

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA**

Miguel Angel ESCALANTE, *et al.*,

Plaintiffs,

v.

U.S. IMMIGRATION AND CUSTOMS
ENFORCEMENT, *et al.*,

Defendants.

No. 1:22-cv_____

APPLICATION FOR A TEMPORARY RESTRAINING ORDER

Pursuant to Fed. R. Civ. P. 65, Plaintiffs Miguel Angel Escalante, Kenet Jefet Hernandez Herrera, Anna Sorokin, and Ramon Dominguez Gonzalez (“Plaintiffs”) hereby apply for the entry of a temporary restraining order requiring Defendants U.S. Immigration and Customs Enforcement (“ICE”), Acting Director of ICE Tae D. Johnson, U.S. Department of Homeland Security (“DHS”), and DHS Secretary Alejandro Mayorkas to immediately make available and provide them with mRNA COVID-19 vaccine booster shots by a qualified medical professional, along with adequate education, pre-vaccination consultation, and documentation in accordance with the Centers for Disease Control and Prevention’s (“CDC”) guidance on COVID-19 vaccine booster shots.

Plaintiffs are all civil immigration detainees who are currently in Defendants’ custody. They all have medical conditions that subject them to a heightened risk of serious illness or death from COVID-19. They are all eligible for vaccine booster shots. The CDC has found that vaccine booster shots provide critical protection against COVID-19 and has recommended those shots for all adults, except under certain rare circumstances. Plaintiffs have been unable to obtain booster

shots in accordance with CDC guidance while in Defendants' custody, putting them at imminent risk of infection, illness, and even death.

As explained in the accompanying Memorandum, Defendants' failure to provide Plaintiffs booster shots places them at unreasonable risk of serious illness and death and also constitutes unlawful punishment, in violation of Plaintiffs' Fifth Amendment due process rights. A temporary restraining order is urgently warranted to protect Plaintiffs from the imminent and irreparable harm of infection from COVID-19 and the ensuing consequences.

In support of this Motion, Plaintiffs rely upon the accompanying Memorandum, declarations, and exhibits. A proposed order is attached for the Court's convenience.

Respectfully submitted this 1st of March, 2022,

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CERTIFICATE OF COUNSEL REQUIRED BY LOCAL RULE 65.1(a)

Pursuant to Local Rule 65.1(a), the undersigned counsel for Plaintiffs hereby certifies as follows:

(1) Copies of all pleadings and papers filed in this action to date, or to be presented to the Court at the hearing on the application for a Temporary Restraining Order, have been delivered to Defendants by emails addressed to Jeffrey Robins, Deputy Director, Office of Immigration Litigation, U.S. Department of Justice (Jeffrey.Robins@usdoj.gov), and Jennifer Youngs, Trial Attorney, U.S. Department of Justice, Civil Division, Office of Immigration Litigation (Jennifer.a.youngs@usdoj.gov), at approximately 12:15 p.m. on March 1, 2022.

A copy of the summons and file-stamped papers will be emailed to the same recipients promptly after receiving summonses from the Clerk of Court, and paper copies will be served promptly thereafter.

(2) The attorneys listed above have been notified that the time of presenting the application for the temporary restraining order to the Court has not yet been set by the Court; the

attorneys listed above will be notified as soon as it is.

March 1, 2022

Respectfully submitted,

/s/ Arthur B. Spitzer

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**PLAINTIFFS' MEMORANDUM IN SUPPORT OF THEIR APPLICATION FOR A
TEMPORARY RESTRAINING ORDER**

INTRODUCTION

Plaintiffs Miguel Angel Escalante, Kenet Jefet Hernandez Herrera, Anna Sorokin, and Ramon Dominguez Gonzalez (collectively, “Plaintiffs”) are medically vulnerable people held by U.S. Immigration and Customs Enforcement (“ICE”), Acting Director of ICE Tae D. Johnson, and U.S. Department of Homeland Security (“DHS”), and DHS Secretary Alejandro N. Mayorkas (collectively “Defendants”) at detention facilities while they await adjudication of their civil immigration cases. As COVID-19 has spread rapidly in ICE detention facilities, Plaintiffs fear for their health and their lives. Since the emergence of the Omicron variant, COVID-19 has surged in ICE detention centers. The number of COVID-19 infections in ICE detention grew by over 800 percent in January 2022 alone.¹ Over one in 20 people in ICE detention are currently infected with COVID-19.²

Plaintiffs, who are eligible for COVID-19 vaccine booster doses, have not been able to receive COVID-19 booster shots in detention. COVID-19 vaccine booster shots provide critical protection against serious illness and death from the virus: messenger RNA (“mRNA”) booster shots are 90 percent effective against hospitalization due to the Omicron variant, in comparison to 57 percent for vaccinated people without boosters. Declaration of Dr. Tara Vijayan (“Vijayan Decl.”) ¶ 21. A vaccinated person without an mRNA vaccine booster shot is approximately three and a half times more likely to be hospitalized and four times more likely to die from COVID-19 than a vaccinated person with an mRNA vaccine booster shot. Declaration of Dr. Eric Feigl-Ding

¹ Declaration of Nathalie E. Amazan (“Amazan Decl.”), Ex. A, Camilo Montoya-Galvez, *Government Medical Advisors Urge ICE to Expand COVID-19 Vaccinations for Immigrant Detainees*, CBS NEWS (Jan. 26, 2022), <https://www.cbsnews.com/news/immigration-ice-detainees-covid-19-vaccines/> (noting increase by 848 percent between January 3 and 26, 2022).

² Amazan Decl. Ex. B, ICE, *ICE Guidance on COVID-19: Detainee Statistics* (updated Feb. 28, 2022), <https://www.ice.gov/coronavirus#detStat> (noting that 1,001 of 18,203 people in ICE detention, or over five percent, have currently tested positive for COVID-19).

¶ 26 (“Feigl-Ding Decl.”). For this reason, the federal government has repeatedly emphasized the importance of COVID-19 vaccine booster shots, encouraging the public to receive boosters as soon as they are eligible.³ The Centers for Disease Control and Prevention (CDC) has likewise advised all detention centers to “provide COVID-19 vaccination, including boosters,” to all those who are held or work in a detention facility.⁴

Plaintiffs, however, have not been able to receive booster shots. They have requested booster shots at their detention facilities, but they have been told that none are available, or that they should wait an indeterminate period of time, or their requests have simply been ignored. One Plaintiff, Mr. Dominguez Gonzalez, was offered only the Johnson & Johnson booster shot, which fails to provide adequate protection, and was told an mRNA booster shot is not available. The Johnson & Johnson booster shot provides limited protection against the Omicron variant, has a greater risk of serious side effects in comparison to the mRNA vaccines,⁵ and falls below the established professional standard of medical care, unless there is a contraindication to the mRNA vaccine. Vijayan Decl. ¶¶ 23–24;⁶ Feigl-Ding Decl. ¶ 24.

The CDC has instructed that detention facilities provide and ensure availability of

³ See, e.g., Amazon Decl. Ex. C, Press Release, The White House, Statement by President Joe Biden on the Omicron COVID-19 Variant (Nov. 26, 2021), <https://www.whitehouse.gov/briefing-room/statements-releases/2021/11/26/statement-by-president-joe-biden-on-the-omicron-covid-19-variant/> (“Get your booster shot now . . .”).

⁴ Amazon Decl. Ex. D, CDC, *Interim Guidance on Management of Coronavirus Disease 2019 (COVID-19) in Correctional and Detention Facilities* (Feb. 15, 2022), <https://www.cdc.gov/coronavirus/2019-ncov/community/correction-detention/guidance-correctional-detention.html>.

⁵ Amazon Decl. Ex. E, CDC, *Johnson & Johnson’s Janssen COVID-19 Vaccine Overview and Safety*, <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines/janssen.html> (updated Dec. 28, 2021) (“In most situations, Pfizer-BioNTech or Moderna COVID-19 vaccines are preferred over the J&J/Janssen COVID-19 vaccine for primary and booster vaccination due to the risk of serious adverse events.”).

⁶ Amazon Decl. Ex. F, CDC, *COVID-19 Vaccine Booster Shots*, <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/booster-shot.html> (updated Jan. 21, 2022).

COVID-19 vaccines, “including boosters,” for all detainees.⁷ In spite of this guidance, knowledge that ICE detains approximately 5,200 people who are medically vulnerable to serious illness and death from COVID-19,⁸ and ample knowledge for at least four months that vaccine booster shots provide critically important protection against the virus, Defendants have done little to ensure that people in their custody can receive booster shots. As of this date, ICE has not given any instruction directing that its approximately 200 detention facilities provide mRNA COVID-19 booster shots to detained people. ICE also has no plan in place to ensure identification and notification of detained people who are eligible for booster shots, nor does it have any plan to educate detained people about the importance of booster doses. As a result, medically vulnerable people in immigration detention lack this basic, widely available, and critical protection against a lethal virus.

Plaintiffs bring this emergency request for a Temporary Restraining Order requiring Defendants to make available and provide them with mRNA COVID-19 vaccine booster shots in accordance with CDC guidance. Plaintiffs are likely to succeed on their claims that Defendants’ failure to provide booster shots violates their Fifth Amendment due process rights by imposing an unreasonable risk to their health and safety, and constitutes unlawful punishment. Without prompt provision of COVID-19 vaccine booster shots, Plaintiffs in this case lack adequate protection against serious illness and death from COVID-19. The Temporary Restraining Order should be granted.

I. **FACTUAL BACKGROUND**

⁷ CDC, *Interim Guidance on Management of Coronavirus Disease 2019 (COVID-19) in Correctional and Detention Facilities*, *supra* note 4.

⁸ Amazan Decl. Ex. G, Camilo Montoya Galvez, *Coronavirus Infections inside U.S. Detention Surge by 520 Percent in 2022*, CBS NEWS (Jan. 14, 2022), <https://www.cbsnews.com/news/immigration-detention-covid-cases-surge/>.

A. COVID-19 Vaccine Booster Shots Are Necessary to Protect Plaintiffs from Serious Illness and Death from COVID-19, Especially in Light of the Omicron Variant.

COVID-19 continues to pose a significant risk of serious illness and death, with more than 4.4 million new cases and over 61,557 new deaths in the United States in the past four weeks alone.⁹ The highly infectious Omicron variant, which began to spread widely in the United States in the past three months, is five times as contagious as the original form of the COVID-19 virus. Vijayan Decl. ¶ 9. As of February 19, 2022, nearly all COVID-19 cases in the United States were estimated to have been caused by the Omicron variant. *Id.*; Feigl-Ding Decl. ¶ 9. Although in many cases, the Omicron variant may cause mild illness, those with underlying medical conditions and who are immunocompromised continue to face a substantial risk of serious illness or death from COVID-19. Vijayan Decl. ¶ 10; Feigl-Ding Decl. ¶ 15.

Moreover, there is growing concern among medical experts and the CDC regarding the new “BA.2” subvariant of Omicron, which “has 17 additional mutations that the original Omicron BA.1 sublineage does not possess” and “is clearly displacing and out-competing all other variants across multiple countries, thereby posing a serious looming threat.” Feigl-Ding Decl. ¶ 21. The BA.2 subvariant “is significantly more infectious than the BA.1 sublineage of Omicron, and seems to be even more severe.” *Id.* ¶ 7. A recent study found that “[t]he viral RNA load in the lung periphery and histopathological disorders of BA.2 were more severe than those of [earlier subvariants of the Omicron variant]” and concluded that “the possibility that BA.2 would be the most concerned variant to global health,” proposing “that BA.2 should be recognized as a unique variant of concern, and this [COVID-19] variant should be monitored in depth.” *Id.* ¶ 23. In Denmark, where the BA.2 subvariant is the dominant form of COVID-19,

⁹ Amazan Decl. Ex. H, Johns Hopkins University Coronavirus Resource Center, *COVID-19 Dashboard*, <https://coronavirus.jhu.edu/map.html> (last visited Feb. 28, 2022).

excess deaths attributable to the virus are surging. *Id.* The BA.2 subvariant has already jumped to 3.8 percent of COVID-19 cases in the United States as of February 19, 2022,⁸ and is expected to increase as it has in other countries. *Id.* ¶¶ 21-23; Vijayan Decl. ¶ 10

The risk of spread of COVID-19 is heightened in high-risk settings such as ICE detention facilities. Vijayan Decl. ¶¶ 8, 15–18; Feigl-Ding Decl. ¶ 13. As the CDC has explained, “[p]eople in correctional and detention facilities are at greater risk for some illnesses, such as COVID-19, because of close living arrangements with other people.”¹⁰ Once present in a detention facility, COVID-19 spreads quickly. As a recent study has shown, COVID-19 case rates in ICE detention were, on average at least 5.3 times higher than in the state-matched U.S. population.¹¹ According to ICE’s own data, 1,001 people in ICE detention facilities as of February 28, 2022 are currently positive for COVID-19, comprising over five percent of all detainees in custody.¹²

The risk of serious illness and death due to COVID-19 is greatest among those who are unvaccinated and those who are vaccinated and eligible for a booster shot but have not received one. Booster doses of mRNA vaccines are critical to preventing hospitalization and death caused by COVID-19, and to reduce transmission within a detention facility. Vijayan Decl. ¶ 20; Feigl-Ding Decl. ¶ 24. Recent data published by the CDC confirms that with the rise of the Omicron variant, mRNA vaccine booster shots (Pfizer-BioNTech and Moderna) are 90 percent effective

¹⁰ Amazan Decl. Ex. I, CDC, *FAQs for Correctional and Detention Facilities*, <https://www.cdc.gov/coronavirus/2019-ncov/community/correction-detention/faq.html> (updated Jan. 26, 2021).

¹¹ Amazan Decl. Ex. J, Nishant Uppal, Elizabeth Chin, and Parsa Erfani, *Trends in Decarceration, COVID-19 Cases, and SARS-CoV-2 Testing in U.S. Immigration Detention Centers from September 2020 to August 2021*, JAMA Network Open (Feb. 16, 2022), <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2789087>.

¹² ICE, *ICE Guidance on COVID-19: Detainee Statistics*, *supra* note 2.

against hospitalization, whereas two doses of the vaccine without the booster are only 57 percent effective against hospitalization. Vijayan Decl. ¶ 21. Fortunately, mRNA booster shots are also effective against the Omicron BA.2 subvariant. Feigl-Ding Decl. ¶ 28; Vijayan Decl. ¶ 11.

The federal government has repeatedly emphasized the importance of the COVID-19 vaccine booster shots. Since October 21, 2021, the CDC has encouraged all individuals 18 and older who are eligible and live in high-risk settings, which include ICE detention facilities, to receive a booster shot for protection against serious illness and death from COVID-19.¹³ The White House issued a statement on December 2, 2021 that “[a]s we face the Omicron variant, boosters are more important than ever. Boosters increase the strength of your antibody response, so when the virus mutates, a booster makes it more likely that your antibodies can protect you against the new variant.”¹⁴ The CDC’s COVID-19 guidance for correctional and detention facilities instructs that facilities should “at all times” “provide COVID-19 vaccination, including boosters.”¹⁵

Under current CDC guidance, all individuals who initially received a Pfizer-BioNTech or Moderna vaccine are eligible for a COVID-19 booster shot once five months have elapsed after completion of their primary vaccination series. Individuals who received a Johnson & Johnson

¹³ Amazan Decl. Ex. K, Press Release, CDC, *CDC Expands Eligibility for COVID-19 Booster Shots* (Oct. 21, 2021), <https://www.cdc.gov/media/releases/2021/p1021-covid-booster.html>.

¹⁴ Amazan Decl. Ex. L, Press Release, The White House, *President Biden Announces New Actions to Protect Americans Against the Delta and Omicron Variants As We Battle COVID-19 This Winter* (Dec. 2, 2021), <https://www.whitehouse.gov/briefing-room/statements-releases/2021/12/02/fact-sheet-president-biden-announces-new-actions-to-protect-americans-against-the-delta-and-omicron-variants-as-we-battle-covid-19-this-winter/>; see also Amazan Decl. Ex. M, The White House, *President Biden on the Omicron Variant: Vaccination and Boosters Offer High Level of Protection*, YOUTUBE (Dec. 28, 2021), <https://www.youtube.com/watch?app=desktop&v=aQj4ecpAMUQ>; Press Release, CDC, *CDC Expands COVID-19 Booster Recommendations*, *supra* note 11.

¹⁵ CDC, *Interim Guidance on Management of Coronavirus Disease 2019 (COVID-19) in Correctional and Detention Facilities*, *supra* note 4.

vaccine are eligible for a COVID-19 booster two months after completion of their primary vaccination dose. The CDC recommends that everyone 18 and older—and, in the case of individuals who initially received a Pfizer-BioNTech vaccine, 12 and older—receive a booster shot.¹⁶ In cases where a patient has recently developed COVID-19, vaccines can be provided after symptoms have subsided and criteria for ending isolation is met (currently at least five days after a positive test and as long as symptoms improve. Vijayan Decl. ¶ 22.

A booster shot of an mRNA vaccine such as Moderna or Pfizer-BioNTech is necessary to provide effective immunity against the Omicron variant. It is now clear that mRNA vaccines produce immunologically superior responses when used as a booster dose and are highly preferable to the viral vector Johnson & Johnson vaccine. Vijayan Decl. ¶ 23; Feigl-Ding Decl. ¶¶ 24-25. The CDC has also clarified that “Pfizer-BioNTech or Moderna COVID-19 vaccines are preferred over the J&J/Janssen COVID-19 vaccine for primary and booster vaccination due to the risk of serious adverse events.”¹⁷ Indeed, the CDC instructs that, prior to vaccination, patients “should be informed that mRNA vaccines are preferred over the [Johnson & Johnson] COVID-19 Vaccine” and that “[a]ll people who elect to receive a Janssen COVID-19 Vaccine booster should be informed about the risk and symptoms of TTS [(thrombosis with thrombocytopenia syndrome—a blood clotting disease)] that could occur after vaccination . . . and the availability of mRNA COVID-19 vaccines instead of the Janssen COVID-19 Vaccine.”¹⁸

As a result, the established standard of medical care is to provide mRNA booster shots to

¹⁶ CDC, *COVID-19 Vaccine Booster Shots*, *supra* note 6.

¹⁷ CDC, *Johnson & Johnson’s Janssen COVID-19 Vaccine Overview and Safety*, *supra* note 5.

¹⁸ Amazan Decl. Ex. N, CDC, *Interim Clinical Considerations for Use of COVID-19 Vaccines Currently Approved or Authorized in the United States* (Jan. 6, 2022), <https://www.cdc.gov/vaccines/covid-19/clinical-considerations/covid-19-vaccines-us.html#considerations-covid19-vax-booster>.

eligible patients; offering only a Johnson & Johnson vaccine booster, absent a medical contraindication, would fall below the established standard of care. Feigl-Ding Decl. ¶ 25; Vijayan Decl. ¶ 24; *see also* Amazan Decl. Ex. O (Letter from Concerned Medical Faculty to DHS Secretary Alejandro Mayorkas and ICE Acting Director Tae D. Johnson, Jan. 27, 2022); Amazan Decl. Ex. P (Letter from DHS Medical Experts Dr. Scott Allen and Dr. Josiah Rich to DHS Secretary Mayorkas and ICE Acting Director Johnson, Jan. 26, 2022).

In light of this evidence, the CDC has formally recommended in its guidance that the Johnson & Johnson vaccine should only be given as a booster shot in rare circumstances, such as if someone “[h]ad a severe reaction after an mRNA vaccine dose” or “ha[s] a severe allergy to an ingredient of Pfizer-BioNTech or Moderna,” if they “[w]ould otherwise remain unvaccinated for COVID-19 due to limited access to Pfizer-BioNTech or Moderna,” or “[w]ants to get the J&J/Janssen COVID-19 vaccine despite the safety concerns.”¹⁹

Defendants have no plausible argument that they have “limited access to Pfizer-BioNTech or Moderna” to provide mRNA booster shots to people in their custody. The mRNA vaccines continue to be widely available in the United States. Indeed, the CDC issued its guidance in support of the use of mRNA boosters noting that “the U.S. supply of mRNA vaccines is abundant – with nearly 100 million doses in the field for immediate use.” Vijayan Decl. ¶ 25; *see also* Feigl-Ding Decl. ¶ 25.

¹⁹ CDC, *Johnson & Johnson’s Janssen COVID-19 Vaccine Overview and Safety*, *supra* note 4.

B. Without mRNA Vaccine Booster Shots, Medically Vulnerable Plaintiffs Face a Heightened and Unreasonable Risk of Serious Illness and Death from COVID-19.

Plaintiffs in this case are all medically vulnerable to COVID-19. They have been diagnosed with medical conditions such as HIV, chronic kidney infection, neurocognitive disorder, post-traumatic disorder, and obesity. Declaration of Miguel Angel Escalante (“Escalante Decl.”) ¶ 2; Declaration of Kenet Jefet Hernandez Herrera (“Hernandez Herrera Decl.”) ¶ 2; Declaration of Anna Sorokin (“Sorokin Decl.”) ¶ 2; Declaration of Ramon Dominguez Gonzalez (“Dominguez Gonzalez Decl.”) ¶ 2. According to the CDC, individuals with these and certain other medical conditions “are more likely to get severely ill from COVID-19.”²⁰ Severe illness means that a person with COVID-19 may be hospitalized, need intensive care, require a ventilator to help them breathe, or die.²¹ Without booster shots, specifically mRNA booster shots, Plaintiffs are particularly vulnerable to COVID-19 infection and severe illness, including death. Vijayan Decl. ¶¶ 6–7.

1. Plaintiffs Suffer from Medical Conditions that Place Them at Risk of Serious Illness or Death from COVID-19.

Plaintiff Miguel Angel Escalante is a 36-year-old man who has been detained by ICE at the Florence Correctional Center (“Florence”) in Florence, Arizona since approximately January 3, 2022. Escalante Decl. ¶ 1. He has been in ICE custody since July 2020 in various different facilities in Arizona. *Id.* Mr. Escalante is HIV-positive and has a weakened immune system, which makes him vulnerable to serious illness or death from COVID-19. *Id.* ¶ 2. ICE is aware of his medical conditions because he has filed five requests for release, including under *Fraihat v.*

²⁰ Amazan Decl. Ex. Q, CDC, *People with Certain Medical Conditions*, <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-with-medical-conditions.html#:~:text=Having%20heart%20conditions%20such%20as,severely%20ill%20from%20COVID%2D19> (updated Dec. 14, 2021).

²¹ *Id.*

U.S. Immigration & Customs Enforcement, which requires ICE to “make timely custody determinations for” medically vulnerable detainees like Plaintiffs. 445 F. Supp. 3d 709, 751 (C.D. Cal. 2020), *overruled by* 16 F. 4th 613 (9th Cir. 2021). *Id.* ¶ 3. His most recent denial was on January 11, 2022. *Id.* ¶ 3. Mr. Escalante received one dose of the Johnson & Johnsons vaccine around May 20, 2021 while in ICE custody at La Palma Correctional Center. *Id.* ¶ 4.

Mr. Escalante has made repeated requests for a booster shot. *Id.* ¶ 6. First, in November 2021, he asked the nurse staff at La Palma Correctional Center for a booster, but they informed him that they did not have them at that time. *Id.* After Mr. Escalante was transferred to Florence, he requested a booster shot from a nurse at intake. *Id.* Again, he was told that they were not available. *Id.* Mr. Escalante subsequently requested the booster shot two more times, after which a nurse informed him that he would be placed on a waiting list. *Id.* Mr. Escalante has been on this waiting list for about a month, and has yet to receive a COVID-19 booster. *Id.* He also does not know any other detainee at Florence who has received a booster shot. *Id.* ¶ 7. Mr. Escalante is extremely worried about contracting COVID-19 because of his HIV status and the frequent number of people moving through the facility. *Id.* ¶ 8. In particular, he wants to receive an mRNA vaccine for more protection from the virus. *Id.*

Plaintiff Kenet Jefet Hernandez Herrera is a 24-year-old man who has been detained by ICE at the Eloy Detention Center (“Eloy”) in Eloy, Arizona since approximately June 2021. Hernandez Herrera Decl. ¶ 1. Mr. Hernandez Herrera has several conditions that make him vulnerable to serious illness or death from COVID-19, including post-traumatic stress disorder, anxiety disorder, and mild neurocognitive disorder. Hernandez Herrera Decl. ¶ 2. He is also a former smoker. *Id.* ICE is aware of his medical conditions because he was diagnosed and prescribed medication for his anxiety disorder at Eloy. *Id.* ¶ 3. He was not vaccinated for

COVID-19 until around July 14, 2021, when he received one dose of the Johnson & Johnson vaccine. *Id.* ¶ 4.

Since then, Mr. Hernandez Herrera has requested the COVID-19 booster shot at least twice while at Eloy. *Id.* He first submitted a request in writing in early to mid-January 2022, but he never received a response. *Id.* ¶ 9. Later in January, he requested a booster shot while speaking with medical staff, but he was told that they were not available. *Id.* He also does not know any other detainees at Eloy who have received a COVID-19 booster shot. *Id.* ¶ 10. Mr. Hernandez Herrera has already been sick with COVID-19 once before, in June 2021, when he had serious symptoms including difficulty breathing, a high fever, and extended cough. *Id.* ¶ 8. He therefore wants a booster shot in order to protect himself from getting seriously ill from COVID-19 in the future. *Id.* ¶ 7. He fears that he is already in danger at Eloy, where the guards have mixed healthy people with those who are infected with COVID-19. *Id.*

Plaintiff Anna Sorokin is a 31-year-old woman who has been detained by ICE at the Orange County Correctional Facility (“Orange County”) in Goshen, New York since June 7, 2021. Sorokin Decl. ¶ 1. She was previously detained by ICE at the Bergen County Correctional Facility since approximately March 25, 2021. *Id.* She has several medical conditions that make her vulnerable to serious illness or death from COVID-19, including a chronic kidney infection as well as depression, anxiety, and post-traumatic stress disorder. *Id.* ¶ 2. ICE is aware of her medical conditions because she had been considered but denied release under *Fraiht* around April 1, 2021, and she has recently submitted two new *Fraiht* requests in February 2022, including information about her kidney condition. *Id.* ¶ 3. She was vaccinated for COVID-19 around April 2021, when she received one dose of the Johnson & Johnson vaccine while detained by ICE at Bergen County Correctional Facility. *Id.* ¶ 4.

Ms. Sorokin has made multiple requests for a booster shot. *Id.* ¶ 7. First, she submitted a sick call slip in December 2021, stating that she wanted a booster. *Id.* She never received a response. *Id.* Then around January 19, 2022, she experienced her first bout of COVID-19, during which she had a fever, persistent cough, nausea, migraines, and body aches. *Id.* ¶ 5. Even after she left quarantine on January 29, 2022, she continued to experience lingering effects including fatigue, coughing, brain fog and shortness of breath. *Id.* After leaving quarantine on January 29, 2022, Ms. Sorokin requested the booster again when she had a medical visit for a general check-up. *Id.* ¶ 7. Although a nurse told her that she would be seen by a doctor to address this, she never heard anything about a booster shot since then. *Id.* She has not heard of any other detained people getting a booster shot in Orange County, and has not seen any information distributed about boosters. *Id.* ¶ 9. She feels especially frustrated that she contracted COVID-19 after Orange County failed to give her a booster shot upon her initial request, and she feels that the staff have left her and other detainees unprotected in the facility. *Id.* ¶ X. Ms. Sorokin still would like a booster shot as soon as she is medically eligible for one, as she is concerned about getting sick from COVID-19 if she contracts it again. *Id.* ¶ 10.

Plaintiff Ramon Dominguez Gonzalez is a 32-year-old man who has been detained by ICE at the Imperial Regional Adult Detention Facility (“Imperial”) in Calexico, California since approximately January 2019. Dominguez-Gonzalez Decl. ¶ 1. Mr. Dominguez Gonzalez is clinically obese and has difficulty breathing. Dominguez-Gonzalez Decl. ¶ 2. ICE is aware of his medical vulnerability to COVID-19 because in October 2020, Mr. Dominguez Gonzalez filed a request for release on the basis of his medical conditions under *Fraiha*. *Id.* ¶ 3. He received a single dose of the Johnson & Johnson vaccine around March 2021, meeting the required two-month wait period to be eligible for a booster shot. *Id.* ¶ 4.

Mr. Dominguez Gonzalez has made multiple requests for a booster shot at Imperial, yet has been unable to receive one. *Id.* ¶ 6. Initially, after submitting a request through a sick call slip in early December 2021, he was told by a nurse that they would get back to him, but they never did. *Id.* Later in the month, he requested the booster shot again at a mental health appointment, but he never received one. *Id.* Mr. Dominguez Gonzalez then submitted another sick call request inquiring about the booster around January 8, 2022, but no one explained to him why he had not yet received a booster. *Id.* Shortly after, on January 17, 2022, Mr. Dominguez Gonzalez tested positive for COVID-19. He fell ill, including suffering a fever, cough, and shortness of breath. *Id.* ¶ 7. Earlier in February 2022, as many as nine out of 12 housing units in Imperial were under quarantine for COVID-19 exposure. *Id.* ¶ 9.

Mr. Dominguez Gonzalez continued to test positive for COVID-19 until January 27, 2022, when he was released from quarantine. *Id.* Although he became eligible for the booster, he was not offered a booster until February 23, 2022, and his only option was the Johnson & Johnson booster. Mr. Dominguez Gonzalez declined the Johnson & Johnson booster based on his understanding of CDC and medical expert recommendations for mRNA boosters. Mr. Dominguez Gonzalez wants an mRNA booster shot to receive protection and prevent himself from getting sick from COVID-19 again. He still has breathing issues, and has no confidence in the staff at Imperial, as he has seen them eschew COVID-19 protocols, like going to work while still sick. *Id.* ¶ 10.

All Plaintiffs have been detained for at least several months, if not years, despite their medical vulnerability to COVID-19. Escalante Decl. ¶ 1-2; Hernandez Herrera Decl. ¶ 1-2; Sorokin Decl. ¶ 1-2; Dominguez Gonzalez Decl. ¶ 1-2.

2. Plaintiffs Have Been Unable to Obtain COVID-19 Booster Shots in ICE Detention.

Plaintiffs have all received their primary COVID-19 vaccine doses, and enough time has elapsed for each of them to receive a COVID-19 booster shot. Escalante Decl. ¶ 4; Hernandez Herrera Decl. ¶ 4; Sorokin Decl. ¶ 4; Dominguez Gonzalez Decl. ¶ 4. They have requested booster shots, only to be told that none are available or that they should wait an indeterminate time, or their requests have been simply ignored. Escalante Decl. ¶ 6; Hernandez Herrera Decl. ¶ 9; Sorokin Decl. ¶ 7; Dominguez Gonzalez Decl. ¶ 6. Plaintiffs have not received booster shots, leaving them acutely vulnerable to COVID-19 infection and serious illness. Escalante Decl. ¶¶ 5-6; Hernandez Herrera Decl. ¶¶ 2, 8; Sorokin Decl. ¶ 7-8; Dominguez Gonzalez Decl. ¶¶ 2, 6. Defendants have not provided Plaintiffs any information or education about booster shots. Escalante Decl. ¶ 7; Hernandez Herrera Decl. ¶ 6; Sorokin Decl. ¶ 9. Plaintiffs report that they are aware of the existence and benefits of booster shots only from watching television, reading the news, or conversations with loved ones. Escalante Decl. ¶ 5; Sorokin Decl. ¶ 9; Dominguez Gonzalez Decl. ¶ 10.

C. Defendants Have Failed to Provide COVID-19 Vaccine Boosters to Immigrant Detainees.

It is evident that Defendants lack any consistent plan to ensure that eligible detainees, such as Plaintiffs, are provided with COVID-19 booster shots. ICE's current version of the Pandemic Response Requirements ("PRR"), which establishes COVID-19 mitigation requirements for detention facilities that hold ICE detainees, contains no provision regarding

booster doses, even though the CDC has encouraged eligible individuals, including Plaintiffs, to receive a booster shot since October 21, 2021.²² The ICE Health Service Corps ("IHSC") COVID-19 Vaccination Guidelines and Protocol, issued on January 25, 2021, applies only to approximately 20 of ICE's 200 detention facilities nationwide, and provides no guidance whatsoever regarding booster shots.²³ ICE's failure to adopt a system-wide booster shot plan is clear from the paltry number of booster shots it has administered to individuals in its custody. Over four months, between November 2021 and February 21, 2022 (when data was last made public), Defendants have provided a mere total of 1,436 boosters to people detained in ICE detention facilities despite holding between 18,800 to 22,000 people on a day-to-day average.²⁴

Defendants' failure to provide booster shots to eligible detainees carries particularly severe consequences for medically vulnerable detainees. According to a recent news report, as of late December 2021, ICE detained approximately 5,200 immigrants whose health issues or age place them at higher risk of severe illness or death if they contract COVID-19.²⁵ Under the terms

²² Amazan Decl. Ex. R, ICE, *ICE ERO COVID-19 Pandemic Response Requirements (Version 7.0)* 6 (Oct. 19, 2021),

<https://www.ice.gov/doclib/coronavirus/eroCOVID19responseReqsCleanFacilities.pdf>

(providing that the PRR "sets forth expectations and assists ICE detention facility operators in sustaining detention operations while mitigating risk to the safety and wellbeing of detainees, staff, contractors, visitors, and stakeholders due to COVID-19").

²³ Amazan Decl. Ex. S, ICE Health Service Corps, *COVID-19 Vaccination Guidelines and Protocol, OM-21-001* (Jan. 25, 2021); Amazan Decl. Ex. T, *ICE Health Service Corps Fiscal Year 2020* 34 (2021), <https://www.ice.gov/doclib/ihsc/IHSCFY20AnnualReport.pdf>.

²⁴ Declaration of Dr. Ada Rivera, *Shaikh v. U.S. Immigr. & Customs Enf't*, No. 1:22-cv-00231, ¶ 31 (D.D.C. Feb. 24, 2022), ECF No. 22-6; Camilo Montoya-Galvez, *Coronavirus Infections inside U.S. Immigration Detention Centers Surge by 520% in 2022*, *supra* note 8 (noting daily average of 22,000 detainees); Amazan Decl. Ex. JJ, ICE, *ICE Guidance on COVID-19: ICE Detainee Statistics*

<https://web.archive.org/web/20220222183148/https://www.ice.gov/coronavirus> (updated Feb. 22, 2022) (noting daily average of 18,800 detainees in custody as of February 21, 2022).

²⁵ Camilo Montoya-Galvez, *Coronavirus Infections inside U.S. Immigration Detention Centers Surge by 520% in 2022*, *supra* note 8.

of a preliminary injunction that remains in effect, ICE is required to review their medical histories and consider releasing these individuals from detention.²⁶ Nevertheless, many medically vulnerable individuals remain detained in ICE custody, often for several months, if not years.

Compounding the danger of ICE's failure to adopt a booster shot plan is its reliance on the Johnson & Johnson vaccine for detainees' primary vaccine dose,²⁷ which is less effective against COVID-19 variants. Each Plaintiff has only received one dose of the Johnson & Johnson vaccine. Escalante Decl. ¶ 4; Hernandez Herrera Decl. ¶ 4; Sorokin Decl. ¶ 4; Dominguez Gonzalez Decl. ¶ 4. Recent data show that mRNA vaccines are most effective at reducing viral transmission and controlling COVID-19 infections, as compared to the Johnson & Johnson vaccine which also carries a greater risk of serious side effects. Vijayan Decl. ¶¶ 21, 23; Feigl-Ding Decl. ¶¶ 25, 30. Studies also show that the Johnson & Johnson vaccine does not produce sufficient quantities of antibodies against Omicron.²⁸ Vijayan Decl. ¶¶ 21, 23. In fact, due to

²⁶ *Frailhat v. ICE*, 445 F. Supp. 3d 709 (C.D. Cal. 2020), *overruled by Frailhat v. ICE*, 16 F.4th 613 (9th Cir. 2021); *see also* 9th Cir. R. 41-2 (timing of mandate) (providing that a mandate will issue seven days after the time to file a motion for reconsideration expires); Order Granting Appellees' Second Unopposed Motion for Extension of Time to File Petition for Rehearing, *Frailhat v. ICE*, No. 20-55634 (9th Cir. Jan. 4, 2022), ECF No. 88 (requiring petition for rehearing to be filed on or before Apr. 5, 2022).

²⁷ Amazan Decl. Ex. U, Priscilla Alvarez, *DHS Begins Administering J&J Vaccine to Immigrant Detainees*, CNN POLITICS (July 13, 2021), <https://www.cnn.com/2021/07/13/politics/immigrant-detainees-vaccine-dhs/index.html>; Amazan Decl. Ex. P, Letter from DHS Medical Experts Dr. Scott Allen and Dr. Josiah Rich to DHS Secretary Mayorkas and Acting ICE Director Johnson, at 3 (Jan. 26, 2022), <https://whistleblower.org/wp-content/uploads/2022/01/012622-LETTER-TO-MAYORKAS-FROM-DRS-RE-COVID-IN-IMM-DETENTION.pdf> ("DHS has offered vaccination to detainees with the single shot Johnson & Johnson (J&J) vaccine, an approach that at one time was appropriate.").

²⁸ Amazan Decl. Ex. V, Wesley H. Self, MD, et al., *Comparative Effectiveness of Moderna, Pfizer-BioNTech, and Janssen (Johnson & Johnson) Vaccines in Preventing COVID-19 Hospitalizations Among Adults Without Immunocompromising Conditions — United States, March–August 2021*, CDC (Sep. 24, 2021), <https://www.cdc.gov/mmwr/volumes/70/wr/mm7038e1.htm>.

efficacy concerns, the CDC has even authorized *second* mRNA booster doses for those who originally received a Johnson & Johnson vaccine.⁴⁴

1. Defendants Knew of the Risk Posed to Plaintiffs by Their Failure to Provide COVID-19 Booster Shots.

Defendants are aware that Plaintiffs are medically vulnerable. All of the Plaintiffs have been diagnosed with medical conditions while in ICE custody or have submitted requests for release to ICE referencing their medical conditions, including requests under the terms of the preliminary injunction issued in *Fraihat*, which requires ICE to “make timely custody determinations for” medically vulnerable detainees like Plaintiffs. Escalante Decl. ¶ 3; Hernandez Herrera Decl. ¶ 3; Sorokin Decl. ¶ 3; Dominguez Gonzalez Decl. ¶ 3; *see also* 445 F. Supp. 3d at 751, *supra* note 26.

Defendants should be, and are, aware of the danger posed by COVID-19 to individuals in its care, and of the critical importance of boosters. As noted above, federal government officials as well as the CDC have repeatedly made public announcements underscoring the vital role booster shots play in protecting public health and mitigating the spread of COVID-19. Moreover, on December 15, 2021, the American Civil Liberties Union (ACLU) sent a letter to DHS Secretary Alejandro Mayorkas and ICE Acting Director Tae Johnson urging them to “take immediate action to address” the agency’s failure to adopt and implement a booster shot plan “before further harm is done to the people in ICE custody and the community at large.”²⁹ On January 26, 2022, Dr. Scott Allen and Dr. Josiah Rich, who serve as medical experts for DHS, sent a letter to Secretary Mayorkas and Acting Director Johnson, warning of the urgent need for ICE to provide COVID-

²⁹ Amazan Decl. Ex. W, Letter from ACLU, to DHS Secretary Mayorkas and ICE Acting Director Johnson (Dec. 15, 2021), <https://www.aclu.org/letter/letter-demanding-dhs-provide-covid-19-vaccine-boosters-people-ice-detention>.

19 vaccination and boosters to detainees.³⁰ And on February 15, 2022, the CDC itself updated its official guidance for correctional and detention facilities, instructing that all people living and working in these facilities should be ensured access to COVID-19 vaccines and boosters.³¹

2. Other Custodial Agencies Have Shown That Boosters Can Be Made Available, Underscoring ICE’s Failure.

ICE’s ongoing failure to provide booster shots stands in contrast to the approach taken by other custodial entities, including the Federal Bureau of Prisons (BOP) and state departments of correction. The BOP’s COVID-19 Vaccine Guidance, issued on October 13, 2021, provides that BOP would offer the Pfizer-BioNTech COVID-19 booster shot to individuals who were then eligible for it under CDC guidance.³² The District of Columbia’s Department of Corrections announced on December 22, 2021 that it “continues to offer a COVID-19 vaccine to all residents and is offering the booster to all residents who are eligible.”³³ Moreover, multiple state departments of correction have administered many thousands of booster shots to people in their custody.³⁴ For example, as of February 18, 2022, the Michigan Department of Corrections has

³⁰ Letter from Dr. Scott Allen and Dr. Josiah Rich, *supra* note 27.

³¹ CDC, *Interim Guidance on Management of Coronavirus Disease 2019 (COVID-19) in Correctional and Detention Facilities*, *supra* note 4.

³² Amazon Decl. Ex. X, Fed. Bureau of Prisons, Clinical Guidance, *COVID-19 Vaccine Guidance*, Version 14.1, 5–6 (Oct. 13, 2021), https://www.bop.gov/resources/pdfs/covid_19_vaccine_guidance_v14_0_2021.pdf.

³³ Amazon Decl. Ex. Y, Gov’t of the Dist. of Columbia, Dep’t of Corr., *Coronavirus Prevention* (Dec. 22, 2021),

<https://web.archive.org/web/20220205062215/https://doc.dc.gov/page/coronavirus-prevention>.

³⁴ See, e.g., Amazon Decl. Ex. Z, Delaware Dep’t of Corr., *Active COVID-19 Cases (Offenders)*, https://doc.delaware.gov/assets/documents/Confirmed_COVID_Cases.pdf (updated Feb. 28, 2022) (noting that “1,593 vaccinated inmates have received a booster”); Amazon Decl. Ex. AA, Missouri Dep’t of Corr., *COVID-19 Data*, <https://doc.mo.gov/media-center/newsroom/covid-19/data> (last visited Feb. 28, 2022) (boosters administered to 4,158 inmates); Amazon Decl. Ex. BB, Minnesota Dep’t of Corr., *MN DOC COVID-19 Data Dashboard*, <https://mn.gov/doc/about/covid-19-updates/> (last updated Feb. 24, 2022) (34 percent of incarcerated population fully vaccinated and boosted).

administered 11,398 booster shots to individuals in its custody (over a third of the total incarcerated population of 32,273 people).³⁵

ICE's failure to provide COVID-19 vaccine boosters is not an anomaly for the agency. ICE's sluggish vaccine roll-out in 2021 does not bode well for people like Plaintiffs who rely on Defendants to promptly provide them booster shots. As early as January 25, 2021, ICE Enforcement and Removal Operations (ERO) suggested that the ICE Health Service Corps (IHSC) add COVID-19 vaccine guidelines and protocols to the next version of the PRR, to ensure "across the board implementation."³⁶ As an ICE official stated in an email, "[u]ltimately we should have a consistent, comprehensive rollout for all 200+ facilities within our detention network [as] opposed to only IHSC staffed facilities."³⁷ This email concerned ICE PRR version 6.0, but that document was not released until nearly two months later, on March 16, 2021.³⁸ What is more, the ICE PRR 6.0 did not, in fact, engage in any "consistent" or "comprehensive" rollout at all, and the agency failed to supply detention facilities with vaccine doses, leaving vaccine rollout up to each facility.³⁹ Defendants did not update their policy regarding vaccine procurement until six months later, after a court order.⁴⁰

II. LEGAL STANDARD

³⁵ Amazan Decl. Ex. CC, Michigan.gov, *COVID-19 Dashboard*, https://www.michigan.gov/coronavirus/0,9753,7-406-98178_103214-547150--,00.html (last updated Feb. 25, 2022).

³⁶ Amazan Decl. Ex. DD, E-mail from Ricardo Wong, Dep. Asst. Dir., Detention Management Division, to Ada Rivera, Dep. Assistant Dir. Clinical Services, ICE Health Services Corps (Jan. 25, 2021, 2:47 PM).

³⁷ *Id.*

³⁸ Amazan Decl. Ex. EE, ICE, *ICE Pandemic Response Requirements (Version 6.0)* (Mar. 16, 2021), <https://www.ice.gov/doclib/coronavirus/eroCOVID19responseReqsCleanFacilities-v6.pdf>.

³⁹ *Id.* at 24.

⁴⁰ *Fraihat v. ICE*, No. 5:19-cv-1546-JGB-SHK (C.D. Cal. June 23, 2021), 2021 WL 2580512.

To obtain a temporary restraining order, a plaintiff “must establish that he is likely to succeed on the merits, that he is likely to suffer irreparable harm in the absence of preliminary relief, that the balance of equities tips in his favor, and that an injunction is in the public interest.” *Winter v. Nat. Res. Def. Council, Inc.*, 555 U.S. 7, 20 (2008); *Aamer v. Obama*, 742 F.3d 1023, 1038 (D.C. Cir. 2014); *Sibley v. Obama*, 810 F. Supp. 2d 309, 310 (D.D.C. 2011) (articulating the elements of a temporary restraining order based on the preliminary injunction standard). Courts in this Circuit have traditionally applied these factors on a sliding scale, where a stronger showing on some factors can compensate for a weaker showing on others. *See, e.g., Davenport v. Int’l Brotherhood of Teamsters*, 166 F.3d 356, 360 (D.C. Cir. 1999). It has been suggested, but not decided, that a likelihood of success on the merits may be required. *See Sherley v. Sebelius*, 644 F.3d 388, 392–93 (D.C. Cir. 2011) (citing *Winter*, 555 U.S. at 20–22). Under either approach, Plaintiffs make the necessary showing.

III. ARGUMENT

A. Plaintiffs Are Likely to Succeed on the Merits.

Plaintiffs are likely to establish that Defendants’ failure to provide them with COVID-19 vaccine booster shots poses an unreasonable risk to their health and constitutes punishment as it lacks a rational relationship to any legitimate governmental interest, in violation of their Fifth Amendment substantive due process rights.

1. Defendants’ Failure to Provide COVID-19 Vaccine Booster Shots Violates Plaintiffs’ Substantive Due Process Rights Under the Fifth Amendment Because It Poses an Unreasonable Risk to Plaintiffs’ Health.

Whenever the government detains or incarcerates someone, it has an affirmative duty to provide conditions of reasonable health and safety as well as reasonably adequate medical care. As the Supreme Court has explained, “when the State takes a person into its custody and holds

him there against his will, the Constitution imposes upon it a corresponding duty to assume some responsibility for his safety and general well-being.” *DeShaney v. Winnebago Cnty. Dep’t of Soc. Servs.*, 489 U.S. 189, 199–200 (1989). As a result, the government must provide those in its custody with “food, clothing, shelter, medical care, and reasonable safety” *Id.* at 200.

The Eighth Amendment prohibits the government from exposing prisoners to “an unreasonable risk of damage to their health.” *Banks v. Booth*, 468 F. Supp. 3d 101, 110 (D.D.C. 2020), *appeal dismissed, cause remanded*, 3 F.4th 445 (D.C. Cir. 2021). The Eighth Amendment similarly prohibits the government from disregarding a “serious medical need” that causes an “excessive risk” to a prisoner’s health and safety. *Baker v. Dist. of Columbia*, 326 F.3d 1302, 1306 (D.C. Cir. 2003) (citing *Farmer v. Brennan*, 511 U.S. 825, 837 (1994)). To show a violation of the Eighth Amendment, prisoners must demonstrate that a government official acted with deliberate indifference, where the official had subjective knowledge of and recklessly disregarded the excessive risk to the prisoner’s health or safety. *Baker*, 326 F.3d at 1306.

The same basic principles apply to immigrant detainees, with an important distinction. Plaintiffs are “civil immigration detainees . . . protected by the Fifth Amendment’s Due Process Clause.” *C.G.B. v. Wolf*, 464 F. Supp. 3d 174, 210 (D.D.C. 2020). Like pre-trial detainees, civil immigrant detainees “have not been convicted of any present crime,” and they “may not be subjected to punishment of any description.” *Id.* As the Supreme Court concluded in *Kingsley v. Hendrickson*, pre-trial detainees bringing excessive force claims need only demonstrate that the use of force was objectively unreasonable. 576 U.S. 389, 397 (2015). Following the Supreme Court’s instruction, this District has concluded that pre-trial detainees “do not need to show deliberate indifference in order to state a due process claim for inadequate conditions of confinement.” *Banks*, 468 F. Supp. 3d at 111. Instead, pre-trial detainees “need only show that

prison conditions are objectively unreasonable in order to state a claim under the due process clause.” *Id.* This test also applies to immigrant detainees. *C.G.B.*, 464 F. Supp. 3d at 211 n.31 (“The Court is persuaded, both by the language of *Kingsley* and by its fellow courts, to apply the *Kingsley* standard here as well. Accordingly, [p]laintiffs need not prove deliberate indifference.”). Defendants thus violate Plaintiffs’ due process rights under the Fifth Amendment when they “knew or should have known that the [detention] conditions posed an excessive risk to their health and intentionally or recklessly failed to act.” *Banks*, 468 F. Supp. 3d at 111.

Defendants’ failure to provide COVID-19 vaccine booster shots to Plaintiffs violates their Fifth Amendment substantive due process rights. Defendants knew or should have known that their failure to provide booster shots constitutes an unreasonable risk to Plaintiffs’ health, and nevertheless failed to provide them. Defendants recklessly disregarded Plaintiffs’ serious medical need for a COVID-19 vaccine booster shot.

a. Defendants’ Failure to Provide COVID-19 Vaccine Booster Shots Poses an Unreasonable Risk to Plaintiffs’ Health.

Defendants’ failure to provide COVID-19 booster shots constitutes an unreasonable risk to Plaintiffs’ health. “Determining whether or not [p]laintiffs have been exposed to an unreasonable risk is an objective analysis which ‘requires a court to assess whether society considers the risk that the prisoner complains of to be so grave that it violates contemporary standards of decency to expose *anyone* unwillingly to such a risk.’” *Banks*, 468 F. Supp. 3d at 111 (quoting *Helling v. McKinney*, 509 U.S. 25, 36 (1993)) (emphasis in original)). “In other words, the [detainee] must show that the risk of which he complains is not one that today’s society chooses to tolerate.” *Helling*, 509 U.S. at 36. Defendants may not impose conditions that pose an unreasonable risk of future harm, even if that harm has not yet come to pass. “It would

be odd to deny an injunction to inmates who plainly proved an unsafe, life-threatening condition in their prison on the ground that nothing yet had happened to them.” *Id.* at 33.

Defendants’ failure to provide booster shots exemplifies this unreasonable risk. As numerous courts have concluded, failure to provide adequate protection against COVID-19 in jail or detention poses an unreasonable risk to the health of detainees. *See, e.g., Banks*, 468 F. Supp. 3d at 111; *Ferreira v. Decker*, 456 F. Supp. 3d 538, 550 (S.D.N.Y. 2020) (“Petitioners have established . . . that Respondents [(including ICE)] have left in place conditions of confinement that result in COVID-19 posing an unreasonable risk of serious damage to their health.”); *Malam v. Adducci*, 455 F. Supp. 3d 384, 395 (E.D. Mich. 2020) (same); *Zepeda Rivas v. Jennings*, 445 F. Supp.3d 36, 40 (N.D. Cal. 2020) (same). This is true even if Defendants have been taking other mitigation measures to reduce the risk of spread of COVID-19. First, the evidence from multiple COVID-19 lawsuits targeting ICE detention facilities across the country, as well as Plaintiffs’ declarations, demonstrate that any mitigation measures Defendants have implemented are falling short of preventing spread of the virus in detention facilities. Second, even if Defendants’ mitigation measures were working, Plaintiffs are still subject to a heightened and unreasonable risk of serious illness or death from COVID-19 without booster shots because of their medical vulnerabilities and by the very fact of their detention in congregate settings. Mitigation measures to reduce the spread of COVID-19 are therefore not replacements for booster shots in constitutional, or practical and medical, senses.

As discussed above, it is well-established that the primary vaccination doses alone, absent a booster shot, provide inadequate protection against COVID-19 because the immunity provided by the initial vaccine doses wanes over time. Vijayan Decl. ¶¶ 21–24; Feigl-Ding Decl. ¶¶ 24–27. Defendants’ failure to offer booster shots to Plaintiffs “prevent[s] Plaintiffs from being able to

take the preventative and precautionary steps that the larger, non-detained population has been able to take to slow the spread of COVID-19.” *Banks*, 468 F. Supp. 3d at 112. Moreover, booster shots are even more critical in light the recent surge in COVID-19 cases caused by the highly infectious Omicron variant and its subvariants. Vijayan Decl. ¶¶ 24–25, Feigl-Ding Decl. ¶¶ 28–29, 31–35; Amazan Decl. Ex. P (Letter from Dr. Allen and Dr. Rich); Amazan Decl. Ex. O (Letter from Concerned Medical Faculty). As a result, Defendants’ failure to provide COVID-19 vaccine booster shots to Plaintiffs constitutes an unreasonable risk to Plaintiffs’ health.

b. Plaintiffs Have a “Serious Medical Need” for a COVID-19 Vaccine Booster Shot.

Given that COVID-19 vaccine booster shots are necessary to protect the health and safety of Plaintiffs and prevent serious illness or death from COVID-19, Plaintiffs have a serious medical need for a COVID-19 vaccine booster shot.

“A medical need is serious if it either is diagnosed by a physician as mandating treatment or is so obvious that a lay person easily would recognize the necessity of a physician’s attention.” *Coleman-Bey v. United States*, 512 F. Supp. 2d 44, 47 (D.D.C. 2007). Furthermore, “[w]here denial or delay causes an inmate to suffer a life-long handicap or permanent loss, the medical need is considered serious.” *Oladokun v. Corr. Treatment Facility*, 5 F. Supp. 3d 7, 15 n.9 (D.D.C. 2013). The well-known risks of serious illness, including hospitalization and death, from COVID-19 for medically vulnerable individuals “easily push [Plaintiffs’] claim into the category of serious medical needs.” *Brown v. D.C.*, 514 F.3d 1279, 1284 (D.C. Cir. 2008).

Numerous courts have concluded that vulnerability to COVID-19 constitutes a “serious medical need.” *Coronel v. Decker*, 449 F. Supp. 3d 274, 283 (S.D.N.Y. 2020) (concluding that immigrant detainees with medical vulnerabilities “have a serious medical need . . . to avoid contracting [COVID-19] and thereby potentially suffering ‘death, degeneration, or extreme

pain.”); accord *Coreas v. Bounds*, 451 F. Supp. 3d 407, 426 (D. Md. 2020); *Gayle v. Meade*, No. 20-21553-CIV, 2020 WL 3041326, at *18 (S.D. Fla. June 6, 2020), *reconsideration denied*, No. 20-21553-CIV, 2021 WL 1255627 (S.D. Fla. Mar. 24, 2021). Moreover, courts have determined that “the COVID-19 vaccine is a ‘serious medical need’” for people in custody. *Maney v. Brown*, No. 6:20-CV-00570-SB, 2021 WL 354384, at *11 (D. Or. Feb. 2, 2021); see also *Patel v. Cnty. of Orange*, No. 817CV01954JLSDFM, 2019 WL 4238875, at *6 (C.D. Cal. June 19, 2019) (concluding, based on the Supreme Court’s holding in *Helling*, that “the exposure to the risk of contracting hepatitis is enough to state an Eighth Amendment claim” that “the need for vaccines to *prevent* the contraction of hepatitis logically is a ‘serious’ medical need”).

c. Defendants Knew or Should Have Known That Their Failure to Provide COVID-19 Vaccine Booster Shots Posed an Excessive Risk to Plaintiffs’ Health, and Recklessly Failed to Act.

Defendants knew or should have known that failure to provide COVID-19 vaccine boosters posed an excessive risk to Plaintiffs’ health. As explained above, to succeed on the merits of their Fifth Amendment due process claim, pre-trial detainees need only “show[] that the Defendants knew or should have known that the jail conditions posed an excessive risk to their health and intentionally or recklessly failed to act.” *Banks*, 468 F. Supp. 3d at 111; see also *Miranda v. Cnty. of Lake*, 900 F.3d 335, 352 (7th Cir. 2018) (concluding that “medical-care claims brought by pretrial detainees . . . are subject only to the objective unreasonableness inquiry identified in *Kingsley*”); *Brawner v. Scott Cty., Tennessee*, 14 F.4th 585, 596 (6th Cir. 2021) (same); *Gordon v. Cnty. of Orange*, 888 F.3d 1118, 1120, 1122–25 (9th Cir. 2018) (same); *Darnell v. Piniero*, 849 F.3d 17, 34–35 (2d. Cir. 2017); but see *Strain v. Regalado*, 977 F.3d 984, 991 (10th Cir. 2020); *Whitley v. City of St. Louis*, 887 F.3d 857, 860 n.4 (8th Cir. 2018); *Dang by*

& through *Dang v. Sheriff, Seminole Cnty.*, 871 F.3d 1272, 1279 n.2 (11th Cir. 2017); *Alderson v. Concordia Parish Corr. Facility*, 848 F.3d 415, 419 n.4 (5th Cir. 2017).

Defendants have recklessly failed to provide COVID-19 booster shots to Plaintiffs.⁴¹ They knew or should have known, based on the recurrent public recommendations discussed above, that COVID-19 booster shots are necessary to provide Plaintiffs adequate protection against COVID-19. *See supra* § I.A, II.C.1. These public announcements, made repeatedly by the CDC and the federal government over the past several months, are sufficient to establish that Defendants knew or should have known that the failure to provide COVID-19 vaccine booster shots poses an excessive risk to Plaintiffs' health. *See, e.g., Farmer*, 511 U.S. at 826 (“[A] factfinder may conclude that the official knew of a substantial risk from the very fact that it was obvious.”). By failing to provide booster shots to people in ICE detention, Defendants “have disregarded those risks by failing to take comprehensive, timely, and proper steps to stem the spread of the virus.” *Banks*, 468 F. Supp. 3d at 119.

⁴¹ Because “[t]he civil law generally calls a person reckless who acts or (if the person has a duty to act) fails to act in the face of an unjustifiably high risk of harm that is either known or so obvious that it should be known,” *Farmer*, 511 U.S. at 836, “to establish that conditions of confinement violate due process, a [pre-trial detainee] need establish only that detaining officials know or should know that those conditions objectively constitute a serious risk to the defendant’s health,” *United States v. Otunyo*, No. CR 18-251 (BAH), 2020 WL 2065041, at *13 (D.D.C. Apr. 28, 2020).

d. While Plaintiffs Need Only Show that Defendants Recklessly Failed to Act under *Kingsley*, Defendants Also Had Subjective Knowledge of The Risk to Plaintiffs.

Because Plaintiffs are civil immigrant detainees, they are not required to establish that Defendants acted with deliberate indifference, a subjective intent or awareness of the risk of harm posed to Plaintiffs by their failure to act, as is required for Eighth Amendment claims brought by convicted prisoners. *See Kingsley*, 576 U.S. at 397; *see also Banks*, 468 F. Supp. 3d at 110–11; *C.G.B.*, 464 F. Supp. 3d at 211 n.31.

However, even if Plaintiffs were required to demonstrate that Defendants had subjective awareness of the risk posed by their failure to act, Defendants clearly were “aware of facts from which the inference could be drawn that a substantial risk of serious harm exists” and “dr[ew] the inference.” *Farmer*, 511 U.S. at 837. Plaintiffs are not required to “show that [Defendants] acted or failed to act believing that harm actually would befall an inmate; it is enough that the official acted or failed to act despite his knowledge of a substantial risk of serious harm.” *Id.* at 842.

Defendants have acknowledged the threat of COVID-19 in their own policy documents,⁴² and is aware of over 5,200 medically vulnerable detainees in custody whom they have declined to release after administrative review of their files, including Plaintiffs.⁴³ *See supra* § I.C.1. In addition, as noted above, the ACLU sent Defendants a letter in December 2021 regarding the importance of booster shots to detainees, as did DHS’s own medical experts in January 2022.⁴⁴ Recently, five medically vulnerable detained immigrants sued Defendants ICE and DHS over the

⁴² ICE, *ICE ERO COVID-19 Pandemic Response Requirements (Version 7.0)*, *supra* note 22 at 6–7.

⁴³ *Fraihat*, 445 F. Supp. 3d at 751, *supra* note 24; Galvez-Montoya, *Coronavirus Infections inside U.S. Detention Surge by 520 Percent in 2022*, *supra* note 8.

⁴⁴ Letter from ACLU to Sec. Alejandro Mayorkas, COVID-19 Vaccine Booster Availability in ICE Detention Facilities (Dec. 15, 2021), *supra* note 28; Letter from Dr. Scott Allen and Josiah Rich (Jan. 26, 2022), *supra* note 29.

failure to provide them with COVID-19 booster shots, directly prompting ICE to administer boosters to those five individuals.⁴⁵ As a result, Defendants’ subjective awareness of the substantial risk of harm that Plaintiffs would face without a COVID-19 booster shot, and their failure to act demonstrate Defendants’ deliberate indifference.

2. Defendants’ Failure to Provide COVID-19 Boosters Constitutes Punishment in Violation of Plaintiffs’ Fifth Amendment Substantive Due Process Rights.

Because Plaintiffs are civil immigration detainees, they cannot be subject to conditions that constitute punishment. *See Bell v. Wolfish*, 441 U.S. 520, 535 (1979). Defendants’ failure to provide COVID-19 booster shots to Plaintiffs constitutes unlawful punishment and violates Plaintiffs’ due process rights because their inaction is not “rationally related to a legitimate nonpunitive government purpose or . . . appear[s] excessive in relation to that purpose.” *C.G.B.*, 464 F. Supp. 3d. at 211 (quoting *Kingsley*, 576 U.S. at 398); *see also S. Poverty Law Ctr. v. U.S. Dep’t of Homeland Sec.*, 2020 WL 3265533, *18 (D.D.C. June 17, 2020) (considering whether the contested condition “is objectively unreasonable or excessive relative to the Government’s proffered justification.”).

As medically vulnerable individuals, Plaintiffs are at risk of serious illness or death if they contract COVID-19, which is highly likely to occur in ICE detention. Vijayan Decl. ¶¶ 7, 15–17. ICE’s failure to provide a COVID-19 vaccine booster shot exposes Plaintiffs to the avoidable risks of hospitalization and death from COVID-19, and lacks any relation to any legitimate interest held by the government. As an initial matter, Defendants’ responsibility to provide detainees “with medical care ordinarily does not conflict with competing administrative concerns.” *Hudson v. McMillian*, 503 U.S. 1, 6 (1992) (citing *Whitley v. Albers*, 475 U.S. 312,

⁴⁵ *See Shaikh v. U.S. Immigr. & Customs Enf’t*, No. 1:22-cv-00231 (D.D.C. Feb. 24, 2022), Dkt. 23.

320 (1986)). Failure to provide a vaccine booster shot to detained immigrants, moreover, is not rationally related to either of the government’s interests in ensuring appearance at future immigration proceedings or preventing danger to the community. *Zadvydas v. Davis*, 533 U.S. 678, 690 (2001). Moreover, providing COVID-19 vaccine booster shots to people in immigration detention does not in any way impede those goals. In fact, Defendants’ failure to provide booster shots may even run counter to their interests, as quarantine protocols due to infection or facility outbreaks have precluded detained immigrants from appearance in court proceedings.⁴⁶

Nor can Defendants argue that their failure to provide Plaintiffs with vaccine booster shots is justified by an interest in saving costs. It is well-established that budgetary interests cannot justify denial of care for a detainee’s serious medical needs. *Peralta v. Dillard*, 744 F.3d 1076, 1083 (9th Cir. 2014) (“Lack of resources is not a defense to a claim” for lack of medical care) (en banc) (citations omitted); *Wright v. Rushen*, 642 F.2d 1129, 1134 (9th Cir. 1981) (“[C]osts cannot be permitted to stand in the way of eliminating conditions below Eighth Amendment standards.”); *Koselik v. Maloney*, 221 F. Supp. 2d 156, 161 (D. Mass. 2002) (“It is not, however, permissible to deny an inmate adequate medical care because it is costly.”). As discussed in detail above, it is beyond dispute that protection from COVID-19, particularly for medically vulnerable individuals, constitutes a “serious medical need.” *See, e.g., Banks*, 459 F. Supp. 3d at 155 (noting lack of dispute regarding the threat of COVID-19 to the health of people in detention); *see also supra* § III.A.1.b.

⁴⁶ Amazan Decl., Ex. FF, Marissa Armas, ‘Putting Our Lives At Risk’: *Detainees at Aurora Facility Claim COVID Prolongs Stay*, CBS4 NEWS (Jan. 20, 2022), <https://denver.cbslocal.com/2022/01/20/covid-aurora-ice-detention-facility/>; Amazan Decl., Ex. GG, Sofia Mejias-Pascoe, *COVID-19 Cases at San Diego Detention Center Reach All-Time High*, INEWSOURCE (Jan. 18, 2022), <https://inewssource.org/2022/01/18/covid-19-cases-san-diegos-ice-detention-center>.

Defendants’ failure to provide COVID-19 booster doses to detained immigrants, such as Plaintiffs, is also unreasonable in light of the policies and programs established by other custodial entities, such as the BOP and state departments of correction, to provide booster shots to prisoners. Where civil detainees, such as Plaintiffs, face conditions that are “not more considerate than those at pretrial and prison facilities,” such conditions “may be punitive in nature and may therefore violate the substantive due process clause.” *S. Poverty Law Ctr.*, 2020 WL 3265533, at *19 (quoting *Torres v. United States Dep’t of Homeland Sec.*, 411 F. Supp. 3d 1036, 1065 (C.D. Cal. 2019)); *Jones v. Blanas*, 393 F.3d 918, 934 (9th Cir. 2004) (“[A] presumption of punitive conditions arises where the individual is detained under conditions identical to, similar to, or more restrictive than those under which pretrial criminal detainees are held.”). Unlike ICE’s PRR, the BOP’s October 2021 COVID-19 Vaccine guidance instructed its facilities nationwide to provide booster doses to eligible prisoners.⁴⁷ The District of Columbia Department of Corrections issued similar guidance in December 2021, noting that it “continues to offer a COVID-19 vaccine to all residents who are eligible.”⁴⁸ State departments of correction have likewise issued similar guidance, and have reported provision of booster shots to thousands of incarcerated individuals.⁴⁹ Defendants’ failure to provide booster shots, in light of conditions in prisons, is therefore unconstitutionally punitive, in violation of Plaintiffs’ due process rights.

B. The Remaining Factors Weigh Heavily in Plaintiffs’ Favor.

1. The Denial of Readily Available Protection from a Lethal Virus Constitutes

⁴⁷ Fed. Bureau of Prisons, *COVID-19 Vaccine Guidance*, Version 14.1, 5–6, *supra* note 32.

⁴⁸ Gov’t of the Dist. of Columbia, *Coronavirus Prevention*, *supra* note 33.

⁴⁹ Delaware Dep’t of Corr., *Active COVID-19 Cases (Offenders)*, *supra* note 34 (noting that “1,593 vaccinated inmates have received a booster”); Missouri Dep’t of Corr., *COVID-19 Data*, *supra* note 34 (boosters administered to 4,158 inmates); Minnesota Dep’t of Corr., *COVID-19 Data*, *supra* note 34 (33 percent of incarcerated population fully vaccinated and boosted); Michigan.gov, *COVID-19 Dashboard*, *supra* note 35 (boosters administered to 11,398 incarcerated individuals).

Irreparable Harm.

A temporary restraining order or preliminary injunction “requires only a likelihood of irreparable injury.” *League of Women Voters of U.S. v. Newby*, 838 F.3d 1, 8–9 (D.C. Cir. 2016) (citing *Winter*, 555 U.S. at 22), and while the harm must be “imminent,” that means only that there must be “a clear and present need for equitable relief to prevent irreparable harm.” *Id.* at 8. (quoting *Chaplaincy of Full Gospel Churches v. England*, 454 F.3d 290, 297 (D.C. Cir. 2006)). The harm also “must be beyond remediation.” *Id.* (quoting *Chaplaincy of Full Gospel Churches*, 454 F.3d at 297).

This district has already concluded that an individual’s “risk of contracting COVID-19 and the resulting complications, including the possibility of death, is the prototypical irreparable harm.” *Banks*, 459 F. Supp. 3d at 159 (citing *Harris v. Bd. of Supervisors, Los Angeles Cnty.*, 366 F.3d 754, 766 (9th Cir. 2004)). Indeed, courts in this district have “often [found] a showing of irreparable harm where the movant’s health is in imminent danger.” *Al-Joudi v. Bush*, 406 F. Supp. 2d 13, 20 (D.D.C. 2005) (citation omitted) (granting preliminary injunction where government was allegedly denying medical treatment to Guantanamo detainees and “the threat of death or serious physical deterioration [was] real and imminent”); *Wilson v. Group Hosp. & Med. Servs., Inc.*, 791 F. Supp. 309, 314 (D.D.C. 1992) (granting preliminary injunction where cancer patient’s “health and future remain[ed] in serious doubt”); *see also, e.g., Banks*, 459 F. Supp. 3d at 159 (granting preliminary injunction where incarcerated plaintiffs “produced expert evidence that they are ‘at a significantly higher risk of infection with COVID-19 as compared to the population in the community’ and ‘at a significantly higher risk of harm if they do become infected’”).

Here, Plaintiffs have submitted evidence describing their medical vulnerability to COVID-19, the danger they face from Defendants’ failure to provide them with COVID-19 vaccine booster shots, and their desire for protection via vaccine booster shot. *See* Escalante Decl. ¶¶ 6–8; Hernandez Herrera Decl. ¶¶ 7–10; Sorokin Decl. ¶¶ 7–10; Dominguez Gonzalez Decl. ¶¶ 7–8.; *see also* Vijayan Decl ¶¶ 19–20, 27. According to ICE’s own data, 1,001 people in ICE detention facilities as of February 28, 2022 are currently positive for COVID-19, compromising over five percent of all detainees in custody.⁵⁰ Individuals held in ICE detention are also more likely to contract COVID-19 than in the surrounding community. Certain mitigation measures to reduce the spread of COVID-19 that Defendants may have been taking have proven inadequate to sufficiently shield Plaintiffs from the risk of contracting COVID-19 while in detention. As a recent study has shown, COVID-19 case rates in ICE detention were, on average at least 5.3 times higher than in the state-matched U.S. population.⁵¹ ICE detainees report other detainees who have recently contracted COVID-19 in their detention facilities, including individuals who requested but were denied booster shots and subsequently fell ill with COVID-19. *See* Sorokin Decl. ¶ 8; Dominguez Gonzalez Decl. ¶ 7. As noted above, without the requested relief, Plaintiffs are approximately three and a half times more likely to be hospitalized and four times more likely to die from COVID-19 because of ICE’s failure to provide them COVID-19 booster shots. Feigl-Ding Decl. ¶ 26. Such injuries are also indisputably “beyond remediation” because the harms from unlawful conditions of detention “cannot be remedied after the fact.” *R.I.L.-R v. Johnson*, 80 F. Supp. 3d 164, 191 (D.D.C. 2015) (citations omitted).

2. The Balance of Equities and Public Interest Weigh Heavily in Plaintiffs’ Favor.

⁵⁰ ICE, *ICE Guidance on COVID-19: Detainee Statistics*, *supra* note 2.

⁵¹ Nishant Uppal, Elizabeth Chin, and Parsa Erfani, *Trends in Decarceration, COVID-19 Cases, and SARS-CoV-2 Testing in U.S. Immigration Detention Centers from September 2020 to August 2021*, *supra* note 11.

The final two factors—balance of the equities and the public interest—merge in this case, as Defendants are government actors. *Pursuing Am.’s Greatness v. FEC*, 831 F.3d 500, 511 (D.C. Cir. 2016). These factors also favor Plaintiffs. As discussed above, Plaintiffs have established a likelihood that they will prevail on the merits of their due process claims, and “[i]t is always in the public interest to prevent the violation of a party’s constitutional rights.” *Banks*, 459 F. Supp. 3d at 160 (citing *Simms v. Dist. of Columbia*, 872 F. Supp. 3d 90, 105 (D.D.C. 2012)). In other words, “[t]here is no harm to the Government when a court prevents unlawful practices.” *Id.*; see also *R.I.L.-R*, 80 F. Supp. 3d at 191.

Moreover, “granting injunctive relief which lessens the risk that Plaintiffs will contract COVID-19 is in the public interest because it supports public health.” *Banks*, 459 F. Supp. 3d at 160. As the *Banks* court aptly described, “[n]o man’s health is an island.” *Id.* Booster shots promote public health by reducing the risk of COVID-19 to Plaintiffs and others detained in the facilities, which also minimizes transmission risk to staff members and local communities. Vijayan Decl. ¶¶ 17–18; Feigl-Ding Decl. ¶¶ 8, 24, 35. New variants of COVID-19, including the Omicron subvariant BA.2, have and will inevitably continue to arise. Feigl-Ding Decl. ¶¶ 7, 21–23; 31–33; Vijayan Decl. ¶ 13. At a time when community resources are still limited and the overall healthcare infrastructure heavily strained, it would also benefit the public to prevent Plaintiffs from suffering serious COVID-19 complications which may require hospitalization. Vijayan Decl. ¶¶ 10–12, 17, 27. Thus, ordering Defendants to take the basic precaution of providing COVID-19 vaccine booster shots to protect Plaintiffs from risk of infection and serious illness also benefits the public. *Banks*, 459 F. Supp. 3d at 160.

Lastly, the modest requested relief does not impose an undue burden on Defendants. COVID-19 vaccine booster shots, including mRNA vaccine booster shots, are widely available

to the U.S. public. Defendants, as federal government agencies, should have unparalleled immediate access to these vaccines.⁵² Vijayan Decl. ¶ 25; Feigl-Ding Decl. ¶ 25. When endorsing the clinical preference for mRNA vaccines, the CDC noted that “[t]he U.S. supply of mRNA vaccines is abundant – with nearly 100 million doses in the field for immediate use.”⁵³ Vijayan Decl. ¶ 25. This Court would not be ordering Defendants to provide any protection that has not already been made available to the broader, non-detained public. Further, by undertaking this simple task of providing booster shots, Defendants will benefit in the long run with fewer detainees becoming infected and becoming very sick from COVID-19, thereby freeing up healthcare and staffing resources. *Id.* ¶ 17.

In light of the grave and irreparable harm Plaintiffs face, ordering Defendants to merely comply with the CDC’s recommendations and provide COVID-19 booster shots to Plaintiffs is not only appropriate but imperative.

IV. CONCLUSION

For the aforementioned reasons, Plaintiffs respectfully request that this Court issue a temporary restraining order directing Defendants to make available and provide each of them with an mRNA COVID-19 vaccine booster shot by a qualified medical professional, along with adequate education, pre-vaccination consultation, and documentation in accordance with the CDC’s guidance on COVID-19 vaccine booster shots.

⁵² Amazan Decl. Ex. HH, Tom Randall, Cedric Sam, et al., *More Than 10.7 Billion Shots Given: COVID-19 Tracker*, BLOOMBERG <https://www.bloomberg.com/graphics/covid-vaccine-tracker-global-distribution/> (updated Feb. 28, 2022) (noting “93.5 million have received boosters,” states have 11 to 34 percent of vaccine supply unused, and “[t]he U.S. has pledged to send 1.1 billion doses to other hard-hit regions of the world . . .”).

⁵³ Amazan Decl. Ex. II, CDC, *CDC Endorses ACIP’s Updated COVID-19 Vaccine Recommendations* (Dec. 16, 2021), <https://www.cdc.gov/media/releases/2021/s1216-covid-19-vaccines.html#>.

Dated: March 1, 2022

Respectfully submitted,

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**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA**

Miguel Angel ESCALANTE, *et al.*,

Plaintiffs,

v.

U.S. IMMIGRATION AND CUSTOMS
ENFORCEMENT, *et al.*,

Defendants.

No. 1:21-cv_____

**INDEX OF DECLARATIONS SUPPORTING PLAINTIFFS' APPLICATION FOR
TEMPORARY RESTRAINING ORDER**

1. Declaration of Dr. Tara Vijayan

- a. Exhibit A. Curriculum Vitae of Tara Vijayan, MD,
MPH

2. Declaration of Dr. Eric Feigl-Ding

- a. Exhibit 1. Curriculum Vitae of Dr. Eric Feigl-Ding

3. Declaration of Nathalie E. Amazan

- a. Exhibits A - JJ

4. Declaration of Miguel Angel Escalante

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7. Declaration of Ramon Dominguez Gonzalez

DECLARATION OF TARA VIJAYAN, M.D., M.P.H.

I, Tara Vijayan, declare:

I. Background and Qualifications

1. My name is Dr. Tara Vijayan. I am an Associate Professor of Medicine in the Division of Infectious Diseases at the UCLA David Geffen School of Medicine. My research and clinical work focus 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. In that capacity, 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 the University of California, San Francisco.
2. A current copy of my CV is attached at the end of this declaration as **Exhibit A**.
3. I have been retained by Plaintiffs' counsel as an expert in this case. I am providing my services pro bono and am not being compensated for my work and testimony in this case.
4. I submit this declaration to discuss the particular dangers that people in immigration detention face with regard to COVID-19, especially with the emergence of new variants, and the critical importance of COVID-19 vaccines and boosters to protect their health and safety.

II. COVID-19 Background

5. COVID-19 (caused by the SARS-CoV-2 virus) is a serious and potentially deadly contagious disease with over 426 million confirmed diagnoses as of February 22, 2022, including over 78 million in the United States.¹ It is quite likely that this number is an undercount of cases in the United States, as many positive tests are confirmed only with at-home rapid tests.² As of February 19, 2022, according to the U.S. Centers for Disease

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 Feb. 22, 2021).

² Marie Louise Kelly, *These Are the Numbers Health Officials Are Watching At This Point in the Pandemic*, NPR, Jan. 4, 2022, <https://www.npr.org/2022/01/04/1070008296/covid-omicron-cases-numbers-deaths-hospitalizations>; Jenni Fink, *America Is Likely Undercounting Infections Amid COVID Surge That's Nearly Doubled Cases*, Newsweek, Dec. 30, 2021, <https://www.newsweek.com/america-likely-undercounting-infections-amid-covid-surge-thats-nearly-doubled-cases-1664396>.

Control and Prevention (“CDC”), at least 930,811 people in the United States have died due to complications from COVID-19.³

6. The effects of COVID-19 can be very severe, including the need for hospitalization, intensive care, and use of a ventilator to assist in breathing. COVID-19 effects can include severe respiratory illness, major organ damage such as myocarditis, 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 fatigue, memory loss, difficulty concentrating, sleep problems, joint pain, chest pain, dizziness, dysautonomia, headaches, and strokes.⁴ Some patients who recover from COVID-19 may also experience long-term neurological complications, including mental fog and confusion. These patients may also experience cardiovascular effects such as injury to the heart, which can cause long-term heart problems, such as abnormal heart rhythm and heart attacks. Some patients may experience ongoing pulmonary dysfunction including difficulty breathing and shortness of breath, while others never regain normal lung function.⁵ Patients who survive intensive care may face even further complications from prolonged treatment itself, including debilitating weakness and fatigue, and post-traumatic stress disorder including delusion and nightmares, anxiety, depression, and challenges functioning in daily life. Patients may experience profound bodily weakness after ventilation, and paralysis of vocal cords.⁶
7. The effects of COVID-19 are particularly significant for people age 50 and older, and those of any age with underlying health problems such as—but not limited to—cancer, obesity, weakened immune systems, serious heart conditions, hypertension, chronic lung and kidney disease, chronic obstructive pulmonary disease (“COPD”), diabetes, HIV infection, pregnancy, history of smoking, substance use disorders, tuberculosis, and mental health conditions.⁷

³ Centers for Disease Control and Prevention, *CDC COVID Data Tracker, United States COVID-19 Cases, Deaths, and Laboratory Testing (NAATs) by State, Territory, and Jurisdiction*, https://covid.cdc.gov/covid-data-tracker/#cases_totalcases (last visited Feb. 22, 2021).

⁴ 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>.

⁵ Brigham and Women’s Hospital, *Understanding the Long-Term Effects of COVID-19*, <https://www.brighamandwomens.org/campaigns/physicians/understanding-long-term-effects-of-covid-19> (last visited Jan. 19, 2022).

⁶ Lenny Bernstein and Dan Keating, *For Many ICU Survivors and Their Families, Life Is Never the Same: Physical, Mental, and Cognitive Problems Can Last Years After COVID-19 Illness is Conquered*, *Washington Post*, Nov. 12, 2021, <https://www.washingtonpost.com/health/2021/11/12/covid-icu-intensive-care-syndrome/>.

⁷ CDC, *COVID-19: People with Certain Medical Conditions*, <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-with-medical-conditions.html> (Dec. 14, 2021).

8. People housed in congregate settings, including nursing homes, residential care, and jails, prisons, and other detention facilities are at heightened risk of contracting and becoming ill with COVID-19.⁸

III. The Omicron Variant

9. In recent months, the United States faced a devastating surge in COVID-19 cases and deaths due to the emergence of the highly transmissible Omicron variant. The Omicron variant, which began to spread widely in the United States in the past three months, is five times as transmissible as the original. The Omicron variant is estimated to have a R_0 of 10, due to a shorter viral incubation period and greater transmissibility, where each person infected by the Omicron variant is estimated to infect 10 people. The Delta variant had an R_0 of 7, compared with an R_0 of 2 or 3 for the original. (An R_0 , pronounced R-naught, is an estimate of how many people one contagious person is likely to infect on average.)⁹ The overwhelming majority of COVID-19 cases in the United States are now caused by the Omicron variant. As of February 19, 2022, nearly 100 percent of COVID-19 cases in the United States are estimated to have been caused by Omicron.¹⁰
10. Although the original Omicron surge has begun to decline in the United States, an another subvariant called “BA.2”, has emerged. The BA.2 subvariant spreads 30 percent more easily than the original Omicron variant (called BA.1). The BA.2 has caused a second Omicron surge in other countries, such as Denmark, and has already accounted for an estimated 3.9 percent of new infections in the U.S., with chances that this may grow exponentially.¹¹

Omicron infection may cause “mild” illness in many people, but this is hardly the case for certain populations, including those with underlying medical conditions, those who are immunocompromised, or those who have not received full vaccination or booster doses. There has been a significant increase in hospitalizations among fully vaccinated individuals with immunocompromising conditions including those who have received transplanted organs. The vast majority of hospitalizations and deaths that have occurred since the emergence of the Omicron variant have occurred among those who are

⁸ Benjamin Barsky, Eric Reinhart, Paul Farmer, and Salmaan Keshavjee, *Vaccination Plus Decarceration—Stopping COVID-19 in Jails and Prisons*, New England Journal of Medicine, Apr. 29, 2021, <https://www.nejm.org/doi/full/10.1056/NEJMp2100609>.

⁹ Talha Khan Burki, *Omicron Variant and Booster COVID-19 Vaccines*, The Lancet Respiratory Medicine, Dec. 17, 2021, [https://www.thelancet.com/journals/lanres/article/PIIS2213-2600\(21\)00559-2/fulltext](https://www.thelancet.com/journals/lanres/article/PIIS2213-2600(21)00559-2/fulltext); Jansen L, Tegomoh B, Lange K, et al. Investigation of a SARS-CoV-2 B.1.1.529 (Omicron) Variant Cluster — Nebraska, November–December 2021. MMWR Morb Mortal Wkly Rep 2021;70:1782–1784. DOI: <http://dx.doi.org/10.15585/mmwr.mm705152e3>external icon.

¹⁰ CDC, CDC COVID Data Tracker, *Variant Proportions*, <https://covid.cdc.gov/covid-data-tracker/#variant-proportions> (last accessed Feb. 22, 2022).

¹¹ Rob Stein, *More Contagious Version of Omicron Spreads in the U.S., Fueling Worries*, NPR News, Feb. 21, 2022, https://www.npr.org/sections/health-shots/2022/02/21/1081810074/omicron-ba2-variant-spread?utm_medium=social&utm_campaign=npr&utm_source=twitter.com&utm_term=nprnews.

unvaccinated, not fully vaccinated, or those at risk for poor vaccine response due to immunocompromising conditions.¹² Added to the issue of a critical shortage of healthcare workers, we have now approached an unprecedented crisis.¹³

11. The Omicron variant, moreover, is less responsive to established treatments for COVID-19, including monoclonal antibody treatments. Most therapeutic monoclonal antibody treatments available against SARS-CoV-2 are ineffective against Omicron.¹⁴ The antibody treatment that works best with the Omicron variant, Sotrovimab, is in extremely short supply in the United States.¹⁵ Furthermore, the oral antiviral Paxlovid, which is as effective as Sotrovimab, has many drug interactions which preclude its use in many patients including those who have undergone transplants (who need certain medication to prevent organ rejection) and those on blood thinners. Due to current scarcity, these treatments have been prioritized for those who meet criteria for the highest risk of progression to severe COVID-19, including immunocompromised individuals not expected to mount an adequate immune response to COVID-19 and unvaccinated individuals of advanced age with additional risk factors.¹⁶ Moreover, some studies have indicated that the BA.2 subvariant of Omicron also escapes immunity created by the primary COVID-19 vaccine doses without a booster shot. There is concern that sotrovimab, one of the main monoclonal antibody therapies used for the treatment of Covid 19 (and the prevention of severe disease) is less effective against BA.2 due to reduced viral neutralization.¹⁷

12. Combined with a greater infection rate, Omicron has led to an exponential rise in hospitalizations across the U.S. As a result of the Omicron variant, the number of U.S. patients hospitalized with COVID-19 reached record levels earlier this year. As of

¹² Emily Barone, *These Charts Show That COVID-19 Is Still the Pandemic of the Unvaccinated*, Time, Jan. 12, 2021, <https://time.com/6138566/pandemic-of-unvaccinated/>; David Leonardt and Ashley Wu, *The Growing Gap*, N.Y. Times, Jan. 11, 2021, <https://www.nytimes.com/2022/01/11/briefing/omicron-deaths-vaccinated-vs-unvaccinated.html>.

¹³ Rong-Gong Lin, Luke Money, Emily Alpert Reyes, *California Approaches Pandemic Record Hospitalizations*, L.A. Times, Jan. 19, 2022, <https://www.latimes.com/california/story/2022-01-19/california-approaches-pandemic-record-for-all-hospitalizations>.

¹⁴ Planas, D., Saunders, N., Maes, P. *et al.* Considerable Escape of SARS-CoV-2 Omicron to Antibody Neutralization. *Nature* (2021). <https://doi.org/10.1038/s41586-021-04389-z>; Ludwig Burger, *Lab Tests: Eli Lilly, Regeneron Antibody Therapies Lose Out Against Omicron*, Reuters, Dec. 14, 2021, <https://www.reuters.com/business/healthcare-pharmaceuticals/lab-test-eli-lilly-regeneron-antibody-therapies-lose-out-against-omicron-2021-12-14/>.

¹⁵ Christina Jewett, Carl Zimmer, Rebecca Robbins, *Hospitals Scramble as Antibody Treatments Fail Against Omicron*, NY Times, Dec. 21, 2021, <https://www.nytimes.com/2021/12/21/health/covid-monoclonal-antibodies-omicron.html>.

¹⁶ See National Institutes of Health, *COVID-19 Treatment Guidelines Panel's Interim Statement on Patient Prioritization for Outpatient Anti-SARS-CoV-2 Therapies or Preventative Strategies When There Are Logistical or Supply Constraints*, (Dec. 23, 2021), <https://www.covid19treatmentguidelines.nih.gov/therapies/statement-on-patient-prioritization-for-outpatient-therapies/>; UCLA Health, *COVID19 Outpatient Treatment*, (Jan. 18, 2022); <https://www.uclahealth.org/conditions-we-treat/coronavirus/covid-19-outpatient-treatment>.

¹⁷ Daichi Yamasoba et al., *Virological Characteristics of SARS-CoV-2 BA.2 Variant*, bioRxiv Preprint, <https://doi.org/10.1101/2022.02.14.480335> (last visited Feb. 22, 2022).

January 11, 2022, more than 145,900 people were hospitalized with COVID-19, almost twice the number two weeks before.¹⁸ At that point, the seven-day average of daily hospitalizations was 132,086 people, an increase of 83 percent from two weeks before.¹⁹ As of January 20, 2021, this number has only increased, with 160,113 people nationwide hospitalized with COVID-19.²⁰ Hospitals nationwide have become overwhelmed,²¹ leading to significant staffing shortages,²² incapacitating emergency rooms,²³ and delaying surgeries.²⁴ Although COVID-19 hospitalizations are now trending downward, the vast majority of hospitals nationwide are under “high or extreme stress” due to the impact of delayed care to patients needing attention for other medical issues, and continued staff shortages.²⁵

13. Omicron is only the newest SARS-CoV-2 variant of concern to emerge since the start of the COVID-19 pandemic. New variants, including Omicron subvariant BA.2, will continue to occur as the virus adapts genetically and as the vast majority of the world’s population remains unvaccinated. It is unclear as to whether future variants will be equally virulent or transmissible, but there is little doubt that the public is likely to face similar surges in infection rates following a new variant’s introduction in the future.²⁶ Even if these variants are less likely to cause severe disease to the general population, those who remain unvaccinated or are not likely able to mount an adequate response to vaccination will continue to be at risk for severe disease and hospitalization.

¹⁸ Department of Health and Human Services, HHS Protect Public Data Hub: Hospital Utilization, (Jan. 14, 2022), <https://protect-public.hhs.gov/pages/hospital-utilization>.

¹⁹ New York Times, *COVID News: U.S. Hospitalizations Break Record as Omicron Surges*, Jan. 13, 2022, <https://www.nytimes.com/live/2022/01/10/world/omicron-covid-testing-vaccines>.

²⁰ Department of Health and Human Services, HHS Protect Public Data Hub: Hospital Utilization, <https://protect-public.hhs.gov/pages/hospital-utilization> (Jan. 20, 2022).

²¹ Paulina Firozi and Paulina Villegas, *States and Health Systems Activate Crisis Standards, New Protocols as Omicron Strains U.S. Hospitals*, Washington Post, Jan. 10, 2022, <https://www.washingtonpost.com/health/2022/01/10/colorado-crisis-standards-omicron-strain-hospitals/>.

²² Dakin Andone and Susannah Cullianane, *Nearly a Quarter of Hospitals Are Reporting a Critical Staff Shortage as Omicron Drives a Rise in COVID-19 Cases*, CNN, Jan. 9, 2022, <https://www.cnn.com/2022/01/09/health/us-coronavirus-sunday/index.html>.

²³ Will Stone, *ERs Are Overwhelmed As Omicron Continues to Flood Them with Patients*, NPR News, Jan. 13, 2022, <https://www.npr.org/sections/health-shots/2022/01/13/1072902744/ers-are-overwhelmed-as-omicron-continues-to-flood-them-with-patients>.

²⁴ Ahmed Aboulenein, *Overwhelmed by Omicron Surge, U.S. Hospitals Delay Surgeries*, Reuters, Jan. 7, 2022, <https://www.reuters.com/world/us/overwhelmed-by-omicron-surge-us-hospitals-delay-surgeries-2022-01-07/>.

²⁵ Amelia Templeton, *The Doctor Will See You Now—In the Hallway*, Oregon Public Broadcasting, Feb. 9, 2022, <https://khn.org/news/article/the-doctor-will-see-you-now-in-the-hallway/>; Eric Berger, *As Omicron Peaks, the U.S. Healthcare System Is Left “Broken Beyond Repair,”* The Guardian, Feb. 4, 2022, <https://www.theguardian.com/society/2022/feb/03/us-coronavirus-healthcare-system-providers>.

²⁶ Eric Topol, *The Pandemic Isn’t Over. Omicron Won’t Be the Last Coronavirus Variant to Haunt Us*, L.A. Times, Feb. 21, 2022, <https://www.latimes.com/opinion/story/2022-02-21/omicron-variants-covid-pandemic-vaccines>; CDC, *What You Need to Know About Variants* (Dec. 13, 2021), <https://www.cdc.gov/coronavirus/2019-ncov/variants/about-variants.html>; Ewen Callaway, *Beyond Omicron: What’s Next for COVID’s Viral Evolution*, Nature, Jan. 5, 2022, <https://www.nature.com/articles/d41586-021-03619-8>; Amy McKeever, *COVID-19 Variants Will Keep Coming Until Everyone Can Access Vaccines*, Nat’l Geographic, Dec. 28, 2021, <https://www.nationalgeographic.com/science/article/covid-19-variants-will-keep-coming-until-everyone-can-access-vaccines>.

IV. The Danger of COVID-19 in Carceral Settings, Including Immigration Detention Facilities

14. SARS-CoV2 is easily transmitted from person to person. The predominant mode of transmission of SARS-CoV-2 is via respiratory droplets. The risk of severe disease also increases with exposure to a higher viral inoculum (or amount of virus to which one is exposed).²⁷ A person who is in a prison or jails, by nature of the living arrangements and density of people, may be frequently exposed to a high viral inoculum, given poor ventilation and difficulty achieving social distancing in shared living and sleeping areas.
15. Transmission increases in closed spaces, particularly those with poor ventilation.²⁸ By design, prisons, jails, and detention centers have poor ventilation, and lack of windows and doors that bring in outside air able to diffuse viral particles.²⁹ 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.³⁰ 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 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.”³¹
16. As noted above, the Omicron variant, now the most common variant in the United States, is estimated to be five times more transmissible than the original wild-type SARS-CoV-2.³² The emerging Omicron subvariant BA.2 is estimated to spread 30 percent more easily than the original Omicron variant.³³ The risk of respiratory transmission in congregate environments, like prisons, is correspondingly much greater. Recent COVID-19 outbreaks in prisons and jails illustrate this risk. For example, in late

²⁷ Monica Gandhi, MD, MPH & George W. Rutherford, MD, *Facial Masking for Covid-19 - Potential for "Variolation" as We Await a Vaccine*, 383 New Eng. J Med. e101(1) (Oct. 29, 2020), <https://www.nejm.org/doi/pdf/10.1056/NEJMp2026913?articleTools=true>.

²⁸ 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>.

²⁹ Joseph Darius Jaafari, *Prison Design Creates Ideal Environment for Coronavirus*, WSKG News, Apr. 17, 2020, <https://wskg.org/news/prison-design-creates-ideal-environment-for-coronavirus/>.

³⁰ 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>.

³¹ 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>.

³² Talha Khan Burki, *Omicron Variant and Booster COVID-19 Vaccines*, The Lancet Respiratory Medicine, Dec. 17, 2021, [https://www.thelancet.com/journals/lanres/article/PIIS2213-2600\(21\)00559-2/fulltext](https://www.thelancet.com/journals/lanres/article/PIIS2213-2600(21)00559-2/fulltext).

³³ Rob Stein, *More Contagious Version of Omicron Spreads in the U.S., Fueling Worries*, NPR News, Feb. 21, 2022, https://www.npr.org/sections/health-shots/2022/02/21/1081810074/omicron-ba2-variant-spread?utm_medium=social&utm_campaign=npr&utm_source=twitter.com&utm_term=nprnews.

December 2021, the Rikers Island Jail in New York experienced a rapid rise of COVID-19 in the space of three days. Although the COVID-19 positivity rate had been at 1 percent within ten days it increased to 9.5 percent, and one day later to over 17 percent of the facility.³⁴

17. COVID-19 has historically spread rapidly in ICE detention at rates higher than in the surrounding community. As a recent study has shown, COVID-19 case rates in ICE detention were, on average at least 5.3 times higher than in the state-matched U.S. population.³⁵ The number of COVID-19 infections in ICE detention facilities among detainees surged by over 800 percent in January 2022.³⁶ As reported by U.S. Immigration and Customs Enforcement (“ICE”), there are at least 1,177 active cases of COVID-19 among people in ICE detention centers—over 6.2 percent of the total current detained population as of February 22, 2022. This does not include numbers among ICE and correctional staff working at these facilities, which is not publicly reported.³⁷ Vaccination rates in ICE custody also appear to be low. Of the over 18,000 people detained in ICE detention facilities daily, as of January 5, 2022, only 671 immigrants in ICE custody had received a booster shot. Moreover, approximately 5,200 immigrants in ICE custody have health issues or age that place them at higher risk of serious illness or death from COVID-19.³⁸ If immigrant detainees experience serious illness from COVID-19 because they have failed to receive vaccination and booster shots, they will undoubtedly be hospitalized in local facilities, impacting already overwhelmed health care infrastructure. Given staffing shortages and increased needs for medical care of detained people during a COVID-19 outbreak, a robust vaccination and booster strategy within detention facilities would also benefit ICE’s ability to conserve vital health care and staffing resources.
18. Moreover, it is widely understood that infections among staff who work in correctional and detention centers are high, especially given low rates of vaccination among staff. High rates of infection among staff simultaneously increases the risk of infection among prisoners and detainees within a correctional facility, as they act as a primary vector of the virus.³⁹ COVID-19 infection among correctional facility staff has risen rapidly. For example, almost one-fifth of all correction staff in the state of Connecticut tested positive for COVID-19 on January 6, 2022.⁴⁰ In California, prison staff

³⁴ Letter from Commissioner Vincent Schiraldi, New York City Department of Correction, Dec. 21, 2021, <https://pbs.twimg.com/media/FHLZd69XEM3qe7.jpg>.

³⁵ Nishant Uppal, Elizabeth Chin, and Parsa Erfani, *Trends in Decarceration, COVID-19 Cases, and SARS-CoV-2 Testing in U.S. Immigration Detention Centers from September 2020 to August 2021*, JAMA Network Open, Feb. 16, 2022, <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2789087>.

³⁶ Camilo Montoya-Galvez, *Government Medical Advisors Urge ICE to Expand COVID-19 Vaccinations for Immigrant Detainees*, CBS News, Jan. 26, 2022, <https://www.cbsnews.com/news/immigration-ice-detainees-covid-19-vaccines/>.

³⁷ U.S. Immigration & Customs Enft, *ICE Guidance on COVID-19: Detainee Statistics* (last visited Feb. 22, 2022), <https://www.ice.gov/coronavirus#detStat>.

³⁸ *Id.*; Camilo Montoya-Galvez, *Coronavirus Infections Inside U.S. Immigration Detention Centers Surge by 520% in 2022*, CBS News, Jan. 14, 2022, <https://www.cbsnews.com/news/immigration-detention-covid-cases-surge/>.

³⁹ Erika Tyagi and Joshua Manson, *Prison Staff Are Refusing Vaccines. Incarcerated People Are Paying the Price*, UCLA COVID Behind Bars, Aug. 12, 2021, <https://uclacovidbehindbars.org/prison-staff-vaccine-refusals>.

⁴⁰ Kelan Lyons, *As Omicron Spreads, CT’s Prison System Isn’t Spared*, CT Mirror, Jan. 7, 2022, <https://ctmirror.org/2022/01/07/as-omicron-spreads-cts-prison-system-isnt-spared/>.

infections increased 212 percent, with more than 3,800 prison staff testing positive for COVID-19 in January 2022.⁴¹ In light of the continued danger posed by the COVID-19 pandemic in carceral settings, the CDC has recently updated its guidance to correctional and detention facilities to require that they provide up-to-date COVID-19 vaccination for prisoners and detainees, including additional doses for immunocompromised people, as well as booster shots.⁴²

V. The Critical Importance of COVID-19 Vaccines and Booster Shots

19. The main goals for providing booster doses to individuals who have received their primary COVID-19 vaccine doses are to prevent hospitalization and death, and to reduce the spread of COVID-19. Given this, COVID-19 booster doses are especially important for individuals who remain at highest risk of hospitalization including older individuals or those with severe health conditions.
20. The greatest danger of COVID-19 is to people who have not yet been vaccinated, those who have not responded to the vaccine (as in individuals with immunocompromising conditions), or medically vulnerable people who have been vaccinated and are eligible for a booster, but have not received a booster. Vaccination, including booster shots, radically decrease the likelihood of hospitalization and death due to COVID-19. The risk of hospitalization for unvaccinated people due to COVID-19 is 4 times higher than vaccinated people without a booster dose (who would be otherwise eligible for a booster), and 14 times higher than fully vaccinated people with booster shots. The death rate among unvaccinated persons is 12.7 times greater than that of persons who are vaccinated without a booster and 53.2 times greater than persons who have been vaccinated with a booster.⁴³ Moreover, vaccination is a critical tool in preventing transmission of the virus, a particularly important factor in congregate environments.⁴⁴
21. Booster shots are critically important protection against COVID-19 given waning immunity of vaccines over time, and even more so in light of the Omicron variant. Patients who have the strongest protections against the recent variant are what has been colloquially called “triple vaccinated,” meaning vaccinated with two doses of an mRNA

⁴¹ Dani Anguiano, *Omicron Wreaks Havoc Across California Prison Facilities As Staff Cases Surge*, The Guardian, Jan. 11, 2022, <https://www.theguardian.com/us-news/2022/jan/11/omicron-covid-california-prisons-staff-cases-surge-us>.

⁴² CDC, *Guidance for Correctional & Detention Facilities* (last updated Feb. 15, 2022), <https://www.cdc.gov/coronavirus/2019-ncov/community/correction-detention/guidance-correctional-detention.html>.

⁴³ Johnson AG, Amin AB, Ali AR, et al., *COVID-19 Incidence and Death Rates Among Unvaccinated and Fully Vaccinated Adults with and Without Booster Doses During Periods of Delta and Omicron Variant Emergence* — 25 U.S. Jurisdictions, April 4–December 25, 2021, MMWR Morb Mortal Wkly Rep. ePub: 21 January 2022. DOI: <http://dx.doi.org/10.15585/mmwr.mm7104e2>.

⁴⁴ Paul C Adamson, Michael A Pfeffer, Valerie A Arboleda, Omai B Garner, Annabelle de St Maurice, Benjamin von Bredow, Jonathan Flint, Leonid Kruglyak, Judith S Currier, *Lower Severe Acute Respiratory Syndrome Coronavirus 2 Viral Shedding Following Coronavirus Disease 2019 Vaccination Among Healthcare Workers in Los Angeles, California*, 8 Open Forum Infectious Diseases 11 (November 2021), <https://doi.org/10.1093/ofid/ofab526>.

vaccine (such as Pfizer or Moderna) and a booster. mRNA booster shots are 90 percent effective against hospitalization due to the Omicron variant, in comparison to 57 percent effectiveness for vaccinated people without boosters and whose last dose was >180 days prior.⁴⁵ Therefore the booster results in a 37 percent increase in efficacy in preventing hospitalization in this population. Studies have shown that two doses of mRNA vaccines, or one dose of viral vector (such as Johnson & Johnson) COVID-19 vaccines, alone, are insufficient to create an adequate antibody response to Omicron. This is because traditional vaccine dosing regimens do not produce sufficient quantity and quality of antibodies against the Omicron variant.⁴⁶ Recent data show that the Johnson & Johnson vaccine also does not produce sufficient quantities of antibodies against Omicron⁴⁷ and considered a second-line vaccine compared with the mRNA vaccines.

22. Prior COVID-19 infection is also insufficient to provide immunity to Omicron, because it is less sensitive to neutralizing antibodies than prior variants.⁴⁸ The risk of COVID-19 reinfection with Omicron is 5.4 times greater than the Delta variant, meaning that people who have already had COVID-19 are still at high risk of contracting the virus again.⁴⁹ Individuals who recently developed COVID-19 but who are otherwise eligible for a booster shot based on prior vaccination can and should receive a booster. In cases where a patient has recently developed COVID-19, vaccine administration should be delayed at least until symptoms have subsided and criteria for ending isolation is met (currently at least 5 days after a positive test and as long as symptoms improve).
23. A booster shot of the Moderna or Pfizer mRNA-based vaccine is necessary to provide effective immunity against Omicron. The CDC has now recommended COVID-19 booster shots to all people who received the Johnson & Johnson COVID-19 vaccine two or more months ago, and to all people ages 18 or older who received either the Pfizer or

⁴⁵ Thompson MG, Natarajan K, Irving SA, et al., *Effectiveness of a Third Dose of mRNA Vaccines Against COVID-19—Associated Emergency Department and Urgent Care Encounters and Hospitalizations Among Adults During Periods of Delta and Omicron Variant Predominance — VISION Network, 10 States, August 2021–January 2022*, MMWR Morb Mortal Wkly Rep. ePub: 21 January 2022. DOI: <http://dx.doi.org/10.15585/mmwr.mm7104e3>.

⁴⁶ Wilfredo F. Garcia-Beltran, Kerri J. St. Denis, Angelique Hoelzemer, Evan C. Lam, Adam D. Nitido, Maegan L. Sheehan, Cristhian Berrios, Onosereme Ofoman, Christina C. Chang, Blake M. Hauser, Jared Feldman, Alex L. Roederer, David J. Gregory, Mark C. Poznansky, Aaron G. Schmidt, A. John Iafraite, Vivek Naranbhai, Alejandro B. Balazs, *mRNA-based COVID-19 Vaccine Boosters Induce Neutralizing Immunity against SARS-CoV-2 Omicron Variant*, Cell, 2022, ISSN 0092-8674, <https://doi.org/10.1016/j.cell.2021.12.033>. (<https://www.sciencedirect.com/science/article/pii/S0092867421014963>); The Harvard Gazette, *No Omicron Immunity Without Booster, Study Finds*, Jan. 7, 2022, <https://news.harvard.edu/gazette/story/2022/01/no-omicron-immunity-without-booster-study-finds/>.

⁴⁷ Bloomberg News, *Sinopharm, J&J, Sputnik Vaccines Are Weaker Against Omicron in New Study*, Dec. 17, 2021, <https://www.bloomberg.com/news/articles/2021-12-17/sinopharm-j-j-sputnik-shots-weaken-against-omicron-study-sees#:~:text=Covid%2D19%20shots%20made%20by,variant's%20vaccine%20evading%20abilities%20mount..>

⁴⁸ Planas, D., Saunders, N., Maes, P. et al., *Considerable Escape of SARS-CoV-2 Omicron to Antibody Neutralization*, Nature (2021). <https://doi.org/10.1038/s41586-021-04389-z>.

⁴⁹ Neil Ferguson et al., *Growth, Population Distribution and Immune Escape of Omicron in England*, MRC Centre for Global Infectious Disease Analysis, Dec. 16, 2021, <https://www.imperial.ac.uk/mrc-global-infectious-disease-analysis/covid-19/report-49-Omicron/>.

Moderna COVID-19 vaccine five or more months ago.⁵⁰ It is now abundantly clear that mRNA vaccines, such as the Pfizer or Moderna vaccine, are the most effective at reducing transmission and controlling COVID-19 related infection, as compared to a Johnson & Johnson booster. mRNA vaccines (such as Pfizer or Moderna) produce an immunologically superior response compared to all other types of vaccines when used as a booster dose, regardless of the original type of vaccine.⁵¹ mRNA vaccine boosters, such as Pfizer, have up to 90 percent protection against hospitalization for COVID-19, even against Omicron.⁵² For this reason, mRNA vaccines are highly preferable to the Johnson & Johnson vaccine for both initial and booster vaccination. The highest level of protection comes from three mRNA doses, which elicit a potent variant cross-neutralization. For individuals who received only one dose of the Johnson & Johnson vaccine, an mRNA booster shot produces substantially higher protection than the initial dose, although it is less effective than a three-dose regimen of an mRNA vaccine.⁵³ As a recent study in the *New England Journal of Medicine* showed, for people who have received an initial Johnson & Johnson vaccine, the immune response benefit of an mRNA booster is much higher than a Johnson & Johnson booster.⁵⁴ Some suggest that individuals who initially received the Johnson & Johnson vaccine may even need *two* additional mRNA vaccine doses to achieve maximum protection against infection.⁵⁵

24. For these reasons, the established standard of care is to provide an mRNA booster shot to eligible patients. Offering only a Johnson & Johnson vaccine booster to an eligible patient would fall below the established professional standard of care unless there was a contraindication to the mRNA vaccination. Indeed, the CDC has emphasized that non-mRNA vaccines are not clinically preferred, particularly in light of links between the Johnson & Johnson and a rare blood clotting disorder and the relatively reduced efficacy compared with mRNA vaccines.⁵⁶

⁵⁰ CDC, *COVID-19 Vaccine Booster Shots* (last visited Jan. 19, 2022), <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/booster-shot.html>.

⁵¹ Munro APS, et al. *Safety and Immunogenicity of Seven COVID-19 Vaccines as a Third Dose (booster) Following Two Doses of ChAdOx1 nCov-19 or BNT162b2 in the UK (COV-BOOST): A Blinded, Multicentre, Randomised, Controlled, Phase 2 Trial*, *Lancet*, 2021 Dec 18;398(10318):2258-2276. doi: 10.1016/S0140-6736(21)02717-3. Epub 2021 Dec 2.

⁵² Tartof, Sara Y., et al., *BNT162b2 (Pfizer–Biontech) mRNA COVID-19 Vaccine Against Omicron-Related Hospital and Emergency Department Admission in a Large US Health System: A Test-Negative Design*, Jan. 18, 2022, <http://dx.doi.org/10.2139/ssrn.4011905>.

⁵³ Garcia-Beltran et al.; Doria-Rose NA et al, *Booster of mRNA-1273 Vaccine Reduces SARS-CoV-2 Omicron Escape from Neutralizing Antibodies*, medRxiv, Dec. 15, 2021, <https://www.medrxiv.org/content/10.1101/2021.12.15.21267805v2>.

⁵⁴ S.G. Roos, et al., *Immunogenicity and Reactogenicity of Vaccine Boosters after Ad26.COV2.S Priming*, *New Engl. J. Med.* Jan. 19, 2022, DOI 10.1056/NEJMoa2116747, <https://www.nejm.org/doi/full/10.1056/NEJMoa2116747>.

⁵⁵ Garcia-Beltran et al.

⁵⁶ CDC, *Use of COVID-19 Vaccines Currently Approved or Authorized in the United States* (Jan. 6, 2022), <https://www.cdc.gov/vaccines/covid-19/clinical-considerations/covid-19-vaccines-us.html>.

25. COVID-19 vaccines, including mRNA vaccines, are now widely available in the U.S.⁵⁷ The CDC took into consideration the supply of mRNA vaccines when it issued its recommendation for mRNA boosters and noted that “the U.S. supply of mRNA vaccines is abundant – with nearly 100 million doses in the field for immediate use.”⁵⁸ Given the clear, demonstrated, and superior protection that mRNA booster shots provide, particularly for those who have previously received Johnson & Johnson vaccines, there is no reason that ICE cannot provide mRNA boosters to detained people, particularly in light of the increased risk of exposure faced in detention facilities.
26. The overwhelming public health consensus is that everyone should receive a COVID-19 booster as soon as they become eligible.⁵⁹ Because a booster shot takes up to two weeks to become fully effective, prompt vaccination is especially critical for those who reside in congregate environments such as prisons, jails, and detention centers, where the risk of exposure to COVID-19 is even higher.⁶⁰

VI. Conclusion and Recommendations

27. It is my professional opinion that people held in congregate facilities, such as ICE detention facilities, are at increased risk of exposure to COVID-19. In light of increased transmission rates by the Omicron variant, all detained people, particularly those who are vulnerable to serious illness or death from COVID-19 should immediately be provided with mRNA booster shots as soon as they are eligible.
28. Given the barriers to information in detention or correctional settings, detained people should be immediately identified and notified of their eligibility for booster shots, and be provided with culturally and linguistically appropriate education on the importance and benefit of vaccination by trained medical officials. Vaccination and boosters should be widely encouraged.

⁵⁷ Bloomberg, *More Than 9.81 Billion Shots Given: COVID-19 Tracker*, <https://www.bloomberg.com/graphics/covid-vaccine-tracker-global-distribution/> (last visited Jan. 19, 2022) (“More than half of the U.S. population has been fully vaccinated, and supply of shots is plentiful The U.S. is sending some of its excess supply to other hard-hit regions of the world.”); cf. Alexandra Topping, *UK, EU, and US ‘Get More COVID Vaccine in Six Weeks Than Africa Has All Year’*, The Guardian, Dec. 23, 2021, <https://www.theguardian.com/world/2021/dec/23/uk-eu-us-get-more-covid-vaccines-six-weeks-africa-all-year> (“G7 countries will have 1.4 billion surplus doses by March 2022, even after giving all adults a booster.”).

⁵⁸ CDC, *CDC Endorses ACIP’s Updated COVID-19 Vaccine Recommendations* (Dec. 16, 2021), <https://www.cdc.gov/media/releases/2021/s1216-covid-19-vaccines.html>.

⁵⁹ CDC, *CDC Expands COVID-19 Booster Recommendations* (Nov. 29, 2021), <https://www.cdc.gov/media/releases/2021/s1129-booster-recommendations.html>; NYC Health, *COVID-19 Booster Shot Recommendations* (Jan. 13, 2022), <https://www1.nyc.gov/assets/doh/downloads/pdf/covid/covid-19-booster-dose-faq.pdf> (“Everyone age 12 and older should get a COVID-19 booster shot as soon as they are eligible”).

⁶⁰ CDC, *Guidance for Correctional & Detention Facilities* (last updated Feb. 15, 2022), <https://www.cdc.gov/coronavirus/2019-ncov/community/correction-detention/guidance-correctional-detention.html>.

29. In addition, ICE should continue to limit the overall number of people in detention, including by identification of people who are medically vulnerable to COVID-19 for release. Reduction in population numbers allow facilities to decrease the risk of rapid transmission, and permit facilities with limited staff to more adequately take protections in light of the pandemic.

I declare, under penalty of perjury and pursuant to 28 U.S.C. § 1746, that the foregoing is true and correct.

Executed on this 26th day of February, 2022, at Los Angeles, California.

A handwritten signature in black ink, appearing to read 'Tara Vijayan', with a stylized, cursive script.

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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

FORMAL TEACHINGResearch Mentorship

Academic Year	Student/Fellow	Role
2015-present	Andrea Censullo (2015-2016) Luis Tulloch (2016-18) Roma Patel (2016-18) Josh Jeharajah (2017-2019) Jean Gibb (2017-2019) Amy Dora (2018-2020) Kusha Davar (2019-2021) Daisuke Furukawa (2020-2021) Azra Bhimani (2021-present) Ariella Goldblatt (2021-)	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 (2020-) Brian Chu (2020-) Karen Bryan (2021-)	Research mentor for 2 nd and 3 rd year medical students

Formal Teaching

Course	Position	Formal Lectures per year	Dates	Number of learners
HBD 406 (Block 6)	Co-Chair	14+	2016-2021	180 per class
SFM	Associate Director	14+	2020-	180 per class
Core Faculty, ID fellowship	Preceptor (clinic and inpatient)	2	2015-present	7
Noon conferences, Internal Medicine Residency	lecturer	2-4	2015-present	30
EL_MD150.02 Formerly EL_MD 999.08	Co-Chair	1	2018-2021	40
Applied Anatomy College AAC_1920	lecturer	1	2019-2020	40
Foundations for Fourth Year FFY_2021	lecturer	1	2021	180
Transitions to Clerkship CF_21-22	lecturer	1	2021	180

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, September, 2017*

- 2018 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
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*

Moderated panel discussion on Myth of Meritocracy for DOM Grand Rounds August 18, 2021
 Updates in the Management of Covid 19, with Drs. Tisha Wang and Linda Cyzypinski, August 25, 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) and live Q&A*
 Approaching Holistic Review in the ID Fellowship Match, National Program Director's Meeting ID Week, September 28, 2021
 Cabotegravir/Rilpivirine in the Clinic: Translating Trials into Clinical Practice. Tough Decisions Made Easier. 18th annual HIV CME Symposium. UCLA Centers for AIDS Research and Education and Pacific AIDS Education and Training Center. November 12, 2021*
 Respiratory Viruses, UCLA Multicampus ID Fellowship, December 7, 2022

2022 Covid Updates for Hospitalists, Geriatricians, Neurologists, Family Medicine. UCLA Health January 13, 2022
 Allocating Scarce Treatments: The UCLA Approach. Community Memorial Health System, Ventura County. January 20, 2022*

*CME talks

LEADERSHIP ROLES:

2019- present. Medical Director, Antimicrobial Stewardship, UCLA Health
 2020- present Faculty Director, Health Equity Pathway, UCLA IM Residency
 2020-present Associate Director of Scientific Foundations of Medicine
 2020-present Lead, Fellowship EDI committee
 2018- 2021 Co-Chair of MS4 elective MD 999.08 Teaching Fellowship
 2016- 2021 Block 6 Co-Chair
 2016-present Faculty Director of Medical Education Concentration
 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, DGSOM
 June 2017 Participated in American Board of Internal Medicine Standard Setting Process
 2017- 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, DGSOM
 2019- DGSOM Admissions Committee
 2020 LCME accreditation task force, DGSOM
 2020- present Department of Medicine Equity, Diversion and Inclusion Advisory Board
 2021- Executive Committee At Large Member and Vice Chair of Selection Committee IDSA Medical Education Community of Practice

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 21 st 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
2020	Infectious Disease Society of America National Meeting, Virtual, Oct 2020
2021	Infectious Disease Society of American National Meeting, Virtual Sept-Oct 2021

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

UCLA David Geffen School of Medicine (DGSoM) - Broad Stem Cell Research Center
 (BSCRC) COVID 19 Research Award (OCRC #21-84) \$12,000. 3/29/21-9/28/21

PRESS RELEASES/PODCASTS

Airtalk, KPCC, January 7, 2022 <https://www.kpcc.org/show/airtalk/2022-01-07/remembering-sidney-poitier-groundbreaking-hollywood-star-and-oscar-winner>

Airtalk, KPCC December 2, 2021. <https://www.kpcc.org/show/airtalk/2021-12-02/re-examining-housing-first-and-shelter-approaches-to-addressing-homelessness-in-l-a>

Airtalk KPCC, November 9, 2021 <https://www.kpcc.org/show/airtalk/2021-11-09/what-does-the-massive-infrastructure-package-mean-for-california>

AirTalk, KPCC October 8, 2021. <https://www.kpcc.org/show/airtalk/2021-10-08/covid-19-ama-sf-to-lift-mask-mandate-for-vaccinated-natural-immunity-more>

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, 2020

<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

Clinical Microbiology and Infectious Disease: A Medical Student and Faculty Collaboration. Reviewed Chapter 4 Gram positive organisms, August 2021

External Reviewer, “Combating Antimicrobial Resistance and Protecting the Miracle of Modern Medicine” for the Health and Medicine Division (HMD) of The National Academies of Sciences, Engineering, and Medicine, September 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. PMID 20024697
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. PMID 23822028
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. PMID 24065780

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. PMID 23913129
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 PMID 24065326
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. PMID 26880481
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. PMID 27116803
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. PMID 27159224
9. Censullo, A and **Vijayan, T**. Choosing Nuclear Medicine Imaging Studies Wisely in Diagnosing Infectious Diseases. *Open Forum Infectious Diseases* 3 Feb 2017. PMID 28480283
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. PMID 31189036
11. **Vijayan, T**. “Browner: Creating Narratives of Race.” *New England Journal of Medicine*. August 1, 2019. PMID 31365798
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. PMID 34457601
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*. Nov 2020 PMID: 32835787
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.
17. 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.” *ICHE*, July 29, 2021 PMID 34323207
18. Winnett A, Srinivasan V, Davis M, **Vijayan T**, Uslan DZ, Garner OB, de St Maurice A. The Path of More Resistance: A Comparison of NHSN and CLSI Criteria in Developing Cumulative Antimicrobial Susceptibility Test Reports and Institutional Antibigrams. *J Clin Microbiol*. 2021 Dec 1:JCM0136621. doi: 10.1128/JCM.01366-21. Epub ahead of print. PMID: 34851679.
19. Davar, K, Wilson, MR, Miller, S, Chiu, CY, **Vijayan, T**. A Rare Bird: Diagnosis of Psittacosis Meningitis by Clinical Metagenomic Next-Generation Sequencing, *Open Forum Infectious Diseases*, Volume 8, Issue 12, December 2021, ofab555, <https://doi.org/10.1093/ofid/ofab555>
20. **Vijayan T**. Raining in Los Angeles. *BMJ*. 2022 Jan 14;376:o113. doi: 10.1136/bmj.o113. PMID: 35031589.
21. Chu BA, Surampudi V, Li Z, Harris C, Seeman T, Norris KC, **Vijayan T**. Micronutrient Deficiency as a Confounder in Ascertaining the Role of Obesity in Severe COVID-19 Infection. *International Journal of Environmental Research and Public Health*. 2022; 19(3):1125. <https://doi.org/10.3390/ijerph19031125>

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

Richley, M, Rao, RR, Afshar, Y, Mei, J, Mok, T, Vijayan, T, Weinstein, S, Pham, CU, Madamba, J, Shin, CS, Suda, D, Han, CS. Use of neutralizing monoclonal antibodies for coronavirus disease-2019 (COVID-19) in pregnancy: A case series. *Obstetrics and Gynecology*.

C. RESEARCH PAPERS - PEER REVIEWED (SUBMITTED):

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
13. Bhimani, A, Srinivasan, V, Weinstein, S, Clemons, N, Batiste-Brown, Q, Yang, S, Garner, O, **Vijayan, T**. Implementation of Use of Monoclonal Antibody Therapy at a Large Academic Medical Center for the Outpatient Treatment of Covid-19. ID Week, 2021.
14. Ross, H, Pham, C, Bukata, S, Markovic, D, Merkheal, M, Silakar, S, **Vijayan, T**. Analysis of Risk Factors Associated with Adverse Outcomes Following Calcium Sulfate Bead Use in Periprosthetic Joint Infections. ID Week, 2021

Community Engagement

Sabbath Town Hall on Covid Vaccines December 27, 2020, January 3, 2021, January 10, 2021 (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

Sabbath Town Hall (Facebook Live Event) August 15, 2021 and August 29, 2021

Instagram Interview with Miyoshi Price, December 28, 2021 on Covid Vaccines

Additional consulting (pro bono) work:

Prison Law Firm, ACLU, Federal Defenders of San Diego.

DECLARATION OF DR. ERIC FEIGL-DING, Sc.D.

I, Eric Feigl-Ding, Sc.D., hereby declare:

1. I am a Senior Fellow at the Federation of American Scientists, a member of the World Health Organization (“WHO”) and United Nations’ (“UN”) COVID-19 Mortality Committee, Head of COVID Risk Communications at the New England Complex Systems Institute, Co-founder of the World Health Network - COVID Action Group, and Chief Health Economist for Microclinic International. My work focuses on the intersection of public health and public policy. Beginning in January 2020, my work has focused significantly on COVID-19. I have been recognized in the media as one of the first to alert the public on the pandemic risk of COVID-19.¹ Over the course of the pandemic, I have advised the WHO, world leaders, governors and members of Congress, as well as worked on analyzing COVID-19 trends, stopping COVID-19 misinformation, advocating for public health, and improving health policy.
2. A current copy of my CV is attached as Exhibit 1. A full list of my publications is available at: <https://pubmed.ncbi.nlm.nih.gov/?term=dining+el>.
3. I have never testified at deposition or trial as an expert witness.
4. I have been retained by Plaintiffs’ counsel as an expert in this case. I am being compensated by Plaintiffs’ counsel for my work and testimony in this case at \$450/hour.
5. I submit this declaration to discuss the dangers that people in immigration detention face with regard to COVID-19, especially with the Omicron variant and future variants, and the critical importance of COVID-19 vaccines and booster shots to protect their health and safety.

I. Background: COVID-19 and the Importance of Vaccines and Booster Shots

6. COVID-19 continues to pose a grave risk to our national and local communities. This is especially true for people who are older and/or medically vulnerable and live in congregate settings, such as immigration detention facilities, where transmission is much more difficult to prevent. Due to the highly transmissible Omicron variant, case numbers, hospitalizations, and deaths due to COVID-19 have been high and are likely to increase with the recent emergence of the BA.2 sublineage of Omicron and the likelihood of future variants.
7. As more fully explained below, the Omicron variant, which now accounts for nearly all COVID-19 infections in the U.S., does not, in fact, result in “milder” infection. Indeed, based on the data available so far, the death toll attributable to Omicron is about 17 percent higher

¹ David Wallace-Wells, *Why Was It So Hard to Raise the Alarm on the Coronavirus*, *Intelligencer* (Mar. 26, 2020), <https://nymag.com/intelligencer/amp/2020/03/why-was-it-so-hard-to-raise-the-alarm-on-coronavirus.html>.

than the death toll caused by the Delta variant.² The recently-identified BA.2 sublineage of Omicron is significantly more infectious than the BA.1 sublineage of Omicron, and seems to be even more severe. In addition, studies suggest that infection with Omicron does not protect individuals from future reinfection.³ In addition to the immediate risk posed by the BA.2 sublineage, each new infection provides the COVID-19 virus another opportunity to mutate and therefore produce even more transmissible and dangerous future variants.

8. The most important public health measures currently available to limit the virus's spread and reduce the chances of severe health consequences caused by COVID-19 are vaccination and receiving an mRNA booster shot. The science is now abundantly clear that two months after receiving the Johnson & Johnson vaccine dose and five months after receiving the Pfizer-BioNTech or Moderna vaccine doses, these original doses are insufficient to provide adequate protection against COVID-19. *See infra* ¶ 26. mRNA booster shots are therefore urgently needed for everyone, but especially for medically vulnerable people in immigration detention facilities.

II. The Omicron Variant and the BA.2 Sublineage

9. The Omicron variant of the COVID-19 virus was first identified as a variant of concern by the WHO on November 26, 2021.⁴ Within weeks, it had begun to spread rapidly around the world. This rapid spread is due to Omicron's increased transmissibility. As of February 12, 2022, nearly 100% of all COVID-19 cases in the United States were attributable to the Omicron variant.⁵
10. Epidemiologists generally refer to transmissibility in terms of the effective reproductive number, or "R." R is defined as the average number of secondary infectious cases produced by a primary infectious case. R is useful to determine the potential for spread of a virus. If R is greater than 1 in a given population, the number of people with the virus will increase; if it is less than 1, the number of people with the virus will decrease.

² Maggie Astor, *The Omicron wave accounts for many more U.S. deaths than Delta's*, <https://www.nytimes.com/live/2022/02/19/world/covid-19-tests-cases-vaccine#the-omicron-wave-accounts-for-many-more-us-deaths-than-deltas> (last accessed Feb. 22, 2022).

³ Venice Servellita, et al., *Neutralizing immunity in vaccine breakthrough infections from the SARS-CoV-2 Omicron and Delta 1 variants*, <https://doi.org/10.1101/2022.01.25.22269794> (last accessed Feb. 22, 2022).

⁴ World Health Organization, *Classification of Omicron (B.1.1.529): SARS-CoV-2 Variant of Concern* (Nov. 26, 2021), [https://www.who.int/news/item/26-11-2021-classification-of-omicron-\(b.1.1.529\)-sars-cov-2-variant-of-concern](https://www.who.int/news/item/26-11-2021-classification-of-omicron-(b.1.1.529)-sars-cov-2-variant-of-concern).

⁵ Centers for Disease Control and Prevention (CDC), *COVID Data Tracker, Variant Proportions*, <https://covid.cdc.gov/covid-data-tracker/#variant-proportions> (last updated Feb. 12, 2022).

11. The effective reproductive number at the outset of an infection, without any mitigation measures in place, is referred to as R_0 . The effective reproductive number at any given time is referred to as R_t . R_t is often less than R_0 because mitigation measures and immunity can slow the spread of a virus. In the case of COVID-19, R_t is currently lower than R_0 in many populations because measures like social distancing and masking limit the ability of the virus to spread. R_t is also lower than R_0 because of prior immunity—acquired through vaccination, boosters, and prior infections—lowers the risk of infection and transmission.
12. Omicron (the main BA.1 sublineage as well as the newer BA.2 sublineage) is significantly more transmissible than the Delta variant, which itself is approximately twice as transmissible as the original Wuhan strain of the COVID-19 virus.⁶ This increased transmissibility of the Omicron variant results in a higher R_t and requires a higher degree of mitigation measures in place and/or immunity to keep down the R_t . This higher R_t can be seen in the rapid spread of the Omicron variant, with cases often doubling every two to three days during the upward expansion phase in many countries, such as the Omicron’s initial surge in the UK and Denmark. It results in far higher numbers of infections than from prior variants. For example, the Institute for Health Metrics and Evaluation estimates that between December of 2021 and March of 2022, over 3 billion people worldwide will likely be infected by the Omicron variant.⁷
13. R_t is even higher in populations that are crowded and are limited in the mitigation measures that they can practice, such as in immigration detention facilities and other congregate living settings. Over the course of the pandemic, higher case and death rates have been observed in prisons than in the general population.⁸ For the Omicron variant, too, the R_t has been significantly high in carceral settings including immigration detention facilities. The number of COVID-19 infections in ICE detention facilities among detainees surged by over 800% in January 2022.⁹
14. There has been a narrative among certain political and media outlets that Omicron is “milder” than prior variants, but Omicron presents a threat that is comparable to—if not worse than—prior variants for several reasons discussed below. According to data available so far, deaths

⁶ UK Health Security Agency, *SARS-CoV-2 variants of concern and variants under investigation in England, Technical briefing 31* (Dec. 19, 2021), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1042367/technical_briefing-31-10-december-2021.pdf.

⁷ Institute for Health Metrics and Evaluation, IHME COVID-19 Model Insights Blog (January 21, 2022), <https://www.healthdata.org/covid/video/insights-ihmes-latest-covid-19-model-run>.

⁸ Brendan Saloner et al., *Research Letter, COVID-19 Cases and Deaths in Federal and State Prisons*, 324 J. Am. Med. Ass’n 602, 602 (2020), <https://jamanetwork.com/journals/jama/fullarticle/2768249>.

⁹ Camilo Montoya-Galvez, *Government Medical Advisors Urge ICE to Expand COVID-19 Vaccinations for Immigrant Detainees*, CBS News, Jan. 26, 2022, <https://www.cbsnews.com/news/immigration-ice-detainees-covid-19-vaccines/>.

caused by Omicron are about 17 percent higher than the deaths caused by the Delta variant.¹⁰ The Omicron wave is far from over. Although nationally cases are for now trending downward, the emergence of the even more transmissible BA.2 sublineage as well as the greater likelihood of reinfection after infection with Omicron—in comparison to reinfection after infection with Delta—show that the serious threats posed by Omicron and COVID-19 is ongoing.

15. First, some data regarding the severity of infections from the Omicron variant does not in fact demonstrate significantly milder outcomes, after adjustment of risk factors like age, vaccinations, and recent immunity. The Omicron variant is able to more effectively infect people with existing immunity than prior variants,¹¹ so a much higher proportion of infections with the Omicron variant are breakthrough infections relative to infections with prior variants. These breakthrough infections tend to be milder than infections in people with no existing immunity to COVID-19. Measures of the severity of infections generally take certain serious outcomes (such as hospitalization or death) as the numerator and total infections as the denominator, resulting in some sort of percentage of cases that result in serious outcomes. The significant number of breakthrough infections, however, expands this denominator to include many people who will experience little or no effects because of their existing immunity, not because of any intrinsic “mildness” of the Omicron variant.
16. Similarly, much of the data regarding the Omicron variant is from South Africa, which was the earliest population to experience a sufficiently documented outbreak of the variant. However, the conditions in South Africa were unusually conducive to milder infections. South Africa had recently experienced a significant wave of infections due to the Delta variant in August and September, just three to four months before it experienced the Omicron wave. A significant percentage of people in South Africa thus had fresh immunity¹² from an infection with the Delta variant, making their infection with the Omicron variant a less severe

¹⁰ Maggie Astor, *The Omicron wave accounts for many more U.S. deaths than Delta's*, NY Times, <https://www.nytimes.com/live/2022/02/19/world/covid-19-tests-cases-vaccine#the-omicron-wave-accounts-for-many-more-us-deaths-than-deltas> (last accessed Feb. 22, 2022).

¹¹ Neil Ferguson, et al., *Report 49 – Growth, population distribution and immune escape of Omicron in England* (Dec. 16, 2021), <https://www.imperial.ac.uk/mrc-global-infectious-disease-analysis/covid-19/report-49-Omicron/>; UK Health Security Agency, *SARS-CoV-2 variants of concern and variants under investigation in England* (Dec. 19, 2021), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1042367/technical_briefing-31-10-december-2021.pdf.

¹² Peter Beaumont, *South Africa: previous infections may explain Omicron hospitalization rate*, The Guardian (Dec. 14, 2021), <https://www.theguardian.com/world/2021/dec/14/south-africa-previous-infections-may-explain-omicron-hospitalisation-rate> (“In a lengthy interview with the Global Health Crisis Coordination Center, [vaccine expert Shabir] Madhi cited a recently completed seropositivity survey – the percentage of population who have already been infected – in Gauteng province, which has been at the centre of the Omicron outbreak, that suggested 72% had experienced a previous infection of coronavirus.”)

breakthrough infection. South Africa also conducts fewer tests than other countries,¹³ so it likely undercounted deaths and serious outcomes from infection with the Omicron variant, instead categorizing these outcomes as unrelated to COVID-19. In fact, South Africa's excess mortality rate during the aftermath of its Omicron wave, a measure that does not depend on testing for COVID-19 and thus is less susceptible to errors from low testing rates, shows an additional 10,000 deaths.¹⁴ This excess mortality rate suggests that the Omicron wave was significantly more deadly in South Africa than reports of deaths from COVID-19 would suggest.

17. Second, most analyses concluding that the Omicron variant is "milder" make that determination relative to the Delta variant, the most severe form of COVID-19 that has been observed in wide circulation. The Delta variant is two to three times more severe,¹⁵ and has up to 4.9 higher odds of more severe outcomes of oxygen use, ICU admission, or death in a Singapore study¹⁶ than the original Wuhan strain, so an Omicron variant that is somewhat less intrinsically severe than the Delta variant is still far more severe than the original Wuhan strain. However, because data regarding deaths lags cases, as noted above, recent data shows that the death toll for Omicron is actually higher than for Delta.
18. Third, Omicron's rapid spread results in far more cases than other variants, with cases doubling approximately every two to three days. Even though it appears that the Omicron variant is slightly less likely to cause severe outcomes, this slight decrease in severity is more than outweighed by the far higher number of cases. For this reason, hospitalizations of people with COVID-19 have been higher during the Omicron wave than at any other point throughout the entire pandemic. Some have suggested that hospitalizations of people for complications of COVID-19 infections, as opposed to hospitalizations of people who are in the hospital for other reasons but test positive for COVID-19 at the hospital, are actually lower during the Omicron wave than they have been at other points during the pandemic. However, the data shows otherwise. Data from the UK during the Omicron wave show that 63% of people reported as hospitalized with COVID-19 were primarily admitted to the hospital because of COVID-19

¹³ Johns Hopkins Coronavirus Resource Center, *How Does Testing in the U.S. Compare to Other Countries?* (last viewed February 11, 2022), <https://coronavirus.jhu.edu/testing/international-comparison>.

¹⁴ Joseph Cotterill, *South Africa offers clues to life after Omicron*, Financial Times (Jan. 7, 2022), <https://www.ft.com/content/b0cd9239-f2df-4afc-912f-b3f87fc676ff>.

¹⁵ David N. Fisman et al., *Evaluation of the relative virulence of novel SARS-CoV-2 variants: a retrospective cohort study in Ontario, Canada*, Canadian Med. Assoc. J., Vol. 193, Issue 42 (Oct. 25, 2021), <https://www.cmaj.ca/content/193/42/E1619>.

¹⁶ Sean Wei Xiang Ong et al., *Clinical and virological features of SARS-CoV-2 variants of concern: a retrospective cohort study comparing B.1.1.7 (Alpha), B.1.315 (Beta), and B.1.617.2 (Delta)*, Clinical Infectious Diseases: an Official Publication of the Infectious Diseases Society of America (Aug. 23 2021), <https://europepmc.org/article/MED/34423834>.

symptoms. This percentage is just slightly lower than the percentage in the UK during the Delta wave, which was roughly 74% prior to Omicron surge.¹⁷

19. There are also reasons to be particularly concerned about the Omicron variant. Most treatments that prevented severe outcomes from prior variants are not effective against the Omicron variant. Of the three available monoclonal antibody treatments, only one, Sotrovimab, is effective against the Omicron variant.¹⁸ Convalescent plasma, which helped limit the severity of infections with other variants, may also likely be less effective against the Omicron variant, given large drops in virus neutralization seen among convalescent survivors of Alpha, Beta, and Delta variants against the Omicron variant.¹⁹
20. Additionally, the Omicron wave creates a serious risk of significant complications in the form of long-lasting effects, known commonly as “long COVID.” We have no reliable data on long COVID resulting from infection with the Omicron variant because long COVID involves symptoms that have yet to fully manifest in the few months since the Omicron variant emerged. However, the most reasonable assumption is that an infection with the Omicron variant will result in similar long COVID effects to those of an infection with prior variants. A recent systematic review shows that more than half of all adults infected with COVID-19 (including mild infections) will develop long COVID.²⁰ Rates of long COVID are increasing, with one study in the UK showing that rates of long COVID among children have tripled in the past six months. Long COVID results in serious harm. For example, it causes cognitive decline, which generally correlates in severity with the severity of the COVID-19 infection. People with long COVID who were hospitalized and intubated exhibit an average cognitive decline equivalent to seven IQ points.²¹ Even people with long COVID who were not hospitalized from their initial COVID-19 infection experience an average cognitive decline equivalent to one to three

¹⁷ Independent Sage, *Latest numbers on COVID-19 in the UK*, 20 (Jan. 14, 2022), https://www.independentsage.org/wp-content/uploads/2022/01/WeeklySlides_14January2022.pdf.

¹⁸ National Institutes for Health, *The COVID-19 Treatment Guidelines Panel’s Statement on Therapies for High-Risk Nonhospitalized Patients with Mild to Moderate COVID-19* (January 19, 2022), <https://www.covid19treatmentguidelines.nih.gov/therapies/statement-on-therapies-for-high-risk-nonhospitalized-patients/>.

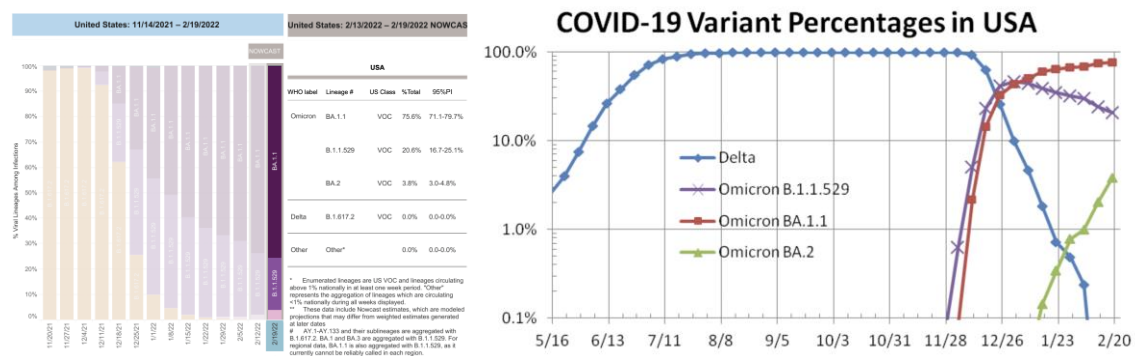
¹⁹ Annika Rössler et al., *SARS-CoV-2 B.1.1.529 variant (Omicron) evades neutralization by sera from vaccinated and convalescent individuals*, medRxiv (Dec. 11, 2021) (preprint), <https://www.medrxiv.org/content/10.1101/2021.12.08.21267491v1>; Elisabetta Cameroni, et al., *Broadly neutralizing antibodies overcome SARS-CoV-2 Omicron antigenic shift*, bioRxiv (Dec. 20, 2021) (preprint), <https://www.biorxiv.org/content/10.1101/2021.12.12.472269v2>.

²⁰ Destin Groff, et al., *Short-term and Long-term Rates of Postacute Sequelae of SARS-CoV-2 Infection*, JAMA Network (Oct. 13, 2021), https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2784918?utm_source=For_The_Media&utm_medium=referral&utm_campaign=ftm_links&utm_term=101321.

²¹ *Id.*

IQ points.²² For comparison, childhood exposure to lead paint is estimated to result in an average two-point IQ drop.

21. There is now also concern about a new sublineage of the Omicron variant called “BA.2,” which has 17 additional mutations²³ that the original Omicron BA.1 sublineage does not possess. Cases of BA.2 have doubled weekly in England,³⁰ are dominant in Denmark, and have jumped to 3.8% in the US, according to the CDC’s data as of February 19, 2022,²⁴ from previously 2.0% on Feb 12, 1% on Feb 5th—the rapid surge suggesting faster contagiousness and/or transmission advantage against other strains. This is best visualized exponentially in the figure titled ‘COVID-19 Variant Percentages in USA’ with BA2 variant shown in light green, surging exponentially (on a logarithmic graph, straight line upwards denotes exponential growth).



22. Growth rate data from UK show BA.2 to have a one and a half times more contagious transmission rate than the original Omicron sublineage,²⁵ a 126% increase of BA.2 in one week, and an approximately 30% higher secondary attack rate (the spread of disease within a closed population) than the original Omicron sublineage.²⁶

²² *Id.*

²³ William A. Haseltine, *Birth of the Omicron Family: BA.1, BA.2, BA.3. Each as Different as Alpha Is from Delta*, Forbes (Jan. 26, 2022), <https://www.forbes.com/sites/williamhaseltine/2022/01/26/birth-of-the-omicron-family-ba1-ba2-ba3-each-as-different-as-alpha-is-from-delta/?sh=10813a453da9>.

³⁰ UK Health Security Agency, *SARS-CoV-2 variants of concern and variants under investigation in England, Technical briefing 35* (Jan. 28, 2021), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1050999/Technical-Briefing-35-28January2022.pdf.

²⁴ Centers for Disease Control and Prevention (CDC), *COVID Data Tracker, Variant Proportions*, <https://covid.cdc.gov/covid-data-tracker/#variant-proportions> (last updated Feb. 19, 2022).

²⁵ Statens Serum Institute, *Risikovurdering for udviklingen i epidemien med covid-19* (Jan. 22, 2022), <https://www.ssi.dk/media/arkiv/subsites/covid19/risikovurderinger/2022/risikovurdering-for-udviklingen-i-epidemien-med-covid19-22012022.pdf?la=da>.

²⁶ UK Health Security Agency, *SARS-CoV-2 variants of concern and variants under investigation in England, Technical briefing 35* (Jan. 28, 2021),

23. The BA.2 sublineage is clearly displacing and out-competing all other variants across multiple countries, thereby posing a serious looming threat. Not only is the BA.2 sublineage of Omicron more transmissible, it is also linked to worse health consequences. In countries like Denmark where the BA.2 sublineage is dominant, excess deaths caused by the virus are spiking.²⁷ A recent study out of Japan which tested different variants on hamsters demonstrates that “[t]he viral RNA load in the lung periphery and histopathological disorders of BA.2 were more severe than those of BA.1 and even B.1.1.”²⁸ The study raises serious concerns about the BA.2 sublineage, as it concluded that the “data suggest[s] the possibility that BA.2 would be the most concerned variant to global health” and “propose that BA.2 should be recognised as a unique variant of concern, and this SARS-CoV-2 variant should be monitored in depth.”²⁹

III. Vaccinations and Boosters

24. For Omicron, as for prior variants, vaccinations and boosters remain the most effective public-health tool we have to limit the risk of infection and serious side effects. Most importantly in a setting with a high Rt value, such as in a carceral facility, vaccines act to decrease the Rt value and thus slow the spread of the virus. The CDC has updated its guidance regarding COVID-19 in correctional and detention facilities to recommend that incarcerated people be provided booster shots.³⁰ This slower spread due to vaccination results in fewer infections and helps to limit the number of severe infections requiring serious medical attention at any given time. Of the vaccines approved or authorized in the United States by the FDA, the Pfizer-BioNTech and Moderna vaccines provide better protection against infection and serious complications. This is true both immediately after the initial course and also as the vaccines’ protection wanes.

25. The most effective protection is provided by a booster dose of either the Pfizer-BioNTech or Moderna vaccines (“mRNA vaccines”). This booster shot results in antibody levels that are multiple times higher than those in people who recently received their primary course of any

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1050999/Technical-Briefing-35-28January2022.pdf.

²⁷ Rohan Smith, *New Covid variant BA.2 could be worse than predecessors for public health*, study warns, News.com.au (Feb. 22, 2022),

<https://www.news.com.au/world/coronavirus/health/new-covid-variant-ba2-could-be-worse-than-predecessors-for-public-health-study-warns/news-story/7238ae227328835a86d655c06b962cd3>.

²⁸ Daichi Yamasoba et al., *Virological characteristics of SARS-CoV-2 BA.2 variant* (Feb. 15, 2022), <https://doi.org/10.1101/2022.02.14.480335>.

²⁹ *Id.* at 11.

³⁰ CDC, *Interim Guidance on Management of Coronavirus Disease 2019 (COVID-19) in Correctional and Detention Facilities*, <https://www.cdc.gov/coronavirus/2019-ncov/community/correction-detention/guidance-correctional-detention.html> (updated Feb. 15, 2022).

of the three available vaccines. From an epidemiological perspective, the best way to limit the spread of any COVID-19 variant and to limit the risk of serious complications is to vaccinate all eligible people with either the Pfizer-BioNTech or Moderna vaccines as soon as possible, and then to provide a booster shot (age 12 and up for Pfizer booster, or age 18 and up for Moderna and J&J booster) as soon as the five-month eligibility window set by the FDA opens (or potentially even earlier, although the FDA has yet to approve earlier boosters). The mRNA vaccines are clinically preferred over the Johnson & Johnson vaccine, and an mRNA booster shot should be provided under all circumstances unless it is unavailable or if someone is contraindicated for the mRNA vaccine. As the CDC has acknowledged when endorsing the clinical preference for mRNA vaccines over the Johnson & Johnson vaccine, mRNA vaccines are widely available in the United States.³¹

26. The science is now abundantly clear that two months after receiving the Johnson & Johnson vaccine dose and five months after receiving the Pfizer-BioNTech or Moderna vaccine doses, these original doses are insufficient to provide adequate protection against COVID-19. Recent CDC data confirms that the hospitalization rate for individuals 18 and older is approximately 3.6 times higher among those who received their primary vaccination doses but not a booster shot compared to those who received their booster shots,³² and the death rate among those who received their primary vaccination doses but not a booster shot is approximately 4.2 percent higher than among those who are vaccinated and received a booster shot.³³ The hospitalization disparity is even greater among those older than 65, for whom vaccine effectiveness without a booster shot has dropped to below 75 percent.

27. While there is waning of vaccines over time, booster shots substantially help prevent symptomatic infections of Omicron.³⁴ Notably, according to CDC data, while vaccine

³¹ CDC, *CDC Endorses ACIP's Updated COVID-19 Vaccine Recommendations* (Dec. 16, 2021), <https://www.cdc.gov/media/releases/2021/s1216-covid-19-vaccines.html#:~:text=CDC%20Endorses%20ACIP's%20Updated%20COVID%2D19%20Vaccine%20Recommendations,-Media%20Statement&text=The%20U.S.%20supply%20of%20mRNA,Canada%20and%20the%20United%20Kingdom.>

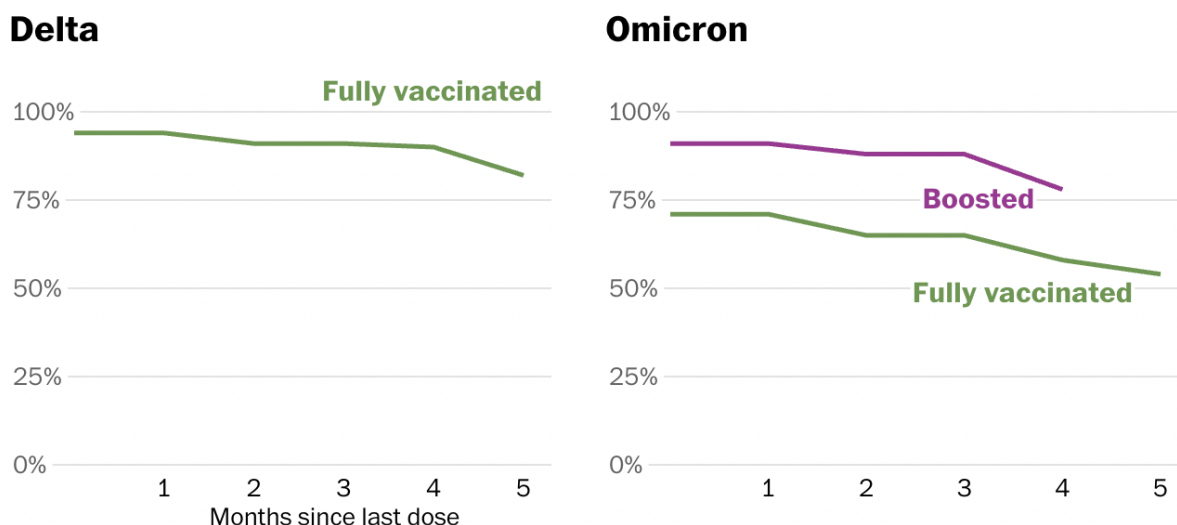
³² CDC, *COVID Data Tracker, Rates of laboratory-confirmed COVID-19 hospitalizations by vaccination status*, <https://covid.cdc.gov/covid-data-tracker/#covidnet-hospitalizations-vaccination> (last updated Jan. 8, 2022).

³³ Johnson AG, Amin AB, Ali AR, et al., *COVID-19 Incidence and Death Rates Among Unvaccinated and Fully Vaccinated Adults with and Without Booster Doses During Periods of Delta and Omicron Variant Emergence — 25 U.S. Jurisdictions, April 4–December 25, 2021*, *MMWR Morb Mortal Wkly Rep.* ePub: 21 January 2022. DOI: <http://dx.doi.org/10.15585/mmwr.mm7104e2>.

³⁴ Dan Keating and Naema Ahmed, *Coronavirus vaccine protection was much weaker against omicron, data shows*, *Washington Post* (Feb 23, 2022), https://www.washingtonpost.com/health/interactive/2022/vaccine-omicron-effectiveness/?itid=hp_pandemic.

effectiveness wanes after 3 months, especially against Omicron, someone who received a booster has roughly a 20% additional VE advantage over someone who is not boosted. This is a large and public health significant protection.

Vaccine effectiveness over time by variant



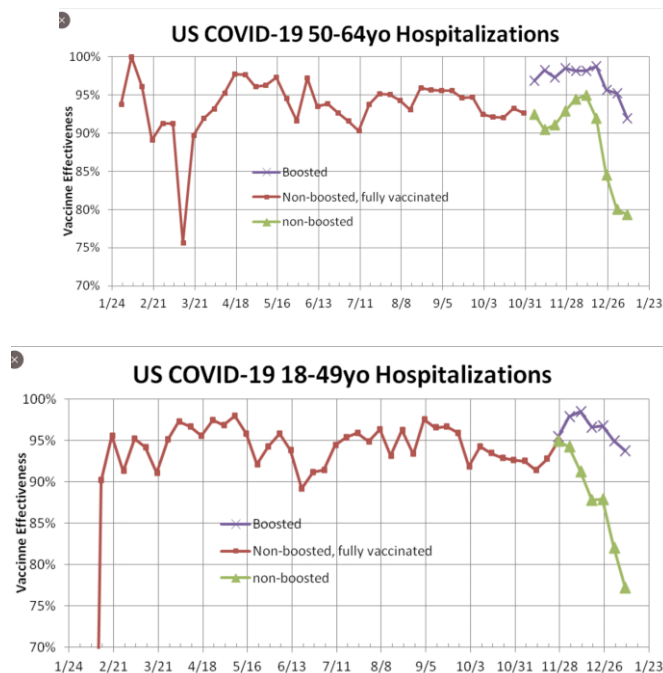
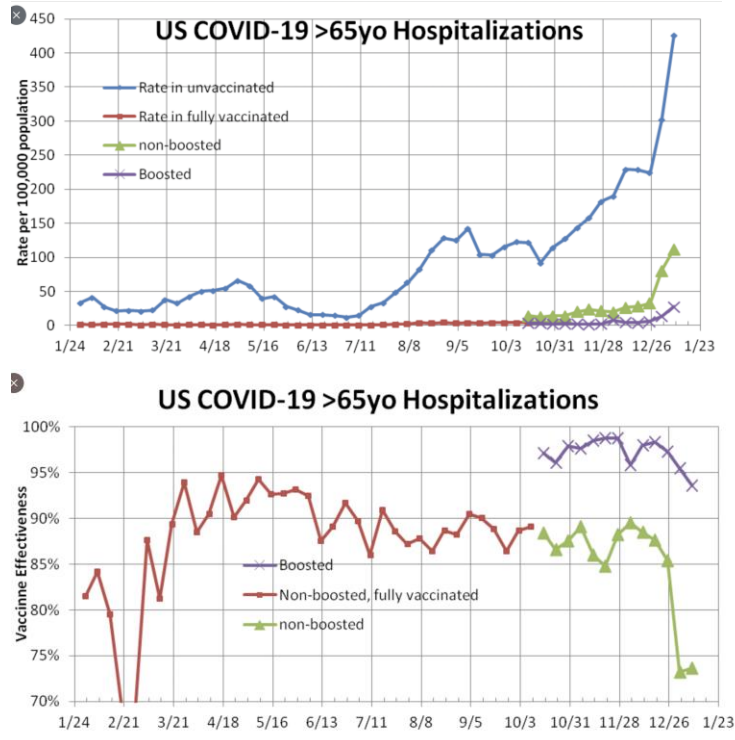
28. With the spread of the Omicron variant, and especially the highly transmissible and dangerous BA.2 sublineage, vaccines and booster shots are more important than ever. The BA.2 sublineage fortunately responds well to boosters similarly to the original Omicron sublineage, with approximately 70% efficacy against symptomatic infections in a UK govt report.³⁵ However, basic vaccine efficacy without a booster is not significant, at only 13%, after an initial course of two shots, according to the same UK report. Thus, again, booster shots are urgently needed for protection against both forms of Omicron.

29. With booster though, vaccine effectiveness does indeed increase substantially. For effectiveness against hospitalizations, the latest CDC data shows clear advantages of receiving a booster shot against hospitalization in all adult age groups. For example, the per capita rate of those boosted is more than 3-fold lower than those merely receiving basic ‘full’ vaccination (2 shots mRNA or 1 shot J&J), and over 10-fold difference than someone unvaccinated.³⁶ Vaccine effectiveness data further show that across all age groups, age 65 or over, age 50-64, and age 18-49, those vaccinated without a booster experienced significant drop in efficacy during the December-January Omicron wave—with VE against hospitalization dropping to

³⁵ UK Health Security Agency, *SARS-CoV-2 variants of concern and variants under investigation in England, Technical briefing 35* (Jan. 28, 2021), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1050999/Technical-Briefing-35-28January2022.pdf.

³⁶ CDC – Rates of laboratory-confirmed COVID-19 hospitalizations by vaccination status. https://covid.cdc.gov/covid-data-tracker/?itid=1k_inline_enhanced-template#covidnet-hospitalizations-vaccination

between 70-79% across all age groups. In contrast, during the same period, VE against hospitalization among those boosted remained high at above 90%. This demonstrates the critical benefit of boosters in avoiding severe COVID and avoiding hospitalization illness and associated costs to any population.



30. Furthermore, there are additional benefits of an mRNA booster over a J&J booster. Notably, an NIH-led study³⁷ found that those who received an mRNA vaccine after an initial J&J shot had 32-fold to 56-fold higher neutralizing antibody response than compared to another J&J shot, which yield only a much smaller 4.6-fold increased antibody response. Neutralizing antibody is a key metric for assessing the likely binding and neutralization of SARS-CoV-2. Thus, it is critical to provide an mRNA booster to an initial J&J recipient, rather than another J&J shot. The results are summarized in the figure below.

How do Covid-19 vaccine boosters compare?¹

Initial Vaccine Administered									
Initial Dose Regime	2			2			1		
Booster Shot Type									
Binding & Neutralizing Antibody Assays (Geometric mean fold rise)	17.3 x	14.9 x	6.2 x	9.7 x	7.9 x	4.7 x	56.1 x	32.8 x	4.6 x
Rank	1 st	2 nd	3 rd	1 st	2 nd	3 rd	1 st	2 nd	3 rd

¹Reference: "Heterologous SARS-CoV-2 Booster Vaccinations - Preliminary Report" (SARS-CoV-2 Vaccine Booster Trial), Table 3, SARS-CoV-2 IgG Binding and Neutralizing Antibody Assays, Geometric mean fold rise

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IV. Future Variants and the Role of Boosters

31. It is entirely plausible that we will see another COVID-19 variant as transmissible as Omicron emerge in the near future. Indeed, we are already seeing scientists calling for the BA.2 sublineage of Omicron to be treated as a separate variant of concern.³⁸ Each new infection provides the COVID-19 virus another opportunity to mutate, so as a general matter, the greater the number of COVID-19 infections worldwide, the greater the opportunity that the virus has to mutate. With three billion people worldwide expected to contract COVID-19 as part of the Omicron wave, the chances of a more transmissible mutation occurring during this wave are significant. This risk is compounded by the use of monoclonal antibody treatments, which, although sometimes effective at preventing severe complications of a COVID-19 infection, may also increase the potential for mutations.
32. Although some people who are infected with the Omicron variant will acquire some immunity to future COVID-19 infections, the protection that this immunity will provide is limited. In many cases, Omicron appears to provide diminished immunity against future COVID-19 infections. An infection with the Omicron variant that does not result in serious symptoms is likely to produce limited cross-variant immunity in people who have not already been

³⁷ Heterologous SARS-CoV-2 Booster Vaccinations - Preliminary Report, <https://pubmed.ncbi.nlm.nih.gov/34671773/>, medRxiv. 2021 Oct 15;2021.10.10.21264827. doi: 10.1101/2021.10.10.21264827.

³⁸ See Daichi Yamasoba et al., *supra* note 28.

vaccinated.³⁹ As a result, unlike prior variants where a person who had survived an infection could expect some immunity against subsequent infections, even high rates of infection with the Omicron variant may not produce significant immunity in the population against a future variant among the unvaccinated,⁴⁰ though among vaccinated individuals who are further boosted, researchers have observed significant neutralization against Omicron—if fully boosted.⁴¹

33. Additionally, as we have observed with Omicron, cross-immunity between variants may be limited, so that a new variant may be capable of infecting even those with immunity to the prior variants of the disease.⁴² A new variant may also render existing therapies less effective: we have observed that it is particularly difficult to neutralize the Omicron variant with convalescent plasma⁴³ and even certain monoclonal antibody drugs.⁴⁴
34. As mentioned earlier, Omicron's unique properties also necessitates requires a booster in the form of a third shot to provide 70-75% vaccine efficacy against symptomatic COVID, and 90-95% efficacy against COVID hospitalization. Otherwise, the protection against infection and against hospitalization is simply too low without a booster during the new era in which Omicron and its subvariants BA are now almost entirely dominant.⁴⁵

³⁹ Suryawanshi, R.K., et al., *Limited cross-variant immunity after infection with the 509 SARS-CoV-2 Omicron variant without vaccination*, medRxiv (Jan. 17, 2022) (preprint), www.medrxiv.org/content/10.1101/2022.01.13.22269243v1.

⁴⁰ Venice Servellita, et al., *Neutralizing immunity in vaccine breakthrough infections from the SARS-CoV-2 Omicron and Delta Variants*, medRxiv (Jan. 26, 2022) (preprint) <https://www.medrxiv.org/content/10.1101/2022.01.25.22269794v1.full.pdf>.

⁴¹ Neil Ferguson, et al., *Report 49 – Growth, population distribution and immune escape of Omicron in England* (Dec. 16, 2021), <https://www.imperial.ac.uk/mrc-global-infectious-disease-analysis/covid-19/report-49-Omicron/>.

⁴² Neil Ferguson, et al., *Report 49 – Growth, population distribution and immune escape of Omicron in England* (Dec. 16, 2021), <https://www.imperial.ac.uk/mrc-global-infectious-disease-analysis/covid-19/report-49-Omicron/>.

⁴³ Annika Rossler, et al., *SARS-CoV-2 Omicron Variant Neutralization in Serum from Vaccinated and Convalescent Persons*, New England J. of Med. (Jan. 12, 2022), <https://www.nejm.org/doi/10.1056/NEJMc2119236>; Elisabetta Cameroni et al., *Broadly neutralizing antibodies overcome SARS-CoV-2 Omicron antigenic shift*, bioRxiv (Dec. 20, 2021) (preprint), <https://www.biorxiv.org/content/10.1101/2021.12.12.472269v2>.

⁴⁴ Patrizia Cavazzoni, M.D., *Coronavirus (COVID-19) Update: FDA Limits Use of Certain Monoclonal Antibodies to Treat COVID-19 Due to the Omicron Variant* (Jan. 24, 2022), <https://www.fda.gov/news-events/press-announcements/coronavirus-covid-19-update-fda-limits-use-certain-monoclonal-antibodies-treat-covid-19-due-omicron>.

⁴⁵ CDC, *Rates of laboratory-confirmed COVID-19 hospitalizations by vaccination status*, https://covid.cdc.gov/covid-data-tracker/?itid=1k_inline_enhanced-template#covidnet-hospitalizations-vaccination (last visited Feb. 28, 2022).

35. For these reasons, booster shots are highly recommended for everyone, regardless of prior infection with COVID-19. People who are infected with COVID-19 should receive a booster shot after they have ended the required isolation period and no longer have symptoms,⁴⁶ albeit 1-2 month delay for a booster shot after a recent infection is acceptable in a low-risk setting. For people who are infected with COVID-19 and live in high-risk settings like immigration detention facilities, it is all the more important that they receive a booster shot as soon as possible after they have ended their isolation period and are not symptomatic due to the greater risk of reinfection with severe consequences in detention.

36. In sum, mRNA booster shots are urgently needed for sufficient protection against Omicron spread, including the BA.2 sublineage, and subsequent illness. Public health interventions should be focused on providing boosters as quickly as possible to everyone, but especially to medically vulnerable people in immigration detention facilities.

I declare under penalty of perjury and the law of the United States of America that the foregoing is true and correct.

Executed on February 28, 2022 in Arlington, Virginia.

A handwritten signature in black ink, reading "Eric Feigl-Ding". The signature is written in a cursive, flowing style. The first name "Eric" is written in a smaller, more compact script, while "Feigl-Ding" is written in a larger, more expansive script with a long, sweeping underline that extends to the right.

Eric Feigl-Ding

⁴⁶ CDC, *Frequently Asked Questions about COVID-19 Vaccination*, <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/faq.html> (updated Feb. 28, 2022).

Dr. Eric Feigl-Ding

EDUCATION

2001-04	B.A. (<i>Phi Beta Kappa</i>)	Public Health	Johns Hopkins University
2004-07	Sc.D. (dual doctorate) [doctoral minor]	Epidemiology Biostatistics	Harvard University
2005-07	Sc.D. (dual doctorate)	Nutrition	Harvard University
2007-10	Fellowship	Public Health	Harvard University ⁱ

EXPERIENCE (selected)

Federation of American Scientists, Senior Fellow, Adjunct (2020-)

- Steering Committee, FAS COVID-19 Task Force
- Head of COVID-19 Risk Communication

New England Complex Systems Institute, (2021-)

- Head of COVID biosecurity risk and Health Policy program
- Co-founded the World Health Network -- COVID Action Group, an international policy group on COVID-19

World Health Organization, 2018-2020 and 2021-

- Member, WHO & UN COVID-19 Mortality Committee (2021-)
- Advisor the WHO Assistant Director General for Data & Analytics (Samira Asma) on COVID19 (2021-)
- Consultant—Advised the WHO Europe on their 53 country initiatives on childhood obesity (2018-2020)

Harvard Chan School of Public Health, Faculty (2012-2018) | Visiting Scientist (2018-2020) (Epidemiologist, Health economist)

- Directed and led major national and international health economic and epidemiology projects and clinical trials. Have worked on projects related to obesity prevention, diabetes/CVD/cancer risk factors, drug safety, health insurance spending, cost savings from behavioral health, health system, food economic policy.
- Key whistle-blower of the drug safety of *Vioxx*; honored in books/magazines, featured in NYTimes.
- Investigated health economic cost savings programs, consumer health insurance incentives.
- Advised/engaged with: HHS (FDA, CDC, NIH, CMS), USDA, WHO, UNRWA, Denmark MoH, Jordan MoH. Advised OECD's Health Directorate, and EC Health Directorate
- Influenced (unpaid) a major Fortune 100 beverage company (directly w/ C-suite) to adopt WHO sugar rec.
- Developed the *Evidenced Formal Coverage Index* metric for multi-national comparative indexing of economic indicators and risk factors of 190-country health systems.
- Ranked by Web of Science among top 1% of all scientists--named by Harvard among top cited scientists.
- Developed one of the [first mobile biosecurity contact outbreak tracing apps](#) in 2014 for the Ebola epidemic, which its features and designs [were adapted for the COVID-19 pandemic](#).

Microclinic International, Chief Health Economist, Director of Epidemiology 2009-

- Managed and spearheaded major projects worldwide including several obesity/diabetes prevention programs. Oversaw 50+ research and field staff. Negotiated with foreign partners.
- Designed and led multimillion diabetes trials in Kentucky; scaled up w/ CDC statewide in 53 counties.
- Co-developed 'microclinic' obesity/diabetes intervention program – it has been adopted and used by the UN, and currently serving over 600,000 refugees in the Middle East.
- Awarded the 2014 *Global Health Project of the Year Prize* by Consortium of Universities for Global Health.
- Profiled and featured on hour-long documentary on PBS-KET (Kentucky Educational TV) - Feb 2020.
- Founder and Principal Investigator of a 3600-person COVID-19 prevention and treatment randomized trial in Mexico: [Vitamin D, Omega-3, and Combination Vitamins B, C and Zinc Supplementation for the Treatment and Prevention of COVID-19](#)

Denmark Ministry of Health's CDC (Statens Serum Institute), Principal Investigator, 2014-2021

- Created and led a major national public health intervention for nutrition and food access.
- Co-PI of trial - total project size = 7890 people in the 2x2x2+1 trial

Toxin Alert, Founder, 2014-2018

- Featured by Harvard, WIRED, etc. Keynoted & honored by numerous groups.
- Created the Toxin Alert Drinking Water Quality Database public biosecurity alert system for informing about water hazards in communities, with over 500,000 locations nationwide, to prevent another Flint MI crisis.

European Commission (Health Directorate). Consultant 2010-2017

- Chaired working groups, chaired reports for EC committees, chaired dialogue w/ US HHS and MOHs
- Health economic and health advisor to EC 7th Framework and EC Horizon 2020.

Harvard Medical School & Brigham and Women's Hospital. Faculty. Instructor of Medicine, 2010-12

- Developed the 'Spaghetti Plot' method, used by non-linear systematic review research worldwide.
- Developed the 'Isotemporal Substitution' model, regarded as a "seminal" breakthrough for behavioral health modeling of time displacement causality. Both methods being used by groups around the world.
- Built the largest historic cohort study of obesity and mortality in professional athletes. Invited to Google Tech Talk, the study comprised 500,000+ player-years over 130-years of baseball, and demonstrated for first time the increased mortality risks of body mass index even among athletes.

Campaign for Cancer Prevention (6.2 million members). Founder, Executive Director. 2007-2014

Corporate partner: Brigham & Women's Hospital, Development (Harvard flagship hospital)

- Founded a 6 million member Campaign for Cancer Prevention, an online campaign against cancer.
- Led national health education program focused on cancer prevention programs engaging >17 million.
- Raised over \$500,000 (median donation \$15) for medical research—and featured in the NY Times. (<https://well.blogs.nytimes.com/2011/12/08/a-web-campaign-for-cancer-prevention/>).

HONORS AND AWARDS

2004 *Phi Beta Kappa (junior year early election)*, Johns Hopkins University, Maryland
 2004 *Honors*, Johns Hopkins University [JHU does not use Latin honor system]
 2004 *Honors in Public Health*, Johns Hopkins University (departmental honors)
 2004 *Health Commissioner's Commendation Award*, Baltimore City Health Department
 2005 *'Best Johns Hopkins Publication'*: Epidemic Proportions (Founding Editor)
 2007 *Arnold Award*, Boston University School of Medicine, Massachusetts
 2008 *Derek Bok Distinction in Teaching Award*, Harvard College
 2008 *Soros Fellowship*, Paul and Daisy Soros Foundation, New York
 2008 *Brick Award* (honored on 40 million bags of Doritos), DoSomething.org, New York
 2011 *AHA Scientist Development Award*, American Heart Association, Texas
 2012 *ADA Junior Faculty Award*, American Diabetes Association, Virginia
 2012 *Global Shaper*. World Economic Forum, Geneva, Switzerland
 2012, 2013, 2015 *'Best of AHA' award*, American Heart Association, Texas
 2012 *16 People and Organizations Changing the World in 2012*, Craig Newmark, Craigslist
 2012 *Outstanding Young Leader Award*, Boston Chamber of Commerce (former winners: JFK, RFK, EMK)
 • (other recent winners: Rep. Joe Kennedy III, Rep. Seth Moulton, Rep. Ayanna Pressley)
 2014 *'Global Health Project of the Year' Prize*, Consortium of Universities for Global Health
 2015 *AHA Scott Grundy Award for Excellence in Research*, American Heart Association, Texas
 2015 *Finalist, White House Fellowship*, White House, Washington, DC
 2017 *Mark V Anderson Leadership Award*, Sigma Chi Foundation, Illinois
 2018 *Highly Cited Researcher (Ranked in Top 1% of all scientists worldwide)*, Web of Science, Clarivate
 2018 *Most Cited Faculty (Ranked among Top 186 across all Harvard)*, Harvard University
 2020 Recognized as first COVID-19 whistleblower by David Wallace-Wells, Editor-at-Large, New York Magazine
 2021 Ranked as a top public health communicator, Massachusetts Institute of Technology.

MENTORING/TEACHING:

- Taught/lectured in 12+ courses at Harvard College, Harvard SPH, Harvard Medical School
- Mentored & supervised 30+ graduate and undergrad students; garnered teaching award from Harvard

PUBLICATIONS AND SCIENTIFIC IMPACT:

- Total publications: **150+** (Full publication list on [Google Scholar](#) and [PubMed](#))
- Total citations to papers (as of February 10 2022): **103,000**
- Impact factor ratings: *H-Index* = **85**; *I₁₀ Index* = **114** (globally among the highest)
- Ranked among Top 1% in Web of Science as a '2018 Highly Cited Researcher'
- Invited national/international keynote presentations: **100+**

SELECTED PUBLICATIONS (out of 150+)

1. US Burden of Disease Collaborators. The State of US Health: Burden of Diseases, Injuries and Risk Factors 1990 to 2010. *JAMA*. 2013 Aug 14;310(6):591-608. PMID: 23842577
2. Feigl AB, **Ding EL**. Evidenced Formal Coverage Index and Universal Healthcare Enactment: A Prospective Longitudinal Study of Social and Economic Predictors. *Health Policy*. 2013 Nov;113(1-2):50-60. doi: 10.1016/j.healthpol.2013.06.009. Epub 2013 Jul 30. PMID: 23906506
3. Zhi M, **Ding EL**, Theisen-Toupal J, Whelan J, Arnaout R. The Landscape of Inappropriate Laboratory Testing: A 15-Year Meta-Analysis. *PLoS One*. 2013 Nov 15;8(11):e78962. PMID: 2426013
4. Tobias DK, Pan A, Jackson CL, O'Reilly EJ, **Ding EL**, Willett WC, Manson JE, Hu FB. "Body-Mass Index and Mortality among Adults with Incident Type 2 Diabetes". *New England Journal of Medicine*. 2014 Jan 16;370(3):233-44. doi: 10.1056/NEJMoa1304501. PMID: 24428469
5. Powles J, Fahimi S, Micha R, Khatibzadeh S, Shi P, Ezzati M, Engell RE, Lim SS, Danaei G, Mozaffarian D; Global Burden of Diseases Nutrition and Chronic Diseases Expert Group (NutriCoDE). Global, regional and national sodium intakes in 1990 and 2010: a systematic analysis of 24 h urinary sodium excretion and dietary surveys worldwide. *BMJ Open*. 2013 Dec 23;3(12):e003733. PMID: 24366578
6. Kassebaum NJ et al. Global, regional, and national levels and causes of maternal mortality during 1990-2013: a systematic analysis for the Global Burden of Disease Study 2013. *Lancet*. 2014 May 2. pii: S0140-6736(14)60696-6. doi: 10.1016/S0140-6736(14)60696-6. [Epub ahead of print] PMID: 24797575
7. Wang H et al. Global, regional, and national levels of neonatal, infant, and under-5 mortality during 1990-2013: a systematic analysis for the Global Burden of Disease Study 2013. *Lancet*. 2014 May 2. pii: S0140-6736(14)60497-9. doi: 10.1016/S0140-6736(14)60497-9. PMID: 24797572
8. Ng M. et al. Global, regional, and national prevalence of overweight and obesity in children and adults during 1980-2013: a systematic analysis for the Global Burden of Disease Study 2013. *Lancet*. 2014 May 28. pii: S0140-6736(14)60460-8. doi: 10.1016/S0140-6736(14)60460-8. PMID: 24880830
9. Global Burden of Diseases Nutrition and Chronic Diseases Expert Group (**NutriCoDE**). Global, regional, and national consumption levels of dietary fats and oils in 1990 and 2010: a systematic analysis including 266 country-specific nutrition surveys. *BMJ*. 2014 Apr 15;348:g2272. doi: 10.1136/bmj.g2272. PMID: 24736206
10. Murray CJ et al. Global, regional, and national incidence and mortality for HIV, tuberculosis, and malaria during 1990-2013: a systematic analysis for the Global Burden of Disease Study 2013. *Lancet*. 2014 Sep 13;384(9947):1005-70. doi: 10.1016/S0140-6736(14)60844-8. Epub 2014 Jul 22. PMID: 25059949
11. Global Burden of Diseases Nutrition and Chronic Diseases Expert Group (**NutriCoDE**). Global sodium consumption and death from cardiovascular causes. *N Engl J Med*. 2014 Aug 14;371(7):624-34. PMID: 25119608
12. Wang D, Leung CW, Li Y, **Ding EL**, Chiuve SE, Hu FB, Willett WC. Trends in Dietary Quality among Adults in the United States: 1999-2010. *JAMA Internal Medicine*. 2014 Sep 1. PMID: 25179639
13. GBD 2013 Mortality and Causes of Death Collaborators. Global, regional, and national age-sex specific all-cause and cause-specific mortality for 240 causes of death, 1990-2013: a systematic analysis for the Global Burden of Disease Study 2013. *Lancet*. 2015 Jan 10;385(9963):117-71. PMID: 25530442
14. Global Burden of Diseases Nutrition and Chronic Diseases Expert Group (**NutriCoDE**). Dietary quality among men and women in 187 countries in 1990 and 2010: a systematic assessment. *Lancet Glob Health*. 2015 Mar;3(3):e132-42. doi: 10.1016/S2214-109X(14)70381-X. PMID: 25701991
15. Global Burden of Diseases Nutrition and Chronic Diseases Expert Group (**NutriCoDE**). Global, regional and national consumption of major food groups in 1990 and 2010: a systematic analysis including 266 country-specific nutrition surveys worldwide. *BMJ Open*. 2015 Sep 24;5(9):e008705. doi: 10.1136/bmjopen-2015-008705. PMID: 26408285

16. Global Burden of Disease Study 2013 Collaborators. Global, regional, and national incidence, prevalence, and years lived with disability for 301 acute and chronic diseases and injuries in 188 countries, 1990-2013: a systematic analysis for the Global Burden of Disease Study 2013. Lancet. 2015 Aug 22;386(9995):743-800. PMID: 26063472
17. Global Burden of Diseases Nutrition and Chronic Diseases Expert Group (NutriCoDE). Estimated Global, Regional, and National Disease Burdens Related to Sugar-Sweetened Beverage Consumption in 2010. Circulation. 2015 Aug 25;132(8):639-66. PMID: 26124185;
18. Global Burden of Diseases Nutrition and Chronic Diseases Expert Group (NutriCoDE). Global, Regional, and National Consumption of Sugar-Sweetened Beverages, Fruit Juices, and Milk: A Systematic Assessment of Beverage Intake in 187 Countries. PLoS One. 2015 Aug 5;10(8):e0124845. PMID: 26244332
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21. GBD 2013 Risk Factors Collaborators. Global, regional, and national comparative risk assessment of 79 behavioural, environmental and occupational, and metabolic risks or clusters of risks in 188 countries, 1990-2013: a systematic analysis for the Global Burden of Disease Study 2013. Lancet. 2015 Dec 5;386(10010):2287-323. doi: 10.1016/S0140-6736(15)00128-2.
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23. Burden of Diseases Nutrition and Chronic Diseases Expert Group (NutriCoDE). Impact of Nonoptimal Intakes of Saturated, Polyunsaturated, and Trans Fat on Global Burdens of Coronary Heart Disease. J Am Heart Assoc. 2016 Jan 20;5(1). pii: e002891. Erratum in: J Am Heart Assoc. 2016;5(1). pii: e002076. PMID: 26790695
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25. GBD 2015 HIV Collaborators. Estimates of global, regional, and national incidence, prevalence, and mortality of HIV, 1980-2015: the Global Burden of Disease Study 2015. Lancet HIV. 2016 Aug;3(8):e361-87. PMID: 27470028
26. Global Burden of Diseases, Injuries, and Risk Factors Metabolic Risk Factors of Chronic Diseases Expert Group. The Impact of Dietary and Metabolic Risk Factors on Cardiovascular Diseases and Type 2 Diabetes Mortality in Brazil. PLoS One. 2016 Mar 18;11(3):e0151503. doi: 10.1371/journal.pone.0151503. eCollection 2016. PMID: 26990765
27. Global Burden of Diseases, Injuries and Risk Factors Study 2013 and Stroke Experts Writing Group. Global burden of stroke and risk factors in 188 countries, during 1990-2013: a systematic analysis for the Global Burden of Disease Study 2013. Lancet Neurol. 2016 Aug;15(9):913-924. doi: 10.1016/S1474-4422(16)30073-4. Epub 2016 Jun 9. PMID: 27291521
28. GBD 2015 Maternal Mortality Collaborators. Global, regional, and national levels of maternal mortality, 1990-2015: a systematic analysis for the Global Burden of Disease Study 2015. Lancet. 2016 Oct 8;388(10053):1775-1812. doi: 10.1016/S0140-6736(16)31470-2. PMID: 27733286
29. GBD 2015 Child Mortality Collaborators. Global, regional, national, and selected subnational levels of stillbirths, neonatal, infant, and under-5 mortality, 1980-2015: a systematic analysis for the Global Burden of Disease Study 2015. Lancet. 2016 Oct 8;388(10053):1725-1774. PMID: 27733285
30. GBD 2015 Risk Factors Collaborators. Global, regional, and national comparative risk assessment of 79 behavioural, environmental and occupational, and metabolic risks or clusters of risks, 1990-2015: a systematic analysis for the Global Burden of Disease Study 2015. Lancet. 2016 Oct 8;388(10053):1659-1724. PMID: 27733284
31. GBD 2015 DALYs and HALE Collaborators. Global, regional, and national disability-adjusted life-years (DALYs) for 315 diseases and injuries and healthy life expectancy (HALE), 1990-2015: a systematic analysis for the Global Burden of Disease Study 2015. Lancet. 2016 Oct 8;388(10053):1603-1658. PMID: 27733283
32. GBD 2015 Disease and Injury Incidence and Prevalence Collaborators. Global, regional, and national incidence, prevalence, and years lived with disability for 310 diseases and injuries, 1990-2015: a systematic analysis for the Global Burden of Disease Study 2015. Lancet. 2016 Oct 8;388(10053):1545-1602. PMID: 27733282
33. GBD 2015 Mortality and Causes of Death Collaborators. Global, regional, and national life expectancy, all-cause mortality, and cause-specific mortality for 249 causes of death, 1980-2015: a systematic analysis for the Global Burden of Disease Study 2015. Lancet. 2016 Oct 8;388(10053):1459-1544. doi: 10.1016/S0140-6736(16)31012-1. PMID: 27733281

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36. Global Burden of Disease Cancer Collaboration. Global, Regional, and National Cancer Incidence, Mortality, Years of Life Lost, Years Lived With Disability, and Disability-Adjusted Life-years for 32 Cancer Groups, 1990 to 2015: A Systematic Analysis for the Global Burden of Disease Study. JAMA Oncol. 2017 Apr 1;3(4):524-548. PMID: 27918777
37. Roth GA et al. Global, Regional, and National Burden of Cardiovascular Diseases for 10 Causes, 1990 to 2015. J Am Coll Cardiol. 2017 May 15. pii: S0735-1097(17)37244-3. PMID: 28527533
38. GBD 2015 Healthcare Access and Quality Collaborators. Healthcare Access and Quality Index based on mortality from causes amenable to personal health care in 195 countries and territories, 1990-2015: a novel analysis from the Global Burden of Disease Study 2015. Lancet. 2017 May 18. pii: S0140-6736(17)30818-8. PMID: 28528753
39. GBD 2015 Eastern Mediterranean Region Diabetes and CKD Collaborators, Mokdad AH. Diabetes mellitus and chronic kidney disease in the Eastern Mediterranean Region: findings from the Global Burden of Disease 2015 study. Int J Public Health. 2017 Aug 3. doi: 10.1007/s00038-017-1014-1. PMID: 28776240
40. GBD 2016 Risk Factors Collaborators. Global, regional, and national comparative risk assessment of 84 behavioural, environmental and occupational, and metabolic risks or clusters of risks, 1990-2016: a systematic analysis for the Global Burden of Disease Study 2016. Lancet. 2017 Sep 16;390(10100):1345-1422. PMID: 28919119
41. GBD 2016 Disease and Injury Incidence and Prevalence Collaborators. Global, regional, and national incidence, prevalence, and years lived with disability for 328 diseases and injuries for 195 countries, 1990-2016: a systematic analysis for the Global Burden of Disease Study 2016. Lancet. 2017 Sep 16;390(10100):1211-1259. PMID: 28919117
42. GBD 2016 Causes of Death Collaborators. Global, regional, and national age-sex specific mortality for 264 causes of death, 1980-2016: a systematic analysis for the Global Burden of Disease Study 2016. Lancet. 2017 Sep 16;390(10100):1151-1210.
43. GBD 2016 Mortality Collaborators. Global, regional, and national under-5 mortality, adult mortality, age-specific mortality, and life expectancy, 1970-2016: a systematic analysis for the Global Burden of Disease Study 2016. Lancet. 2017 Sep 16;390(10100):1084-1150. PMID: 28919115
44. GBD 2016 SDG Collaborators. Measuring progress and projecting attainment on the basis of past trends of the health-related Sustainable Development Goals in 188 countries: an analysis from the Global Burden of Disease Study 2016. Lancet. 2017 Sep 16;390(10100):1423-1459. PMID: 28916366
45. Barnard ND, Willett WC, **Ding EL**. The Misuse of Meta-Analysis in Nutrition Research. JAMA. 2017 Sep 18. doi: 10.1001/jama.2017.12083. PMID: 28975260
46. US Burden of Disease Collaborators. The State of US Health, 1990-2016: Burden of Diseases, Injuries, and Risk Factors Among US States. JAMA. 2018 Apr 10;319(14):1444-1472. doi: 10.1001/jama.2018.0158. PMID: 29634829
47. Global Burden of Cardiovascular Diseases Collaboration. The Burden of Cardiovascular Diseases Among US States, 1990-2016. JAMA Cardiol. 2018 May 1;3(5):375-389. doi: 10.1001/jamacardio.2018.0385. PMID: 29641820
48. Soliño-Fernandez D, Ding A, Bayro-Kaiser E, **Ding EL**. Willingness to adopt wearable devices with behavioral and economic incentives by health insurance wellness programs: results of a US cross-sectional survey with multiple consumer health vignettes. BMC Public Health. 2019 Dec 16;19(1):1649. doi: 10.1186/s12889-019-7920-9. PMID: 31839006
49. Bar-Yam Y, Gurdasani D, Baker MG, Scally G, George S, Kvalsvig A, Fhaoláin SN, Chiou ST, Drury J, Duckett S, **Ding EL**, Gershenson C, Gibson C, Greenhalgh T, Hamdy A, Hyde Z, James T, Jimenez JL, McKee M, Michie S, Pagel C, Philippe C, Prather K, Raina SK, Ricciardi W, Rubin M, Ryan T, Schneider MF, Staines A, West R, Ziauddeen H. The World Health Network: a global citizens' initiative. Lancet. 2021 Oct 30;398(10311):1567-1568. doi: 10.1016/S0140-6736(21)02246-7.

¹ (**Earned the legacy Sc.D. Doctor of Science, which was phased out by Harvard University beginning in 2016. The outdated Sc.D. in Epidemiology and Sc.D. in Nutrition are no longer conferred at Harvard, and each have been respectively replaced by the Ph.D. degree at Harvard. Thus, in everyday parlance, it has now become common practice that Harvard graduates holding grandfathered Sc.D. degrees often use 'Ph.D.' in lay/general audience settings.*)

DECLARATION OF MIGUEL ANGEL ESCALANTE

I, Miguel Angel Escalante, hereby declare:

1. My name is Miguel Angel Escalante. I am 36 years old. I have been detained by Immigration and Customs Enforcement (ICE) at the Florence Correctional Center in Florence, Arizona since around January 3, 2022. Previously, I was held at Florence Correctional Center first from July 9, 2020 to July 22, 2020 after completing a prison sentence. I was then transferred to La Palma Correctional Center in Eloy, Arizona and stayed there from July 22, 2020 to January 2, 2022. On January 2, 2022 I spent a night at Florence Service Processing Center before being transferred back to Florence Correctional Center around January 3, 2022.
2. I am HIV Positive which makes me vulnerable to serious illness or death from COVID-19. My immune system is very weak.
3. I believe that ICE is aware of my medical condition, because I filed five requests for release from custody, including *Fraihat* requests, between December 2020 and January 2022 while at La Palma Correctional Center and Florence Correctional Center on the basis of my HIV Positive status. ICE denied all of my requests. The most recent denial was received on January 11, 2022.
4. I was vaccinated for COVID-19 on May 20, 2021 with one dose of the Johnson & Johnson vaccine at La Palma Correctional Center.
5. I learned about the COVID-19 booster shot from the news in September of 2021. I want to receive a COVID-19 booster shot because my immune system is too weak. I am very vulnerable to contracting COVID-19 because of my HIV Positive status. I worry a lot about my health and I'm willing to do anything I can to prevent getting sick with COVID-19. If I got a booster shot, I would prefer an mRNA booster because they are the most effective.
6. I asked for a COVID-19 booster shot at La Palma Correctional Center in November of 2021 by speaking to the nurse staff. They informed me that they did not have them at the moment. When I got transferred to Florence Correctional Center in early January 2022, the nurse at intake asked me if I was vaccinated. I told her I was, but would like to request a booster shot. She said they were not available at the moment. A few days later, I asked another nurse at Florence Correctional Center about the booster and she said they still did not have them but when they do have them, I would need to put in a request. A few days later, I asked a nurse about the booster again and she put me on the waiting list. I've been on the waiting list for a month and I have never been offered a COVID-19 booster.
7. I do not know any other detainees at Florence Correctional Center who have received a COVID-19 booster shot. There has been no educational material or information given out by staff to detainees about the booster shot at Florence. Even after I was put on the waiting list, I did not see or hear of any staff letting other people know that they can get on the list as well.

8. I am concerned about the spread of COVID-19 at Florence Correctional Center, because new arrivals come in frequently while we have been in an extended period of quarantine due to positive cases. We were recently in quarantine for a month and a week. Wednesday, February 16th was the first day in over a month I was able to go outside to get fresh air.

I certify under penalty of perjury under the laws of the United States that the foregoing is true and correct to the best of my knowledge and belief.

Executed on the _____ day of _____, 2022, in Florence, Arizona.

Miguel Angel Escalante

CERTIFICATE OF AFFIRMATION

I, Nathalie E. Amazan, certify that on March 1st, 2022, I transcribed the foregoing based on statements that Miguel Angel Escalante (“Miguel”) made to me. I further certify that I have read the foregoing to Miguel, and that Miguel affirmed the foregoing is true and correct under penalty of perjury of the laws of the United States.

I prepared and reviewed this declaration with Miguel over the telephone in light of the COVID-19 pandemic.



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DECLARATION OF KENET JEFET HERNANDEZ HERRERA

I, Kenet Jefet Hernandez Herrera, hereby declare:

1. My name is Kenet Jefet Hernandez Herrera. I am 24 years old. I have been detained by Immigration and Customs Enforcement (ICE) at the Eloy Detention Center (Eloy) in Eloy, Arizona since approximately June 2021.
2. I have several medical conditions that make me vulnerable to serious illness or death from COVID-19 including post-traumatic stress disorder, anxiety disorder, and mild neurocognitive disorder. In addition, I am a former cigarette smoker, having smoked roughly 10 cigarettes per day for about 2 years.
3. I believe that ICE is aware of at least some of the medical conditions mentioned above. Staff at Eloy diagnosed me with anxiety disorder and have been prescribing me medication. I do not know whether I have been considered for release under *Fraihat*.
4. I was vaccinated for COVID-19 around July 14, 2021. I received a single dose of the Johnson & Johnson vaccine. I requested it several times before receiving it.
5. I learned about the COVID-19 booster shots from television news.
6. I did not learn about boosters from people who work for ICE or at Eloy. There have been no information sessions about booster shots and I have not seen any posters about them either.
7. I want to get a booster to stay safe. I fled my country because I'm afraid for my life. I don't want to put myself in more danger in this detention facility, and a booster will help me protect myself. Here at Eloy, the guards mix vaccinated people with unvaccinated people, and sometimes, healthy people with sick people.
8. I'm afraid of getting COVID-19 again. I had it once before around June 2021. I had difficulty breathing, a high fever, and I remember coughing a lot. It made me quite sick.
9. I have asked for a COVID-19 booster shot at Eloy at least twice. I requested a booster once in writing around early or mid-January. I did not get a response. Then, later in January, when I had an opportunity to speak with medical staff in person, I again asked for a booster. I was told they are not available.
10. I do not know any other detainees at Eloy who have received a COVID-19 booster shot.

I certify under penalty of perjury under the laws of the United States that the foregoing is true and correct to the best of my knowledge and belief.

Executed on the _____ day of _____, 2022, in Eloy, Arizona.

Kenet Jefet Hernandez Herrera

CERTIFICATE OF AFFIRMATION AND INTERPRETATION

I, Patrick Taurel, certify that on February 24, 2022, I transcribed the foregoing based on statements that Kenet Jefet Hernandez Herrera made to me. I further certify that I have read the foregoing to Kenet Jefet Hernandez Herrera, and that Kenet Jefet Hernandez Herrera affirmed the foregoing is true and correct under penalty of perjury of the laws of the United States.

I also certify that on February 24, 2022, I read the foregoing to Kenet Jefet Hernandez Herrera in Spanish, and that I am competent to render this interpretation and that I would testify to the same under penalty of perjury if I were called upon to do so.

I prepared and reviewed this declaration with Kenet Jefet Hernandez Herrera over the telephone in light of the COVID-19 pandemic.

/s/ Patrick Taurel
Patrick Taurel
American Civil Liberties Union
National Prison Project
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Washington, DC 20005
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DECLARATION OF ANNA SOROKIN

I, Anna Sorokin, hereby declare:

1. My name is Anna Sorokin. I am 31 years old. I have been detained by Immigration and Customs Enforcement (ICE) since approximately March 25, 2021. First, I was detained at the Bergen County Correctional Facility. Then, on or about June 7, 2021, I was transferred to the Orange County Correctional Facility (“Orange County”), where I am presently detained.
2. I have been diagnosed with a chronic kidney infection as well as depression, anxiety, and post-traumatic stress disorder, which make me vulnerable to serious illness or death from COVID-19.
3. ICE is aware of my medical conditions. On or about April 1, 2021, ICE considered releasing me under *Fraiht* but declined to do so. The piece of paper I received containing the decision refers to me as being at high risk of harm from COVID-19. On February 4, 2022, I submitted a new *Fraiht* request informing ICE of my kidney condition. On February 17, 2022, I sent a third *Fraiht* request to ICE containing translations of medical records my family sent me from Germany. I have not received a response to these latter requests.
4. I was vaccinated for COVID-19 in April 2021, when I was held at the Bergen County Correctional Facility. I was given a single dose of the Johnson & Johnson vaccine.
5. I recently experienced my first bout with COVID-19. I tested positive on or about January 19, 2022. I was in quarantine until approximately January 29, 2022. I had a fever and felt nauseous. I was coughing quite a bit. I had migraines and body aches. I threw up several times, as well. The only medication medical staff at Orange County offered me was Tylenol. For several days after my quarantine ended, I continued to experience some lingering aftereffects –including fatigue, coughing, brain fog, and shortness of breath.
6. Being sick was hard enough, but the isolation that comes with it was especially hard to take. I was locked in a cell basically all day. I was released for only 15 minutes per day to shower. I wasn’t allowed any recreation.
7. I asked medical staff at Orange County for a booster shot in December. I submitted a sick call slip saying I wanted a booster. I never received a response to my sick call slip. That’s not uncommon at this detention facility – medical staff is not very responsive to requests from detained people. Then, after I cleared quarantine, on January 29, 2022, I had a medical visit for a general check-up. I asked a nurse during that visit for a booster shot. I believe the nurse said she’d have a doctor see me about this, but I have not heard anything about a booster since then.

8. I find it especially frustrating that I got COVID-19 after I was not given a booster the first time I asked for one. I feel like the people at Orange County forced me to get COVID-19, because there's no way to escape it here, and their refusal to provide me a booster left me completely unprotected. I do not think Orange County is protecting others detained here either. After several people tested positive, the facility did not isolate or test other people who had been exposed. It's as if they do not want to find out who actually has COVID-19. The lack of testing has likely led to more people getting sick.
9. I learned about boosters from reading the newspaper. I did not get information about boosters from people who work at Orange County. To the best of my knowledge, people who work at Orange County have not distributed any information about boosters. I haven't seen any posters or flyers about COVID-19 booster shots here at the jail. I also have not heard of any other detained people getting a booster shot here at Orange County.
10. I would like a booster shot as soon as I am medically eligible for one. I'm concerned about getting very sick from COVID-19 if I get it again. Getting COVID-19 was a terrible experience, and I'm frightened about what the virus can do to me.

I certify under penalty of perjury under the laws of the United States that the foregoing is true and correct to the best of my knowledge and belief.

Executed on the _____ day of _____, 2022, in Goshen, New York.

Anna Sorokin

CERTIFICATE OF AFFIRMATION

I, Patrick Taurel, certify that on February 8, 2022 and on February 24, 2022, I transcribed the foregoing based on statements that Anna Sorokin made to me. I further certify that I have read the foregoing to Anna Sorokin, and that Anna Sorokin affirmed the foregoing is true and correct under penalty of perjury of the laws of the United States.

I prepared and reviewed this declaration with Anna Sorokin over the telephone in light of the COVID-19 pandemic.

/s/ Patrick Taurel
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DECLARATION OF RAMON DOMINGUEZ GONZALEZ

I, Ramon Dominguez Gonzalez, hereby declare:

1. My name is Ramon Dominguez Gonzalez. I am 32 years old. I have been detained by Immigration and Customs Enforcement (ICE) at the Imperial Regional Adult Detention Facility ("Imperial") in Calexico, California, since January 2019.
2. I am obese, which makes me vulnerable to serious illness or death from COVID-19. I have also been experiencing difficulty breathing lately due, I suspect, to the poor air quality at the detention facility.
3. Around October 2020, I filed a *Fruihat* request for release with ICE, based on my underlying medical condition. ICE denied my request that month.
4. I was vaccinated for COVID-19 at the first opportunity – around March 2021, at Imperial. I received a single dose of the Johnson & Johnson vaccine.
5. I learned about the COVID-19 booster shot from watching the news on TV and from speaking with my family. I want to receive a COVID-19 booster shot because I'm afraid of getting COVID-19. I've heard your first shot wears off and I want to stay protected.
6. I have asked staff at Imperial for a COVID-19 booster shot at least three times. The first time I asked through a sick call slip. This was in early December 2021, I believe. I was told by a nurse that they would get back to me, but they never did. Then, later on in December, I raised the issue again when I was in a mental health appointment. I was told that I would be given a booster on December 29, 2021, but that day came and went and I still haven't received a booster. I submitted another sick call slip around January 8, 2022, inquiring about the booster, saying I should have received one but still haven't. No one explained to me why I didn't receive a booster in response to my requests.
7. On January 17, 2022, I tested positive for COVID-19. I had a bad fever and cough. I also experienced shortness of breath. The worst part about it was not knowing whether I would die or survive because that is the thing about COVID-19—it's unpredictable.
8. I spoke with medical about a booster around January 20, 2022. I was told then that I could not get a booster because I had COVID-19. I was told I will get a booster after I test negative and wait a certain amount of time per CDC guidelines. On January 27, 2022, I tested negative and was released from quarantine.
9. I still want a booster because I am afraid of getting COVID-19 again. I have no confidence in the staff at Imperial. I have seen sick staff members continue to work near other people detained here, when they should have been immediately sent home and tested. At some point earlier this month, my understanding is that 9 out of 12 housing units at Imperial were under quarantine because of COVID-19. I don't feel safe here. I

still have breathing issues. I am not sure if it is related to my previous condition or if it was worsened by COVID-19.

10. On February 23, 2022, staff at Imperial offered me a Johnson & Johnson booster shot. I declined it because I have read about how ineffective the J&J booster is compared to the Moderna and Pfizer boosters. I want the enhanced protection that comes from a booster by Moderna and Pfizer because I believe I remain in danger of reinfection here at Imperial. I have read that the CDC and doctors are recommending Moderna and Pfizer boosters especially if your original vaccine was J&J, and I want to listen to medical experts. If I were not in jail, I would get for myself a Moderna or Pfizer booster shot.

I certify under penalty of perjury under the laws of the United States that the foregoing is true and correct to the best of my knowledge and belief.

Executed on the _____ day of _____, 2022, in Calexico, California.

Ramon Dominguez Gonzalez

CERTIFICATE OF AFFIRMATION

I, My Khanh Ngo, certify that on February 28, 2022, I read the foregoing statements made by Ramon Dominguez Gonzalez by telephone back to Mr. Dominguez Gonzalez, and that Mr. Dominguez Gonzalez affirmed the foregoing is true and correct under penalty of perjury of the laws of the United States.

I prepared and reviewed this declaration with Mr. Dominguez Gonzalez over the telephone in light of the COVID-19 pandemic.

/S/ My Khanh Ngo

My Khanh Ngo

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**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA**

Miguel Angel ESCALANTE, *et al.*,

Plaintiffs,

v.

U.S. IMMIGRATION AND CUSTOMS
ENFORCEMENT, *et al.*,

Defendants.

No. 1:22-cv_____

[PROPOSED] TEMPORARY RESTRAINING ORDER

Upon consideration of the moving papers submitted by Plaintiffs Miguel Angel Escalante, Kenet Jefet Hernandez Herrera, Anna Sorokin, and Ramon Dominguez Gonzalez (“Plaintiffs”) in support of their motion for a temporary restraining order, and any opposition, reply, and further pleadings and argument submitted in support thereof, or in opposition thereto;

It appearing to the Court that Plaintiffs are likely to succeed on the merits of their action, that Plaintiffs will suffer the irreparable injury of violation of their Fifth Amendment rights if Defendants are not immediately required to provide them a COVID-19 vaccine booster shot, Defendants will not be harmed if such an order is issued, and that the public interest favors the entry of such an order, it is, therefore,

ORDERED that Plaintiffs’ motion for a temporary restraining order is hereby GRANTED; and the Defendants are, for 14 days from the date and time shown below, hereby:

1. ORDERED to make available and provide Plaintiffs with an mRNA COVID-19 vaccine booster shot (Pfizer-BioNTech or Moderna) by a qualified medical professional, along with adequate education, pre-vaccination consultation, and documentation in accordance with

the Centers for Disease Control and Prevention's (CDC) guidance on COVID-19 vaccine booster shots within two (2) days of this Order.

2. ORDERED to administer Plaintiffs an mRNA vaccine booster shot (Pfizer-BioNTech or Moderna) unless doing so is inconsistent with CDC guidance.
3. ORDERED that Plaintiffs shall not be required to furnish security for costs.

Entered on _____, 2022 at _____ a.m./p.m.

United States District Court Judge