between neighboring beds, particularly because people do not wear masks while sleeping and the very long exposure period of several hours allows for transmission of a large amount of virus.[48] Although individual or small group cells are an improvement over these dormitory conditions, those cells often have one wall that is open with bars or other

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[40] California Department of Corrections and Rehabilitation, Three-Judge Court Monthly Update (June 15, 2021), https://www.cdcr.ca.gov/3-judge-court-update/.
[41] Foss Decl. ¶¶ 5, 7, 8, 9, 10.
[42] Foss Decl. ¶ 8; Bick Decl. ¶ 21.
[43] Foss Decl. ¶ 3.
[44] Foss Decl. ¶ 10.
[45] Bick Decl. ¶¶ 25-26.
[46] Foss Decl. ¶¶ 5, 8.
[47] Foss Dec. ¶ 5.
[48] Vijayan Decl. ¶ 15; CDCR CCHCS Memorandum, *Recommended COVID-19 Personal Protective Equipment and Physical Distancing Requirements for Staff and Inmate-Patients Update* (May 10, 2021), ECF No. 3592-1 Ex. A. at 3-4.

perforations rather than a solid door, and are in close proximity to one another,[49] still permitting transmission.

Many individuals sleeping in a single room would be dangerous even with single beds rather than bunk beds and even with six feet between each bed.[50] For example, medical and public health experts from UC Berkeley and UCSF visited the Substance Abuse Treatment Facility and State Prison at Corcoran (SATF) and concluded that, in order to minimize COVID-19 risk, dorms with a capacity of fifty people should house only three people, and that small dorms with a capacity of six people and cells with capacity of two people should both house only a single person.[51] A prison system operating at 109% of design capacity simply cannot meet these idealized conditions.

Thus, CDCR institutions, by their design, current population, and operation, pose a great and ineliminable risk of COVID-19 transmission by close contact, even where rules regarding masking and social distancing are enforced.

Even where greater social distancing is possible, airborne transmission is also a substantial risk in indoor conditions. Indoor conditions, including air conditioning, fans, and heating systems, facilitate transmission by carrying droplets further than six feet – up to 19 to 26 feet away.[52] Particularly in spaces where ventilation uses recycled air with insufficient filtering, these droplets build up over time. The virus can survive for approximately three hours in such droplets suspended in the air. These conditions, in which a person infected with COVID-19 may remain in a single space for a long period of time, make congregate living dangerous even where individuals are further than six feet apart.[53]

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[49] Foss Decl. ¶ 6; Bick Decl. ¶ 27.

[50] Vijayan Decl. ¶ 15.

[51] ECF No. 3566 at 17-21. *See also* ECF No. 3579 at 14-15; ECF No. 3592 at 14-17.

[52] Vijayan Decl. ¶¶ 9-11; Lydia Bourouiba, Images in Clinical Medicine: *A Sneeze*, 375 New Eng. J. Med. e15 (Aug. 25, 2016), https://www.nejm.org/doi/full/10.1056/nejmicm1501197; Francis W. Moses, et al., *COVID-19 outbreak associated with air conditioning in restaurant, Guangzhou, China, 2020*, 26 Emerging Infectious Diseases 2298 (Sept. 2020), https://doi.org/10.3201/eid2609.201749; M. Saiful Islam, et al., *Current knowledge of COVID-19 and infection prevention and control strategies in healthcare settings: A global analysis*, 41 Infection Control & Hospital Epidemiology 1196, 1196–1206 (Oct. 2020), https://doi.org/10.1017/ice.2020.237.

[53] Center for Disease Control and Prevention, *Scientific Brief: SARS-CoV-2 and Potential Airborne Transmission* (Oct. 5, 2020), https://www.cdc.gov/coronavirus/2019-ncov/more/scientific-brief-sars-cov-2.html. *See also* Neeltje van Doremalen, et al., *Aerosol and Surface Stability of*

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Indeed, ventilation which uses recirculated air and insufficient filters may spread the virus even to people housed in single-person cells with solid doors.[54] Efforts to install filters to mitigate this condition are ongoing, but are in any event only a small step toward reducing the high risks of infection through repeated and continuous exposure in congregate conditions.[55] Poor circulation is also exacerbated by the lack of openable windows, often making it impossible to comply with CDC guidance that windows be opened to allow air circulation after an infection has been present in a building.[56]

2. *Fomite Transmission*

In congregate spaces such as prisons, fomite transmission is also a much greater risk because many people are in regular contact with the same objects and surfaces. Incarcerated persons share the same tables, chairs, bathroom facilities, and phones, among other items – items used not merely by one or two family members, but by many incarcerated persons.[57] The length of time the virus can survive in a droplet on a surface depends upon the surface material; however, COVID-19 can survive as long as two to three days on plastic or stainless steel.[58] Without nearly constant cleaning, COVID-19 may be transmitted in prisons by contact with surfaces in communal spaces.

B. Facility Design

As noted above, the spaces in which incarcerated persons live are generally too densely populated to allow for social distancing, and inadequate ventilation in CDCR institutions can exacerbate this difficulty.

SARS-CoV-2 as Compared with SARS-CoV-1, 382 New Eng. J. Med. 1564 (Mar. 17, 2020), https://www.nejm.org/doi/10.1056/nejmc2004973.

[54] ECF No. 3566 at 17-21. *See also* ECF No. 3579 at 14-15; ECF No. 3592 at 14-17.

[55] Moreover, while a substantial number of housing units at eleven prisons utilize a MERV-13 filter, eighteen institutions have yet to make this change, with fifteen planning to do so by October. ECF No. 3605 at 10-11.

[56] Centers for Disease Control and Prevention, *Interim Guidance on Management of Coronavirus Disease 2019 (COVID-19) in Correctional and Detention Facilities*, at (Jul. 22, 2020), https://www.cdc.gov/coronavirus/2019-ncov/community/correction-detention/guidance-correctional-detention.html.

[57] Foss Decl. ¶ 11.

[58] Centers for Disease Control and Prevention, *Science Brief: SARS-CoV-2 and Surface (Fomite) Transmission for Indoor Community Environments* (updated Apr. 5, 2021), https://www.cdc.gov/coronavirus/2019-ncov/more/science-and-research/surface-transmission.html#ref10.

Facilities limitations also make effective quarantining difficult. For those under quarantine in prisons, the CDC recommends that "[i]deally, each quarantined individual should be housed in a single cell with solid walls and a solid door that closes."[59] Throughout the pandemic, CDCR has not had enough solid-door cells at many institutions to follow this guidance.[60]

C. Other Factors

Quarantining in CDCR facilities has also been complicated by some incarcerated persons refusing to leave their cell or dorm despite qualifying for quarantining.[61] While the reasons for such refusal vary, interviews conducted by the *Plata* Plaintiffs suggest that some reasons include fear of social isolation, loss of pay from work, loss of their previous housing and the community networks they have built there, the location of quarantine facilities in a Sensitive Needs Yard where they did not believe they would be safe, and mistrust of custody and medical leadership.[62] CDCR has taken steps to identify and address these issues, including adopting many of the *Plata* Plaintiffs' proposals to ameliorate refusals. But the persistent problem illustrates the complexity of preventing the spread of infection within the prison environment.

* * *

In sum, prison systems, even those that take important mitigation measures such as masking and social distancing, are not designed and operated to prevent the transmission of a highly contagious virus and cannot be redesigned to do so effectively in the near term. The conditions of confinement and the manner in which prisons are operated deprive incarcerated people of the same opportunities to protect themselves through social distancing and limiting contact that are available to the public at large. Limiting the introduction of COVID-19 into prisons is critical to protecting the health of incarcerated people.

IV. Once infected, incarcerated persons with COVID-19 have worse health outcomes than the population at large.

Studies of health outcomes for incarcerated persons with COVID-19 in prison systems confirm that incarcerated persons have worse health outcomes on average than the population

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[59] Bick Decl. ¶ 27; Center for Disease Control and Prevention, Interim Guidance on Management of Coronavirus Disease 2019 (COVID-19) in Correctional and Detention Facilities (June 9, 2021), https://www.cdc.gov/coronavirus/2019-ncov/community/correction-detention/guidance-correctional-detention.html.

[60] ECF No. 3502 at 2-7. *See also* Foss Decl. ¶¶ 5, 6.

[61] ECF No. 3545 at 27-28.

[62] ECF No. 3548 at 11-15.

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as a whole. One study of patients in Michigan found that this was true even when incarcerated persons were treated in hospitals.[63] The study found incarcerated persons were more likely to be admitted to the intensive care unit (26.9% vs. 18.7%), require respirators (24.1% vs. 9.9%), and require intubation (25.0% vs. 15.2%).[64] Incarcerated persons were also more likely to die in the hospital (29.6% vs. 20.1%) and more likely to die after 30 days (34.3% vs. 24.6%).[65]

Incarcerated persons experience worse health outcomes in part because they have risk factors for COVID-19 at a disproportionate rate compared to the general public. Incarcerated persons have high rates of chronic illnesses including diabetes, heart disease, chronic lung disease, and immunosuppressive illnesses, as well as other risk factors owing to poor access to medical care prior to incarceration or a history of alcohol or drug abuse.[66] For these reasons, incarcerated persons are often considered effectively ten years older, physiologically, than their chronological age,[67] and they experience worse health outcomes accordingly.[68] The more of these risk factors an individual has, the greater the medical care challenges and the greater the risk of a poor health outcome.[69]

Prison conditions also increase the difficulty of securing good patient outcomes. Patients experiencing severe symptoms may need treatment in community medical facilities, such as an area hospital. But many prisons are located in rural areas with poor access to

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[63] Ahmed M. Altibi, et al., *Characteristics and comparative clinical outcomes of prisoner versus non-prisoner populations hospitalized with COVID-19*, Scientific Reports (March 22, 2021), https://www.nature.com/articles/s41598-021-85916-w.

[64] *Id*.

[65] *Id*.

[66] Jennifer Bronson, et al., *Drug Use, Dependence, and Abuse Among State Prisoners and Jail Inmates, 2007-2009*, U.S. Department of Justice, Bureau of Justice Statistics (updated Aug. 10, 2020), https://bjs.ojp.gov/content/pub/pdf/dudaspji0709.pdf (approximately 58% of convicted persons incarcerated in state prisons meet DSM IV criteria for substance use dependence or abuse).

[67] Brie A. Williams, et al., *Aging in Correctional Custody: Setting a Policy Agenda for Older Prisoner Health Care*, 102 Am. J. Pub. Health 1475 (Aug. 2012) https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3464842/.

[68] Ingrid A. Binswanger, et al., *Health Disparities and the Criminal Justice System: An Agenda for Further Research and Action*, 89 J. Urban Health 98 (Feb. 2012), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3284594/.

[69] Wei-jie Guan, et al*., Comorbidity and its impact on 1590 patients with COVID-19 in China: a nationwide analysis*, 55 Eur. Respir. J. (May 14, 2020), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7098485/.

community healthcare, and transportation to a far-away hospital may be necessary.[70] Delays in accessing care for serious COVID-19 cases may be critical.[71]

V. COVID-19 outbreaks exacerbate the healthcare delivery inadequacies that the core mission of the Receivership addresses.

The experience of the pandemic to date has demonstrated beyond dispute the obvious fact that COVID-19 diverts scarce healthcare resources from managing chronic health conditions.[72] CCHCS continues to take precautions against a renewed spread of an even worse variant that will again prevent routine care.[73] When an outbreak is ongoing in an institution, non-essential medical services are postponed. Only after 14 days without a new infection in that institution can medium priority healthcare services like preventative care and screenings resume.[74] Routine clinical operations are suspended until 28 days without a new infection.[75]

Even when there is no recent outbreak in an institution, prevention protocols interfere with the provision of adequate medical services. The risk of COVID-19 requires social distancing in medical clinic waiting areas and the cleaning of holding cells and exam rooms between each appointment, limiting the number of appointments per day.[76] As a result of COVID-19, between January 31, 2020, and March 15, 2021, the backlog of overdue primary care appointments grew from 2,700 to 6,600.[77]

The risk to healthcare providers of contracting COVID-19 at work, the need for the use of excessive overtime, and the stress of providing care in institutions with extraordinarily high

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[70] Bick Decl. ¶ 6.

[71] Jenna S. Silverstein, et al., *Acute Respiratory Decompensation Requiring Intubation in Pregnant Women with SARS-CoV-2 (COVID-19)*, 10 Am. J. Perinatology Rep. e169 (June 4, 2020), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7272216/; Matthew E. Hartman, et al., *COVID-19 Respiratory Failure: Targeting Inflammation on VV-ECMO Support*, 66 ASAIO Journal 603 (June 2020), https://journals.lww.com/asaiojournal/fulltext/2020/06000/covid_19_respiratory_failure__targeting.4.aspx.

[72] Bick Decl. ¶ 7.

[73] California Department of Corrections and Rehabilitation, Roadmap to Reopening (April 20, 2021), https://www.cdcr.ca.gov/covid19/reopening/roadmap/.

[74] *Id*.

[75] *Id*.

[76] ECF No. 3592 at 17.

[77] *Id*.

COVID-19 caseloads have also made it more difficult to staff healthcare units fully, as the difficult working conditions have reduced the size of the workforce.[78]

VI. The Delta variant will continue to cause additional outbreaks.

The risk now is grave. We cannot afford to be lulled by the decline in infections in CDCR, which mirrored the fall in rates in the larger community. That fall in rates is, unfortunately, already a thing of the past. That fire may be dying, but a new one is starting: As Dr. Tomás J. Aragón, Director of the California Department of Public Health, now reports, "California is currently experiencing the fastest increase in COVID-19 cases during the entire pandemic."[79] As rates rise rapidly, more institutional staff will come to work with COVID-19, unaware they are ill, introducing COVID-19 into CDCR institutions.[80] Indeed, case rates among staff members have increased by more than 500% in recent weeks.[81]

This is not a mere repetition of the early days of the pandemic. This new wave threatens to be worse. The Delta variant is twice as transmissible as the original Wuhan strain.[82] The natural immunity provided by having previously been infected with COVID-19 may not provide robust protection against the Delta variant, both because natural immunity wanes over time, possibly within months,[83] and because the immunity provided by earlier variants may not provide the same level of immunity to the Delta variant.[84] Each of these factors may allow individuals who have previously contracted COVID-19 to be re-infected with the Delta variant.

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[78] Bick Decl. ¶ 12.
[79] California Department of Public Health (July 26, 2021), *supra* note 16.
[80] Bick Decl. ¶¶ 14-18, 20, 30.
[81] Bick Decl. ¶ 30.
[82] Vijayan Decl. ¶ 12; Scientific Pandemic Influenza Group on Modeling, Operational sub-group (SPI-M-O), *Consensus Statement on COVID-19* (June 2, 2021), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/993321/S1267_SPI-M-O_Consensus_Statement.pdf.
[83] Bick Decl. ¶ 31; Jeffrey Seow, et al., *Longitudinal observation and decline of neutralizing antibody responses in the three months following SARS-CoV-2 infection in humans*, 5 Nature Microbiology 1598 (Oct. 26, 2020), https://www.nature.com/articles/s41564-020-00813-8.
[84] Bick Decl. ¶ 31; Emanuele Andreano & Rino Rappuoli, *SARS-CoV-2 escaped natural immunity, raising questions about vaccines and therapies*, 27 Nature Med. 759 (May 10, 2021), https://www.nature.com/articles/s41591-021-01347-0.

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Research results are mixed, but early evidence suggests that health outcomes for those infected with the Delta variant may be worse than for those infected with previous variants, causing hospitalization and death in a greater proportion of cases.[85]

The Delta variant is now the predominant strain of COVID-19 in California, accounting for 82.8% of tested samples in July 2021.[86] Case counts across the state are climbing rapidly. The reproduction rate is the highest it has been in the course of the pandemic. Five counties currently have an R at or above 1.50.[87] This is consistent with past waves, where the reproduction rate was a leading indicator that cases would surge. Positive COVID-19 tests of staff and incarcerated persons in CDCR in July reflect a similarly high percentage of Delta variant infections.[88]

Recognizing the building third wave, public health agencies are now taking action to slow the growth rate of new COVID-19 infections. Two weeks ago, on July 15, 2021, Los Angeles County announced that masks would again be required in indoor public spaces, regardless of vaccination status.[89] The State of California announced on July 26, 2021, that all state employees and employees in certain high-risk environments must provide proof of vaccination or submit to weekly or bi-weekly testing for COVID-19.[90] Following the many hospital systems adopting a mandatory vaccination policy, the Department of Veterans Affairs mandated vaccination for all health care personnel working in or visiting Veterans Health Administration facilities.[91]

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[85] Aziz Sheikh, *SARS-CoV-2 Delta VOC in Scotland: demographics, risk of hospital admission, and vaccine effectiveness*, The Lancet (June 14, 2021), https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)01358-1/fulltext.
[86] California Department of Public Health, Tracking Variants (updated July 22, 2021), https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/COVID-19/COVID-Variants.aspx.
[87] Lee Worden, et al., *supra* note 25 (providing updated data to the study at note 22).
[88] Bick Decl. ¶ 30.
[89] Luke Money & Rong-Gong Lin II, *L.A. County will require masks indoors amid alarming rise in coronavirus cases*, L.A. Times (July 15, 2021), https://www.latimes.com/california/story/2021-07-15/l-a-county-will-require-masks-indoors-amid-covid-19-surge.
[90] California Department of Public Health, *supra* note 16.
[91] U.S. Department of Veterans Affairs, Office of Public and Intergovernmental Affairs, *VA mandates COVID-19 vaccines among its medical employees including VHA facilities staff* (July 26, 2021), https://www.va.gov/opa/pressrel/pressrelease.cfm?id=5696.

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Recent large-scale outbreaks demonstrate the risk COVID-19 still presents to prisons. A recent outbreak in Solano sickened 93 incarcerated persons and spread to two of four yards.[92] The vaccination rate for corrections officers at Solano is only 46%.[93]

The virus will continue to mutate, likely generating more transmissible varieties.[94] Variants of Concern (VOC's), such as the Delta variant, have been confirmed to increase transmissibility or virulence, or to decrease the effectiveness of disease prevention measures and treatments.[95] The World Health Organization is also currently tracking four variants currently designated as Variants of Interest (VOI) – variants with genetic changes believed to affect characteristics like transmissibility and disease severity with significant community transmission.[96] Among those Variants of Interest—which may become confirmed Variants of Concern—is the Lambda variant, which may already be driving higher infection rates in South America, and has spread rapidly to other countries, including the United States.[97]

Absent very high levels of vaccination, the Delta variant and other future variants will become more common in California, and there almost certainly will be additional large-scale outbreaks in CDCR facilities.[98] The responsibility to act includes the responsibility to act before it is too late. Now is the time to take decisive steps to minimize this risk.

VII. Vaccination at very high levels is the only effective measure for preventing outbreaks.

The higher reproduction rate from both the Delta variant and the great risk of spread in prison conditions necessitates a resolute effort to block the transmission of the disease into the prison environment.[99] Popular belief notwithstanding, there is no known percentage for achieving so-called "herd immunity" either in the larger community or in prisons. The best way

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[92] Bick Decl., Ex. A at 3.
[93] Bick Decl., Ex B.
[94] Bick Decl. ¶ 33.
[95] World Health Organization, Tracking SARS-CoV-2 variants (accessed Aug. 3, 2021), https://www.who.int/en/activities/tracking-SARS-CoV-2-variants/.
[96] *Id*.
[97] Clive Cookson & Gideon Long, *Lambda Covid variant's 'unusual' mutations puzzle scientists*, Financial Times (July 2, 2021), https://www.ft.com/content/b3ea5177-9312-418b-acb7-af16a3bdcd22; Robert Downen, *Houston Methodist Hospital records first lambda variant as COVID cases double since July 1*, Houston Chronicle (July 19, 2021), https://www.houstonchronicle.com/news/houston-texas/houston/article/Houston-Methodist-Hospital-records-first-lambda-16325190.php.
[98] Bick Decl. ¶¶ 32-33.
[99] Christie Aschwanden, *The false promise of herd immunity for COVID-19*, Nature (October 21, 2020), https://www.nature.com/articles/d41586-020-02948-4.

to protect the health of incarcerated individuals and staff is to achieve as high a level of vaccination as possible.[100]

The Delta variant is well-controlled by existing vaccines.[101] Researchers in Britain have found two doses of the Pfizer vaccine 88% effective against symptomatic disease from the Delta variant.[102] Other studies have replicated this result. A Scottish study found 79% efficacy against symptomatic disease,[103] and a Canadian study found 87% efficacy against symptomatic disease.[104] One study found a more significant decrease in efficacy at preventing symptomatic disease, down to 64%, but that study nevertheless confirmed that the vaccine is 94% effective at preventing hospitalization and death.[105] Some range in studies of efficacy is ordinary and the research overall strongly supports the efficacy of the vaccines at preventing transmission.

Vaccination is far more effective than other measures like masking and social distancing.[106] Even if it were possible in prisons to apply all other methods to reduce transmission, these methods are less effective than vaccination. Social distancing cannot be effectively imposed in current present conditions, but even if it could, it is far less effective in spreading infection than vaccination. Remaining at six feet of distance from others provides some protection against contracting COVID-19, but, particularly in indoor environments, the virus can travel up to 19 to 26 feet away and remain alive in droplets in the air for as much as three hours.[107] It has been a challenge to implement masking requirements. As the Office of

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[100] Bick Decl. ¶¶ 34-37; Vijayan Decl. ¶¶ 17-19.
[101] Bick Decl. ¶¶ 34-35; Vijayan Decl. ¶¶ 18-19.
[102] Jamie Lopez Bernal, et al., *Effectiveness of COVID-19 vaccines against the B.1.617.2 (Delta) Variant*, New Eng. J. Med. (July 21, 2021), https://www.nejm.org/doi/full/10.1056/NEJMoa2108891.
[103] Aziz Sheikh, et al., *SARS-CoV-2 Delta VOC in Scotland: demographics, risk of hospital admission, and vaccine effectiveness* (June 14, 2021), https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)01358-1/fulltext.
[104] Sharifa Nasreen, et al., *Effectiveness of COVID-19 vaccines against variants of concern, Canada* (July 3, 2021), https://www.medrxiv.org/content/10.1101/2021.06.28.21259420v1.
[105] Dov Lieber, *Pfizer Vaccine Less Effective Against Delta Infections but Prevents Sever Illness, Israeli Data Show*, Wall Street J. (July 6, 2021), https://www.wsj.com/articles/pfizers-covid-19-vaccine-is-less-effective-against-delta-variant-israeli-data-show-11625572796.
[106] Bick Decl. ¶ 34.
[107] Lydia Bourouiba, Ph.D., Images in Clinical Medicine: *A Sneeze*, 375 New Eng. J. Med. e15 (Aug. 25, 2016), https://www.nejm.org/doi/full/10.1056/nejmicm1501197; Francis W. Moses, et al., *COVID-19 outbreak associated with air conditioning in restaurant, Guangzhou, China, 2020*, Emerg. Infect. Dis. (Sept. 2020), https://doi.org/10.3201/eid2609.201749; M. Saiful Islam, et al., *Current knowledge of COVID-19 and infection prevention and control strategies in*

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the Inspector General's report made clear, masks are not consistently correctly used by incarcerated persons or staff at CDCR institutions.[108] But even when correctly used, "medical masks (surgical masks and even N95 masks) [are] not able to completely block the transmission of virus droplets/aerosols . . . ."[109] As the Director of the California Department of Public Health has noted, "[v]accination against COVID-19 is the most effective means of preventing infection with the COVID-19 virus, and subsequent transmission and outbreaks."[110]

Voluntary efforts have not produced acceptable results, and continuation with a voluntary approach that yields such results must be acknowledged for what it has proven to be – an unacceptable half-way measure. As a result of voluntary programs, only 53% of all staff and only 42% of custodial staff have received at least one dose of the vaccines.[111]

VIII. The vaccination rate for CDCR staff is too low, and it is now evident that voluntary means of encouraging vaccination will not raise rates to acceptable levels.

The vaccination rate for institutional staff is far too low to safeguard the health of CCHCS's patients. Only 40% of corrections officers statewide are fully vaccinated.[112] The proportion is alarmingly lower in some institutions. For example, at High Desert State Prison,

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healthcare settings: A global analysis, 41 Infection Control & Hospital Epidemiology 1196, 1196-1206 (Oct. 2020), https://doi.org/10.1017/ice.2020.237.

[108] Office of the Inspector General, COVID-19 Review Series Part Two (October 2020), https://www.oig.ca.gov/wp-content/uploads/2020/10/OIG-COVID-19-Review-Series-Part-2-%E2%80%93-Face-Coverings-and-PPE.pdf ("[O]ur staff observed that staff and incarcerated persons frequently failed to adhere to those basic safety protocols. . . . The frequent noncompliance by staff and incarcerated persons was likely caused at least in part by the department's supervisors' and managers' lack of enforcement of the requirements. . . . [W]e found that prison management statewide only referred seven of the department's more than 63,000 employees for formal investigations or punitive actions for misconduct related to face covering or physical distancing requirements.").

[109] Hiroshi Ueki, et al., *Effectiveness of Face Masks in Preventing Airborne Transmission of SARCoV-2*, 5 mSphere (Oct. 28, 2020), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7580955/.

[110] California Department of Public Health, *supra* note 15.

[111] Bick Decl. ¶ 37, Ex. B. The statistics show that virtually all staff who get the first dose get the second. For that reason, unless otherwise indicated, the figures for staff vaccination are for those who have received "at least one dose"; the percentage that have received two doses is slightly less.

[112] *Id*.

just 16% of all corrections officers are fully vaccinated.[113] In six other institutions the complete vaccination rate for corrections officers is at or below 30%.[114] Healthcare staff are fully vaccinated at higher rates, 72% statewide, but that higher rate is still insufficient to provide protection against large outbreaks.[115]

Vaccination rates remain unacceptably low despite widely advertised vaccine clinics for all staff during all shifts, at all facilities in May; offers of up to 80 hours of supplemental paid sick leave; and peer education through the COVID Mitigation Action Program.[116] Recent progress has dwindled. In the four weeks between June 30, 2021, and July 29, 2021, the percentage of staff fully vaccinated and the percentage receiving only one dose each increased by just one percent.[117]

The Receiver is committed to continuing all efforts to increase staff vaccination rates and welcomes all efforts by the State and CCPOA to do the same.[118] Recent experience provides no basis for believing those efforts will find significant success. With rapidly rising case rates, there is no time to delay implementing a policy that will be effective: a mandatory vaccination requirement for staff coming into contact with incarcerated persons.

IX. A mandatory vaccination policy is necessary and reasonable considering historical precedent, the widespread adoption of similar policies, and the public health necessity for doing so.

Because voluntary efforts to raise the vaccination rate to safe levels have proven insufficient, requiring vaccination of institutional staff is the only path likely to provide adequate protection for incarcerated persons. CDCR would not be the first congregate facility to require vaccination for staff against COVID-19. As detailed below, countless other congregate facilities have already chosen to mandate vaccination for staff. Prior to the COVID-19 pandemic, requiring vaccination for other diseases was commonplace. A majority of

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[113] *Id*.
[114] *Id*.
[115] *Id*.
[116] ECF No. 3579 (Apr. 27, 2021) at 7-9.
[117] Bick Decl. ¶ 37; ECF No. 3623 at 6.
[118] Mandatory individual vaccine counseling, scheduled to begin on August 4, 2021, is one such program, as is continuing to pursue peer education through the COVID Mitigation Action Program. Implementing statewide programs of this magnitude takes time, such that any success will take time to manifest. With rapidly rising infection rates, these efforts must proceed alongside implementation of a mandatory program so that their combined impact is not felt only after the next wave has come and gone.

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hospital systems require that staff be vaccinated for the seasonal influenza.[119] Schools and colleges have long required documentation of vaccination for diseases like meningitis.[120]

Mandatory vaccination policies, particularly in congregate settings, are being widely adopted with strong support from the public health community. The American Medical Association and eighty-eight other medical associations have announced their support for mandatory vaccination policies for health care workers.[121] Numerous hospitals have adopted just such a mandatory policy;[122] as have many universities, another type of congregate facility;[123] and the City San Francisco also will require employees in hospitals, nursing homes, and jails, all congregate facilities, whether employed by the city and county or not, to be vaccinated.[124]

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[119] M. Todd Greene, et al., *Changes in Influenza Vaccination Requirements for Health Care Personnel in US Hospitals*, 1 JAMA Network Open e180143 (June 1, 2018), https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2682876 (finding that 61.4% of hospitals surveyed had such a requirement).

[120] *See e.g.*, University of California Immunization Requirements & Recommendations (Sept. 25, 2017), https://healthcenter.ucsc.edu/forms/immunization_requirements.pdf.

[121] Ezekiel J. Emanuel, *Joint Statement in Support of COVID-19 Vaccine Mandates for All Workers in Health and Long-Term Care* (July 26, 2021), http://www.ezekielemanuel.com/writing/all-articles/2021/07/26/joint-statement-in-support-of-covid-19-vaccine-mandates-for-all-workers-in-health-and-long-term-care. *See also* Dan Diamond, *Coalition says healthcare workers should be required to get coronavirus vaccine*, Washington Post (July 13, 2021), https://www.washingtonpost.com/health/2021/07/13/vaccine-mandates-health-care-workers/ (reporting that the Society for Healthcare Epidemiology of America, the Infectious Diseases Society of America, and five other public health organizations recently recommend mandatory vaccination for healthcare facilities).

[122] Kelly Gooch and Hannah Mitchell, *Hospitals, health systems mandating vaccines for workers*, Becker's Hospital Review (updated July 15, 2021), https://www.beckershospitalreview.com/workforce/hospitals-health-systems-mandating-vaccines-for-workersjune17.html (listing thirty-two hospital systems which have announced such policies).

[123] Andy Thomason & Brian O'Leary, *Here's a List of Colleges That Will Require Students or Employees to Be Vaccinated Against Covid-19*, Chronicle of Higher Education (July 15, 2021), https://www.chronicle.com/blogs/live-coronavirus-updates/heres-a-list-of-colleges-that-will-require-students-to-be-vaccinated-against-covid-19.

[124] Rong-Gong II, *San Francisco to require staff in hospitals, jails and nursing homes to get COVID-19 vaccine* (June 15, 2021), https://www.latimes.com/california/story/2021-06-15/san-

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Every prior measure to limit the spread of COVID-19 in CDCR institutions has been mandatory. Employees have not had the choice of whether to wear a mask, social distance, or take weekly COVID-19 tests.[125] Each is a mandatory requirement of employment. Requiring vaccination, which is far more effective, is consistent with prior actions taken during the COVID-19 pandemic.

Waiting until COVID-19 case counts are higher to mandate vaccination will ensure that protection against COVID-19 is effective only after the next wave has come and gone. The CDC recommends that patients receive the second dose of the Pfizer vaccine three weeks after the first dose, and the second dose of the Moderna vaccine four weeks after the first dose.[126] After the second dose, it takes another two weeks for a patient to receive full benefits of vaccination.[127] Individuals will therefore not be fully vaccinated until at least five to six weeks after their first dose. Any mandatory vaccination program would have to provide a significant amount of additional time for patients to comply. California's two previous waves of COVID-19 infection lasted approximately three months each.[128] Delaying a mandatory vaccination policy until the next wave is upon us will not produce results until it is too late and the worst of the wave is over.

With the rate of vaccination unacceptably low, the voluntary means of raising it ineffective and insufficient, and an urgent need to increase the vaccination rate in the face of the Delta variant, a mandatory vaccination policy is urgently required.

X. The Receiver has determined that a mandatory vaccination policy for workers entering CDCR institutions and incarcerated persons who choose to work outside of an institution or accept in-person visitation is supported by the best medical science and

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francisco-to-require-covid-19-vaccine-for-some-workers?utm_campaign=KHN%3A%20First%20Edition&utm_medium=email&_hsmi=134144726&_hsenc=p2ANqtz-8bEAEUkoHWLC3nfpBI87MguaZQD639q2x_j9_tg1ak_D90-hw1ZiZKcY2XCioY_gGyG3o5QbhsvT8UikNz-YU5DuTwCr6lUcRl5U3E2BWasQ4UqSI&utm_content=134144726&utm_source=hs_email.

[125] California Department of Corrections and Rehabilitation, COVID-19 Response Efforts (accessed July 29, 2021), https://www.cdcr.ca.gov/covid19/covid-19-response-efforts/.

[126] Centers for Disease Control and Prevention, COVID-19 Vaccines That Require 2 Shots (updated June 3, 2021), https://www.cdc.gov/coronavirus/2019-ncov/vaccines/second-shot.html.

[127] *Id*.

[128] State of California, Tracking COVID-19 in California (updated July 15, 2021), https://covid19.ca.gov/state-dashboard/ (showing a spike in infections from mid-June to late-August 2020 and from early-November 2020 to mid-February 2021).

respectfully requests that the Court issue an order to show cause why CDCR and CCHCS should not be ordered to implement such a policy.

Staff and incarcerated persons with contact with the community outside of CDCR institutions cannot be effectively quarantined with each contact and so are most likely to introduce COVID-19 into CDCR institutions. As discussed above, this has been confirmed by more than a year of experience of COVID-19 in CDCR institutions and other jails and prisons. It is particularly critical that those at high risk of being vectors for infection are fully vaccinated to minimize the chance that COVID-19 will be introduced to an institution.

Pursuant to the State Public Health Officer Order of July 26, 2021, all CDCR institutions must verify the vaccine status of all workers. As the Receiver said at the July 29, 2021 Case Management Conference, in addition to this requirement, and the other requirements imposed by that Order, the Receiver recommends that access by workers to CDCR institutions be limited to those workers who establish proof of vaccination (or who have established a religious or medical exemption to vaccination).[129] The Receiver further recommends that incarcerated persons who desire to work outside of the institution (e.g., fire camps) or to have in-person visitation must be vaccinated (or establish a religious or medical exemption). The Receiver has determined that the best available medical science supports this recommendation.

The Receiver respectfully requests that the Court issue an order to show cause why the Court should not order CDCR and CCHCS to implement this recommendation.

[129] *See* 42 U.S.C. § 2000e-2; 42 U.S.C. § 12112.

Declaration of Dr. Joseph Bick

I declare, under penalty of perjury and pursuant to 28 U.S.C. § 1746, as follows:

I. Background and Qualifications

1. I am Dr. Joseph Bick, Director, Healthcare Services at California Correctional Health Care Services (CCHCS). I oversee all healthcare services, including medical, nursing, quality management, mental health, and dental. In that capacity, I have also led healthcare's response to COVID-19 since I assumed this role in July 2020.

2. I have worked for the California Department of Corrections and Rehabilitation (CDCR) for over 28 years. From January to July of 2020, I served as Director of Healthcare Services for Mental Health and Dental. Prior to that role, I served in several roles at the California Medical Facility (CMF) in Vacaville, including as the Chief Medical Executive, Chief Deputy of Clinical Services, and the Chief Medical Officer.

3. I received a Medical Doctorate from the University of Michigan Medical School and am board-certified in internal medicine. I completed a fellowship in infectious diseases at Rush-Presbyterian-St. Luke's Medical Center in Chicago.

4. I have authored numerous publications in peer-reviewed journals concerning infectious diseases in correctional settings and am an internationally recognized expert in the field of correctional healthcare. I have served as a federal court-appointed monitor to oversee healthcare in the Alabama Department of Corrections in the matter of *Leatherwood v. Campbell*, 02-cv-02812-KOB (W.D. Ala.). I have also served as an International Technical Expert on Prisons for the United Nations Office for Project Services in Myanmar and as a consultant on infectious diseases for the Malaysian prison system.

II. Impact of COVID-19 on Incarcerated Patients

5. As of July 25, 2021, at least 49,467 people incarcerated by CDCR have been infected with COVID-19.[1] This represents approximately half of all those in CDCR custody. Of those who have contracted COVID-19 in CDCR custody, 227 have died.[2] Some of those who survived have long-term—perhaps lifelong—symptoms and complications.

6. Many institutions are located in rural areas with very few hospital beds in the community. In these institutions, outbreaks among incarcerated persons can rapidly fill all or most of the nearby hospital beds, leaving no room for future

[1] California Department of Corrections and Rehabilitation, Population COVID-19 Tracking, https://www.cdcr.ca.gov/covid19/population-status-tracking/ (accessed July 25, 2021).

[2] *Id*.

COVID patients from either the community or the prison. CDCR medical staff work routinely with local health authorities to manage this issue.

7. When COVID outbreaks occur in CDCR institutions, the workload associated with both testing those who have been exposed and clinically monitoring patients who are either on quarantine or in isolation increases dramatically. As a result, staff effort and resources must be focused primarily upon urgent and emergent care. This creates challenges with respect to the timely provision of routine healthcare services.

8. COVID is readily transmitted during aerosol generating procedures. As a result, widespread COVID outbreaks in 2020 required curtailing routine dental services and focusing primarily upon urgent and emergent dental matters.

9. Group therapy is an important component of the treatment that is provided to patients who are in the mental health delivery system. During outbreaks, COVID related concerns regarding physical distancing created a significant impediment to the delivery of group therapy. In addition, patients who are on quarantine due to exposure to an infected staff member are unable to attend programming during the period of their quarantine.

10. Patients who require a higher level of mental health treatment than is typically available at their assigned institution regularly require transfer to other institutions for inpatient care. During outbreaks, concerns regarding the potential for transmitting COVID from one location to another complicate the movement of patients for higher level mental health care, both within the CDCR and also back and forth from the Department of State Hospitals.

11. COVID-related quarantine requires patients to spend the vast majority of time in their cells or living quarters. Over time, this can negatively impact patients by depriving them of access to outdoor exercise and other programing and services.

12. The prolonged COVID pandemic has placed a great strain upon the CDCR and CCHCS workforce. Employees have seen an increased workload and more involuntary overtime. The personal protective equipment requirements are onerous and have contributed to a more stressful working environment. Staff have been impacted emotionally by the constant stream of COVID-related illness and death in their patients, their coworkers, and family members. These factors have contributed to the challenge of maintaining sufficient staff to provide medical care to our patients.

III. Introduction of COVID-19 to CDCR Institutions

13. In an effort to limit the spread of COVID-19 within CDCR facilities, CDCR has limited transfers of incarcerated persons into and between its institutions and also quarantines all new arrivals for 14 days. As a result, incarcerated persons are quarantined between their contacts with the community outside the institution and their contact with the inmates and staff at the institution. Incarcerated persons

who neither work outside of CDCR institutions nor participate in in-person visitation do not present a significant risk of introducing SARS-CoV-2 into CDCR institutions.

14. By contrast, institutional staff enter and leave CDCR institutions daily and have significant contacts with the broader community in their daily lives. These contacts create a danger that staff could contract COVID-19 through community transmission and inadvertently introduce SARS-CoV-2 to the institution in which they work.

15. When an outbreak of COVID-19 occurs in a CDCR institution, CDCR performs contact tracing to determine how the outbreak developed. CDCR also performs genomic sequencing to identify the variant involved. These techniques allow CDCR to identify with some certainty how an outbreak likely originated.

16. The data obtained from contract tracing and genomic sequencing confirm that CDCR staff are a primary vector for transmission of COVID-19 into CDCR institutions.

17. During May, June, and July of 2021, analysis conducted by CCHCS indicates that staff have been identified as the source of at least 50% of all CDCR COVID outbreaks among incarcerated persons. Analysis of the remainder of the outbreaks is ongoing.[3]

18. People can be infected with SARS-CoV-2 and transmit the virus even if they are not symptomatic. Because CDCR conducts surveillance testing of asymptomatic individuals at far higher rates than seen in non-correctional settings, CDCR identifies more positive tests of asymptomatic people than captured in the outside community. Nearly half of all individuals who tested positive in the CDCR system reported having no symptoms at the time. It is very likely that many staff and patients in CDCR have spread COVID with cases that went undetected.

19. Unvaccinated institutional staff are now tested weekly for COVID-19. The CEO and Warden of each institution are responsible for tracking compliance and imposing progressive discipline on staff who are out of compliance.

20. It can take three to five days after infection for an individual infected with COVID-19 to build up a sufficient viral load to test positive. It also often takes days to receive the results of a COVID test. As a result, staff members in compliance with the weekly testing regime could nevertheless be asymptomatic but infectious, spreading COVID for a week or more before learning they are infected. These limitations of testing's effectiveness mean that, while more frequent testing reduces the length of time during which someone may spread COVID between tests or while waiting for test results, symptom screening and

[3] Exhibit A.

testing alone are inadequate to prevent contagious staff members from entering CDCR institutions between becoming infected and receiving a positive test result.

21. Because many staff members move throughout an institution in the course of performing their daily duties, a staff member infected with COVID-19 can come into contact with many inmates and staff, including inmates and staff from multiple housing units and yards, potentially spreading SARS-CoV-2 throughout the institution. Healthcare staff have close contact with patients when providing treatment and corrections staff have frequent close contact with inmates when applying restraints, escorting them throughout an institution, performing rounds, and providing security.

IV. Transmission of SARS-CoV-2 within CDCR Institutions

22. SARS-CoV-2 is transmitted by inhalation of aerosolized particles, deposition on exposed mucus membranes, and fomite transmission (i.e. touching an object with live virus on it).[4] As a general matter, the greater the amount of the virus an individual is exposed to, or the more prolonged exposure to the virus an individual has, the more likely the individual is to contract the virus. Prisons put individuals in continuous close contact: They share close spaces for the vast majority of the day and touch many of the same surfaces repeatedly. Compared to people not living in a congregate environment, incarcerated persons are much more likely to be exposed to the virus more frequently and for longer periods of time.

23. Incarcerated persons in CDCR custody share relatively small spaces with a large number of people throughout the day. SARS-CoV-2 spreads very easily by respiratory transmission under such conditions. Incarcerated persons also share bunk beds and communal living spaces, cafeterias, bathrooms, showers, telephones, and other common spaces. In such an environment, and in the absence of high rates of vaccination, routine public health measures such as physical distancing and environmental cleaning are insufficient to prevent spread of SARS-CoV-2.

24. The CDC defines close contact as 15 minutes spent within six feet of a person infected with COVID-19 cumulatively over the course of a day.[5] In an environment like a prison in which incarcerated persons typically spend the large majority of the day in close proximity to other people, a typical incarcerated

[4] Centers for Disease Control and Prevention, SARS-CoV-2 Transmission (May 7, 2021), https://www.cdc.gov/coronavirus/2019-ncov/science/science-briefs/sars-cov-2-transmission.html.

[5] Centers for Disease Control and Prevention, Community-Related Exposures (December 3, 2020), https://www.cdc.gov/coronavirus/2019-ncov/php/public-health-recommendations.html.

person will accumulate that level of exposure to a large number of people in the course of a day.

25. It is not possible to consistently maintain physical distancing in congregate living environments such as jails and prisons. This is especially true in sleeping quarters, common areas, dining halls, and bathrooms.

26. While compliance with mask guidance helps slow the spread of COVID-19 in CDCR institutions, it alone cannot prevent transmission. In addition, incarcerated persons cannot wear a mask while eating or sleeping, yet there is a very significant risk of transmission during those times.

27. The CDC recommends that incarcerated individuals in close contact with a person infected with COVID-19 be quarantined individually in "a single cell with solid walls and a solid door that closes."[6] Many institutions in CDCR's system do not have a sufficient number of such cells to quarantine individuals during a significant outbreak.

28. CDCR has not been able to lower the risk of COVID to high-risk patients by moving them to alternative housing before they are exposed. Moving large numbers of people during a pandemic risks spreading an infection to other housing units and yards.

V. Mutation of SARS-CoV-2 and the Delta Variant

29. The Delta variant of SARS-CoV-2 is more than twice as transmissible as the Wuhan strain. On average, a patient infected with the Delta variant sheds 1,000 times more virus than an average patient with an earlier strain.

30. Case rates have increased more than 500% among staff members in recent weeks, most of whom are infected with the Delta variant.

31. Natural immunity acquired through infection with COVID-19 appears to wane over time, possibly within months, and natural immunity from an earlier strain of COIVD-19 may be ineffective against the Delta variant. As a result, unvaccinated people who previously contracted COVID may be re-infected with the Delta variant at a higher rate than was true of prior strains of COVID-19. The potential decreased effectiveness of natural immunity is another reason that vaccination is imperative.

32. With such a transmissible strain, it is particularly important that staff be vaccinated to limit the introduction of COVID into CDCR institutions because,

[6] Centers for Disease Control and Prevention, Interim Guidance on Management of Coronavirus Disease 2019 (COVID-19) in Correctional and Detention Facilities (June 9, 2021), https://www.cdc.gov/coronavirus/2019-ncov/community/correction-detention/guidance-correctional-detention.html.

once introduced, it is extraordinarily difficult to prevent the spread of COVID-19, which could lead to large-scale outbreaks.

33. The virus is likely to continue to mutate, potentially creating even more transmissible strains than Delta, as it has done repeatedly in the past. These strains may be even more difficult to constrain using basic public health precautions like masking, social distancing, and frequent cleaning of high touch surfaces.

VI. Role of Vaccination in Limiting the Spread of SARS-CoV-2

34. The number of cases in CDCR institutions over the late spring and early summer is a small fraction of the number of cases in earlier phases of the pandemic, particularly the winter of 2020-2021.[7] Vaccination is substantially responsible for the decrease in cases. Vaccination is far more effective than other public health measures such as masking, social distancing, and frequent cleaning of hands and high touch surfaces.

35. With the Delta variant's higher rate of transmissibility, the risk to unvaccinated persons has markedly increased. Although some vaccinated people will become infected with COVID-19, based on current information, their symptoms will generally be far less serious and they will be less likely to spread the disease. Future variants may prove more resistant to the vaccine, but the vaccine currently provides robust protection against all known variants. Given the likelihood of spread of COVID-19, vaccination of as many people as possible is critical.

36. Given the particular danger of the Delta variant to the unvaccinated, a much higher vaccination rate is necessary to provide protection for those who are unvaccinated. With the very high transmissibility of the Delta variant, only extremely high levels of vaccination could provide an adequate level of protection.

37. CDCR staff are vaccinated at far too low a rate to reduce the risk of mass outbreaks in CDCR institutions. According to CDCR data regarding vaccination rates of institutional staff, just 53% of all institutional staff and only 42% of corrections officers have received at least one dose of a COVID-19 vaccine.[8] By contrast, patients have accepted vaccination at very high rates. Voluntary efforts to increase the rate of vaccination have made very little progress over the four

[7] Iris Lee & Sean Greene, *Tracking the coronavirus in California state prisons*, LA Times (updated July 24, 2021), https://www.latimes.com/projects/california-coronavirus-cases-tracking-outbreak/state-prisons/.

[8] Exhibit B.

weeks between June 30, 2021 and July 29, 2021. In that period, the total number of fully vaccinated and partially vaccinated staff each increased by just 1%.[9]

I declare that the foregoing is true and correct.

Executed on this 4 day of August, 2021, at Sacramento, California.

Joseph Bick

Joseph Bick, M.D.

[9] ECF No. 3623 at 6.

EXHIBIT A

Which May-July 2021 COVID-19 Case Clusters Among Patients Can Be Traced with Some Certainty to Infected Staff?

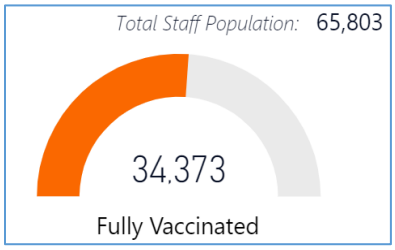
CCHCS Public Health and Employee Health Staff
August 3, 2021

Summary

Of the 14 clusters of Coronavirus Disease 2019 (COVID-19) cases that occurred among CDCR/CCHCS inmate-patients in May-July 2021, 7 (50%) can be traced to staff at this time. However, additional data may either provide stronger evidence for the linkage between a cluster and a positive staff member, or may provide evidence for linkages not found in this preliminary analysis.

Background

As of August 1, 2021, of 99,215 inmate-patients in CDCR institutions, 72,376 (73%) had been fully vaccinated against COVID-19. In contrast, of 65,803 staff working in CDCR/CCHCS, only 34,373 (52%) had been fully vaccinated.[1]



The Prison Law Office, which represents the plaintiffs in *Plata v Newsom*, has called upon CDCR/CCHCS to mandate vaccinations for staff. For example, in the Joint Case Management Conference Statement of July 29, 2021,[2] states in part:

> We continue to believe that vaccination against COVID-19 should be mandated for all CDCR and CCHCS staff in the prisons. Staff are the primary vector for coronavirus getting into the prisons, and those who are unvaccinated pose a much higher risk of infecting residents and other staff.

[1] CDCR/CCHCS. Population COVID-19 Tracking. Available at: https://www.cdcr.ca.gov/covid19/population-status-tracking/. Accessed August 1, 2021.
[2] Available at: https://prisonlaw.com/wp-content/uploads/2021/07/21.07.27-Doc-3623-Joint-Case-Management-Conference-Statement.pdf.

This paper attempts to preliminarily assess the evidence for first part of the second sentence. That is, to show that "staff are the primary vector for coronavirus getting into the prisons," it would be necessary to calculate the percentage of inmate-patients found positive for SARS-CoV-2 (the virus that causes COVID-19) who were probably infected by a positive staff member, whether directly or indirectly.

However, due to resource constraints,[3] the CCHCS Public Health and Employee Health teams were unable to evaluate each COVID-19 patient case that has occurred to determine whether the infection could be ultimately traced to staff. Instead, on August 2, 2021, the teams instead decided to focus on case clusters[4] among patients in the period May-July 2021. The evidence for staff introduction is both qualitative and epidemiological.

Methods

CCHCS Public Health research staff provided data on the occurrences of COVID-19 case clusters among patients by date of first patient case, institution, and facility. CCHCS Public Health nursing staff in institutions commented on whether each of the patient case clusters could have been linked to staff cases based on contact investigations and other information. The Employee Health program provided data on occurrences of case clusters among staff by date of first staff case, institution, and facility.

Results

The total number of COVID-19 cases among patients during the period was 361. Of these, 307 cases occurred in 14 case clusters during the period May-July 2021. That is, 54 cases occurred outside a known cluster.

Of the 14 patient case clusters, 7 (50%) could be linked to staff (Table 1). There were a total of 172 patients in the 7 clusters linked to staff. The percentages of staff who were fully vaccinated at the seven institutions involved in the case clusters were below the state average.

For the remaining seven patient case clusters (Table 2), including 135 patients, there is no evidence yet that staff introduction of SARS-CoV-2 into the patient population caused the cluster.

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[3] The request was received on Friday, July 30, with a deadline of Tuesday morning, August 3.
[4] A "case cluster" is a set of cases linked in time and space. In contrast, the word "outbreak" suggests a linkage among the cases in a cluster, for example by being exposed to a "common source" or by one person spreading a disease to another. See "Legionnaires' disease outbreak investigation toolbox" from the European Centre for Disease Prevention and Control at https://legionnaires.ecdc.europa.eu/?pid=205. In this report, we prefer the former term to describe all the groups of cases observed.

Table 1. Characteristics of Seven May-July 2021 Case Clusters Among Patients That Were Linked to Staff

Date of First Patient Case in the Cluster	Institution Where Cluster Occurred	Staff Vaccination Rate at Institution*	Facility or Facilities Involved in the Cluster	Number of Patient Cases in the Cluster
5/3/2021	**WSP**	45%	WSP-H	4
5/26/2021	**MCSP**	47%	MCSP-C	24
6/1/2021	**CCC**	33%	CCC-X22**	7
7/16/2021	**SCC**	39%	SCC-A, SCC-C, and SCC-X01	113
7/21/2021	**PBSP**	30%	PBSP-B and PBSP-A	11
7/23/2021	**SATF**	44%	SATF-G	4
7/26/2021	**PVSP**	39%	PVSP-A	9
			Total number of cases in the seven case clusters	172

Table 2. Characteristics of Seven May-July 2021 Case Clusters Among Patients That Were Not Linked to Staff, as of 08/03/2021

Date of First Patient Case in the Cluster	Institution Where Cluster Occurred	Staff Vaccination Rate at Institution*	Facility or Facilities Involved in the Cluster	Number of Patient Cases in the Cluster
5/12/2021	**CHCF**	61%	CHCF-B	6
5/21/2021	**SOL**	54%	SOL-A	82
5/29/2021	**SOL**	54%	SOL-B	11
5/30/2021	**NKSP**	47%	NKSP-B	9
6/4/2021	**CCC**	33%	CCC-C	9
6/14/2021	**CCC**	33%	CCC-B	8
6/23/2021	**CCC**	33%	CCC-C	10
			Total number of cases in the seven case clusters	135

* "% Fully Vaccinated" staff from https://www.cdcr.ca.gov/covid19/population-status-tracking/.
** The case cluster at CCC beginning on 6/1/2021 was associated with CalFire staff, not with CDCR/CCHCS staff.

Discussion and Conclusions

These preliminary analyses are limited in several respects. First, at this time we are unable to use results of whole genome sequencing (WGS) of SARS-CoV-2 to support our arguments. Although WGS can be used to support linkages between cases of COVID-19, WGS results take weeks or months to obtain from the California Department

of Public Health. We do not have enough WGS results from the period May-July 2021 to make meaningful conclusions.

Second, data are incomplete for some of the clusters listed in Table 2. It is possible that in the future, some of these clusters could be classified as linked to staff.

Third, we are not yet able to address the second part of the second sentence in the excerpt from the Joint Case Management Conference Statement above. That is, we have not yet determined whether "those [staff] who are unvaccinated pose a much higher risk of infecting residents and other staff." We do note that staff vaccination rates tended to be low in the institutions where the seven patient case clusters linked to staff occurred. In addition, we note that the new Delta variant of SARS-CoV-2 may be easier to transmit than previous variants, regardless of vaccination status.[5]

Finally, additional analyses are needed to assess disease severity and hospitalizations for patients and staff. That is, the number of patient cases in each cluster may not fully represent the impact of introductions of COVID-19 into the CDCR/CCHCS patient and staff populations.

[5] A study of one outbreak published by the Centers for Disease Control and Prevention on July 30, 2021, found that the concentration of virus detected in infected vaccinated people (as measured by "cycle threshold") was similar to the concentration of virus detected in infected unvaccinated people. This suggests that the Delta variant can spread from vaccinated and unvaccinated people equally well. See: Brown CM, Vostok J, Johnson H, et al. Outbreak of SARS-CoV-2 Infections, Including COVID-19 Vaccine Breakthrough Infections, Associated with Large Public Gatherings — Barnstable County, Massachusetts, July 2021. MMWR Morb Mortal Wkly Rep. ePub: 30 July 2021. Available at: https://www.cdc.gov/mmwr/volumes/70/wr/mm7031e2.htm.

EXHIBIT B

Institution	ALL					Healthcare					Custody				
	Total number of staff	Completely Vaccinated		Vaccinated with at Least 1 Dose		Total number of staff	Completely Vaccinated		Vaccinated with at Least 1 Dose		Total number of staff	Completely Vaccinated		Vaccinated with at Least 1 Dose	
		#	%	#	%		#	%	#	%		#	%	#	%
SW	**55541**	**27925**	**50%**	**29218**	**53%**	**10800**	**7753**	**72%**	**8016**	**74%**	**26769**	**10812**	**40%**	**11339**	**42%**
ASP	1400	623	45%	668	48%	176	96	55%	107	61%	726	286	39%	308	42%
CAC	728	310	43%	330	45%	110	85	77%	91	83%	386	116	30%	122	32%
CAL	1292	788	61%	831	64%	142	98	69%	104	73%	727	425	58%	443	61%
CCC	1078	352	33%	372	35%	101	66	65%	67	66%	597	149	25%	160	27%
CCI	1682	601	36%	651	39%	220	123	56%	132	60%	973	271	28%	283	29%
CCWF	1336	707	53%	745	56%	298	196	66%	202	68%	536	222	41%	238	44%
CEN	1328	873	66%	912	69%	152	103	68%	107	70%	740	481	65%	500	68%
CHCF	3847	2327	60%	2435	63%	1755	1350	77%	1390	79%	984	446	45%	473	48%
CIM	1853	1049	57%	1087	59%	361	267	74%	277	77%	858	418	49%	428	50%
CIW	1354	763	56%	804	59%	364	272	75%	285	78%	484	252	52%	266	55%
CMC	1928	1044	54%	1090	57%	390	312	80%	319	82%	887	349	39%	364	41%
CMF	2745	1646	60%	1686	61%	825	677	82%	693	84%	885	491	55%	503	57%
COR	2153	958	44%	988	46%	387	266	69%	272	70%	1155	380	33%	389	34%
CRC	1316	670	51%	697	53%	184	129	70%	137	74%	749	318	42%	330	44%
CTF	1469	931	63%	963	66%	210	177	84%	180	86%	724	381	53%	394	54%
CVSP	893	426	48%	443	50%	113	77	68%	80	71%	433	170	39%	179	41%
DVI	318	192	60%	195	61%	34	27	79%	27	79%	132	67	51%	70	53%
FSP	1195	653	55%	667	56%	168	138	82%	139	83%	599	294	49%	303	51%
HDSP	1311	340	26%	355	27%	192	99	52%	103	54%	747	118	16%	126	17%
ISP	1361	614	45%	658	48%	124	71	57%	76	61%	689	264	38%	280	41%
KVSP	1629	755	46%	783	48%	238	161	68%	164	69%	992	365	37%	386	39%
LAC	1692	836	49%	908	54%	341	224	66%	235	69%	826	330	40%	352	43%
MCSP	1817	859	47%	904	50%	394	280	71%	286	73%	871	269	31%	292	34%
NKSP	1461	683	47%	712	49%	263	174	66%	178	68%	771	285	37%	297	39%
PBSP	1369	405	30%	425	31%	146	62	42%	63	43%	865	180	21%	187	22%
PVSP	1329	519	39%	545	41%	178	96	54%	99	56%	770	224	29%	242	31%
RJD	2214	1187	54%	1241	56%	474	360	76%	375	79%	1057	461	44%	482	46%

Institution	ALL					Healthcare					Custody				
	Total number of staff	Completely Vaccinated		Vaccinated with at Least 1 Dose		Total number of staff	Completely Vaccinated		Vaccinated with at Least 1 Dose		Total number of staff	Completely Vaccinated		Vaccinated with at Least 1 Dose	
		#	%	#	%		#	%	#	%		#	%	#	%
SAC	1921	920	48%	953	50%	395	284	72%	295	75%	902	340	38%	354	39%
SATF	1963	864	44%	913	47%	391	221	57%	233	60%	990	362	37%	385	39%
SCC	1176	464	39%	491	42%	139	97	70%	97	70%	666	203	30%	221	33%
SOL	1416	769	54%	798	56%	214	174	81%	176	82%	724	319	44%	333	46%
SQ	2157	1264	59%	1336	62%	345	278	81%	292	85%	1015	604	60%	638	63%
SVSP	1989	1100	55%	1149	58%	413	325	79%	334	81%	944	431	46%	453	48%
VSP	1190	702	59%	722	61%	256	183	71%	187	73%	537	271	50%	277	52%
WSP	1631	731	45%	761	47%	307	205	67%	214	70%	828	270	33%	281	34%

Institution	Administrative, Maintenance & Operations Services					Contractor Staff				
	Total number of staff	Completely Vaccinated		Vaccinated with at Least 1 Dose		Total number of staff	Completely Vaccinated		Vaccinated with at Least 1 Dose	
		#	%	#	%		#	%	#	%
SW	**12205**	**7480**	**61%**	**7729**	**63%**	**5763**	**1878**	**33%**	**2132**	**37%**
ASP	399	200	50%	211	53%	98	41	42%	42	43%
CAC	159	87	55%	89	56%	73	22	30%	28	38%
CAL	322	225	70%	231	72%	101	40	40%	53	52%
CCC	283	104	37%	108	38%	97	33	34%	37	38%
CCI	340	163	48%	172	51%	149	44	30%	64	43%
CCWF	391	248	63%	259	66%	111	41	37%	46	41%
CEN	344	259	75%	271	79%	92	30	33%	34	37%
CHCF	587	379	65%	394	67%	521	152	29%	178	34%
CIM	419	280	67%	288	69%	214	84	39%	94	44%
CIW	282	202	72%	207	73%	224	37	17%	46	21%
CMC	467	324	69%	334	72%	184	59	32%	73	40%
CMF	415	303	73%	307	74%	620	175	28%	183	30%
COR	431	247	57%	255	59%	179	64	36%	71	40%
CRC	286	201	70%	206	72%	97	22	23%	24	25%
CTF	398	292	73%	300	75%	137	81	59%	89	65%
CVSP	274	156	57%	160	58%	73	23	32%	24	33%
DVI	122	83	68%	83	68%	30	15	50%	15	50%
FSP	315	190	60%	192	61%	113	31	27%	33	29%
HDSP	304	111	37%	113	37%	68	12	18%	13	19%
ISP	307	173	56%	183	60%	241	106	44%	119	49%
KVSP	370	208	56%	212	57%	29	21	72%	21	72%
LAC	332	198	60%	205	62%	192	83	43%	115	60%
MCSP	448	265	59%	273	61%	104	45	43%	53	51%
NKSP	336	189	56%	199	59%	91	35	38%	38	42%
PBSP	302	141	47%	151	50%	56	22	39%	24	43%

Institution	Administrative, Maintenance & Operations Services					Contractor Staff				
	Total number of staff	Completely Vaccinated		Vaccinated with at Least 1 Dose		Total number of staff	Completely Vaccinated		Vaccinated with at Least 1 Dose	
		#	%	#	%		#	%	#	%
PVSP	307	173	56%	175	57%	74	26	35%	29	39%
RJD	382	278	73%	290	76%	301	88	29%	94	31%
SAC	337	219	65%	223	66%	287	77	27%	81	28%
SATF	444	238	54%	246	55%	138	43	31%	49	36%
SCC	301	143	48%	147	49%	70	21	30%	26	37%
SOL	379	235	62%	245	65%	99	41	41%	44	44%
SQ	347	270	78%	278	80%	450	112	25%	128	28%
SVSP	412	275	67%	289	70%	220	69	31%	73	33%
VSP	307	215	70%	221	72%	90	33	37%	37	41%
WSP	356	206	58%	212	60%	140	50	36%	54	39%

Declaration of Ms. Tammatha Foss

I declare, under penalty of perjury and pursuant to 28 U.S.C. § 1746, as follows:

I. Background and Qualifications

1. My name is Tammatha Foss, Director, Corrections Services at California Correctional Health Care Services (CCHCS). In that role, I coordinate activities between the Receivership and CDCR. I was appointed to serve in my current role in November 2020.

2. I have worked at the California Department of Corrections and Rehabilitation (CDCR) for twenty-five years in a variety of roles. From 1996 to 2009, I was a corrections officer at Pelican Bay State Prison. After serving in administrative roles at San Quentin State Prison and CDCR Headquarters from 2009 to 2016, I was appointed chief deputy warden at High Desert State Prison, where I served from 2016 to 2018. From 2018 to 2019, I was acting warden at Salinas Valley State Prison. In 2019, I was appointed as Associate Director of Female Offenders Programs and Services.

II. Introduction of COIVD-19 to CDCR Institutions

3. From my duties in my current and prior roles within the CCHCS and CDCR, I am familiar with how corrections officers and incarcerated persons interact on a daily basis. Corrections officers have frequent, daily, close contact with incarcerated persons. Corrections officers work in the housing units in which incarcerated persons live and provide them with services throughout the day. In many cases, corrections officers provide incarcerated persons their meals, distribute their mail, and perform daily safety checks. When incarcerated persons go out to the yard—an outdoor space within the grounds of a facility—which they generally do twice each day, corrections officers pat them down to ensure they do not have contraband both on their way to and from the yard. Incarcerated persons are also handcuffed and escorted by a corrections officer, with the officer maintaining physical contact to guide the incarcerated person, when not in a secure environment, such as moving to another part of the institution or to an outside medical appointment. Those in administrative segregation are typically handcuffed when out of their cells. When performing their jobs, corrections officers are within six feet of incarcerated people frequently throughout their shifts; it is not possible for corrections officers to perform their job with social distancing precautions.

4. Corrections officers perform their work throughout the institution and cannot typically remain at one duty station because the allocation of staff resources is adjusted to meet the needs of the institution. Officers working their ordinary shifts are often reassigned to cover higher-need vacant positions. For example, a gym officer may be reassigned for the day to guard a clinic in order to keep the clinic operating. There are often insufficient staff resources within one housing

unit or one yard to accommodate these institutional needs without moving staff throughout the institution. Emergency transports are also a near daily occurrence at each institution, and any available officer may be assigned to assist in that transport. Corrections officers also frequently work overtime in housing units and yards to which they are not ordinarily assigned, based on availability and need of the institution.

III. CDCR Facilities

5. A majority of incarcerated persons in CDCR custody are housed in dormitories that are too crowded to allow for social distancing. These accommodations typically have one hundred to two hundred bunk beds per room in close proximity to one another. To provide more distance during the COVID-19 pandemic, bunk beds have been grouped together into cohorts of eight beds. Within a cohort, the beds are within six feet of each other, but the cohorts are spaced six feet apart from other cohorts.

6. Some incarcerated persons are housed in cells, typically two-person cells. Most cells have perforated doors or bars rather than solid doors.

7. If there is no current COVID-19 outbreak, incarcerated persons spend their days in a variety of environments, none of which is conducive to social distancing. Typically, incarcerated people spend the day at job assignments in the institution, in classrooms, in the yard, or in the dayroom. In most of these environments, incarcerated people are with only those people who are in the same housing unit. However, in the yard and in jobs, incarcerated people will come into close contact with people from other housing units. The institutions do not contain sufficient yard or work spaces or sufficient staff to provide each housing unit separate yard and work space.

8. In some institutions incarcerated people are served meals in their cells. Generally, however, incarcerated people eat in a dining hall. Generally, those dining halls have tables of four, at which incarcerated persons sit close together with others from the same housing unit. During the COVID-19 pandemic, the tables have been spaced at least six feet apart from one another.

9. Bathroom facilities vary by housing type. Every cell has its own toilet and sink and several cells share a single shower. Dormitory housing has group bathrooms, generally with a shower area with six shower heads, a large sink area, and a common bathroom. It is common for several residents to be in these common bathrooms at a time.

10. Incarcerated people will often be in close contact with residents of their own and other housing units and yards while waiting for services such as laundry, pill distribution, telephones, and classrooms. Medical programs also often bring incarcerated people from different housing units into close contact, such as Enhanced Outpatient Program ("EOP") groups for mental health, or instances

where ten to twenty incarcerated people wait together in a holding area to be called in for medical appointments. When visitation is available, incarcerated people are held in a holding area after completing visitation and are often in close contact there with people from other housing units. Although visitation was suspended from March 2020 through April 2021, since April, limited visitation has been available in institutions without a recent outbreak consistent with the Roadmap to Reopening plan.

11. Incarcerated people also share a large number of high-touch objects and surfaces such as telephones, showers, tables and chairs, door handles, and water fountains. While some of these surfaces, such as showers and telephones, are now cleaned between each use, many are not.

I declare that the foregoing is true and correct.

Executed on this 4th day of August, 2021, at Sacramento, California.

DocuSigned by:
Tammy Foss
CA838E6E43384A2...

Tammatha Foss

Declaration of Dr. Tara Vijayan

I declare, under penalty of perjury and pursuant to 28 U.S.C. § 1746, as follows:

I. Background and Qualifications

1. I am Dr. Tara Vijayan, an Associate Professor of Medicine in the Division of Infectious Diseases at the UCLA David Geffen School of Medicine. My research focuses on general infectious diseases, HIV medicine, global and underserved health, health equity, medical education, and antimicrobial stewardship. I am currently the Medical Director of Antimicrobial Stewardship for UCLA Health and Medical Director for COVID-19 Preparedness for the Division of Infectious Diseases. I am currently overseeing the treatment of patients with COVID-19 at UCLA hospitals. I am board-certified in Internal Medicine and Infectious Disease, and I completed a three-year fellowship in Infectious Disease at UCSF Medical Center. A current copy of my CV is attached as **Exhibit A**.

2. To prepare this Declaration, I reviewed at least the following documents:

   a. The Report of J. Clark Kelso, Receiver Regarding a Mandatory COVID-19 Vaccination Policy for California Department of Corrections and Rehabilitation Personnel in Contact with Incarcerated Persons and Incarcerated Persons with Outside Contact.

   b. The Declaration of Tammatha Foss dated August 4, 2021, filed in support of the above report.

   c. The Declaration of Dr. Joseph Bick dated August 4, 2021, filed in support of the above report.

   d. The studies and reports cited in this Declaration.

II. COVID-19 Background

3. COVID-19 (caused by the SARS-CoV-2 virus) is a serious disease with over 197 million confirmed diagnoses as of July 31, 2021, including nearly 35 million in the United States.[1] As of July 31, 2021, according to the U.S. Centers for Disease Control and Prevention, at least 610,873 people in the United States have died due

[1] John Hopkins University, Coronavirus Resource Center, COVID-19 Dashboard by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University, https://coronavirus.jhu.edu/map.html (last visited July 31, 2021).

to complications from COVID-19.[2] In recent weeks, the number of people infected in California has grown at an extremely rapid rate.

4. The effects of COVID-19 can be very severe, and can include severe respiratory illness, major organ damage, blood clots (in the lungs as well as strokes), multisystem inflammatory syndrome, and death. Patients who recover from COVID-19 often suffer lasting and serious complications, including long term effects on the central and peripheral nervous systems resulting in dizziness, dysautonomia, headaches and strokes.[3]

5. The effects of COVID-19 are particularly significant for people over the age of 50, and those of any age with underlying health problems such as—but not limited to—cancer, obesity, weakened immune systems, serious heart conditions, chronic kidney disease, COPD, and diabetes.[4]

6. In the United States, African Americans, Latino/a Americans, and Native Americans suffer complications and death at much higher and disproportionate rates to their population. In California alone, the Latino/a population makes up 46.4% of the COVID-19 deaths, despite accounting for 38.9% of the state's population, and Latino/a individuals account for 72.5% of the deaths in California between the ages of 35-49 despite only accounting for 41.5% of the state's population in that age group.[5]

III. Transmission of SARS-CoV2

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[2] Centers for Disease Control and Prevention, CDC COVID Data Tracker, United States COVID-19 Cases and Deaths by State, https://covid.cdc.gov/covid-datatracker/#cases_casesper100klast7days (last visited July 31, 2021).

[3] Bjørn Blomberg, et al., *Long COVID in a prospective cohort of home-isolated patients*, Nature Med. (June 23, 2021), https://www.nature.com/articles/s41591-021-01433-3; Ani Nalbandian, et al., *Post-acute COVID-19 syndrome*, 27 Nature Med. 601 (March 22, 2021), https://doi.org/10.1038/s41591-021-01283-z.

[4] Center for Disease Control and Prevention, Evidence used to update the list of underlying medical conditions that increase a person's risk of severe illness from COVID-19 (updated May 13, 2021), https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/evidence-table.html.

[5] California Department of Public Health, COVID-19 Race and Ethnicity Data (July 28, 2021), https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/COVID-19/Race-Ethnicity.aspx. This is in part due to upstream socioeconomic factors such as poverty, living in multigenerational households and working essential jobs. Tara Vijayan, MD, MPH, et al., *Beyond the 405 and the 5: Geographic variations and factors associated with SARS-CoV-2 positivity rates in Los Angeles County*, Clinical Infectious Diseases (Nov. 3, 2020), https://doi.org/10.1093/cid/ciaa1692.

7. A factor that has accelerated the transmission of the virus across the world is the number of people who are positive for the virus but are asymptomatic or pre-symptomatic, and not aware that they are carrying and shedding the virus. Surveillance studies indicate that, without vaccination, 81% of people infected with SARS-CoV2 will have mild or no disease, 14% will be sick enough to require hospitalization, and 5% will require ICU levels of care.[6] The fact that so many people may have the virus but are unaware that they have it makes it very difficult to effectively quarantine infected individuals. This is precisely why, prior to the widespread availability of vaccines, public health experts emphasized the need for shelter-in-place orders, strict limits on assembling people in indoor spaces, and social distancing.

8. SARS-CoV2 is easily transmitted from person to person. Although the predominant mode of transmission of SARS-CoV-2 is via respiratory droplets, infection can occur via multiple modes of transmission. To the extent that a person is exposed to multiple modalities of transmission, their risk of infection increases. The risk of severe disease also increases with exposure to a higher viral inoculum.[7] A person who is in a prison or jail—especially one that is at or above full design capacity—is, by the nature of the living arrangements and density of people, exposed to these multiple modalities of transmission and high viral inoculum.

9. With respect to **respiratory transmission**, the COVID-19 virus spreads largely through respiratory droplets containing virus; however, aerosolization can occur in certain conditions and with certain aerosol generating procedures.[8] Droplets are generated when an infected person coughs, sneezes, or even speaks loudly, through droplets of saliva or nasal discharge. The quantity of respiratory emissions can vary by volume of speech and other factors.[9] Under usual circumstances, droplets can be spread within approximately six feet of a person.[10]

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[6] Zunyou Wu & Jennifer M. McGoogan, *Characteristics of and Important Lessons From the Coronavirus Disease 2019 (COVID-19) Outbreak in China Summary of a Report of 72314 Cases From the Chinese Center for Disease Control and Prevention*, 323 JAMA 1239, https://jamanetwork.com/journals/jama/fullarticle/2762130. *See also* Centers for Disease Control and Prevention, *Coronavirus Disease 2019 Case Surveillance – United States, January 22-May 30, 2020* (June 19, 2020), https://www.cdc.gov/mmwr/volumes/69/wr/mm6924e2.htm?s_cid=mm6924e2_w.

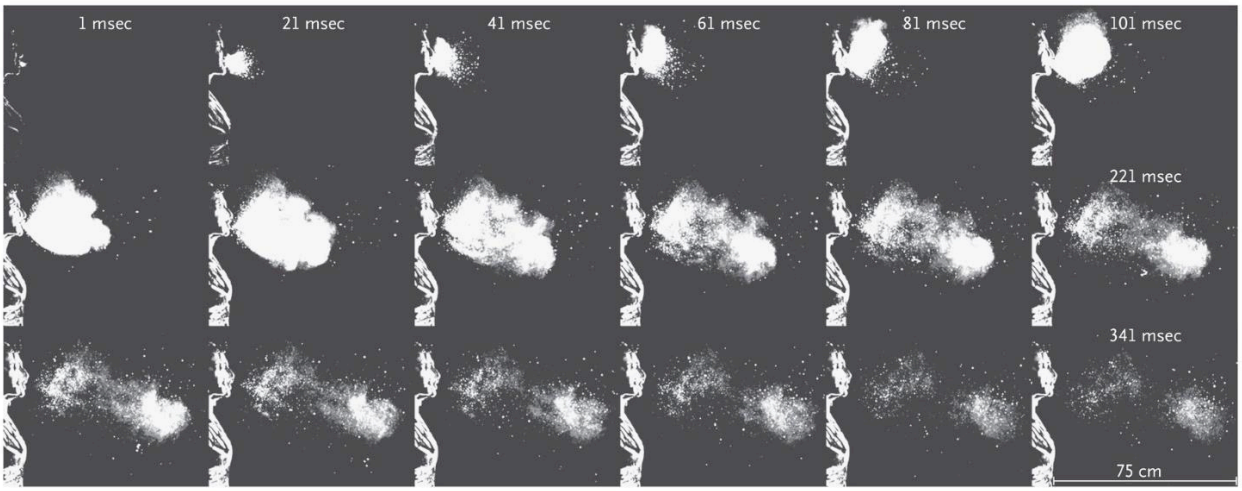
[7] Monica Gandhi, MD, MPH & George W. Rutherford, MD, *Facial Masking for Covid-19 - Potential for "Variolation" as We Await a Vaccin*e, 383 New Eng. J Med. e101(1) (Oct. 29, 2020), https://www.nejm.org/doi/pdf/10.1056/NEJMp2026913?articleTools=true.

[8] Center for Disease Control and Prevention, Scientific Brief: SARS-CoV-2 and Potential Airborne Transmission (May 7, 2021), https://www.cdc.gov/coronavirus/2019-ncov/more/scientific-brief-sars-cov-2.html.

[9] Sima Asadi, et al., *Aerosol emission and superemission during human speech increase with voice loudness*, SCI. REP. (Feb. 20, 2019), https://doi.org/10.1038/s41598-019-38808-z.

[10] Center for Disease Control and Prevention, Scientific Brief: SARS-CoV-2 and Potential

However, under specific conditions, including in enclosed spaces using air conditioning, droplets can travel farther than 6 feet.[11] The below image from the New England Journal of Medicine illustrates a human sneeze in increments of 20 milliseconds, and how a sneeze can eject droplets of fluid and infectious organisms. As noted by the scientist who created this image, "The ejection lasts up to 150 msec (top row) and then transitions into a freely evolving turbulent puff cloud (middle and bottom rows). The largest droplets rapidly settle within 1 to 2 m away from the person. The smaller and evaporating droplets are trapped in the turbulent puff cloud, remain suspended, and, over the course of seconds to a few minutes, can travel the dimensions of a room and land up to 6 to 8 m away."[12]



10. Transmission increases in closed spaces, particularly those with poor ventilation.[13] One helpful analogy for how some particles can linger is to compare them to how cigarette smoke can linger and permeate an area, especially an enclosed space.[14] The longer the person with COVID-19 is in an enclosed space, the more the droplets containing virus in the space will build up and the

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Airborne Transmission (May 7, 2021), https://www.cdc.gov/coronavirus/2019-ncov/more/scientific-brief-sars-cov-2.html.

[11] Jianyun Lu & Zhicong Yang, *COVID-19 Outbreak Associated with Air Conditioning in Restaurant, Guangzhou, China, 2020*, 26 Emerging Infectious Diseases 2790, 2790–93 (Nov. 26, 2020), https://doi.org/10.3201/eid2611.203774.

[12] Lydia Bourouiba, Ph.D., *Images in Clinical Medicine: A Sneeze*, 375 New Eng. J Med. e15 (Aug. 25, 2016), https://www.nejm.org/doi/full/10.1056/nejmicm1501197.

[13] Maogui Hu, et al., *The risk of COVID-19 transmission in train passengers: an epidemiological and modelling study*, 72 Clinical Infectious Diseases 604 (Feb. 15, 2021), https://doi.org/10.1093/cid/ciaa1057.

[14] Byron Erath, et al., *What a Smoky Bar Can Teach Us About the '6-Foot Rule' During the COVID 19 Pandemic*, Discover Magazine (Sept. 10, 2020), https://www.discovermagazine.com/health/what-a-smoky-bar-can-teach-us-about-the-6-foot-ruleduring-the-covid-19.

more probable transmission becomes. The CDC reports that people can be infected even when they have not had close contact with an infected person, especially where there are: (1) "[e]nclosed spaces with inadequate ventilation or air handling within which the concentration of exhaled respiratory fluids . . . can build-up in the air space," (2) "[i]ncreased exhalation of respiratory fluids if the infectious person is engaged in physical exertion or raises their voice," and (3) "[p]rolonged exposure to these conditions, typically more than 15 minutes."[15]

11. The strict public health limits on indoor assembly, for example, allowing indoor restaurant dining at only 25% of capacity or closing gyms where multiple people are exercising and exhaling in enclosed spaces, were to reduce the probability of respiratory transmission. For much of the pandemic, authorities did not allow people in the community to assemble and crowd indoors at bars and restaurants as a public health strategy, because we know that indoor transmission is much more highly likely than outdoor transmission. This shows how dangerous it is to have people indoors in close quarters for long periods of time, as they are in prisons and jails. Both droplets and aerosol particles are disseminated even farther under certain conditions such as when air conditioners, air mixing fans, or heating systems recirculate air.[16]

12. The Delta variant, now the most common variant in California,[17] is 2-3 times more transmissible than the original wild-type SARS-CoV2.[18] The risk of respiratory transmission in congregate environments, like prisons, is correspondingly much greater. Moreover, natural immunity from infection with

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[15] Centers for Disease Control and Prevention, SARS-CoV-2 Transmission (May 7, 2021), https://www.cdc.gov/coronavirus/2019-ncov/more/scientific-brief-sars-cov-2.html.

[16] Francis W. Moses, et al., *COVID-19 outbreak associated with air conditioning in restaurant, Guangzhou, China, 2020*, Emerging Infectious Diseases (Sept. 2020), https://doi.org/10.3201/eid2609.201749;
M. Saiful Islam, et al., *Current knowledge of COVID-19 and infection prevention and control strategies in healthcare settings: A global analysis*, 41 Infection Control & Hospital Epidemiology 1196, 1196–1206 (Oct. 2020), https://doi.org/10.1017/ice.2020.237.

[17] California Department of Public Health, Tracking Variants (July 29, 2021), https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/COVID-19/COVID-Variants.aspx.

[18] Scientific Pandemic Influenza Group on Modeling, Operational Sub-Group, *SPI-M-O: Consensus Statement on COVID-19* (June 2, 2021), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/993321/S1267_SPI-M-O_Consensus_Statement.pdf; Strategic Advisory Group of Experts on Immunization, Eighty-ninth SAGE meeting on COVID-19, 13 May 2021, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/988403/S1236_Eighty-nineth_SAGE.pdf; Catherine M. Brown, et al., *Outbreak of SARS-CoV-2 Infections, Including COVID-19 Vaccine Breakthrough Infections, Associated with Large Public Gatherings – Barnstable County, Massachusetts, July 2021* (July 30, 2021), https://www.cdc.gov/mmwr/volumes/70/wr/mm7031e2.htm?s_cid=mm7031e2_w.

an earlier strain of COVID-19 may be ineffective at preventing infection with the Delta variant.[19]

IV. Housing Practices in CDCR Institutions

13. I have reviewed the Declaration of Tammatha Foss, Director, Corrections Services, California Correctional Health Care Services, concerning living conditions inside CDCR institutions and the Declaration of Joseph Bick, Director, Health Care Services, California Correctional Health Care Services.

14. I understand that there is insufficient space to avoid close contacts in the places in which incarcerated persons sleep and spend their day.[20] So many people together indoors in a shared living space makes spread of COVID-19 very likely.

15. I understand that most incarcerated persons in CDCR custody sleep in dormitories that are too crowded for social distancing, with one to two hundred bunk beds in a single room and groups of eight beds together within six feet of each other.[21] These arrangements drastically increase the risk of potential transmission, because of the close proximity of the people, the fact that they are not wearing masks, and the length of the exposure. Even if the beds were at least six feet apart and there were only single beds instead of bunk beds, this arrangement would be inherently dangerous for anyone sleeping there because the air in any given room is shared with each individual in that room and the length of exposure is so long.[22]

16. I understand that corrections officers come into close daily contact with incarcerated persons in the course of their work and travel throughout the institution.[23] Because corrections officers and other staff go daily between the institutions in which they work and the communities in which they live, where they may be subject to community transmission of SARS-CoV2, there is a high risk of staff members unknowingly introducing SARS-CoV2 to an institution.

V. Vaccination

17. Because SARS-CoV2 spreads so easily within CDCR institutions due to aspects of their design and operation that cannot practically be changed, the most effective means of preventing large-scale outbreaks at CDCR institutions is

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[19] Delphine Planas, et al., *Reduced sensitivity of SARS-CoV-2 variant Delta to antibody neutralization*, Nature (July 8, 2021), https://doi.org/10.1038/s41586-021-03777-9.

[20] Foss Decl. ¶¶ 5, 7, 9.

[21] Foss Decl. ¶ 5.

[22] M. Saiful Islam, et al., *Current knowledge of COVID-19 and infection prevention and control strategies in healthcare settings: A global analysis*, 41 Infection Control & Hospital Epidemiology 1196, 1196–1206 (Oct. 2020), https://doi.org/10.1017/ice.2020.237.

[23] Foss Decl. ¶¶ 3, 4.

preventing contagious individuals from entering an institution and introducing the virus to the institution. Although it is possible for "breakthrough infections" of vaccinated individuals to occur, and for vaccinated people who become infected to infect others with SARS-CoV2, individuals who are vaccinated are substantially less likely to get COVID-19, and therefore to transmit it to others.[24] Furthermore, the vaccine appears to be very effective against the Delta variant and other variants.[25] For that reason, it is particularly important that staff members, who, as noted above, go daily between their communities and CDCR institutions, are vaccinated against SARS-CoV2.

18. Available vaccines greatly reduce the risk of becoming infected with and transmitting SARS-CoV2, including the Delta variant.[26] As a result, a very high vaccination rate, particularly among those with contact with the outside community who may introduce SARS-CoV2 into a CDCR institution, is the most effective means of preventing outbreaks in CDCR institutions, as in other jails and prisons.

19. All three available vaccines, Pfizer, Moderna, and Johnson & Johnson have been rigorously tested and are safe to use and effective against the transmission of SARS-CoV2.[27]

I declare that the foregoing is true and correct.

Executed on this 4th day of August, 2021, at Los Angeles, California.

Tara Vijayan, M.D.

[24] Moriah Bergwerk, et al., *Covid-19 Breakthrough Infections in Vaccinated Health Care Workers*, New Eng. J Med. (July 28, 2021), https://www.nejm.org/doi/full/10.1056/NEJMoa2109072.

[25] Jamie Lopez Bernal, et al., *Effectiveness of COVID-19 vaccines against the B.1.617.2 (Delta) Variant*, New Eng. J Med. (July 21, 2021), https://www.nejm.org/doi/full/10.1056/NEJMoa2108891.

[26] Jamie Lopez Bernal, et al., *supra* note 28; Aziz Sheikh, et al., *SARS-CoV-2 Delta VOC in Scotland: demographics, risk of hospital admission, and vaccine effectiveness*, Lancet (June 14, 2021), https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)01358-1/fulltext; Sharifa Nasreen, et al., *Effectiveness of COVID-19 vaccines against variants of concern, Canada* (July 3, 2021), https://www.medrxiv.org/content/10.1101/2021.06.28.21259420v1; Dov Lieber, *Pfizer Vaccine Less Effective Against Delta Infections but Prevents Severe Illness, Israeli Data Show*, Wall Street Journal (July 6, 2021), https://www.wsj.com/articles/pfizers-covid-19-vaccine-is-less-effective-against-delta-variant-israeli-data-show-11625572796.

[27] Centers for Disease Control and Prevention, Safety of COVID-19 Vaccines (July 26, 2021), https://www.cdc.gov/coronavirus/2019-ncov/vaccines/safety/safety-of-vaccines.html.

EXHIBIT A

Tara Vijayan, MD, MPH

tvijayan@mednet.ucla.edu

updated: Aug 4, 2021

EDUCATION:

1997-2001	University of California, Berkeley	B.A.	Literature, Mol Biology
2002-2007	Albert Einstein College of Medicine	M.D.	Medicine
2007-2008	University of California, San Francisco	Intern	Internal Medicine
2008-2010	University of California, San Francisco	Resident	Internal Medicine
2008-2010	UCSF Global Health Pathway	Resident	Clinical Scholar
2010-2013	University of California, San Francisco	Fellow	Infectious Diseases
2011-2012	University of California, Berkeley	M.P.H	Epidemiology
2011-2013	University of California, San Francisco	Research Fellow	
	Mentors: Elvin Geng, Jeff Martin, Diane Havlir		
2015-2017	University of California, Los Angeles	Medical Education Fellowship	

CURRENT POSITIONS:

Associate Clinical Professor, Division of Infectious Diseases, DGSOM, UCLA
Block 6 Co-Chair, David Geffen School of Medicine, University of California, Los Angeles
Chair of the Antibiotic Subcommittee, Pharmaceuticals and Therapeutics, UCLA Health
Medical Director, Adult Antimicrobial Stewardship Program, UCLA Health
Associate Director, Scientific Foundations of Medicine
Faculty Director, Medical Education Concentration, UCLA Multicampus ID Fellowship
Faculty Director, Health Equity Pathway, UCLA Internal Medicine Residency
Core Faculty, UCLA Multicampus Fellowship, David Geffen School of Medicine
Member of Admissions Committee, DGSOM, 2019- present
Lead, EDI Committee, UCLA Multicampus Fellowship

LICENSES AND CERTIFICATION:

2008	Medical Licensure, California (A107177)
2010	Board Certified, American Board of Internal Medicine, 8/2010
2012	Board Certified, Infectious Diseases, 10/2012
2013	Credentialed as an HIV Specialist through the American Academy of HIV Medicine
2019	Buprenorphine prescriber (X-Waiver)

HONORS AND AWARDS:

2001-2002	Americorps Fellowship, St. Anthony Free Medical Clinic, San Francisco, CA
2003	Pediatric Academic Society/Society for Pediatric Research Fellowship, UCSF
2005-2006	Doris Duke Clinical Research Fellowship, Yale University School of Medicine
2005-2006	Farr Scholar, Yale University School of Medicine
2006	Global Health Fellowship, Albert Einstein College of Medicine
2006	Alpha Omega Alpha, Albert Einstein College of Medicine
2007	Glasgow-Rubin Achievement Citation, American Medical Women's Association
2011	Infectious Disease Society of America travel award: excellence in abstract submission
2012	Infectious Disease Society of America travel award: excellence in abstract submission
2017	Invited by American Board of Internal Medicine to take part in Standard Setting Process for Infectious Disease Boards
2019	Golden Apple Award, given by DGSOM Class of 2021

2020 Los Angeles Magazine, Top Doctor
2020 Golden Apple Award, given by DGSOM Class of 2020
2021 Los Angeles Magazine, Top Doctor
2021 Golden Apple Award, given by DGSOM Class of 2023
2021 IDSA Featured Educator

KEYWORDS/AREAS OF INTEREST:
Infectious diseases in underserved populations, HIV medicine, clinical infectious diseases, implementation science, medical education, antimicrobial stewardship

PROFESSIONAL ACTIVITIES

CLINICAL ACTIVITIES:
2009-2010 Moonlighting as a Medical Hospitalist at UCSF Mount Zion and Cancer Research Institute for 1 shift per 3 months
2010-2011 Infectious Diseases Consult Service at UCSF, SFGH, San Francisco VA (SFVAMC)
Transplant ID Consult Service at UCSF for 2 months
Infectious Diseases Clinic for one half-day per week (SFVAMC)
Needlestick hotline coverage at SFGH for 2 months
2011- present Moonlighting one weekend per month for East Bay AIDS Center (privileges at Alta Bates Medical Center and Summit Medical Center)
2011-2012 Moonlighting as internist at Contra Costa Regional Medical Center
2012 Transplant ID Consult Service at UCSF for two weeks at a time
2011-2013 Moonlighting Staff Physician, East Bay AIDS Center
2011-2013 Infectious Diseases Clinic for one half-day every other week (UCSF)
HIV Clinic for one half-day every other week (UCSF Positive Health Practice)
2012-2014 Moonlighting as Infectious Disease Consultant Contra Costa Regional Medical Center
2013-2014 San Francisco VA medical center, Department of Internal Medicine
July 2013- Dec 2014 San Francisco VA medical center, Attending Physician on ID service
May 2013-Jan 2015 Attending physician, East Bay AIDS Center, Oakland, CA
May 2013-Jan 2015 Assistant Professor of Medicine, WOS, Division of Infectious Diseases, UCSF
February 2015-June 2021 Assistant Professor of Medicine, Step II-IV, Division of Infectious Diseases, UCLA
July 2021 Associate Professor of Medicine, Division of Infectious Diseases, UCLA

INTERNATIONAL WORK AND ACTIVITIES:
2000 Research in medical anthropology, University of Cape Town, RSA (6 months)
2006 Global Health Fellowship, St. John's Medical Center, Bangalore, India (1.5 months)
2009 Physician, Family AIDS Care and Education (FACES) Clinic, Rongo, Kenya (1 month)
2010 Physician, Project Medishare, Port-au-Prince, Haiti (1 week)
2012 Research, International Epidemiologic Database to Evaluate AIDS, Uganda and Kenya

MENTORSHIP:

Research Mentorship

Academic Year	Student/Fellow	Role

2016-present	Luis Tulloch (2016-18) Roma Patel (2016-18) Josh Jeharajah (2017-2019) Jean Gibb (2017-2019) Amy Dora (2018-2020) Kusha Davar (2019-present) Daisuke Furukawa (2020-present) Azra Bhimani (2021-present)	Director of Medical Education Concentration: led infectious fellows through projects, submitted abstracts
2018	Shilpa Vashista	Mentor for Medical Education Pathway in Internal Medicine Residency
2020-present	Vinay Srinivasan Brian Chu	Research mentor for 2nd and 3rd year medical students

Other Teaching

2008-2010 Teaching on medicine service to interns and medical students, UCSF
2008-present Precept medical, pre-medical and nursing students in student-run homeless clinic, UCSF
2011-2013 Teaching on the infectious diseases consult service to residents and students, UCSF
2015-present Teaching on the infectious disease consult service to fellows, residents and students, UCLA
2015- present Precepting in Clinic to 2nd and 3rd year medical students, internal medicine and med-peds residents and infectious disease fellows
2020: Faculty Facilitator, Healers Art Course

INVITED PRESENTATIONS:

2009 CME for clinical staff at the Family AIDS Center and Education clinic in Rongo, Kenya:
Depression
Hepatitis B-HIV co-infection
2010 Noon conference, San Francisco General Hospital: Hepatitis B-HIV co-infection
2010 Noon conference, San Francisco VA Medical Center: Cases in Infectious Diseases
2010-2011 Infectious Diseases Grand Rounds, UCSF:
Landouzy's septicemia (disseminated TB) in an HIV-infected patient
VZV-related progressive outer retinal necrosis in a gentleman with sarcoidosis
Disseminated Salmonella infections
Amebic liver abscesses in men who have sex with men
Reactivated Hepatitis B infection in a woman with breast cancer
Japanese Encephalitis Virus
Cryptococcal Immune Reconstitution Inflammatory Syndrome (IRIS)
Infectious and non-infectious causes of leukemoid reactions

2012 Infectious Diseases Grand Rounds Journal Club, UCSF, February 2013:
Newer regimens for the treatment of latent tuberculosis infection

2012 UCSF-UC Berkeley Joint Infectious Diseases Retreat:
Timing and determinants of antiretroviral initiation in patients with HIV-associated TB

2012 UCSF primary care resident ambulatory core curriculum: HIV management
UCSF primary care resident ambulatory core curriculum: Latent TB infection
2013 UCSF PRIME curriculum: Antiretroviral therapy initiation

Guest speaker for Ambulatory Case Conference, UCSF: TB peritonitis, February 2013
Infectious Diseases Grand Rounds, Journal Club, UCSF, Feb 2013:
Fecal Microbiota Transplantation

2014 UCSF PRIME curriculum: Cases in Ambulatory HIV Care

2014 East Bay AIDS Education and Training Center Conference: Seminar on Current Topics in Infectious Diseases

2015 Infectious Diseases in the Homeless Population, lecture for medical students, UCLA
Clinical manifestations of HIV, Epidemiology M228 Biology of HIV, UCLA
Skin and Soft Tissue Infections, Residents in Department of Medicine, UCLA
Sexually Transmitted Disease, Block 6, David Geffen School of Medicine
Infectious Disease Grand Rounds: Innovations in Medical Education

2016 Diabetic Foot Infections, Infectious Disease Fellows, UCLA
Skin and Soft Tissue Infections, SM Noon Conference
Sexually Transmitted Disease in Pregnancy, Maternal Fetal Medicine Fellows, UCLA

2017 Respiratory Viral Pathogens, Infectious Disease Fellows
Diabetic Foot Infections, SM Noon Conference
Skin and Soft Tissue Infections, SM Noon Conference
Mycobacterial Diseases and Endemic Mycoses, Thoracic Surgery Conference
Infectious Diseases in the Geriatric Patient, UCLA Board Review Course for Geriatric Medicine, Sept, 2017*
Funny, you don't look like you are from Los Angeles! Implicit Biases: It is the Elephant in the Room. Annual Doctoring and PBL Tutors Conference. November 2017

2018 Mock Medical School Lecture for Transfer Students at UCLA (undergraduate): "Dysuria," January 2018
ID Grand Rounds- Joint Conference on Managing Patients with CF, April 2018
Iris Cantor Women's Health Conference: Skin and Soft Tissue Infections, March 2018
How to Complete an Evaluation, Brief Talk for Infectious Disease Faculty, June 2018
Infectious Diseases in Older Persons, UCLA Geriatrics Board Review CME Sept 2018*
Implicit Bias seminar for UCLA IM Residents, Ambulatory Curriculum Sept-Oct 2018

2019 Grand Rounds St. Vincent's Medical Center: Choosing Antibiotics Wisely Feb 28, 2019*
4th UCLA Health Advanced Practice Provider Conference: Choose Antibiotics Wisely March 30, 2019*
Dysuria, Mock Medical School Lecture for Undergraduates at UCLA, Jan 2019
Respiratory Viral Infections, UCLA Multicampus Fellowship, Feb 2019
Infectious Diseases in Older Persons, UCLA Geriatrics Board Review CME Sept 2019*
Chairperson, pre-conference seminar on infectious diseases, UCLA Geriatrics Board Review, CME Sept 2019*
Noon Conference, Skin and Soft Tissue Infections, SM Hospital and RRMC
"Walking on Eggshells: How to Have Difficult Conversations with your Learner." Given as part of Doctor IV seminar as well as Doctoring retreat, December 2019

2020 "Health Equity Story Slam" Department of Medicine Grand Rounds, January 2020
"What's New in Infectious Diseases." Surgery Grand Rounds March 4, 2020*
"Clinical Management of COVID-19" DGSOM, May 1, 2020, DGSOM
COVID-19 Update, DOM grand rounds. "Re-writing Treatment Guidance." May 6, 2020*
Roundtable on COVID-19 for DOM with Otto Yang, Omai Garner, May 7, 2020
Oral abstract "Walking on Eggshells" AAMC Group on Diversity and Inclusion Conference , Miami, FL May 1-4, 2020

Urology Grand Rounds: Clinical and Surgical Management of the Patient with Covid-19. May 13, 2020.*
Choosing Antibiotics Wisely, Ob-Gyn Residents, Aug 28, 2020
"The UCLA Experience with Covid-19: Diagnosis, Treatment and Community Service."
DOM Grand Rounds with Omai Garner, PhD. Sept 2, 2020*
ID-Health Equity Journal Club, Sept 17, 2020, UCLA Multicampus Fellowship
Overview of Respiratory Viruses, Sept 29, 2020, UCLA Multicampus Fellowship
Novel Coronavirus: From the inpatient setting to outpatient management. UCLA IM residents, Sept- October 2020
Non-tuberculous Mycobacteria, Thoracic Surgery Residents November 6, 2020
Latent TB Infection, Noon Conference, UCLA IM Residents November 12, 2020
UCLA-University of Kwazulu Natal Covid-19 Case Conference, November 30, 2020
Walking on Eggshells, Doctoring 4, DGSOM December 3, 2020
Updates in the Management of Covid-19, with Drs. Christopher Tymchuk and Adrian Mayo December 17, 2020

2021 Department of Medicine Retreat Story Slam, March 2, 2021
Urology Grand Rounds: Updates in Covid-19, April 21, 2021*
Pulmonary Non-tuberculous Mycobacteria, June 14, 2021
Choosing Antibiotics Wisely, Lakewood Medical Center, July 23, 2021*
Geriatrics Board Review, UCLA: Infections in Older Persons September 24, 2021* (pre-recorded)
Geriatrics Board Review, UCLA: Taking care of patients with Covid-19: A Living Document September 24, 2021 (pre-recorded)*

*CME talks

LEADERSHIP ROLES:

2020- present Faculty Director, Health Equity Pathway, UCLA IM Residency
2019- present Medical Director, Antimicrobial Stewardship Program
2018- 2021. Co-Chair of MS4 elective MD 999.08 Teaching Fellowship
2016- present Block 6 Co-Chair
2016-present Faculty Director of Medical Education Concentration
2020-present. Associate Director of Scientific Foundations of Medicine
2020-present. Lead, Fellowship EDI committee
2011-2012 Chief fellow, Division of Infectious Diseases, UCSF
2002-2006 Founder and editor of Ad Libitum, Literary and Art Magazine of Albert Einstein College of Medicine

PROFESSIONAL ORGANIZATIONS AND TASK FORCES:

2010-present Member, Infectious Diseases Society of America
2016-2017 Cultural Competency Task Force, UCLA
June 2017 Participated in American Board of Internal Medicine Standard Setting Process
2017-present Medical Education Committee, UCLA Multicampus ID Fellowship
2019-2021 Teaching and Learning Resources Work Group of the IDSA Medical Education Community of Practice
2019-2020 Curriculum Redesign Task Force, Phase III Program Evaluation & Assessment Committee
2020 LCME accreditation task force
2020- present. Department of Medicine Equity, Diversion and Inclusion Advisory Board

CME COURSES ATTENDED:

2008	Medical Management of HIV/AIDS, UCSF
2010	International Congress of Infectious Diseases, Miami, FL
2011	Infectious Diseases Society of America national meeting, Boston, MA
2012	Clinical Tuberculosis Intensive, Curry National Tuberculosis Program, San Francisco
2012	Infectious Diseases Society of America national meeting, San Diego, CA
2015	Infectious Disease Society of America National Meeting, San Diego, CA
2017	Infectious Disease Society of America National Meeting, San Diego, CA
2018	Developing Faculty Competencies in Assessment: An Interactive Workshop for UCLA Clinical Educators, February 2018
	UCSF Developing Medical Educators of the 21st Century Conference March 2018
	Infectious Disease Society of America National Meeting (ID Week), SF, CA, Oct 2018
2019	2019 NBME Invitational Conference for Educators (May 15 - 16, 2019) at the Indianapolis Marriott Downtown hotel in Indianapolis, Indiana.
	Infectious Disease Society of America National Meeting (ID Week) Washington DC October 2019

RESEARCH AND CREATIVE ACTIVITIES

RESEARCH AWARDS AND GRANTS:

Past

Doris Duke Clinical Research Fellowship, Yale University School of Medicine 6/1/05-5/31/06

Ruth L. Kirschstein National Research Service Award (PD: Chambers) 7/1/11-5/1/13
Institutional Research Training Grant
T32 AI007641-06A2
NIH/PHS
Role: Trainee

PRESS RELEASES/PODCASTS

Febrile Podcast: Episode #9 Arts and Grafts April 19, 2021 https://febrilepodcast.com/episode-9-arts-grafts/

Interviewed by Madeline Brand, Press Play, KCRW, https://www.kcrw.com/people/dr-tara-vijayan Feb 26, 2021

Cited in Washington Post, December 31, 2021
https://www.washingtonpost.com/health/2020/12/31/covid-monoclonal-antibodies-unused/

Cited in Self Magazine December 13, 2019 on Z packs https://www.self.com/story/z-pack-antibiotics-uses

Interviewed for BYU XM Radio on influenza. October 9, 2018
https://www.byuradio.org/episode/888427d8-9384-48d2-abfd-7c4d70a0a0f4?playhead=1436&autoplay=true

Cited in NYT article on Influenza: January 12, 2018,https://www.nytimes.com/2018/01/12/well/live/flu-h3n2-virus-care-remedy.html

Cited in Today Show article on "The Man Flu" December 17, 2017, https://www.today.com/health/man-flu-real-t119791

REVIEWER
Annals of Internal Medicine, October 2018
AIDS Care, BMC Infectious Diseases (2012-2016)
Annals of Internal Medicine, May 2020, July 2020
JAMA Open Network, July 2020
OFID, March 2021

PUBLICATION/BIBLIOGRAPHY

RESEARCH PAPERS

A. RESEARCH PAPERS (PEER REVIEWED)

1. **Vijayan, T**, Benin, AL, Wagner, K, Romano, S, Andiman, WA. "Transitioning Adolescents with Perinatally-Acquired HIV to Adult Medicine." AIDS Care, Volume 21, Issue 10 October 2009, 1222-1229.
2. **Vijayan, T,** Chiller, T, Klausner, J. Sensitivity and specificity of a new cryptococcal antigen lateral flow assay in serum and cerebrospinal fluid." MLO Med Lab Obs. 2013 Mar;45(3):16, 18, 20.
3. **Vijayan, T,** Klausner, J. "Integrating clinical services for HIV, tuberculosis and cryptococcal disease in the developing world: a step forward with two novel diagnostic tests" Journal of International Association of Providers of AIDS Care, 2013 Sep-Oct;12(5):301-5.
4. **Vijayan, T**, Zheng, P, Nguyen, C, Peters, M. "Assessing Burden and Depth of HBV Infection Among Asian Pacific Islander Families in San Francisco." Journal of Immigrant and Minority Health, e-published ahead of print August 3, 2013.
5. **Vijayan, T,** Semitala, F, Matsiko, N, Elyanu P, Namusobya J, Havlir DV, Kamya M, Geng EH. "Changes in the timing of antiretroviral therapy initiation in HIV-infected patients with tuberculosis in Uganda: a study of the diffusion of evidence into practice in the global response to HIV/AIDS." Clin Infect Dis. 2013 Sep 24
6. Kuan, EC, Yoon AJ, **Vijayan T**, Humpries RM, Suh, HD. Canine Staphylococcus pseudintermedius sinonasal infection in human hosts. Int Forum Allergy Rhinol. 2016 Feb 16.
7. **Vijayan T**, Klausner JD. Hepatitis C: challenges and opportunities in the laboratory diagnosis of infection. MLO Med Lab Obs. 2016 Mar; 48(3): 16, 18.
8. Roy M, Muyindike W, **Vijayan T**, Kanyesigye M, Bwana M, Wenger M, Martin J, Geng E. Use of symptom screening and sputum microscopy testing for active tuberculosis case detection among HIV-infected patients in real-world clinical practice in Uganda. J Acquir Immune Defic Syndr. 2016 May 6.
9. Censullo, A and **Vijayan, T**. Choosing Nuclear Medicine Imaging Studies Wisely in Diagnosing Infectious Diseases. Open Forum Infectious Diseases 3 Feb 2017.
10. Wilson, M, Sample H Zorn KC, Arevalo S, Yu G, Neuhaus J, Federman S, Stryke D, Briggs B, Langelier C, Berger A, Douglas V, Josephson SA, Chow FC, Fulton BD, DeRisi JL, Gelfand JM, Naccache SN, Bender J, Dien Bard J, Murkey J, Carlson M, Vespa PM, **Vijayan T**, Allyn PR, Campeau S, Humphries RM, Klausner JD, Ganzon CD, Memar F, Ocampo NA, Zimmermann LL, Cohen SH, Polage CR, DeBiasi RL, Haller B, Dallas R, Maron G, Hayden R, Messacar K, Dominguez SR, Miller S, Chiu CY. Clinical Metagenomic Next-Generation

Sequencing for Diagnosis of Infectious Meningitis and Encephalitis. New England Journal of Medicine, June 13, 2019.

11. **Vijayan, T**. "Browner: Creating Narratives of Race." New England Journal of Medicine. August 1, 2019.
12. Tulloch, L, Patel, R, Martin, E, Curello, J, Relan, A, **Vijayan, T**. Using modified team-based learning to teach antimicrobial stewardship to medical students: One institution's approach. Medical Science Educator. published online August 28, 2019.
13. Takada S, Ober AJ, Currier, JS, Goldstein NJ, Horwich TB, Mittman BS, Shu SB, Tseng CH, **Vijayan T**, Wali S, Cunningham WE, Ladapo JA. Reducing cardiovascular risk among people living with HIV: Rationale and design of the Increasing Statin Prescribing in HIV Behavioral Economic Research (INSPIRE) randomized controlling trial. Prog Cardiovasc Dis 2020 Feb 19.
14. Adamson, P, Goodman-Meza, D, **Vijayan, T**, Yang, Shangxin, Garner, Omai. Diagnostic Yield of Repeat Testing for SARS-CoV-2: Experience from a Large Health System in Los Angeles. International Journal of Infectious Diseases. Accepted, pending publication.
15. **Vijayan T**, Cortés-Penfield N, Harris C. Tuskegee as a History Lesson, Tuskegee as Metaphor: Addressing Discrimination as a Social Determinant of Health in the Classroom. Open Forum Infect Dis. 2020 Sep 28;7(10):ofaa458. doi: 10.1093/ofid/ofaa458. PMID: 33134422; PMCID: PMC7588099.
16. **Vijayan T**, Shin M, Adamson PC, Harris C, Seeman T, Norris KC, Goodman-Meza D. Beyond the 405 and the 5: Geographic variations and factors associated with SARS-CoV-2 positivity rates in Los Angeles County. Clin Infect Dis. 2020 Nov 3:ciaa1692. doi: 10.1093/cid/ciaa1692. Epub ahead of print. PMID: 33141164.

B. RESEARCH/PERSPECTIVE PAPERS - PEER REVIEWED (in press)

C. RESEARCH PAPERS - PEER REVIEWED (SUBMITTED):

Winnett, A, Srinivasan, V, Davis, M, **Vijayan, T**, Uslan, D, Garner, O, de St Maurice, A. "The Path of More Resistance: A Comparison of NHSN and CLSI Criteria in Developing Institutional Antibiograms." Submitted to CID

Davar, K, Wilson, M, Miller, S, Chiu, CY, **Vijayan, T**. "A Rare Bird: Diagnosis of Psittacosis Meningitis by Clinical Metagenomic Next-Generation Sequencing." Submitted to OFID.

Furukawa, D, Douglas, N, Hsu, J, Davis, M, Pham, M, Kanatani, M, **Vijayan, T**. Antibiotic prophylaxis in beta-lactam allergic patients undergoing Cesarean and vaginal delivery: An opportunity for stewardship." Submitted to ICHE.

RESEARCH PAPERS (NON-PEER REVIEWED)

D. RESEARCH PAPERS - NON-PEER REVIEWED

1. **Vijayan, T**, Pelfrey, J, Klausner, J. Cryptococcal Lateral Flow Assay, YRG newsletter.

E. RESEARCH PAPERS - NON-PEER REVIEWED (IN PRESS)
None
F. RESEARCH PAPERS - NON-PEER REVIEWED (SUBMITTED)
None

CHAPTERS

CHAPTERS (IN PRESS)

1. **Vijayan, T,** Gonzales, R. Acute Sinusitis. In: Chiovaro J, Durand K, Lai C., eds. UCSF Outpatient Medicine Pocket Preceptor. University of California San Francisco. November 2009.

2. **Vijayan, T**, Winston, L. Sexually Transmitted Diseases. In: Chiovaro J, Durand K, Lai C., eds. UCSF Outpatient Medicine Pocket Preceptor. University of California San Francisco. November 2009.

3. **Vijayan, T**, Fox, L. Dermatology. In: Chiovaro J, Durand K, Lai C., eds. UCSF Outpatient Medicine Pocket Preceptor. University of California San Francisco. November 2009.

4. **Vijayan, T**. Plague. DynaMed, 2014

5. **Vijayan, T**. Viral Hemorrhagic Fever. DynaMed, 2014.

ONLINE EDITORIALS

Vijayan, T. "A Typical Day in This Physician's Household." KevinMD.com. Feb 6, 2018

Vijayan, T, Qadir, N, Wang, T. "Trusting evidence over anecdote: Clinical decision making in the era of covid-19. BMJ Opinion. July 23, 2020

Vijayan, T. "In the quiet of the holiday season, the City of Angels burns." https://blogs.bmj.com/bmj/2021/01/05/tara-vijayan-in-the-quiet-of-the-holiday-season-the-city-of-angels-burns/ BMJ Opinion, January 5, 2021

ABSTRACTS

1. **Vijayan, T**, Pai-Dhungat, M, Tebb, K, Fink, J, Orphila, M, Stewart, P, Shafer, MA. "Is Ethnicity Associated with Factors Leading to Childhood Obesity?" Presented as a poster at the Pediatric Academic Society/Society for Pediatric Research Meeting in San Francisco, May 2004
2. **Vijayan, T**, Benin, AL, Wagner, K, Romano, S, Andiman, WA. " 'We Never Thought This Would Happen': Transitioning Adolescents with Perinatally-Acquired HIV to Adult Medicine." Presented as a poster for Yale Student Research Day and Doris Duke Clinical Research Meeting, May 2006.
3. **Vijayan, T**, Zheng, P, Nguyen, C, Peters, M. "Assessing Burden and Depth of HBV Infection Among Asian Pacific Islander Families in San Francisco." Presented as a poster at the 14th International Congress of Infectious Diseases, Miami, FL, March 9-12, 2010.

4. **Vijayan, T**, Zheng, P, Nguyen, C, Peters, M. "Limited knowledge and screening among family members of Hepatitis B infected Asian Pacific Islanders." Presented at American Association of Liver Diseases meeting Boston, MA Oct 29-Nov 2, 2010
5. **Vijayan, T**, Metcalfe, JZ, Grinsdale, J, Ho, C, Kawamura, M, Hopewell, P, Nahid, P. "The Sum and the Whole of Whole-Blood Interferon Gamma Release Assays: Understanding Patient Factors That Influence Quantitative IGRA Values." Presented at the Infectious Diseases Society of America conference in Boston, MA, October 20-23, 2011.
6. **Vijayan, T,** Bauman S, Chiller, T, Klausner, J. "Test performance of a novel lateral-flow assay to detect cryptococcal disease." ID Week, San Diego, October 18, 2012.
7. Patel, R, Relan, A, and **Vijayan, T.** "Flipping Expectations: Are Active Learning Strategies Sufficient or Necessary To Teach Principles of Antimicrobial Stewardship in Medical School?." ID Week, San Diego, October 2017
8. Allyn, P, Schaenman, J, Schwartz, B, **Vijayan, T**. "West Coast Transplant ID Conference: A Model for Building Community In ID Disciplines?" ID Week 2018, San Francisco.
9. Davar, K, **Vijayan, T**. The PEST Approach to Choosing Antimicrobial Therapy. ID Week October, 2020
10. Davar, K, **Vijayan, T**. "Psitticosis meningitis." Challenging Cases. ID Week, October 2020
11. Dora, A, Graber, C, **Vijayan, T**. "Works well enough? Program Directors' Perceptions of the Effectiveness and Transparency of Competency-Based Evaluations in Assessing Infectious Diseases Fellow Performance." ID Week, October 2020
12. Vasishta, S, Graber, C, **Vijayan, T**. Next-Generation Sequencing in Clinical Practice: A Survey of Infectious Disease Providers. ID week, October 2020

Community Engagement

Sabbath Town Hall on Covid Vaccines December 27, 2020, January 3, 2020, January 10, 2020 (Facebook Live Event) sponsored by CoVPN, Charles Drew University, New Vision Church of Jesus Christ

Inglewood Active Community Town Hall Event sponsored by the American Heart Association, April 21, 2021

Covid Vaccine Townhall: Expansion of Covid-19 Vaccine Ages 12 and Up. Ask the Doctor. May 14, 2-21 Facebook Live

Carnegie Science Center Covid-19 Vaccine Panel Series, Vaccine Science & Safety, May 20, 2021

Additional consulting work:
Prison Law Firm, ACLU, Federal Defenders of San Diego.