

**IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF NEW YORK**

Allen HARPER, José LEON, and Ranfis PEREZ on behalf of themselves and all others similarly situated; and the RELEASE AGING PEOPLE IN PRISON CAMPAIGN (“RAPP”),

Plaintiffs,

v.

Civil Action No. 9:21-cv-19 (LEK/ML)

ANDREW CUOMO, in his official capacity as the Governor of the State of New York; NEW YORK STATE DEPARTMENT OF CORRECTIONS AND COMMUNITY SUPERVISION; ANTHONY J. ANNUCCI, in his official capacity as the Acting Commissioner of the New York State Department of Corrections and Community Supervision; JOHN MORLEY, M.D., in his official capacity as the Deputy Commissioner and Chief Medical Officer of the New York State Department of Corrections and Community Supervision; and JEFFREY TEDFORD, in his official capacity as the Superintendent of Adirondack Correctional Facility

Defendants.

**MEMORANDUM OF LAW IN SUPPORT OF PLAINTIFFS’ REQUEST FOR
PRELIMINARY INJUNCTION**

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I. Introduction

Defendants have transferred the most vulnerable people in their prison system, elderly people with underlying health conditions, to the remote Adirondack Correctional Facility (“Adirondack”) during the most deadly pandemic in generations. In doing so, they have failed to conduct basic testing, screening, quarantining, and social distancing practices that would protect this population from death or serious injury resulting from COVID-19. These actions have created the conditions for a deadly outbreak. Plaintiffs bring this case, and seek a preliminary injunction from the Court, in order to prevent such an outbreak and mitigate the risk facing people incarcerated at Adirondack.

Specifically, Plaintiffs Allen Harper, Jose Leon, and Ranfis Perez (“Individual Plaintiffs”), on behalf of themselves and members of a General Class and Disability Subclass, along with the Release Aging People in Prison Campaign (“RAPP”), seek declaratory and injunctive relief under Title II of the Americans with Disabilities Act (“ADA”), Section 504 of the Rehabilitation Act of 1973 (“RA”), and the Eighth Amendment to the United States Constitution to remedy Defendants’ ongoing violations of their statutory and constitutional rights. Defendants Governor Andrew Cuomo, the New York State Department of Corrections and Community Supervision (“DOCCS”), DOCCS’s Acting Commissioner Anthony J. Annucci, DOCCS’s Chief Medical Officer John Morley, M.D., and Adirondack Correctional Facility (“Adirondack”) Superintendent Jeffrey Tedford (collectively, “Defendants”) have discriminated against and failed to provide reasonable modifications to Individual Plaintiffs and the members of the Disability Subclass, and have violated the Eighth Amendment rights of all members of the General Class.

Although all of Plaintiffs’ claims merit urgent consideration and require relief, Plaintiffs

seek through their Preliminary Injunction narrower relief aimed at immediately preventing COVID-19 from entering the facility and identifying and containing it if it does enter. To that end, Plaintiffs ask that the Court order Defendants to implement appropriate screening, testing, quarantining, and contact tracing protocols for all staff and residents of Adirondack, and that Defendants be enjoined from transferring anyone into the facility until they are able to do so in a way that does not create an unnecessary and unreasonable risk of introducing COVID-19 to Adirondack, pursuant to the conditions described below.

II. Factual Background

COVID-19 is an acute respiratory illness caused by a highly contagious, novel virus to which humans have no pre-existing immunity. Ex. 14, Shaman Decl. at ¶ 9. COVID-19 can be fatal, and many of those who survive COVID-19 suffer debilitating long-term damage to the heart, lungs, brain, and vascular system.¹ As of Jan. 6, 2021, COVID-19 has infected an estimated 21.2 million people in the United States,² and almost 360,000 people in the United States have died from COVID-19 or related complications. COVID-19 is thus about 14 times more deadly than seasonal influenza.³

The virus spreads quickly in part because it can spread from asymptomatic carriers. Ex. 14, Shaman Decl. at ¶ 9. People who spread COVID-19 often show only mild symptoms or no symptoms at all.⁴ The virus is most contagious 2-3 days before any symptoms arise, and even

¹ Mayo Clinic Staff, *COVID-19 (coronavirus): Long-Term Effects*, MAYO CLINIC (Nov. 17, 2020), <https://www.mayoclinic.org/diseases-conditions/coronavirus/in-depth/coronavirus-long-term-effects/art-20490351>.

² Jordan Allen et al., *Coronavirus in the U.S.: Latest Map and Case Count*, N.Y. Times (Jan. 8, 2021), <https://www.nytimes.com/interactive/2020/us/coronavirus-us-cases.html>.

³ From the 2010-11 to 2019-20 flu seasons, there were an estimated 296,300,000 symptomatic influenza cases, and 359,000 estimated deaths, for a fatality rate of 0.12%. CTRS. FOR DISEASE CONTROL & PREVENTION, PAST SEASONS ESTIMATED INFLUENZA DISEASE BURDEN, <https://www.cdc.gov/flu/about/burden/past-seasons.html>.

⁴ Daniel P. Oran, AM & Eric J. Topol, M.D., *Prevalence of Asymptomatic SARS-CoV-2 Infection*, 173 *Annals of Internal Medicine* 362, (2020), <https://www.acpjournals.org/doi/10.7326/M20-3012> (finding that 40-45% of people had no symptoms); Sharon H. Bergquist et al., *Non-hospitalized Adults with COVID-19 Differ Noticeably from*

those without symptoms may be contagious for more than two weeks after infection.⁵ Because of these factors, asymptomatic transmissions are thought to account for more than half of all infections, and there is no way to know who is infected or contagious without testing.⁶

While everyone is at risk of contracting COVID-19, several factors can exacerbate the risk that death or serious injury will result from the virus. For example, the risk of death or serious injury resulting from COVID-19 is especially grave for older people. As of January 6, 2021, people at least 65 years old constituted 4 out of 5 U.S. COVID-19 related deaths,⁷ and people at least 55 years old constituted 92% of deaths.⁸

Several medical conditions also exacerbate the risk. One study found that 70% of those hospitalized from COVID-19 had at least one underlying condition that increased their risk.⁹ The Centers for Disease Control and Prevention (“CDC”) recognizes that such medical conditions include heart conditions (including heart failure, coronary artery disease, congenital heart disease, cardiomyopathies and pulmonary hypertension); diabetes; and some forms of chronic kidney disease.¹⁰

Race and gender also affect susceptibility to death or serious injury from COVID-19. The CDC has estimated that non-Hispanic Black or African American individuals are 3.7 times and 2.8 times as likely to be hospitalized and to die from COVID-19, respectively, as compared to

Hospitalized Adults in Their Demographic, Clinical, and Social Characteristics, SN COMPREHENSIVE CLINICAL MEDICINE (2020), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7426161/>, (finding that 52% of people reported no symptoms or only mild ones).

⁵ Xi He et al., *Temporal Dynamics in Viral Shedding and Transmissibility of COVID-19*, NATURE MEDICINE (April 15, 2020), <https://www.nature.com/articles/s41591-020-0869-5>.

⁶ CTRS. FOR DISEASE CONTROL & PREVENTION, SCIENTIFIC BRIEF: COMMUNITY USE OF CLOTH MASKS TO CONTROL THE SPREAD OF SARS-CoV-2 (Nov. 20, 2020), <https://www.cdc.gov/coronavirus/2019-ncov/more/masking-science-sars-cov2.html>.

⁷ CTRS. FOR DISEASE CONTROL AND PREVENTION, WEEKLY UPDATES BY SELECT DEMOGRAPHIC AND GEOGRAPHIC CHARACTERISTICS (Jan. 6, 2021), https://www.cdc.gov/nchs/nvss/vsrr/covid_weekly/index.htm.

⁸ *Id.*

⁹ Sharon H. Bergquist, et al., *supra* note 4.

¹⁰ CTRS. FOR DISEASE CONTROL AND PREVENTION, OLDER ADULTS (Dec. 13, 2020), <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/older-adults.html>

white, non-Hispanic persons. Hispanic or Latino individuals are 4.1 times more likely to be hospitalized, and 2.8 times more likely to die.¹¹ Men also face a greater risk of severe illness and death from COVID-19 infection,¹² so much so that the CDC has added gender to its list of potential risk factors for severe COVID-19 illness.¹³

Congregate living spaces are ripe for the spread of COVID-19. The virus spreads through droplets expelled into the air from a person's respiratory system while breathing, coughing, talking, speaking, singing, or eating, which may then infect others. Ex. 14, Shaman Decl. at ¶ 11. In situations where people spend a significant period of time physically close to one another, particularly in indoor settings with poor ventilation, transmission of the virus becomes much more likely. Ex. 14, Shaman Decl. at ¶¶ 11-12. In part because of their congregate nature, for example, nursing homes are particularly dangerous environments for the spread of COVID-19. By December 2020, 39% of COVID-19 deaths had occurred in nursing homes.¹⁴

Likewise, incarcerated people are at exceptionally high risk of infection and serious illness or death from COVID-19. When people are incarcerated, they have little to no agency over their environment and have extremely limited privacy, so they have little ability to socially

¹¹ CTRS. FOR DISEASE CONTROL & PREVENTION, COVID-19 HOSPITALIZATION AND DEATH BY RACE/ETHNICITY, CENTERS FOR DISEASE CONTROL, (Nov. 30, 2020), <https://www.cdc.gov/coronavirus/2019-ncov/covid-data/investigations-discovery/hospitalization-death-by-race-ethnicity.html>.

¹² Richard V. Reeves & Tiffany N. Ford, *COVID-19 Much More Fatal for Men, Especially Taking Age Into Account*, Brookings Institute (May 15, 2020), <https://www.brookings.edu/blog/up-front/2020/05/15/covid-19-much-more-fatal-for-men-especially-taking-age-into-account/>. See Maggie Koerth, *Why Are More Men Than Women Dying of COVID-19?*, FIVETHIRTYEIGHT (April 30, 2020, 5:58 AM), <https://fivethirtyeight.com/features/why-are-more-men-than-women-dying-of-covid-19/> (reporting on research showing that, out of 35 countries reporting COVID-19 deaths broken down by sex, men with confirmed COVID-19 infections were more likely to die than women with confirmed infections).

¹³ CTRS. FOR DISEASE CONTROL AND PREVENTION, ASSESSING RISK FACTORS FOR SEVERE COVID-19 ILLNESS, (Nov. 30, 2020), <https://www.cdc.gov/coronavirus/2019-ncov/covid-data/investigations-discovery/assessing-risk-factors.html>.

¹⁴ Halley Bondy, *39% of Covid-19 deaths have occurred in nursing homes – many could have been prevented: report*, NBC NEWS KNOW YOUR VALUE (Dec. 8, 2020 1:29 PM), <https://www.nbcnews.com/know-your-value/feature/39-covid-19-deaths-have-occurred-nursing-homes-many-could-ncna1250374>.

distance absent policies and procedures enabling them to do so.¹⁵ *See, e.g.*, Ex. 1, Harper Decl. at ¶¶ 12-14, 10; Ex. 2, Leon Decl. at ¶¶ 14-17; Ex. 3, Perez Decl. at ¶¶ 10-12. Frequently, including at Adirondack, incarcerated people are required to sleep in rooms without doors; to share sinks, toilets, showers and phones; and to sit next to and across from each other at mealtimes.¹⁶ For these reasons, without measures to ameliorate its spread, COVID-19 spreads twice as fast in a prison setting as it does in the general community, and the infected fall ill two to four times more often.¹⁷

Defendants have compounded these risks by making Adirondack into a prison nursing home. They have brought in exclusively elderly and vulnerable prisoners, many with serious underlying medical conditions. In May of 2020, Defendants announced that they would convert Adirondack, formerly a youth facility, into a prison for “incarcerated individuals age 65 or older” who met certain medical and mental health requirements.¹⁸ Since that time, approximately 96 men, all of whom are over the age of 60, and half of whom are over 65, have been brought in from all over the state. All have health conditions that may place them at risk for serious illness from COVID-19. *See, e.g.*, Ex. 1, Harper Decl. at ¶¶ 4, 10; Ex. 20, Harper Med. Records; Ex. 2, Leon Decl. at ¶¶ 4, 10; Ex. 17, Leon Med. Records; Ex. 3, Perez Decl. at ¶ 4; Ex. 19, Perez Med. Records.

¹⁵ Brandy Henry, *Social Distancing and Incarceration: Policy and Management Strategies to Reduce COVID-19 Transmission and Promote Health Equity Through Decarceration*, 47 HEALTH EDUCATION AND BEHAVIOR 536-539 (May 2020).

¹⁶ Jan Ransom & Alan Feuer, *‘We’re Left for Dead’: Fears of Virus Catastrophe at Rikers Jail*, N.Y. TIMES (Mar. 30, 2020), <https://www.nytimes.com/2020/03/30/nyregion/coronavirus-rikers-nyc-jail.html>; Zak Cheney-Rice, *We’re Going to All Start Dropping’: Rikers Inmates on Life as Prisoners of COVID-19*, N.Y. MAG. INTELLIGENCER (Apr. 1, 2020), <https://nymag.com/intelligencer/2020/04/rikers-inmates-on-life-as-prisoners-of-the-coronavirus.html>.

¹⁷ Henry Njuguna, M.D. et al., *Serial Laboratory Testing for SARS-CoV-2 Infection Among Incarcerated and Detained Persons in a Correctional and Detention Facility*, 69 MORBIDITY AND MORTALITY WEEKLY REPORT 836, 837 (2020), <https://www.cdc.gov/mmwr/volumes/69/wr/pdfs/mm6926e2-H.pdf>; Brendan Saloner, Ph.D., et al., *COVID-19 Cases and Deaths in Federal and State Prisons*, JAMA NETWORK (July 8, 2020), <https://jamanetwork.com/journals/jama/fullarticle/2768249>.

¹⁸ N.Y. STATE DEP’T OF CORR. & CMTY. SUPERVISION, DOCCS RE-OPENING PLAN FACT SHEET, (May 29, 2020), <https://doccs.ny.gov/system/files/documents/2020/06/web-page-doccs-re-opening-fact-sheet-5-29-20-final.pdf>

Defendants have been on notice of all these risks in the prison system for months, as there have been over 3400 COVID-19 cases and 27 deaths among incarcerated people in DOCCS facilities. *See* Ex. 21, DOCCS COVID-19 Data Compilation. A similar number of staff members have been infected, though with fewer deaths. In addition to numerous warnings from state and local health officials, New York state prisons have suffered several recent outbreaks since the start of the pandemic that illustrate how rapidly the disease spreads.¹⁹ At Woodburne Correctional Facility, there were no active COVID-19 cases reported on December 1, 2020, yet now there have been 219 cases, including two deaths.²⁰ Greene Correctional Facility reported two COVID-19 cases on October 1, 2020; two weeks later, there were over 90 cases.²¹ Similarly, Elmira reported only one case on September 28, 2020.²² By October 28, 2020, the number had skyrocketed to 590.²³

Moreover, Plaintiff RAPP has contacted Defendants Cuomo, Annucci, Morley, and Tedford repeatedly to inform them of the extent and severity of the risk of concentrating medically vulnerable and elderly people in prison, generally, and at Adirondack, specifically.²⁴ Plaintiff RAPP and other advocacy groups have alerted Defendants specifically to the risk posed by transferring elderly and medically vulnerable people to Adirondack and have identified the inadequacy of COVID-19-related measures at Adirondack.²⁵ They have asked Defendants to mitigate the dangerous COVID-19-related conditions at the facility by engaging in proper

¹⁹ *See, e.g.*, Shan Li, *Covid-19 Surge Strikes Two New York Prisons*, WALL ST. J. (Oct. 21, 2020), <https://www.wsj.com/articles/covid-19-surge-strikes-two-new-york-prisons-11603315628>.

²⁰ *Compare* Ex. 21, DOCCS COVID-19 Data Compilation at 5 (Dec. 1, 2020), *with* Ex. 21, DOCCS COVID-19 Data Compilation at 8 (Dec. 22, 2020).

²¹ *Compare* Ex. 21, DOCCS COVID-19 Data Compilation at 2 (Oct. 1, 2020), *with* Ex. 21, DOCCS COVID-19 Data Compilation at 4 (Oct. 28, 2020).

²² Ex. 21, DOCCS COVID-19 Data Compilation at 1 (Sep. 28, 2020).

²³ Ex. 21, DOCCS COVID-19 Data Compilation at 4 (Oct. 28, 2020).

²⁴ *See, e.g.*, “Re: Releasing New Yorkers from Prison is the Only Way to Save Lives in the Wake of COVID-19,” <http://rappcampaign.com/wp-content/uploads/Legis-letter-Cuomo.pdf>. (hereinafter “RAPP Advocacy Letter”).

²⁵ *Id.*

testing, quarantining, and isolation practices; providing incarcerated people with sufficient cleaning and hygiene supplies; ceasing transfers to the facility, and releasing people from the facility.²⁶ RAPP has also convened a local working group and organized numerous local volunteers to educate the public and to advocate that public officials take steps to mitigate the risks COVID-19 poses at Adirondack.

Despite these warnings, Defendants have done little to protect from COVID-19 the elderly and infirm people who are, by design, concentrated at Adirondack. The CDC recommends that facilities like Adirondack conduct testing at intake before putting transferees into the general population at the facility; house people individually while test results are pending; and implement a routine 14-day quarantine for people entering a facility.²⁷ These recommendations are “particularly” important when incoming people “will transition to a congregate setting with persons at increased risk for severe illness from COVID-19.”²⁸

DOCCS has done none of this at Adirondack, disregarding CDC and other public health guidelines without adopting any alternative guidance to prevent the entry of COVID-19 to the facility or limiting its spread among the population. It does not test people before transferring them to Adirondack from prisons around the state, nor does it separate or quarantine people upon arrival or while test results are pending. *See, e.g.*, Ex. 19, Perez Med. Records at 1 (no COVID-19 test prior to June 29, 2020, when Mr. Perez was tested at Adirondack); Ex. 17, Leon Med. Records at 1 (last test at Otisville pre-transfer was June 4, 2020; first test at Adirondack was June 28 with result received on July 3), 4 (transfer paperwork dated June 18). The hours-long bus

²⁶ *Id.*

²⁷ CTRS. FOR DISEASE CONTROL AND PREVENTION, INTERIM CONSIDERATIONS FOR SARS-CoV-2 TESTING IN CORRECTIONAL AND DETENTION FACILITIES (Dec. 3, 2020), <https://www.cdc.gov/coronavirus/2019-ncov/community/correction-detention/testing.html>.

²⁸ *Id.*

rides on which incarcerated people are transferred include people from numerous facilities around the state. *See, e.g.*, Ex. 1, Harper Decl. at ¶ 5; Ex. 4, Spadaro Decl. at ¶ 5. They are transported in rows immediately in front of and behind each other, a practice that precludes social distancing. Ex. 1, Harper Decl. at ¶ 5.

Once at Adirondack, people are often housed in cells without doors. Ex. 1, Harper Decl. at ¶ 12. They congregate in recreation areas where they are required to sit on small benches, such that sitting any distance apart is impossible. Ex. 3, Perez Decl. at ¶ 12. Multiple housing units eat in a communal mess hall, where 45-50 people at a time wait in line for food and sit across from or next to each other, well within six feet. Ex. 1, Harper Decl. at ¶ 14. Other than food they buy from the commissary, the only food people are allowed to eat in their cells are slices of bread. Ex. 4, Spadaro Decl. at ¶ 25. Many people are therefore forced to eat their meals in the mess hall three times a day, potentially exposing themselves to COVID-19 infection. *See* Ex. 8, Leon Supp. Decl. at ¶¶ 10-11.

Defendants do not conduct any regular temperature or symptom screening of incarcerated people, *see* Ex. 8, Leon Supp. Decl. at ¶ 4, and testing is haphazard. Several Plaintiffs have stated that over the course of several months, they have been tested once at Adirondack. Ex. 1, Harper Decl. at ¶ 8; Ex. 2, Leon Decl. at ¶ 8; Ex. 3, Perez Decl. at ¶ 6. Defendants' responses to positive testing have also been inadequate. In those cases where a person has tested positive, Defendants have failed to quarantine and test people who have been in close contact with the person, allowing other potentially infected people to continue commingling with the rest of the population. For example, on September 30 and October 1, 2020, DOCCS conducted what appears to be its only round of facility-wide COVID-19 testing at Adirondack since at least mid-summer. Ex. 3, Perez Decl. at ¶ 6; Ex. 12, Applegate Decl. at ¶ 7. One incarcerated person tested

positive for COVID-19 at that time. On October 2, the person who tested positive was moved into quarantine, but no one else from his communal housing unit was quarantined or separated in any way. Instead, people who had been living with him before he tested positive continued to mingle with each other and the prison-wide population, eating meals with people from around the prison in the mess hall and working wherever they were assigned throughout the prison. Indeed, in the week before this individual tested positive, he had participated in a grievance hearing with Plaintiff Perez. Another incarcerated person was also in the meeting, along with three staff members. The grievance hearing was held in a room with no windows, with everyone sitting around a table less than six feet apart for approximately one hour. After learning that someone who had been in the grievance hearing had tested positive, Defendants sent the staff members home for two weeks, but they did not quarantine Plaintiff Perez or the other incarcerated person. Instead, they sent them back to their housing units, conducting no follow-up testing or screening and potentially exposing everyone in those units. This incident illustrates that even under circumstances where Defendants understood that quarantining was necessary and appropriate, and where they instituted such quarantines to protect staff members, they refused to do the same to protect class members. Moreover, by failing to re-test residents, Defendants failed to learn the scope of the possible infection within Adirondack, a crucial step for containing any outbreak.

Simply put, Adirondack is a disaster waiting to happen. Plaintiffs ask that this Court grant a preliminary injunction to require Defendants to conduct regular asymptomatic testing of all incarcerated people and staff at Adirondack, isolate those people known to have been exposed, and halt transfers until an appropriate testing regimen can be instated.

III. Argument

Plaintiffs bring claims under the ADA, RA, and Eighth Amendment. For the reasons discussed herein, Plaintiffs meet the standards for a preliminary injunction with respect to each claim.

A. Standard of Review and Relief Sought

A party seeking a preliminary injunction or temporary restraining order must show (1) “a likelihood of success on the merits,” (2) “a likelihood of irreparable harm in the absence of preliminary relief,” and (3) “that the balance of equities tips in the party’s favor, and that an injunction is in the public interest.” *ACLU v. Clapper*, 804 F.3d 617, 622 (2d Cir. 2015) (citing *Winter v. NRDC*, 555 U.S. 7, 20 (2008)). See also *Jolly v. Coughlin*, 76 F.3d 468, 473 (2d. Cir. 1996) (quotation marks omitted).

“A showing of irreparable harm is the single most important prerequisite for the issuance of a preliminary injunction.” *Faiveley Transp. Malmo AB v. Wabtec Corp.*, 559 F.3d 110, 118 (2d Cir. 2009) (quotation marks omitted). The irreparable harm must be “neither remote nor speculative, but actual and imminent, and one that cannot be remedied if the court waits until the end of trial to resolve the harm.” *Martinez-Brooks v. Easter*, 459 F. Supp. 3d 411, 447 (D. Conn. 2020) (quoting *Faively Transport*, 559 F.3d at 118). The fact that the harm has not yet come to pass is irrelevant to the irreparable harm analysis, as “a remedy for unsafe conditions need not await a tragic event.” *Helling v. McKinney*, 509 U.S. 25, 33 (1993).

In assessing preliminary injunction requests, courts distinguish between injunctions that impose mandatory relief, “commanding some positive act,” and injunctions that impose prohibitory relief, enjoining a defendant from engaging in some conduct. Courts apply a heightened standard for mandatory relief, requiring, in addition to the preliminary injunction criteria outlined above, that movants seeking mandatory relief make “a clear showing that the

moving party is entitled to the relief requested,” or that “extreme or very serious damage will result from a denial of preliminary relief.” *Tom Doherty Ass’ts, Inc. v. Saban Entertainment, Inc.*, 60 F.3d 27, 34 (2d Cir. 1995).

Here, Plaintiffs seek both prohibitory and mandatory relief. Plaintiffs seek prohibitory relief in the form of halting transfers until Defendants can demonstrate that they are conducting them in a manner that does not create an unconstitutional risk to safety. For this relief, the prohibitory preliminary injunction standard applies. Plaintiffs also seek mandatory relief in the form of testing of asymptomatic officers and incarcerated people and quarantining and retesting of people who have come into contact with individuals known to be infected. For this relief, the mandatory standard applies. Plaintiffs meet the applicable standard for all relief they seek.

B. Plaintiffs Will Suffer Irreparable Harm in the Form of Extreme and Very Serious Damage, Including the Possibility of Long-Term Injury and Death, in the Absence of a Preliminary Injunction.

The irreparable harm Plaintiffs face is the danger of death or serious long-term injury that would result from an outbreak of COVID-19 within Adirondack, given Defendants’ refusal to put in place policies that would prevent it. COVID-19 can be fatal, and many of those who survive suffer debilitating long-term damage to the heart, lungs, brain, and vascular system.²⁹ Moreover, Adirondack is populated exclusively with people who are at the gravest risk for serious harm from COVID-19 – older men, many of whom have chronic conditions rendering them especially susceptible to severe or fatal illness.³⁰ As of December 12, 2020, the CDC records that men over the age of 55—the entire Adirondack population—have accounted for half

²⁹ MAYO CLINIC, *supra* note 1.

³⁰ Additionally, a constitutional violation constitutes irreparable harm. “In the Second Circuit, it is well-settled that an alleged constitutional violation constitutes irreparable harm.” *Martinez-Brooks*, 459 F. Supp. 3d at 411 (quoting *Basank*, 449 F. Supp. 3d at 213, and citing *Connecticut Dep’t of Env’tl. Prot. v. OSHA*, 356 F.3d 226 (2d Cir. 2004)). The unreasonably high risk of a COVID-19 outbreak among highly vulnerable incarcerated people constitutes irreparable harm because it violates the right to be from cruel and unusual punishment. *Martinez-Brooks*, 459 F. Supp. 3d at 411.

of all COVID-19-related deaths in the United States.³¹ People over the age of 50 are *at least* 4 times more likely to need hospitalization due to COVID-19 than the population at large, and at least 30 times more likely to die. Chronic conditions such as diabetes, kidney disease, obesity, and heart conditions—which afflict members of the Plaintiff classes—further exacerbate risk.³²

A substantial risk of death or serious illness constitutes irreparable harm, as courts in the Second Circuit consistently recognize. *See, e.g., Martinez-Brooks*, 459 F. Supp. 3d at 447–48 (irreparable harm where plaintiffs face “[a] substantial risk of serious illness or death”)³³ citing *Innovative Health Systems, Inc. v. City of White Plains*, 117 F.3d 37, 43–44 (2d Cir. 1997) (irreparable harm where the closure of a treatment program would pose risk of serious harm to plaintiffs, including “death, illness or disability”); *Shapiro v. Cadman Towers, Inc.*, 51 F.3d 328, 332–33 (2d Cir. 1995) (affirming District Court’s irreparable harm finding based on substantial “risk of injury [and] infection” to plaintiff).

Indeed, courts around the country have recognized that the specific risk of death or injury COVID-19 poses to incarcerated people, and particularly to the medically vulnerable, satisfies the irreparable harm requirement. *See, e.g., Martinez-Brooks*, 459 F. Supp. 3d at 448 (irreparable harm where class of people incarcerated at FCI Danbury, in particular the medically vulnerable subclass, faced “grave risk” of death from COVID-19); *Mays v. Dart*, 453 F. Supp. 3d 1074, 1098 (N.D. Ill. 2020) (irreparable harm where incarcerated plaintiffs were at risk of “severe

³¹ Men aged 55 and over account for 135,391 out of 276,061 (49%) of all U.S. COVID-19 related deaths. CTRS. FOR DISEASE CONTROL AND PREVENTION, *supra* note 7.

³² CTRS. FOR DISEASE CONTROL & PREVENTION, PEOPLE WITH CERTAIN MEDICAL CONDITIONS (Dec. 29, 2020), <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-with-medical-conditions.html>; CTRS. FOR DISEASE CONTROL & PREVENTION, EVIDENCE USED TO UPDATE THE LIST OF UNDERLYING MEDICAL CONDITIONS THAT INCREASE A PERSON’S RISK OF SEVERE ILLNESS FROM COVID-19 (Nov. 2, 2020), <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/evidence-table.html>.

³³ Although *Martinez-Brooks* involved a petition for a temporary restraining order rather than a preliminary injunction, “It is well established that in this Circuit the standard for an entry of a TRO is the same as for a preliminary injunction.” *Andino v. Fischer*, 555 F. Supp. 2d 418, 419 (S.D.N.Y. 2008) (collecting cases).

health consequences, including death” and “permanent lung damage” from COVID-19), *aff’d in relevant part*, 974 F.3d 810 (7th Cir. 2020); *Basank v. Decker*, 449 F. Supp. 3d 205, 210–13 (S.D.N.Y. 2020) (irreparable harm because “[t]he nature of detention facilities makes exposure and spread of the virus particularly harmful”). Indeed, in *Martinez-Brooks*, the Court found that the threat of COVID-19 in prison “easily satisfy[ed] the irreparable harm prerequisite” under the heightened standard applied to mandatory injunctions. *See Martinez-Brooks*, 459 F. Supp. 3d at 438 (mandatory standard applied to plaintiffs’ claims), 448 (plaintiffs satisfied that standard).

The risk of irreparable harm is imminent. The United States is experiencing its greatest surge of COVID-19 infections yet. Ex. 14, Shaman Decl. at ¶¶ 26-28; 32. The country’s correctional systems have not been spared. During the week of December 15, 2020, new cases among incarcerated people across the country, at well over 25,000, broke the record that been set the previous week.³⁴ New York State prisons are also experiencing their most severe surge yet. Since December 2, the total number of positive COVID-19 cases has increased by 89 percent, and the number of COVID-related deaths has risen 50 percent.³⁵ Defendants have failed to respond to this increase by implementing necessary policies to contain the spread.

Prisons by their very nature are “epicenters of infectious diseases,” if measures are not taken to combat virus spread.³⁶ Asymptomatic carriers—or people without symptoms—have long been known to spread COVID-19. Experts estimate that asymptomatic transmissions account for more than 50% of all transmissions.³⁷ Without proactive and consistent testing of

³⁴ *A State by State Look at Coronavirus in Prisons*, THE MARSHALL PROJECT, <https://www.themarshallproject.org/2020/05/01/a-state-by-state-look-at-coronavirus-in-prisons> (last visited Jan. 8, 2021).

³⁵ *Compare* Ex. 21, DOCCS COVID-19 Data Compilation at 10 (January 6, 2021) (reporting 3,459 total positive cases and 27 deaths) *with* Ex. 21, DOCCS COVID-19 Data Compilation at 6 (December 2, 2020) (reporting 1,826 total positive cases and 18 deaths).

³⁶ Brandy Henry, *supra* note 15.

³⁷ CTRS. FOR DISEASE CONTROL & PREVENTION, *supra* note 6.

asymptomatic staff, residents, and people transferred into Adirondack, every person at the facility could seed an outbreak.

In view of this, Defendants' failure to conduct a meaningful testing and quarantining regimen creates an imminent risk of irreparable harm. Defendants' failure to test transferees creates an imminent risk of COVID-19 entering the prison, and their failure to test people incarcerated at Adirondack prevents Defendants from knowing the extent of the presence of COVID-19 within the facility. Moreover, in light of this failure, Defendants' refusal to quarantine or screen people who have been exposed to COVID-19 creates an imminent risk of spread within the prison.

The threat of death or serious injury from this imminent risk is particularly acute because if an outbreak does occur, it will overwhelm the local health care infrastructure. Adirondack is poorly equipped to deal with health crises. Adirondack's medical staff consists of only two nurses. Incarcerated people may visit the infirmary once a day, at 6:15 AM, on weekdays only. Adirondack has at most four rooms with appropriate ventilation to isolate infectious patients. The closest hospital that appears equipped to handle incarcerated patients—Albany Medical Center—is over two hours away. The two nearby hospitals, where people incarcerated at Adirondack may not even be eligible to receive care, are Adirondack Medical Center, which has only eight intensive care beds,³⁸ and Elizabethtown Community Hospital, in Vermont, which has only 25 inpatient beds total.³⁹ Neither Adirondack Correctional Facility nor the surrounding communities are equipped to handle a major outbreak of COVID-19 at the prison.

³⁸ Adam Federman, *Small Adirondack Hospital Preps For COVID-19 In The Rural North Country's 'Calm Before The Storm'*, ADIRONDACK EXPLORER (Mar. 25, 2020), <https://www.adirondackexplorer.org/stories/small-adirondack-hospital-preps-for-covid-19-in-the-rural-north-countrys-calm-before-the-storm>.

³⁹ Elizabethtown Community Hospital, *Inpatient Care*, <https://www.ech.org/Departments-and-Programs/Inpatient-Care-Department> (last visited Jan. 8, 2021).

Defendants' failure to implement necessary testing and quarantine policies thus creates an imminent, grave, and unnecessarily high risk of death or serious injury among the Adirondack population. To address the risk and ensure it does not materialize, Plaintiffs ask that the Court issue a preliminary injunction requiring Defendants to take the necessary testing and quarantining measures to protect people at Adirondack. Without this relief, there is a serious risk that Adirondack, like many New York State prisons, will be overrun by the virus.

C. Likelihood of Success on the Merits

Plaintiffs seek relief under the ADA, RA, and Eighth Amendment. While Plaintiffs meet the preliminary injunction standard for all claims, as discussed below, success on any individual claim would be sufficient to warrant the relief Plaintiffs seek.

1. Plaintiffs are Likely to Succeed on the Merits of Their ADA and RA Claims.

Defendants have discriminated against members of the Disability Subclass and have failed to provide them with reasonable modifications that would allow them to access programs and services at Adirondack safely.

The ADA prohibits public entities, including prisons and prison systems, from discriminating on the basis of disability. *See, e.g., Pa. Dep't of Corr. v. Yeskey*, 524 U.S. 206, 201 (1998). Under Title II of the ADA, "no qualified individual with a disability shall, by reason of such disability, be excluded from participation in or be denied the benefits of the services, programs, or activities of a public entity, or be subjected to discrimination by any such entity." 42 U.S.C. § 12132. The RA similarly provides that "[n]o otherwise qualified individual with a disability . . . shall, solely by reason of her or his disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." 29 U.S.C. § 794(a). Courts construe the ADA and RA to

have comparable requirements. *See, e.g., Wright v. New York State Dep't of Corr.*, 831 F.3d 64, 72 (2d Cir. 2016).

In order to make a *prima facie* case of an ADA or RA violation, a plaintiff must show “1) that he is a qualified individual with a disability; 2) [Defendant] is an entity subject to the [ADA or RA]; and 3) he was denied the opportunity to benefit from [Defendant’s] services, programs, or activities or [Defendant] otherwise discriminated against him by reason of his disability.” *Wright*, 831 F.3d at 72. Once a plaintiff makes a *prima facie* showing under the ADA or RA, the burden shifts to the defendant, who must prove that the modification plaintiffs seek would “impose undue hardship on the operation of its services, programs, or activities.” *Wright*, 831 F.3d at 76 (quotation marks and alterations omitted).

a. Individual Plaintiffs and Members of the Disability Subclass are Qualified Individuals with Disabilities.

Plaintiffs in the Disability Subclass are qualified individuals with disabilities within the meaning of the ADA. They have impairments that, with or without medication, 42 U.S.C. § 12102(4)(E)(i)(I), substantially limit “major life activities,” 42 U.S.C. § 12102(2), including their ability to walk and their ability to operate “major bodily function[s], including but not limited to, functions of the immune system, normal cell growth, digestive, bowel, bladder, neurological, brain, respiratory, circulatory, endocrine, and reproductive functions.” *Id.* Individual Plaintiffs in the Disability Subclass have substantial physical impairments that constitute disabilities under the ADA. Plaintiff Perez has diabetes, which interferes with his endocrine functioning, and as a consequence of which, without medication, he would be limited in his ability to sleep, see, walk around, and engage in otherwise routine daily activities. *See, e.g., Ex. 19, Perez Med. Records at 1; 29 C.F.R. § 1630.2(j)(3)(iii); U.S. Equal Employment Opportunity Commission, Diabetes in the Workplace and the ADA* (“As a result of changes made by the ADAAA, individuals who

have diabetes should easily be found to have a disability within the meaning of the first part of the ADA’s definition of disability within the meaning of the first part of the ADA’s definition of disability because they are substantially limited in the major life activity of endocrine function.”) Similarly, Plaintiffs Harper and Leon suffer from hypertension and a history of heart disease. Without medication, their blood pressure would rise and they would be at serious risk for stroke or heart attack. *See, e.g.*, Ex. 20, Harper Med. Records at 10, 14, 15, 34; Ex. 17, Leon Med. Records at 3, 6, 7; *Gogos v. AMS Mech. Sys., Inc.*, 737 F.3d 1170, 1173 (7th Cir. 2013) (“[Plaintiff]’s alleged chronic blood-pressure condition—for which he has taken medication for more than eight years—could also qualify as a disability . . . ‘[S]omeone who began taking medication for hypertension before experiencing substantial limitations related to the impairment would still be an individual with a disability if, without the medication, he or she would now be substantially limited in functions of the cardiovascular or circulatory system.’”) (quoting 29 C.F.R. Pt. 1630, App. at Section 1630.2(j)(1)(vi)).

b. Defendant DOCCS is an Entity Subject to the ADA and RA.

Defendant DOCCS is a public entity and recipient of federal funds, and thus it is subject to the ADA and RA. *See, e.g., Wright*, 831 F.3d at 72. (“DOCCS is an entity that is subject to the [ADA and RA].”); *Fulton v. Goord*, 591 F.3d 37, 43 (2d Cir. 2009) (same).

c. Individual Plaintiffs and Members of the Disability Subclass Were Denied the Opportunity to Benefit from Defendants’ Services, Programs, or Activities.

Defendants denied Plaintiffs the opportunity to benefit from their services, programs or activities by reason of Plaintiffs’ disabilities. “[S]ervices, programs, [and] activities” under the ADA include “recreational activities, medical services, and educational and vocational programs.” *Wright*, 831 F.3d at 72 (quoting *Yeskey*, 524 U.S. at 210) (quotation marks omitted). The law in the Second Circuit is consistent with Department of Justice regulations, which

provide that the ADA encompasses “anything a public agency does.” 28 C.F.R. Pt. 35, App. B. Under Title II of the ADA, public entities must “make reasonable modifications in policies, practices, or procedures when the modifications are necessary to avoid discrimination on the basis of disability, unless the public entity can demonstrate that making the modifications would fundamentally alter the nature of the service, program, or activity.” 28 C.F.R. § 35.130(b)(7)(i). *See also, e.g., Martinez v. Cuomo*, 459 F. Supp. 3d 517, 523 (S.D.N.Y. 2020) (RA, like ADA, requires reasonable modifications providing meaningful access to services).

Members of the Disability Subclass are particularly vulnerable to complications from COVID-19 as compared to the prison population at large by virtue of their disabilities. *See* Ex. 16, Fenig Decl. at ¶¶ 53-65. They require reasonable modifications to safely access Adirondack’s services, programs, and activities. Defendants have failed to provide reasonable modifications to them by failing to effectively provide basic protections from the uncontrolled spread of COVID-19, thereby increasing the likelihood that members of the disability subclass will contract COVID-19 and suffer serious complications as a result. Such reasonable modifications include measures to prevent the unnecessary spread of COVID-19 within Adirondack, including testing asymptomatic people, testing and quarantining people known to have come into contact with COVID-19-positive individuals, testing people before transferring them to Adirondack, and quarantining and testing people after they arrive at Adirondack. Necessary reasonable modifications also include allowing adequate distancing at mealtimes, including by allowing people to eat in their rooms, along with allowing adequate distancing in bathrooms and recreation areas. Reasonable modifications also require ensuring that people have doors on their bedrooms to limit airborne spread. Defendants have failed to make these reasonable

modifications despite being warned by experts around the country and from advocates within New York that this conduct puts people in its care at a grave risk of serious illness or death.

Defendants have thus failed to provide effective access, because Plaintiffs in the Disability Subclass cannot safely access any of the prison's services. They cannot safely use the day rooms for recreation, safely shave in the bathrooms, or safely eat in the mess hall because they cannot partake in any of these services without risking unmasked exposure to people housed throughout the prison. Defendants' failure to provide a safe environment thus deters Plaintiffs from using basic prison services. *See, e.g., Disabled in Action v. Bd. Of Elections in City of New York*, 752 F.3d 189, 200 (2d Cir. 2014) ("deterrence constitutes an injury under the ADA"). Indeed, Plaintiffs in the Disability Subclass sometimes abstain from eating in the mess hall altogether. They are instead forced to pay for food to eat in their rooms, the only alternative. As the Supreme Court has explained, the "deliberate refusal of prison officials to accommodate [an incarcerated person's] disability-related needs in such fundamentals as mobility, hygiene, medical care, and virtually all other prison programs" could "quite plausib[ly]" constitute a violation of Title II. *See United States v. Georgia*, 546 U.S. 151, 157 (2006). Moreover, "[a] reasonable accommodation must provide effective access to prison activities and programs." *Wright*, 831 F.3d at 73.

Not only have Defendants discriminated against Plaintiffs in the Disability Subclass by failing to provide them reasonable modifications as described above, they have also discriminated against them by transferring them to Adirondack. As Defendants' public statements made clear, Plaintiffs would not have been transferred to Adirondack unless they had or were perceived to have a disability. Yet after transferring members of the Disability Subclass, Defendants have chosen not to make the reasonable modifications necessary to allow them to

safely access the prison's programs and services. Plaintiffs were thus denied access to programming in contravention of the ADA and RA. *See, e.g.*, 42 U.S.C. § 12132; 28 C.F.R. § 35.130(b)(1).

The reasonable modifications that members of the Disability Subclass seek are readily available to Defendants. According to Mr. Schwartz, it is within Defendants' capacity to conduct pre-transfer testing, post-transfer testing and quarantining, regular facility-wide testing, and testing and quarantining for individuals known to have been exposed to someone with COVID-19 that Disability Subclass Plaintiffs seek. *See, e.g.*, Ex. 15, Schwartz Decl. at ¶ 24. These measures would dramatically reduce the likelihood of members of the Disability Subclass contracting and suffering serious complications from COVID-19. *See, e.g.*, Ex. 16, Fenig Decl. at ¶¶ 30-41.

d. Defendants Cannot Demonstrate That the Relief Plaintiffs Seek Would Impose an Undue Hardship.

Because Plaintiffs in the Disability Subclass have made a *prima facie* case that Defendants have failed to make reasonable accommodations for their needs, the burden shifts to Defendants to demonstrate that the accommodation they seek would "impose undue hardship on the operation of its services, programs, or activities." *Wright*, 831 F.3d at 76 (quotation marks and alterations omitted). Defendants cannot meet this burden. As prison expertise confirms, DOCCS can provide these modifications without imposing an undue hardship or "fundamentally altering" the nature of Defendants' services. Ex. 15, Schwartz Decl. at ¶¶ 24, 34, 36-37, 41.

Accordingly, Plaintiffs in the Disability Subclass are likely to prevail on their claim that Defendants have failed to provide them with reasonable modifications and have discriminated against them on the bases of their disabilities in violation of the ADA and RA.

2. Plaintiffs are Likely to Succeed on the Merits of their Eighth Amendment Claim.

“[W]hen the State . . . so restrains an individual’s liberty that it renders him unable to care for himself, and at the same time fails to provide for his basic human needs—*e.g.*, . . . medical care, and reasonable safety—it transgresses the . . . Eighth Amendment.” *Helling*, 509 U.S. at 32 (citing *DeShaney v. Winnebago Co. Dep’t of Soc. Serv.*, 489 U.S. 189, 200 (1989)) (quotation marks omitted). A prisoner’s Eighth Amendment right to humane conditions of confinement is violated when, under an objective analysis, he is incarcerated “under conditions posing a substantial risk of serious harm” and, when, under a subjective analysis, prison officials have acted with “deliberate indifference to inmate health or safety.” *See Martinez-Brooks*, 459 F. Supp. 3d at 439 (quoting *Farmer v. Brennan*, 511 U.S. 825, 832–833 (1994)).

Both prongs of the Eighth Amendment test are satisfied in this case. In the middle of the COVID-19 pandemic, Defendants have concentrated medically vulnerable, elderly, and disabled men under conditions that objectively pose a substantial risk of allowing the airborne and rapidly transmissible COVID-19 virus to enter Adirondack and spread uncontrollably. Defendants know full well that every person incarcerated at Adirondack is uniquely vulnerable to death or serious complications from COVID-19 and that combatting the virus’s spread requires measures that they have refused to take at Adirondack.

a. Defendants Have Exposed Individual Plaintiffs and Members of the General Class to a Substantial Risk of Serious Harm.

The first prong of the Eighth Amendment analysis is satisfied when someone is imprisoned under conditions that expose them to a substantial risk of serious damage to their health. *See Farmer*, 511 U.S. at 843. It is not constitutionally significant that the risk has not materialized; officials violate the Eighth Amendment when they subject incarcerated people to

risks that are “very likely to cause serious illness and needless suffering the next week or month or year.” *Helling*, 509 U.S. at 33. Plaintiffs readily satisfy this standard, as there is a serious risk that they will be infected with COVID-19 and suffer serious health consequences—or die—as a result.

Indeed, courts have found that the possibility of the spread of communicable disease in prisons—even diseases far less serious than COVID-19—meets the objective-risk standard of the Eighth Amendment. *See, e.g., Helling*, 509 U.S. at 33 (where “inmates in punitive isolation were crowded into cells,” and “some of them had infectious maladies such as hepatitis and venereal disease . . . the Eighth Amendment required a remedy.”) (citing *Hutto v. Finley*, 437 U.S. 678, 682 (1978); *Martinez-Brooks*, 459 F. Supp. 3d at 439 (“Courts have long recognized that prison officials have an Eighth Amendment duty to protect inmates from exposure to communicable disease.”). Unsurprisingly, courts have found that the risk of potential spread of COVID-19, specifically, satisfies the Eighth Amendment’s objective prong. *See, e.g., Martinez-Brooks*, 459 F. Supp. 3d at 439 (finding that the risk of COVID-19 in prison “easily satisfie[s]” objective prong); *Mays*, 453 F. Supp. 3d at 1091 (finding that the risk of COVID-19 in jail satisfies analogous objective prong of the Fourteenth Amendment for pre-trial detainees).

The danger of the spread of COVID-19 is so significant that the country has effectively shut down much of the economy to avoid it, and many states, including in New York, continue to impose even more serious restrictions as winter begins. The risk in this case—both because of the elevated likelihood of spread within a prison and the particular vulnerability of Adirondack’s population—is even higher than that which exists in virtually every other prison and certainly outside prisons. There can simply be no doubt that the potential spread of the virus at Adirondack poses a “serious risk to the health or safety” of the people imprisoned therein, such

that the Eighth Amendment requires a response from Defendants to try to mitigate that risk.

b. Defendants Have Acted with Deliberate Indifference in Exposing Plaintiffs to a Serious Risk of Harm.

The second, subjective, prong of the Eighth Amendment analysis requires that Defendants have acted with “deliberate indifference” to the risk of serious harm—in other words, that officials know “that inmates face a substantial risk of serious harm and disregard[] that risk by failing to take reasonable measures to abate it.” *Martinez-Brooks*, 459 F. Supp. 3d at 440 (citing *Farmer*, 511 U.S. at 847). Here, Defendants both knew of the substantial risk and disregarded that risk by failing to take any necessary measures to limit it.

Defendants are aware of the substantial risk that the spread of COVID-19 poses to the elderly and medically vulnerable population at Adirondack. COVID-19 has spurred lockdowns, quarantines, and social distancing measures over the past year—indeed, Defendant Cuomo has mandated many of these measures. Defendants were also aware of the specific risk that COVID-19 poses to elderly and medically vulnerable prisoners. From the early days of the pandemic, health officials and advocates warned Defendants about the high likelihood of COVID-19 spread in prison settings⁴⁰ and, on June 25, 2020, Plaintiff RAPP and dozens of other concerned organizations warned Defendant Cuomo that the plan to transfer elderly and infirm men to Adirondack “fundamentally represent[ed] a public health crisis that amounts to a ticking time bomb.”⁴¹ Defendants’ experience at other prisons has borne out that risk. As of December 22, 2020, New York state prisons have confirmed 2,479 and 2,627 COVID-19 cases for incarcerated people and staff, respectively.⁴² Even more relevant, Defendants’ recent experience at

⁴⁰ RAPP Advocacy Letter, *supra* note 24.

⁴¹ RAPP, June 25, 2020 RAPP Adirondack Letter, http://rappcampaign.com/wp-content/uploads/Adirondack-Sign-on-Letter_June-2020-new.pdf.

⁴² N.Y. STATE DEP’T OF CORR. & CMTY. SUPERVISION, DOCCS COVID-19 REPORT, <https://doccs.ny.gov/doccs-covid-19-report> (last accessed Jan. 8, 2021).

Woodbourne Correctional Facility—which has the second-highest concentration of elderly incarcerated people in the state system, after Adirondack—demonstrates not only the danger that COVID-19 poses in a prison setting with a high concentration of elderly people, but how quickly it can spin out of control. As of December 1, 2020, there had been zero COVID-19 cases at the facility, but today there have been 219, with two resulting in death.⁴³ Indeed, Defendant Cuomo has acknowledged this risk to elderly and medically vulnerable people in prison.⁴⁴ Defendants thus knew of the risk facing members of the General Class, all of whom are at least sixty years old and have underlying medical conditions. *See, e.g., Hope v. Pelzer*, 536 U.S. 730, 738 (2002) (court “may infer the existence of this subjective state of mind from the fact that the risk of harm is obvious”).

Defendants are deliberately indifferent because, in spite of this knowledge, they refuse to take necessary steps to try to mitigate the risk. Contrasted with the robust, proactive actions that Defendant Cuomo has undertaken to prevent the spread of COVID-19 in other areas, Defendants have done virtually nothing at Adirondack to minimize the spread of the virus, and many of their actions have exacerbated the likelihood that it will spread. Of course, prisons present challenges for social distancing efforts that do not exist in the community at large, *see, e.g., Mays v. Dart*, 974 F.3d 810, 820–21 (7th Cir. 2020), but the Constitution requires a necessary response to at least try to abate the risk.

The deliberate indifference standard is guided by the threat to incarcerated people and the options available to prison officials to protect against that threat. As the court explained in *Martinez-Brooks*, “While the Warden is free to exercise discretion in choosing among equally

⁴³ Compare Ex. 21, DOCCS COVID-19 Data Compilation at 5 (Dec. 1, 2020), with Ex. 21, DOCCS COVID-19 Data Compilation at 10 (January 6, 2021).

⁴⁴ *See, e.g., N.Y. State, Governor Cuomo Announces Eighth Region on TRACK TO Hit Benchmark to Begin Reopening Tuesday May 26th*, YOUTUBE (May 23, 2020), <https://www.youtube.com/watch?v=4NAycLIsyHU>.

effective measures to protect inmates from serious risks, choosing inevitably inadequate measures to the exclusion of a plainly superior one constitutes deliberate indifference.” 459 F. Supp. 3d at 443. Thus, in *Martinez-Brooks*, the court found that plaintiffs were likely to succeed on their deliberate indifference claim where prison officials had failed to make use of the compassionate release process to send incarcerated people home. The court reasoned that “even with the measures that the Warden has put in place,” the virus “continues to pose a grave risk to vulnerable inmates’ health.” *Martinez-Brooks*, 459 F. Supp. 3d at 443. By failing to employ the compassionate release procedure, prison officials “failed to implement what appears to be the sole measure capable of adequately protecting vulnerable inmates . . . in favor of measures that, even if they were fully and painstakingly implemented, would still leave vulnerable inmates subject to a grave risk to their health.” *Martinez-Brooks*, 459 F. Supp. 3d at 443.

In a prison filled with extremely vulnerable people who are at risk of serious illness and death if they contract COVID-19, the necessary steps to respond to that threat include making efforts to prevent the virus from entering the facility and implementing policies and practices that will limit its spread should it enter. Defendants’ efforts to combat the spread of COVID-19 at Adirondack are so inadequate to protect members of the General Class that they reflect deliberate indifference to this risk. Defendants’ paltry measures flout public health guidance, including CDC guidance, at every turn, and fall short of what prisons and jails around the country are doing. As the Court of Appeals for the Seventh Circuit explained in *Mays*, while “[t]he CDC Guidelines . . . do not themselves set a constitutional standard,” they do “provide the authoritative source of guidance on prevention and safety mechanisms for a novel coronavirus in a historic global pandemic where the public health standards are emerging and changing.” *Mays*, 974 F.3d at 823. As a result, “implementation (and proper execution) of guidelines that express

an expert agency’s views on best practices are certainly relevant” to the constitutional evaluation. *Mays*, 974 F.3d at 823.

Here, Defendants fail to test transferees and fail to quarantine them upon their arrival at Adirondack, “plac[ing] both the existing and incoming inmates at significant risk of COVID-19 infection.” Moreover, Defendants’ method of transferring people to Adirondack—mixing men from different facilities who have not been tested for COVID-19, on a poorly ventilated bus, without adequate social distancing measures—“present[s] a dangerous situation since it unnecessarily exposed them to SARS-CoV-2 viral transmission during their bus transport.” Ex. 16, Fenig Decl. at ¶ 29. CDC guidelines “recommend avoiding transfers between facilities if at all possible” but recommend that individuals be quarantined upon arrival at a new facility before they are assimilated into the general population. Ex. 16, Fenig Decl. at ¶¶ 33, 38. These common-sense measures “provide[] protection to the destination facility inmates by preventing their exposure to asymptomatic carriers of COVID-19 from other incoming facilities.” Ex. 16, Fenig Decl. at ¶ 33. While the prison could take steps to ameliorate transfer risks, Schwartz Dec. at ¶ 24, Defendants have failed entirely to do so here.

Once General Class members enter the prison, there is no effort to implement policies providing for regular universal testing, regular symptom screening, quarantining of exposed people, social distancing in housing units, or keeping housing units within the prison separate from each other. Given the potential for asymptomatic transfer of COVID-19, “[r]outine testing of asymptomatic individuals is an important strategy to detect COVID-19 outbreaks early and minimize the number of exposed and affected individuals.” Ex. 16, Fenig Decl. at ¶ 39.

Defendants’ responses to positive tests and exposures are similarly inadequate. When one person tested positive for COVID-19, staff members he had had close contact with were sent

home to quarantine, while absolutely no testing, quarantining, or screening was done for incarcerated people with whom he had been in close contact. Ex. 10, Perez Decl. at ¶¶ 6-7; Ex. 12, Applegate Decl. at ¶¶ 10-13, 17. Because of the possibility of asymptomatic transfer, the CDC recommends that an incarcerated person who has had close contact with a person suspected or confirmed to have COVID-19 be removed from their housing units for fourteen days for quarantine or, if that is impractical, the entire unit may be “quarantined in place.” Ex. 16, Fenig Decl. at ¶¶ 30-31. Defendants obviously understand the importance of quarantining, as they sent home staff members who had been exposed, but they were deliberately indifferent to the need to quarantine people who are incarcerated.

Defendants have also failed to provide for social distancing within Adirondack that would limit the spread of COVID-19. Although the CDC Guidelines make clear that social distancing is essential to prevent the spread of COVID-19, distancing at Adirondack is “inconsistently enforced at best, and ignored at worst.” Ex. 16, Fenig Decl. at ¶ 14. Up to 15-20 people at a time must cram into day rooms on a daily basis to watch television and socialize; men at Adirondack stand next to each other while waiting in lines for medication or other services; they frequently congregate in the bathroom, including standing next to each other without masks on for extended periods of time while shaving; and, “most concerning[ly,]” they must sit within six feet of each other while eating in the dining halls, which, because it “necessitates that the individual remove their mask, becomes a particularly perilous activity, as there is no barrier to mitigate the viral spread.” Ex. 16, Fenig Decl. at ¶¶ 16-19.

Increasing the potential for harm is that, in the dining hall and at other times, people from different housing units are allowed to congregate under non-socially distanced conditions, which creates an opportunity for the virus to spread throughout the entire prison rather than being

limited to a single unit. Ex. 16, Fenig Decl. at ¶ 22 (“Mitigating the potential spread of COVID-19 in congregate living situations such as prisons is best achieved when cohorts of inmates are siloed, such as in housing units. If an infectious outbreak occurs, close contact exposure of different housing units to each other would allow COVID-19 to infect a much larger number of inmates and staff. Adirondack Correctional Facility[’s] incapacity to safely keep inmate cohorts separated undermines the ability to contain a potential outbreak, therefore placing these clients as well as all inmates and staff at risk of infection.”). This risk of intra-unit spread is heightened by the practice of having guards work in different housing units.

Defendants’ acts and omissions at Adirondack fall well short of their constitutional duties. Instead of taking the transfer, testing, screening, quarantining, and social-distancing precautions that the CDC guidelines counsel and that other prisons and jails are taking, Defendants have ignored these requirements in favor of an approach that will be inevitably insufficient to prevent the entry and spread of COVID-19. Through this wanton disregard for the threat that COVID-19 poses to the population at Adirondack, Defendants have created a tinder box that requires only the predictable entry of COVID-19 in order to consume the General Class. Defendants have acted with deliberate indifference to a substantial risk of serious harm, such that Plaintiffs are likely to succeed on the merits of their Eighth Amendment claims.

D. The Balance of Equities and the Public Interest Support a Preliminary Injunction.

Where, as here, the government is the party opposing a preliminary injunction, the final two factors in the analysis—the balance of the equities and the public interest—merge. *See, e.g., Martinez-Brooks*, 459 F. Supp. 3d at 448 (quoting *Coronel v. Decker*, 449 F. Supp. 3d 274, 287 (S.D.N.Y. 2020)). Because relief here would promote public health, prevent death, and prevent further constitutional injury without significant financial cost or logistical burden and no

irreparable harm to Defendants, all factors weigh in favor of granting injunctive relief in this case.

The requested relief will promote public health by preventing unnecessary illness and death both within Adirondack and in the surrounding community. Spread between prisons and communities is common, and indeed, prisons act as reservoirs for viruses, continuing their circulation in the community after traditional public health measures would have curtailed that spread. Ex. 13, Shaman Decl. at ¶ 23. Ray Brook, New York, where Adirondack is located, has few public health resources – its local hospitals, Adirondack Medical Center and Elizabethtown Community Hospital, have only 8 intensive care beds and 25 inpatient beds, respectively.⁴⁵ That medical system was established to serve the regular needs of the population there, not the needs of the population during a pandemic. It certainly cannot mitigate the heightened risk of community spread from Defendants’ addition of 100 elderly, medically needy adults. Courts have recognized this risk. *See, e.g., Banks v. Booth*, 468 F. Supp. 3d 101, 124 (D.D.C. 2020) (“No man’s health is an island. If Plaintiffs contract COVID-19, they risk infecting others inside the DOC facilities. Plaintiffs also risk infecting DOC staff members who work inside DOC facilities but also live in the community, thus increasing the number of people vulnerable to infection in the community at large.”).

The harm Plaintiffs seek to prevent, death or serious injury, is also extreme and weighs heavily in assessing the balance of equities. *See, e.g., Martinez-Brooks*, 468 F. Supp. 3d at 124 (“Moreover, the Petitioners’ interest in avoiding serious illness or death must weigh heavily on the scales.”).

Defendants’ conduct also violates Plaintiffs’ right under the Eighth Amendment to be

⁴⁵ Elizabeth Izzo, *Local hospitals move to expand capacity*, ADIRONDACK DAILY ENTERPRISE (Mar. 24, 2020), <https://www.adirondackdailyenterprise.com/news/local-news/2020/03/local-hospitals-move-to-expand-capacity/>.

free from cruel and unusual punishment, and “the public interest is best served by ensuring that the constitutional rights of persons within the United States are upheld.” *Id.* at 124 (quoting *Coronel*, 449 F.Supp.3d at 287). As courts have explained, “there is no harm to the Government when a court prevents unlawful practices.” *Banks*, 468 F. Supp. 3d at 124.

Protecting these vital interests comes at a little relative cost to Defendants. Defendants can significantly mitigate the imminent risk of a deadly outbreak among the most vulnerable incarcerated people with only a few basic measures that include testing before transfer, quarantining and testing after transfer, testing for asymptomatic incarcerated people and staff, and quarantining and testing people who have come into contact with someone known to have an active case of COVID-19. While an injunction requiring testing would impose some logistical and financial burden, it will be limited. Testing is available to the public nationwide, and already employed to some extent by DOCCS. The testing contemplated by the injunction would also be limited to people entering or currently living and working in Adirondack, and does not place a burden on the DOCCS system as a whole.

Halting transfers of untested people and isolating those who test positive poses no risk to Defendants at all. Prison officials around the country have taken similar measures, and there is no reason why Defendants cannot implement them here. In fact, the relief requested actually benefits Defendants and the community at large by mitigating the risk that staff and those they interact with outside the prison will become infected. While Defendants do have an interest in maintaining procedures that ensure safety, order, and security, the measures sought in the preliminary injunction in no way undermine these goals.

Finally, the harm to Defendants, if any, will not be irreparable. If the Plaintiffs should not ultimately prevail, Defendants can return to their current practices, having suffered only the

financial cost of implementing improved procedures for a limited time. Finances can be recouped. Lost lives cannot.

E. The Remedy Plaintiffs Seek is Appropriate

Plaintiffs seek an injunction ordering Defendants to immediately:

1. Regularly screen and test all staff and incarcerated people at Adirondack, including asymptomatic people, in a manner that allows timely isolation of positive cases;
2. Isolate and distance those testing positive and those suspected of having been exposed to the virus from the rest of the Adirondack population, consistent with the CDC guidelines, by housing incarcerated people separately from those who have not tested positive, and requiring staff to stay home from work; and
3. Cease all transfers of people from other prisons to Adirondack until Defendants can demonstrate that:
 1. Everyone who is being transferred has been tested, quarantined pending results, and been determined to be negative for COVID-19 prior to testing;
 2. Staff who are conducting transfers have been tested, quarantined pending results, and been determined to be negative for COVID-19 prior to conducting transfers;
 3. People are transferred only from one facility at a time and are not exposed to people from other facilities during transport;
 4. People being transferred and staff wear masks and are able to maintain social distance during transport; and
 5. People are quarantined separately from current Adirondack residents for a period of two weeks upon arrival.

These are the most basic and least intrusive measures that can effectively prevent an

outbreak at Adirondack, because they constitute the most minimal action Defendants could take to identify and separate positive COVID-19 cases from the rest of the Adirondack population.⁴⁶ Because the virus spreads without symptoms and does not discriminate between the incarcerated or staff, the only way to identify positive cases is with regular screening and testing of all people at Adirondack, regardless of whether they show symptoms. Defendants must also promptly isolate positive individuals because the virus spreads easily in facilities where people often have no choice but to engage in close enough contact for virus transmission to occur.⁴⁷ Finally, Defendants cannot continue their reckless practice of transferring new people into Adirondack without ensuring that they test negative for the virus. Trying to control the virus will prove pointless if new people of unknown COVID-19 status are continually added to the population. Hence, the relief requested is tailored to minimize the imposition on Defendants' interest in the orderly and secure administration of its facilities, while also making a significant first step in protecting the lives and constitutional rights of the Plaintiff classes.

IV. Conclusion

For the reasons stated herein, Plaintiffs ask that the Court grant the narrow relief Plaintiffs seek to protect against the imminent threat of death or serious physical injury.

Dated: January 11, 2021

Respectfully Submitted,

/s/ Rebecca Livengood
 Sasha Samberg-Champion (Bar Roll #702397)
 Jia Cobb*
 Gabriel Diaz*
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 RELMAN COLFAX PLLC

⁴⁶ Indeed, the CDC recommendations for all correctional facilities go much farther than the relief requested here, *see* CENTERS FOR DISEASE CONTROL AND PREVENTION, *supra* note 27.

⁴⁷ Timothy Williams, Benjamin Weiser and William K. Rashbaum, 'Jails Are Petri Dishes': Inmates Freed as the Virus Spreads Behind Bars, N.Y. TIMES (Mar. 30, 2020), <https://www.nytimes.com/2020/03/30/us/coronavirus-prisons-jails.html>; *see* Henry, *supra* note 15.

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**Pro Hac Vice Applications to Be Submitted*

CERTIFICATE OF SERVICE

I hereby certify that on this 11th day of January, 2021, a copy of the foregoing Memorandum of Law in Support of Plaintiffs' Request for Preliminary Injunction and all related filings and attachments were filed using the CM/ECF system for the Northern District of New York and will be hand-delivered via process server upon the following Defendants:

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EXHIBIT

14

**IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF NEW YORK**

Allen HARPER, José LEON, and Ranfis PEREZ on behalf of themselves and all others similarly situated; and the RELEASE AGING PEOPLE IN PRISON CAMPAIGN (“RAPP”),

Plaintiffs,

v.

Civil Action No. 9:21-cv-19 (LEK/ML)

ANDREW CUOMO, in his official capacity as the Governor of the State of New York; NEW YORK STATE DEPARTMENT OF CORRECTIONS AND COMMUNITY SUPERVISION; ANTHONY J. ANNUCCI, in his official capacity as the Acting Commissioner of the New York State Department of Corrections and Community Supervision; JOHN MORLEY, M.D., in his official capacity as the Deputy Commissioner and Chief Medical Officer of the New York State Department of Corrections and Community Supervision; and JEFFREY TEDFORD, in his official capacity as the Superintendent of Adirondack Correctional Facility

Defendants.

DECLARATION OF JEFFREY L. SHAMAN

I, Jeffrey L. Shaman, hereby state as follows:

1. I am over the age of eighteen and am competent to make this Declaration.
2. I am a full-time professor at Columbia University in the Department of

Environmental Health Sciences at the Mailman School of Public Health. I am Director of the Climate and Health Program and Associate Chair of the Earth Institute Faculty. My research

focus is principally the study of the survival, transmission and ecology of infectious agents, including the effects of meteorological and hydrological conditions on these processes. My work to date has primarily focused on mosquito-borne and respiratory pathogens. I use mathematical and statistical models to describe, understand, and forecast the transmission dynamics of these disease systems.

3. I have studied infectious diseases for 20+ years. I hold a BA in Biology from the University of Pennsylvania and a PhD in Climate Science from Columbia University.

4. My research has been funded by multiple agencies including the National Institutes of Health, National Science Foundation, Department of Defense, Centers for Disease Control and Prevention (CDC), National Oceanic and Atmospheric Administration, and National Aeronautics and Space Administration.

5. My work is at the vanguard of infectious disease modeling and forecasting. My group won the first CDC Predict the Influenza Challenge and has brought the use of model-inference systems, i.e. mathematical models coupled with Bayesian inference approaches, to the fore of infectious disease epidemiology.

6. My C.V. is attached as Exhibit A.

7. I am donating my time preparing this Declaration and any live testimony *pro bono*.

8. I have not previously testified as an expert by declaration or at trial.

What are the particular dangers associated with COVID-19 within a prison/congregate living environment?

9. Coronavirus disease 2019 (COVID-19) is caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), a respiratory virus that emerged in humans during 2019. Following the initial emergence, the virus rapidly spread from its epicenter in China throughout the world. This spread was facilitated by two epidemiological characteristics that make the virus very difficult to contain: 1) it is a newly emerged respiratory virus to which the vast majority of humans appear to have little pre-existing immunity; and 2) the majority of infections caused by SARS-CoV-2 are subclinical but still contagious, facilitating high rates of transmission from persons unaware of their own infection. The former property implies that most persons are susceptible to infection with SARS-CoV-2. The latter property indicates that, for most, the infection is mild or asymptomatic and thus does not disrupt these individuals from their normal routines of interaction — e.g., going to work, shopping, using public transit, plane travel. Because asymptomatic, mildly symptomatic, and even pre-symptomatic infections are contagious, there exist ample opportunities for a host to unknowingly spread the virus.

10. The sole activity of a virus is replication, which it accomplishes by invading another organism and commandeering the cellular machinery of that host to produce copies of itself. These copies are then disseminated to other cells within the host, as well as to the environment for transmission to another host.

11. Infectious hosts shed the SARS-CoV-2 virus principally in the oral and nasal mucosa of the respiratory tract. During breathing, speaking, singing, coughing and sneezing, persons expel droplets from the respiratory tract into the environment. Some of the droplets from an infectious individual will contain the virus, which can infect a naïve host upon contact with

the respiratory tract or eyes of that host. A number of modes of transmission can, in theory, support this transfer of virus, including droplet spray, aerosolization and sedimentation on objects with which a naïve host comes in contact. It remains unclear which mode or modes of transmission are most important. As a consequence, it is important that people socially distance, wear masks, ventilate rooms and wash hands to guard against all potential modes of transmission.

12. The spread of the SARS-CoV-2 virus is facilitated by opportunities for person-to-person transmission. It is these opportunities that sustain the virus in the broader community by providing it new hosts to exploit. Crowded indoor environments with poor ventilation, little social distancing and no mask use are optimal settings for virus transmission. Poor ventilation limits the mixing and dilution of droplets and aerosols containing the virus, and thus concentrates the pathogen increasing the chances of transmission. Limited social distancing allows spread by droplets and spray. A lack of masks enables spread by droplets and aerosols.

13. Infectious individuals in crowded indoor environments with poor ventilation, little social distancing and no mask use can spread the virus to one or more individuals. There are many documented instances in which numerous individuals were infected with SARS-CoV-2 at an indoor event (a party, a bar, a choir practice) by a single infectious individual. These “superspreader” events can transmit the virus to dozens of others.

14. Dense congregate environments, such as prisons, nursing homes, and long-term care facilities, are prime localities for the spread of SARS-CoV-2. These indoor settings with individuals in unavoidable close contact provide opportunity for superspreading events, the

establishment of sustained chains of transmission, and spillover, through staff and visitors, to the broader community.¹

15. However, spread in these congregate settings is not inevitable; the risk of transmission can be minimized through sensible public health and testing policies. Modeling work I have performed simulating SARS-CoV-2 transmission in nursing home settings indicates that testing of both staff and visitors entering a facility can help prevent the introduction and spread of the virus within the facility. It is similarly advisable to regularly test employees, people being transferred into prisons, and visitors to prisons, prior to entry, in order to screen for infection and prevent introduction of the virus into the facility.

16. Because testing is not without error, due to slow turnaround or suboptimal test sensitivity, it is advisable to test prison staff as often as possible and all visitors upon each visit. In addition, prisoners should be routinely tested to determine if the virus has leaked into the facility. By testing the prisoners often, chains of transmission can be identified earlier, before many individuals are infected. Routine, sensitive, rapid turnaround testing of staff, visitors and prisoners, in addition to social distancing, personal protective equipment, ventilation and surface cleaning are essential tools for limiting introduction of the virus and outbreaks in prison environments. Further, rates of testing should increase as infection rates in the broader community increase.

17. Elderly prisoners, particularly those with certain chronic conditions such as diabetes, hypertension, chronic respiratory disease, and cardiovascular disease, are at elevated risk of adverse outcomes, hospitalization and death following infection with SARS-CoV-2.

¹ Stuart A. Kinner, et al., *Prisons and custodial settings are part of a comprehensive response to COVID-19*, 5 THE LANCET PUBLIC HEALTH 4, e188 (2020), available at <https://www.thelancet.com/action/showPdf?pii=S2468-2667%2820%2930058-X>.

18. Most transmission occurs from infectious persons who are not aware of their infection. The majority of SARS-CoV-2 infections are undocumented, i.e. individuals who are never tested and confirmed as having an infection. Most undocumented infectious individuals experience mild or no symptoms and as a consequence do not alter their normal routines of going to work or school, shopping, and social interactions. Further, among those whose symptoms are more severe and who are tested and confirmed as having an infection, contagiousness typically commences 2-3 days prior to the onset of symptoms. This pre-symptomatic shedding is another means by which infected individuals unknowingly transmit SARS-CoV-2. As a consequence, the virus can spread for some time among individuals within a setting, such as a prison, before being detected through identification of a symptomatic infection.

What are the risks of community spread in the larger community once COVID-19 is in a prison, and what are the impacts on hospital capacity/community healthcare resources in the event of an outbreak within a prison?

19. The percentage of the population still susceptible to SARS-CoV-2 infection remains high in most areas of the country, including upstate New York. This high susceptibility can readily support transmission in the community.

20. In the larger community, elderly persons, the immunocompromised, and those with conditions such as cancer, diabetes, hypertension, chronic pulmonary disease and cardiovascular disease are particularly at risk of experiencing adverse outcomes upon infection with SARS-CoV-2

21. The virus is very difficult to contain once present in a community as the majority of transmission occurs from people unaware of their infection.

22. As seen presently (as of December 6, 2020) hospital resources are stretched in much of the country. Hospitalizations for COVID-19 are at record levels and some hospitals have asked infected healthcare personnel to work in order to avoid personnel shortages. Such circumstances degrade the quality of patient care and need to be avoided by limiting transmission in the community.

23. Prisons are not operated in isolation. Corrections officers, staff, visitors and medical personnel enter and exit the prison environment daily, and residents are transferred among prisons. This movement of people into and out of the prison provides opportunities for introducing SARS-CoV-2 into the prison population and for acquiring the virus and bringing it back to surrounding communities. This potential movement of the virus between community and prison, which is often unobserved, allows prisons to act as reservoirs for the disease and disruptors of care services in the broader community. Specifically, the virus, once introduced, can spread rapidly in the closed prison environment, infecting many prisoners at once. Such elevated infection rates not only increase the risk of virus spillover to surrounding communities but also can strain local hospital resources through a flood of sick prisoners and compromise bed availability.²

Where are things currently in the lifecycle of the COVID-19 disease?

24. During the next 3-4 months, spread of the virus will be very difficult to control. There are a number of reasons for this.

25. Presently (as of December 6, 2020), community infection rates, the fraction of the population infected with SARS-CoV-2, are at record levels in the US. My group at Columbia

² Dan Noyes, *San Quentin coronavirus: Inmate shares how massive COVID-19 outbreak started*, ABC 7 NEWS (July 8, 2020), available at <https://abc7news.com/san-quentin-covid-cases-coronavirus-19-death-row/6307270/>.

University estimates that 1% of the United States population is actively infected with the virus, i.e. contagious, and another 1% is latently infected.

26. The virus thrives off opportunities for person-to-person transmission, which are most abundant when people gather indoors. During the coming winter months, people will spend more time indoors, both at home and when going outside the home to shop, dine, etc., which will increase person-to-person contact indoors.

27. The risks associated with increased indoor person-to-person contact are particularly acute in congregate living environments.

28. Evidence indicates the SARS-CoV-2 virus is more transmissible when conditions are colder and drier as they are during winter. Dryness, i.e. low humidity, is particularly problematic, as this condition seems to increase virus viability outside the host, and, unlike temperature, humidity indoors is not generally regulated. As a consequence, humidity conditions are often very dry indoors during winter, which appears to support more transmission of SARS-CoV-2. Sensitivity to humidity is well-documented for influenza, and a similar seasonal cycle of wintertime transmission is observed for other human coronaviruses.

29. As community spread increases, so does the risk that staff will bring the virus into congregate living environments, increasing the risk there.

30. SARS-CoV-2 has been present in the United States for nearly a year. Since March, it has significantly disrupted day-to-day activity, interaction and commerce. Understandably, people are tired of the virus—tired of not seeing their families, tired of not traveling, tired of not engaging with the world as they had previously. This fatigue, which leads to lapses in social distancing and other non-pharmaceutical interventions, may provide additional transmission opportunities for the virus.

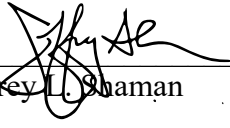
31. Effective vaccines began to be rolled out during December 2020; however, there will not be enough doses delivered to sufficient numbers of people to end the pandemic in the US until late spring or summer 2021 or later. Further, many people may refuse the vaccine. Over the next months, we will have to continue our reliance on non-pharmaceutical interventions to control the virus.

32. Given these circumstances, I expect one hundred thousand or more cases per day in the United States for the next 2 months. Since December 6, 2020, the U.S. 7-day moving average of new cases has exceeded 200,000 per day. These levels are more than double the rates experienced during the peak of the summer wave. While this rate of case accrual may not persist at such a high level, I expect it will take some time to drop below one hundred thousand new cases per day.

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

EXECUTED WITHIN THE UNITED STATES ON: _____, 2021.

BY:



Jeffrey L. Shaman

EXHIBIT

A

Jeffrey Shaman
Curriculum Vitae

Department of Environmental Health Sciences
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AREAS OF INTEREST: Climate and health, infectious disease transmission and epidemiology, mosquito-borne disease, mosquito ecology, modeling and prediction of infectious disease, large-scale climate dynamics, tropical meteorology, climate prediction, the hydrologic cycle

EDUCATION:

University of Pennsylvania, Bachelor of Arts in Biology, *Cum Laude* with honors in the major, 1990
Columbia University, Master of Arts, Department of Earth and Environmental Sciences, 2000
Columbia University, Master of Philosophy, Department of Earth and Environmental Sciences, 2002
Columbia University, Doctor of Philosophy, Department of Earth and Environmental Sciences, 2003, Awarded with Distinction
Harvard University, National Oceanic and Atmospheric Administration Post-Doctoral Fellow in Climate and Global Change, 2003-2005

APPOINTMENTS:

Professor, Department of Environmental Health Sciences, Mailman School of Public Health, Columbia University, 2019-present
Director, Climate and Health Program, Mailman School of Public Health, Columbia University, 2017-present
Associate Professor, Department of Environmental Health Sciences, Mailman School of Public Health, Columbia University, 2014-2018
Co-Director, Climate and Health Program, Mailman School of Public Health, Columbia University, 2014-2016
Assistant Professor, Department of Environmental Health Sciences, Mailman School of Public Health, Columbia University, 2011-2014
Assistant Professor, College of Oceanic and Atmospheric Sciences, Oregon State University, 2005-2011
National Oceanic and Atmospheric Administration Post-Doctoral Fellow, Harvard University, 2003-2005
National Aeronautics and Space Administration Earth System Science Fellow (graduate), 2000-2003
Laboratory Technician, Children's Hospital of Philadelphia and the University of Pennsylvania. Immunological research involving molecular and cellular experimentation investigating the class II system and its genetic expression, 1992-1994
Field Researcher, The University of Pennsylvania. Plant biology surveys, experimentation and research of forest regrowth and plant community competition, 1990-1991

AFFILIATIONS:

Associate Chair, Earth Institute Faculty, Columbia University, 2020-present
Earth Institute, Columbia University, Faculty Member, 2020-present
Data Science Institute, Columbia University, Affiliate Member, 2017-present
American Museum of Natural History, Division of Invertebrate Zoology, Research Associate, 2016-present
Columbia Center for Environmental Health in Northern Manhattan, Mailman School of Public Health, Columbia University, 2011-present
International Research Institute for Climate and Society, Columbia University, 2011-present
Earth Institute, Columbia University, Associate Faculty Member, 2016-2020
Earth Institute, Columbia University, Junior Faculty Fellow, 2012-2016
Institute for Social and Economic Research and Policy, Columbia University, Faculty Fellow, 2012-2018
College of Earth, Oceanic and Atmospheric Sciences, Oregon State University, Courtesy, 2011-2014
Center for Communicable Disease Dynamics, Harvard School of Public Health, 2009-2015

GRADUATE AND POSTDOCTORAL ADVISORS:

Mark A. Cane, Columbia University (graduate)
Eli Tziperman, Harvard University (post-doctoral)

AWARDS:

Dean's Excellence in Faculty Leadership Award, Mailman School of Public Health, 2020
 International Society for Disease Surveillance Outstanding Research Article in Biosurveillance in the Scientific Achievement Category, first prize (for Pei et al., 2018), 2018
 Tow Faculty Leadership Award, Mailman School of Public Health, 2015-2018
 Winner, Centers for Disease Control and Prevention 'Predict the Influenza Season Challenge', 2014
 International Society for Disease Surveillance Outstanding Research Article in Biosurveillance in the Scientific Achievement Category, first prize (for Shaman and Karspeck, 2012), 2013
 Junior Faculty Career Development Award, Columbia University Center for Environmental Health in Northern Manhattan, 2012-2014
 National Oceanic and Atmospheric Administration Post-Doctoral Fellowship in Climate and Global Change, 2003-2005
 Bruce C. Heezen Prize for graduate students making exceptional scientific contributions, 2003
 Columbia Sigma Xi, 2003
 Ph.D. Awarded with Distinction, 2003
 NASA Earth System Science Fellowship, 2000-2003

MANUSCRIPTS IN REVIEW AND PRESS:

Pei S, Teng X, Lewis P, Shaman J. Optimizing influenza surveillance networks using uncertainty propagation. *Accepted*.
 Baker RE, Worby CJ, Yang W, Saad-Roy CM, Shaman J, Metcalf CJE, Vecchi G, Grenfell GT. Implications of climatic and demographic change for influenza dynamics and evolution. *In review*.
 Keyes KM, Kandula S, Olfson M, Gould MS, Martinez-Ales G, Rutherford C, Shaman J. Suicide and the agent-host-environment triad: leveraging surveillance sources to inform prevention. *Accepted*.
 Galanti M, Shaman J. Direct observation of multiple subsequent infections with endemic coronaviruses. *Accepted*.
 Branas CC, Rundle A, Pei S, Yang W, Carr BG, Sims S, Zebrowski A, Doorley R, Schluger N, Quinn JW, Shaman J. Flattening the curve before it flattens us: hospital critical care capacity limits and mortality from novel coronavirus (SARS-CoV2) cases in US counties - 3 and 6 week projections from April 2, 2020. *In review*.
 Lamb MR, Kandula S, Shaman J. Differential COVID-19 case positivity in New York City neighborhoods: socioeconomic factors and mobility. *Accepted*.
 Ukawuba I, Shaman J. Use of climate in a simple entomological model of malaria transmission. *In preparation*.
 Yang W, Kandula S, Huynh M, Greene SK, Van Wye G, Li W, Chan HT, McGibbon E, Yeung A, Olson D, Fine A, Shaman J. Estimating the infection fatality risk of COVID-19 in New York City during the spring 2020 pandemic wave: a model-based analysis. *Accepted*.
 Rader B, White LF, Burns MR, Chen J, Brilliant J, Cohen J, Shaman J, Brilliant L, Hawkins J, Scarpino SV, Astley CM, Brownstein JS. Mask wearing and control of SARS-CoV-2 transmission in the United States. *In review*.
 Lewandowski SA, Kioumourtzoglou MA, Shaman JL. Heat stress illness outcomes and annual indices of outdoor heat at U.S. Army installations. *In submission*.
 Ma, Y. S. Pei, J. Shaman, R. Dubrow and K. Chen. Role of air temperature and humidity in the transmission of SARS-CoV-2 in the United States. *In revision*.
 Martinez-Ales G, Pamplin II, JR, Rutherford C, Gimbrone C, Kandula S, Olson M, Gould MS, Shaman J, Keyes KM. Age, period, and cohort effects on suicide death in the US from 1999 to 2017: moderation by sex, race, and firearm involvement. *In submission*.

PEER REVIEWED PUBLICATIONS:

Matienzo N, Youssef MM, Comito D, Lane B, Ligon C, Morita H, Winchester A, Decker ME, Dayan P, Shoptsin B, Shaman J. Respiratory viruses in pediatric emergency department patients and their family members. *Influenza and Other Respiratory Viruses*, **15(1)**:91-98, doi:10.1111/irv.12789, 2021.
 Pei S, Kandula S, Shaman J. Differential Effects of Intervention Timing on COVID-19 Spread in the United States. *Science Advances*, **6(49)**:eabd6370, doi:10.1126/sciadv.abd6370, 2020.
 Pei S, Dahl K, Yamana TK, Licker R, Shaman J. Compound risks of hurricane evacuation amid the COVID-19 pandemic in the United States. *GeoHealth*, **4(12)**:e2020GH000319, doi:10.1029/2020GH000319, 2020.
 Cruz AT, Shaman J, Dayan P. The challenge of clearly counting COVID-19 cases in children. *Pediatrics*, **146(6)**:e2020031682, doi:10.1542/peds.2020-027425, 2020.
 Bomfim R, Pei S, Shaman J, Yamana T, Makse HA, Andrade Jr. JS, Lima Neto AS, Furtado V. Predicting dengue outbreaks at neighborhood level using human mobility in urban areas. *Journal of the Royal Society Interface*, **17(171)**:20200691, doi:10.1098/rsif.2020.0691, 2020..
 Shaman J, Galanti M. Will SARS-CoV-2 become endemic? *Science*, **370(6516)**:527-529, doi:10.1126/science.abe5960, 2020.
 Kramer SC, Pei S, Shaman J. Forecasting influenza in Europe using a metapopulation model incorporating cross-border commuting and air travel. *PLOS Computational Biology*, **16(10)**:e1008233, doi:10.1371/journal.pcbi.1008233, 2020.

- Pei S, Shaman J. Aggregating forecasts of multiple respiratory pathogens supports more accurate forecasting of influenza-like illness. *PLOS Computational Biology*, **16(10)**:e1008301, doi:10.1371/journal.pcbi.1008301, 2020.
- Galanti M, Comito D, Ligon C, Lane B, Matienzo N, Ibrahim S, Shittu A, Tagne E, Birger R, Ud-Dean M, Filip I, Morita H, Rabadan R, Anthony S, Freyer GA, Dayan P, Shopsin B, Shaman J. Active surveillance documents rates of clinical care seeking due to respiratory illness. *Influenza and Other Respiratory Viruses*, **14(5)**:499-506, doi:10.1111/irv.12753, 2020.
- Emeruwa UN, Ona S, Shaman J, Turitz A, Wright JD, Gyamfi-Bannerman C, Melamed A. Associations between built environment, neighborhood socioeconomic status and SARS-CoV-2 infection among pregnant women in New York City. *JAMA*, **324(4)**:390-392, doi:10.1001/jama.2020.11370, 2020.
- Shea B, Knowlton K, Shaman J. The state of climate-health education at health professions schools: a baseline assessment. *JAMA Open Network*, **3(5)**:e206609, doi:10.1001/jamanetworkopen.2020.6609, 2020.
- Li R, Pei S, Chen B, Song Y, Zhang T, Yang W, Shaman J. Substantial undocumented infection facilitates the rapid dissemination of novel coronavirus (SARS-CoV2). *Science*, **368(6490)**:489-493, doi:10.1126/science.abb3221, 2020.
- Gervais M, Shaman J, Kushnir Y. Impact of the North Atlantic Warming Hole on sensible weather. *Journal of Climate*, **33(10)**:4255-4271, doi:10.1175/JCLI-D-1909636.1, 2020.
- Heaney A, Alexander K, Shaman J. Ensemble forecast and parameter inference of childhood diarrhea in Chobe District, Botswana. *Epidemics*, **30**:100372, doi:10.1016/j.epidem.2019.100372, 2020.
- Yamana TK, Shaman J. A framework for evaluating the effects of observational type and quality on vector-borne disease forecast. *Epidemics*, **30**:100359, doi:10.1016/j.epidem.2019.100359, 2020.
- Krasna H, Czabanowska K, Jiang S, Khadka S, Morita H, Kornfeld J, Shaman J. The future of careers at the intersection of climate change and public health: What can job postings and an employer survey tell us? *International Journal of Environmental Research and Public Health*, **17(4)**:1310, doi:10.3390/ijerph170418310, 2020.
- Orenbuch R, Filip I, Comito D, Shaman J, Pe'er I, Rabadan R. arcasHLA: high resolution HLA typing from RNAseq. *Bioinformatics*, **36(1)**:33-40, doi:10.1093/bioinformatics/btz474, 2020.
- Heaney A, Shaman J, Alexander K. El Nino-Southern Oscillation and under-5 diarrhea in Botswana. *Nature Communications*, **10**:5798, doi:10.1038/s41467-019-13584-6, 2019.
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- Johansson M et al. Advancing probabilistic epidemic forecasting through an open challenge: The Dengue Forecasting Project. *Proceedings of the National Academy of Sciences*, **116(48)**:24268-24274, doi:10.1073/pnas.1909865116, 2019.
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- Kandula S, Shaman J. Near-term forecasts of influenza-like illness: an evaluation of autoregressive time series approaches. *Epidemics*, **27**:41-51, doi:10.1016/j.epidem.2019.01.002, 2019.
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FUNDING

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NSF, Climate and Large-Scale Dynamics Grant: 'Collaborative Research: The ENSO-Mediterranean Teleconnection: Observations and Dynamics. PI. August 1, 2009-July 31, 2012. (Extended through July 31, 2014 via no-cost extension.)

Medical Research Foundation (Oregon Health Sciences University): 'Weather and psychosocial influences on seasonal depression in at-risk males from adolescence to young adulthood', Co-I, December 2010-November 2011.

NIH/NSF, Division of Mathematical Sciences/National Institute of General Medical Sciences, Joint Initiative to Support Research at the Interface of the Biological and Mathematical Sciences: 'Influenza Outbreak Prediction: Applying Data Assimilation Methodologies to Make Skillful Forecasts of an Inherently Chaotic, Nonlinear System', PI. August 1, 2011-July 31, 2017.

Columbia Earth Institute Cross-Cutting Initiative: 'Impact of climate variability and urbanization on water storage practices and vector-borne disease incidence: Developing an understanding for risk prediction and response using Delhi, India as context', Co-PI, September 2011-August 2012.

Columbia University Center for Environmental Health in Northern Manhattan: 'Exploring Environmental Controls on Airborne Respiratory Pathogens in Public Spaces in Northern Manhattan', PI, December 2011.

Columbia University Center for Environmental Health in Northern Manhattan, Junior Faculty Career Development Award: 'The Mechanisms of Influenza Survival and Transmission', PI, April 2012-March 2014.

Columbia Earth Institute Junior Faculty Research Award: 'The Staphylococcal Cloud -- Its Role in Household Transmission', PI, July 2013 - June 2014.

NIH Models of Infectious Disease Agent Study (MIDAS)/ Health and Human Services Biomedical Advanced Research and Development Authority (BARDA); Supplemental award dispensed through the Harvard School of Public Health NIH MIDAS center grant: 'Real-Time Prediction of Influenza', PI, September 2013 - August 2014.

NSF, Climate and Large-Scale Dynamics Grant: 'Collaborative Research: Combined Influence of Snow Cover and El Nino/Southern Oscillation (ENSO) on North African/Mediterranean Temperature and Precipitation'. PI. December 1, 2013-November 30, 2016.

NSF, Climate and Large-Scale Dynamics Grant: 'Support for a Symposium Honoring Mark Cane's Contribution to Climate Science; Palisades, NY; October 20-21, 2014', Co-I. June 1, 2014 - May 31, 2015.

NIH, National Institute of Environmental Health Sciences (NIEHS) Ruth Kirchstein T32 Training Grant: 'Interdisciplinary Training in Climate and Health', Co-PI. July 2014 - June 2019.

NIH, National Institute of General Medical Sciences (NIGMS) Models of Infectious Disease Agent Study (MIDAS): 'Development and Dissemination of Operational Real-Time Respiratory Virus Forecast', PI. September 1, 2014 - June 30, 2019.

DOD, Defense Threat Reduction Agency (DTRA): 'Developing Real-Time Forecasts of Infectious Diseases', PI. January 23, 2015 - January 22, 2019.

DOD, Defense Advanced Research Projects Agency (DARPA): 'The Virome of Manhattan: A Testbed for Radically Advancing Understanding and Forecast of Viral Respiratory Infections', PI. March 1, 2016 - December 31, 2020.

NSF, Division of Information and Intelligent Systems: 'EAGER: Collaborative Research: Combining Community and Clinical Data for Augmenting Influenza Modeling', PI. September 1, 2016 - August 31, 2018.

Rockefeller Foundation: 'Global Consortium on Climate and Health Education', PI. January 1, 2017 - December 31, 2017.

Research Initiatives in Science and Engineering, Columbia University: 'Evolution in the Arctic: Genomic reconstruction of microbial, plant and animal communities during the Holocene', PI. July 1, 2018 - June 30, 2020.

NIH, National Institute of Allergy and Infectious Disease: 'Disease Persistence and Population Dynamics: Modeling Measles under Mass Vaccination', Co-I. July 1, 2019 - June 30, 2024.

CDC, Centers for Disease Control and Prevention: 'Multifaceted Control Strategies for Seasonal and Pandemic Influenza', PI, August 1, 2019 - January 31, 2021.

NIH, National Institute of Mental Health: 'Suicide as a contagion: modeling and forecasting emergent outbreaks', MPI, January 24, 2020 - November 30, 2024.

NSF, Division of Mathematical Sciences: 'RAPID: Inference, Forecasting, and Intervention Modeling of COVID-19', PI, April 15, 2020 - March 31, 2021.

Morris-Singer Foundation: 'Columbia Prediction of Infectious Diseases', PI, June 1, 2020 - May 31, 2022.

Regeneron: 'Projections of COVID-19', PI, June 1, 2020 - December 31, 2020.

NIH, National Institute of Environmental Health Sciences: 'Advanced training in environmental health and data science: molecules to populations', MPI, July 1, 2020 - June 30, 2025.

CDC, Centers for Disease Control and Prevention: 'Inference, forecasting and optimal control of healthcare-associated infections', MPI, August 1, 2020 - July 31, 2025.

CDC, Centers for Disease Control and Prevention: 'Supplement: Inference, forecasting and optimal control of healthcare-associated infections', MPI, August 1, 2020 - July 31, 2021.

Pfizer: 'Projecting future adult symptomatic attack rates in counties with potential vaccine efficacy trial sites in the United States', PI, July 1, 2020 - October 31, 2020.

CSTE, Council of State and Territorial Epidemiologists: 'Heterogeneous forecast and nowcast of COVID-19 at county scale', PI, September 1, 2020 - August 31, 2021.

Pfizer: 'Evaluating the direct and indirect effects of the Pfizer COVID-19 vaccine under different distribution schema', PI, October 1, 2020 - March 31, 2021.

INVITED UNIVERSITY, INSTITUTE, AND GOVERNMENT TALKS

University of Miami, Rosenstiel School of Marine and Atmospheric Science, Division of Meteorology and Physical Oceanography, 'Monitoring and Forecasting St. Louis Encephalitis Transmission in Florida', November 19, 2002.

Harvard University, School of Public Health, Department of Epidemiology, 'Monitoring and Forecasting St. Louis Encephalitis Transmission in Florida', February 20, 2003.

Massachusetts Institute of Technology, Department of Civil and Environmental Engineering, 'The Effect of ENSO on the South Asian monsoons', April 8, 2004.

Lamont-Doherty Earth Observatory of Columbia University, Division of Ocean and Climate Physics, 'The Effect of ENSO on the South Asian monsoons', October 11, 2004.

Georgia Institute of Technology, School of Earth and Atmospheric Sciences, 'From Mosquitoes to Monsoons', October 22, 2004.

Oregon State University, College of Oceanic and Atmospheric Sciences, 'Some Effects of ENSO on the South Asian monsoons', March 31, 2005.

Oregon State University, College of Oceanic and Atmospheric Sciences, 'Monitoring and Forecasting Mosquito-Borne Disease Transmission', April 1, 2005.

Massachusetts Institute of Technology, Department of Earth and Atmospheric Sciences, 'Some Effects of ENSO on the South Asian monsoons', April 27, 2005.

Oregon State University, Department of Statistics, 'Monitoring and Forecasting Mosquito-Borne Disease Transmission', April 17, 2006.

University of Washington, Department of Atmospheric Sciences, 'Dynamics of the ENSO-Indian Monsoon Teleconnection', April 27, 2007.

Hatfield Marine Science Center, 'Hydrologic and Meteorological Determinants of Mosquito-Borne Disease Transmission', May 3, 2007.

Harvard University, Department of Earth and Planetary Sciences, 'Dynamics of the ENSO-Indian Monsoon Teleconnection', August 14, 2007.

Princeton University, Program in Science, Technology and Environmental Policy, Woodrow Wilson School, 'Operational Hydrologic Monitoring of Mosquito-Borne Disease Transmission: The Science and Policy', February 4, 2008.

University of California, Los Angeles, Institute for Geophysics and Planetary Physics, 'Operational Hydrologic Monitoring of Mosquito-Borne Disease', April 1, 2008.

Stanford University, Department of Earth Environmental System Science, 'The ENSO-North African-Asian Jet Teleconnection: Dynamics and Implications', November 5, 2008.

Harvard University, School of Public Health, Department of Epidemiology, 'Influenza and Humidity', February 9, 2009.

Harvard University, Department of Earth and Planetary Sciences, 'Influenza and Humidity', February 10, 2009.

Colorado State University, Department of Atmospheric Sciences, 'The ENSO-North African-Asian Jet Teleconnection: Dynamics and Implications', April 16, 2009.

Columbia University, Department of Environmental Health Science, 'Absolute Humidity and the Transmission and Seasonality of Influenza', November 2, 2009.

International Research Institute for Climate and Society, 'Absolute Humidity and the Transmission and Seasonality of Influenza', November 4, 2009.

University of California, Berkeley, Department of Geography, 'Absolute Humidity and the Transmission and Seasonality of Influenza', September 29, 2010.

National Center for Atmospheric Research, Climate and Global Dynamics Division, 'Complex Wavenumber Rossby Wave Ray Tracing', August 18, 2011.

National Center for Atmospheric Research, Climate and Global Dynamics Division and Research Applications Laboratory, 'Absolute Humidity and the Survival, Transmission and Seasonality of Influenza', August 24, 2011.

Harvard University, Department of Earth and Planetary Sciences, 'Complex Wavenumber Rossby Wave Ray Tracing', April 19, 2012.

Stony Brook University, School of Marine and Atmospheric Sciences, 'The ENSO-Pandemic Influenza Connection: Coincident or Causal?', August 29, 2012.

Virginia Polytechnic Institute and State University, Department of Civil and Environmental Engineering, 'Hydrologic Variability and the Dynamics of West Nile Virus Transmission', September 28, 2012.

Yale University, Yale Climate and Energy Institute, 'Local Hydrological and Meteorological Constraints on Infectious Disease Transmission', January 25, 2013.

University of Michigan, Robert Wood Johnson Foundation, Health and Society Scholars Program Seminar Series, The Center for Social Epidemiology and Population Health, 'Forecasting Seasonal Outbreaks of Influenza', February 5, 2013.

Yale University, Global Health Leadership Institute, Yale Schools of Medicine and Public Health, 'Absolute Humidity and the Transmission and Seasonality of Influenza', February 18, 2013.

Columbia University, College of Physicians and Surgeons, Pulmonary, Allergy and Critical Care Conference, 'Forecasting Seasonal Outbreaks of Influenza', February 27, 2013.

U.S. Department of Health and Human Services, Biomedical Advanced Research and Development Authority, Analytic Decision Support Division, 'Forecasting Seasonal Outbreaks of Influenza', March 1, 2013.

Columbia University, College of Physicians and Surgeons, Infectious Disease Fellows Conference, 'Forecasting Seasonal Outbreaks of Influenza', May 29, 2013.

University of Miami, Abess Center for Ecosystem Science and Policy, 'Forecasting Seasonal Outbreaks of Influenza', September 30, 2013.

U.S. Department of Health and Human Services, Biomedical Advanced Research and Development Authority, Analytic Decision Support Division, 'Forecasting Seasonal Outbreaks of Influenza', February 7, 2014.

Columbia University, School of International and Public Affairs, Sustainable Development Program, 'Forecasting Seasonal Outbreaks of Influenza', February 24, 2014.

Columbia University, Lamont-Doherty Earth Observatory Colloquium, 'Simulation and Forecast of Infectious Disease: Environmental Determinants and Transmission Dynamics', October 7, 2016.

Colorado University, Climate Summit Keynote Lecture, 'Climate-Disease Connections: Associations, Processes and Incorporation in Infectious Disease Forecast', October 16, 2018.

Yale University, Climate Change Leader in Residence, Yale School of Public Health, 'Infectious Disease Forecast and the Incorporation of Climate Drivers', January 14, 2019.

Yale University, Climate Change Leader in Residence, Yale School of Public Health, 'Climate-Disease Connections: Associations and Processes Affecting Infectious Disease Dynamics', January 15, 2019.

University of Notre Dame, Center for Informatics and Computational Biology, 'Forecasting the Growth and Spread of Infectious Diseases', March 20, 2019.

Carnegie Mellon University, Department of Statistics, 'Process-Based Forecasting of Infectious Disease Outbreaks', April 15, 2019.

Cary Institute, 'Forecasting Outbreaks of Infectious Disease', May 9, 2019.

University at Albany, Department of Atmospheric and Environmental Sciences and the Wadsworth Center, 'Modeling and Forecasting West Nile Virus', May 16, 2019.

Johns Hopkins University, Bloomberg School of Public Health, Department of Environmental Health and Engineering, Grand Rounds, 'Forecasting Outbreaks of Infectious Disease', October 11, 2019.

California Institute of Technology, Department of Environmental Science and Engineering, 'Transmission Dynamics of Influenza and SARS-CoV-2: Environmental Determinants, Inference and Forecast', April 29, 2020.

National Center for Atmospheric Research, 'Transmission Dynamics of Influenza and SARS-CoV-2: Environmental Determinants, Inference and Forecast', May 18, 2020.

University of Minnesota, The Institute of Mathematics and its Applications, School of Mathematics, 'Transmission Dynamics of Influenza and SARS-CoV-2: Environmental Determinants, Inference and Forecast', May 19, 2020.

National Academies' Board of Atmospheric Sciences and Climate, 'Short-term climate variability and virus seasonality', May 28, 2020.

McGill University, McGill Genome Centre, 'Transmission Dynamics of Influenza and SARS-CoV-2: Inference and Forecast', July 9, 2020.

Keck Graduate Institute, 'Modeling Influenza and SARS-CoV-2: Environmental Determinants, Inference and Forecast', July 13, 2020.

University of California, Berkeley, Berkeley Atmospheric Sciences Center, 'Modeling Influenza and SARS-CoV-2: Environmental Determinants, Inference and Forecast', September 9, 2020.

Weill Cornell Medicine, Global Health Education, 'The Implications of Climate Change on Health and Well-being in the Age of COVID-19', October 7, 2020.

Massachusetts Institute of Technology, Program in Atmospheres, Oceans, and Climate, Department of Earth, Atmospheric, and Planetary Sciences, 'Transmission Dynamics of Influenza and SARS-CoV-2: Meteorological Drivers, Inference and Forecast', October 14, 2020.

University of Minnesota, Webinar in Epidemiology and Community Health, 'Transmission Dynamics of SARS-CoV-2: Meteorological Drivers, Model Inference and Projection', October 23, 2020.

CONFERENCE PRESENTATIONS

Prediction of Mosquito Abundance with Modeled Land-Surface Hydrology, Poster Presentation at New Challenges in Tropical Medicine and Parasitology, Oxford, United Kingdom, 18-22 September, 2000

Prediction of Floodwater Mosquito Abundance with Modeled Land-Surface Hydrology, Oral Presentation at the Annual Meeting of the American Society of Tropical Medicine and Hygiene, Houston, Texas, 29 October – 2 November, 2000

Prediction of Floodwater Mosquito Abundance with Modeled Land-Surface Hydrology, Oral Presentation at the 2000 Joint Annual Meeting of the Entomological Societies of Quebec, Canada, and America, Montreal, Quebec, 3-6 December, 2000

Representation of Stormflow and a More Responsive Water Table in a TOPMODEL-Based Hydrology Model, Poster Presentation at the Chapman Conference of the American Geophysical Union on State-of-the-Art in Hillslope Hydrology, Sun River, Oregon, 8-12 October, 2001

Representation of Stormflow and a More Responsive Water Table in a TOPMODEL-Based Hydrology Model, Oral Presentation at the Fall Meeting of the American Geophysical Union, San Francisco, California, 10-14 December, 2001

Seasonal Forecast of St. Louis Encephalitis Virus Transmission in Forecast, Oral Presentation at the Annual Meeting of the American Society of Tropical Medicine and Hygiene, Denver, Colorado, 10-14 November 2002

Seasonal Forecast of St. Louis Encephalitis Virus Transmission in Forecast, Oral Presentation at the Annual Meeting of the Entomological Society of America, Ft. Lauderdale, Florida, 18--22 November 2002

A Local Forecast of Land Surface Wetness Conditions, Drought, and St. Louis Encephalitis Virus Transmission Derived from Seasonal Climate Predictions, Poster Presentation at the Fall Meeting of the American Geophysical Union, San Francisco, California, 6-10 December 2003

A Local Forecast of Land Surface Wetness Conditions, Drought, and St. Louis Encephalitis Virus Transmission Derived from Seasonal Climate Predictions, Oral Presentation at the World Water and Environmental Resources Congress of the American Society of Civil Engineers, Philadelphia, Pennsylvania, 23-26 June 2003

The Effect of ENSO on Tibetan Plateau Snow Depth and the South Asian Monsoons: A Stationary Wave Teleconnection Mechanism. Oral Presentation at the Spring Meeting of the American Geophysical Union, Montreal, Quebec, 17-21 May (Joint Assembly of AGU, CGU, SEG and EGS) 2004

The direct effect of summertime ENSO conditions on the South Asian monsoons: barotropic and baroclinic teleconnection mechanisms. Poster Presentation at the Fall Meeting of the American Geophysical Union, San Francisco, California, 13-17 December 2004

The direct effect of summertime ENSO conditions on the South Asian monsoons: barotropic and baroclinic teleconnection mechanisms. Oral Presentation at the Annual Meeting of the American Meteorological Society, 16th Conference on Climate Variability and Change, San Diego, California, 9-13 January 2005

Modeling and Forecasting Local Arbovirus Transmission. EPA workshop-conference to address the practical consequences of Levins' philosophy of modeling ecological systems, H. J. Andrews Experimental Forest Station, Oregon, 12-15 January 2005.

Modeling and Forecasting Mosquito-Borne Disease Transmission. NOAA Climate and Global Change Conference Celebrating the 100th Postdoctoral Appointment, NOAA Headquarters, Silver Springs, Maryland, 20-21 April 2005, INVITED.

Are Big Basins just the Sum Small Catchments? Oral Presentation at the Spring Meeting of the American Geophysical Union, New Orleans, Louisiana, 22-27 May 2005, INVITED.

An atmospheric teleconnection linking ENSO to the North African-Asian jet. Oral Presentation at the European Geosciences Union General Assembly, Vienna, Austria, 2-7 April 2006.

Preserving Health in a Changing Global Environment. Oral Presentation at the 12th Annual German-American Frontiers of Science Symposium of the Alexander von Humboldt Foundation and the U.S. National Academy of Sciences, Potsdam, Germany, 22-24, June 2006, INVITED.

Hydrologic Monitoring and Modeling of Mosquito-Borne Disease Transmission. Oral presentation at the Center for Discrete Mathematics and Theoretical Computer Science (DIMACS) and Center for Dynamic Data Analysis (DyDAn) Workshop of Climate and Disease, Rutgers University, Piscataway, New Jersey, 7-8 April 2008, INVITED.

The Dynamics of the ENSO-Atlantic Hurricane Teleconnection: ENSO-related changes to the North African-Asian Jet affect Atlantic Basin Tropical Cyclogenesis. Poster Presentation at the Fall Meeting of the American Geophysical Union, San Francisco, California, 14-18 December 2008.

Episodic Mode Water Formation: Atmospheric Controls and Trends. Poster Presentation at the Fall Meeting of the American Geophysical Union, San Francisco, California, 14-18 December 2008.

Southern Hemisphere PDO?: Interhemispheric symmetry suggests tropical forcing of Pacific decadal variability. Poster Presentation at the Fall Meeting of the American Geophysical Union, San Francisco, California, 14-18 December 2008.

Episodic Mode Water Formation: Atmospheric Controls and Trends. Oral Presentation at the CLIVAR CLIMODE/KESS Western Boundary Current Workshop, Phoenix Arizona, 15-17 January 2009.

Climate Change and Arbovirus Disease Transmission. Oral presentation at the Centers for Disease Control and Prevention and the American Mosquito Control Association 2009 National Conference on West Nile Virus. Savannah, Georgia, 19-20 February 2009, INVITED.

Climate Change and Vector-Borne Infections. Oral presentation at the Infectious Diseases Society of America Annual Meeting, 29 October-1 November 2009, INVITED.

Absolute Humidity and the Seasonal Onset of Influenza in the Continental US. Oral Presentation at the Annual Meeting of the American Meteorological Society, First Environment and Health Symposium, Atlanta, Georgia, 17-21 January 2010.

Shortcomings in Simulating the ENSO-Atlantic Hurricane Teleconnection in Climate Models. Poster presentation at the Western Pacific Geophysics Meeting of the American Geophysical Union, Taipei Taiwan, 22-25 June 2010.

Meteorological Determinants of Influenza Survival, Transmission and Seasonality. Oral Presentation at Centers for Disease Control and Prevention Workshop for Understanding the Modes of Influenza Transmission, 3-4 November 2010, INVITED.

An Atmospheric Teleconnection Linking ENSO and Southwestern European Precipitation. Poster Presentation at the Fall Meeting of the American Geophysical Union, San Francisco, California, 13-17 December 2010.

Absolute Humidity and the Seasonality of Influenza. Oral Presentation at the Fall Meeting of the American Geophysical Union, San Francisco, California, 13-17 December 2010, INVITED.

Meteorological Determinants of Epidemic and Pandemic Influenza Transmission. Oral Presentation at the NIH Models of Infectious Disease Agents Study (MIDAS) Meeting, Atlanta, Georgia, 8-10 June 2011.

Hydrologic Variability and the Dynamics of West Nile Virus Transmission. Oral Presentation at the conference Water and Health: Where Science Meets Policy, Chapel Hill, North Carolina, 3-7 October 2011.

Absolute Humidity and Transmission and Seasonality of Influenza. Oral Presentation at the annual meeting of the Geological Society of America, Minneapolis, Minnesota, 9-12 October 2011, INVITED.

Hydrologic Variability and the Dynamics of West Nile Virus Transmission. Poster Presentation at Epidemics³, Boston, Massachusetts, 30 November-2 December 2011.

The ENSO-Pandemic Influenza Connection: Coincident or Causal? Poster Presentation at Epidemics³, Boston, Massachusetts, 30 November-2 December 2011.

Hydrologic Variability and the Dynamics of West Nile Virus Transmission. Oral Presentation at the Fall Meeting of the American Geophysical Union, San Francisco, California, 5-9 December 2011, INVITED.

The ENSO-Pandemic Influenza Connection: Coincident or Causal? Union Oral Presentation at the Fall Meeting of the American Geophysical Union, San Francisco, California, 5-9 December 2011.

The Seasonality of Influenza and Other Respiratory Pathogens: Host-Mediated, Behavioral and Environmental Determinants. Oral Presentation at the *Seminaire de Recherche sur la Transmission* (Seminar on the Seasonality of Transmission) sponsored by Inserm, Institut Pasteur and the Institut Thematique Multi Organisme Microbiologie et Maladies Infectieuses (IMMI) d'Aviesan, Abbayes des Vaux de Cernay, France, 22-23 March 2012, INVITED.

Forecasting Seasonal Outbreaks of Influenza. Oral Presentation at the NIH Models of Infectious Disease Agents Study (MIDAS) Meeting, Atlanta, Georgia, 6-8 June, 2012.

Forecasting Seasonal Outbreaks of Influenza. Oral Presentation at the NOAA Climate and Global Change Postdoctoral Fellowship Program Summer Institute, Steamboat Springs, Colorado, 8-12 July 2012.

Forecasting Seasonal Outbreaks of Influenza. Poster Presentation at the Asia Oceania Geosciences Society-American Geophysical Union Joint Assembly, Singapore, 13-17 August 2012.

The Seasonal Effects of ENSO on Western European Precipitation: Observational Analyses and Model Simulations. Oral Presentation at the European Geosciences Union General Assembly, Vienna, Austria, 7-12 April 2013.

Real-Time Influenza Forecasts during the 2012-2013 Season. Oral Presentation at the NIH Models of Infectious Disease Agents Study (MIDAS) Meeting, Austin, Texas, 6-8 May 2013.

The Seasonal Effects of ENSO on Western European Precipitation: Observational Analyses and Model Simulations. Oral Presentation at the American Meteorological Society 19th Conference on Atmospheric and Oceanic Fluid Dynamics, Newport, Rhode Island, 17-21 June 2013.

Forecasting Seasonal Outbreaks of Influenza. Oral Presentation at the NIH Models of Infectious Disease Agents Study (MIDAS) 10th Anniversary Meeting, Bethesda, Maryland, 23 September 2013, INVITED

Forecasting Seasonal Outbreaks of Influenza. Oral Presentation at the American Society of Microbiology, Region 1 Meeting, University of Connecticut, Storrs, Connecticut, 26 October 2013, INVITED

The Effect of Hydrologic Variability on the Ecology of West Nile Virus. Oral Presentation at the American Society of Tropical Medicine and Hygiene, Annual Meeting, Washington DC, 13-17 November 2013, INVITED

Real-Time Influenza Forecasts during the 2012-2013 Season. Oral Presentation at Epidemics⁴, Amsterdam, Netherlands, 19-22 November 2013.

Forecasting Seasonal Outbreaks of Influenza. Oral Presentation at the Annual Meeting of the International Society for Disease Surveillance, New Orleans, Louisiana, 11-13 December 2013, INVITED

Forecasting Seasonal Outbreaks of Influenza. Oral Presentation at the Preparedness Summit, Atlanta, Georgia, 1-4 April 2014, INVITED

Integration of Influenza Forecasts into Public Health Decision Making. Oral Presentation at the Preparedness Summit, Atlanta, Georgia, 14-17 April 2015.

Forecasting Infectious Disease Outbreaks. Oral Presentation at the conference on Human Health in the Face of Climate Change: Science, Medicine and Adaptation, Sponsored by the Caixa Foundation and the New York Academy of Sciences, 14-15 May 2015, INVITED

Climate and Tropical Infectious Disease. Oral Presentation at the American Society of Tropical Medicine and Hygiene, Annual Meeting, Philadelphia PA, 26-29 October 2015, INVITED

Forecasting Infectious Disease Outbreaks. Oral Presentation at the Fall Meeting of the American Geophysical Union, San Francisco, California, 13-17 December 2015, INVITED

The superposition of eastward and westward Rossby waves in response to localized forcing. Poster Presentation at the Fall Meeting of the American Geophysical Union, San Francisco, California, 13-17 December 2015.

Launch of a Global Consortium on Climate and Health Education (GCCHE). Oral presentation at the annual meeting of the American Public Health Association, Atlanta, Georgia, 5-8 November 2017.

Simulation and Forecast of Infectious Disease: Environmental Determinants and Transmission. Oral keynote presentation at the Symposium on Atmospheric Chemistry, Climate and Health, Sigma Xi, Raleigh, North Carolina, 10 November 2017, INVITED

The Use of Ambient Humidity Conditions to Improve Influenza Forecast. Oral Presentation at the Fall Meeting of the American Geophysical Union, New Orleans, Louisiana, 11-15 December 2017, INVITED

Real-time West Nile Virus Forecasts with Temperature Forcing. Oral Presentation at the Fall Meeting of the American Geophysical Union, New Orleans, Louisiana, 11-15 December 2017.

Using weather to improve infectious disease forecasts. Oral Presentation at the Consortium of Universities of Global Health Annual Meeting, New York, New York 15-17 March 2018, INVITED

Forecasting the growth and spread of infectious disease outbreaks. Oral Presentation at the *Future of Health*, the annual symposium of the Institute for Systems Biology, Seattle, Washington, 26-27 March 2018 INVITED.

Absolute humidity modulates influenza transmission. Oral Presentation at the Gordon Research Conference *The Microbiology of the Built Environment*, Biddeford, Maine, 15-19 July 2018, INVITED.

Climate and health. Oral Presentation at workshop on climate, health and bioethics, Hastings Center, Garrison, New York, 3-4 June 2019 INVITED.

Climate and influenza: associations, processes, and implications. Oral Presentation at the annual Ecology and Evolution of Infectious Diseases meeting, Princeton, New Jersey, 10-13 June 2019 INVITED.

Inference and control of the nosocomial transmission of methicillin-resistant *Staphylococcus aureus*. Oral Presentation at SPHINx19 - Spread of Pathogens in Healthcare Institutions and Networks: a modeling conference, Paris, France, 24-25 June 2019, INVITED.

Utilizing big data to track outbreaks of antimicrobial resistant pathogens. Presidential Advisory Council on Combating Antibiotic-Resistant Bacteria (PACARB), McLean, Virginia 10-11 July 2019, INVITED.

Forecasting seasonal influenza activity. Oral Presentation at Options X for the Control of Influenza, Singapore, 28 August - September 1, 2019, INVITED.

Forecasting Infectious Diseases Both with and without Climate Forcing. Oral Presentation at the 100th Annual Meeting of the American Meteorological Society, Boston, Massachusetts, 12-16 January, 2020, INVITED.

Process-based Infectious Disease Forecasting. Oral Presentation at the Annual Meeting of the American Association for the Advancement of Science, Seattle, Washington, 13-17 February, 2020, INVITED.

Modeling the Transmission Dynamics of SARS-CoV-2 and the Effects of Intervention Timing on COVID-19 Incidence. Oral Presentation at the 38th International Conference of the System Dynamics Society, Bergen, Norway (Virtual), 19-21 July, 2020, INVITED.

Transmission Dynamics of SARS-CoV-2: Inference and Projection. Oral Presentation at Cold Spring Harbor Laboratory COVID/SARS CoV2 Rapid Research Reports #2, Cold Spring Harbor, NY (Virtual), 21-22 July, 2020, INVITED.

Symposium panel on forecasting and projecting meteorological and environmental links to COVID-19, American Geophysical Union, 4 August 2020. INVITED.

Meteorological determinants of influenza and SARS-CoV-2 survival and transmission, 32nd Annual Conference of the International Society for Environmental Epidemiology, (Virtual) 24-27 August 2020. INVITED (keynote).

Transmission Dynamics of Influenza and SARS-CoV-2: Meteorological Determinants, Inference and Forecast. AGU Webinar, 14 September 2020. INVITED.

The Health Impacts of Climate Change, 36th Annual Conference of the International Society for Pharmacoepidemiology, (Virtual) 15-17 September, 2020. INVITED.

Transmission Dynamics of SARS-CoV-2: Modeling, Inference and Projection, 1st ACM SIGSPATIAL International Workshop on Modeling and Understanding the Spread of COVID-19, (Virtual), Keynote, 3 November, 2020 INVITED.

GRADUATE COURSES: Introduction to Atmospheric Science, Climatic Change, Global Assessment and Monitoring using Remote Sensing, Nonlinear Dynamics in the Earth Sciences, Introduction to Atmospheric Chemistry, Ocean-Atmosphere Interactions, Water and Infectious Diseases, Advanced General Geology, Quantitative Methods of Data Analysis, Myths and Methods in Modeling, Dynamics of Climate, Wave Motions in the Atmosphere and Ocean, Geophysical Fluid Dynamics Seminar—Tracers, Ocean Dynamics, Tropical Oceanography, Tropical Meteorology, Physics of Fluids

TEACHING EXPERIENCE

Environmental Science for Decision Makers, Teaching Assistant (2 Semesters), School for International and Public Affairs, Columbia University.

Introduction to Atmospheric Sciences, ATS 210, undergraduate course, Oregon State University, Fall 2006.

Principles of Atmospheric Sciences, ATS 420/520 graduate course, Oregon State University, Fall 2007.

Special Topics, El Niño-Southern Oscillation climate variability in the past, present and future, OC669/ATS690 graduate course, Oregon State University, Spring 2008.

Principles of Climate, ATS 420/520 graduate course (new version of Principles of Atmospheric Sciences) Oregon State University, Fall 2008.

Climate Dynamics, ATS 630, graduate course, Oregon State University, Spring 2010.

The Fluid Earth, OEAS 430/530 graduate course (new core curriculum course for COAS), Oregon State University, Fall 2010.

Journal Club in Environmental Health: Climate and Health, EHSC 9370, graduate seminar course, Columbia University, Fall 2011.

Climate and Atmospheric Science for Public Health, P8301, graduate course, Columbia University, Fall 2012, Fall 2013, Fall 2014, Fall 2015, Fall 2016, Fall 2017, Fall 2018, Fall 2019, Fall 2020.

Water, Sanitation and Human Health, P8329, graduate course, Columbia University, Spring 2014, Spring 2015, Spring 2016, Spring 2017, Spring 2018.

Environmental Science, Senior Seminar, X3801, undergraduate course, Columbia University, Spring 2014, Fall 2014, Spring 2015.

Public Health Impacts of Climate Change, P8304, graduate course, Columbia University, Spring 2017, Spring 2018.

Seminar in Climate and Health, P8324, graduate seminar course, Columbia University, Spring 2017, Spring 2018, Spring 2019, Spring 2020.

PROFESSIONAL ACTIVITIES

Professional Organizations

American Geophysical Union

American Meteorological Society

International Society for Infectious Diseases

International Society for Disease Surveillance

Center and Institute Memberships

Center for Communicable Disease Dynamics, Harvard University, 2009-present

Columbia Center for Environmental Health in Northern Manhattan, 2011-present

Columbia Institute for Social and Environmental Research and Policy, 2011-present

International Research Institute for Climate and Society, 2011-present

Columbia Earth Institute, 2012-present

Conference Session Chair, Workshop Convener, Meeting Organizer

36th Annual Meeting of the Society of Vector Ecology, 'Fact or Fiction: Using Technology to Monitor and Forecast Vector-Borne Disease', Session Chair, Boston, MA, September 2004

National Research Council Ad Hoc Committee to plan and conduct workshop in San Francisco on the Potential Impacts of Climate Change on Human Health. Sponsored jointly by the Roundtable on Environmental Health Sciences, Research and Medicine and the NRC Climate Research Committee, March-September, 2007.

National Academy of Science, Sackler Colloquium, *Fostering Interdisciplinary Advances in Climate Science*. Co-Organizer. Washington DC, March 31-April 2, 2011.

Asia Oceania Geosciences Society-American Geophysical Union Joint Assembly, Session Convener and Chair, 'Geophysical Drivers of Infectious Disease Transmission', Singapore, 13-17 August 2012.

NIH RAPIDD Workshop, Next Generation Modeling: Climate, Weather and Infectious Disease, Co-Organizer. Princeton NJ, January 15-17, 2014.

NIH/Columbia Workshop, Preparing for and Responding to Influenza Outbreaks: Public Health Decision Making and a Role for Influenza Forecast, Organizer, New York NY, May 1-2, 2014.
 NSF/Columbia Workshop, The Tropics Rule: a symposium honoring Mark Cane's contributions to climate science, Co-Organizer, Palisades NY, October 20-21, 2014.
 Preparedness Summit, Learning Session, Using Forecasts to Guide Decision Making during Influenza Seasons and Pandemics, Co-Organizer, Atlanta GA, April 17, 2015.
 NIH/Columbia Workshop, Preparing for and Responding to Influenza Outbreaks: Healthcare Preparedness and a Role for Influenza Forecast, Organizer, New York NY, April 21-22, 2016.
 Annual Meeting the NIGMS MIDAS Program, Organizer, Atlanta GA, May 22-24, 2017.

Workshop Participation

EPA workshop-conference to address the practical consequences of Levins' philosophy of modeling ecological systems, H. J. Andrews Experimental Forest Station, Oregon, 12-15 January 2005.
 CLIVAR CLIMODE/KESS Western Boundary Current Workshop, Phoenix, Arizona, 15-17 January 2009.
 Hydrosynthesis, water and human interactions workshop, Chapel Hill, North Carolina, 21-22 October 2010.
 Centers for Disease Control and Prevention Workshop, Understanding the Modes of Influenza Transmission, Atlanta, Georgia, 4-5 November 2010.
 RAPIDD 2011 Convocation, National Institutes of Health, Washington DC, 26-27 January 2011.
 RAPIDD Workshop, Modelling Interventions and Malaria Resistance, London, England, 19-20 May 2011.
 RAPIDD 2012 Convocation, National Institutes of Health, Washington DC, 2-3 February 2012.
 RAPIDD Workshop, Modelling Interventions and Malaria Resistance, Durham, England, 11-12 April 2012.
 National Oceanic and Atmospheric Administration Climate and Global Change Postdoctoral Fellowship Program Summer Institute, Steamboat Springs, Colorado, 8-12 July 2012.
 Yale Climate and Energy Institute, Forum on the Integration of Climate Science and Infectious Disease Research, New Haven, Connecticut, 25-26 January 2013.
 RAPIDD 2013 Convocation, National Institutes of Health, Bethesda, MD, 13-14 June 2013.
 RAPIDD 2014 Convocation, National Institutes of Health, Bethesda, MD, 4-5 September 2014.
 Dengue Forecasting Workshop, Office of Science and Technology Policy, The White House, Washington DC, 15 September 2014.
 Ebola Forecasting Workshop, Biomedical Advanced Research and Development Authority, Washington DC, 15 December 2014.
 RAPIDD Workshop, Ebola Modeling, Bethesda MD, 23-25 March 2015.
 WHO Second Global Conference on Health and Climate, Paris France, 7-8 July 2016.
 ASPPH Webinar on Environmental Health Programming that Inspires and Excites, 7 October 2019.
 National Academies of Science, Engineering and Medicine, Harnessing data to strengthen community health in a changing climate: a virtual scoping meeting, 25 August 2020.

National Committees, Panels, Reviews

Peer Review Panel for EPA STAR Grant 'An Interdisciplinary Approach to Examining Links Between Social Stressors, Biodiversity and Human Health', July 17-18, 2007.
 External Reviewer, National Academy of Science, Institute of Medicine, Workshop Summary, 'Global Climate change and Extreme Weather Events: Understanding the Contributions to the Emergence, Reemergence, and Spread of Infectious Disease', 2008.
 National Academy of Science, Climate, Energy and National Security, Topical Panel Meeting, San Francisco, CA, 24-25 June 2009 (Continued activity through 2010).
 Peer Review Panel for NIH NIAID Centers of Excellence for Influenza Research and Surveillance, 3-5 June, 2013.
 Review Panel for NIH NIAID K awards, Microbiology and Infectious Disease Research Committee, 20 February, 2015.
 MIDAS Steering Committee, 2014-2018
 MIDAS Executive Committee, 2016-2018
 MIDAS Executive Committee, Vice Chair, 2016-2018
 IRAP, NIH Study Section, 2019-present

State, Local and University Committees

Organizer, Division of Climate and Physical Oceanography Seminar Series, Lamont-Doherty Earth Observatory, 2001
 Committee Member, Women in Science: Evaluation of Observatory Policies and Practices, Lamont-Doherty Earth Observatory, 2001-2002.
 Student Representative, Curriculum Reform Committee, Department of Earth and Environmental Sciences, Columbia University, 2001-2003.
 Convener, Symposium: 'Fact or Fiction: Using Technology to Monitor and Forecast Vector-Borne Disease', 36th Annual Meeting of the Society of Vector Ecology, Boston, September 2004.
 Faculty Advisory Committee, COAS, OSU, 2005-2006.
 Dean's Advisory Committee, COAS, OSU 2006-2009.
 Frontiers Seminar Committee, COAS, OSU 2006-2009.

Discovery and Research Panel, The Future of Ocean and Coastal Studies at OSU, March 13 2007.
 Climate Change Ecosystem Preparation Strategy Meeting, Oregon Department of Energy, June 11, 2007.
 Earth System Science, Structure and Governance Committee, OSU, 2007.
 Earth System Science, Research Committee, OSU, 2007-2008.
 Atmospheric Science Hire Search Committee, COAS, OSU, 2007-2008.
 Promotion and Tenure Committee, COAS, OSU, non-voting, 2008-2009.
 Core Curriculum Planning Group, COAS, OSU, 2008-2009.
 Core Curriculum Development Group, COAS, OSU, 2009-2010.
 Peer Review of Teaching Committee, COAS, OSU, 2010-2011.
 Atmospheric Science Hire Search Committee, COAS, OSU, 2010-2011.
 COAS-Geosciences Merger Committee, COAS, OSU, 2010-2011.
 MPH Admissions Committee, Mailman School, Columbia University, 2011-present
 Earth Institute Postdoctoral Fellows Admissions Committee, Columbia University, 2011-2018
 Earth Institute Director Search Committee, Columbia University, 2016-2018
 Columbia University Capital Campaign Climate Task Force, 2017
 Earth Institute Executive Committee, Columbia University, 2017-present
 Earth Institute Leadership Committee, Columbia University, 2018-present
 Columbia University Task Force on Climate, 2019
 Columbia Climate School, Major Programs Director, 2020-present

EDITORIAL ACTIVITIES

Manuscripts Reviewed for: *International Journal of Climatology*, *Climatic Change*, *Global Change Biology*, *Journal of Medical Entomology*, *Ecological Modelling*, *Journal of Climate*, *International Journal of Remote Sensing*, *Hydrological Processes*, *Geophysical Research Letters*, *Journal of Geophysical Research*, *PLoS ONE*, *Vector-Borne and Zoonotic Diseases*, *Quarterly Journal of the Royal Meteorological Society*, *Water Resources Research*, *Atmospheric Research*, *PLoS Medicine*, *PNAS*, *PLoS Neglected Tropical Diseases*, *Journal of Vector Ecology*, *Journal of the Atmospheric Sciences*, *American Journal of Epidemiology*, *Environmental Health Perspectives*, *Entomologia Experimentalis et Applicata*, *Malaria Journal*, *Acta Tropica*, *Proceedings of the Royal Society B*, *Transactions of the Royal Society of Tropical Medicine and Hygiene*, *Environmental Health*, *Journal of the Royal Society Interface*, *International Journal for Environmental Research and Public Health*, *BioMed Central Infectious Diseases*, *American Journal of Tropical Medicine and Hygiene*, *Journal of Theoretical Biology*, *Journal of the Meteorological Society of Japan*, *Epidemiology and Infection*, *Ecology Letters*, *WIREs Climate Change*, *Climate Dynamics*, *PLoS Computational Biology*, *International Journal of Biometeorology*, *Influenza and Other Respiratory Viruses*, *PLOS Currents Influenza*, *Disaster Medicine and Public Health Preparedness*, *Scientific Reports*, *PLOS Currents Outbreaks*, *Nature Climate Change*, *BMC Infectious Diseases*, *Epidemics*, *eLife*, *PLOS Biology*, *Nature Communications*, *Nature*, *Science*, *Science Translational Medicine*, *Nature Human Behavior*, *Emerging Infectious Diseases*

Proposals Reviewed for: *NSF Climate and Large-Scale Dynamics*; *NOAA Climate Prediction Program for the Americas*; *Wellcome Trust*; *Ministry of Earth Sciences Monsoon Mission II, India*; *Swiss NSF*

Review Panels: *EPA Biodiversity and Human Health*, *NIH Centers of Excellence for Influenza Research and Surveillance*, *NIAID Microbiology and Infectious Disease Research Committee K Awards*, *NIH IRAP Study Section (2019, 2020)*

Guest Editor: *PNAS*, *International Journal for Environmental Research and Public Health*, *PLOS Computational Biology*, *PLOS Medicine*, *PLOS Biology*

Academic Editor: *PLOS ONE*, 2014-present

Editor: *PLOS Currents Outbreaks*, 2015-2018

OUTREACH

Interview on topic of Climate and Health, *Geotimes*. Printed in January 2006 article entitled 'Warming Linked to Disease Outbreaks'

Interview and OSU Press Release: *New Strategy Developed to Combat West Nile Virus*, Published online on www.medicalnewstoday.com, www.medilexicon.com, www.hospitalworldwide.com. Picked up by the Associated Press, printed online on many other news sites, including www.medindia.net. Published in print May 15, 2006 *Oregonian*.

Lecturer, Climate Impacts, Oregon State University Academy for Lifelong Learning, May 2006.
 Lecturer, Climate and Health, Oregon Teachers Climate Change Workshop, September 2006

Radio interview discussion of climate, pollution and health on Oregon Territory of Oregon Public Broadcasting. Broadcast December 1, 2006. Available online at <http://www.opb.org/programs/oregonterritory/episodes/2006/1201/>.

Interview on climate science consensus, *Houston Chronicle*, Printed in January 22, 2007 entitled 'Climate Scientists Feeling the Heat'.

Lecturer, Climate Change and IPCC 4th Assessment, OSU Sustainability Group, February 20, 2007.

Lecturer, Climate Change, Human Health and Local Ecology, Earth Day Celebration, Hatfield Marine Science Center, April 21, 2007.

Lecturer, Climate Change and IPCC 4th Assessment, Isaac Walton League, Corvallis, June 11, 2007.

Lecturer, Climate Change and IPCC 4th Assessment, League of Conservation Voters, Newport, June 15, 2007.

Lecturer, Climate Change and IPCC 4th Assessment, The Seminar Group, Global Warming and the Effects on Environmental Law, Portland, OR, September 26, 2007.

Lecturer, Climate Change, Human Health and Local Ecology, Marys Peak Chapter, Oregon Sierra Club, Corvallis, OR, October 2, 2007.

Lecturer, Climate Change and IPCC 4th Assessment, 63rd Annual Conference of the Oregon Public Health Association, Corvallis, OR, October 3, 2007.

Speaker, Operational Hydrologic Monitoring of Mosquito-Borne Disease Transmission, Oregon Department of Health, Portland, OR, December 12, 2007.

Developer, with individuals at the Florida Medical Entomology Laboratory, of the arboviral transmission risk model: http://mosquito.ifas.ufl.edu/MWTD_Risk_Model.htm

Lecture and Debate, Climate Change, Philomath High School, Earth Awareness Day, Philomath, OR, February 29, 2008.

Testimony on Climate Change and IPCC 4th Assessment before the Oregon State Legislature Committee on Energy and Environment, April 4, 2008.

Speaker, Operational Hydrologic Monitoring of Mosquito-Borne Disease Transmission, Epidemiologists' Forum, Oregon Public Health Association, Oregon Public Health Division, Oregon Health Sciences University Department of Public Health and Preventive Medicine, Portland, OR, April 16, 2008.

Lecturer, Climate Change Science, Meadow Park Middle School Science and Robotics Teams, October 10, 2008

Interview, Adult Education Instructor, Ocean Science and Math Collaborative Program of the Oregon Office of Community College and Workforce Development, October 16, 2008.

Radio interview discussion of climate change on Sunday at Noon of KLCC Public Radio, Eugene, OR. Broadcast November 16, 2008. Available online at www.klcc.org/audio/S@N 11-16 mp3

Multiple interviews regarding February 9, 2009 release of influenza and humidity article in *PNAS*. Over 300 radio, print, television and online news sources covered the findings including Science, National Geographic, Scientific American, New York Times, Discover Magazine, U.S. News and World Report, MSNBC, CNN, The Today Show, Wall Street Journal and International Herald Tribune.

Consultation with officials at the Centers for Disease Control and Prevention and Mexican ministries regarding the fate and spread of swine flu, April 26-29, 2009.

Interview for National Geographic, April 29, 2009, regarding the emergence and spread of swine flu. Published online April 30, 2009, Summer to Kill Swine Flu in U.S. and Mexico? Additional interviews regarding swine flu with the Atlanta Journal-Constitution and Bay Area News.

Speaker, OSU Global Environmental Change Organization, Climate Change Seminar Series, April 29, 2009.

Speaker, Climate, Weather and Influenza, Military Officers Club of Corvallis, September 16, 2009.

Speaker, Climate, Weather and Health, Oregon Health Sciences University School of Nursing Faculty and Staff, October 14, 2009.

Lecturer, Humidity and the Seasonality of Influenza, Oregon State University Extension Service Climate Change Series, Hillsboro, OR, November 17, 2009.

Multiple interviews regarding February 23, 2010 release of influenza article in *PLoS Biology*. Interviews with Oregon Public Radio, KGW Channel 8 Portland, KEZI Channel 9 Eugene, Voice of America, Discovery Channel (online), NIH Research Matters and an NIH podcast. Additional coverage in L.A. Times, U.S. News and World Report, USA Today, Business Week, Times of India, MSNBC, and other news sources. KGW broadcast picked up by local affiliates around the country.

Interview for Religion Dispatches, March 17, 2010, on global warming. Article entitled 'Creationism and Global Warming Denial: Anti-Science's Kissing Cousins?' by Lauri Lebo.

Interview for Science News, September 8, 2010 on influenza. Article entitled 'Dry air might boost flu transmission', published September 10, 2010, by Janet Raloff.

Multiple interviews regarding January 17, 2012 release of influenza article in *PNAS*. Interviews with BBC, Huffington Post, Climate Wire, Voice of America, Australian Broadcasting Corporation Radio, Toronto Globe and Mail, Toronto Star, Canadian Press, Earth Magazine (American Geosciences Institute). Additional coverage with UPI, CBC, Houston Chronicle, Guardian, Oregon Public Radio, Scientific American and other news sources.

Consultation with officials at the Centers for Disease Control and Prevention on the emerging H3N2v swine variant at state fairs, the risk of a larger outbreak, and the merits of developing a vaccine against this variant., September 4-7, 2012.

Multiple interviews regarding November 26, 2012 release of influenza prediction article in *PNAS*. Interviews with NBC Nightly News, ABC World News Tonight, CBS Early Show, CBS Up to the Minute, CBS Radio, the Associated Press,

Reuters-Thomson, CTV, and local radio and print outlets. AP and Reuters coverage in both print and television appeared on hundreds of outlets.

Several interviews regarding August 2013 online release of weather and depression article in *J. Affective Disorders*. Press coverage appeared in multiple print outlets around the globe.

Multiple interviews regarding December 3, 2013 release of influenza prediction article in *Nature Communications*.

Interviews with Time, Bloomberg News. Coverage on Salon, Huffington, Fox News, VOA.

Multiple interviews regarding January 2014 launch of influenza prediction website. Interviews with NY1, New York Times.

Multiple interviews regarding 2014 West African Ebola outbreak and forecasts of the epidemic. Interviews with the New York Times, NBC Nightly News, NPR, ABC, CBS Affiliates, Bloomberg News.

Multiple interviews regarding 2014-2015 influenza season and its forecast. Interviews with the New York Times, Time magazine, NY1, Village Voice, CNN.

Interview October 2015 on Science Friday regarding influenza prediction

Interviews with NBC news (online) and Radio Times (WHYY) regarding the Zika outbreak, 2016

Organized and moderated an Earth Institute Sustainable Development seminar, open to the public, on the ongoing Zika outbreak, 2016.

Co-organized and participated in an event revealing preliminary results from summer 2016 respiratory virus and microbiome sampling among visitor to the American Museum of Natural History. The event was held at the museum July 14, 2016.

Podcast with *Scientific American* regarding the *PLOS Computational Biology* publication on flu prediction within New York City, December 6, 2016.

Webinar for New York Academy of Science Junior Academy on the Ebola Outbreak and infectious disease forecasting. January 19, 2017.

Public Lecture, Taste of Science, Ryan's Daughter, 350 E. 85th St., January 24, 2017.

Interviewed and participated in the WNYC Only Human podcast Flu-dunnit?, March 22, 2017.

Interviewed for Stat News on climate and health, April 11, 2017 (released April 24, 2017).

Interviewed by ABC news (online) regarding climate and health, June, 2017.

Interviewed by Metro, Australian Financial Times and other regarding *PNAS* publication on spatial forecast of influenza, February 2018.

Letter to the Editor in New York Times, 'One more thing you can do', regarding climate and health, (<https://www.nytimes.com/2018/10/08/opinion/letters/science-health-climate-environmental-protection-agency.html>) October 8, 2018.

2019: Interviews with Columbia Magazine, Columbia Public Health Magazine, the Montgomery Advertiser

Podcast with US Green Building Council, *Built for Health: Climate*, released October 21, 2019.

Interview with NPR regarding the Wuhan novel coronavirus, aired on *All Things Considered* February 5, 2020

Interview with PRI World on climate and infectious disease, February 5, 2020.

Interview with BBC Science in Action on COVID-19, February 15, 2020; aired February 20, 2020

Interviews with *Washington Post*, *New York Times*, *CNBC*, *The Hill*, *China Global TV*, *CBS News*, *Axios*, *China Daily USA*, *Wall Street Journal*, *Buzzfeed News (AM2DM)*, *Bloomberg News*, *Vice News*, *Al Jazeera English*, *NBC News*, *Weather Underground*, *New Yorker*, *ProPublica*, *BBC World*, *Morning Joe*, *Chicago Tribune*, *NPR All Things Considered*, *NPR Here and Now*, *National Geographic*, *NOVA*, *BBC Horizons*, *CNN Situation Room*, *Science Friday*, *BBC Panorama*, *NHK Japan*, *NBC Meet the Press*, *CNN with Don Lemon*, *PBS News Hour*, *The Rachel Maddow Show*, *CTV*, *The Takeaway* among others regarding COVID-19 outbreak, February-December, 2020

Interview with The Weather Channel regarding influenza and respiratory forecasting, aired February 26, 2020

Podcast interview with The Environmental Breakdown on climate change and infectious disease and COVID-19, released March 13, 2020.

Advised governors of Washington and Ohio, congresspeople, state department, NY, VT, ME, CA and HI State officials, NYC mayor's office, NYC Economic Development Council, MD State Assembly, Directors Guild of America, NYC Campaign Finance Board on COVID-19 response, March-December 2020.

EXHIBIT

15

**IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF NEW YORK**

Allen HARPER, José LEON, and Ranfis PEREZ on behalf of themselves and all others similarly situated; and the RELEASE AGING PEOPLE IN PRISON CAMPAIGN (“RAPP”),

Plaintiffs,

v.

Civil Action No. 9:21-cv-19 (LEK/ML)

ANDREW CUOMO, in his official capacity as the Governor of the State of New York; NEW YORK STATE DEPARTMENT OF CORRECTIONS AND COMMUNITY SUPERVISION; ANTHONY J. ANNUCCI, in his official capacity as the Acting Commissioner of the New York State Department of Corrections and Community Supervision; JOHN MORLEY, M.D., in his official capacity as the Deputy Commissioner and Chief Medical Officer of the New York State Department of Corrections and Community Supervision; and JEFFREY TEDFORD, in his official capacity as the Superintendent of Adirondack Correctional Facility

Defendants.

DECLARATION OF JEFFREY A. SCHWARTZ,
PH.D.

I, Jeffrey A. Schwartz, Ph.D., hereby state as follows:

1. I am over the age of eighteen and am competent to make this Declaration.
2. My name is Jeffrey A. Schwartz, Ph.D., and my office is at 1610 La Pradera

Drive in Campbell, California. I am the president of Law Enforcement Training and Research

Associates, Inc. (LETRA), a criminal justice training and consulting organization that has had offices in the San Francisco Bay Area since its incorporation in June 1972. I have worked full-time with law enforcement and correctional agencies across the United States and Canada for over 35 years, both as LETRA's president and as a private consultant. The largest proportion of my work for the last 20 years has been working with prisons and jails and assisting them in applying national corrections standards to their operations.

3. I have worked with more than 40 of the 50 state Departments of Corrections, with small, medium and large jails, and with local Departments of Corrections. During my career I have toured literally hundreds of prisons and jails. I believe that I have done more work on major emergencies in jails and prisons than anyone else in the United States. I have co-authored three book-length monographs on preparing for and managing major emergencies in jails and prisons, and all three of those volumes have been published by the National Institute of Corrections (NIC), a branch of the U.S. Department of Justice. I have conducted Critical Incident Reviews (also called "After-Action Reports") following some of the most high-profile emergencies and disasters in jails and prisons in the United States in the last 40 years, including the riots in Camp Hill, Pennsylvania; the effects of Hurricanes Rita and Katrina on the Louisiana Department of Corrections; the riot and hostage-taking in Deer Lodge, Montana; the hostage-taking and rape of a Correctional Counselor at the Delaware Correctional Center; the riot at the prison in Lucasville, Ohio; and others. I have also conducted detailed audits of emergency preparedness at a number of prisons and jails across the United States and Canada and co-developed a unique system of emergency preparation and response that has been used in some form by over two thirds of the state Departments of Corrections in the country. I have provided training on emergency preparedness and response to thousands of jail and prison staff, either by

personally conducting that training or by training and certifying emergency preparedness instructors for various correctional agencies.

4. I was appointed as the Federal Court's security expert in the U.S. Virgin Islands and reviewed security in two correctional facilities there and then testified in a long-running class action and consent decree case. I also testified in a decades-long consent decree about conditions in the Shelby County, Tennessee Jail and then, at the request of the Federal Judge, conducted an evaluation of progress, leading to the discharge of that consent decree.

5. I am currently a Federal Court Monitor for the Los Angeles, California, jails in a matter that resulted in a consent decree arising out of a class action use of force lawsuit against those jails. I served as the corrections expert for the Southern Poverty Law Center in reviewing inmate violence and staff use of force in the Orleans Parish jails and testified in Federal Court resulting in a consent decree there. I similarly completed work as an expert for the U.S. Attorney's Office in the Southern District of New York (Manhattan) resulting in a consent decree that centers on inmate-on-inmate violence and use of force issues at Rikers Island. I evaluated use of force issues in the San Bernardino County, California jails, worked with the Court and the Prison Law Office to develop a new use of force policy for that jail/system, and I currently serve as a Federal Court Monitor reviewing progress on a use of force consent decree there.

6. My expert witness work and my consulting and training work have included a major emphasis on staff use of force and inmate-on-inmate violence issues. I have written and/or drafted use of force policies for state Departments of Corrections as well as county correctional facilities. I have developed and presented training on use of force to correctional staff in a number of state Departments of Corrections, county jails, and adolescent facilities. I have also

reviewed use of force investigative and review procedures in many police and correctional agencies and the largest proportion of cases in which I have served as an expert is use of force cases. I have published six articles on use of force.¹

7. Some nine months ago I recognized that the COVID-19 virus was spreading fast but that there was no guidance for prison and jail managers and administrators, although those facilities are the only housing in the United States that is higher density than nursing homes. In response, I co-authored a monograph, which Dr. Venters and I self-published for free to get it into circulation as quickly as possible.² We made minor updates and the Correctional Law Reporter then published that second edition of the monograph in its entirety.³

8. I was retained in this case by Plaintiffs' attorneys Relman Colfax PLLC and the Legal Aid Society in November of 2020.

9. My C.V. is attached as Exhibit A.

10. I am not a medical expert and I have not been asked nor have I attempted to form opinions about medical treatment issues in this case.

11. I am familiar with data showing that one in five inmates in state and federal prisons across the United States has tested positive for COVID-19.⁴ That rate is four times higher than the rate in the general population, and according to Homer Venters, formally the Chief

¹ A Note on "Verbal and Non-Verbal Indicators to Assaults"; Corrections.com; May 2009; Reducing Exposure in Use of Force Litigation; Corrections Today; June 2009; The Force Continuum: Is It Worth Keeping? Part I; Phil Collins, Jeffrey A. Schwartz, and Donald Leach; Correctional Law Reporter; December/January 2011; The Force Continuum: Is It Worth Keeping? Part II; Phil Collins, Jeffrey A. Schwartz, and Donald Leach; Correctional Law Reporter; April/May 2011; "Come and Get Me! The Best and Worst in Cell Extractions"; American Jails; July/August 2009; "Fixing Use of Force Problems"; American Jails; January/February 2010.

² JEFFREY A. SCHWARTZ, PH.D. & HOMER VENTERS, M.D., *JAILS, PRISONS, AND THE COVID-19 VIRUS: A MONOGRAPH* (2020).

³ Jeffrey A. Schwartz, Ph.D. & Homer Venters, M.D., *Jails, Prisons, and the Covid-19 Virus: A Monograph*, 32 Corr. Law Rep. 17-23 (2020).

⁴ Ben Schwartzapfel, Katie Park & Andrew Demillo, *1 in 5 prisoners in the US has had COVID-19, 1,700 have died*, ASSOCIATED PRESS, Dec. 18, 2020, <https://apnews.com/article/pandemics-race-and-ethnicity-prisons-united-states-coronavirus-pandemic-0bef0673013aa579551db5ad61b885e0>.

Medical Officer for Rikers Island, it still may be a vast undercount.⁵ The data reflect that in some state prison systems, over half the inmates have been or are currently infected with the virus. The same two sources, The Associated Press and The Marshall Project, also report the infection rate for prison staff as one in five.

12. As bad as this pandemic is for the general population of the United States, it is clear that it is a significantly more extreme crisis for correctional facilities. Being sentenced to prison should not mean that you are getting a death sentence from COVID-19. While prison inmates are at far higher risk from COVID-19 than the general population, that risk is exacerbated for older inmates and inmates with pre-existing medical conditions. The inmates at Adirondack are all older and all have pre-existing medical conditions.

13. This declaration is specific to the Adirondack Correctional Facility (“Adirondack”) in upstate New York, near Lake Placid. Adirondack was a juvenile correctional facility, but as of spring, 2020, the remaining small number of juveniles were moved out. The facility was re-purposed as a medium security adult prison and adult inmates began populating the facility in the summer. Adirondack houses a specific and special population. All of its inmates are at least sixty years old and all have serious pre-existing medical conditions, with diabetes and heart problems being the most common. None of the inmates are classified as higher than medium security. The facility has 500 beds but is currently far under that capacity at approximately 100 inmates.

14. I recognize there are serious, perhaps life-and-death, issues at Adirondack with the lack of medical services for the inmate population there and the lack of available community resources. It is not necessary to be a medical professional to recognize those issues and their

⁵ *Id.*

importance. However, those issues are outside my expertise and I will leave them to others to address. They are not considered in this declaration.

15. This declaration primarily concerns two general issues: the transfer of additional inmates into Adirondack; and the conditions at Adirondack related to COVID-19.

16. The picture of what is going on at Adirondack is shocking, not because the prison management is doing one thing that is wrong, or dangerous. It is shocking because they are doing so many things wrong that together create such a dangerous situation: they are not adequately providing masks, PPE, safe housing, sanitation, meals, testing, screening, quarantining, or recreation.

17. At the outset, it is crucial to underscore two facts. First, there is no question that state prisons have an obligation to protect inmates from known threats of harm. In general, when individuals are incarcerated, there are a number of ways in which they cannot protect themselves. That protection becomes the responsibility of the incarcerating authority. The classic analogy is that in a fire, inmates locked in their cells are as helpless to protect themselves as horses locked in a barn during a fire. Likewise, the duty of prisons and of prison staff to protect inmates from harm is long-standing, basic, and consensually accepted throughout U.S. corrections. That duty is enshrined in case and statutory federal law, state law and Department policy. This general duty to protect inmates includes the specific duty to protect them from illness and disease. Indeed, in other litigation challenging conditions in prison facilities run by Defendants, Defendants have not disputed that fundamental duty.

18. The second fact is that the U.S. Centers for Disease Control and Prevention (CDC) has issued guidance for prisons and jails to combat COVID-19. The CDC issued interim guidance in March of 2020 and by July 14, 2020 had published comprehensive procedures

specific to correctional facilities. The CDC guidelines are not theoretical, and they are not controversial; they are specific and they are the product of some of the most renowned scientists and epidemiologists in the world. There is no indication that Defendants challenge the science in the CDC guidelines and, to the contrary, the extensive DOCCS publication “DOCCS COVID-19 Report,” online and updated daily, promises the Department is adhering to those guidelines in ways that they are not.⁶

19. If Defendants acknowledge their duty to protect inmate lives, and if they do not dispute the validity of the CDC guidelines, why are they not following those guidelines to the greatest extent possible? The CDC guidelines are not intended to be an aspirational “gold standard”; they are intended to provide guidance that prisons can reasonably adhere to. If Defendants find specific provisions impossible, Defendants should say so and state why. Otherwise, the provisions of the CDC guidelines are the best ways to prevent loss of life from the pandemic in jails and prisons, and to do less will predictably result in inmate deaths and a clear breach of Defendants’ duty to protect inmates.

20. The CDC guidelines for transfer provide, in relevant part, that prisons are to:

- “Limit transfers of incarcerated/detained persons to and from other jurisdictions and facilities unless necessary for medical evaluation, medical isolation/quarantine, clinical care, extenuating security concerns, release, or to prevent overcrowding.”
- “If a transfer is absolutely necessary: Perform verbal screening and a temperature check as outlined in the Screening section below, before the individual leaves the facility. If an individual does not clear the screening process, delay the transfer and follow the protocol for suspected COVID-19 infection – including giving the individual a cloth face mask (unless contraindicated), if not already wearing one, immediately placing them under medical isolation, and evaluating them for SARS-CoV-2.”

⁶ N.Y. STATE DEP’T OF CORRS. AND CMTY. SUPERVISION, DOCCS COVID-19 REPORT, <https://doccs.ny.gov/doccs-covid-19-report> (last visited Jan. 6, 2021).

- “If a transfer is absolutely necessary: Ensure that the receiving facility has capacity to properly quarantine or isolate the individual upon arrival.”⁷

21. It is my understanding that no inmates have been transferred into Adirondack since September 2020, but that Defendants have provided no assurances they will not resume such transfers, and as there is still capacity for additional people at Adirondack, Defendants could readily continue these transfers. When inmates were transferred into the facility, it was done without observing standard, well-recognized preventative procedures against COVID-19. Based on declarations I have reviewed, inmates were transferred into Adirondack from other New York State prisons without being testing before transfer and without quarantine on arrival. That was true for all six of the inmate Declarations I reviewed in preparation for this, my own Declaration. The inmate Declarations also emphasized that it was not possible to maintain six feet of distance from other inmates during the long bus ride to Adirondack.

22. The relationship between COVID-19 infections and inmate transfers could not be illustrated more graphically than by what happened this summer at San Quentin State Prison in California. Importantly, while most of California’s more than thirty state prisons are located in isolated or rural areas and away from metropolitan communities, San Quentin is in the midst of Marin County, just north of San Francisco and surrounded by suburbs. San Quentin’s 3,500 inmates had zero cases of COVID-19 until the state Department of Corrections transferred 121 inmates into San Quentin from the California Institution for Men in Southern California, which was having a COVID-19 outbreak. The virus spread through San Quentin like wildfire,

⁷ CTRS. FOR DISEASE CONTROL & PREVENTION, INTERIM GUIDANCE ON MANAGEMENT OF CORONAVIRUS DISEASE 2019 (COVID-19) IN CORRECTIONAL AND DETENTION FACILITIES (Dec. 31, 2020), <https://www.cdc.gov/coronavirus/2019-ncov/community/correction-detention/guidance-correctional-detention.html>.

eventually infecting more than 2,200 inmates there and killing 28 inmates in the largest single outbreak of the virus in the United States.

23. If COVID-19 were to gain a foothold at Adirondack and start spreading, it would likely be even more devastating than at San Quentin because of the age of the Adirondack inmates and their pre-existing medical conditions. That is a proposition that no one needs or wants to be tested.

24. The relief which Plaintiffs are asking for with regard to transfer of inmates should not be difficult for Defendants. Plaintiffs are asking that Defendants agree: a. that no more inmates be transferred into Adirondack; or, b. agree that no additional inmates be transferred to Adirondack until the prison can show that it is conducting transfers in compliance with the 8th Amendment and the Americans with Disabilities Act, for example, by ensuring that any inmate transferred is tested for the virus prior to transfer, that only those inmates who test negative shall be transferred, and that any inmate transferred into Adirondack shall, upon arrival, be quarantined for fourteen days from other inmates at the facility and from staff working at the facility. In my opinion, the guarantees that Plaintiffs are asking from Defendants are little more than common sense. None of those conditions would present unusual or particularly substantial operational challenges to the running of the facility. The Adirondack population has remained at approximately 100 for several months, indicating there has been no urgent need to continue to transfer inmates to the facility. If the need to increase the population arose, a population increase would not present a problem as long as the appropriate safety protocols were followed with regard to transfers.

25. The remainder of my Declaration has to do with day-to-day operations at Adirondack and the operational measures being used to prevent infections and transmission of the virus, or the lack of such measures.

26. The CDC guidelines for isolation and quarantine provide, in relevant part:

- “As soon as an individual develops symptoms of COVID-19 or tests positive for SARS-CoV-2 they should be given a mask . . ., immediately placed under medical isolation in a separate environment from other individuals, and medically evaluated.”
- “Incarcerated/detained persons who are close contacts of someone with confirmed or suspected COVID-19 . . . should be placed under quarantine for 14 days.”⁸

27. In order to identify who has COVID-19, inmates should be tested for COVID-19 regularly, preferably every two weeks but no less than once a month. Inmates should be screened with a digital thermometer as often as practical but at least every week. Staff should be screened daily with a thermometer when they report to work but at the perimeter of the facility. Staff should be tested weekly.

28. If an inmate tests positive, that inmate should be isolated, if hospital care is not necessary, and all of that inmate’s contacts, both staff and other inmates, should be quarantined for fourteen days. That is not being done. The inmate declarants described that when an inmate tested positive, the staff in contact with that individual were sent home to quarantine, but other inmates in contact were not identified and no inmates were put in quarantine or tested after a waiting period to ensure they were not infected. Here again, it is not that there is controversy about safe practices. The facility is concerned about staff safety, so staff are quarantined after a contact. Why then would Defendants not similarly follow this procedure for inmates? In both of the jails I am most familiar with, in Los Angeles and in San Bernardino County, isolation and

⁸ *Id.*

quarantine procedures for inmates after someone tests positive are standard and have been for some time. That is also true in other jails and prisons I know about across the country from Hawaii to Virginia. The Virginia Department of Corrections is a good example. I know that they follow the CDC guidelines explicitly and in detail, from masks to transfers to isolation and quarantine. Obviously, it is not the case that a state correctional agency cannot comply with CDC guidance if they choose to.

29. With 100 inmates in a 500-bed facility, there is no reason for any inmates to be double celled or to be housed in rooms without doors. However, the inmate declarations describe housing units with 12 to 16 rooms with doors and 6 to 8 rooms without doors. Some of the inmates submitting declarations are assigned to rooms with no doors. That creates an unnecessary risk of transmission.

30. Adirondack is a 500-bed facility with only 100 beds in use. It is my understanding that many parts of the facility are not in use. There is no reason Defendants cannot open additional areas so that there is an isolation unit, a quarantine unit, and enough general population units such that each inmate can have a single room with a door.

31. The CDC guidelines concerning mask use provide, in relevant part, that prisons should:

- “Provide masks at no cost to incarcerated/detained individuals and launder them routinely.”
- Provide “[c]loth face masks for source control”⁹

32. It appears that the situation with masks for inmates is improved from the summer but is still grossly inadequate. Of the six inmate declarations I reviewed, five said they have paper masks which they must wash in the sink with soap and water because they are not replaced

⁹ *Id.*

or replaced often. The sixth inmate uses a bandana as a face covering, something he fashioned himself. All inmates should be issued cloth masks. Paper masks are not acceptable unless they are provided in sufficient numbers to allow them not to require cleaning; providing so few paper masks that inmates must wash them is unacceptable, as it degrades the masks' quality. Inmates should be issued a new cloth mask no less frequently than every two weeks. CDC guidelines specify cloth masks of at least two layers of material. Their publications do not mention or acknowledge paper masks.

33. None of this should be surprising for Defendants; indeed, they purport to be taking these steps right now, though they are not doing so at Adirondack. The website with most current DOCCS public report on Covid-19 (Dec. 31, 2020) prominently features this notice above the title of the Report: "COVID-19 is still spreading, even as the vaccine is here. Wear a mask, social distance and stay up to date on New York State's vaccination program.". Yet neither of those things are being done at Adirondack. In the section of the report "What DOCCS is Doing", the report lists a number of steps. The first two listed are: "Mandating all staff to wear face masks while on duty" and "Supplying all incarcerated individuals with surgical-type masks."¹⁰ Neither of these publicly heralded measures are true at Adirondack, or they are not conducted and enforced in a meaningful way.

34. Inmate declarations are consistent in stating that although staff have been issued masks, many staff either do not wear them or do not wear them consistently. Adirondack must mandate that all staff wear masks throughout their workday and must discipline those staff who do not comply. Prison staff work in a highly regulated environment. There are hundreds of pages of policy and procedure and the penalty for violating established policy may be days of

¹⁰ New York State Department of Corrections and Community Supervision, *supra* note 6.

suspension without pay or even termination. Staff quickly learn, however, which policies are enforced and which are only paper requirements. Based on the inmate declarations, no mask policy is being enforced. That is relatively easy to correct. If the facility management emphasizes to all officers, supervisors, and managers that masks, properly worn, are mandatory at all times while on duty and that all violations will be met with formal discipline, the situation will change. As soon as an officer is given days off for a second mask violation, the word will spread and masks will be worn.

35. The CDC guidelines concerning movement within prisons provide, in relevant part, that prisons should:

- “Make every possible effort to modify staff assignments to minimize movement across housing units and other areas of the facility. For example, ensure that the same staff are assigned to the same housing unit across shifts to prevent cross-contamination from units where infected individuals have been identified to units with no infections.”
- “Make a list of possible social distancing strategies that could be implemented as needed at different stages of transmission intensity.”¹¹

36. Activities such as recreation, showers, feeding and the like should be designed so that all inmates can maintain social distance from other inmates and from staff. That is not the case at Adirondack. For meals, inmates go to the dining hall (“mess hall”) 45 to 50 at a time. They line up to receive food very close to each other and then sit at tables and eat without masks with people on either side and directly across. Because of the policy of requiring people to eat in the dining hall together, it is not possible to maintain six feet of distance there. The prison could either serve inmates their meals in their rooms, as is done at many correctional facilities, or spread out meal time and feed in smaller groups, maintaining social distance in food lines and at dining tables. Similarly, the dayrooms where inmates pass time watching television have several

¹¹ Centers for Disease Control and Prevention, *supra* note 7.

benches and the declarations make it clear that inmates sit next to each other because the only alternative would be to stand for hours. There is a simple solution. Portable or folding chairs could be added to each dayroom in sufficient numbers such that every inmate could watch television while maintaining adequate distance from others. That would not work at a maximum security facility because the chairs are potential weapons but at Adirondack, with medium security inmates who are also elderly, the risk is not high.

37. The fact that the prison feeds people three times a day in crowded, unsafe conditions reflects indifference to and refusal to implement the most obvious and common-sense measures that would decrease the chance that these men will get COVID-19. That conclusion is not difficult. The prison officials knew about COVID-19 many months ago – one would have to live on Mars not to have heard a great deal about it, and I suspect that even on Mars they were receiving Governor Cuomo’s daily press conferences. Yet, some of the obvious preventative measures have not been taken. Perhaps extra cleaning supplies and cloth masks were a budget issue or a matter of availability, but compliance with a mask policy for staff costs nothing and presents no additional operational challenges or complexities. Enforcing social distancing in lines in the dining hall when waiting for food costs nothing and might actually decrease inmate tension. It is what those same prison officials must do after work when in line at a grocery store, so why have they not done it for inmates? Arranging feeding differently, perhaps in smaller groups so that inmates from different living units do not mix, would not be rocket science. There are many other examples of steps that could have been taken and have not been.

38. With respect to soap, the CDC guidelines provide, in relevant part, that prisons should:

- “Provide a no-cost supply of soap to incarcerated/detained persons. . . Provide liquid or foam soap where possible.”¹²

39. The inmate declarations are also consistent in complaining that cleaning supplies and hand sanitizers are not readily available. Inmates receive only two bars of soap for every two weeks, to be used for all of their soap needs, including regular hand-washing, as no hand soap is provided in the bathrooms. In many instances, if inmates run out of this soap they are required to buy more. Inmates should be given enough soap and other disinfectants that are effective against the virus to allow every inmate to clean their cell or sleeping area at least once a day and to wash their hands with soap eight times per day.

40. As was true with the question of transferring additional inmates into Adirondack, these issues that Plaintiffs are specifying should not present insurmountable problems operationally or from the perspective of facility management.

41. In other litigation and in many other places, the New York State Department of Corrections and Community Supervision readily acknowledges that it has a long-standing, well-established and incontrovertible duty to protect inmates, including the duty to protect them from illness. The Department goes to great lengths and great expense in some cases to comply with that duty. Here, without extraordinary resources and without major disruption of operations, the facility could take a number of steps to better protect the health of the inmate population.

42. New York’s Governor, Andrew Cuomo, was one of the first in the United States to take strong preventive measures to protect the state’s residents. It is not unreasonable to ask that a branch of his state government take fundamental measures to protect individuals who are at far higher risk and far more inherently vulnerable than most New York State residents.

¹² *Id.*

that a branch of his state government take fundamental measures to protect individuals who are at far higher risk and far more inherently vulnerable than most New York State residents.

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

EXECUTED WITHIN THE UNITED STATES ON: June 7, 2021, 2021.

BY:

Jeffrey A. Schwartz
Jeffrey A. Schwartz

EXHIBIT

A

Jeffrey A. Schwartz, Ph.D.

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SUMMARY

Thirty years experience in criminal justice management coupled with a psychology Ph.D. in research methodology. Detailed, hands-on experience with police, prisons, jails, community corrections; adult and juvenile; local, state, federal and foreign correction agencies. Development of innovative training programs and new approaches to training methodology. Planning for “turnaround management” and culture change in troubled institutions and agencies.

PROFESSIONAL EXPERIENCE

LETRA, Inc., Campbell, CA (1972 - present), A non-profit training and research organization, serving criminal justice and other governmental agencies, business and industry.

Founder and Chief Executive Officer:

All phases of corporate and fiscal management, supervision of professional staff, consultants. Policy development and procedures for emergency preparedness, use of force and conflict resolution. Design of new training programs and training of trainers.

RICHMOND POLICE DEPARTMENT, Richmond, CA (1968-1976)

Administrative Consultant to the Chief of Police:

Organizational development, research, program evaluation, new training programs and grants. Developed first generalist police crisis intervention training program in the U.S.. Planned and organized innovative department-wide juvenile diversion project, used as state model. National research on female and minority employment in policing.

PALO ALTO VETERAN'S HOSPITAL, Palo Alto, CA (1969-1971)

Chief of Program Evaluation Unit:

Founded, organized and managed new applied research unit in large medical/psychiatric teaching hospital. Developed research and statistical strategies for evaluating effectiveness of clinical programs. Served on Hospital Director's Executive staff.

EDUCATION

1960-1964	Western Reserve University	B.A. Chemistry and English Literature.
1964-1965	Toledo University	Graduate work: Psychology
1965-1968	Denver University	M.A. & Ph.D. Experimental Psychology (Research Methods, Learning, Statistics)
1968-1969	Palo Alto Veteran's Hospital	Internship: Clinical and Community Psychology

CORRECTIONS EXPERIENCE (representative sample)

National Institute of Corrections: Thirty years experience working with NIC. Conducted two large national management training programs over three years. Developed original curriculum, innovative training methodology, trained 500 managers from all areas of corrections from all 50 states in a residential 7-day, intense corrections-specific management skills training program. Administered all aspects of these projects. Project Director for more than 10 major NIC grants / cooperative agreements; technical expert on more than 25 NIC technical assistance projects from all four NIC operating Divisions; authored 3 book length NIC publications. Helped plan new NIC courses and evaluated NIC operating procedures.

Shelby County, TN (Memphis) Jail: Comprehensive operational review of deeply troubled large jail system after Federal Court found the county in contempt of all five major elements of consent decree (2000). Developed plan to cure contempt findings, drafted response to Civil Rights Division of US DOJ to avoid second 1983 suit, worked on transformation of jail to direct supervision and on population management, use of force, inmate grievance system, management training and practices. Achieved discharge from Federal Court supervision in 2005 and from DOJ supervision in 2009.

California Youth Authority (CYA): The development of Conflict Management and Crisis Intervention procedures in all Youth Authority institutions; training and procedures for the management of hostage situations; training of trainers. LETRA's Crisis Intervention training program has been required by policy of all CYA institutional staff and in use for over 15 years, and LETRA's Emergency Preparedness course was in use state-wide for over ten years.

Montana Department of Corrections (DOC): After the maximum security unit riot and hostage situation at the Montana State Prison in Deer Lodge, in 1991, selected by NIC to head the seven person Administrative Inquiry Team commissioned to investigate the events leading to and surrounding the riot. Coordinated the writing of the Inquiry Team Final Report ("Riot at Max") and managed extensive media contacts for the Inquiry Team.

Michigan DOC, Hawaii DOC, Alaska DOC: Initiated state-wide training programs in each state on institutional crisis intervention. All three State DOC's continued to provide this training to all or almost all institution staff for many years.

Pennsylvania DOC: After Camp Hill riots, conducted assessment of Department's emergency response capacity, developed plan to increase preparedness including recommendations for specialized equipment, staff, etc. Conducted administrative policy seminar, tailored emergency training curriculum to department's needs, trained cadre of mid-managers to deliver emergency preparedness training at all 16 institutions to both management and line/supervisory staff and developed format for new institutional emergency plans.

Nebraska, Iowa, Wyoming, Oregon, Kentucky, North Carolina, Missouri, Kansas, Florida, Delaware, North Dakota, Hawaii, Nevada, Arkansas, Vermont and New Hampshire DOC's, the Omaha, Jacksonville, Greenville and Boise jail systems: Emergency Preparedness. Typically began with security analysis and evaluation of existing emergency plans and procedures, review of emergency policies, leading to adaptation of LETRA's detailed, comprehensive and generic ("all risk") emergency system. Provided Emergency Preparedness training for all staff at all institutions on new emergency system by training and certifying department instructors.

Hawaii DOC: Created new Use of Force policy, then developed curriculum to train all staff to new policy. Prepared Department staff as instructors so Department would be self-sufficient. Achieved substantial reduction in allegations of improper use of force. Similarly adapted LETRA's model use of force policy and training for state DOC's in Oregon, New Mexico, Shelby Co. Jail.

Correctional Services of Canada: Crisis Intervention and Conflict Resolution work at Stony Mountain Penitentiary following riot and murder of two staff members. Developed Conflict Resolution program (in English and French) for all Regions of Penitentiary Service. Revised and expanded emergency policies governing crisis management at all Federal institutions in Canada.

POLICE CONSULTATION EXPERIENCE (representative sample)

FBI National Academy, Quantico, Virginia: Presented two seminars on Domestic Crisis Intervention to police executives from largest 50 police departments in U.S. LETRA was the first outside group (non-FBI) to be invited to present an entire course at the FBI Academy.

Richmond, California, Police Department: Developed new 40-hour training program for generalist patrol officers on child and juvenile issues. Course ranged from gangs to drug abuse to battered and neglected children. All uniformed officers and detective trained within one calendar year.

Sacramento, California, Police Department and Sheriff's Office: Long-term project to train trainers in Crisis Intervention. Over 1500 patrol officers trained in LETRA's Domestic Crisis Intervention during an 18 month period. Evaluation showed 40% reduction of officer injuries, reduction in time spent on disputes. Similar projects in Rochester, NY; San Jose, CA; and other police agencies.

COLLEGE/UNIVERSITY TEACHING EXPERIENCE

Denver University, San Francisco State University, San Jose City College, University of California at Santa Cruz, Guest Lecturer at Stanford Law School. Psychology courses taught: Learning, Theory of Measurement, Educational Psychology, Introductory Statistics. Criminal justice courses: Correctional Management, Police Supervisory Training, Training for Trainers, etc.

EXPERT WITNESS (Plaintiff and defense-side experience)

Use of Force (Police and Corrections); Operation of Correctional Facilities; Failure to Protect (Staff Sexual Misconduct with Offenders; Suicide; etc.); Emergency Preparedness and Emergency Response (Prisons and Jails); Crisis Intervention (Police, Probation, Parole, Jails and Prisons)

Currently a Federal Court Monitor On a Los Angeles Jails class action consent decree on use of force; Also Federal Court Monitor, use of force consent decree, San Bernardino County Jails.

Class Action and related cases: Corrections expert in class action by Southern Poverty Law Center and Special Litigation Section of DOJ resulting in 2013 Consent Decree against New Orleans Jails; Corrections expert for Manhattan U.S. Attorney's Office in CRIPA investigation of adolescent conditions, Rikers Island; Invited testimony before Citizens' Commission on Jail Violence (CCJV), Los Angeles Jails; Federal Court security expert, consent decree on conditions, Virgin Islands Jails;

CRITICAL INCIDENT REVIEWS ("after-action reports")

Camp Hill (PA) riots; Hurricanes Katrina and Rita and the LA DOC; Hostage taking at Delaware Correctional Center; "Riot at Max" at Montana State Prism; Wyoming Penitentiary carbon monoxide poisonings; Southern Ohio Correctional Facility (Lucasville) riot.

AWARDS, PUBLICATIONS AND INVITED ADDRESSES

NDEA Fellow in Graduate Psychology. Presented invited addresses at ACA, APPA, AJA, CPPCA, IACP meetings, State Correctional Associations. Published numerous articles and chapters on corrections, research methodology, police science and psychology. Authored or co-authored more than 15 training texts, three book length NIC publications early NIC programmed learning course.

PROFESSIONAL ORGANIZATIONS (current and former)

American Correctional Association; American Probation and Parole Association; American Jail Association; California Probation, Parole and Corrections Association; American Psychological Association; International Association of Chiefs of Police

COMMUNITY INVOLVEMENT

Elected Trustee, West Valley-Mission Community College District, three terms. Served as President of Governing Board 1984-85 and 2005-2006. The District serves over 25,000 students, with more than 1000 employees and a budget of over \$100 million dollars per year.

Member, Bd. of Directors, former President of large homeowners' association in Saratoga, CA.

Vice Chair, Board of Directors (1988 - 1995), Women's Housing Connection, which was the only homeless shelter in Santa Clara County exclusively for women and women with young children.

Co-founder and Director (1986-2009), Visa Technologies (later Momar Industries), a computer supply and flexible packaging company with over \$10M in sales, annually.

Volunteer Mediator, Child Find, Inc., A national organization that attempts to locate missing children, reconcile run-away children and juveniles with their families, and prevent child abduction.

ADDITIONAL SKILLS AND EXPERIENCE

Budget and Personnel Management: As President of a College Board of Trustees, oversaw a budget in excess of \$100M/year with approximately 1000 professional and support staff. Oversaw private corporate budget (Visa Technologies) in excess of \$10M/year with 65 employees. Extensive experience teaching leadership development, personnel administration, budget and fiscal control and other management topics to criminal justice managers.

Media Relations and Public Speaking: Extensive media experience in community activities as well as with criminal justice work. Frequent public speaking in a wide variety of contexts.

Legislative Liaison and Policy Analysis: Substantial experience working with local legislative delegations, testifying before legislation bodies, analyzing and drafting policy and regulations.

Special Consultant to the California Assembly: (1) Investigation and hearings leading to resignation of Insurance Commissioner Charles Quackenbush. (2) Investigation and hearings on the state of California contract for Oracle software.

EXHIBIT

16

**IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF NEW YORK**

Allen HARPER, José LEON, and Ranfis PEREZ on behalf of themselves and all others similarly situated; and the RELEASE AGING PEOPLE IN PRISON CAMPAIGN (“RAPP”),

Plaintiffs,

v.

Civil Action No. 9:21-cv-19 (LEK/ML)

ANDREW CUOMO, in his official capacity as the Governor of the State of New York; NEW YORK STATE DEPARTMENT OF CORRECTIONS AND COMMUNITY SUPERVISION; ANTHONY J. ANNUCCI, in his official capacity as the Acting Commissioner of the New York State Department of Corrections and Community Supervision; JOHN MORLEY, M.D., in his official capacity as the Deputy Commissioner and Chief Medical Officer of the New York State Department of Corrections and Community Supervision; and JEFFREY TEDFORD, in his official capacity as the Superintendent of Adirondack Correctional Facility

Defendants.

DECLARATION OF MARK FENIG, MD

I, Mark Fenig, MD, hereby state as follows:

1. I am over the age of eighteen and am competent to make this Declaration.

2. I am a physician duly licensed to practice medicine in the State of New York. I have over 10 years of experience working as a full-time attending emergency medicine physician in the Bronx, New York.

3. I received my medical degree from the Sackler School of Medicine in 2007 and completed my Emergency Medicine residency training at Emory University School of Medicine in 2010. After completing my specialty training I served as a full time attending physician in Montefiore Medical Center's Department of Emergency Medicine – Weiler Division from August 2010 until August 2012. I was then a full time attending physician for NYC-HHC Lincoln Medical and Mental Health Center from August 2012 until August 2017. I then returned to the Montefiore Medical Center's Weiler Division where I resumed my full-time duties as an attending physician and where I am presently employed.

4. I have also held academic appointments at both Weill Cornell Medical School and the Albert Einstein College of Medicine. I am an Assistant Professor of Emergency Medicine at the Albert Einstein College of Medicine (November 2010 – 2014 and again from August 2017 – present). I was a clinical Instructor of Emergency Medicine at Weill Cornell Medical College (November 2012 – August 2017).

5. I am a Diplomate of the American Board of Emergency Medicine (certification valid from June 2011 to December 2021). I was a Fellow of the American Academy of Emergency Medicine (FAAEM 2012 – 2016), and a Fellow of the American College of Emergency Physicians (FACEP 2007 – 2012; 2017).

6. As an emergency medicine physician in the Bronx, New York, a region that was particularly hard hit with severe COVID-19 infection, I have treated and continue to treat many patients infected with COVID-19.

7. As part of my clinical work, it is my responsibility to remain current on much of the relevant COVID-19 scientific literature in order to educate patients about their individual risk factors for severe COVID-19 illness and to educate patients about methods of infection prevention.

8. My C.V. is attached as Exhibit A.

9. At the request of Relman Colfax PLLC and the Legal Aid Society, I have reviewed the following documents:

Centers for Disease Control (CDC) Interim Guidance on Management of Coronavirus Disease 2019 (COVID-19) in Correctional and Detention Facilities; Interim Considerations for SARS-CoV-2 Testing in Correctional and Detention Facilities; Centers for Disease Control (CDC) Certain Medical Conditions and Risk for Severe COVID-19 Illness; DOCCS COVID-19 Report - COVID-19 Safety Measures; New York State Department of Public Health COVID-19 Recommendations; the declarations of the following men incarcerated at Adirondack Correctional Facility: Allen Harper (“Plaintiff Harper”), Jose Leon (“Plaintiff Leon”), Gregory Jenkins (“Witness Jenkins”), Ranfis Perez (“Plaintiff Perez”), John Spadaro (“Witness Spadaro”), Juan Cangiano (“Witness Cangiano”), Gregory Jenkins (“Witness Jenkins”), Bradford Applegate (“Witness Applegate”), and Francisco Salinas (“Witness Salinas”); and the supplemental declarations of Plaintiff Perez, Plaintiff Harper, Plaintiff Leon, and Witness Spadaro.

10. SARS-CoV-2 is a virus that causes the COVID-19 disease.¹ To date, there is no curative medical treatment. Multiple vaccines have been developed, but it will take at least

¹ Unless otherwise specified, “SARS-CoV-2” and “COVID-19” will be used interchangeably throughout this declaration.

months before there will be sufficient herd immunity from mass vaccination to effectively arrest the spreading pandemic.

11. The CDC has promulgated guidelines to prevent or mitigate the spread of SARS-CoV-2, including specific guidelines for slowing the spread of the virus in jail and prison settings. While these guidelines are not laws, they represent common sense public health measures that are based on science and directed to prevent the spread of COVID-19. Specifically, they recommend: (1) social distancing, (2) temperature and symptom screening of everyone who enters or leaves a facility, (3) isolation of individuals with symptoms of COVID-19, (4) quarantining close contacts of COVID-19 cases, (5) testing all symptomatic and quarantined individuals for the SARS-CoV-2 virus, (6) asymptomatic routine testing for new incarcerated or detained persons (“IDPs”) before joining general population or quarantine for fourteen days before assimilation along with testing prior to transferring to a new facility, (7) frequent cleaning and disinfecting of surfaces and objects that are repeatedly touched, (8) providing sufficient and proper hygiene supplies at no cost to facilitate frequent handwashing, and (9) mandatory mask wearing by all individuals who have the potential for direct or indirect exposure to COVID-19 cases.

12. Adirondack Correctional Facility (“Adirondack”) is a congregate environment where inmates spend a significant portion of each day in close proximity to each other. As such, the risk for COVID-19 exposure, infection, and transmission is increased. Inmates are therefore at especially high risk of infection without protective measures in place. These measures include physical distancing, mask wearing, screening and testing protocols, non-punitive quarantining and isolation, and rigorous cleaning and hygiene practices.

13. Based on my review of the aforementioned declarations, it is clear to me that the following protective health measures have not been consistently operationalized or practiced in Adirondack Correctional Facility:

I. Physical Distancing

14. While jails and prisons do present challenges for the enactment of social distancing measures, social distancing in prisons is possible and recommended, as the CDC guidance reflects. Still, all six witnesses who were interviewed declared that physical distancing was inconsistently enforced at best and ignored at worst.

15. The CDC has stated that high risk airborne droplet transmission of SARS-CoV-2 occurs in enclosed spaces, during prolonged exposure to respiratory particles, and in settings with inadequate ventilation or air handling.² Other studies have demonstrated that SARS-CoV-2 is spread through non-contact transmission³ (such as droplets or airborne particles) and is particularly dangerous in indoor environments that are crowded and poorly ventilated.^{4,5} The CDC brief specifies that airborne transmission of SARS-CoV-2 occurs in “enclosed spaces within which an infectious person either exposed susceptible people at the same time or to which susceptible people were exposed shortly after the infectious person had left the space.”⁶ This accurately describes the environment at Adirondack Correctional Facility, where inmates are

² CENTERS FOR DISEASE CONTROL AND PREVENTION, SCIENTIFIC BRIEF: SARS-CoV-2 AND POTENTIAL AIRBORNE TRANSMISSION (OCT. 5, 2020), available at <https://www.cdc.gov/coronavirus/2019-ncov/more/scientific-brief-sars-cov-2.html>.

³ Jasper Fuk-Woo Chan et al., *Surgical Mask Partition Reduces the Risk of Noncontact Transmission in a Golden Syrian Hamster Model for Coronavirus Disease 2019 (COVID-19)*, 71 CLINICAL INFECTIOUS DISEASES 16, 2139 (2020), available at <https://academic.oup.com/cid/article/71/16/2139/5848814>.

⁴ Lidia Morawska & Donald K. Milton, *It Is Time to Address Airborne Transmission of Coronavirus Disease 2019 (COVID-19)*, 71 CLINICAL INFECTIOUS DISEASES 9, 2311 (2020), available at <https://academic.oup.com/cid/article/71/9/2311/5867798>.

⁵ Keun-Sang Kwon et al., *Evidence of Long-Distance Droplet Transmission of SARS-CoV-2 by Direct Air Flow in a Restaurant in Korea*, 35 J. KOREAN MED. SCI. 46, 415 (2020), available at <https://jkms.org/DOIx.php?id=10.3346/jkms.2020.35.e415>.

⁶ CENTERS FOR DISEASE CONTROL AND PREVENTION, *supra*.

particularly susceptible to infection due to advanced age and their enclosed living environment without adequate physical distancing. Social distancing measures should therefore be adopted at Adirondack, as the CDC specifically states that “existing interventions to prevent the spread of SARS-CoV-2 appear sufficient to address transmission both through close contact and under the special circumstances favorable to potential airborne transmission.”⁷

A. Day Rooms

16. Common areas include, but are not limited to, housing unit day rooms where there are benches for communal seated gathering and televisions; areas where inmates are expected to line up, such as the food or medication line; and the mess hall where inmates dine.

17. All six witnesses consistently expressed a lack of critical social distancing in different areas of Adirondack prison. Plaintiff Harper, Plaintiff Leon, Plaintiff Perez, and Witness Spadaro described the day room as a communal space where Adirondack has made no effort to facilitate physical distancing. The benches that exist as the only seating options do not afford sufficient seating space between inmates. Plaintiff Leon declared that, “There are two day rooms... The rooms are small and there are regularly 15-20 people in the rooms at one time.” Declaration of Jose Leon (“Leon Decl.”). Similarly, Plaintiff Harper declared that, “There is a room where we watch television in my house. The room is extremely small and people sit immediately next to each other when they are in there - there is no way to socially distance.” Declaration of Allen Harper (“Harper Decl.”). Plaintiff Perez confirmed the same concern during a telephonic interview I conducted with him. Supplemental Declaration of Ranfis Perez (“Perez Supp. Decl.”). Witness Spadaro echoed the same concern in his declaration and added that he is prohibited from introducing a chair into the dayroom. Declaration of John Spadaro (“Spadaro

⁷ *Id.*

Decl.”). Adirondack’s policies prevent physical distancing in Adirondack Correctional Facility’s day rooms.

B. Bathrooms

18. Similar to day rooms, Adirondack’s bathrooms can become crowded, creating an environment that precludes physical distancing. Both Witness Spadaro and Witness Cangiano declared that they are required to use the bathroom with multiple other people at once – for example, when shaving – and disclosed to counsel that there is frequently less than six feet of distance between people in the bathroom. Additionally, Witness Salinas states that during the time for shaving, multiple inmates stand shoulder to shoulder in front of the bathroom mirror, without masks. Declaration of Francisco Salinas (“Salinas Decl.”). Close contact without masks, above all else, encourages the spread of SARS-CoV-2 virus.

C. Dining Hall

19. The most concerning deviation from the physical distancing guidelines as outlined by the CDC’s Interim Guidance on Management of Coronavirus Disease 2019 (COVID-19) in Correctional and Detention Facilities⁸ and NYSDOH guidelines⁹ to prevent the spread of COVID-19 is in the dining halls. Inmates do not wear masks as they eat. Obviously, physical distancing becomes especially critical when inmates are exposed to other inmates who are not wearing masks. Plaintiff Harper, Plaintiff Leon, Witness Jenkins, Plaintiff Perez and Witness Cangiano all reported that there is insufficient physical distancing during meal times in the dining areas. Plaintiff Harper states, “There are often 45-50 other individuals eating at the same

⁸CENTERS FOR DISEASE CONTROL AND PREVENTION, INTERIM GUIDANCE ON MANAGEMENT OF CORONAVIRUS DISEASE 2019 (COVID-19) IN CORRECTIONAL AND DETENTION FACILITIES (DEC. 31, 2020), *available at* <https://www.cdc.gov/coronavirus/2019-ncov/community/correction-detention/guidance-correctional-detention.html>.

⁹ NEW YORK STATE DEPT. OF HEALTH, PROTECT YOURSELF AND YOUR FAMILY FROM CORONAVIRUS (COVID-19) (last accessed Jan. 7, 2021), *available at* <https://coronavirus.health.ny.gov/protect-yourself-and-your-family-coronavirus-covid-19>.

time,” and because of this arrangement, “it is not possible to maintain six feet of distance during meal times. People are closer than six feet from each other when getting food and sitting and eating. Previously people only sat on one side of the table... now they have implemented a rule where people sit across from each other... We are not allowed to bring food from the mess hall to eat in our rooms.” Harper Decl..

20. Studies have shown that spread of SARS-CoV-2 is more likely in crowded, poorly ventilated indoor environments.^{10,11,12} Eating, which necessitates that the individual remove their mask, becomes a particularly perilous activity, as there is no barrier to mitigate the viral spread.¹³ Thrice daily, inmates at Adirondack Correctional Facility are faced with the following choice: having access to a meal or avoid the most dangerous exposure to COVID-19.

D. Physical Distancing when Assembling in Lines

21. Lines are frequent points of assembly in prison environments. Plaintiff Harper noted that there was no physical distancing when lining up in the mess hall for food.. Witness Jenkins also documents that only 2 feet of physical distancing exists while waiting for medications in the med line. Declaration of Gregory Jenkins (“Jenkins Decl.”).

E. Physical Distancing Between Housing Units

22. Mitigating the potential spread of COVID-19 in congregate living situations such as prisons is best achieved when cohorts of inmates are siloed, such as in housing units. If an infectious outbreak occurs, close contact exposure of different housing units to each other would allow COVID-19 to infect a much larger number of inmates and staff. Thus, the CDC

¹⁰ Lidia Morawska & Donald K. Milton, *supra*.

¹¹ Keun-Sang Kwon et al., *supra*.

¹² CENTERS FOR DISEASE CONTROL AND PREVENTION, *supra*.

¹³ Jasper Fuk-Woo Chan et al., *supra*.

recommends that when possible, prisons reduce interactions between housing units, such as during meals and group or work detail activities.¹⁴

23. Plaintiff Harper, Plaintiff Leon, Plaintiff Perez and Witness Jenkins all state that housing units are not staggered during meal times; rather, different housing units eat at the same time in the same mess hall. Supplemental Declaration of Allen Harper (“Harper Supp. Decl.”); Supplemental Declaration of Jose Leon (“Leon Supp. Decl.”); Perez Supp. Decl.; Jenkins Decl.. As mentioned above, mealtime at Adirondack Correctional Facility is especially fraught with risk of contracting COVID-19 because of insufficient physical distancing between inmates without masks over extended periods of time.

24. Plaintiff Perez disclosed to me during a telephonic interview that during his work detail as an orderly he is required to work alongside inmates from other housing units without physical distancing and that his work detail group cleans in many different housing units. In other words, inmates are unnecessarily exposed to members of other housing units during their work detail, and different housing units are also exposed to the work group’s collective COVID-19 exposure.

25. The migration of inmates from multiple prisons to Adirondack also involved mixing prisons populations in confined spaces even before arrival to Adirondack. Witness Spadaro states “People from Green Haven Correctional Facility and Otisville Correctional Facility were transported to Fishkill, where we were all placed on the bus to Adirondack.” Spadaro Decl. at ¶ 4.

¹⁴ CENTERS FOR DISEASE CONTROL AND PREVENTION, *supra*.

26. Adirondack Correctional Facility's refusal to safely keep inmate cohorts separated undermines the ability to contain a potential outbreak, therefore placing these clients as well as all inmates and staff at risk of infection.

F. Physical Distancing During a Transfer

27. The CDC recognizes that migrating cohorts of inmates poses a risk of exposing a COVID-19-free cohort to another cohort that may be infected with COVID-19. Therefore, the common-sense guidelines that the CDC recommends include symptom screening and temperature checks prior to an inmate's transfer. The CDC also recommends bus operators open bus windows to increase airflow while transporting passengers.¹⁵ Spacing inmates apart from each other, consistent with both the CDC and NYDOH guidelines should also be enforced so as to limit viral spread in this confined environment. Research has shown that respiratory droplets in confined spaces are much more likely to linger and infect others than when in larger or outdoor environments.¹⁶

28. All six declarants were transferred to Adirondack Correctional Facility from other prisons. At least one, Plaintiff Harper, was transferred during a COVID-19 outbreak at his previous facility. Harper Decl.. The mass mixing and assimilation of multiple prison cohorts as reflected in the Plaintiffs' and Witness' declarations include Plaintiff Harper's transfer from Woodbourne Correctional Facility, Plaintiff Leon's transfer from Otisville Correctional Facility, Plaintiff Perez's transfer from Eastern Correctional Facility, and Witness Jenkins', Witness Spadaro's and Witness Cangiano's transfer from Fishkill Correctional Facility.

¹⁵ CENTERS FOR DISEASE CONTROL AND PREVENTION, COVID-19 EMPLOYER INFORMATION FOR BUS TRANSIT OPERATORS (DEC. 31, 2020), *available at* <https://www.cdc.gov/coronavirus/2019-ncov/community/organizations/bus-transit-operator.html>.

¹⁶ Lidia Morawska & Donald K. Milton, *supra*.

29. Plaintiff Harper, Plaintiff Leon, Witness Jenkins, Witness Spadaro and Witness Cangiano all attested to a lack of physical distancing during the bus ride. These inmates describe sitting immediately in front and behind one another. No option for distancing existed during the transport of these clients. This disregarded the DOCCS Reopening Plans, which states, “DOCCS will slowly resume the internal movement and transfer of incarcerated individuals, on or about June 1, 2020, while instituting social distancing on transportation vehicles, with both staff and the incarcerated population required to wear masks.”¹⁷ In addition, one study found that on a bus with one COVID-19-positive passenger and no mask-wearing or open windows, more than a third of the passengers subsequently developed COVID-19 after just 100 minutes of exposure.¹⁸ This study illustrates how unsafe these bus trips were for the clients and all inmates involved. Therefore, the DOCCS Adirondack inmate migration presented a dangerous situation since it unnecessarily exposed them to SARS-CoV-2 viral transmission during their bus transport.

II. Quarantine

30. Inmate quarantine is when an inmate is separated from their cohort after the inmate has had a possible COVID-19 exposure. A close contact exposure is one in which an individual was less than six feet from a person with COVID-19, for more than fifteen minutes. Longer exposures or exposures in closer proximity present a higher risk of contracting COVID-19. All close contacts are considered exposed if they had close contact with the infected person beginning two days prior to onset of the infected person’s symptoms or two days prior to the

¹⁷ NEW YORK STATE DEPARTMENT OF CORRECTIONS AND COMMUNITY SUPERVISION, DOCCS RE-OPENING PLAN FACT SHEET (LAST ACCESSED JAN. 7, 2021), *available at* <https://doccs.ny.gov/system/files/documents/2020/07/web-page-doccs-re-opening-fact-sheet.pdf>.

¹⁸ Ye Shen et al., *Community Outbreak Investigation of SARS-CoV-2 Transmission Among Bus Riders in Eastern China*, 180 JAMA INTERN. MED. 12, 1665 (2021), *available at* <https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2770172>.

infected person's positive COVID-19 test. The CDC recommends that quarantined inmates be separated from their housing units for fourteen days if they have had close contact exposure with a person suspected or confirmed to have COVID-19.

31. If it is impractical to contact trace individual exposures, such as in congregate living environments where all inmates in a larger cohort share common spaces, then an entire housing unit may be quarantined. This is called quarantining-in-place. The CDC outlines recommended conditions when this larger cohort quarantine may end.

32. During both individual quarantine or a larger cohort quarantine-in-place, inmates should be frequently screened for COVID-19 signs and symptoms and routinely tested for COVID-19. Inmates who screen positive or test positive must be removed from the cohort and placed into a COVID-19-positive isolation. Failure to implement immediate quarantine measures will invite opportunity for accelerated spread of COVID-19 throughout the prison.

A. Quarantine Prior to Assimilating into a New Prison Population

33. Public health recommendations include the protective measure to quarantine inmates before assimilating them into a new facility.¹⁹ This provides protection to the destination facility inmates by preventing their exposure to asymptomatic carriers of COVID-19 from other incoming facilities. None of the declarants who were transferred to Adirondack during the COVID-19 pandemic was quarantined on arrival. Since arriving, inmates immediately engaged in congregate living without consistent physical distancing. For example, Witness Spadaro described his transfer to, and assimilation into Adirondack Correctional Facility as follows:

I was transferred to Adirondack by bus. Approximately 20 people from 3 different correctional facilities were placed on a bus together. People from Greenhaven Correctional Facility and Otisville Correctional Facility were transported to Fishkill where we were all placed on a bus to Adirondack... [i]t was not possible to maintain 6 feet of distance between people during the bus ride. People were coughing during the bus

¹⁹CENTERS FOR DISEASE CONTROL AND PREVENTION, *supra*.

ride and no one wore masks...[a]t the time of transfer from Fishkill to Adirondack in June 2020, about 12 people had died at Fishkill. I was not tested or quarantined when I arrived at Adirondack. We all went into regular housing units. Spadaro Decl..

34. Ignoring this public health protective measure placed both the existing and incoming inmates at significant risk of COVID-19 infection.

B. Quarantine of Individuals Exposed to COVID-19

35. One person I spoke to and whose declarations I reviewed, Mr. Perez, had a close contact exposure to Witness Applegate, an inmate from a neighboring cell. Perez Supp. Decl. Applegate was subsequently removed from the congregate living unit due to his confirmed COVID-19. Declaration of Bradford Applegate (“Applegate Decl.”). Plaintiff Perez reports that he was never contacted regarding this close contact exposure, nor was he tested for COVID-19 or screened for symptoms. Perez Supp. Decl.. Plaintiff Perez and his housing unit were never quarantined. Applegate Decl. Plaintiff Perez resumed regular acts of daily living in his congregate housing unit and also continued his work detail in multiple housing units and alongside inmates from different housing units. Perez Supp. Decl.

36. Failing to screen, test, or separate Plaintiff Perez from other unexposed inmates after his close contact exposure to a person who had tested positive for COVID-19 threatened the health and lives of both Plaintiff Perez’s housing unit as well as the rest of the inmates and staff at Adirondack Correctional Facility.

III. Testing/Screening

37. Screening for COVID-19 is an effective way to quickly identify inmates who may be infected with COVID-19. Screening can take the form of questions about symptoms or looking for signs of infection such as elevated body temperatures. Since inmates may have COVID-19 infection without showing any signs or symptoms, the CDC also describes the

benefit of testing for infection as an effective screening tool. Specifically, the CDC notes the usefulness of this approach in prison settings.²⁰

38. None of the declarants interviewed described regular screening checks for COVID-19, including questions regarding symptoms and temperature checks. CDC guidelines recommend avoiding transfers between facilities if at all possible, and states: “If a transfer is absolutely necessary...[p]erform verbal screening and a temperature check...before the individual leaves the facility.”²¹ All declarants whose statements I reviewed were transferred to Adirondack Correctional Facility during the COVID-19 pandemic. None commented on screenings and temperature checks prior to transfer or upon arrival to the new facility. Plaintiff Harper and Plaintiff Leon were tested approximately four weeks prior to being transferred. These tests become increasingly irrelevant as time elapses between testing and transferring. For this reason, the CDC guidelines for travel recommend testing within 72 hours of departure.²²

39. Routine testing of asymptomatic individuals is an important strategy to detect COVID-19 outbreaks early and minimize the number of exposed and affected individuals. The CDC recommends a triaged approach to screening inmates with COVID-19 tests based on positive cases that exist in their facilities and surrounding communities.²³ The following table illustrates these recommendations:²⁴

²⁰ CENTERS FOR DISEASE CONTROL AND PREVENTION, CDC GUIDANCE FOR EXPANDED SCREENING TESTING TO REDUCE SILENT SPREAD OF SARS-CoV-2 (DEC. 3, 2020), *available at* <https://www.cdc.gov/coronavirus/2019-ncov/php/open-america/expanded-screening-testing.html>.

²¹ CENTERS FOR DISEASE CONTROL AND PREVENTION, *supra*.

²² CENTERS FOR DISEASE CONTROL AND PREVENTION, DOMESTIC TRAVEL DURING THE COVID-19 PANDEMIC (DEC. 2, 2020), *available at* <https://www.cdc.gov/coronavirus/2019-ncov/travelers/travel-during-covid19.html>.

²³ CENTERS FOR DISEASE CONTROL AND PREVENTION, *supra*.

²⁴ *Id.*

(consider higher categorization based on either of the 2 indicators below)	Low	Moderate	High	Highest
Cumulative number of new cases per 100,000 persons within the last 7 days	< 10	10 to 50	51-100	≥ 100
Percentage of viral tests that are positive during the last 7 days	< 5%	5% to 7.9%	8% – 10%	≥ 10.1 %

Low	Focus on ensuring testing for all close contacts of cases and potentially expanding using a tiered approach to those who might have exposure
Moderate	Weekly screening testing of select groups plus testing of close contacts
High	Weekly or twice a week screening testing of select groups plus testing of close contacts
Highest	Twice a week or more frequent screening testing for select groups plus testing of close contacts

40. All declarants reported no routine testing at their facilities. They report sporadic testing. Witness Jenkins and Plaintiff Perez were tested approximately one month after arrival to Adirondack. Witness Cangiano has been tested twice.

41. The CDC recommends that individuals in close contact with another individual who may have been exposed to COVID-19 should quarantine for ten to fourteen days. While daily temperature checks are part of the recommended health monitoring, a single temperature recording is not a substitute for a fourteen-day quarantine from the time of exposure.

IV. Mask wearing

42. CDC guidelines recommend that all individuals wear masks as a way to mitigate virus transmission by reducing the spread of the wearer's respiratory droplets. COVID-19 is

known to spread through asymptomatic carriers which necessitates universal masking; one can spread infectious droplets before showing any signs or symptoms of the disease. Mask-wearing has been shown to decrease incidence of COVID-19 infection.^{25,26}

43. The protective efficacy of masks is higher when masks are worn by the virus spreader, and there is a synergistic effect when masks are worn by all.²⁷ While wearing one's mask provides some protection against virus particles, individuals are reliant on those around them to also wear masks to minimize virus spread. In settings where social distancing is limited or impossible, such as the congregate living settings at Adirondack Correctional Facility, the full effectiveness of masks relies on every person, both inmates and staff, complying with masking policies.

44. Every declarant disclosed inconsistent mask use by the prison guards, describing that guards were not always wearing masks while with the inmates and when around other guards. Witness Cangiano testified that "I have seen guards either not wearing masks or wearing masks around their chins so that they are not covering their noses or mouths." Cangiano Decl.. This is particularly concerning for several reasons. First, the prison staff have daily contact with the outside community, making it possible for staff to introduce a new infection into the inmate community. This risk would be decreased by consistent mask use while in the prison, but as disclosed in our Plaintiffs' and Witnesses' declarations, mask use by the staff is inconsistent at best. Second, there is an inherent power differential between the correctional officers and the inmates that makes it uncomfortable if not dangerous for inmates to request staff to comply with

²⁵ Jasper Fuk-Woo Chan et al., *supra*.

²⁶ Kevin Zhang et al., *The impact of mask-wearing and shelter-in-place on COVID-19 outbreaks in the United States*, 101 INT. J. INFECT. DIS. 334 (2020), available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7544634/>.

²⁷ Hiroshi Ueki et al., *Effectiveness of Face Masks in Preventing Airborne Transmission of SARS-CoV-2*, AM. SOCIETY FOR MICROBIOLOGY E00637 (2020), available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7580955/>.

mask use. Finally, the DOCCS website shows that as of December 19, 2020, 2,506 DOCCS staff have tested positive for COVID-19, and six have died.²⁸ Infection with COVID-19 is a significant concern among prison staff, and the failure of prison staff to properly and consistently wear masks while at the Adirondack Correctional Facility jeopardizes the health and safety of the inmates.

45. Mask availability has been another limitation described by the Plaintiffs and Witnesses. The CDC recommends that correctional facilities should “provide masks at no cost to incarcerated/detained individuals and launder them routinely.”²⁹ All clients reported they have received several masks, with a mix of cloth and surgical-style masks. None have had masks laundered for them; each describes washing even the surgical-style masks by hand in the sink. Surgical masks are designed to be single use; our clients report reusing surgical masks for months on end. Adirondack Correctional Facility has failed in its responsibility to provide an adequate number of clean masks to our clients, and to ensure universal masking of staff to minimize viral spread between inmates and staff. This failure has placed these inmates at an increased risk of COVID-19 exposure and infection.

V. Cleaning/Hygiene

46. Fomites are objects that can carry infectious bacteria or viruses and have potential to transfer disease. Transfer is more likely from fomites that are hard and lustrous, such as tabletops, door knobs, or telephones. These are also examples of frequently touched objects and therefore pose a particularly high risk for transferring infection.

²⁸ NEW YORK STATE DEPARTMENT OF HEALTH, DOCCS COVID-19 REPORT (LAST ACCESSED DEC. 19, 2020), available at <https://doccs.ny.gov/doccs-covid-19-report>.

²⁹ CENTERS FOR DISEASE CONTROL AND PREVENTION, *supra*.

47. A recent study analyzing the lifespan of SARS-CoV-2 on common surfaces revealed that infectious SARS-CoV-2 was isolated from all analyzed surfaces, except cotton, for up to 28 days at 68°F.³⁰

48. Because of the infectious exposure to fomites, both the CDC and the New York Department of Public Health recommend frequent hand washing as well as frequent disinfection of surfaces that are handled often. Hand washing for 20 seconds with soap and water is the best way to prevent autoinoculation (infecting oneself, e.g. after touching a telephone receiver covered in infectious virus then touching one's own eyes or mouth) and spreading infectious virus to other surfaces (e.g. after touching a telephone receiver covered in infectious virus and then touching a counter surface).

49. Typically, inmates have limited access to soap. They are often required to purchase additional bars of soap from the prison commissary. Because the CDC recognized this practice would encourage soap-rationing behavior, they make the common-sense recommendation to suspend this barrier to soap acquisition, and suggest that during the pandemic inmates be given sufficient soap free of charge. "Provide a no-cost supply of soap to incarcerated/detained persons, sufficient to allow frequent hand washing...and ensure that individuals do not share bars of soap."³¹ This intervention would limit transmission of infection to other fomites, inmates or officers.

50. Inmates at Adirondack Correctional Facility are unable to consistently wash their hands with soap and water for 20 seconds because soap is still being rationed in this prison.

³⁰ Shane Riddell et al., *The effect of temperature on persistence of SARS-CoV-2 on common surfaces*, 17 VIROLOGY JOURNAL 145 (2020), available at <https://virologyj.biomedcentral.com/articles/10.1186/s12985-020-01418-7#citeas>.

³¹ CENTERS FOR DISEASE CONTROL AND PREVENTION, *supra*.

51. Witness Salinas noted that bars of soap were only given out once every two weeks and that this was insufficient. When Witness Salinas ran out of soap, he was forced to buy more at his own expense. Salinas Decl.

52. Frequent cleaning of commonly touched surfaces and the barrier to soap access are examples of easily achievable interventions that would limit the transmission potential of SARS-CoV-2 at Adirondack Correctional Facility.

VI. Risk factors predisposing clients to a severe form of COVID-19 infection

53. The disease course of COVID-19 is varied. While most infected individuals have mild or no symptoms, hundreds of thousands of people infected with SARS-CoV-2 virus suffered a moderate to severe disease course that often resulted in death. Much of the damage wrought during the disease process is pulmonary, and manifests as a viral pneumonia. Patients who suffer from COVID-19 pneumonia often need supplemental oxygen in a hospital setting to assist their breathing. In severe cases of the disease, this supplemental oxygen must be supplied by some form of mechanical ventilation. Some patients progress to even more severe forms of the disease when their responding immune systems begin to ‘inadvertently’ damage their own organs. Frequently, patients, many whom I have personally cared for, progressed to this severe form of disease. Their kidneys often fail and they develop shock states requiring different forms of life support medications. Unfortunately, despite aggressive measures with all available treatments, COVID-19 proves fatal in many patients who suffer this severe form of disease.

54. It is now well documented that certain pre-existing diseases predispose patients to a more severe course of COVID-19 disease.³² These pre-existing conditions include, but are not limited to, obesity, diabetes, cardiac disease, hypertension, and reactive airway disease. Advanced age, while not a disease, has also been identified as a major determinant for risk of a severe form of COVID-19.

55. All Individual Plaintiffs have chronic medical conditions that put them at higher risk for the severe form of COVID-19 disease. Specific conditions as they relate to these clients are outlined below:

A. Age as a risk factor for severe COVID-19 disease

56. Advanced age, perhaps above all other risk factors, is a characteristic that has received the greatest amount of attention. This is likely due to the devastating toll SARS-CoV-2 had on elderly congregate living environments such as aged care homes. DOCCS moved older inmates to Adirondack Correctional Facility and transferred younger inmates out of Adirondack Correctional Facility to other prisons.³³ Everyone imprisoned at Adirondack Correctional Facility is 60 years old and above. Since the migration of older inmates to Adirondack Correctional Facility, the prison, not unlike aged care homes, has become a high-risk congregate living environment.

57. The following table illustrates the increasing case fatality rate as ages incrementally rise:³⁴

³² CENTERS FOR DISEASE CONTROL AND PREVENTION, EVIDENCE USED TO UPDATE THE LIST OF UNDERLYING MEDICAL CONDITIONS THAT INCREASE A PERSON'S RISK OF SEVERE ILLNESS FROM COVID-19 (NOV. 2, 2020), available at <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/evidence-table.html>.

³³ NEW YORK STATE DEPARTMENT OF CORRECTIONS AND COMMUNITY SUPERVISION, *supra*.

³⁴ CENTERS FOR DISEASE CONTROL AND PREVENTION, COVID-19 HOSPITALIZATION AND DEATH BY AGE (AUG. 18, 2020), available at <https://www.cdc.gov/coronavirus/2019-ncov/covid-data/investigations-discovery/hospitalization-death-by-age.html>.

	Hospitalization ¹	Death ²
18-29 years	Comparison Group	Comparison Group
30-39 years	2x higher	4x higher
40-49 years	3x higher	10x higher
50-64 years	4x higher	30x higher
65-74 years	5x higher	90x higher
75-84 years	8x higher	220x higher
85+ years	13x higher	630x higher

58. After 50 years of age, the risk of dying from COVID-19 begins to rise rapidly. There are several declarants in this high risk group, including Plaintiff Leon, Witness Jenkins, and Plaintiff Perez, aged 62, 62, and 60, respectively. The risk of death for an infected person over the age of 65 jumps exponentially. Witnesses Spadaro and Cangiano have an alarming 90-fold risk of death compared to an inmate who is 29 years old. Plaintiff Harper is 75 years old. Not only is he living in a congregate environment with insufficient pandemic protective measures, but if he were to contract COVID-19, his risk of dying is 220-fold the risk of a 29-year-old inmate.

59. Eight out of ten deaths reported in the United States have been among people over the age of 65. It behooves the reader to recognize these clients specifically, and Adirondack

Correctional Facility more broadly, as cohorts at especially high risk for severe disease, hospitalization, respiratory distress, and death.³⁵

B. Obesity as a risk factor for severe COVID-19 disease

60. In addition to the heightened risk of advanced age, two clients suffer from obesity. Overweight is defined as BMI 25 to 29.9; obesity is a BMI of 30 or greater. Clients 2 and 6, with body mass indexes of 30 and 37 respectively, have a 4-fold increased chance of severe disease requiring hospitalization compared to normal or overweight individuals. If these clients contract COVID-19 they are at increased risk for severe course of infection and death.³⁶

C. Hypertension as a risk factor for severe COVID-19 disease

61. All Individual Plaintiffs have hypertension, or elevated blood pressure. Hypertension causes chronic changes in the heart that may cause patients to be more susceptible to infection with SARS-CoV-2.³⁷ One multicenter trial found the patients with hypertension who were infected with COVID-19 had a higher proportion of severe cases (64.6% vs 38.1%), and had a higher proportion of intensive care admission (21.5% vs 11.3%).³⁸ A large meta-analysis that looked at comorbid conditions and outcomes of COVID-19 illness found that out of chronic conditions such as chronic obstructive pulmonary disease (COPD), diabetes and malignancy, those with hypertension had the highest percentage of the deaths.³⁹ In addition to COVID-19,

³⁵ CENTERS FOR DISEASE CONTROL AND PREVENTION, OLDER ADULTS: AT GREATER RISK OF REQUIRING HOSPITALIZATION OR DYING IF DIAGNOSED WITH COVID-19 (DEC. 13, 2020), *available at* <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/older-adults.html>.

³⁶ Christopher M. Petrilli, MD et al., Factors associated with hospitalization and critical illness among 4,103 patients with Covid-19 disease in New York City (2020), *available at* <https://www.medrxiv.org/content/10.1101/2020.04.08.20057794v1.full.pdf>.

³⁷ Spoorthy Kulkarni et al., *COVID-19 and hypertension*, J. OF THE RENIN-ANGIOTENSIN ALDOSTERONE SYSTEM 1 (2020), *available at* <https://journals.sagepub.com/doi/10.1177/1470320320927851>.

³⁸ Songjiang Huang et al., *COVID-19 patients with hypertension have more severe disease: a multicenter retrospective observational study*, 43 HYPERTENSION RESEARCH 824 (2020), *available at* <https://www.nature.com/articles/s41440-020-0485-2>.

³⁹ Ruchong Chen, MD et al., *Risk Factors of Fatal Outcome in Hospitalized Subjects With Coronavirus Disease 2019 From a Nationwide Analysis in China*, 158 CHEST 97 (2020), *available at* <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7158802/>.

high blood pressure also causes damage to multiple organs including the heart, kidneys, and brain. This compounded attack on the body's organs lead to an increased risk of severe COVID-19 course of disease.⁴⁰ If Plaintiffs Harper, Perez, and Leon, or Witnesses Jenkins and Cangiano, contract COVID-19, they are more likely to have a severe infection and die due to their hypertension.

D. Diabetes as a risk factor for severe COVID-19 disease

62. Plaintiff Perez and Witnesses Spadaro and Cangiano suffer from type 2 diabetes. Plaintiff Perez has poorly controlled diabetes. Witness Spadaro reports taking multiple medications to control his diabetes and has neuropathy in his feet requiring that he wears medical boots. Spadaro Decl. This level of end-organ damage to the nerves and microvasculature in Witness Spadaro's feet is indicative of poorly controlled diabetic disease. In patients with COVID-19, those with type 2 diabetes required more medical interventions and had a significantly higher mortality (7.8% vs 2.7%) and multiple-organ injury than non-diabetic individuals.⁴¹ Another study found that the mortality rate among patients with diabetes was 28.8%, compared to 6.2% in patients without diabetes or hyperglycemia.⁴² Both Plaintiff Perez and Witness Spadaro are at a significantly increased risk of death should they contract COVID-19.

⁴⁰ Tadesse Melaku Abegaz et al., *Target Organ Damage and the Long Term Effect of Nonadherence to Clinical Practice Guidelines in Patients with Hypertension: A Retrospective Cohort Study*, 2017 INT J HYPERTENS 1 (2017), available at <https://pubmed.ncbi.nlm.nih.gov/28695006/>.

⁴¹ Lihua Zhu et al., *Association of Blood Glucose Control and Outcomes in Patients with COVID-19 and Pre-existing Type 2 Diabetes*, 31 CELL METABOLISM 1068 (2020), available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7252168/>.

⁴² Bruce Bode, MD et al., *Glycemic Characteristics and Clinical Outcomes of COVID-19 Patients Hospitalized in the United States*, 14 J. OF DIABETES SCIENCE AND TECHNOLOGY 813 (2020), available at <https://doi.org/10.1177/1932296820924469>.

E. Chronic Kidney Disease as a risk factor for severe COVID-19 disease

63. Chronic kidney disease (CKD) is the presence of kidney damage or impaired function for more than three months. While often clinically silent in its early stages, it can lead to multiple health complications and eventually result in renal failure requiring hemodialysis. Both Plaintiff Harper and Witness Jenkins suffer from CKD stage III (on a scale from I to V, with patients with CKD V often requiring hemodialysis). Patients who become critically ill with COVID-19 and have renal impairment such as CKD have high mortality rates, and patients with severe CDK have a very high risk of mortality if infected with COVID-19.⁴³⁴⁴ CKD places Plaintiff Harper and Witness Jenkins at an increased risk of death should they be infected with COVID-19.

F. Asthma as a risk factor for severe COVID-19 disease

64. Asthma leads to increased severity and mortality in patients with COVID-19.⁴⁵ Plaintiff Perez has a history of bronchial asthma. Older patients and male patients with asthma were even more susceptible to death due to COVID; Plaintiff Perez has all three risk factors.⁴⁶ Asthma is also linked to more days on a mechanical ventilator and longer hospitalization times for patients aged 50-64 years old who contract COVID-19; Plaintiff Perez is 60 years old.⁴⁷ His history of asthma puts him at an increased risk of death or severe disease should he get COVID-19, with a prolonged hospital stay.

⁴³ Williamson, E.J., Walker, A.J., Bhaskaran, K. et al., *Factors associated with COVID-19-related death using OpenSAFELY*. 584 NATURE 430 (2020), available at <https://www.nature.com/articles/s41586-020-2521-4>.

⁴⁴ M. Gasparini et al., *Renal impairment and its impact on clinical outcomes inpatients who are critically ill with COVID-19: a multicentreobservational study*, 2020 ANAESTHESIA 1 (2020), available at <https://associationofanaesthetists-publications.onlinelibrary.wiley.com/doi/10.1111/anae.15293>.

⁴⁵ Singh, Awadhesh Kumar, and Anoop Misra. *Impact of COVID-19 and comorbidities on health and economics: Focus on developing countries and India*, 14 DIABETES & METABOLIC SYNDROME 1625 (2020), available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7451213/>.

⁴⁶ Lee, S.C., Son, K.J., Han, C.H. et al., *Impact of comorbid asthma on severity of coronavirus disease (COVID-19)*, 10 SCI REP 21805 (2020), available at <https://www.nature.com/articles/s41598-020-77791-8>.

⁴⁷ Mahdavinia M, Foster KJ, Jauregui E, et al., *Asthma prolongs intubation in COVID-19*, 8 J ALLERGY CLIN. IMMUNOL. PRACT. 2388 (2020), available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7224651/>.

G. Heart Conditions as a risk factor for severe COVID-19 disease

65. Leon has coronary artery disease and suffered from a heart attack (myocardial infarction) about one year ago. He required a percutaneous coronary intervention with a stent placed in one of the arteries in his heart. Notably, the majority of our other clients also have risk factors associated with cardiovascular disease including hypertension, hyperlipidemia, diabetes and smoking.⁴⁸ Patients with underlying cardiovascular disease have a higher mortality rate when infected with COVID-19.⁴⁹⁵⁰ If infected with COVID-19, Leon is more likely to die due to his coronary artery disease.

VII. Conclusion

66. In conclusion, I believe that New York's DOCCS has failed to operationalize sufficient protective measures to prevent COVID-19 infection at Adirondack Correctional Facility. Review of these declarations has made it apparent that the protective health practices of physical distancing, screening and testing, quarantining, consistent mask wearing, and rigorous cleaning and hygiene have not been upheld. Given the lack of these protective measures, it is my medical opinion, to the best of my knowledge, that these declarants are at unusually and unnecessarily high risk for contracting COVID-19. Furthermore, it is my medical opinion, to the best of my knowledge, that the clients' medical conditions put them at especially high risk for a severe course of COVID-19 that may result in respiratory failure, extended hospitalization and death.

⁴⁸ Ben Lacey et al., *The Role of Emerging Risk Factors in Cardiovascular Outcomes*, 19 CURR ATHEROSCLER. REP. 28 (2017), available at <https://pubmed.ncbi.nlm.nih.gov/28477314/>.

⁴⁹ Tao Guo et al., *Cardiovascular Implications of Fatal Outcomes of Patients With Coronavirus Disease 2019 (COVID-19)*, 5 JAMA Cardiol. 811 (2020), available at <https://jamanetwork.com/journals/jamacardiology/fullarticle/2763845>.

⁵⁰ Ruchong Chen, MD et al., *supra*.

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

EXECUTED WITHIN THE UNITED STATES ON: January 8, 2021.

BY: M. Fenig
Mark Fenig MD

EXHIBIT

A

MARK FENIG MD MPH

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EDUCATION

McMaster University, Hamilton, On, Canada
Bachelor of Arts (BA), November 2000
 Concentration in Cultural Anthropology & Pre-Medical Sciences

Yale University – School of Epidemiology & Public Health, New Haven, CT
Masters of Public Health (MPH), June 2003
 Concentration in Epidemiology of Microbial Diseases & Global Health

Sackler School of Medicine – New York State Program, Tel Aviv, Israel
Medical Doctor (MD), May 2007
 Completed four-year American medical curriculum in Tel Aviv

POST-GRADUATE TRAINING & EDUCATIONAL ACTIVITIES

Emory School of Medicine – Department of Emergency Medicine, Atlanta, GA
Emergency Medicine Resident, Aug 2007 – Aug 2010
 Providing care to over 250,000 patients annually in five metro Atlanta Emergency Departments,
 including the region's only Level 1 trauma center and the leading adult and pediatric referral centers.

Advanced Hazmat Life Support, Macon, GA, May 2009
Provider & Instructor Certified

PROFESSIONAL EMPLOYMENT

Montefiore Medical Center, Weiler Division, Bronx, NY
 Attending Physician, Department of Emergency Medicine, 8/2010 – Present

Albert Einstein College of Medicine, Bronx, NY
 Assistant Professor of Emergency Medicine, 11/ 2010 – 4/2013, 8/2017 - Present

Lincoln Medical and Mental Health Center, Bronx NY
 Attending Physician, Department of Emergency Medicine, 10/2012 – 7/2017

Weill Cornell Medical College, New York, NY
 Clinical Instructor of Emergency Medicine, 11/2012 – 8/2017

BOARD CERTIFICATION

Diplomate of the American Board of Emergency Medicine
 June 2011 – December 2021

MEMBERSHIPS

Fellow of the American Academy of Emergency Medicine (FAAEM) 2012 - 2016
Fellow of the American College of Emergency Physicians (FACEP) 2007-2012, 2017

AWARDS & HONORS

Weinerman Fellowship, Yale University Summer 2002
 Funds from this award were applied to research during a refugee health internship with the International Rescue
 Committee in Azerbaijan.

Award of Excellence in Medical Toxicology, Emory University June 2009
 Georgia Poison Center in conjunction with the Department of Emergency Medicine recognizes the resident who
 went above and beyond the requirements of the toxicology rotation.

MARK FENIG MD MPH

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**PROFESSIONAL
ACTIVITIES****EM Student Education**

August 2017 – Present

*Weiler Division Preceptor of 4th year student elective rotations, Department of Emergency Medicine, Montefiore Medical Center – Weiler Division*Supervise clinical shift for all 4th year medical students at the Weiler division during their month-long Montefiore sub-internship rotation**EM Student Education**

August 2016 – June 2017

*Co-director of 4th year student elective rotations, Department of Emergency Medicine, Lincoln Medical and Mental Health Center*Develop and supervise a curriculum for approximately 160 4th year medical students who annually complete a clinical rotation in our adult and pediatric emergency departments. Evaluate the students' performance based on standardized clinical competencies and complete a Standard Letter of Evaluation (SLOE) for each student based on faculty consensus scoring.**Clinical Competency Committee**

June 2013 – June 2017

Chair of Committee, Department of Emergency Medicine, Lincoln Medical and Mental Health Center

Implementation and management of ACGME/RRC/EBEM/CORD new emergency medicine resident educational milestones. These milestones will be used as outcome measures for continuous ACGME and departmental monitoring of physician in training practices and competencies.

Hospital Incident Command Center

June 2013 – June 2017

Chemical Disaster Response Officer, Lincoln Medical and Mental Health Center

Member of the hospital emergency preparedness committee responsible for hospital-wide disaster drills as well as vulnerability assessments and surge capacity preparation. Serve Incident Command in capacity of response specialist in case of chemical disaster.

STEMI-Accelerator Project

May 2013 – June 2014

Co-Principal Investigator, Lincoln Medical and Mental Health Center

Co-PI for Lincoln's participation in a multi-center project to establish regional STEMI systems of care by implementing a plan for collaboration between EMS, regional hospitals, emergency departments and cardiology specialists. Lincoln is one of the national STEMI Accelerator Non-PCI hospital sites for this project.

Sackler School of Medicine Admissions Committee,

October 2012 - Present

Committee Member, New York, NY

Member of a seven-person committee responsible to review medical school applications and make final determination regarding matriculation.

International Earthquake Disaster Response, Jimani, Dominican Republic

January 2010

Emergency Medicine Volunteer Physician, BR2Haiti Organization

Member of a seven-person team sent on medical mission to Good Samaritan Hospital along the Haitian border in the Dominican Republic. Directed the establishment of an urgent care center on the hospital compound. Responsible for an inpatient ward of 70 victims.

American Red Cross, New Haven, Connecticut

January - May 2002

Intern, Yale School of Public Health: Community Health Program Planning and Evaluation

Worked in a consultancy capacity as a member of a research team for a joint Yale University-American Red Cross Project. Conducted health care disaster volunteer availability analyses. Results of this study were used to design the American Red Cross's future disaster preparedness infrastructure.

Integrated Community-based Development Project (ICDP), Imishli, Azerbaijan

May-August 2002

Health Intern, International Rescue Committee (IRC)

Composed and edited country specific health education materials, analyzed primary health care survey results, and provided a water installation project with public health direction.

Howard Hospital, Glendale, Zimbabwe

November-February 2000

Volunteer Consultant, "Veahavta" - a non-profit organization, Toronto Canada

Evaluated and reorganized patient admission process and patient hospital medical record management. Created a dynamic patient information database to accommodate admission and administrative needs.

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RESEARCH & PUBLICATIONS

Publication, Textbook Chapter

Zummer J, Fenig M, "Pediatric Trauma" in Waseem et al (eds.), Prepare for the Pediatric Emergency Medicine Board Examination; Springer Nature Switzerland AG (2020); ISBN 978-3-030-28372-8

Publication, Academic Emergency Medicine

Caputo, Azan, Dominguez, Donner, Fenig, et al. Emergency Department Use of Apneic Oxygenation Versus Usual Care During Rapid Sequence Intubation: A Randomized Controlled Trial (The ENDAO Trial). Acad Emerg Med 24(11):1387-1394, 2017

Publication, Annals of Emergency Medicine

Gold M, Fenig M, Images in Emergency Medicine: Man with Pain in his Neck. (Traumatic Hypoglossal Nerve Paralysis) Ann Emerg Med 68:545,561, 2016

Publication, American Journal of Emergency Medicine

Fenig M, et al, Laryngeal fracture after coughing, Am J Emerg Med 31:1421.e1-1421.e3, 2013

Publication, American Journal of Emergency Medicine

Fenig M, Lowman R, Thompson B, Shayne P, Fatal Posterior Sternoclavicular Joint Dislocation Due to Occult Trauma. Am J Emerg Med 28:385.e5 - 385.e8, 2010

Publication, Prehospital Emergency Care

Fenig M, Cone DC, Advancing Disaster Epidemiology and Response: Developing a National Disaster-Victim Database. Prehosp Emerg Care 9:457-467, 2005

Abstract Presentation, American Public Health Association, Philadelphia, PA

November 2002

Fenig M, Stockman L, Nguyen K, Rosenstein S, Lwanga E, Assessment of September 11th Spontaneous Health Care Volunteers: Potential Impact on American Red Cross and Disaster Preparedness

Presented at the 130th Annual American Public Health Association Meeting. The Presentation has been included in the Meeting's Disaster Preparedness and Emergency Response session of the Injury Control and Emergency Health Services Program. APHA, Abstract 44993, 2002

CERTIFICATIONS

ACLS, ATLS, PALS, AHLS, HERT