APPENDIX

UNITED STATES COURT OF APPEALS FOR THE SEVENTH CIRCUIT

Everett McKinley Dirksen United States Courthouse
Room 2722 - 219 S. Dearborn Street
Chicago, Illinois 60604

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ORDER

July 15, 2020

Before

DIANE P. WOOD, *Circuit Judge*
MICHAEL B. BRENNAN, *Circuit Judge*
AMY J. ST. EVE, *Circuit Judge*

No. 20-2262	DALE HARTKEMEYER, Plaintiff - Appellant and FATHER MARK O'KEEFE, Intervening Plaintiff - Appellant v. WILLIAM P. BARR, Attorney General of the United States, et al., Defendants - Appellees
Originating Case Information:	
District Court No: 2:20-cv-00336-JMS-DLP Southern District of Indiana, Terre Haute Division District Judge Jane Magnus-Stinson	

The following are before the court:

1. **MOTION TO STAY EXECUTIONS PENDING APPEAL**, filed by counsel for the appellants on July 14, 2020.

2. **OPPOSITION TO MOTION TO STAY EXECUTIONS PENDING APPEAL**, filed by counsel for the appellees on July 15, 2020.

3. **APPELLANTS' REPLY IN SUPPORT OF MOTION TO STAY EXECUTIONS PENDING APPEAL**, filed by counsel for the appellants on July 15, 2020.

IT IS ORDERED that the Motion to stay the executions is **DENIED**.

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF INDIANA
TERRE HAUTE DIVISION

DALE HARTKEMEYER, Plaintiff, v. WILLIAM P. BARR, et al. Defendants.	)	No. 2:20-cv-00336-JMS-DLP
FATHER MARK OKEEFE, Intervenor Plaintiff.	)	

Order Denying Motion for Preliminary Injunction

Plaintiff Dale Hartkemeyer filed this civil rights action challenging the defendants' scheduling of Wesley Purkey's execution for July 15, 2020 during the COVID-19 pandemic. Mr. Hartkemeyer, who is Mr. Purkey's minister of record, alleges that the scheduled execution violates the Religious Freedom and Restoration Act of 1993 ("RFRA") and the Administrative Procedure Act ("the APA") as it places him at serious personal risk due to potential exposure to the coronavirus.

Intervenor-plaintiff Father Mark O'Keefe challenges the defendants' scheduling of Dustin Lee Honken's execution for July 17, 2020. Fr. O'Keefe, who is Mr. Honken's minister of record, likewise alleges that the scheduled execution violates RFRA and the APA, again citing the coincidence of the execution and the COVID-19 pandemic.

I. Background

A federal jury found Mr. Purkey guilty in 2003 of interstate kidnapping, rape, and murder, and he was sentenced to death. *United States v. Purkey*, 428 F.3d 738, 744 (8th Cir. 2005).

A federal jury found Mr. Honken guilty in 2004 of witness tampering, soliciting the murder of a witness, drug conspiracy murder, and Continuing Criminal Enterprise (CCE) murder, and he was sentenced to death. *United States v. Honken*, 541 F.3d 1146, 1148–49 (8th Cir. 2008).

On July 25, 2019, at the direction of defendant Attorney General William Barr, the Department of Justice set execution dates for five federal inmates, including Mr. Purkey and Mr. Honken. Those executions were stayed in November 2019 by a preliminary injunction in the United States District Court for the District of Columbia. *In re Matter of Federal Bureau of Prisons' Execution Protocol Cases*, 2019 WL 6691814, at *8 (D.D.C. Nov. 20, 2019). On April 7, 2020, the District of Columbia Circuit Court of Appeals vacated the preliminary injunction. *In re Matter of Federal Bureau of Prisons' Execution Protocol Cases*, 955 F.3d 106, 113 (D.C. Cir. 2020), *reh'g denied*, 955 F.3d 106 (May 15, 2020), *cert. denied*, *Bourgeois v. Barr*, 2020 WL 3492763 (Mem. Op.) (June 29, 2020).

Meanwhile, the novel coronavirus ("COVID-19") has been spreading in the United States since early 2020. As of 12:15 p.m. on July 12, 2020, there were 3,236,130 reported cases in the United States, including 394,224 cases in the past week. Centers for Disease Control and Prevention, Covid Data Tracker, https://www.cdc.gov/covid-data-tracker/#cases (last visited July 12, 2020). 134,572 people have died from the virus in the United States. *Id.* In Indiana, there have been 51,612 confirmed cases, and 2,567 people have died. Indiana COVID-19 Dashboard, https://www.coronavirus.in.gov/2393.htm (last visited July 12, 2020).

On June 15, 2020, with the Bureau of Prisons ("BOP") essentially locked down due to the COVID-19 pandemic, the Department of Justice announced four execution dates, including Mr. Purkey's on July 15, 2020, and Mr. Honken's on July 17, 2020. *See* Press Release, Dep't of Justice, "Executions Scheduled for Four Federal Inmates Convicted of Murdering Children" (June

15, 2020), https://www.justice.gov/opa/pr/executions-scheduled-four-federal-inmates-convicted-murdering-children.

On July 11, 2020, four days before Mr. Purkey's scheduled execution and six days before Mr. Honken's, a staff member at FCC Terre Haute tested positive for COVID-19 after visiting with individuals who also tested positive. Dkt. 77-1 at ¶¶ 4–5 (Rick Winter Declaration July 12, 2020). This officer left work on July 8 to self-quarantine. *Id.* at ¶ 4. Between his exposure and his departure, he (1) "attended the law enforcement meeting with outside law enforcement in preparation for the scheduled executions"; (2) "attended a meeting regarding the handling of demonstrators at the scheduled executions"; and (3) "attended to an issue at the SCU," where Mr. Purkey and Mr. Honken are presently held. *Id.* at ¶ 6. He "did not wear a mask at all times during this period." *Id.* at ¶ 7. While this staff member did not come into contact with any members of the execution protocol team, the BOP has not yet completed contact tracing protocols. *Id.* at ¶ 9. And, despite this positive test, the BOP has not changed its plan to forego testing the execution protocol team. Dkt. 33-1 at ¶ 7 (Rick Winter Declaration July 6, 2020) ("BOP has no plans to conduct COVID testing on individuals involved in the execution in advance of the execution."); dkt. 77-1 ("BOP will continue to perform the mitigation measures identified in my prior declaration dated July 6.").

II. Standard for Preliminary Injunction

In deciding whether to stay an execution, the Court must consider: "(1) whether the stay applicant has made a strong showing that he is likely to succeed on the merits; (2) whether the applicant will be irreparably injured absent a stay; (3) whether issuance of the stay will substantially injure the other parties interested in the proceeding; and (4) where the public interest lies." *Nken v. Holder*, 556 U.S. 418, 434 (2009). "The first two factors . . . are the most critical." *Id.*

III. Discussion

A. The Plaintiffs Have Not Shown More than a Negligible Likelihood of Success on Their RFRA Claims.

As the statute itself explains, Congress enacted RFRA "to restore the compelling interest test as set forth in *Sherbert v. Verner*, 374 U.S. 398 (1963) and *Wisconsin v. Yoder*, 406 U.S. 205 (1972) and to guarantee its application in all cases where free exercise of religion is substantially burdened." 42 U.S.C. § 2000bb(b)(1). Courts evaluate RFRA claims using a four-part test. The plaintiff must show that a challenged government action (1) substantially burdens (2) the plaintiff's sincerely held religious belief. *Burwell v. Hobby Lobby Stores, Inc.*, 573 U.S. 682, 691–92 (2014). If the plaintiff makes the required showings, then the defendant must show that the government action (3) is necessitated by a compelling governmental interest and (4) constitutes the least restrictive means to satisfy that interest. *Id.*

The defendants do not dispute for purposes of this motion that Mr. Hartkemeyer's and Fr. O'Keefe's sincerely held religious beliefs require them to attend to the spiritual needs of Mr. Purkey and Mr. Honken, respectively, as these men face execution. The defendants do, however, argue that the government has imposed no substantial burden on the plaintiffs' free exercise of those beliefs because the plaintiffs are "not themselves the subject of government regulation." Dkt. 33 at 11; *id.* at 13 ("[T]he only impediment Rev. Hartkemeyer identifies—the global pandemic—is not one of the Government's making.").

To show a government-created substantial burden, a plaintiff must identify some government action with a "tendency to coerce individuals into acting contrary to their religious beliefs." *Lyng v. Nw. Indian Cemetery Protective Ass'n*, 485 U.S. 439, 450 (1988). The mere scheduling of an execution imposes no obligation or restriction on the religious advisor whom the condemned prisoner has selected to attend. And the plaintiffs' claims as stated in their complaint

rest entirely on the setting of Mr. Purkey's and Mr. Honken's execution dates during the pandemic. Accordingly, the plaintiffs have not shown more than a negligible likelihood of demonstrating a substantial burden on their religious beliefs, as required to prevail on their RFRA claims.

The Court notes that the plaintiffs, in litigating their motions for preliminary injunction, have increasingly focused on the burdens imposed on them as a result of alleged inadequacies of protective measures under the regulations and protocols governing their behavior—and requiring various interactions with prison staff—during the execution process. *See*, *e.g.*, dkt. 82 at 4 ("The Government's failures to ensure compliance with its only limited COVID-19 protocols are an equal cause for concern.")[1]. But the plaintiffs' complaints allege only that the scheduling of executions violated RFRA and the APA. They are not seeking an injunction requiring defendants to provide any additional protective measures for plaintiffs' personal safety. Indeed, the only relief they seek is postponement of Mr. Purkey's and Mr. Honken's executions until a treatment or vaccine for COVID-19 is widely available. Given recent developments, *see* *Peterson v. Barr*, --- F.3d ----, ----, 2020 WL 3955951, at *2 (7th Cir. 2020) ("[I]f the BOP observes the minimal requirements in the regulation . . . then it has the unconstrained discretion to choose a date for the execution."); *Barr v. Lee*, 591 U.S. ---, ---, No. 20A8 (July 14, 2020) (per curiam), the likelihood of success on this remedy seems vanishingly small. If the plaintiffs wish to litigate some other claim, or seek different relief, they must first amend their complaints.

B. The Plaintiffs Have Not Shown More than a Negligible Likelihood of Success on Their APA Claims.

"The APA 'sets forth the procedures by which federal agencies are accountable to the public and their actions subject to review by the courts.'" *Dep't of Homeland Sec. v. Regents of the Univ.*

[1] The Court is mindful that plaintiffs were not advised by the defendants as to the COVID-19 precautionary measures for spiritual advisors until after the initial complaint was filed.

of California, 140 S. Ct. 1891, 1905 (2020) (quoting *Franklin v. Massachusetts*, 505 U.S. 788, 796 (1992)). "A person suffering legal wrong because of agency action, or adversely affected or aggrieved by agency action within the meaning of a relevant statute, is entitled to judicial review thereof." 5 U.S.C. § 702.

When an agency action is subject to review, a district court may "hold [it] unlawful and set [it] aside" for a number of reasons. 5 U.S.C. § 706(2). The plaintiffs ask the Court to hold unlawful and set aside the government's scheduling of Mr. Purkey's execution on July 15, 2020, and Mr. Honken's on July 17, 2020, as arbitrary and capricious in violation of 5 U.S.C. § 706(2)(A).

The Seventh Circuit recently held that, aside from specific regulations upon which the plaintiffs do not rely, the BOP has "unconstrained discretion" to set an execution date. *Peterson*, --- F.3d at ----, 2020 WL 3955951, at *2. The plaintiffs therefore have no more than a negligible chance of success in showing that the defendants violated the APA in choosing Mr. Purkey's and Mr. Honken's execution dates.

C. Remaining Preliminary Injunction Factors

Given the plaintiffs' slim chances of success, the Court need not address the other factors for granting an injunction. *See GEFT Outdoors, LLC v. City of Westfield*, 922 F.3d 357, 364 (7th Cir. 2019) (likelihood of success is a "threshold requirement[]," and a court must deny the preliminary injunction if the plaintiff fails to satisfy it).

IV. Conclusion

Mr. Hartkemeyer's motion for preliminary injunction, dkt. [6], and Fr. O'Keefe's motion for preliminary injunction, dkt. [60], are **denied**.

IT IS SO ORDERED.

Date: 7/14/2020

Hon. Jane Magnus-Stinson, Chief Judge
United States District Court
Southern District of Indiana

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UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF INDIANA
TERRE HAUTE DIVISION

DALE HARTKEMEYER, Plaintiff, v. WILLIAM P. BARR, et al. Defendants.	)	No. 2:20-cv-00336-JMS-DLP
FATHER MARK OKEEFE, Intervenor Plaintiff.	)	

Order Denying Motion to Stay Pending Appeal

On July 14, 2020, the Court denied plaintiff Dale Hartkemeyer's and plaintiff Father Mark O'Keefe's respective motions for preliminary injunction. Dkt. 84. Now, the plaintiffs have filed a notice of appeal and motion to stay pending appeal. Dkts. 85, 89.

The motion to stay pending appeal summarizes the arguments raised in the plaintiffs' briefing of their motions for preliminary injunction. For the reasons stated in the Court's order denying preliminary injunction, dkt. 84, the motion to stay pending appeal, dkt. [89], is **denied**.

IT IS SO ORDERED.

Date: 7/14/2020

Hon. Jane Magnus-Stinson, Chief Judge
United States District Court
Southern District of Indiana

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(b) Purposes

The purposes of this chapter are—

(1) to restore the compelling interest test as set forth in Sherbert v. Verner, 374 U.S. 398 (1963) and Wisconsin v. Yoder, 406 U.S. 205 (1972) and to guarantee its application in all cases where free exercise of religion is substantially burdened; and

(2) to provide a claim or defense to persons whose religious exercise is substantially burdened by government.

(Pub. L. 103–141, § 2, Nov. 16, 1993, 107 Stat. 1488.)

REFERENCES IN TEXT

This chapter, referred to in subsec. (b), was in the original ''this Act'', meaning Pub. L. 103–141, Nov. 16, 1993, 107 Stat. 1488, which is classified principally to this chapter. For complete classification of this Act to the Code, see Short Title note below and Tables.

CONSTITUTIONALITY

For constitutionality of section 2 of Pub. L. 103–141, see Congressional Research Service, The Constitution of the United States of America: Analysis and Interpretation, Appendix 1, Acts of Congress Held Unconstitutional in Whole or in Part by the Supreme Court of the United States.

SHORT TITLE

Pub. L. 103–141, § 1, Nov. 16, 1993, 107 Stat. 1488, provided that: ''This Act [enacting this chapter and amending section 1988 of this title and section 504 of Title 5, Government Organization and Employees] may be cited as the 'Religious Freedom Restoration Act of 1993'.''

EX. ORD. NO. 13798. PROMOTING FREE SPEECH AND RELIGIOUS LIBERTY

Ex. Ord. No. 13798, May 4, 2017, 82 F.R. 21675, provided:

By the authority vested in me as President by the Constitution and the laws of the United States of America, in order to guide the executive branch in formulating and implementing policies with implications for the religious liberty of persons and organizations in America, and to further compliance with the Constitution and with applicable statutes and Presidential Directives, it is hereby ordered as follows:

SECTION 1. *Policy*. It shall be the policy of the executive branch to vigorously enforce Federal law's robust protections for religious freedom. The Founders envisioned a Nation in which religious voices and views were integral to a vibrant public square, and in which religious people and institutions were free to practice their faith without fear of discrimination or retaliation by the Federal Government. For that reason, the United States Constitution enshrines and protects the fundamental right to religious liberty as Americans' first freedom. Federal law protects the freedom of Americans and their organizations to exercise religion and participate fully in civic life without undue interference by the Federal Government. The executive branch will honor and enforce those protections.

SEC. 2. *Respecting Religious and Political Speech*. All executive departments and agencies (agencies) shall, to the greatest extent practicable and to the extent permitted by law, respect and protect the freedom of persons and organizations to engage in religious and political speech. In particular, the Secretary of the Treasury shall ensure, to the extent permitted by law, that the Department of the Treasury does not take any adverse action against any individual, house of worship, or other religious organization on the basis that such individual or organization speaks or has spoken about moral or political issues from a religious perspective, where speech of similar character has, consistent with law, not ordinarily been treated as participation or intervention in a political campaign on behalf of (or in opposition to) a candidate for public office by the Department of the Treasury. As used in this section, the term ''adverse action'' means the imposition of any tax or tax penalty; the delay or denial of tax-exempt status; the disallowance of tax deductions for contributions made to entities exempted from taxation under section 501(c)(3) of title 26, United States Code; or any other action that makes unavailable or denies any tax deduction, exemption, credit, or benefit.

SEC. 3. *Conscience Protections with Respect to Preventive-Care Mandate*. The Secretary of the Treasury, the Secretary of Labor, and the Secretary of Health and Human Services shall consider issuing amended regulations, consistent with applicable law, to address conscience-based objections to the preventive-care mandate promulgated under section 300gg–13(a)(4) of title 42, United States Code.

SEC. 4. *Religious Liberty Guidance*. In order to guide all agencies in complying with relevant Federal law, the Attorney General shall, as appropriate, issue guidance interpreting religious liberty protections in Federal law.

SEC. 5. *Severability*. If any provision of this order, or the application of any provision to any individual or circumstance, is held to be invalid, the remainder of this order and the application of its other provisions to any other individuals or circumstances shall not be affected thereby.

SEC. 6. *General Provisions*. (a) Nothing in this order shall be construed to impair or otherwise affect:

(i) the authority granted by law to an executive department or agency, or the head thereof; or

(ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This order shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

DONALD J. TRUMP.

§ 2000bb–1. Free exercise of religion protected

(a) In general

Government shall not substantially burden a person's exercise of religion even if the burden results from a rule of general applicability, except as provided in subsection (b).

(b) Exception

Government may substantially burden a person's exercise of religion only if it demonstrates that application of the burden to the person—

(1) is in furtherance of a compelling governmental interest; and

(2) is the least restrictive means of furthering that compelling governmental interest.

(c) Judicial relief

A person whose religious exercise has been burdened in violation of this section may assert that violation as a claim or defense in a judicial proceeding and obtain appropriate relief against a government. Standing to assert a claim or defense under this section shall be governed by the general rules of standing under article III of the Constitution.

(Pub. L. 103–141, § 3, Nov. 16, 1993, 107 Stat. 1488.)

§ 2000bb–2. Definitions

As used in this chapter—

(1) the term ''government'' includes a branch, department, agency, instrumentality, and official (or other person acting under color of law) of the United States, or of a covered entity;

(2) the term ''covered entity'' means the District of Columbia, the Commonwealth of Puerto Rico, and each territory and possession of the United States;

(3) the term ''demonstrates'' means meets the burdens of going forward with the evidence and of persuasion; and

(4) the term ''exercise of religion'' means religious exercise, as defined in section 2000cc–5 of this title.

(Pub. L. 103–141, §5, Nov. 16, 1993, 107 Stat. 1489; Pub. L. 106–274, §7(a), Sept. 22, 2000, 114 Stat. 806.)

REFERENCES IN TEXT

This chapter, referred to in text, was in the original ''this Act'', meaning Pub. L. 103–141, Nov. 16, 1993, 107 Stat. 1488, which is classified principally to this chapter. For complete classification of this Act to the Code, see Short Title note set out under section 2000bb of this title and Tables.

AMENDMENTS

2000—Par. (1). Pub. L. 106–274, §7(a)(1), substituted ''or of a covered entity'' for ''a State, or a subdivision of a State''.

Par. (2). Pub. L. 106–274, §7(a)(2), substituted ''term 'covered entity' means'' for ''term 'State' includes''.

Par. (4). Pub. L. 106–274, §7(a)(3), substituted ''religious exercise, as defined in section 2000cc–5 of this title'' for ''the exercise of religion under the First Amendment to the Constitution''.

§ 2000bb–3. Applicability

(a) In general

This chapter applies to all Federal law, and the implementation of that law, whether statutory or otherwise, and whether adopted before or after November 16, 1993.

(b) Rule of construction

Federal statutory law adopted after November 16, 1993, is subject to this chapter unless such law explicitly excludes such application by reference to this chapter.

(c) Religious belief unaffected

Nothing in this chapter shall be construed to authorize any government to burden any religious belief.

(Pub. L. 103–141, §6, Nov. 16, 1993, 107 Stat. 1489; Pub. L. 106–274, §7(b), Sept. 22, 2000, 114 Stat. 806.)

REFERENCES IN TEXT

This chapter, referred to in text, was in the original ''this Act'', meaning Pub. L. 103–141, Nov. 16, 1993, 107 Stat. 1488, which is classified principally to this chapter. For complete classification of this Act to the Code, see Short Title note set out under section 2000bb of this title and Tables.

AMENDMENTS

2000—Subsec. (a). Pub. L. 106–274 struck out ''and State'' after ''Federal''.

§ 2000bb–4. Establishment clause unaffected

Nothing in this chapter shall be construed to affect, interpret, or in any way address that portion of the First Amendment prohibiting laws respecting the establishment of religion (referred to in this section as the ''Establishment Clause''). Granting government funding, benefits, or exemptions, to the extent permissible under the Establishment Clause, shall not constitute a violation of this chapter. As used in this section, the term ''granting'', used with respect to government funding, benefits, or exemptions, does not include the denial of government funding, benefits, or exemptions.

(Pub. L. 103–141, §7, Nov. 16, 1993, 107 Stat. 1489.)

REFERENCES IN TEXT

This chapter, referred to in text, was in the original ''this Act'', meaning Pub. L. 103–141, Nov. 16, 1993, 107 Stat. 1488, which is classified principally to this chapter. For complete classification of this Act to the Code, see Short Title note set out under section 2000bb of this title and Tables.

CHAPTER 21C—PROTECTION OF RELIGIOUS EXERCISE IN LAND USE AND BY INSTITUTIONALIZED PERSONS

Sec.

§ 2000cc. Protection of land use as religious exercise

(a) Substantial burdens

(1) General rule

No government shall impose or implement a land use regulation in a manner that imposes a substantial burden on the religious exercise of a person, including a religious assembly or institution, unless the government demonstrates that imposition of the burden on that person, assembly, or institution—

(A) is in furtherance of a compelling governmental interest; and

(B) is the least restrictive means of furthering that compelling governmental interest.

(2) Scope of application

This subsection applies in any case in which—

(A) the substantial burden is imposed in a program or activity that receives Federal financial assistance, even if the burden results from a rule of general applicability;

(B) the substantial burden affects, or removal of that substantial burden would affect, commerce with foreign nations, among the several States, or with Indian tribes, even if the burden results from a rule of general applicability; or

(C) the substantial burden is imposed in the implementation of a land use regulation or system of land use regulations, under which a government makes, or has in place formal or informal procedures or practices that permit the government to make, individualized assessments of the proposed uses for the property involved.

(3) The sentence shall be executed on a date and at a place designated by the Director of the Federal Bureau of Prisons; and

(4) The prisoner under sentence of death shall be committed to the custody of the Attorney General or his authorized representative for appropriate detention pending execution of the sentence.

(b) The attorney for the government shall append to the proposed Judgment and Order a Return by which the designated United States Marshal may inform the court that the sentence of death has been executed.

§ 26.3 Date, time, place, and method of execution.

(a) Except to the extent a court orders otherwise, a sentence of death shall be executed:

(1) On a date and at a time designated by the Director of the Federal Bureau of Prisons, which date shall be no sooner than 60 days from the entry of the judgment of death. If the date designated for execution passes by reason of a stay of execution, then a new date shall be designated promptly by the Director of the Federal Bureau of Prisons when the stay is lifted;

(2) At a federal penal or correctional institution designated by the Director of the Federal Bureau of Prisons;

(3) By a United States Marshal designated by the Director of the United States Marshals Service, assisted by additional personnel selected by the Marshal and the Warden of the designated institution and acting at the direction of the Marshal; and

(4) By intravenous injection of a lethal substance or substances in a quantity sufficient to cause death, such substance or substances to be determined by the Director of the Federal Bureau of Prisons and to be administered by qualified personnel selected by the Warden and acting at the direction of the Marshal.

(b) Unless the President interposes, the United States Marshal shall not stay execution of the sentence on the basis that the prisoner has filed a petition for executive clemency.

§ 26.4 Other execution procedures.

Except to the extent a court orders otherwise:

(a) The Warden of the designated institution shall notify the prisoner under sentence of death of the date designated for execution at least 20 days in advance, except when the date follows a postponement of fewer than 20 days of a previously scheduled and noticed date of execution, in which case the Warden shall notify the prisoner as soon as possible.

(b) Beginning seven days before the designated date of execution, the prisoner shall have access only to his spiritual advisers (not to exceed two), his defense attorneys, members of his family, and the officers and employees of the institution. Upon approval of the Director of the Federal Bureau of Prisons, the Warden may grant access to such other proper persons as the prisoner may request.

(c) In addition to the Marshal and Warden, the following persons shall be present at the execution:

(1) Necessary personnel selected by the Marshal and Warden;

(2) Those attorneys of the Department of Justice whom the Deputy Attorney General determines are necessary;

(3) Not more than the following numbers of person selected by the prisoner:

(i) One spiritual adviser;

(ii) Two defense attorneys; and

(iii) Three adult friends or relatives; and

(4) Not more than the following numbers of persons selected by the Warden:

(i) Eight citizens; and

(ii) Ten representatives of the press.

(d) No other person shall be present at the execution, unless leave for such person's presence is granted by the Director of the Federal Bureau of Prisons. No person younger than 18 years of age shall witness the execution.

(e) The Warden should notify those individuals described in paragraph (c) of this section as soon as practicable before the designated time of execution.

(f) No photographic or other visual or audio recording of the execution shall be permitted.

(g) After the execution has been carried out, qualified personnel selected

by the Warden shall conduct an examination of the body of the prisoner to determine that death has occurred and shall inform the Marshal and Warden of his determination. Upon notification of prisoner's death, the Marshal shall complete and sign the Return described in § 26.2(b) or any similar document and shall file such document with the sentencing court.

(h) The remains of the prisoner shall be disposed of according to procedures established by the Director of the Federal Bureau of Prisons.

§ 26.5 Attendance at or participation in executions by Department of Justice personnel.

No officer or employee of the Department of Justice shall be required to be in attendance at or to participate in any execution if such attendance or participation is contrary to the moral or religious convictions of the officer or employee, or if the employee is a medical professional who considers such participation or attendance contrary to medical ethics. For purposes of this section, the term ''participation'' includes personal preparation of the condemned individual and the apparatus used for execution and supervision of the activities of other personnel in carrying out such activities.

Subpart B—Certification Process for State Capital Counsel Systems

SOURCE: 78 FR 58183, Sept. 23, 2013, unless otherwise noted.

§ 26.20 Purpose.

Sections 2261(b)(1) and 2265(a) of title 28 of the United States Code require the Attorney General to certify whether a State has a mechanism for providing legal representation to indigent prisoners in State postconviction proceedings in capital cases that satisfies the requirements of chapter 154 of title 28. If the Attorney General certifies that a State has established such a mechanism, sections 2262, 2263, 2264, and 2266 of chapter 154 of title 28 apply in relation to Federal habeas corpus review of State capital cases in which counsel was appointed pursuant to that mechanism. These sections will also apply in Federal habeas corpus review of capital cases from a State with a mechanism certified by the Attorney General in which petitioner validly waived counsel, petitioner retained counsel, or petitioner was found not to be indigent, as provided in section 2261(b) of title 28. Subsection (b) of 28 U.S.C. 2265 directs the Attorney General to promulgate regulations to implement the certification procedure under subsection (a) of that section.

§ 26.21 Definitions.

For purposes of this part, the term—

Appointment means provision of counsel in a manner that is reasonably timely in light of the time limitations for seeking State and Federal postconviction review and the time required for developing and presenting claims in the postconviction proceedings.

Appropriate State official means the State attorney general, except that, in a State in which the State attorney general does not have responsibility for Federal habeas corpus litigation, it means the chief executive of the State.

Indigent prisoners means persons whose net financial resources and income are insufficient to obtain qualified counsel.

State postconviction proceedings means collateral proceedings in State court, regardless of whether the State conducts such proceedings after or concurrently with direct State review.

§ 26.22 Requirements.

The Attorney General will certify that a State meets the requirements for certification under 28 U.S.C. 2261 and 2265 if the Attorney General determines that the State has established a mechanism for the appointment of counsel for indigent prisoners under sentence of death in State postconviction proceedings that satisfies the following standards:

(a) As provided in 28 U.S.C. 2261(c) and (d), the mechanism must offer to all such prisoners postconviction counsel, who may not be counsel who previously represented the prisoner at trial unless the prisoner and counsel expressly requested continued representation, and the mechanism must provide for the entry of an order by a court of record—

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF INDIANA
TERRE HAUTE DIVISION

DALE HARTKEMEYER (AKA SEIGEN) Plaintiff, v. WILLIAM P. BARR, in his official capacity as the Attorney General of the United States; MICHAEL CARVAJAL, in his official capacity as the Director of the Federal Bureau of Prisons; and T.J. WATSON, in his official capacity as Complex Warden for Terre Haute Federal Correctional Complex, Defendants.	Case No. _____

DECLARATION OF DALE (SEIGEN) HARTKEMEYER

I, Dale Hartkemeyer (aka Seigen), pursuant to 28 U.S.C. § 1746, declare as follows:

1. I am the Plaintiff in the above-captioned case.

2. I am a Zen Buddhist priest. I began my practice of Zen Buddhism in 1978 while in Europe. I received lay precepts in 1981: In Buddhism, the ceremony called "Receiving the Precepts" serves as a layperson's first official declaration of his intent to become a Buddhist. During this ceremony, the layperson publicly acknowledges that he will live according to the sixteen precepts of Mahayana Buddhism, which are ethical guidelines for behavior similar to the Ten Commandments in the Judeo-Christian tradition. After further studying the Zen Buddhist teachings and attending various religious retreats, I was then ordained as a monk in 1983 in France in the lineage of Zen

master Taisen Deshimaru. In connection with my ordination as a Buddhist priest, I took on the religious name of "Seigen," which means "Sacred Source."

3. Since 2008, I have been associated with the Sanshin Zen Community under Reverend Shohaku Okumura in Bloomington, Indiana, participating in near-daily Zen practice at the temple as well as in retreats and sesshin (intensive silent retreats), and assisting Rev. Okumura with translations into English of Japanese Soto Zen teachings. All of these activities have come to a halt during the COVID-19 pandemic, with the exception of assisting with translations which I am working on remotely from home.

4. In addition to my regular Zen practice, as a Buddhist priest, I have helped organize and direct retreats at the Sanshin Zen Community, participated in committee meetings, and delivered Dharma talks, which are the equivalent of a sermon in other faith traditions. I also have been religiously called to provide spiritual counseling to prisoners. The Mahayana Buddhist precepts, which we take as lay or ordained Zen Buddhists, teach us that a bodhisattva (one following the Buddha who aspires to help liberate all suffering beings) needs to visit a person who is in distress or trouble (sick, injured, etc.) and provide that person whatever help, relief, or consolation he can. These precepts are based on the core Buddhist commitment to compassion. I believe wholeheartedly in this religious mandate and, as a Buddhist priest, I believe that I have a religious obligation to show compassion for incarcerated individuals, in particular. They are too often denied Buddha's immense compassion, his great wish for the well-being of all his children, who include all beings.

5. While living in Michigan from 2000 through 2008, I undertook Buddhist prison ministry work on various occasions. For example, on several occasions, I provided instruction on Zen sitting practice to a group of teenagers at the Nokomis Challenge Center, a youth detention center

that was located in Prudenville, Michigan, but has since closed. I also visited the Standish Maximum Correctional Facility before it closed its doors to discuss Buddhist teachings and provide meditation instruction to several prisoners who requested guidance from a Buddhist priest.

6. Currently, I am involved in pastoral letter correspondence with several Buddhist prisoners in Indiana as well as another Buddhist prisoner in California.

7. My pastoral relationship with Wesley Purkey began in January 2009. Mr. Purkey's then-spiritual advisor moved to Arkansas in December 2008 and asked if I would be willing to take over his role as Mr. Purkey's priest. I agreed and had my first visit with Mr. Purkey at USP Terre Haute the following month.

8. The prison is about 60 miles from my home and takes me an hour and a half to drive there. Since January 2009, I have had monthly visits with Mr. Purkey to provide spiritual guidance and counseling consistent with the Zen Buddhist faith. Quite often, Mr. Purkey brought religious issues and questions raised in Buddhist journals to our visits for us to discuss.

9. In 2013, Mr. Purkey officially designated me as his Minister of Record (MOR). Attached hereto as Exhibit 1 is a true and correct copy of my email correspondence with prison officials in which they indicate that Mr. Purkey designated me his MOR.

10. My last visit with Mr. Purkey was in February of 2020. The next month, I learned that my visit scheduled for March 21, 2020, was suspended due to the threat posed by the COVID-19 pandemic. On May 26, 2020, I received an email from the Religious Services Assistant at BOP, indicating that "the Federal Bureau of Prisons has issued a 'Shelter in Place' order that will remain in effect throughout June 30, 2020, at which time it will be re-evaluated." The letter stated that the "unprecedented world-wide public health emergency" was the impetus for the "Shelter in Place" order. Attached as Exhibit 2 is a true and correct copy of the letter. After Mr. Purkey received an

execution date, BOP scheduled an MOR visit between Mr. Purkey and me for July 3, 2020. However, on June 26, I informed the BOP that I was unable to attend. It was my understanding that Mr. Purkey did not want visitors at that time. Plus, I was already very concerned about visiting the prison due to the COVID-19 pandemic. My concerns only intensified with the news in the past week of surges in infections across the country. As discussed further below, my age and certain medical conditions put me at high risk for infection and serious illness or death should I become infected.

11. Although it would be inappropriate, as Mr. Purkey's priest, for me to reveal the specific content of our spiritual-counseling visits, I can attest that Mr. Purkey has demonstrated to me over the years that he is a devoted Buddhist and sincerely believes in the faith.

12. As Mr. Purkey's priest, he is under my spiritual care. I am bound by my religious duty to be present at his execution, where—on the threshold of death, and at his ultimate moment of crisis—he will suffer the most dire distress.

13. In the Buddhist faith, death is a transition, a crossing over, to what is after life; it is a liberation from the limitations and sufferings inherent in our condition as separate human beings. However, in order for this liberation process to be successful and peaceful, the presence of an ordained Buddhist priest whom Mr. Purkey knows well and trusts is indispensable. In the absence of a priest at this crucial moment, carrying out the pastoral function by assisting and supporting the crossing-over process, Mr. Purkey may fail to achieve the full liberation and peaceful transition that death represents. A comparable parallel in Christian traditions might be the "last rites" that assure a proper and peaceful death in the throes of the transition between life and death.

14. Specifically, for Buddhists, the state of mind of a person at the moment of passing away is very significant for that person for karmic reasons, so that having one's priest in attendance to

serve as a spiritual guide is truly essential. As Mr. Purkey's priest, I would deliver a sutra (a chant with content and meaning) and a dharani (a mantra-like chant) as he passes away to facilitate the dying process and convey equanimity to him. During this process, it is important that I am visible to him so he can see my face to remind him of the many hours we spent together and the teachings I shared with him during that time. In accordance with these principles and the Mahayana Buddhist precepts discussed above, my presence would provide spiritual consolation and compassion to him during this time, helping him attain peace of mind as he leaves this life.

15. Thus, in order to help provide for a peaceful state of mind and a proper transition and liberation, it is my sacred religious duty to be at Mr. Purkey's execution. My failure to be there would, for me, constitute a troubling violation of my religious tenets and priestly obligations. Given my relationship with Mr. Purkey, which has developed over the course of eleven years, it is inconceivable that I should be absent and fail to share in his final tribulation.

16. To that end, when Mr. Purkey was initially scheduled for execution on December 13, 2019, I planned to attend the execution. In accordance with BOP regulations, Mr. Purkey designated me as the spiritual advisor who shall be present when his execution is carried out. On November 21, 2019, I received a letter from the BOP noting that Mr. Purkey had selected me to be a witness and requiring me to report to the Vigo County Sheriff's Office parking lot on the day of the execution, where I would be picked up by prison staff and transported to the prison for processing.

17. Despite the onerous procedures associated with attending the execution that was planned for December 2019, there is no doubt in my mind that I would have attended to fulfill my religious duties. However, the execution date was postponed.

18. It is my understanding that a new execution date for Mr. Purkey has been set for July 15, 2020. I was shocked to learn that the BOP would be proceeding with the execution during the

pandemic, especially given the fact that the prison had not even been allowing visits to the prison since the middle of March. I immediately became worried that I would not be able to attend without significant risk to my health and life.

19. Having visited Mr. Purkey at USP Terre Haute many times before, I know that the security procedures, even absent an execution, do not allow for the kind of social distancing that is required by CDC guidelines during the COVID-19 crisis. In my experience as a visitor at Terre Haute, I must first check-in at the entrance of the main building and hand my identification and keys to the guards at the front desk. Then, if there are other visitors who also need to be processed, I have to wait in the waiting room for up to thirty minutes with them. There are about thirty chairs in the waiting room, organized in sets of two or three and in rows no more than a few feet apart from each other.

20. Once my name is called, a guard takes my photo and asks me to put my shoes, belt, and other property in a plastic bin to pass through a metal detector on a conveyor belt while I walk through a separate metal detector. Afterward, a guard manually inspects my property. I then collect my things and the guard stamps my hand.

21. At this point, I am confined to another part of the waiting room, where I wait with other visitors an additional period of time—varying from 30 minutes up to, on occasion, 90 minutes. This waiting area is structured similarly to the waiting area at the entrance: It has rows of plastic chairs cramped together and little ability to socially distance from others.

22. Once a guard collects copies of my photograph from the front desk, I and any other visitors are escorted one-by-one to a third area, a small, confined space where visitors put their stamped hand under a black light. After showing their hands in the black light area, each visitor must remain

there waiting for others to do the same. By the end of the black light process, the space can become quite crowded.

23. The guard then escorts the group of us outside and into a second building. At this point, most of the group breaks off to go in the direction of general population. A guard then escorts me and other Special Confinement Unit (SCU) visitors, if there are any, through several long narrow hallways. On this route, we pass several prisoners and staff in close proximity on our way to an elevator that can hold up to ten people. I am then taken to another check-in desk for the SCU, where I sign a logbook and wait immediately outside of the visiting room.

24. A different guard unlocks the door to the visiting room where I have a non-contact visit with Mr. Purkey through a plexiglass barrier. When the visit is over, I have to wait for prison staff to escort me along the same path, back to the main entrance, where I collect my identification and keys on my way out of the facility. During this entire process, from intake until my exit, it is impossible to avoid being in close proximity to many of the individuals I encounter. On any one visit, it is not uncommon for me to encounter at least a dozen different people, if not more, in close proximity.

25. I am certain that the security procedures and protocol will be even more stringent on the day of execution than they are under normal visitation conditions. I believe that these procedures will likely require even more contact with guards, as well as extended periods of waiting in close proximity with other attendees and individuals.

26. I am 68 years old and thus, because of my age, at a high risk for becoming infected with COVID-19 and becoming seriously ill or dying should I become infected.

27. Beyond my age, I also have suffered several lung-related illnesses that make me medically vulnerable to COVID-19. In January of 2019, I had a severe case of bronchitis, which lasted four

to five weeks and then recurred in March of the same year. I also have a history of pleurisy, an illness that causes severe lung inflammation and hampers breathing.

28. Because of my medical vulnerability, I have severely curtailed my contact with others during the pandemic. Before the pandemic, I went to my local library on a near-daily basis. To date, the library is closed, but I do not plan to visit even if it does reopen. I also used to frequent coffee shops regularly. I no longer do so even though many coffee shops have started to reopen at reduced capacity. I also do not currently attend services at my temple. I actively avoid socializing in person and gathering in groups and, instead, I remain sheltered at home. The only time I leave my home is to go grocery shopping, during which I maintain a strict distance from others and wear a mask, or to walk for exercise.

29. I want nothing more than to fulfill my priestly duties toward Mr. Purkey, but because of the BOP's decision to schedule this execution during a pandemic, I feel substantial pressure to abandon my religious commitments to him. It would be impossible for me to fulfill my religious duties during Mr. Purkey's execution in a way that complies with the CDC guidelines for medically vulnerable populations. As such, I have been placed in the impossible position of violating my religious duties or risking my health and life to carry them out.

30. If the execution were delayed until a time when there is either an effective COVID-19 treatment or a vaccine, I would be safely able to attend and honor the core tenets of my faith and my religious commitments as Mr. Purkey's priest.

I declare pursuant under penalty of perjury that the foregoing facts are true and correct.

Dale C. Hartkemeyer

Dale Hartkemeyer (aka Seigen)
June 30, 2020

Exhibit 1

---------- Forwarded message ---------
From: **Dale Hartkemeyer** <dalehartkemeyer@gmail.com>
Date: Wed, Feb 13, 2013 at 2:53 PM
Subject: Minister of Record request
To: David C. Holston <dholston@bop.gov>

Rev. David C. Holston

Supervisory Chaplain

Federal Correctional Complex

4200 Bureau Road South
Terre Haute, IN 47802

Dear Rev. Holston:

This email is in reply to Inmate Wesley Purkey's request to have me serve as his Minister of Record. I would like this email to serve as my formal acceptance of his request and would like to apply to be designated as his MOR. As you probably already know, I have been serving as a spiritual adviser to Mr. Purkey since January of 2009, visiting him monthly, usually on Saturdays, to further his study and instruction in Zen Buddhism. We often spend the visit time exploring Buddhist readings and discussing the contents of essays/sermons that he has found in various publications, and studying various themes within the teachings and drawing connections among the many aspects of the teachings. I find that Mr. Purkey's familiarity with and awareness of the broad picture of the Buddha Way has greatly expanded over these past years of our mutual spiritual enterprise. I would like to see this instructional relationship continue.

Attached you will find the NCIC check document. I will be submitting other documents shortly. Thank you for considering this application for MOR status.

Sincerely,

Rev. Dale Seigen Hartkemeyer

Sanshin Zen Community

Bloomington, Indiana

---------- Forwarded message ---------
From: **David C. Holston** <dholston@bop.gov>
Date: Wed, Mar 6, 2013 at 12:55 PM
Subject: Re: clergy credentials - Part 2
To: Dale Hartkemeyer <dalehartkemeyer@gmail.com>

Rev. Hartkemeyer: Most everything should be the same except I am responsible for the scheduling for all MOR visits. I schedule all the MORs a month in advance through Counselor Edwards. Is this the email that you want to receive the monthly request? If so, I will add this email address to my contact list. The days for MORs will be Saturday-Sunday-Monday. Normally, the time slots are morning around 8 to 11:30, and afternoon slot is 12:30-3pm. What times would you like to request for March 30 and April 20. April 20 afternoon would be better, and March 30 should be open, at least as MORs are concerned. Let me know and I will request with Counselor Edwards.

Thanks.

D. Holston
Supervisory Chaplain
Federal Correctional Complex
4200 Bureau Rd. South
Terre Haute, IN 47802
(812) 244-4677 (USP)
(812) 238-3433 (FCI)
>>> Dale Hartkemeyer <dalehartkemeyer@gmail.com> 3/6/2013 12:15 PM >>>
Dear Rev.Holston,
Thank you for the notice. Could you tell me if the MOR visits differ in any way from the pastoral visits I was making previously, in terms of scheduling, duration of visits, etc.? I am available on March 30 (Saturday) for a visit with Mr. Purkey. In April, the 20th would be the best date for me.
Thank you.
Dale Seigen Hartkemeyer

On Wed, Mar 6, 2013 at 10:51 AM, David C. Holston <dholston@bop.gov> wrote:

> Rev. Hartkemeyer: You have been approved as MOR for Inmate Purkey. If you would like to make your first MOR visit in March, we could try and schedule for last week of March. Please respond asap if available. Also, I am scheduling April's visits, so please let me know when you would like to visit in April.

Thanks.

D. Holston
Supervisory Chaplain
Federal Correctional Complex
4200 Bureau Rd. South
Terre Haute, IN 47802
(812) 244-4677 (USP)
(812) 238-3433 (FCI)
>>> Dale Hartkemeyer <dalehartkemeyer@gmail.com> 2/20/2013 1:56 PM >>>
Dear Rev, Holston:

Attached you will find scans of Zen lineage papers received at the time of my precepts-taking (file *kechi-seigen)* and of my ordination as a Zen Buddhist monk (file *kechi-shogyo*).

Sincerely,
Dale Seigen Hartkemeyer

Text (bottom) of kechi-seigen:

To the bodhisattva (lay Buddhist) Seigen (name meaning "Sacred Source")
La Gendronniere Zen Temple, Aug. 9, 1981

[Conferred by Zen Master Taisen Deshimaru]

Text (bottom) of kechi-shogyo:

La Gendronniere, July 29, 1983, to Seigen Shogyo [Dale Hartkemeyer], by Taimyo, Zen monk and disciple of Taisen Deshimaru, for his ordination as monk.

[Conferred by Zen monk Taimyo Luc Boussard]

Exhibit 2

U.S. Department of Justice
Federal Bureau of Prisons

Federal Correctional Complex
Terre Haute, Indiana

Religious Services

May 26, 2020

Greetings,

We hope you and your family are staying safe during this unprecedented world- wide public health emergency.

The Federal Bureau of Prisons has issued a "Shelter in Place" order that will remain in effect throughout June 30, 2020, at which time it will be re-evaluated.

Thank you for your patience. An update will be provided, once volunteers are allowed to return to the Federal Correctional Complex.

Sincerely,

Mrs. Kiersten Orr
Religious Services Assistant
812-238-1531 ext. 3434
kshepherd@bop.gov

Declaration of Father Mark O'Keefe Pursuant to 28 U.S.C. § 1746

I, Father Mark O'Keefe, declare as follows:

1. I am a Roman Catholic priest and a member of the Order of St. Benedict (Ordo Sancti Benedicti). I am an accredited volunteer at the Terre Haute federal penitentiary, where I have ministered to Dustin Honken, a Roman Catholic prisoner who is scheduled to be executed by the United States government on July 17, 2020.

2. On June 30, 2020, Dustin designated me to be his spiritual advisor so that I accompany him at his execution, to minister to him as he exits this world. Consistent with the teachings of the Catholic Church, I regard this request to be a source of sacred obligation and essential to my own religious practice.

3. Because the U.S. government has scheduled Dustin's execution during the midst of a pandemic involving the worsening spread of the novel COVID-19 virus, I will be required to place myself, as well those to whom I minister outside the prison, in a position of heightened and unnecessary risk of exposure to the COVID-19 virus, in order to fulfil my sacred obligation of ministry to Dustin in his time of greatest need.

4. I make this declaration in support of my claim that conducting Dustin's execution during the pandemic burdens my religious practice, namely, my ability to minister to Dustin as taught by the Catholic Church and sincerely sought by Dustin, by forcing me to take on a heightened and unnecessary risk of contracting and spreading the novel COVID-19 virus in order to carry out my ministry (including administration of the sacraments that only a priest can administer).

CATHOLIC DOCTRINE

5. I have observed first-hand that Dustin is a devout and pious practicing Catholic. I have met with Dustin one-on-one several times, as an accredited volunteer at the Terre Haute prison.

6. In requesting my ministry at his execution, Dustin seeks to be in a state of grace at the moment of death. To be sure he remains steadfast in his final act of contrition, which he will make as close to the moment of his death as humanly possible, and to assist him in remaining true to his religious conviction until his death, he has requested my ministry in his last moments, including in the execution chamber as he passes from this life to the next.

7. Confession and true contrition are essential to Confession which I will be prepared to offer to Dustin at the time of death.

8. Last Rites is no mere ritual but one of the seven holy sacraments: Baptism, Confession, Communion (Eucharist), Confirmation, Marriage, Ordination, Last Rites. It can only be administered by an ordained Catholic priest.

9. Catholic doctrine teaches the following:

a. Life is eternal, but life on earth is transient.

b. At the end of life, Dustin's soul will pass to eternal life, either heaven, hell, or purgatory.

c. If Dustin dies upon having made an act of true contrition, with no denunciation of God or wavering in his contrition, he may avail himself of the redemption offered by the sacrifice Jesus made, and Dustin can eventually achieve life eternal with God.

d. Even if he stays contrite and true to his last breath with my ministering to him, he may suffer in purgatory to atone for his sins on earth before joining God in heaven.

10. Catholics are very mindful that even our Lord and Savior, Jesus Christ, approached despair during his state-ordered execution on the Cross, and cried to his Father "Eli Eli Lama Sabachthani?" or "My God, my God, why hast thou forsaken me?"

11. The guidance and accompaniment of a priest, and the Last Rites and the sacraments of the Eucharist and Confession which Dustin seeks, assist the dying to avail themselves of the redemption offered by Jesus for eternal life with God.

12. The administering of Last Rites and the completion of his last confession and recital of a good act of contrition until the moment of death can enable Dustin to achieve eternal salvation. Denying Dustin those sacraments at the time of his death and denying him the spiritual comfort and guidance that only a priest can provide adds jeopardy to his effort to seek redemption.

13. I feel that I have a sacred religious obligation to be present with and minister to Dustin as he faces his own death. I feel morally and spiritually obligated to honor his request, and to allow him, through my presence and ministry at the time of his death, an opportunity to enter into the next life in the full grace of God. This is one of the most important roles that a priest can possibly play in helping a member of the flock achieve salvation.

COVID-19 CONCERNS

14. I am 64 years old. I understand that there is a scientific consensus that, due to my age, I am at a high risk of serious complications and even death attendant to the spread of COVID-19, which has intensified in recent days. I understand that, by agreeing to minister to

Dustin at his execution, I have agreed to put my health, and possibly even my life, in danger. I also recognize that those who contract COVID-19 are highly likely to spread the virus to other people, putting those others at grave risk. I do not take these risks lightly, and they cause me serious fear and concern. Nonetheless, my faith and my personal conscience compel me to fulfill Dustin's request for my ministry at the time of his death.

15. I am devastated by the prospect of exposing myself and others to the risk of COVID-19 infection because the U.S. government chooses to execute Dustin and others in the midst of this pandemic. I believe the U.S. government could readily postpone Dustin's execution until a time when I would not have to risk health and life to carry out my sacred obligations as a Catholic priest.

16. I would note that in mid-March of 2020, in direct response to the risks posed by COVID-19 to visitors and to the inmate population, BOP suspended all visits to prisoners, including religious visits. This has prevented me from visiting and ministering to inmates at Terre Haute at this time.

17. After the prison scheduled executions last month, the prison began permitting spiritual visits for only the four men with execution dates. However, BOP continues to prohibit volunteers like me to visit all other inmate in the prison, out of concern about the potential spread of COVID-19. And yet the prison compels me at the same time to risk health and life in order to practice my religion with Dustin at his execution.

18. As part of my Catholic ministry, I am the Resident Chaplain at the Carmelite Monastery in Terre Haute. Among other things, I say a daily Mass for the cloistered nuns, at which I provide them with the holy sacrament of Communion. The nuns and I, each of us, have maintained careful protocols at the monastery to protect ourselves from exposure to COVID-19.

Where necessary, I make trips to the pharmacy and grocery store only for myself; likewise, there is one designated nun who shops for the sisters on their behalf to protect them from direct exposure.

19. It is an essential part of my ministry that I am able to administer Communion to the nuns on a daily basis. There are several nuns over the age of 60 and a few who are over 80 years old. I understand this means they too are at a heightened risk of serious COVID-19 complications, including death, associated with the current pandemic and with the close contact with others that will be inevitable when I attend Dustin's execution.

20. I have discussed the issue with the sisters, and while they, too, are concerned and profoundly disappointed by the burden this places on our religious exercise, they are nonetheless steadfast that Dustin must be permitted to have his spiritual advisor present with him as he passes from this life to the next (and that they wish to continue to have daily Communion). While I am also steadfast in my commitment to minister to Dustin at the time of his greatest need, as my faith requires, I am nonetheless gravely worried about the risks this creates for me and for those closest to me in the faith. As a religious man, scholar, and citizen, it seems wholly unnecessary that Dustin's execution would be scheduled in the midst of a pandemic the likes of which this country has never seen. That decision places great burdens on the religious exercise of those, like myself, who feel obligated to tend to the souls of all God's children, even those condemned to die by the U.S. government.

21. By way of background, I have been a parish priest and pastor, educator and author, as follows:

Current: Resident Chaplain of the Carmelite nuns of the Monastery of St. Joseph, Terre Haute, IN

Education:

Current: Professor of Moral Theology, Saint Meinrad Seminary and School of Theology.

BA (Saint Meinrad College, 1978); MA from Indiana University, and an STL and STD (doctorate in sacred theology) from the Catholic University.

Employment history:

Pastor of St. Mary Parish in Huntingburg, IN, from 2008 to August 2012.

1996-2008- President-rector of Saint Meinrad School of Theology from 1996 to 2008.

Publications: a five-book series on the Catholic priesthood including Priestly Wisdom, Priestly Prayer, Priestly Virtues, The Ordination of a Priest and In Persona Christi. Other books include, Becoming Good, Becoming Holy: On the Relationship of Christian Ethics and Spirituality, What Are They Saying About Social Sin?, and Deciding to Be Christian: A Daily Commitment, Love Awakened by Love: The Liberating Ascent of St. John of the Cross.

22. For the foregoing reasons, I submit this affidavit in support of my claims that the Bureau of Prisons has arbitrarily and improperly burdened my religious exercise by putting to me to the choice of risking my health and life, and the health and life of those I minister to, in order to do what I feel my faith requires, which is to be present to minister to Dustin at his execution.

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

Signed: Father Mark O'Keefe

Father Mark O'Keefe

Date: 7/7/20

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF INDIANA
TERRE HAUTE DIVISION

DALE HARTKEMEYER (AKA SEIGEN) Plaintiff, v. WILLIAM P. BARR, in his official capacity as the Attorney General of the United States; MICHAEL CARVAJAL, in his official capacity as the Director of the Federal Bureau of Prisons; and T.J. WATSON, in his official capacity as Complex Warden for Terre Haute Federal Correctional Complex, Defendants.	)	Case No. _____

DECLARATION OF DR. JOE GOLDENSON

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

Background

1. I am a medical physician with 33 years of experience in correctional health care. For 28 years, I worked for Jail Health Services of the San Francisco Department of Public Health. For 22 of those years, I served as the Director and Medical Director. In that role, I provided direct clinical services, managed public health activities in the San Francisco County jail, including the management of HIV, tuberculosis, Hepatitis C, and other infectious diseases in the facility, planned and coordinated the jail's response to H1N1, and administered the correctional health enterprise, including its budget, human resources services, and medical, mental health, dental, and pharmacy services.

2. I served as a member of the Board of Directors of the National Commission on Correctional Health Care for eight years and was past President of the California chapter of the American Correctional Health Services Association. In 2014, I received the Armond Start Award of Excellence from the Society of Correctional Physicians, which recognizes its recipient as a representative of the highest ideals in correctional medicine.

3. For 35 years, I held an academic appointment as an Assistant Clinical Professor at the University of California, San Francisco.

4. I have worked extensively as a correctional health medical expert and court monitor. I have served as a medical expert for the United States District Court for the Northern District of California for 25 years. I am currently retained by that Court as a medical expert in *Plata v. Newsom*, Case No. 3:01-cv-01351 (N.D. Cal.), to evaluate medical care provided to inmate patients in the California Department of Correctional Rehabilitation. I have also served as a medical expert/monitor at Cook County Jail in Chicago and Los Angeles County Jail, at other jails in Washington, Texas, and Florida, and at prisons in Illinois, Ohio, and Wisconsin.

5. My CV is attached as Exhibit A.

6. I am not being compensated for my time reviewing materials and preparing this report.

7. As a researcher of prisoner health care and infectious diseases, I have studied the scientific literature about COVID-19, including the literature regarding symptoms, testing, infection rates and transmission. In addition, I have studied and am familiar with the public health guidance regarding prevention and containment of COVID-19, including U.S. Centers For Disease Control and Prevention's ("CDC") Guidance for Population in Jails and the CDC's Interim Infection Prevention and Control Recommendations for Patients with Suspected or Confirmed Coronavirus Disease 2019 (COVID-19) in Healthcare Settings.

8. I have been asked by counsel for Seigen, the spiritual advisor for a death row prisoner detained at the United States Penitentiary at Terre Haute in Terre Haute, Indiana, to describe the risks to visitors, prisoners, staff and the community posed by resuming visitation and carrying out executions at Terre Haute during the COVID-19 pandemic, and in particular, the risks to individuals with medical vulnerabilities. Seigen is the spiritual advisor for Wes Purkey, whose execution is scheduled for July 15, 2020.

COVID-19

9. COVID-19 is a serious disease that reached pandemic status in March 2020. As of June 28, 2020, there are at least 10,039,286 confirmed cases of COVID-19 worldwide, including 2,504,175 cases in the United States.[1] At least 499,633 people have died, including 125,484 in the United States.[2] As of June 28, 2020 there were 44,575 confirmed cases of COVID in Indiana and 2,616 reported deaths.[3] Vigo County, where Terre Haute is located,

[1] Johns Hopkins University COVID-19 Data Center, https://coronavirus.jhu.edu/ (last visited June 28, 2020); Centers for Disease Control and Prevention, Covid Data Tracker, https://www.cdc.gov/covid-data-tracker/#cases (last visited June 28, 2020).
[2] *Id.*
[3] *Id.*

has had 219 confirmed cases and 8 deaths.[4] Because these numbers include only laboratory confirmed cases, they likely understate the actual number of cases and deaths. Even as some jurisdictions relax social distancing restrictions, new hotspots of infection continue to emerge and cases continue to rise in states across the South, West and Midwest.[5] Cases have increased 15% over the last few weeks and, as of June 20, were rising in 18 states across the South, West, and Midwest. Twelve states hit single-day case records the week of June 20.[6]

10. COVID-19 is a highly contagious respiratory illness. It is transmitted between persons in close proximity (within about six feet) by airborne droplets released by infected individuals when they cough or sneeze.[7] The droplets can survive in the air for up to three hours. It may also be possible for an individual to become infected by touching a surface or object that has the virus on it and then touching his or her own mouth, nose, or possibly eyes. Infected droplets can survive on surfaces for variable lengths of time, ranging from up to four hours on copper, to 24 hours on cardboard, to two to three days on plastic or stainless steel.

11. Signs and symptoms of COVID-19 may appear two to 14 days after exposure and may include fever, cough, shortness of breath or difficulty breathing, chills, fatigue, muscle pain, headache, sore throat, new loss of taste or smell, congestion or runny nose, nausea or vomiting, or diarrhea.[8] In severe cases, COVID-19 can require hospitalization and lead to respiratory failure or death. While more than 80% of the cases are mild, overall some 20% of cases will have severe disease requiring medical intervention and support.

12. Patients who suffer from serious disease may progress to Acute Respiratory Distress Syndrome (ARDS), which is a type of respiratory failure. Many patients suffering from ARDS will require mechanical ventilation. ARDS has a 30 percent mortality rate overall, and a higher mortality rate in people with other medical conditions.

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[4] Johns Hopkins University Coronavirus Resource Center, COVID-19 United States Cases by County, https://coronavirus.jhu.edu/us-map (last visited June 28, 2020).
[5] Julie Bosman, W.H.O. Warns of 'Dangerous Phase' of Pandemic as Outbreaks Widen, New York Times (June 19, 2020), https://www.nytimes.com/2020/06/19/us/coronavirus-new-dangerous-phase.html; New York Times, *Coronavirus Live Updates: Cases Across U.S. Surge Toward May's High* (June 20, 2020).
[6] New York Times, *Coronavirus Live Updates,* June 21, 2020, https://www.nytimes.com/2020/06/21/world/coronavirus-updates.html?action=click&module=Top%20Stories&pgtype=Homepage
[7] Centers for Disease Control and Prevention, Interim Infection Prevention and Control Recommendations for Patients with Suspected or Confirmed Coronavirus Disease 2019 (COVID-19) in Healthcare Settings, https://www.cdc.gov/coronavirus/2019-ncov/hcp/infection-control-recommendations.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Finfection-control%2Fcontrol-recommendations.html.
[8] Centers for Disease Control and Prevention, Symptoms of Coronavirus (updated May 13, 2020), https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html

13. Certain populations are particularly vulnerable to severe cases of COVID-19. The case fatality rate and need for advanced medical intervention and support increase significantly with advancing age in people aged over 50 and for people of any age with certain underlying medical conditions (the "medically vulnerable"). The CDC has identified people with the following medical conditions as high risk for severe illness (hospitalization, intensive care, ventilatory support or death) from COVID-19:

- Type 2 diabetes mellitus
- Chronic obstructive pulmonary disease
- Serious heart conditions, such as heart failure, coronary artery disease, or cardiomyopathies
- Sickle cell disease
- Chronic kidney disease
- Immunocompromised state (weakened immune system) from solid organ transplant
- Obesity (body mass index (BMI) of 30 or higher)

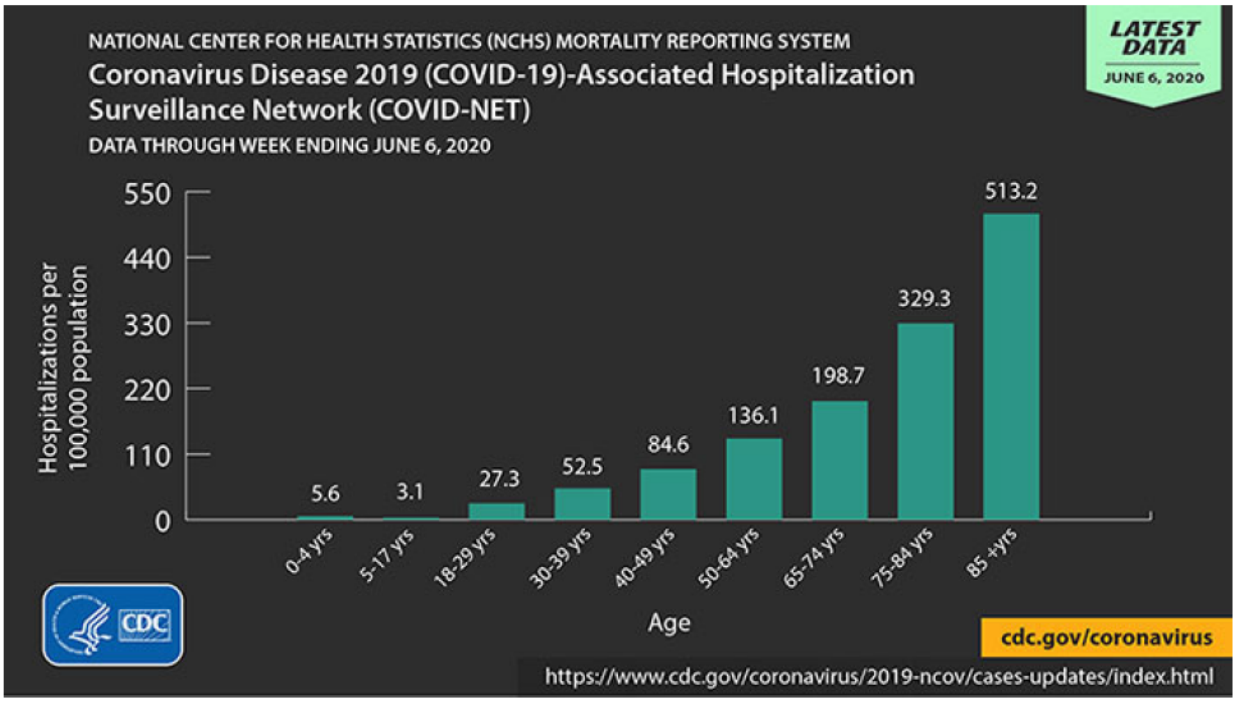
The CDC notes that people with the following conditions might also be at risk for severe illness from COVID-19:

- Asthma (moderate to severe)
- Cerebrovascular disease (affects blood vessels and blood supply to the brain)
- Cystic fibrosis
- Hypertension or high blood pressure
- Immunocompromised state (weakened immune system) from blood or bone marrow transplant, immune deficiencies, HIV, use of corticosteroids, or use of other immune weakening medicines
- Neurologic conditions, such as dementia
- Liver disease
- Pregnancy
- Pulmonary fibrosis (having damaged or scarred lung tissues)
- Smoking
- Thalassemia (a type of blood disorder)
- Type 1 diabetes mellitus[9]

[9] Centers for Disease Control and Prevention, *People of Any Age with Underlying Medical Conditions* (updated June 25, 2020), https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-with-medical-conditions.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fneed-extra-precautions%2Fgroups-at-higher-risk.html

14. The CDC also notes the risk for severe illness from COVID-19 increases with age, with older adults at highest risk.[10] For example, as depicted in Chart 1, a CDC graphic, 84.6 per 100,000 patients age 40-49 years are hospitalized due to COVID-19. That rate increases to 136.1 per 100,000 for patients age 50-64 years; to 198.7 per 100,000 for patients age 65-74 years; and to 329.3 per 100,000 for patients age 75-84 years.[11]

Chart 1



15. The risk of death from COVID-19 also increases with age. As shown in Chart 2, another CDC graphic, patients age 40-49 account for 2.9% of all COVID-19 deaths. Beginning at age 50, the risk of death increases dramatically. Patients age 50-64 account for 15% of COVID-19 deaths; patients aged 65-74 account for 20.6% of deaths; patients aged 75-84 account for 26.1% of deaths.[12] The increasing death toll for older adults does not correlate with overall percentage of the population. Rather, the death rate from COVID-19 increases significantly with age, despite the fact that those age groups constitute an

[10] Centers for Disease Control and Prevention, *Older Adults* (updated June 25, 2020), https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/older-adults.html
[11] *Id.*
[12] Centers for Disease Control and Prevention, *Demographic Trends of COVID-19 cases and deaths in the US reported to CDC* (updated June 29, 2020), https://www.cdc.gov/covid-data-tracker/index.html#demographics.

increasingly smaller percentage of the overall population. This trend is depicted in Chart 3, below, compiled from CDC data[13] and population estimates from the U.S. Census Bureau.[14]

Chart 2

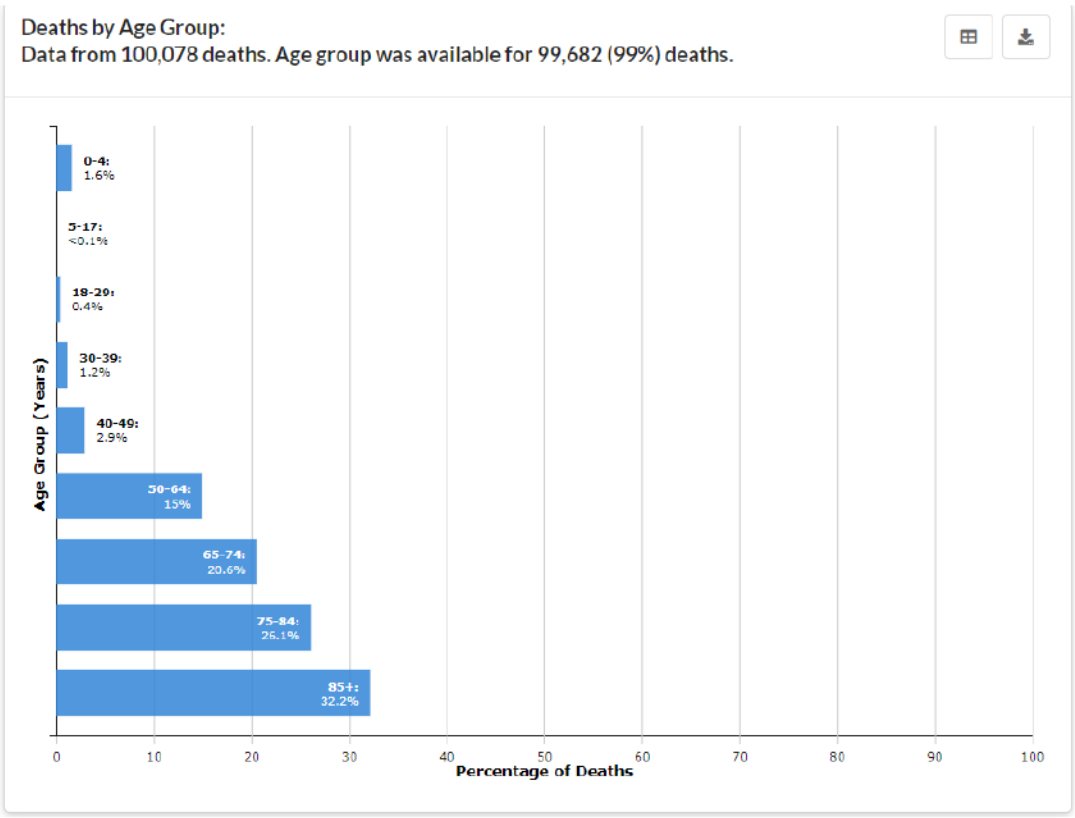
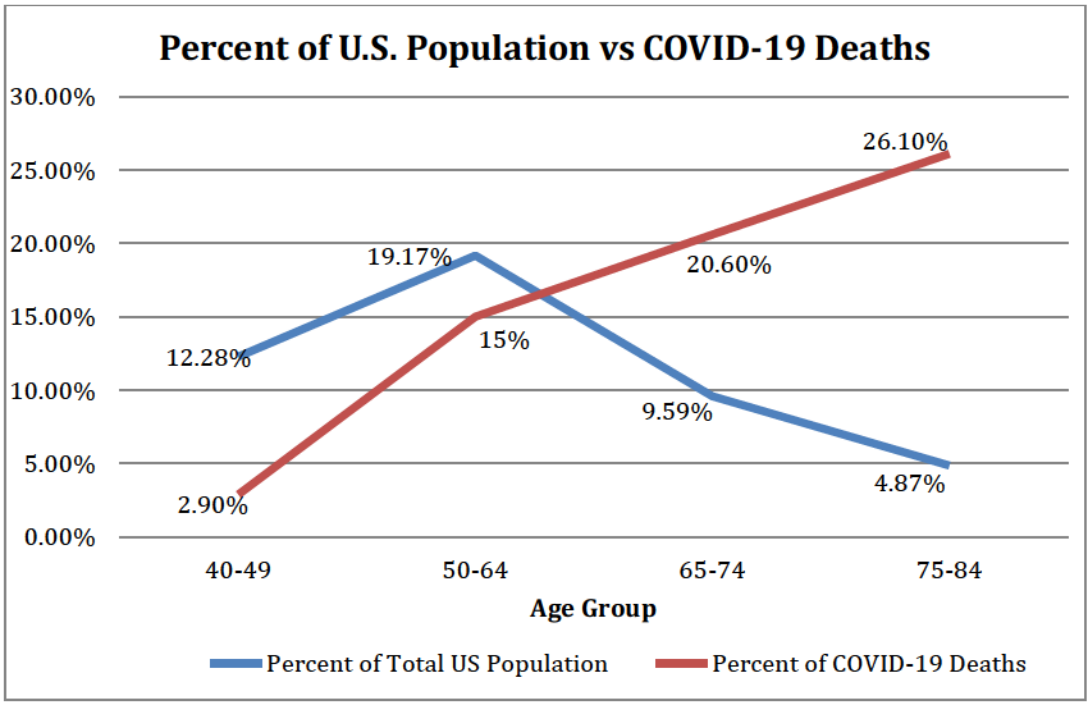


Chart 3

[13] *Id.*

[14] *See* United States Census Bureau, *2019 Population Estimates by Age, Sex, Race and Hispanic Origin* (June 25, 2020), https://www.census.gov/newsroom/press-kits/2020/population-estimates-detailed.html.



16. A significant number of infected individuals do not exhibit symptoms, however, and asymptomatic individuals—either before the onset of symptoms or because no symptoms will ever manifest—can nevertheless transmit the disease to others. According to the CDC, up to 25 percent of people infected with COVID-19 will remain asymptomatic.[15] Similarly, infected individuals may experience only mild symptoms. These asymptomatic and mildly symptomatic individuals can, and do, transmit the virus, contributing to its rapid spread. Because of the high risk of transmission by asymptomatic individuals, CDC recommends everyone wear a mask when they leave their homes.

17. At this time there is no vaccine to prevent COVID-19 and there is no known cure or anti-viral treatment available.[16]

18. Current preventive measures seek to slow the transmission of COVID-19 through a number of mechanisms. The CDC has identified social distancing (keeping persons separated by at least six feet) as a "cornerstone of reducing transmission of respiratory diseases such as COVID-19."[17] In addition, frequent handwashing, and respiratory hygiene (*e.g.*, covering mouth and nose when coughing or sneezing), and frequent cleansing of surfaces, while less

[15] Apoorva Mandavilli, *Infected but Feeling Fine: The Unwitting Coronavirus Spreaders*, N.Y. Times (Mar. 31, 2020), https://www.nytimes.com/2020/03/31/health/coronavirus-asymptomatic-transmission.html.
[16] Centers for Disease Control and Prevention, *Prevent Getting Sick* (Apr. 8, 2020), cdc.gov/coronavirus/2019-ncov/prevent-getting-sick.
[17] Centers for Disease Control and Prevention, *Interim Guidance on Management of Coronavirus Disease 2019 (COVID-19) in Correctional and Detention Facilities*, at 4 (Mar. 23, 2020), https://www.cdc.gov/coronavirus/2019-ncov/downloads/guidance-correctional-detention.pdf

effective than social distancing, are recommended.[18] While these are important and necessary actions to reduce the risk of infection and the spread of the virus, they are not fully preventive.

COVID-19 in Detention Facilities Generally

19. For multiple reasons, the risk of exposure to and transmission of infectious diseases, as well as the potential harm to those who become infected, is significantly higher in jails and prisons than in the community, putting inmates, staff, and others who must enter the facility at high risk of becoming ill with COVID-19.

20. Close living quarters and often overcrowded conditions in jails, prisons, and detention centers facilitate the rapid transmission of infectious diseases, particularly those transmitted by airborne droplets through sneezing or coughing, like COVID-19. In these congregate settings, large numbers of people are closely confined and forced to share bunkrooms, bathrooms, cafeterias, and other enclosed spaces. They are physically unable to practice social distancing, which, as described above, is a "cornerstone" of reducing transmission of COVID-19.[19] Within these facilities, space and resource limitations—and the resulting inability of inmates and employees to practice social distancing[20]—make it extremely difficult to effectively quell the explosive growth of a highly contagious virus. The CDC has recognized that correctional and detention facilities "present unique challenges for control of COVID-19 transmission among incarcerated/detained persons, staff, and visitors."[21]

21. Frequent and thorough hand washing is one of the key recommendations to reduce transmission but sufficient soap and/or hand sanitizer is often not available (for inmates and staff) to wash their hands frequently enough to prevent the risk of transmission in contravention of the CDC's *Interim Guidance.*[22]

22. Correctional facilities are commonly poorly ventilated, which facilitates the transmission of airborne illnesses, such as COVID-19. The CDC recommends generally after an infection in buildings that building operators open windows to allow fresh air to circulate.[23] This recommendation is not possible in prisons.

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[18] Centers for Disease Control and Prevention, *How to Protect Yourself and Others* 1–2 (Apr. 18, 2020), https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention-H.pdf.
[19] Centers for Disease Control and Prevention, *Interim Guidance on Management of Coronavirus Disease 2019 (COVID-19) in Correctional and Detention Facilities*, at 4 (Mar. 23, 2020), https://www.cdc.gov/coronavirus/2019-ncov/downloads/guidance-correctional-detention.pdf
[20] *See id.* at 2, 11.
[21] *Id.* at 2.
[22] *See id*.
[23] Centers for Disease Control and Prevention, *Cleaning and Disinfecting Your Facility* 2 (Apr. 1, 2020), https://www.cdc.gov/coronavirus/2019-ncov/community/disinfecting-building-facility-H.pdf.

23. Current CDC recommendations for reducing the transmission of COVID-19 in jails include screening of all newly arriving arrestees, quarantining all newly arriving arrestees for 14 days and performing daily symptom screening and temperature checks while they are in quarantine, isolating any detainee with any symptoms consistent with COVID-19 or with fever who is currently housed in the facility, and providing masks to all inmates who are "confirmed or suspected COVID-19 cases, or showing symptoms of COVID-19."[24] In addition, the CDC generally recommends providing and wearing masks in congregate settings. Individuals should not be added to an existing quarantine cohort after the 14-day quarantine clock has started.

24. These recommendations are also difficult, if not impossible, to implement in prisons due to space constraints, lack of sufficient respiratory isolation rooms, and lack of necessary equipment and other resources.

25. Testing has been limited in many jails and prisons. Even when available, it can take days to obtain results. Moreover, someone who is tested shortly after being infected may test negative. As a result of this limited testing, the data regarding the spread of COVID-19 in correctional facilities is extremely limited and likely significantly undercounts the true spread of the virus. CDC Director Robert Redfield estimates that the number of people infected with COVID-19 in the community is likely 10 times higher than the number of patients who have been confirmed positive through testing.[25] It is likely that the rate of undiagnosed patients is even higher in prisons and jails, where testing rates are often much lower than in the community.

26. Non-test based verbal screens—i.e., asking a person for a subjective report of symptoms—cannot adequately screen for new, asymptomatic or pre-symptomatic infections. COVID-19 has a typical incubation period of 2 to 14 days, commonly five days, and transmission often occurs before presentation of symptoms. According to the Centers for Disease Control and Prevention, up to 25 percent of people infected with COVID-19 will remain asymptomatic.[26] Similarly, infected individuals may experience only mild symptoms. These newly infected, asymptomatic and mildly symptomatic individuals can, and do, transmit the virus, contributing to its rapid spread. As a result, such inadequate screening presents a critical problem. The possibility of asymptomatic transmission means that monitoring staff and incarcerated people for symptoms and fever is inadequate to identify all who may be infected and to prevent transmission. Because of the problems with screening procedures, the risk of false negative tests, the unavailability of test kits and the delays in obtaining test results, one necessary means to prevent the introduction of COVID into the jails by someone who is arrested is to quarantine all arrestees for 14 days and monitor

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[24] *See* Centers for Disease Control and Prevention, *Interim Guidance* at 10, 14, 15, 20.
[25] Lena H. Sun & Joel Achenbach, *CDC chief says coronavirus cases may be 10 times higher than reported*, Washington Post (June 25, 2020), https://www.washingtonpost.com/health/2020/06/25/coronavirus-cases-10-times-larger/.
[26] Apoorva Mandavilli, *Infected but Feeling Fine: The Unwitting Coronavirus Spreaders*, N.Y. Times (Mar. 31, 2020), https://www.nytimes.com/2020/03/31/health/coronavirus-asymptomatic-transmission.html

them daily for symptoms and fever before they are deemed safe to introduce into the general population of the jail.

27. In correctional facilities, groups of persons are often moved from space to space, for example, from a dormitory to a cafeteria or visiting room. Persons often from multiple different housing units, congregate and come in close contact while standing in lines for medication, commissary, fresh laundry, or telephones. These group movements, which may cluster large numbers of people together in small spaces, increase the risk of transmission between incarcerated persons and throughout the facility. It is common for individuals in a given housing unit to routinely be subjected to such group movements multiple times each day. Additionally, detention facilities often rely on incarcerated people to perform work that supports the operation of the facility, such as food service, laundry, and cleaning. To perform these work assignments, they typically travel from their housing units to other parts of the facility.

28. Correctional officers and other facility staff routinely have direct physical contact with incarcerated people, especially when handcuffing or removing handcuffs from prisoners who are entering or exiting the facility, or who are being escorted from one part of the facility to another. Staff members also move around within the facility, which creates opportunities for transmission both among staff in different parts of the facility and transmission to and from incarcerated people in different parts of the facility. Correctional officers must also come into close contact with visitors at facilities, in order to process them through security, conduct security searches, and escort them to their destination within the facility. This creates further opportunities for transmission between staff and visitors.

29. Correctional facilities largely lack the robust medical care infrastructure that would be necessary to deal with a COVID-19 outbreak. If a significant number of people become sick with COVID-19 the institution's health care facilities will be unable to respond appropriately to those people and those who need medical care for other reasons. And, when an incarcerated patient's needs are too acute for a correctional facility to provide adequate treatment, the patient must be transported to and treated at a community hospital. Once COVID-19 spreads throughout the correctional facility, the burden of caring for many of these sick individuals will shift to local community medical facilities.

30. When an outbreak strikes a correctional facility, correction and medical staff will become ill. They will not show up to work. These vacancies can result in facilities becoming dangerously understaffed, which compromises medical care. Healthcare staff who provide treatment are unavailable. Correctional staff also play a vital role in delivering medical services, by escorting prisoners, responding to and alerting medical of medical emergencies, and providing security to health care staff while they provide services. Their absence also compromises treatment.

31. If infected, inmates are at greater risk for harm from COVID-19 than those in the general community. This is due to a number of factors including the fact that people in prisons have high rates of chronic illnesses, such as diabetes, heart disease, chronic lung disease, and immunosuppressive illnesses such as HIV disease that increase the risk from

COVID-19, often have had poor or absent prior health care, and often have made unhealthy life-style choices, including alcohol and drug use. For these reasons, it is well accepted within the medical community that prison inmates are physiologically 10 years older than their chronological age.

32. Because of the conditions typically found in jails and prisons, carceral settings often have particularly serious incidence of communicable disease. For example, during the H1N1-strain flu outbreak in 2009 (known as the "swine flu"), jails and prisons experienced a disproportionately high number of cases.[27] Until recently the Cook County Jail in Chicago was believed to be the largest-known source of U.S. COVID virus infections.[28] As of April 13, more than 500 people had been infected at the facility, and the numbers continue to climb.[29] In one prison in Ohio, 78% of the approximately 2,500 prisoners tested positive.[30] The State of Ohio tested its prisoners en masse for COVID-19 so this number includes large numbers of inmates who were asymptomatic and would otherwise not have been tested. This underscores the risk of the spread of COVID-19 by asymptomatic individuals. In addition, 109 staff had tested positive for COVID-19.[31]

33. During an infectious disease outbreak, a containment strategy requires people who have known or suspected illness be isolated and that caregivers have access to personal protective equipment to protect themselves and to prevent the further transmission of the disease. During an outbreak, jails and prisons are under-resourced in being able to provide medically appropriate housing for persons with known or suspected infectious illness, and are often underequipped to provide sufficient personal protective equipment, increasing the risk of a widespread outbreak.

34. In sum, current CDC recommendations for social distancing, frequent hand washing, frequent cleansing of surfaces, symptom screening, temperature checks and isolation to prevent infection and the spread of the virus are extremely difficult, if not impossible, to implement in carceral settings. As a result, the risk of COVID transmission is far greater than in non-custodial institutions. Given the rapid spread of COVID-19, it is likely

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[27] David M. Reutter, *Swine Flu Widespread in Prisons and Jails, but Deaths are Few*, Prison Legal News (Feb. 15, 2010), https://www.prisonlegalnews.org/news/2010/feb/15/swine-flu-widespread-in-prisons-and-jails-but-deathsare-few/.

[28] Timothy Williams and Danielle Ivory, *Chicago's Jail is Top U.S. Hot Spot as Cirus Spreads Behind Bars*, N.Y. Times (Apr. 8, 2020), https://www.nytimes.com/2020/04/08/us/coronavirus-cook-county-jail-chicago.html.

[29] Cheryl Corley, *The COVID-19 Struggle In Chicago's Cook County Jail*, NPR (Apr. 13, 2020) https://www.npr.org/2020/04/13/833440047/the-covid-19-struggle-in-chicagos-cook-county-jail.)

[30] Ohio Department of Rehabilitation & Correction, COVID-19 Inmate Testing (last updated Apr. 20, 2020), https://drc.ohio.gov/Portals/0/DRC%20COVID-19%20Information%2004-20-2020%20%201304.pdf,

[31] Bill Chappell and Paige Pfleger, *73% Of Inmates At An Ohio Prison Test Positive For Coronavirus,* NPR (Apr. 20, 2020), https://www.npr.org/sections/coronavirus-live-updates/2020/04/20/838943211/73-of-inmates-at-an-ohio-prison-test-positive-for-coronavirus

impossible to achieve and sustain these measures sufficiently to mitigate the risk of transmission for medically vulnerable inmates, staff, or visitors.

Conditions in Prisons Pose Significant Risk of Transmission of COVID-19 To and From the Community Outside the Prisons

35. The conditions in prisons pose very significant risk of transmission of communicable diseases like COVID-19 not only to inmates, employees and volunteers in the prisons, but also to the community as a whole. It has long been known that jails, prisons, and detention centers can be hotbeds of disease transmission, and that due to the frequent ingress and egress of employees at these facilities, an outbreak within a jail, prison, or detention center can quickly spread to surrounding communities. In addition, staff may contract communicable diseases in the community and then introduce those diseases into the facility. While prisons are often thought of as closed environments, this is not the case. A large number of custody, medical, and other support staff and contractors who have direct contact with prisoners enter and leave the facility throughout the day. Prisons admit and release prisoners on a regular basis. Since there is no effective way to screen for newly infected or asymptomatic individuals, they can unknowingly transmit COVID-19 to the inmate population.

36. When there is an outbreak in a prison, staff can become infected and bring the virus home to their families and community. For example, the tuberculosis epidemic that broke out in New York City in the early 1990s began in jails and was spread to the community by jail employees who became infected and then returned home.

37. It is difficult to overstate the devastation that a COVID-19 outbreak could inflict on correctional facilities and its surrounding communities. At Rikers Island in New York, between the mornings of Wednesday, April 1 and Thursday, April 2, the number of COVID-19 positive incarcerated individuals and staff members grew by 47 and 57 people, respectively, upping the jail's total numbers of confirmed cases to 231 among the incarcerated population and 223 among staff.[32] The first known case of COVID-19 at Rikers was confirmed on Wednesday, March 18,[33] illustrating just how quickly this disease can and will overwhelm detention facilities. A rising number of individuals in prisons continue to test positive for COVID-19.[34]

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[32] Julia Craven, *Coronavirus Cases Are Spreading Rapidly on Rikers Island*, Slate (Apr. 2, 2020), https://slate.com/news-and-politics/2020/04/rikers-coronavirus-cases-increase.html.
[33] *As Testing Expands, Confirmed Cases of Coronavirus in N.Y.C. Near 2,000*, N.Y. Times (updated Mar. 19, 2020), https://www.nytimes.com/2020/03/18/nyregion/coronavirus-new-york-update.html.
[34] The Marshall Project, *A State-by-State Look at Coronavirus in Prisons* (June 18, 2020), https://www.themarshallproject.org/2020/05/01/a-state-by-state-look-at-coronavirus-in-prisons?utm_medium=email&utm_campaign=newsletter&utm_source=opening-statement&utm_term=newsletter-20200612-2022&utm_source=The+Marshall+Project+Newsletter&utm_campaign=06b2d8b8bf-

Conditions at USP Terre Haute and Risks for Visitation

38. The Bureau of Prisons (BOP) describes the Terre Haute Federal Correctional Complex (FCC) as comprised of two facilities, USP Terre Haute, a High Security Detention Facility with 1,306 male prisoners and FCI Terre Haute, a Medium Security Federal Correctional Institution (978 prisoners) with an adjacent Minimum Security Satellite Camp (256 prisoners).[35] Death row prisoners are housed in USP Terre Haute, in the Maximum Security Facility.

39. In April, Terre Haute FCC became the BOP's regional intake center, resulting in the transfer of inmates who were in the custody of the US Marshals from facilities around the region.[36]

40. The first case of COVID-19 in Terre Haute was publicly reported on May 16, 2020.[37] Since then, at least one prisoner has died from the virus.[38] The BOP reports that as of June 27, eight prisoners have tested positive for COVID-19.[39] However, the BOP also reports that it has only conducted tests on 229 prisoners, or less than 19% of the total population at USP Terre Haute.[40] The results for 20 additional tests are still pending.[41]

41. The BOP has not reported information about the number of staff members who have been tested at the facility, or whether BOP is offering testing to staff members at USP Terre

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EMAIL_CAMPAIGN_2020_06_12_11_47&utm_medium=email&utm_term=0_5e02cdad9d-06b2d8b8bf-160852501 (describing recent "remarkable growth in coronavirus cases and noting that recent widespread testing results "suggest that coronavirus had been circulating in prisons in much greater numbers than know in the early weeks of the pandemic").

[35] Federal Bureau of Prisons, FCI Terre Haute, https://www.bop.gov/locations/institutions/tha/.

[36] WHTI-TV 10, *Terre Haute's Federal Prison Set to Become Intake Center for the Region, Bringing in Over 100 Inmates*, (April 15, 2020), https://www.wthitv.com/content/news/Terre-Hautes-federal-prison-set-to-become-intake-center-for-the-region-bringing-in-over-100-inmates--569642741.html; WHTI-TV 10, *New Inmates Arrived at Terre Haute's Federal Penitentiary As Part of Plan to Make it Intake Center for the Region* (April 22, 2020), https://www.wthitv.com/content/news/New-inmates-arrived-at-Terre-Hautes-federal-penitentiary-as-part-of-plan-to-make-it-intake-center-for-the-region-569837071.html.

[37] Lisa Trigg, *Case of COVID-19 Infection Reported at Federal Prison in Terre Haute*, Tribute-Star (May 18, 2020), https://www.tribstar.com/news/case-of-covid-19-infection-reported-at-federal-prison-in-terre-haute/article_85a075ee-9940-11ea-87fe-fb3a2398734d.html

[38] *Terre Haute Prison Inmate With COVID-19 Dies; 3 More Have It*, U.S. News (May 26, 2020), https://www.usnews.com/news/best-states/indiana/articles/2020-05-26/3-terre-haute-federal-prison-inmates-positive-for-covid-19

[39] Federal Bureau of Prisons, COVID-19 Cases, www.bop.gov/coronavirus/ (last visited June 27, 2020).

[40] *Id.*

[41] *Id.*

Haute. Publically available information suggests that BOP is screening staff for COVID-19, however the information available indicates that the screening is highly insufficient. According to BOP's Implementing Modified Operations, intended to mitigate the spread of COVID-19, heath screening of staff is being performed at all BOP locations.[42] That screening includes only "self-reporting and temperature checks."[43] The screening, at a minimum, should inquire about the broad range of COVID-19 symptoms that patients may experience. Further, temperature checks and non-test based verbal screens such as this cannot adequately screen for new, asymptomatic or pre-symptomatic infections. Infected staff are a key vector for introducing COVID-19 into a correctional facility. Such insufficient screening does little to mitigate this risk.

42. Counsel has provided a declaration of Mr. Purkey's spiritual advisor, Seigen, describing his experience with the process of admission and visitation for death row prisoners at Terre Haute. This process is similar to other prisons I have visited, and involves close and repeated contact between the visitor and custodial staff, other visitors, and prisoners.

43. According to the BOP website for USP Terre Huate, "all visiting at this facility has been suspended until further notice." [44] According to the BOP website's modified operations, all in person social and legal visits are suspended across all BOP facilities "in order to mitigate the spread of COVID-19[.]"[45]

44. Counsel has provided a declaration of Rebecca Woodman, counsel for Mr. Purkey, regarding possible visits by members of Mr. Purkey's defense team, expert witnesses, spiritual advisor, and family. After Mr. Purkey's execution was scheduled, exceptions were apparently made to allow for legal and social visits with Mr. Purkey. According to USP Terre Haute Counsel, the only precautions the prison can offer are to provide visitors a mask, type unknown, take the temperature of visitors, provide hand sanitizer at the front entrance, and to install Plexiglass in the visitation room. These measures are insufficient to protect visitors from the risk of COVID-19. Provision of masks to visitors may mitigate the risk that the visitor brings COVID-19 into the facility. It does not, however, protect visitors themselves from the risk of contracting the virus. Further, measures to distance or separate individuals cannot fully mitigate the risk of COVID-19 transmission when conducted in an otherwise confined space with poor ventilation.

45. In addition, the BOP appears to intend to utilize a screening form that has not been updated since March 13, 2020 and includes only three questions regarding international travel, contact with a COVID-19 positive individual, and a subjective report of symptoms. As

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[42] Federal Bureau of Prisons, BOP Implementing Modified Operations, https://www.bop.gov/coronavirus/covid19_status.jsp (last visited June 29, 2020).
[43] *Id.*
[44] Federal Bureau of Prisons, USP Terre Haute, https://www.bop.gov/locations/institutions/thp/ (last visited June 29, 2020).
[45] Federal Bureau of Prisons, BOP Implementing Modified Operations, https://www.bop.gov/coronavirus/covid19_status.jsp (last visited June 29, 2020).

noted above, temperature checks and non-test based verbal screens such as this cannot adequately screen for new, asymptomatic or pre-symptomatic infections. In addition, this screening form appears to rely on outdated information. It only asks about three symptoms: fever or chills, cough, and shortness of breath. But as noted above, the CDC expanded its list of typical COVID-19 symptoms to include not only fever, cough, and shortness of breath, but also fatigue, muscle pain, headache, sore throat, new loss of taste or smell, congestion or runny nose, nausea or vomiting, or diarrhea.[46] The CDC updated this information in May; any screening forms in use should have been subsequently updated. Given our quickly evolving understanding of COVID-19, it is imperative to update safety measures according to updated knowledge about the virus. BOP does not appear to have done this.

46. These intended measures alone are not adequate. As noted above, necessary precautions include ensuring the ability to social distance, frequent cleaning and disinfecting of objects and surfaces, requiring staff and inmates to wear masks if within six feet of others, and adequate ventilation.

47. Counsel has further informed me that some of Mr. Purkey's team members and witnesses are medically vulnerable.

48. Given the current health crisis related to the COVID-19 pandemic, and the fact that COVID-19 has already been identified in the prison, with at least one inmate death, it is my medical opinion that it is not safe for medically vulnerable individuals (as defined above) to visit USP Terre Haute.

49. I have personally been requested to visit a number of correctional facilities to determine if appropriate safety precautions were being implemented and followed. Given my age (70 years old) and the fact that I suffer from medical conditions that make me medically vulnerable, I have turned down these requests.

Special Risks Posed by Executions

50. The BOP execution regulations specify the attendance of a large number of witnesses for executions. They delineate 24 witnesses, exclusive of the custodial staff, Warden, Marshall, and Department of Justice Attorneys. The execution protocol provided to me by counsel, although redacted in many areas, clearly anticipates involvement of a large number of BOP and Marshall personnel.

51. According to Ms. Woodman, Mr. Purkey's attorney, apart from the inadequate measures put in place regarding general visitation, BOP counsel has not provided any information pertaining to planned COVID-19 safety measures for the execution itself.

[46] Centers for Disease Control and Prevention, Symptoms of Coronavirus (updated May 13, 2020), https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html.

52. Public reports of the execution facility show it as a single low building.[47] One reporter described the room where media witnesses were directed to witness the execution as a "small, unadorned room."[48] Images from news reports show a small execution chamber with windows into what appear to be small observation areas.[49]

53. Counsel has provided a declaration of Timothy Floyd, an attorney who has personally attended an execution conducted as USP Terre Haute. Mr. Floyd describes repeatedly sitting shoulder-to-shoulder in a cramped room with several other people, including his client's spiritual advisors, in order to visit with his client prior to the execution. Mr. Floyd further described that he and his client's spiritual advisors were all shuttled to the "Death House" in a cramped van along with prison staff, were escorted together to the execution chamber, and shared a small viewing room for the execution. In the viewing room, Mr. Floyd and his client's spiritual advisors stood shoulder-to-shoulder in order to see and be seen by Mr. Floyd's client. The environment described by Mr. Floyd does not allow for the social distancing recommended by the CDC to prevent the transmission of COVID-19.

54. During the 2001 Timothy McVeigh execution, a reporter described a "media area, on the prison grounds, but away from the actual buildings" that "looks and feels like a fairground or circus," with a temporary village of media tents and media staff moving around on golf carts and foot.[50]

55. I am informed that Seigen, Mr. Purkey's spiritual advisor, as well as all of Mr. Purkey's defense attorneys, defense investigators, and family members live out of town and will need to travel by plane or long car rides to the prison to attend the execution.

56. While airlines have implemented many safety measures aimed at reducing the risk of COVID-19 infection, air travel (including transportation to and from the airport, going through security check points, using public bathrooms, and boarding the airplane) still poses a significant risk of COVID-19 infection. Dr. Bob Wachter, the chairman of the University of California, San Francisco's Department of Medicine stated, "Flying is an accumulation of a bunch of things that in general imply higher risk. It is staying in fairly close contact with a

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[47] Andrew Cohen, *Same Planet, Different Wolds*, CBS News.Com (June 10, 2001), https://www.cbsnews.com/news/same-planet-different-worlds/.
[48] Peter Slevin, Witnessing A Federal Execution (Sept. 4, 2019), https://www.newyorker.com/news/news-desk/witnessing-a-federal-execution
[49] Annie Johnston, WHI-TV1-, *Judge Halts Federal Executions Scheduled to Take Place in Terre Haute* (Nov. 21, 2019); Julia Delcourt, Timothy McVeigh's Last Day, Tulsa World (June 10, 2001), https://www.tulsaworld.com/archive/timothy-mcveighs-last-day/article_3ee65baf-50b9-5253-9a98-140faf0cc125.html.
[50] Andrew Cohen, *Same Planet, Different Worlds*, CBS News.Com (June 10, 2001), https://www.cbsnews.com/news/same-planet-different-worlds/.

whole lot of people you don't know, it is doing that indoors, it is doing that for long periods of time."[51]

57. Counsel provided me with a declaration by BOP Regional Counsel Rick Winter, who describes the BOP personnel who will be traveling to USP Terre Haute to participate in any execution. The "execution team" is comprised of more than 40 BOP staff members; it appears that many, if not all, of these individuals will be traveling to Terre Haute from unknown parts of the country. In addition, approximately 50 BOP staff on specialized security teams will travel to FCC Terre Haute from other BOP institutions for the purpose of the execution, according to the Winter declaration. Finally, approximately 200 FCC Terre Haute staff will provide specialized security and support for an execution, according to the Winter declaration. These staff members are pulled away from their normal duties at FCC Terre Haute.

58. As a result, a large number of individuals, including BOP staff, media, attorneys, spiritual advisors, family members, and other witnesses will be congregated in close quarters in and around the execution building. Any of the BOP staff members may previously have been in contact with inmates or other staff who are COVID-19 positive in the course of their normal duties. In addition, a large number of these individuals will have traveled from different parts of the country, where they may have been exposed to one of many COVID-19 "hot spots" or may have been exposed to COVID-19 through air travel.

59. Events, such as the execution described above, therefore pose added risk of COVID-19 infection and spread of the virus. They are referred to as "super-spreader events" and involve indoor gatherings with many people, like a religious service or birthday party. On April 8, 2020, CDC reported on a cluster of 16 confirmed or probable cases of COVID-19, including three deaths, likely resulting from one introduction. CDC noted that family gatherings including a funeral and a birthday party likely facilitated transmission of SARS-CoV-2 in this cluster. CDC concluded, "Together with evidence emerging from around the world these data shed light on transmission beyond household contacts, including the potential for super-spreading events."[52]

60. The experience of one prison in Missouri, where the only execution to have taken place during the pandemic was conducted, is concerning. Missouri conducted an execution at

[51] Sarah Feldberg, *Is it safe to fly? Far-flung Bay Area families weigh coronavirus risk,* San Francisco Chronicle, June 20, 2020, https://www.sfchronicle.com/travel/article/Is-it-safe-to-fly-Far-flung-Bay-Area-families-15351374.php

[52] *Community Transmission of SARS-CoV-2 at Two Family Gatherings — Chicago, Illinois, February–March 2020*, Morbidity and Mortality Weekly Report (MMWR), April 17, 2020, 69(15);446–450, https://www.cdc.gov/mmwr/volumes/69/wr/mm6915e1.htm?s_cid=mm6915e1_w

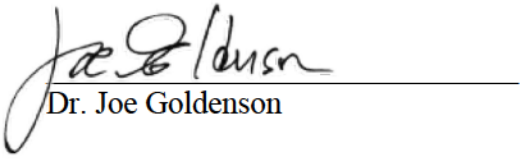
a state prison in Bonne Terre on May 19.[53] Just one month later, that same facility reported a large COVID-19 outbreak, with at least 21 confirmed cases at the facility.[54]

61. Given the current health crisis related to the COVID-19 pandemic, and the fact that COVID-19 has already been identified in the prison, with at least one inmate death, and the number of people required to travel to and attend the execution, it is my medical opinion that it is not safe for medically vulnerable individuals (as defined above) to attend an execution at USP Terre Haute.

Conclusion

62. For the reasons above, it is my professional opinion that any individual entering the prison for legal or other types of visits or to witness an execution is at increased risk of COVID-19 infection. Those who are medically vulnerable, as a result of age, medical condition, or both, are at even greater risk if they were to become infected.

I declare under penalty of perjury that the foregoing is true and correct. Executed on July 1, 2020 in Alameda County, California.



Dr. Joe Goldenson

[53] Erik Ortiz, Missouri holds nation's first execution during coronavirus pandemic, NBC News May 20, 2020, https://www.nbcnews.com/news/us-news/missouri-holds-nation-s-first-execution-during-coronavirus-pandemic-n1210646.

[54] Bobby Radford, *COVID-10 Outbreak Confirmed at Prison In Bonne Terre, Daily Journal Online*, June 19, 2020, https://dailyjournalonline.com/news/local/govt-and-politics/covid-19-outbreak-confirmed-at-prison-in-bonne-terre/article_c7222072-e242-513d-871a-c63a9c30cfbc.html.

EXHIBIT 1

CURRICULUM VITAE

JOE GOLDENSON, MD
1406 CYPRESS STREET
BERKELEY, CA 94703
(510) 557-1086
jgoldenson@gmail.com

EDUCATION

Post Graduate Training

February 1992	University of California, San Francisco, CPAT/APEX Mini-Residency in HIV Care
1979-1980	Robert Wood Johnson Fellowship in Family Practice
1976-1979	University of California, San Francisco Residency in Family Practice

Medical School

1973-1975	Mt. Sinai School of Medicine, New York M.D. Degree
1971-1973	University of Michigan, Ann Arbor

Undergraduate Education

1967-1971	University of Michigan, Ann Arbor B.A. in Psychology

PROFESSIONAL EXPERIENCE

Practice Experience

1993-2015	Director/Medical Director Jail Health Services San Francisco Department of Public Health
1991-1993	Medical Director Jail Health Services San Francisco Department of Public Health
1990-1991	Chief of Medical Services, Hall of Justice Jail Health Services San Francisco Department of Public Health
1987-1990	Staff Physician Jail Health Services San Francisco Department of Public Health
1980-1987	Sabbatical
1975-1976	Staff Physician United Farm Workers Health Center, Salinas, CA

Consulting

3/20-Preset	Federal Court appointed Medical Monitor, *Chavez, et al., v. County of Santa Clara,* Case No. 15-cv-05277-RMI, Consent Decree, United States District Court, Northern District of California, Eureka Division, re: Medical care in Santa Clara County Jail
6/16-8/19	Consultant to Los Angeles Department of Health Services re: provision of health care services in the LA County Jail
4/02-Present	Federal Court Medical Expert, *Plata v. Newsome*, Class Action Lawsuit re: prisoner medical care in California State Prison System
6/14-9/14	Medical expert for the Illinois Department of Corrections and the ACLU of Illinois
6/10-12/13	Federal Court appointed Medical Monitor, U.S.A. v. Cook County, et al., United States District Court for the Northern District of Illinois, No. 10 C 2946, re: medical care in the Cook County Jail
6/08-6/12	Member, *Plata v. Schwarzenegger* Advisory Board to the Honorable Thelton E. Henderson, U.S. District Court Judge
5/08-9/09	Medical Expert for ACLU re Maricopa County Jail, Phoenix, AZ
1/08	Member of the National Commission on Correctional Health Care's Technical Assistance Review Team for the Miami Dade Department of Corrections
9/07-1/10	Federal Court appointed Medical Expert, *Herrera v. Pierce County, et al.,* re: medical care at the Pierce County Jail, Tacoma, WA
8/06-8/12	State Court Appointed Medical Expert, *Farrell v. Allen*, Superior Court of California Consent Decree re medical care in the California Department of Juvenile Justice
6/05	Member of Technical Assistance Review Team for the Dallas County Jail
11/02-4/03	Medical Expert for ACLU re Jefferson County Jail, Port Townsend, Washington
4/02-8/06	Federal Court Medical Expert, *Austin, et. al vs Wilkinson, et al*, Class Action Law Suit re: Prisoner medical care at the Ohio State Penitentiary Supermax Facility
1/02-3/02	Consultant to the Francis J. Curry, National Tuberculosis Center re: *Tuberculosis Control Plan for the Jail Setting: A Template (Jail Template)*,
8/01-4/02	Medical Expert for ACLU re Wisconsin Supermax Correctional Facility, Boscobel, WI
7/01-4/02	Medical Expert for Ohio Attorney General's Office re Ohio State Prison, Youngstown, OH
1/96-1/14	Member and Surveyor, California Medical Association Corrections and Detentions Health Care Committee
5/95-6/08	Medical Expert for the Office of the Special Master, *Madrid vs*

	Alameida, Federal Class Action Law Suit re: Prisoner medical care at the Pelican Bay State Prison Supermax Facility
3/98-12/98	Member, Los Angeles County Department of Public Health Jail Health Services Task Force
2/98	Medical Expert, Department of Justice Investigation of Clark County Detention Center, Las Vegas, Nevada
6/94	Surveyor, National Commission on Correctional Health Care, INS Detention Center, El Centro, CA

Work Related Committees

1/14 to present	Member, Editorial Advisory Board, *Correctional Health Care Report*
10/11 to 5/19	Member, Board of Directors of the National Commission on Correctional Health Care
5/07-10/12	Liaison to the CDC Advisory Council for the Elimination of Tuberculosis (ACET) from the National Commission on Correctional Health Care
12/04-3/06	Member of the CDC Advisory Council for the Elimination of Tuberculosis (ACET) Ad Hoc Working Group on the *Prevention and Control of Tuberculosis in Correctional and Detention Facilities: Recommendations from CDC* (MMWR 2006; 55(No. RR-9))
6/03-8/03	Member of the Advisory Panel for the Francis J. Curry National Tuberculosis Center and National Commission on Correctional Health Care, 2003: *Corrections Tuberculosis Training and Education Resource Guide*
3/02-1/03	Member of the Advisory Committee to Develop the *Tuberculosis Control Plan for the Jail Setting: A Template (Jail Template)*, Francis J. Curry, National Tuberculosis Center
6/01-1/15	Director's Cabinet San Francisco Department of Public Health
3/01	Consultant to Centers for Disease Control on the Prevention and Control of Infections with Hepatitis Viruses in Correctional Settings (MMWR 2003; 52(No. RR-1))
9/97-6/02	Member, Executive Committee of Medical Practice Group, San Francisco Department of Public Health
3/97-3/02	American Correctional Health Services Association Liaison with American Public Health Association
3/96-6/12	Chairperson, Bay Area Corrections Committee (on tuberculosis)
2/00-12/00	Medical Providers' Subcommittee of the Office-based Opiate Treatment Program, San Francisco Department of public Health
12/98-12/00	Associate Chairperson, Corrections Sub-Committee, California Tuberculosis Elimination Advisory Committee
7/94-7/96	Advisory Committee for the Control And Elimination of Tuberculosis, San Francisco Department of Public Health
6/93-6/95	Managed Care Clinical Implementation Committee, San Francisco Department of Public Health

2/92-2/96	Tuberculosis Control Task Force, San Francisco Department of Public Health
3/90-7/97	San Francisco General Hospital Blood Borne Pathogen Committee
1/93-7/93	Medical Staff Bylaws Committee, San Francisco Department of Public Health

ACADEMIC APPOINTMENT

1980-2015 Assistant Clinical Professor
University of California, San Francisco

PROFESSIONAL AFFILIATIONS

Society of Correctional Physicians, Member of President's Council, Past-Treasurer and Secretary
American Correctional Health Services Association, Past-President of California Chapter
American Public Health Association, Jails and Prison's Subcommittee
Academy of Correctional Health Professionals

PROFESSIONAL PRESENTATIONS

Caring for the Inmate Health Population: A Public Health Imperative, Correctional Health Care Leadership Institutes, July 2015

Correctional Medicine and Community Health, Society of Correctional Physicians Annual Meeting, October, 2014

Identifying Pulmonary TB in Jails: A Roundtable Discussion, National Commission on Correctional Health Care Annual Conference, October 31, 2006

A Community Health Approach to Correctional Health Care, Society of Correctional Physicians, October 29, 2006

Prisoners the Unwanted and Underserved Population, Why Public Health Should Be in Jail, San Francisco General Hospital Medical Center, Medical Grand Rounds, 10/12/04

TB in Jail: A Contact Investigation Course, Legal and Administrative Responsibilities, Francis J. Curry National Tuberculosis Center, 10/7/04

Public Health and Correctional Medicine, American Public Health Association Annual Conference, 11/19/2003

Hepatitis in Corrections, CA/NV Chapter, American Correctional Health Services Association Annual Meeting, 1/17/02

Correctional Medicine, San Francisco General Hospital Medical Center, Medical Grand Rounds, 12/16/02

SuperMax Prisons, American Public Health Association Annual Conference, 11/8/01

Chronic Care Programs in Corrections, CA/NV Chapter, American Correctional Health Services Association Annual Meeting, 9/19/02

Tuberculosis in Corrections - Continuity of Care, California Tuberculosis Controllers Association Spring Conference, 5/12/98

HIV Care Incarcerated in Incarcerated Populations, UCSF Clinical Care of the AIDS Patient Conference, 12/5/97

Tuberculosis in Correctional Facilities, Pennsylvania AIDS Education and Training Center, 3/25/93

Tuberculosis Control in Jails, AIDS and Prison Conference, 10/15/93

The Interface of Public Health and Correctional Health Care, American Public Health Association Annual Meeting, 10/26/93

HIV Education for Correctional Health Care Workers, American Public Health Association Annual Meeting, 10/26/93

PUBLICATIONS

Structure and Administration of a Jail Medical Program. Correctional Health Care: Practice, Administration, and Law. Kingston, NJ: Civic Research Institute. 2017.

Structure and Administration of a Jail Medical Program – Part II. Correctional Health Care Report. Volume 16, No. 2, January-February 2015.

Structure and Administration of a Jail Medical Program – Part I. Correctional Health Care Report. Volume 16, No. 1, November-December 2014.

Pain Behind Bars: The Epidemiology of Pain in Older Jail Inmates in a County Jail. Journal of Palliative Medicine. 09/2014; DOI: 10.1089/jpm.2014.0160

Older jail inmates and community acute care use. Am J Public Health. 2014 Sep; 104(9):1728-33.

Correctional Health Care Must be Recognized as an Integral Part of the Public Health Sector, Sexually Transmitted Diseases, February Supplement 2009, Vol. 36, No. 2, p.S3–S4

Use of sentinel surveillance and geographic information systems to monitor trends in HIV prevalence, incidence, and related risk behavior among women undergoing syphilis screening in a jail setting. Journal of Urban Health 10/2008; 86(1):79-92.

Discharge Planning and Continuity of Health Care: Findings From the San Francisco County Jail, American Journal of Public Health, 98:2182–2184, 2008

Public Health Behind Bars, Deputy Editor, Springer, 2007

Diabetes Care in the San Francisco County Jail, American Journal of Public Health, 96:1571-73, 2006

Clinical Practice in Correctional Medicine, 2nd Edition, Associate Editor, Mosby, 2006.

Tuberculosis in the Correctional Facility, Mark Lobato, MD and Joe Goldenson, MD, *Clinical Practice in Correctional Medicine, 2nd Edition,* Mosby, 2006.

Incidence of TB in inmates with latent TB infection: 5-year follow-up. American Journal of Preventive Medicine. 11/2005; 29(4):295-301.

Cancer Screening Among Jail Inmates: Frequency, Knowledge, and Willingness Am J Public Health. 2005 October; 95(10): 1781–1787

Improving tuberculosis therapy completion after jail: translation of research to practice. Health Education Research. 05/2005; 20(2):163-74.

Incidence of TB in Inmates with Latent TB Infection, 5-Year Follow-up, American Journal of Preventive Medicine, 29(4), 2005

Prevention and Control of Infections with Hepatitis Viruses in Correctional Settings, Morbidity and Mortality Reports, (External Consultant to Centers for Disease Control),Vol. 52/No. RR-1 January 24, 2003

Randomized Controlled Trial of Interventions to Improve Follow-up for Latent Tuberculosis Infection After Release from Jail, Archives of Internal Medicine, 162:1044-1050, 2002

Jail Inmates and HIV care: provision of antiretroviral therapy and Pneumocystis carinii pneumonia prophylaxis, International Journal of STD & AIDS; 12: 380-385, 2001

Tuberculosis Prevalence in an urban jail: 1994 and 1998, International Journal of Tuberculosis Lung Disease, 5(5):400-404, 2001

Screening for Tuberculosis in Jail and Clinic Follow-up after Release, American Journal of Public Health, 88(2):223-226, 1998

A Clinical Trial of a Financial Incentive to Go to the Tuberculosis Clinic for Isoniazid after Release from Jail, International Journal of Tuberculosis Lung Disease, 2(6):506-512,1998

AWARDS

Armond Start Award of Excellence, Society of Correctional Physicians, 2014
Award of Honor, San Francisco Board of Supervisors, 2014
Award of Honor, San Francisco Health Commission, 2014
Certificate of Appreciation, San Francisco Public Defender's Office, 2014
Certificate for Excellence in Teaching, California Department of Health Services, 2002
Employee Recognition Award, San Francisco Health Commission, July 2000
Public Managerial Excellence Award, Certificate of Merit, San Francisco, 1997

LICENSURE AND CERTIFICATION

Medical Board of California, Certificate #A32488
Fellow, Society of Correctional Physicians
Board Certified in Family Practice, 1979-1986 (Currently Board Eligible)

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF INDIANA
TERRE HAUTE DIVISION

DALE HARTKEMEYER (AKA SEIGEN) Plaintiff, v. WILLIAM P. BARR, in his official capacity as the Attorney General of the United States; MICHAEL CARVAJAL, in his official capacity as the Director of the Federal Bureau of Prisons; and T.J. WATSON, in his official capacity as Complex Warden for Terre Haute Federal Correctional Complex, Defendants.	Case No. 2:20-cv-00336-JMS-DLP

SUPPLEMENTAL DECLARATION OF DR. JOE GOLDENSON

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

1. I am a medical physician with 33 years of experience in correctional health care. For 28 years, I worked for Jail Health Services of the San Francisco Department of Public Health. For 22 of those years, I served as the Director and Medical Director. In that role, I provided direct clinical services, managed public health activities in the San Francisco County jail, including the management of HIV, tuberculosis, Hepatitis C, and other infectious diseases in the facility, planned and coordinated the jail's response to H1N1, and administered the correctional health enterprise, including its budget, human resources services, and medical, mental health, dental, and pharmacy services.

2. I served as a member of the Board of Directors of the National Commission on Correctional Health Care for eight years and was past President of the California chapter of the American Correctional Health Services Association. In 2014, I received the Armond Start Award of Excellence from the Society of Correctional Physicians, which recognizes its recipient as a representative of the highest ideals in correctional medicine.

3. For 35 years, I held an academic appointment as an Assistant Clinical Professor at the University of California, San Francisco.

4. I have worked extensively as a correctional health medical expert and court monitor. I have served as a medical expert for the United States District Court for the Northern District of California for 25 years. I am currently retained by that Court as a medical expert in *Plata v. Newsom*, Case No. 3:01-cv-01351 (N.D. Cal.), to evaluate medical care provided to inmate patients in the California Department of Correctional Rehabilitation. I have also served as a medical expert/monitor at Cook County Jail in Chicago and Los Angeles County Jail, at other jails in Washington, Texas, and Florida, and at prisons in Illinois, Ohio, and Wisconsin.

5. On July 1, 2020, I signed a declaration that was submitted in this case.

6. Since the time of my July 1 declaration, the COVID-19 pandemic has continued to escalate around the country. As of July 6, 2020, the seven-day average of cases in 12 states reached new highs.[1] In Indiana, the governor has paused the state's reopening plans as a result of an increase in COVID-19 cases.[2]

7. In addition, 239 scientists released a journal article to emphasize the risks of airborne transmission of COVID-19.[3] The authors conclude that studies have "demonstrated beyond any reasonable doubt that viruses are released during exhalation, talking, and coughing in microdroplets small enough to remain aloft in the air and pose a risk of exposure at distances beyond 1 to 2 m from an infected individual. . . . There is every reason to expect that [COVID-19] behaves similarly, and that transmission via airborne microdroplets is an important pathway."[4] As such, while hand washing and social distancing are "appropriate," these measures are "insufficient to provide protection from virus-carrying respiratory microdroplets released into the air by infected people"[5] The authors note that concerns around airborne transmission are "especially acute in indoor or enclosed environments, particularly those that are crowded and have inadequate ventilation."[6] To respond to these risks, the following measures should be taken: (1) ensure sufficient and effective ventilation; (2) supplement that ventilation with airborne infection controls; and (3) avoid overcrowding.[7]

8. As noted in my prior declaration, prison environments are enclosed, crowded environments with poor ventilation, which facilitates the transmission of airborne illnesses, such as COVID-19. Simple solutions such as opening windows and doors, as recommended by the Centers for Disease Control and Prevention (CDC)[8] are not possible in prisons.

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[1] Joshua Partlow & Nick Miroff, *States mandate masks, begin to shut down again as coronavirus cases soar and hospitalizations rise*, Wash. Post (July 6, 2020), https://www.washingtonpost.com/national/coronavirus-rises-states-shutdown/2020/07/06/d8805d18-bf9e-11ea-9fdd-b7ac6b051dc8_story.html.
[2] Liz Nagy, *Coronavirus Indiana: IN reports 330 new COVID-19 cases, 5 deaths as Phase 4.5 begins*, ABC 7 (July 6, 2020), https://abc7chicago.com/health/indiana-covid-19-cases-increase-by-330-5-deaths/6302466/.
[3] Lidia Morawska & Donald K. Milton, *It is Time to Address Airborne Transmission of COVID-19*, Clinical Infectious Diseases, ciaa939, https://doi.org/10.1093/cid/ciaa939.
[4] *Id.* at 2 (internal citations omitted).
[5] *Id.* at 3.
[6] *Id.*
[7] *Id.* at 4.
[8] Centers for Disease Control and Prevention, *Cleaning and Disinfecting Your Facility* 2 (Apr. 1, 2020), https://www.cdc.gov/coronavirus/2019-ncov/community/disinfecting-building-facility-H.pdf.

9. I have reviewed the declaration of Rick Winter, submitted in this case on July 6, 2020. Mr. Winter describes the measures that the Bureau of Prisons (BOP) is taking, or will be taking, such as temperature checks and symptom screening for staff; providing personal protective equipment (PPE), including a surgical face mask, gloves, gown and face shield, to Rev. Hartkemeyer; providing hand sanitizer and soap to Rev. Hartkemeyer; providing an N-95 mask to Rev. Hartkemeyer's security escort; and attempts to limit the number of people in contact with Rev. Hartkemeyer. According to Mr. Winter, the BOP will not be conducting testing of staff or others participating in the execution procedures. Mr. Winter's declaration also indicates that the government is not taking any protective measures to increase ventilation or avoid overcrowding in the small rooms of the Death House.

10. These measures are inadequate. As someone who is medically vulnerable to COVID-19 due to my age and medical history, I personally would not enter any of the buildings at issue, even with the mitigation efforts described by Mr. Winter.

11. **Testing.** The BOP will not be conducting testing on any of the hundreds of individuals involved in the execution. Tests are not foolproof. For example, individuals with recent infections can still test negative. However, testing is a helpful way to screen out people who are potentially infectious and who could spread the disease to those around them. Instead, BOP requires staff to pass daily temperature checks and symptom screening. As I noted in my prior declaration, temperature checks and non-test based verbal screens such as this cannot adequately screen for new, asymptomatic or pre-symptomatic infections. Infected staff are a key vector for introducing COVID-19 into a correctional facility. Screening, as described above, is insufficient to eliminate this risk.

12. **Ventilation.** The BOP is not taking any measures to improve the ventilation in the facility or the areas where Rev. Hartkemeyer will be visiting. As described above, there is strong and mounting evidence that COVID-19 is spread through airborne droplets. Appropriate ventilation that ensures the air is not recirculated, and that air is allowed to flow outside of the building, is critical to reducing the risk of COVID-19 transmission. Without adequate ventilation, the risk of transmission remains high. Concerns about inadequate ventilation are particularly acute in the Death House where the execution will take place. Publically available images depict a small, windowless building. See Figure 1. Separating Rev. Hartkemeyer from other witnesses and media who will be in different observation rooms does not prevent the spread of an airborne virus when poor ventilation circulates the same air between the rooms.

Figure 1:

Source: https://www.burlingtonfreepress.com/story/news/local/vermont/2015/06/25/donald-fell-death-row-lawsuit/29243195/

13. **Masks and PPE.** Mr. Winter's declaration states that Rev. Hartkemeyer will be provided with a surgical mask and Rev. Hartkemeyer's security escort will be wearing an N-95 mask. The type of mask provided for Rev. Hartkemeyer will not eliminate the risk of possible infection. Surgical masks primarily protect those around the wearer; they do not eliminate the risk of infection to the wearer himself. Mr. Winter's declaration indicates that Rev. Hartkemeyer may come in contact with members of Mr. Purkey's legal team, who like the other witnesses, are given the option, but not required, to wear PPE. In addition, the security escort's use of an N-95 mask provides limited, if any, additional protection to Mr. Hartkemeyer beyond that of a typical mask. N-95 masks are designed to protect the wearer. Unlike surgical masks, they filter the air during inspiration. Furthermore, individuals can catch the virus through the membranes in their eyes, a risk that masking does not eliminate. Rev. Hartkemeyer will also be offered additional PPE, including gloves, gown and face shield. However, without a guarantee of social distancing and ventilation in the buildings where Rev. Hartkemeyer will be visiting, the risk of COVID-19 transmission remains.

14. **Visitation in the SCU**. Mr. Winter's declaration states that Rev. Hartkemeyer will be visiting his spiritual advisee in the Special Confinement Unit (SCU). This is the same

visitation location described in Rev. Hartkemeyer's declaration, which I reviewed previously. The visitation process is similar to other prisons I have visited, and inevitably involves close and repeated contact between the visitor and custodial staff, other visitors, and prisoners. Upon review of Mr. Winter's declaration, the visitation process, and the attendant risks, remains the same as described in my prior declaration, with perhaps the exception of exposure to other visitors. Even if BOP makes efforts to limit the number of individuals with whom Rev. Hartkemeyer comes into direct contact, those individuals themselves are still in contact with any number of other people throughout the day and in the days leading up to Rev. Hartkemeyer's visits. Those individuals may be unable to socially distance, will likely be in poorly ventilated, enclosed spaces, and may not be wearing full PPE at all times. Further, the potential for aerosolization of COVID-19 creates a risk of transmission from individuals with whom that Rev. Hartkemeyer does not have direct contact. As such, the risk of COVID-19 spread remains substantial.

15. Mr. Winter states that the visitation room will be sanitized between visits, but he provides no information about the cleaning products that will be used. Only certain cleaning products, used at full strength, are effective against COVID-19. In my experience, prisons typically utilize watered-down cleaning products. If such products were used to "sanitize" the visitation room, they would be ineffective at killing any virus that remained on surfaces.

16. Mr. Winter's assertion that there are no confirmed COVID-19 cases in the SCU is irrelevant. My understanding is the SCU is one housing unit within the larger USP Terre Haute building, and there have been a number of confirmed COVID-19 cases in USP Terre Haute. In any typical prison environment, staff go back and forth between various parts of the facility. Staff are the primary vector for transmission in prisons, and their movement allows COVID-19 to spread between units. For example, San Quentin State Prison in San Quentin, California, is experiencing a widespread COVID-19 outbreak.[9] I have been to San Quentin and am familiar with the layout. The facility's death row is housed in a separate building and contained to its own floor. The outbreak began in the main housing units. Nevertheless, the outbreak has spread from the main housing units to the death row unit at that facility; three men on death row have now died of COVID-19.[10]

17. In addition, as a result of the low rates of testing at USP Terre Haute, there may be undiagnosed individuals in the SCU with COVID-19. Further, asymptomatic and mildly symptomatic individuals can, and do, transmit the virus, contributing to its rapid spread.

18. **Visitation at the Death House**. Mr. Winter indicates Rev. Hatkemeyer will have the opportunity to visit with Mr. Purkey in the Death House as well. This visitation necessarily includes the same type of close contact with custodial staff as visitation at the SCU, and carries the same attendant risks. In addition, I previously reviewed the declaration of Mr.

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[9] Richard Winton & Taryn Luna, *San Quentin coronavirus outbreak spreads: 1,113 prisoners infected, death row inmate dies*, L.A. Times (June 30, 2020), https://www.latimes.com/california/story/2020-06-30/san-quentin-coronavirus-outbreak-prisoners-infected-death-row-inmate-dies-covid-19.

[10] Leonardo Castañeda, *Three death row inmates in San Quentin die of COVID-19 amid growing prison outbreak*, The Mercury News (updated July 6, 2020), https://www.mercurynews.com/2020/07/03/two-death-row-inmates-in-san-quentin-die-of-covid-19-amid-growing-prison-outbreak/.

Floyd. In Mr. Floyd's experience, these Death House visits were attended not just by the spiritual advisor, but also by members of the legal team, and took place in a small, cramped room. Mr. Winter does not address whether there will be any measures taken to allow for social distancing during these visits, and does not address any measures taken to improve the ventilation in these visitation rooms.

19. **Execution Procedures.** Mr. Winter's declaration indicates that Rev. Hartkemeyer will be in a waiting room adjacent to the execution chamber, and the execution chamber itself. In the chamber itself, there will be at least five individuals: Mr. Purkey, Rev. Hartkemeyer, Rev. Harkemeyer's security escort, a U.S. Marshals' representative and a BOP official. It is unclear if the U.S. Marshals' representative and BOP official will be wearing full PPE. Publically available images depict a small, narrow room that is not large enough to allow five individuals to remain six feet apart at all times. See Figure 2. Rev. Hartkemeyer will be in these small, enclosed spaces, with no ability to socially distance, and no measures taken to improve ventilation.

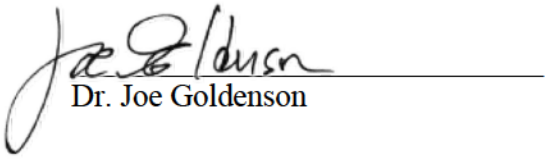
Figure 2:

Source: https://www.wthitv.com/content/news/Judge-halts-federal-executions-scheduled-to-take-place-in-Terre-Haute-565274511.html

20. The measures described by Mr. Winter are inadequate to protect an individual who is vulnerable to COVID-19. Even with such measures in place, a vulnerable individual is still at risk of contracting COVID-19 and suffering serious illness as a result. Rev. Hartkemeyer will repeatedly be in small, enclosed spaces with no ability to socially distance from other

individuals who may be COVID-19 positive, and in spaces which may be filled with aerosolized droplets containing COVID-19. These spaces will also be poorly ventilated, with air recirculating within the building. The risk of COVID-19 transmission remains high.

I declare under penalty of perjury that the foregoing is true and correct. Executed on July 8, 2020 in Alameda County, California.



Dr. Joe Goldenson

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF INDIANA
TERRE HAUTE DIVISION

DALE HARTKEMEYER (AKA SEIGEN) Plaintiff, v. WILLIAM P. BARR, in his official capacity as the Attorney General of the United States; MICHAEL CARVAJAL, in his official capacity as the Director of the Federal Bureau of Prisons; and T.J. WATSON, in his official capacity as Complex Warden for Terre Haute Federal Correctional Complex, Defendants.	Case No. 2:20-cv-00336-JMS-DLP

SECOND SUPPLEMENTAL DECLARATION OF DR. JOE GOLDENSON

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

1. I am a medical physician with 33 years of experience in correctional health care. For 28 years, I worked for Jail Health Services of the San Francisco Department of Public Health. For 22 of those years, I served as the Director and Medical Director. In that role, I provided direct clinical services, managed public health activities in the San Francisco County jail, including the management of HIV, tuberculosis, Hepatitis C, and other infectious diseases in the facility, planned and coordinated the jail's response to H1N1, and administered the correctional health enterprise, including its budget, human resources services, and medical, mental health, dental, and pharmacy services.

2. I served as a member of the Board of Directors of the National Commission on Correctional Health Care for eight years and was past President of the California chapter of the American Correctional Health Services Association. In 2014, I received the Armond Start Award of Excellence from the Society of Correctional Physicians, which recognizes its recipient as a representative of the highest ideals in correctional medicine.

3. For 35 years, I held an academic appointment as an Assistant Clinical Professor at the University of California, San Francisco.

4. I have worked extensively as a correctional health medical expert and court monitor. I have served as a medical expert for the United States District Court for the Northern District of California for 25 years. I am currently retained by that Court as a medical expert in *Plata v. Newsom*, Case No. 3:01-cv-01351 (N.D. Cal.), to evaluate medical care provided to inmate patients in the California Department of Correctional Rehabilitation. I have also served as a medical expert/monitor at Cook County Jail in Chicago and Los Angeles County Jail, at other jails in Washington, Texas, and Florida, and at prisons in Illinois, Ohio, and Wisconsin.

5. On July 1, 2020, I signed an initial declaration that was submitted in this case, and on July 8, 2020 I submitted a supplemental declaration.

6. Since the time of my July 8 declaration, the COVID-19 pandemic has continued to escalate around the country and in Indiana.[1] The Indiana statewide ventilator usage is at 84% of capacity as of today, July 12, 2020.[2]

7. Counsel for Rev. Hartkemeyer provided me with a new declaration, dated today, July 12, 2020 from Rick Winter. The new declaration is of significant concern with respect to the risk to Rev. Hartkemeyer in entering the prison and attending the execution on July 15, 2020.

8. In my prior declarations I described the risk that staff could bring COVID-19 into the facility and expose other staff, prisoners, or witnesses involved in the execution. The new Winter declaration confirms the worst case scenario: a known exposure from an infected staff person who has been in contact with other staff involved in carrying out the executions and who has been in the housing unit with the individuals scheduled for execution. This infected individual could have infected other staff members who were in meetings or enclosed, indoor spaces with him and who are now pre-symptomatic or asymptomatic. These individuals may remain pre-symptomatic for between 2 and 14 days, or could remain asymptomatic, but contagious, for the duration of the infection.

9. In order to address this known exposure, the Government needs to identify all individuals who were exposed – through meetings or indoor settings – to the infected person and place all of those individuals on a 14-day quarantine. This would include at least all of those BOP staff and law enforcement who attended the "law enforcement meeting" to prepare for the executions, all BOP staff and law enforcement who attended "the meeting regarding the handling of demonstrators", and all BOP staff and all prisoners in the SCU who had contact with or shared airspace with the infected staff member when he "attended to an issue at the SCU." Decl. Winter July 12, 2020, ¶ 6. There may be others who need to be quarantined as well. For example, if the individual passes through security as part of his workday, the security staff are another group who may need to be quarantined. As I explained in my previous declarations, the poor ventilation and likelihood of airborne spread

[1] See NBC Chicago, Coronavirus in Indiana: State Reports Highest Increase in COVID-19 Cases in More Than 2 Months, July 11, 2020, https://www.nbcchicago.com/news/local/coronavirus-in-indiana-state-reports-highest-increase-in-covid-19-cases-in-more-than-2-months/2303511/; New York Times, New Coronavirus Cases in U.S. Soar Past 68,000, Shattering Record, July 10, 2020, https://www.nytimes.com/2020/07/10/world/coronavirus-updates.html.

[2] See Indiana, Indiana COVID-19 Dashboard, July 12, 2020, https://www.coronavirus.in.gov/2393.htm.

means that all of those individuals in those encounters must be considered at risk of having contracted COVID-19, and potentially now infected with COVID-19 themselves.

10. The Government will then need to track through testing those exposed individuals. If any of the quarantined individuals are sick, they will then need to trace the contacts of those infected individuals and place them on quarantine, with the 14-day clock running from the last date of contact. It may take several weeks to determine who is carrying the virus as a result of this exposure. The best case scenario will require a 14-day quarantine from July 8, the last day the infected person was in the prison and potentially exposed others to the virus

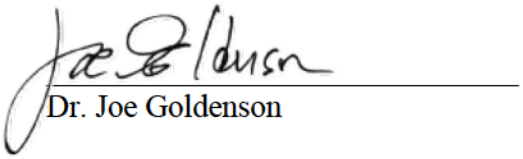
11. The BOP's suggestion that individuals exposed to the infected person will not be allowed to come into contact with witnesses "[f]or the duration of the execution or until a negative test is obtained," is an inadequate measure to determine which staff are at risk of spreading the disease to witnesses. Winter Decl. ¶ 9. An exposed individual could test negative today and become ill later within the quarantine period. Of course, this just addresses the circles of potential infection from with this one person's infection; even after this time period has expired, there still remains a substantial risk that other individuals involved in the execution are infected and will spread the disease. Indeed, BOP only learned about this person's illness because of his self-disclosure.

12. Another significant problem revealed by the new Winter declaration is that the staff individual who has tested positive did not always wear a mask while at the prison. (Winter Decl. ¶). By not wearing a mask, the infected individual significantly increased the likelihood that others will become sick. The fact that he was permitted to engage with others without a mask suggests the lack of adequate compliance and enforcement of even the limited COVID-19 policies the Government described adopting in advance of the execution. The July 6, 2020 Declaration signed by Mr. Winter previously reported that the BOP policy is that "all BOP staff are required to wear face masks." Winter July 6, 2020 Decl. ¶ 7. The fact that an individual involved in the planning of this execution was not wearing a mask indicates a critical break down in BOP policy. The BOP needs to conduct an assessment of its policies enforcement to determine how and why such a basic requirement was not followed and address this breakdown.

13. I previously identified the BOP measures as inadequate to protect the health of a medically vulnerable individual to COVID-19, including the lack of testing, ventilation concerns, inadequate PPE, and visitation risks associated with the conditions in the Special Confinement Unit and in the execution chamber itself. All of those concerns are now significantly escalated by the known recent exposure to a countless number of individuals at the prison, including significant numbers of staff and potentially even the individuals scheduled for execution.

14. Rev. Hartkemeyer cannot attend the execution on July 15, 2020 without being at grave risk for serious illness and death.

I declare under penalty of perjury that the foregoing is true and correct. Executed on July 12, 2020 in Alameda County, California.



Dr. Joe Goldenson

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF INDIANA
TERRE HAUTE DIVISION

DALE HARTKEMEYER (AKA SEIGEN) Plaintiff, v. WILLIAM P. BARR, in his official capacity as the Attorney General of the United States; MICHAEL CARVAJAL, in his official capacity as the Director of the Federal Bureau of Prisons; and T.J. WATSON, in his official capacity as Complex Warden for Terre Haute Federal Correctional Complex, Defendants.	Case No. 2:20-cv-00336-JSM-DLP

DECLARATION OF DR. NINA H. FEFFERMAN

I, Nina Fefferman, certify under penalty of perjury that the following statement is true and correct pursuant to 28 U.S.C. § 1746:

1. I am a full Professor at the University of Tennessee, Knoxville in both the Department of Ecology and Evolutionary Biology and the Department of Mathematics. I am also the Director of the Mathematical Modeling Consulting Center at the National Institute for Mathematical and Biological Synthesis, and the Associate Director of the University of Tennessee One Health Initiative. My research focuses on complex adaptive systems, with a focus on the interplay between individual behavior and infectious disease epidemiology. Complex adaptive systems are systems that have a large number of components that interact and adapt such that the system is more complicated than its various parts— for example, living organisms,

economies, or cities.

2. I have worked for the past 16 years as a researcher of the epidemiology, ecology, and evolution of infectious disease, pandemic preparedness, national biosecurity, and infrastructure protection. I hold a Master's degree in mathematics from Rutgers University and a PhD in Biology from Tufts University.

3. For over a decade, I was one of the primary researchers of the Command, Control, and Interoperability Center for Advanced Data Analytics, a U.S. Department of Homeland Security ("DHS") Center of Excellence, where I ran a research group focusing on the mathematics of both biosecurity and cybersecurity. As part of my role in that center, I actively contributed models and policy recommendations to DHS and its affiliate agencies for how to manage and mitigate pandemic threats from H1N1 2009 flu, Ebola in West Africa, and Zika virus. I have also consulted for various additional state and federal agencies and private companies, domestically and abroad, in the area of outbreak management since 2004.

4. My C.V., attached as **Exhibit A**, includes a full list of my honors, experience, and publications.

5. I am donating my time reviewing materials and preparing this report. Any live testimony I provide will also be provided *pro bono*.

BASES FOR OPINIONS

6. This declaration is based upon my experience modeling COVID-19, my review of the scientific literature regarding COVID-19, and my review of four declarations provided to me by counsel for Rev. Hartkemeyer: (1) a December, 2019 declaration from Rick Winter, an attorney with the Bureau of Prisons (BOP); (2) a July 6, 2020 supplemental declaration from Rick Winter; (3) a June 30, 2020 declaration from Rev. Dale Hartekemeyer; (4) a June 30, 2020

declaration from Tim Floyd; and (5) a July 1, 2020 declaration from Dr. Joe Goldenson. I quote here relevant excerpts from each of the first four declarations:

7. From Rick Winter's November 21, 2019 Declaration (paragraphs 4-10):

In advance of the (execution) dates, the BOP has, and intends to continue, making necessary arrangements.

Such arrangements include the activation of the execution team, which consists of over **40 BOP staff members**. These staff members will, by necessity, be removed from their normal duties, **which include a wide range of correctional and administrative positions within the BOP**. Pursuant to the current operational plan, these staff members are **scheduled to cease their normal duties several days in advance of a scheduled execution,** in order to give the team time to practice and prepare for their role in an execution. In addition to the team members, **a number of BOP administrators will be present as well, also ceasing their normal duties in the days in advance of an execution**. Logistical items such as travel, lodging and personal arrangements have already begun for the two execution dates in December.

Additionally, the BOP plans to **use contractors** who have made themselves available and presumably have made any necessary arrangements for personal and work related matters based on the executions scheduled in December.

Executions are scheduled to take place at the Federal Correctional Complex at Terre Haute, Indiana (FCC Terre Haute). Accordingly, FCC Terre Haute is also mobilizing personnel in preparation of the currently scheduled executions. In preparation, FCC Terre Haute has also been coordinating with **federal, state, and local law enforcement agencies**, some of whom have indicated their **plans to send personnel to FCC Terre Haute** to help maintain security for the currently scheduled executions.

Approximately **200 FCC Terre Haute staff** will serve as institution security and support during an execution. With its **staff pulled away from their normal duties**, FCC Terre Haute **will not be able to operate under normal conditions**. For example, due to expected staffing issues and changes in security procedures, FCC Terre Haute **will not be able to prepare inmate meals** in the ordinary fashion. Instead, the institution plans to prepare food in advance for its approximately 2,600 inmates. This alteration in meal preparation comes at a greatly increased cost to the BOP.

Additionally, FCC Terre Haute has made arrangements for specific needs related solely to an execution, for example **contracting for buses which will be used to transport public demonstrators** who wish to assemble.

Schedules for FCC Terre Haute staff members are currently being created, allocating staff based on current execution dates. For additional security and support, specialized BOP teams such as Special Operations Response Teams (SORT) and Disturbance

Control Teams (DCT) **will travel to FCC Terre Haute from other BOP institutions**. **These teams consists of approximately 50 individuals**. Again, logistical arrangements such as **travel and lodging** have already begun for the current execution dates.

8. From Rick Winter's July 6, 2020 Declaration (paragraphs 7 -14):

The Terre Haute Federal Correction Complex (FCC Terre Haute) consists of USP Terre Haute, as well as a Federal Correctional Institution (FCI Terre Haute) and a prison camp. Mr. Purkey is housed at USP Terre Haute's Special Confinement Unit (SCU). There have been zero cases of COVID-19 in the SCU, with two inmates having been tested. Staff at FCC Terre Haute are required to pass a temperature check and symptom screening daily before being allowed on the grounds of FCC Terre Haute. As of July 2, 2020**,** ninety tw**o** staff members at FCC Terre Haute have been tested for COVID-19. Of those, one staff member at the FCI previously tested positive but has recovered. At the USP, no staff members have tested positive for COVID-19. No FCC staff members are currently positive. for COVID-19. As for the inmate population, 264 USP inmates have completed tests. **Four USP inmates are currently positive for COVID-19**. Tests have been conducted on 141 FCI inmates; **one FCI inmate is currently positive**. See https://www.bop.gov/coronavirus/. All BOP staff are required to wear face masks**. BOP has no plans to conduct COVID testing on individuals involved in the execution in advance of the execution.** FCC Terre Haute will continue its screening procedures.

If Rev. Hartkemeyer chooses to visit Mr. Purkey in the days prior to the execution, that visitation will occur in the SCU. I understand that Rev. Hartkemeyer will need to drive approximately 60 miles from his home to FCC Terre Haute. **Upon his arrival at FCC Terre Haute, he will be given the opportunity to utilize Personal Protective Equipment ("PPE"), in the form of a surgical face mask, gloves, a gown, and a plastic face shield**. He will be **escorted through security by BOP staff** wearing face masks to a SCU visiting room only utilized by visitors of SCU inmates. The visiting room allows non-contact visitation—i.e., the inmate is separated from his visitor by a partition—and is sanitized after each use. Once inside the USP, Rev. Hartkemeyer will also be given access to hand sanitizer and a restroom with a sink and hand soap.

During any such visit, Rev. Hartkemeyer will have no interaction with any other inmates housed at SCU or elsewhere. Additionally, Rev. Hartkemeyer will have no interaction with other visitors or members of the public at the SCU because regular visitation remains suspended due to COVID-19. If the other inmates scheduled for execution also have visitors, such visits will take place in separate area.

If **Rev. Hartkemeyer chooses to attend the execution, his interaction with BOP staff and other individuals will be limited**. He will not have direct interaction with, nor be near, the vast majority of individuals expected to be present for Mr. Purkey's execution. His only possible interaction with members of the public may be with Mr. Purkey's legal team, who, like other witnesses, will be provided PPE if they desire.

As to Plaintiff's interaction with BOP employees, while the execution team consists of

approximately 40 BOP staff members, the vast majority of them have assignments in areas other than the rooms in which Rev. Hartkemeyer will be located. Similarly, while approximately **100 BOP staff** members and approximately **50 members** of specialized teams will have various roles in the overall security of FCC Terre Haute, their duties will not cause them to have any interaction with Rev. Hartkemeyer. Rev. Hartkemeyer will only have interactions with those security officers in the specific areas in which he needs to be. Furthermore, Rev. Hartkeymeyer should have no interaction with the victim's witnesses, media, or demonstrators, as those groups are separated from each other by design. See Ex. A-1 at 23, 26-27.

On the day of his execution, Mr. Purkey will be taken from the SCU to the execution facility, which is a separate facility from USP Terre Haute. Rev. Hartkemeyer will be given the opportunity to visit Mr. Purkey at the execution facility. In order to do so, he will again be met at a designated area and will be given the opportunity to utilize PPE in the form of a surgical face mask, gloves, a gown, and a plastic face shield. He will then be subject to a brief **escort to the execution facility where he will be met by a BOP employee who will then escort him** throughout the execution facility grounds. That BOP security escort will wear an N-95 face mask, a face shield, and gloves while in close proximity with Rev. Hartkemeyer.

At the execution facility, Rev. Hartkemeyer's visit will again be non-contact. The equipment and surfaces in the area of the visit will be disinfected prior to use. At the conclusion of the visit, Rev. Hartkemeyer **will be escorted away** from the visiting area of the execution facility.

For the actual execution, Rev. Hartkemeyer's **BOP security escort** will take to a room adjacent to the execution room. Shortly prior to curtains opening, his BOP security escort will lead him into the execution room itself for a brief non-contact visit with Mr. Purkey. Rev. Hartkemeyer will then be permitted to **remain the execution room with the assigned BOP security escort** during the execution procedure. See Ex. A-2**. In addition to Mr. Purkey, Rev. Hartkemyer, and his security escort**, the only **other individuals who will be present in the execution room are a United States Marshals' representative and a BOP official** – both of whom will be at a social distance from Rev. Hartkemeyer.

9. From Rev. Harktemeyer's Declaration (paragraphs 19-27):

Having visited Mr. Purkey at USP Terre Haute many times before, I know that **the security procedures**, even absent an execution, **do not allow for the kind of social distancing** that is required by CDC guidelines during the COVID-19 crisis. In my experience as a visitor at Terre Haute, I must first check-in at the entrance of the main building and hand my identification and keys to the guards at the front desk. Then, if there are other visitors who also need to be processed, I have to wait in the waiting room for up to thirty minutes with them. There are about thirty chairs in the waiting room, organized in sets of two or three and in rows no more than a few feet apart from each other.

Once my name is called, a guard takes my photo and asks me to put my shoes, belt, and other property in a plastic bin to pass through a metal detector on a conveyor belt while I walk through a separate metal detector. Afterward, a guard manually inspects my property. I then collect my things and the **guard stamps my hand**.

At this point, I am confined to another part of the waiting room, where I wait with other visitors an additional period of time—varying from 30 minutes up to, on occasion, 90 minutes. This waiting area is structured similarly to the waiting area at the entrance: It has rows of plastic chairs cramped together and little ability to socially distance from others.

Once a guard collects copies of my photograph from the front desk, **I and any other visitor are escorted one-by-one to a third area, a small, confined space where visitors put their stamped hand under a black light**. After showing their hands in the black light area, each visitor must remain there waiting for others to do the same. By the end of the black light process, the space can become quite crowded.

The guard then escorts the group of us outside and into a second building. At this point, most of the group breaks off to go in the direction of general population. **A guard then escorts me** and other Special Confinement Unit (SCU) visitors, if there are any, through several long narrow hallways. On this route, **we pass several prisoners and staff in close proximity on our way to an elevator that can hold up to ten people**. I am then taken to another check-in desk for the SCU, **where I sign a logbook** and wait immediately outside of the visiting room.

A different guard unlocks the door to the visiting room where I have a non-contact visit with Mr. Purkey through a plexiglass barrier. When the visit is over, I have to wait for **prison staff to escort** me along the same path, back to the main entrance, where I collect my identification and keys on my way out of the facility. During this entire process, from intake until my exit, **it is impossible to avoid being in close proximity** to many of the individuals I encounter. On any one visit, it is not uncommon for me to encounter at least a dozen different people, if not more, in close proximity.

I am certain that the security procedures and protocol will be even more stringent on the day of execution than they are under normal visitation conditions. I believe that these procedures will likely require even more contact with guards, as well as extended periods of waiting in close proximity with other attendees and individuals.

I am **68 years old** and thus, because of my age, at a high risk for becoming infected with COVID-19 and becoming seriously ill or dying should I become infected.
Beyond my age, I also have suffered several lung-related illnesses that make me medically vulnerable to COVID-19.

10. Timothy Floyd June 30, 2020 declaration, paragraphs 4 to 6:

Though the Death House is separated from the main prison building, Death House

visitors are required to clear a security checkpoint at the main building before they are cleared to visit the Death House. Each day, I made several trips off the prison grounds for meals and to work on obtaining a stay of execution. Each time I returned I followed the same process.

The Death House was a very small building, with several rooms. While there, Mr. Jones was held in a very small cell with a twin-sized cot. When I visited Mr. Jones, I was brought by prison staff to a **small enclosed area** connected to Mr. Jones's cell where I could speak to him through a plexiglass window. The plexiglass had holes that allowed us to hear one another more clearly, and a compartment that we used to pass documents back and forth. Mr. Jones used this compartment to pass me a message that he asked me to read to the media on the morning of his execution.

In the days leading up to Mr. Jones's execution, **I shared this cramped visitation space with three spiritual advisors and with Mr. Jones's daughter**, who flew from Columbus, Georgia to be with her father on his last days. Regardless of whether we were sitting or standing, we **were shoulder-to-shoulder so that we could all fit in the room** at once.

OPINIONS

11. The BOP plans for holding the federal execution of Wes Purkey on July 15, 2020 as described in the Rick Winter declarations are a serious cause for concern for the spread of COVID-19. Specifically, I have identified four areas of risk from this plan:

12. First, the plan involves risks to all of the individuals who will be traveling to the Terre Haute facility. Airplane travel, staying in hotels, and eating at restaurants all carry risks and anyone attending the execution as either a witness or staff may become exposed through this travel.

13. Second, the execution plan involves substantial risks that incoming BOP staff, contractors, or witnesses will bring infection to the prison complex, and spread infection to staff within the prison facility and to prisoners. The Winter declarations describe a large number of individuals who will be traveling to and within the facility. The BOP's policy since March of 2020 of prohibiting visitation is to stem this type of spread, from outsiders carrying infections into federal prison facilities. The introduction of potential new sources of infection in prisons is particularly concerning because of the maintenance of higher rates of contact amongst susceptible

incarcerated people, due to the density and structure of prison housing arrangements (including limited ability to isolate potentially exposed individuals), the lack of social distancing, inadequate facilities for personal hygiene, difficulty in maintaining adequate disinfection of high-touch surfaces, and poor ventilation within prisons. These dynamics drive the resulting efficacy of any proposed interventions.

14. The Winter I declaration refers to multiple days of training and practice, suggesting that the outside BOP staff will be mixing with BOP Terre Haute staff for multiple days, increasing the likelihood of spread within the prison. It describes pulling individuals from across the facility, increasing the risk of new interactions and exposure among Terre Haute staff, as well as increasing the exposures from the out of town individuals. The Winter II declaration describes multiple days of visitation, in multiple locations for Rev. Hartkemeyer, again increasing the exposure and risk. Multiple days of resident and staff mixing in the tight enclosures of the prison facilities increase risk of spread of the disease throughout the facility.

15. The concern for spread within the prison by the days of training and preparation is further heightened because the plan to pull significant numbers of staffing itself adds pressure to the system for likelihood of spread within the prison. Reduced staffing risks that staff will have a slower response time to respond to individuals who become sick and need medical attention, thereby also increasing the exposure times for cell-mates of those developing symptoms. There are other areas of concern. For example, without adequate staffing, the distribution plan for meals or medications could require additional movement or gathering of large groups and spread across the facility, increasing exposures.

16. Even if the BOP follows through with its plan to provide some of visitors and staff with certain PPE (N-95 masks will not be provided to visitors), the risk of exposure and transmission of COVID-19 will remain significant. The lack of testing is a major concern,

compounded by the fact that some BOP staff may be coming from prisons with documented large-scale outbreaks.

17. Third, the plan for holding the executions itself risks transmission because of the number of people coming inside, interacting in tight quarters, in a high-risk interaction with a shared ventilation system.

18. Fourth, the final area of concern is the very real probability that some of the individuals attending the training, visitation, and/or execution will become exposed and take the virus home with them, increasing the overall national level of risk. Without contract tracing, exposures in this kind of large-scale event will be hard to control and prevent from spreading infection, including to some communities where levels may be sufficiently low such that the introduction of a new infection significantly increase the difficulty in controlling spread in the community.

19. The risks to Rev. Hartkemeyer posed by this plan are significant. There are repeated points of close person to person contact between him and BOP staff, including those who will have been exposed during the multiple days of training and preparation. The execution itself is a highly risky setting without an opportunity to socially distance from multiple other individuals. He risks becoming exposed to COVID-19, even if he wears the PPE that the BOP has said it will provide. As a medically vulnerable individual, this exposure is of grave concern.

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

Nina H. Fefferman, PhD July 8, 2020

Exhibit A

Nina H. Fefferman

http://feffermanlab.org

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University of Tennessee
Knoxville, TN 37996

Education

2005	PhD in Mathematical Biology from the Department of Biology, Tufts University. Advisor: J. Michael Reed
2001	MS in Mathematics from the Department of Mathematics, Rutgers University. Advisor: J. Beck
1999	AB in Mathematics from Princeton University

Positions

2020-	Associate Director, UT One Health Initiative, University of Tennessee, Knoxville
2018-	Director, Mathematical Modeling Consulting Center, University of Tennessee, Knoxville
2018 -	Professor, Depts. of Mathematics & Ecology and Evolutionary Biology, University of Tennessee, Knoxville
2016 - 2018	Associate Professor, Depts. of Mathematics & Ecology and Evolutionary Biology, University of Tennessee, Knoxville
2015 - 2016	Program Director, Graduate Program in Ecology and Evolution, Rutgers University
2012 - 2016	Associate Professor, Dept. of Ecology, Evolution, and Natural Resources, Rutgers University
2011 - 2016	Assistant/Associate Professor, School of Public Health, University of Medicine and Dentistry of New Jersey
2008 - 2012	Assistant Professor, Dept. of Ecology, Evolution, and Natural Resources, Rutgers University
2007 - 2016	Research Assistant/Associate Professor, The Center for Discrete Mathematics and Theoretical Computer Science, Rutgers University
2005 - present	Co-Director, Tufts University Initiative for the Forecasting and Modeling of Infectious Disease (InForMID), Tufts University School of Medicine
2005 - 2007	Visiting Research Associate, Center for Discrete Math and Theoretical Computer Science (DIMACS), Rutgers University
2005	Short Term Visitor, School of Natural Sciences, Institute for Advanced Study

Honors/Awards

2019	Invited Participant of the 11th.Triennial Invitational Choice Symposium
2019	Invited Performer/Participant, Stand Up Science – a public performance featuring stand-up comics and scientists discussing their work
2017	Invited Research Team Leader: AWM Women in Mathematical Biology Workshop
2016	Invited Speaker at the National Academy of Sciences Sackler Colloquium
2015	Coauthored an article chosen for the cover of *Phil Trans Roy Soc B* (issue 370.1665)
2012	Invited to Health Foo 2012

2011 Shared the Virginia Governor's Technology Award in the category of 'Cross-Boundary Collaboration in Modeling & Simulation' for our study 'Strategic Default in the Context of a Social Network: An Epidemiological Approach'.
2010 Speaker at TEDx Midatlantic
2009 Rutgers University Packard Fellow Nominee
2007 Coauthored an article chosen for the cover of *The Lancet Infectious Diseases* (vol. 7)
- Invited to give 22 Keynote, Plenary, or Public Lectures (see Invited Talks for details), over three continents

Media Coverage (interviews and coverage):

Television/Online Video Broadcasts:

The Washington Post, 2020
BBC International, 2020
WBIR News, 2019
NJTV News, 2015
Discovery Channel "How Stuff Works" (Season 2: "Games Unboxed"), 2011
BBC World News Aug 21, 2007
CBS News Aug 22, 2007
Canada Television (CTV) Aug 21, 2007
AT&T Tech Channel Sept, 2007

Radio Broadcasts:

NPR Marketplace, Mar 2020
NPR WUOT Knoxville, Mar 2017
PRI Studio 360, Sept 2016
New Tech City, WNYC, Oct 2014
PRI Studio 360, Sept 2014
PRI Studio 360, Jan 2013
BBC UK News, Aug 2007
National Public Radio Podcast "Science Friday", Sept 2007
AM900 CHML, Sept 2007
National Public Radio "All Things Considered", Oct 2005

Print/Online Media (2005-present):

ABC News, ABS CBN News, ARS Technical, Canadian Press (via CBC), Cell, The Daily Mail (UK), The Daily Telegraph (Australia), The Economist, Forbes, Fox News, G1.com.br (Brazil), The Gist (Slate.com), O Globo (Brazil), Gazet Van Antwerpen (Belgium), La Jornada (Mexico), KevinMD, Knox News, Medical News Today, New Scientist, NU.nl (Netherlands), PC Gamer, Reuters, TIME, The Washington Post, Science News, Slate.com, the South African Star, Tech News World, Wired, Yahoo! Entertainment, You Made I *and many more…*

Research Support

Active

2020-2021	$198,932	NSF RAPID – DEB Coupled Social and Epidemiological Networks and COVID-19	PI
2020-2022	$359,849	DoD Minerva DECUR - The Topology of Interdependent Multi-Domain Behavioral Systems	PI
2017-2022	$138,964	NSF IOS - Melding Mathematical and Theoretical	UT-PI

		Models of Stress	
2017-2021	$2,498,876	NSF EEID – Co-evolutionary Epidemiology of Avian Malaria	UT-PI
Completed			
2018-2020	$196,628	SESYNC/NIMBioS Modeling Risk Perception, Vector-borne Diseases, and Environmental Integrity	PI
2016-2019	$99,938	NSF EAGER – CISE – Distributed Anomaly Detection	PI
2018-2019	$2,000	Haines Morris Grant – Internal UTK Competition	Co-PI
2016-2018	$50,000	US - Israel Binational Science Foundation (BSF)	Co-PI
2016-2018	$190,000	NSF RAPID – DEB – Modeling Zika Virus Control	PI
2015-2018	$292,804	USFWS – White-Nose Syndrome Open Grant	Co-PI
2015-2017	$21,003	NSF RAPID – Information & Intelligent Systems – Virtual Worlds and Experiential Learning	PI
2016-2017	$75,000	US START Center – Leadership in Social Networks	PI
2017	$30,000	Syngenta – Workshop Grant – Math of Agribusiness	Co-I
2016-2017	$100,000	National Academies Keck Futures Initiative	Co-PI
2015-2017	$130,000	NSF EAGER – DEB – Machine Learning for Co-Evolutionary Systems	Co-PI
2012-2016	$1,228,053	Dept. of Homeland Security – CyberSecurity	PI
2014-2016	$100,000	Dept. of Homeland Security – Next Generation Communications and Interoperability	Project PI
2009-2016	$275,000	Dept. of Homeland Security – BioSecurity	Project PI
2011-2014	$3,853,332	NSF EASM – Ocean Sciences – SocioEconomic Systems and Climate Change	Co-PI
2011-2012	$22,500	UCDPER – Emergency Preparedness	Co-PI
2010-2012	$384,000	Dept. of Homeland Security – Virtual Worlds and Experiential Education	Project PI
2010-2011	$99,944	Dept. of Homeland Security – Self-Organizing Surveillance Systems	Project PI
2010	$22,500	Dept. of Homeland Security – BioSecurity	Co-PI
2009-2012	$299,886	NSF – DEB – ULTRA-Ex	Co-PI
2009-2011	$89,318	UCDPER – Emergency Preparedness	PI
2009-2010	$10,000	USDA CSREES Multi-State Research Fund – Vector-borne Disease Control	Co-I
2008	$99,990	NIH NAID SBIR – Epidemiological Surveillance	PI
2008	$5,000	Rutgers Climate and Environmental Change Initiative	PI
2008	$75,000	Rutgers Academic Excellence Fellowship, Climate and Health Research Initiative	Co-I
2007	$22,500	Dept. of Homeland Security – BioSecurity	PI
2007	$22,500	Dept. of Homeland Security – BioSecurity	PI
2006	$5,000	Tufts Summer Scholars Award – Epidemiology	PI
2003-2004	$42,000	NIH R01 Supplement - Epidemiology	Co-PI
2003-2004	$1,500	Tufts Institute of the Environment	Co-I
2003	$500	MASI Student Travel Award	PI
2003	$1,500	TIES Student Travel Award	PI

Consultancies

2020	American Civil Liberties Union (ACLU)

2020	The State of Vermont, Department of Education
2018	Ogilvy
2017-present	Humane Society International
2009-present	US Centers for Disease Control
2011-2012	Research Institute for Housing America Trust Fund
2006-2007	New Jersey, Department of Corrections
2004-2009	NIH U19 (Center PI: Gorski) T-cell Mediated Immunity
2004	National Defense University
2004	DARPA

Participation in Research Centers

Center	Position	Description of Role
NIMBioS *(National Institute for Mathematical and Biological Synthesis)*	Leadership Team	Active participant in working group, organizer of multiple tutorials, mentor for summer research experience for undergraduates, and founding director of the Mathematical Modeling Consulting Center
InForMID *(Tufts University Initiative for the Forecasting and Modeling of Infectious Diseases)*	Center Co-Director	Researcher and Administrative lead in the area of mathematical modeling of infectious disease epidemiology
CCICADA *(US Dept of Homeland Security Command, Control, and Interoperability Center for Advanced Data Analysis)*	Project PI	Principle Investigator into data analysis relating to social behavior in virtual/technologically enable environments, bio-security, and bio-inspired algorithms in cyber-security
DIMACS *(The Center for Discrete Mathematics and Theoretical Computer Science)*	Member	Active participant in working groups, collaborations, and conferences (including acting as organizer for multiple workshops/conferences/tutorials) in all areas of mathematical macrobiology
START *(US Dept of Homeland Security Center for the Study of Terrorism and Responses to Terrorism)*	Project PI	Principle Investigator working on understanding social behavior and algorithms driving the emergence of extremism and leadership in

Publications (peer reviewed):

** = a student or post-doctoral researcher advised by Fefferman during the research effort reported*

Journal Articles:

Published or In Press

68. Lemanski*, N., S. Schwab, D. Fonseca, and N.H. **Fefferman**. (In press) Coordination Among Neighbors Improves the Efficacy of the Zika Control Despite Economic Costs. *PLoS Neglected Tropical Diseases*.
67. Wilson, S., S. Sindi, H. Brooks, M. Hohn, C. Price, A. Radunskaya, N. Williams, and N.H. **Fefferman**. 2020. How Emergent Social Patterns in Allogrooming Combat Parasitic Infections. *Frontiers in Ecology and Evolution*. 8:54.
66. DeNegre*, A., Myers*, K., and N.H. **Fefferman**. 2020. Impact of Strain Competition on Bacterial Resistance in Immunocompromised Populations. *Antibiotics*. 9(3):114
65. Myers*, K., A. Redere*, and N.H. **Fefferman**. 2020. How Resource Limitations and Household Economics May Compromise Efforts to Safeguard Children During Outbreaks. *BMC Public Health.* 20(1):1-14.
64. Suarez*, G., O. Udiani*, B. Allan, C. Price, S. Ryan, E. Lofgren, A. Coman, C. Stone*, L. Gallos*, and N.H. **Fefferman**. 2020. A Generic Arboviral Model Framework for Exploring Trade-offs Between Vector Control and Environmental Concern. *Journal of Theoretical Biology.* 490 (2020) 110161.
63. DeNegre*, A., Myers*, K., and N.H. **Fefferman**. 2020. Impact of Chemoprophylaxis Policy for AIDS-immunocompromised Patients on Emergence of Bacterial Resistance. *PLoS One*. 15(1): e0225861.
62. Gallos*, L., S. Havlin, G. Stanley, and N.H. **Fefferman**. 2019. Propinquity drives the emergence of network structure and density. *Proceedings of the National Academy of Sciences*. 116(41):20360-20365.
61. Stone*, C., S. Schwab*, D. Fonseca, and N.H. **Fefferman**. 2019. Contrasting the Value of Targeted vs. Area-Wide Mosquito Control Scenarios to Limit Arbovirus Transmission for Different Tropical Urban Population Centers. *PLoS Neglected Tropical Diseases.* 13.7: e0007479.
60. Myers*, K, A. DeNegre*, L.K. Gallos*, N. Lemanski*, A. Mayberry, A. Redere*, S. Schwab*, O. Stringham, & N.H. **Fefferman**. 2019. Dynamic Ad Hoc Social Networks in Improvised Intelligence / Counter-Intelligence Exercises: A Department of Homeland Security Red-Team Blue-Team Live-Action Roleplay. *Journal of Homeland Security and Emergency Management.* https://doi.org/10.1515/jhsem-2018-0027.
59. Suarez*, G.P., L.K. Gallos, and N.H. **Fefferman**. 2019. A Case Study in Tailoring a Bio-Inspired Cyber-Security Algorithm: designing anomaly detection for multilayer networks. *Journal of Cyber Security and Mobility*. 8(1):113-132.
58. DeNegre*, A., K. Myers*, M. Ndeffo, and N.H. Fefferman. 2019. Emergence of Antibiotic Resistance in Immunocompromised Host Populations. *PLoS One* 14 (2), e0212969.
57. Schwab*, S., C. Stone*, D. Fonseca, and N.H. **Fefferman**. 2019. (Meta)population Dynamics Determine Effective Spatial Distributions of Mosquito-Borne Disease Control. *Ecological Applications* 29(3): e01856.
56. Kebir*, A., N.H. **Fefferman**, and S.B. Miled. 2018. A general structured model of a hermaphrodite population. *Journal of Theoretical Biology.* 449:53-59.
55. Lemanski*, N.J. and N.H. **Fefferman**. 2018. Expanding the evolutionary theory of aging: honeybees as a test case for an optimal decision making model of senescence. *American Naturalist*. 191(6):756-766.
54. Schwab*, S., C. Stone*, D. Fonseca, and N.H. **Fefferman**. 2018. The importance of being urgent: the impact of surveillance target and scale on mosquito-borne disease control. *Epidemics*. 23:55-63.

53. Beckage, B., L. Gross, S. Metcalf, E. Carr, K. Lacasse, J. Winter, P. Howe, N. **Fefferman**, A. Zia, and T. Franck. 2018. Integrating human behavior and risk perception into a climate model. *Nature Climate Change.* 8:79–84.

52. Maslo, B., O. Stringham, A. Bevan, A. Brumbaugh, C. Sanders, M. Hall, and N.H. **Fefferman**. 2017. High Survival of Some Infected Bat Populations Veils a Persistent Extinction Risk from White-nose Syndrome. *Ecosphere*. 8(12):e02001.10.1002/ecs2.2001.

51. Stone*, C.M., S.R. Schwab*, D.M. Fonseca, N.H. **Fefferman**. 2017. Human movement, cooperation, and the effectiveness of coordinated vector control strategies. *Journal of the Royal Society Interface.* 14(133):20170336.

50. Lemanski*, N.J. and N.H. **Fefferman**. 2017. Coordination Between the Sexes Constrains the Optimization of Reproductive Timing in Honey Bee Colonies *Nature Scientific Reports.* 7:2740.

49. Egizi, A., N.H. **Fefferman**, and R. Jordan. 2017. Relative Risk of Infection with Ehrlichiosis Agents and Lyme Disease in an Area Where Both Vectors are Sympatric. *Emerging Infectious Diseases.* 23(6):939-945.

48. Greenbaum*, G. and N.H. **Fefferman**. 2017. Application of network methods for understanding evolutionary dynamics in discrete habitat. *Molecular Ecology*. DOI: 10.1111/mec.14059

47. Maslo, B., R. Valentin, K Leu, K Kerwin, A Bevan, G.C. Hamilton, N.H. **Fefferman**, and D.M. Fonseca. 2017. ChiroSurveillance: The Use of Native Bats to Detect Invasive Agricultural Pests. *PLoS One.* 12(3), e0173321.

46. Robinson*, O.J., O.P. Jensen, M.M. Provost, S. Huang, N.H. **Fefferman**, A. Kebir and J.L. Lockwood. 2017. Evaluating the vulnerability of sex-changing fish to harvest: A game-theoretic approach. *ICES Journal of Marine Science.* 74(3):652-659.

45. Gallos*, L., M. Korczynski*, and N.H. **Fefferman.** 2017. Anomaly Detection Through Information Sharing Under Different Topologies. *EURASIP Journal on Information Security.* 2017:5. DOI:10.1186/s13635-017-0056-5.

44. Maslo, B., S. Gignoux-Wolfsohn, and N.H. **Fefferman**. 2017. Success of Wildlife Disease Treatment Depends on Host Immune Response. *Frontiers in Ecology and Evolution*. 5(28).

43. Lofgren*, E., A. Egizi, and N.H. **Fefferman**. 2016. Patients as Patches: Ecology and Epidemiology in Healthcare Environments. *Infection Control and Hospital Epidemiology.* 37(12):1507-1512.

42. Korczynski*, M., A. Hamieh*, J. H. Huh, H. Holm, S. R. Rajagopalan, and N. H. **Fefferman**. 2016. Hive Oversight for Network Intrusion Early Warning Using DIAMoND: A Bee-Inspired Method for Fully Distributed Cyber Defense. *IEEE Communications Magazine* 54(6):60-67.

41. Gallos*, L. and N.H. **Fefferman.** 2015. Simple and efficient self-healing strategy for damaged complex networks. *Physical Reviews E*. 92(5):052806.

40. Kebir*, A., N.H. **Fefferman**, S. Ben Miled. 2015. Understanding hermaphrodite species through game theory. *Journal of Mathematical Biology*. 71(6-7):1505-1524.

39. Gallos*, L., and N.H. **Fefferman**. 2015. The Effect of Disease-Induced Mortality on Structural Network Properties. *PLoS One.* DOI: 10.1371/journal.pone.0136704

37. Burkhalter*, J.C., N.H. **Fefferman**, and J.L. Lockwood. 2015. The impact of personality on the success of prospecting behavior in changing landscapes. *Current Zoology*. 61:557-568.

36. Robinson*, O., J. Lockwood, O. Stringham*, and N.H. **Fefferman**. 2015. A Novel Tool for Making Policy Recommendations Based on PVA:Helping Theory Become Practice. *Conservation Letters*. 8(3):190-198.

35. **Fefferman**, N.H. and E.N. Naumova. 2015. Dangers of vaccine refusal near the herd immunity threshold: a modelling study. *Lancet Infectious Diseases*. S1473-3099(15)70130-1

34. Maslo, B. and N.H. **Fefferman.** 2015. A Case Study of Bats and White-Nose Syndrome Demonstrating How to Model Population Viability with Evolutionary Effects. *Conservation Biology*. 29(4):1176-1185. DOI: 10.1111/cobi.12485.

33. Parham, P E. J. Waldock, G.K. Christophides, D. Hemming, F. Agusto, K. J. Evans, N.H. **Fefferman**, H. Gaff, A. Gumel, S. LaDeau, S. Lenhart, R.E. Mickens, E. Naumova, R. Ostfeld, P. Ready, M. Thomas, J. Velasco-Hernandez, E. Michael. 2015. Climate, Environmental, and Socioeconomic Change – Weighing up the Balance in Vector-Borne Disease Transmission. *Philosophical Transactions of the Royal Society B*. 370.1665 (2015): 20130551.

32. Egizi, A., N.H. **Fefferman**, and D. M. Fonseca. 2015. Evidence that implicit assumptions of "no evolution" of disease vectors in changing environments can be violated on a rapid timescale. *Philosophical Transactions of the Royal Society B*. 370.1665 (2015): 20140136.

31. Greening*, B., N. Pinter-Wollman, and N.H. **Fefferman**. 2015. Higher-Order Analysis of Information Sharing and Knowledge Capacity in Animal Social Groups *Current Zoology*. 61(1): 114–127.

30. Gallos*, L. and N.H. **Fefferman.** 2014. Revealing effective classifiers through network comparison. *Europhysics Letters*. 108(3): 38001.

29. Lofgren*, E.T., R.W. Moehring, D.J. Anderson, D.J. Weber, and N.H. **Fefferman**. 2014. A Mathematical Model to Evaluate the Routine Use of Fecal Microbiota Transplantation to Prevent Incident and Recurrent *Clostridium difficile* Infection. *Infection Control and Hospital Epidemiology*. 35(1):18-27.

28. Greening*, B. and N.H. **Fefferman**. 2014. Evolutionary Significance of the Role of Family Units in a Broader Social System. *Nature Scientific Reports*. 4: 3608

27. Seiler, M.J., Collins, A.J., and N.H. **Fefferman**. 2013. Strategic Mortgage Default in the Context of a Social Network: An Epidemiological Approach. *Journal of Real Estate Research* 35(4).

26. Robinson*, O.J., N.H. **Fefferman**, and J.L. Lockwood. 2013. How to effectively manage invasive predators to protect their native prey. *Biological Conservation* 165: 146-153.

25. **Fefferman,** N.H., and L.M. Romero. 2013. Can physiological stress alter population persistence? A model with conservation implications. *Conservation Physiology*. 1(1): cot012. doi: 10.1093/conphys/cot012

24. Moorthy, M., D. Castronovo, A. Abraham, S. Bhattacharyya, S. Gradus, J. Gorski, Y.N. Naumov, N.H. **Fefferman**, and E.N. Naumova. 2012. Deviations in influenza seasonality: odd coincidence or obscure consequence? *Clinical Microbiology and Infection*. 18(10):955-962.

23. Hock*, K. and N.H. **Fefferman**. 2012. Social organization patterns can lower disease risk without associated disease avoidance or immunity. *Ecological Complexity*. 12:34–42.

22. Hock*, K. and N.H. **Fefferman**. 2011. Violating Social Norms when Choosing Friends: How Rule-Breakers Affect Social Networks. *PLoS One.* 2011; 6(10): e26652

21. Hock*, K. and N.H. **Fefferman**. 2011. Extending the role of social networks to study social organization and interaction structure of animal groups. *Annales Zoologici Fennici*. 48(6):365-370.

20. Kafai, Y.B. and N.H. **Fefferman**. 2010. Virtual Epidemics as Learning Laboratories in Virtual Worlds. *Journal of Virtual Worlds Research.* 3(2):2-15.

19. Hock*, K., K.L. Ng, and N.H. **Fefferman**. 2010. Systems approach to studying animal sociality: individual position versus group organization in dynamic social network models. *PLoS One.* 5(12): e15789.

18. **Fefferman,** N.H. and E.N. Naumova. 2010. Innovation in Observation: A Vision for Early Outbreak Detection. *Emerging Health Threats.* 3:e6. doi: 10.3134/ehtj.10.006

17. Lofgren*, E.T., J.B. Wenger, N.H. **Fefferman**, D. Bina, S Gradus, S. Bhattacharyya, Y.N. Naumov, J. Gorski, E.N. Naumova. 2010. Disproportional Effects in Populations of Concern for Pandemic Influenza: Insights from Seasonal Epidemics in Wisconsin, 1967-2004. *Influenza and Other Respiratory Diseases.* 4:205-212.

16. Phan, L., N.H. **Fefferman,** D. Hui, and D. Brugge. 2010. Impact of Street Crime on Boston Chinatown. *Local Environment*. 15(5):481-491.

15. Reed, J.M., N.H. **Fefferman**, and R.C. Averil-Murray. 2009. Vital Rate Sensitivity Analysis and Management Implications for Desert Tortoise. *Biological Conservation*. 14(12): 2813-3222.

14. Wilson-Rich, N., Spivak, M., **Fefferman**, N.H., Starks, P.T. 2009. Genetic, Individual, and Group Facilitation of Disease Resistance in Insect Societies. *Annual Reviews of Entomol*ogy. 54:405-23.

13. **Fefferman**. N.H. 2008. Biological Experimentation *in silico*. *Annales Zoologici Fennici,* 45: 367-368.

12. Lofgren*, E., M. Senese*, J. Rogers* and N.H. **Fefferman**. 2008. Pandemic Preparedness Strategies for School Systems: Is Closure Really the Only Way? *Annales Zoologici Fennici,* 45: 449-458.

11. **Fefferman**, N.H. and K.L. Ng*. 2007. How Disease Models on Static Graphs Fail to Approximate Epidemics in Shifting Social Networks. *Physical Review E*. 76:031919. (*This article was selected for reprinting by the Virtual Journal of Biological Physics Research 2007)*

10. Lofgren*, E. and N.H. **Fefferman**. 2007. The Untapped Potential of Virtual Game Worlds to Shed Light on Real World Epidemics. *The Lancet Infectious Diseases.* 7:625–629. *(article content was the cover of the journal)*

9. Lofgren*, E., N.H. **Fefferman**, Y.N. Naumov, J. Gorski and E.N. Naumova. 2007. Influenza Seasonality: Underlying Causes and Modeling Theories. *Journal of Virology*, 81(11):5429-5436.

8. Lofgren*, E., N.H. **Fefferman**, M. Doshi and E.N. Naumova. 2007. Assessing Seasonal Variation in Multisource Surveillance Data: Annual Harmonic Regression. *Lecture Notes in Computer Science.* BioSurveillance 2007. eds D. Zeng et al. 4506:114-123.

7. **Fefferman**, N.H. and K.L Ng*. 2007. The role of individual choice in the evolution of social complexity. *Annales Zoologici Fennici*, 44:58-69.

6. **Fefferman**, N.H., J.F.A. Traniello, R.B. Rosengaus and D.V. Calleri. 2007. Disease Prevention and Resistance in Social Insects: Modeling the Survival Consequences of Immunity, Hygienic Behavior and Colony Organization. *Behavioral Ecology and Sociobiology*, 61:565-577.

5. Starks, P.T.B. and N.H. **Fefferman**. 2006. Polistes Nest Founding Behavior: a Model for the Selective Maintenance of Alternative Behavioral Phenotypes. *Annales Zoologici Fennici*, 43:456-467.

4. **Fefferman**, N.H., and E.N. Naumova. 2006. Combinatorial Decomposition of an Outbreak Signature. *Mathematical Biosciences*, 202(2):269-287.

3. **Fefferman**, N.H. and J.M. Reed. 2006. A Vital Rate Sensitivity Analysis that is Valid for Non-Stable Age Distributions and for Short-Term Planning. *The Journal of Wildlife Management*, 70(3):649-656.

2. **Fefferman**, N.H., and P.T.B. Starks. 2006. A Modeling Approach to Swarming in Honey Bees. *Insectes Sociaux*, 53(1):37-45.

1. **Fefferman**, N.H., E.A. O'Neil, and E.N. Naumova. 2005. Confidentiality vs Confidence: The aggravation of aggregation as a remedy in public health. *Journal of Public Health Policy,* 26(4):430-449.

Under Review:

10. **Fefferman**, N.H., E.T. Lofgren, N. Li, P. Blue, D.J. Weber, and A.A. Yakubu. Fear, Access, and the Real-Time Estimation of Etiological Parameters for Outbreaks of Novel Pathogens. (Under Review)
9. **Fefferman,** N.H. and O. Udiani. Workforce Training, Deployment, Protection, and Management in the Wake of a Pandemic. (Under Review).
8. Lofgren, E. K. Lum, A. Horowitz, B. Madubuonwu, K. Myers, and N. H. **Fefferman**. The Epidemiological Implications of Jails for Community, Corrections Officer, and Incarcerated Population Risks from COVID-19. (Under Review).
7. Feinberg, F., A. Patania, B. McShane, B. Falk, D. Larremore, E. Feit, J. Helveston, M. Small, M. Braun, N. **Fefferman**, and E. Bruch. A Framework for Studying Choices in Networks. (Under Review)
6. Beckage, B., K. Lacasse, J.M. Winter, N.H. **Fefferman**, F.M. Hoffman, L.J. Gross, S.S. Metcalf, T. Franck, E. Carr, A. Zia, and A. Kinzig. The Earth has humans, so why don't our climate models? (Under Review)
5. Udiani*, O., K. Lacasse, A. Zia, L. Gallos*, P. Zhong*, B. Beckage, E. Carr, T. Franck, L. Gross, F. Hoffman, P. Howe, A. Kinzig, S. Metcalf, J. Winter, and N.H. **Fefferman**. Recruitment and Mobilization for Social Movements: implications from network modeling. (Under Review)
4. Udiani*, O., and N.H. **Fefferman**. Could the Need for Rest Provide a Pathway for the Evolution of Division of Labor in Social Species? (Under Review)
3. Gignoux-Wolfsohn, S.A., Pinsky, M.L., Kerwin, K., Herzog, C., Hall, M., Bennett, A.B., **Fefferman**, N.H. and Maslo, B., Genomic signatures of evolutionary rescue in bats surviving white-nose syndrome. (Under Review)
2. Udiani*, O. and N.H. **Fefferman**. Has disease risk shaped the evolution of social complexity in insect societies? (Under Review)
1. Siewe*, N., B. Greening*, and N.H. **Fefferman**. The Potential Role of Asymptomatic Infection in Outbreaks of Emerging Pathogens (Under Review)

Book Chapters:

Published or In Press

10. **Fefferman**, N.H. When to Turn to Nature-Inspired Solutions for Cyber Systems. 2019. *in* Nature-Inspired Security and Resilience. eds. Eltoweissy, Elalfy, Fulp, and Mazurczyk. pp 29-50. The Institution of Engineering and Technology, London, UK.
9. Price, C.R. and N.H. **Fefferman**. 2019. A Preliminary Exploration of the Professional Support Networks the EDGE Program Creates. *in* A Celebration of the EDGE Program's Impact on the Mathematics Community and Beyond (pp. 317-325). Springer, Cham.
8. Brooks. H.Z., M.E. Hohn, C. Price, A.E. Radunskaya, S.S. Sindi, N.D. Williams, S.N. Wilson, N.H. **Fefferman**. 2018. Mathematical Analysis of the Impact of Social Structure on Ectoparasite Load in Allogrooming Populations. *in* Understanding Complex Biological Systems with Mathematics eds. A. Radunskaya, R. Segal, B. Shtylla. Association for Women in Mathematics Series, vol 14. pp 47-61. Springer

7. Williams, N.D., H.Z. Brooks, M.E. Hohn, C. R. Price, A.E. Radunskaya, S.S. Sindi, S.N. Wilson, and N. H. **Fefferman**. 2018. How Disease Risks Can Impact the Evolution of Social Behaviors and Emergent Population Organization. *in* Understanding Complex Biological Systems with Mathematics eds. A. Radunskaya, R. Segal, B. Shtylla. Association for Women in Mathematics Series, vol 14. pp 31-46. Springer
6. Korczynski*, M., A. Hamieh*, J.H. Huh, H. Holm, S. R. Rajagopalan, and N.H. **Fefferman**. 2017. DIAMoND: Distributed Intrusion/Anomaly Monitoring for Nonparametric Detection (invited extended version). *in* Security, Privacy and Reliability in Computer Communications and Networks. eds. K. Sha, A Striegel, and M Song. River Publishers Series in Communications. River Publishers.
5. **Fefferman**, N.H. and L.M. Fefferman. 2011. Mathematical Macrobiology: An Unexploited Opportunity in High School Education. *in* Biomath in the Schools. eds. M.B. Cozzens, and F.S. Roberts. DIMACS Series in Discrete Mathematics and Theoretical Computer Science. Vol 76. American Mathematical Society.
4. Jagai, J., N.H. **Fefferman** and E.N. Naumova. 2011. Waterborne Disease Surveillance. *in* Encyclopedia of Environmental Health. eds. J. Nriagu, S. Kcew, T. Kawamoto, J. Patz, and D. Rennie. Elsevier Science. 1st edition
3. Ji, S., W.A. Chaovalitwongse, N.H. **Fefferman**, W. Yoo, and J.E. Perez-Ortin. 2009. Mechanism-based Clustering of Genome-wide RNA Levels: Roles of Transcription and Transcript-Degradation Rates. *in* Clustering Challenges in Biological Networks. eds. S. Butenko, P.M. Pardalos, and W.A. Chaovalitwongse. World Scientific Publishing Company.
2. **Fefferman**, N.H. and J.F.A. Traniello. 2008. Social Insects as Models in Epidemiology: Establishing the Foundation for an Interdisciplinary Approach to Disease and Sociality. *in* Organization of Insect Societies: From Genome to Sociocomplexity eds J. Gadau and J. Fewell. Harvard University Press
1. MacLeod, N., N. Ortiz, N.H. **Fefferman**, W. Clyde, C. Schulter, and J. MacLean. 2000. Phenotypic Response of Foraminifera to episodes of global environmental change. *in* Biotic Response to Global Change. eds S.J. Culver and P. Rawson. Cambridge University Press

Edited Volumes:

1. **Fefferman**, N.H. (Ed.) (2008) *Annales Zoologici Fennici* 45(5)

Peer Reviewed Contributed Conference Papers:

8. Suarez*, G.P., L.K. Gallos, and N.H. **Fefferman**. 2018. A Case Study in Tailoring a Bio-Inspired Cyber-Security Algorithm: designing anomaly detection for multilayer networks. *2018 IEEE Security and Privacy Workshops (SPW)*. IEEE, 2018.
7. Fields, D. A., Kafai, Y. B., Giang, M. T., **Fefferman**, N., & Wong, J. 2017. Plagues and people: Mass community participation in a virtual epidemic within a tween online world. *Proceedings of the 12th International Conference on the Foundations of Digital Games.* DOI: 10.1145/3102071.3102108
6. Kafai, Y. B., Fields, D. A., Giang, M. T., **Fefferman**, N., Sun, J., Kunka, D., & Wong, J. 2017. Designing for massive engagement in a tween community: Participation, prevention, and philanthropy in a virtual epidemic. In *Interaction Design & Children Conference*. New York: ACM, 365-370. ISBN: 978-1-4503-4921-5
5. Fields, D. A., Kafai, Y. B., Giang, M. T., **Fefferman**, N., & Wong, J. 2017. The Dragon Swooping Cough: Mass community participation in a virtual epidemic within a tween online world. *In* B. Smith, M. Borge, E. Mercier & K. Y. Lim (*Eds.*) *Proceedings of the 12th International Conference*

on Computer Supported Collaborative Learning, Volume 2 (pp. 865-866). Philadelphia, PA: International Society of the Learning Sciences.

4. Fields, D. A., Kafai, Y. B., Sun, J., **Fefferman**, N., Ellis, E., DeVane, B., Giang, M. T., & Wong, J. 2016. The great dragon swooping cough: Stories about learning designs in promoting participation and engagement with a virtual epidemic. *In* Barany, A., Slater, S., & C. Steinkuehler *(Eds.), Proceedings of the Games + Learning + Society (GLS) 12.0 Conference* (pp. 419-424). Pittsburgh, PA: ETC Press.

3. Verma, S., A. Hamieh*, J. H. Huh, H. Holm, S. R. Rajagopalan, M. Korczynski*, and N. H. **Fefferman**. 2016. Stopping Amplified DNS DDoS Attacks Through Query Rate Sharing Between DNS Resolvers, to appear in the International Conference on Availability, Reliability and Security (ARES). (Note: this is the proceeding of a conference, not a journal, but is equivalent to journal publication for the field of computer science, however in keeping with the conventions of Biology, Fefferman is last author as PI on the sponsoring grant that funded the research.)

2. Korczynski*, M., A. Hamieh*, J.H. Huh, H. Holm, S. R. Rajagopalan, and N.H. **Fefferman**. 2015. DIAMoND: Distributed Intrusion/Anomaly Monitoring for Nonparametric Detection. *CCCN 2015: 24th International Conference on Computer Communications and Networks, IEEE, 2015.* (Note: this is the proceeding of a conference, not a journal, but is equivalent to journal publication for the field of computer science, however in keeping with the conventions of Biology, Fefferman is last author as PI on the sponsoring grant that funded the research.)

1. **Fefferman**, N.H., J. Jagai, and E.N. Naumova. 2004. Two - Stage Wavelet Analysis Assessment of Dependencies in Time Series of Disease Incidence. *Proceedings of the 2004 Conference of the International Environmetrics Society*

Research Mentoring

(bold = current)

Undergraduate Researchers:

Shyretha Brown, Danika Chari, Kaige Chen, Ian Clark, Liz Davis, Anne Eaton, Taylor Eisenstein, Brandon Grandison, Derek Hansen, David Haycraft, John Huffman, Ana Kilgore, John Kim, Edward Lee, Somair Malik, Andrew McConvey, Jeffrey Mandell, Zain Paracha, Luke Postle, Lauren Prince, Asya Pritsker, Cathy Reis, Jeremiah Rogers, Bolanle Salaam, Nicole Scholtz, Margaret Senese, Joshua Smith, Andrew Sohn, Kim Stanek, Johanna Tam, Colleen Thiersch, Elena Tsvetkova, Barton Willage, Immanuel Williams, Nakeya Williams, Barry Walker, Hannah Yin, Yi Ming Yu, Yongqing Yuan, Stefanie Yuen, James Xue, Bobby Zandstra

Graduate Researchers:

*(Committee Member, or Advisor for work on funded research projects – not primary dissertation advisor; * = special case)*

Kevin Aagard, Emma Bell, Carissa Bleker, Curtis Burkhalter, Jordan Bush, Huilan Chang, Erick Chastain, Fnu Eric Ngang Che, **Brittany Coppinger**, Ashley Crump, Kathyrn Fair, Alison Golinski, **Stephen Grady,** Gili Greenbaum, Candice JeanLouis, **Hwayoung Jung,** Ariel Kruger, Di Li, Eric Lofgren*, Nicholas Lorusso, Adam Marszalek, Benjamin Mcclendon, Anthony Ogbuka, Paul Raff, Orin Robinson, Margaurete Romero, Rajat Roy, Liliana Salvador, **Shelby Scott,** Tinevimbo Shiri, Brittany Stephenson**,** Alex Thorn, Rafael Valentine, Alex Villiard, Orion Weldon

(primary research advisor to)

Jessica Beck, **Kelly Buch**, Ashley DeNegre, **Jeff DeSalu**, Brad Greening, Natalie Lemanski, **Agnesa Redere**, Samantha Schwab, **Anna Sisk** (co-advised), Oliver Stringham, Karen Wylie

Post-Doctoral Researchers:

Dr. Erick Chastain, Dr. Lazaros Gallos, Dr. Manuel Garcia-Quisimondo, Dr. Ali Hamieh, Dr. Karlo Hock, Dr. Cindy Hui, **Dr. Jing Jiao**, Dr. Amira Kebir, Dr. Maciej Korczynski, Dr. Natalie Lemanski, Dr. Kellen Myers, Dr. Kah Loon Ng, Dr. Chris Stone, Dr. Nourridine Siewe (co-advised by Prof. S. Lenhart), Dr. Gonzalo Suarez, **Dr. Oyita Udiani**, Dr. Peng Zhong

Courses Developed and Taught (all courses developed from scratch)

- Advanced Mathematical Ecology II (MAT/EEB 682 – University of Tennessee, Knoxville) Spring 2017 and 2019
- Evolution, Disease, and Medicine (ENR110 – Rutgers University / EEB 310 – UT, Knoxville) Fall each year 2009 – 2014, Spring 2018 and 2020
- Conversational Bio-Mathematical Modeling (ENR 428 – Rutgers University/ EEB 475 – UT, Knoxville) Spring 2011 – 2014, 2020
- Problems in Ecology: Academic Pedagogy (ENR 601 – Rutgers University) Fall 2015
- *(Co-Developed and Taught)* Ethics & Professional Development in Ecology and Evolution (ENR 602 01 – Rutgers University) Spring 2013-2016 (exception – sabbatical Fall 2014-Spring 2015)
- Introduction to Modeling Ecology, Evolution, and Epidemiology (ENR 604 – Rutgers University) Spring each year 2010 – 2016 (exception – sabbatical Fall 2014-Spring 2015)
- Introduction to Epidemiological Modeling (ENR 603 – Rutgers University) Fall each year 2009 – 2012
- Elements of Data Analysis and Epidemiology (CMPH 343 – Tufts University School of Medicine) Spring 2006

Professional Memberships

Association for Women in Mathematics (AWM)
Association for Women in Science (AWIS)
Complex Systems Society (CSS)
Institute of Electrical and Electronics Engineers (IEEE)
International Union for the Study of Social Insects (IUSSI)
Society for Industrial and Applied Mathematics (SIAM)
Society for Mathematical Biology (SMB)

Invited Presentations

*upcoming

2020

Public Interview: "Nina Fefferman," You Made it Weird podcast

Public Lecture: "The Role of Applied Math in Real-time Pandemic Response: How Basic Disease Models Work," NIMBioS Webinar Series, Knoxville, TN

Public Interview: "Math + Virus + Us," Here We Are podcast and YouTube video.

2019

Public Lecture: "Vaccine Acceptance and Epidemic Risks," Infinite Futures Event Series, Museum of Science and Industry, Chicago, IL.

"When to Turn to Biology for Inspiration in Systems Design," DIMACS 30th Anniversary Conference, New Brunswick, NJ.

"Patients as patches: Ecological challenges from the epidemiology of healthcare environments," ESA 2019, Louisville, KY.

"Math and Disease," Possibilities in Postsecondary Education and Science (PIPES), UTK, Knoxville, TN.

Keynote Address: "Evolving Efficient Solutions: How simple natural systems solve the most complicated problems," MBI Capstone Conference 2019, Columbus, OH (virtual)

Plenary Talk: "How AIDS prevalence impacts the emergence of antibiotic resistance in bacterial infections," SIAM BAMM 2019, Richmond, VA.

Public Lecture: "Math and Disease," Stand Up Science, Farragut, TN.

"Biosurveillance and Homeland Security," Princeton University, NJ.

"Understanding Social Communication Systems with Homology Theory," Complex Systems Seminar, University of Michigan, Ann Arbor, MI.

"Going Against the Grain," Women Empowered in STEM (WeSTEM) 2019, Champaign, IL.

"You're Worth It: Job Negotiations," Women Empowered in STEM (WeSTEM) 2019, Champaign, IL.

2018

"Math: A Critical, Treacherous Bridge Between Scientific Disciplines," American Geophyiscal Union (AGU 2018), Washington DC.

"The Evolution of Social Complexity as Multi-Scale Feedback Control on Networks," Systems Theory Lunch Colloquium, Harvard Medical School, Boston, MA.

"Saving Bats from Fungal Diseases with Linear Algebra," Claremont Center for Mathematical Sciences Colloquium, Claremont, CA.

Plenary Talk: "Evolving Efficient Solutions: How simple natural systems solve the most complicated problems," NIMBioS Undergraduate Research Conference 2018, Knoxville, TN.

Plenary Talk: "Linking Local Decisions with Global Outcomes in Networks: Case Studies in Behavior and Population Health" SIAM Life Sciences 2018, Minneapolis, MN.

"The mathematical biology of networks: from disease outbreaks to cyber-attacks," TN Governor's School, University of Tennessee, Knoxville, TN.

"Trans-disciplinary adventures in the mathematical biology of networks: from disease outbreaks to cyber attacks," DIMACS REU, Rutgers University, Piscataway, NJ.

Public Webinar: "Social and Biological Networks: The Evolution of Social Systems," US National Academies of Sciences, Engineering, and Medicine: Math Frontiers Webinar Series

2017

"Self-Diagnosing Networks," Data Institute San Francisco Conference (DSCO17), San Francisco, CA.

Keynote: "Evolving Efficient Solutions: How simple natural systems solve the most complicated problems," Workshop on Bio-Inspired Security, Trust Assurance, and Resilience (BioSTAR 2017), San Jose, CA.

"Wildlife Disease Management Outcomes May Depend on the Mechanism of Host Immune Response," Distinguished Lecture Series in Immunology and Infectious Diseases, Center for Emerging & Re-emerging Infectious Diseases, School of Medicine, University of Washington, Pullman, WA.

2016

"Evolving Healthy Populations," International Symposium on Biomathematics and Ecology Education and Research 2016, Charlseton, SC.

"Individuals, Societies, and Climate: Modeling motivations to change," Oak Ridge National Laboratory Workshop on Human Activity at Scale in Earth System Models, Oak Ridge, TN.

"Network Models in Epidemiology," US-Canadian Institutes Epidemiology Summer School: Mathematical Modeling of Infectious Disease Spread, MBI, Columbus, OH.

"The Invasion Ecology of Diseases in a Human Environment," Arthur M. Sackler Colloquia of the National Academy of Sciences, Coupled Human and Environmental Systems, Washington DC.

"Global Feedback Control on Centrality in Self-Organizing Systems", Mathematical Biosciences Institute Workshop on the Control and Observability of Network Dynamics, MBI, Columbus, OH.

"Zika Control: More Complicated than Hoped?" Next Einstein Forum, Dakar, Senegal.

2015

"Linear Algebraic Tools in Conservation Ecology," Simon A. Levin Mathematical, Computational and Modeling Sciences Center Seminar, Tempe, AZ.

"Applications of Homology Theory to Animal Communication Systems," Mathematics and Statistics Colloquium, Arizona State Univ., Tempe, AZ.

"Trade-offs Between Collaboration and Infection Risk: Can 'social distancing' improve colony function?" Conference on Complex Systems 2015, Tempe, AZ.

"The Benefits of Ongoing Dynamics in Self-Organizing Social Systems," Conference on Collective Dynamics and Evolving Networks, Bath, UK.

Plenary Talk: Exploiting the Complexity of Identity to Infiltrate Clandestine Groups – Lessons from a LARP, CyDentity Conference, CCICADA, New Brunswick, NJ.

"Incorporating Evolutionary Rescue into Population Viability Models," Mathematics of Planet Earth: Workshop on Management of Natural Resources, Washington D.C.

"Distributed Detection Algorithms for Real-Time Maritime CyberSecurity," Joint CCICADA & AMU Conference on Maritime CyberSecurity, New Brunswick, NJ.

"The Definition of Communication: One way biology and math people accidentally talk past each other and what we might be able to do to fix it," Annual Meeting, Society for Integrative and Comparative Biology, West Palm Beach, FL.

2014

"BioInspired Anomaly Detection: Social Insects and Network Security," Dept. of Homeland Security Science and Technology HSARPA CyberSecurity Division Research and Development Showcase and Technical Workshop, Washington D.C.

"n-TANGLE: a new method for comparing networks across scales" Workshop on Advances in Discrete Networks, Dept. of Mathematics, Univ. of Pittsburgh, Pittsburgh, PA.

Keynote Address: "Virtual Worlds Helping Public Health Preparedness," New Jersey Health Care Quality Institute Annual Meeting, Trenton, NJ.

"A Mathematician's Role in Fighting Ebola," Saint Ann's School, Brooklyn, NY.

"Provable Boundaries on Disease Outbreaks in Self-Organizing Social Networks," The Duke University Mathematical Biology Colloquium, Durham, NC.

Keynote Address: "Designing your own role: Women in STEM," Tufts University Graduate Student Luncheon for Women in Science, Medford, MA.

"Division of Labor as an Adaptation to Combat Disease Risks?" The Seventh International Symposium on Biomathematics and Ecology: Education and Research (BEER), Claremont, CA.

"How dynamic networks affect disease transmission," The BioCircuits Institute, UCSD, San Diego, CA.

"The Evolution of Social Complexity," Plant Biology Dept. Seminar, Univ. of Vermont, Burlington, VT.

"Provable Boundaries on Disease Outbreaks in Self-Organizing Social Networks," Math Dept. Seminar, Univ. of Tennessee at Knoxville, TN.

"Mathematics, Optimization, and the Evolution and Behavior of Social Insects," Math Dept. Junior Colloquium, Univ. of Tennessee at Knoxville, TN.

"The Life of a Mathematical Researcher," Saint Ann's School, Brooklyn, NY.

"Mathematics, Optimization, and the Evolution and Behavior of Social Insects," Social Insect Research Group Seminar, School of Life Sciences, Arizona State Univ., AZ.

"N-tangle: A Network Comparison Method," Workshop on Animal Social Networks, NIMBioS, TN

2013

"Evolutionary pressures, Infectious Diseases, and Self-Organizing Social Systems," Evolutionary Studies Seminar, Co-Sponsored by the Collective Dynamics of Complex Systems Research Group, the Undergraduate Math Club, Upsilon Pi Epsilon, and Pi Mu Epsilon, SUNY Binghamton, NY.

"BioInspired Anomaly Detection," DHS CyberSecurity PI Meeting, Arlington, VA.

"Mathematics, Evolutionary Biology, Epidemiology, and National Security", Saint Ann's School, Brooklyn, NY.

"Evolution of Reproductive Timing and Social Organization in Honey Bees," Scientific Learning Forum at FMC, Ewing, NJ.

"Crowd Sourcing WoW: A Case Study in Improving Pandemic Preparedness," Annual George M. Sideris Biology Conference, LIU, Brooklyn, NY.

2012

Public Lecture: "Math, Complexity, and Social Groups: Using math to understand the nature of society," Campus Life Enrichment Committee (CLEC) Lecture, Georgia Southern Univ., GA.

"How and Why Static Approximations Can Fail to Give Adequate Insight into Processes on Dynamic Networks," Math Dept. Colloquium, Georgia Southern Univ., GA.

"Theoretical Worlds: An Exploration of Models and Model Systems," Tufts Univ, Dept. of Civil and Environmental Engineering Seminar Series, Medford, MA.

"Help, my avatar is sick!" Panel Talk, SXSW, Austin, TX.

"WISE – Women, Ignore Silly Expectations!" 2012 WISE Conference, Texas A&M, TX.

2011

"The Evolution of Social Complexity," CUNY Initiative for the Theoretical Sciences Workshop on A Unified Theory of Evolution, CUNY, NY.

"Balancing Workforce Productivity Against Disease Risks for Environmental and Infectious Epidemics," Math Dept. Seminar, Univ. of Ghana, Legon, Ghana.

"Selective Pressures from Disease on Social Behavior in Hosts," DIMACS/MBI US - African BioMathematics Initiative: Workshop on Genetics and Disease Control, Elmina, Ghana.

Plenary Address: "The Future of Technology and Knowledge," Next-Generation Communications Interoperability Workshop, Chicago, IL.

"Virtual Worlds and Real Epidemics - Insights from WoW's Corrupted Blood Plague," E-Virtuoses International Conference on Serious Games, Valenciennes, France.

Plenary Address: "Disease Robustness and Evolutionary Selective Pressures on Social Organization in Eusocial Insects," Mathematical Biosciences Institute Workshop on Insect Self-Organization and Swarming, Ohio State Univ., OH.

"Hakkar's Corrupted Blood Plague: How an Outbreak in WoW is Helping Epidemiologists Create Better Disease Models," Game Developer's Conference 2011, San Francisco, CA

"Exploring the Role of Behavior in Infectious Disease Dynamics: Mathematical Insights from World of Warcraft and other Virtual Worlds," DIMACS/CCICADA Student Workshop on Where the Mathematical and Computational Sciences Meet Society, Rutgers University, NJ

"Multi-Dimensional Data and the Influence of Human Behavior in Biosurveillance for Infectious Disease Outbreaks," Global Biosurveillance Conference: Enabling Science and Technology – 2nd Meeting in the Biological Threat Non-Proliferation Conference Series, Santa Fe, NM

2010

"Distributed Algorithms for Collective Visualization of Data," Visualanalytics Workshop 2010, Imperial College London, UK

"The Importance of Behavioral Dynamics on Disease Burden," Southern African Wildlife College, South Africa

"The Impact of Stress on Populations," DIMACS Advanced Study Institute on Conservation Biology, Limpopo, South Africa

"Social Behavior in Virtual Worlds," Panel Discussant – InPlay 2010, Toronto, Canada

"Self-Organizing Networks, Social Complexity, and Disease Dynamics," Rensselaer Polytechnic Institute, NY

"Playing with Plague: Exploring Disease Dynamics from Within," 2010 AAAS Annual Meeting, San Diego, CA

"Epidemiological Pressures on the Evolution of Social Complexity," Mathematical Methods in Systems Biology, Tel Aviv, Israel

2009

"Information Theoretic Tool for Biosurveillance," CCICADA Kickoff Meeting, Rutgers Univ., NJ

"Perspectives, Challenges, and Creativity in Understanding Behavioral Epidemiology," Workshop on Behavioral Epidemiology, Rutgers Univ., NJ

"Evolutionary Implications of Epidemics on Social Behavior," Evolutionary Genetics and Genomics at Rutgers, Rutgers Univ., NJ

Panel participant and Speaker on Popular Culture and Science, Sheffield Documentary Film Festival '09, Sheffield, United Kingdom

Keynote Address: "Epidemiological Insights from Virtual Worlds," Life Science Dialogue Heidelberg, - Inaugural Conference, Germany

"Social Stability and Success: A new concept in self-organizing systems and preferential attachment," Office of Naval Research Workshop on Complex Systems, Institute for Pure and Applied Mathematics, Los Angeles, CA

"The Impact of Household Capital Models on Targeted Epidemiological Control Strategies for Diseases with Age-Based Etiologies," Makerere Univ., Kampala, Uganda

Keynote Address: "Hakkar's Corrupted Blood Plague: How an Outbreak in World of Warcraft is Helping Epidemiologists Create Better Disease Models," Games for Health – Virtual Worlds, Boston, MA

"Network Representations and the Evolution of Social Complexity," Frontiers in Applied and Computational Mathematics, New Jersey Institute of Technology, NJ

"Mathematical Optimization, Evolutionary Sociobiology, and Eusocial Insects," Conference on The Power of Analysis, Princeton Univ., NJ

"Mathematical Insights into Behavioral Epidemiology," Univ. of Texas Health Science Center, Houston, TX

"Basics of Mathematical Modeling," Mosquito Modeling Made Easy Day, Center for Vector Biology, Rutgers Univ., NJ

"Mathematical and Computational Methods in Epidemiology and BioSurveillance," Jackson State University, MS

"Mathematics, Optimization, and the Evolution and Behavior of Social Insects," UNC, Chapel Hill, Applied Math, NC

"Network models in Epidemiology and Sociobiology: Introduction, Overview, and Recent Advances," Mathematical Sciences, RPI, NY

2008

"Social Behavior and the Dynamics of Corrupted Blood," Rice University/Games for Health, Houston, TX

"Possible Selective Mechanisms for the Evolution of Disease-defensive Social Organizations," Ecology and Evolution Seminar, Boston Univ., MA

"Behavioral Epidemiology in Virtual Worlds: Exploiting the virtual experience," Advanced Technology Applications for Combat Casualty Care 08; Telemedicine and Advanced Technologies Research Center Medical Simulation & Training Technology

"Recent Advances in the What, How and When of Network Models in Infectious Disease Epidemiology," SIAM 2008, CA

"World of Warcraft Corrupted Blood Disease: Epidemiological Observations and Findings," Games for Health, Baltimore, MD

"Computational Ecology: The Evolution of Sociality," Frontiers in Applied and Computational Mathematics, New Jersey Institute of Technology, NJ

Plenary Talk: "Self-organizing social behavior and disease-defensive organizational strategies in social species," Complexity 2008, Univ. Illinois Urbana, IL

"From the Individual to the Population: Modeling the many levels of evolutionary fitness in social species," Dept. of Ecology and Evolution and Natural Resources, Rutgers Univ., NJ

"Individual Decisions, Group Efficiency," ExxonMobil, Clinton, N.J.

2007

Public Lecture: "Virtual Games, Real Epidemics: Can We Learn Real-Life Lessons in BioDefense from Online Games?" Biosecurity, Biotechnology and Global Health Seminar Series, Program on Science and Global Security, Princeton Univ., NJ

"Disease on Networks: Can Static Representations Capture the Full Complexity of a Dynamic Process?" NDSSL Seminar Series, Virginia Bioinformatics Institute, Virginia Tech, VA

Public Lecture: "Real People, Virtual Worlds: Watching a Plague Unfold," Institute for Mathematical Sciences, National Univ. of Singapore

"The Continued Mystery of Regular, Old, Annual Flu," Workshop on Mathematical models for the Study of the Infection Dynamics of Emergent and Re-emergent Diseases in Humans, Institute for Mathematical Sciences, National Univ. of Singapore

"Epidemics and the Evolution of Social Complexity," Program in Ecology and Evolution Seminar Series, Rutgers Univ., NJ

"Playing Games at School: Parents, Public Schools, and Children's Health," DIMACS Workshop on Game Theory in Epidemiology and Ecology, Rutgers Univ., NJ

"Analyzing Entropy in Biosurveillance," U.S. Dept. of Homeland Security research briefing, Washington D.C.

"Fantastic Problems in Mathematical Ecology," DIMACS Bio-Math Connection Field Testers Workshop, Rutgers Univ., NJ

"Does Securing Infrastructure Against Workforce-Depletion Depend on Whether the Risk is Environmental or Infectious?" DIMACS Workshop on Mathematical Modeling of Infectious Diseases in Africa, Univ. of Stellenbosch, South Africa

"Social interaction and disease dynamics," Workshop on Analysis of Time Series Data in Epidemiology, Tufts Univ. School of Medicine, Boston, MA

"The Behaviors of Individuals and Populations," Working Group on Spatio-Temporal and Network Modeling of Diseases, ICMS, Edinburgh, Scotland

"The Evolution of Complexity in Already Social Groups," Dept. of Ecology and Evolutionary Biology, Princeton Univ., NJ

"Disease as a Selective Pressure and the Evolution of Social Complexity," Applied Biomathematics, Stony Brook, NY

"Vital Rate Sensitivity Analysis: A new method for population viability analysis - Two examples of its use," Applied Biomathematics, Stony Brook, NY

"Disease as a Selective Pressure and the Evolution of Social Complexity," Morin Lab, Dept. of Ecology, Evolution and Natural Resources, Rutgers Univ., NJ

2006

"The Role of Individual Choice in the Evolution of Social Complexity and its Implications Towards the Emergence of Zoonotic Infections," DIMACS Computational and Mathematical Epidemiology Seminar, Rutgers Univ., NJ

"Preparing Societal Infrastructure Against Disease-Related Workforce Depletion," DIMACS Workshop on Facing the Challenge of Infectious Diseases in Africa, University of the Witswatersrand, South Africa

"Fantastic Problems in Mathematical Ecology," DIMACS Bio-Math Connect Institute for High School Teachers, Denver, CO

"Societal Bio-defense - How Can we Accomplish Safety, Stability and Efficiency?" SIAM Annual Meeting, Boston, MA

"When females should stop supporting lazy males: mathematics and honey bees?" DIMACS REU Seminar Series, Rutgers Univ., NJ

"Selected Problems in Epidemiology." DIMACS Tutorial on Data Mining and Epidemiology, NJ

"How Would Termites Prepare for Pandemic Bird Flu and What Should We Learn From Them?" Joint Dept. of Entomology and Center for Infectious Disease Dynamics Seminar, Penn State Univ., PA

"Different Scales of BioDefense - Can societies be both safe and efficient?" DIMACS Computational and Mathematical Epidemiology Seminar, Rutgers Univ., NJ

2005

"Termites in the Nation's Service," DIMACS Computational and Mathematical Epidemiology Seminar, Rutgers Univ., NJ

"Applications of Self-Organizing Systems to Epidemiology." DIMACS Mixer Series, Rutgers Univ., NJ

"Disease Signatures: A New Combinatorial Method for Epidemiology," DIMACS Computational and Mathematical Epidemiology Seminar, Rutgers Univ., NJ

"Fantastic Problems in Mathematical Ecology," DIMACS Bio-Math Connect Institute for High School Teachers, Rutgers Univ., NJ

"How Complex Systems Can Simplify a Complex Problem: What Epidemiologists Can Learn From Insects," Institute for Advanced Study, Center for Systems Biology Seminar Series, NJ

2004

"Incorporating Behavior and Social Structure into Pathogen Defense Strategies. Conference on Innate Immunity for Biodefense," National Defense University's Center for Technology and National Security Policy (CTNSP) & the Department of Defense, Washington D.C.

Keynote Address: "Social Insects, Immunocompetence and Epidemiology: A Model System for Systems Modelers," Vanderbilt Medical School, Dept. of Microbiology and Immunology Annual Retreat, TN

"Disease and Immunocompetence in Group-Living Animals: Implications for Human Epidemiology," DARPA/DSO Workshop on Endogenous Defense, VA

Contributed Presentations

2008. "An Interdisciplinary Framework for Defining and Distinguishing Security Desiderata for Personally Sensitive Information," DIMACS/DyDAn Workshop on Internet Privacy: Facilitating Seamless Data Movement with Appropriate Controls

2006. "A Vital Rate Sensitivity Analysis (VRSA) for Non-stable Age Distributions and Short-term Planning," North American Ornithological Conference

2004. "A Mathematical Analysis of Reproductive Fission," North American Section of the International Union for the Study of Social Insects (with published abstract)

2004. "Two-stage Wavelet Analysis Assessment of Dependencies in Time Series of Disease Incidence," The 2004 Conference of the International Environmetrics Society (with published abstract)

2004. "Mathematical Modeling of Behavior and Ecology in Social Insects: Social mechanisms of pathogen control in termite colonies," Departmental Research Seminar, Tufts Univ.

2003. "Modeling Waterborne Infectious Outbreaks: When, where and how bad will they be?" The 2003 Conference of the International Environmetrics Society (with published abstract)

2003. "Modeling Disease Resistance through Social Interactions in Termites," The 2nd Conference on the Mathematics and Algorithms of Social Insects (with published abstract)

Service (external to Home Institution)

Ongoing	Referee of papers for *American Naturalist, Annales Zoologici Fennici, Behavioral Ecology and Sociobiology, Biological Conservation, BMC Evolutionary Biology, Bulletin for Mathematical Biology, Canadian Biosystems Engineering, Conservation Letters, IMA Journal of Applied Mathematics, Journal of Biological Dynamics, Journal of Infectious Diseases, Journal of Insect Science, Journal of Nonlinear Dynamics, Mathematical Biosciences, Journal of Medical Internet Research, Journal of the Royal Society Interface, Malaria Journal, Nature, Nature Scientific Reports, Parasites and Vecotrs, PeerJ, Phyiscal Reviews X, PLoS Computational Biology, PLoSOne, PloS Medicine, PNAS, Vaccine, Vector-Borne and Zoonotic Diseases*
2020	Deputy Editor *PLOS Computational Biology*
2019-2021	Director of Development, Enhancing Diversity in Graduate Education (EDGE) Foundation
2019	Guest Editor *PLOS Computational Biology*
2019	Co-Organizer SIAM Network Science Annual Meeting (NS 19)
2018	NSF ad hoc proposal reviewer

2018	Burroughs Wellcome Fund grant proposal reviewer
2018	Co-Organizer IEEE Symposium on Security and Privacy, entitled: 3rd Workshop on Bio-inspired Security, Trust, Assurance and Resilience (BioSTAR 2018)
2017-cont.	Member of the Leadership Team of the National Institute for Mathematical and Biological Synthesis
2017	Co-Organizer NIMBioS Workshop on Applying Optimization Techniques to Agricultural Problems
2017	ARO grant proposal reviewer
2016	Co-Organizer MBI (the Mathematical Biosciences Institute at Ohio State) Workshop on Generalized Network Structures and Dynamics
2016	Co-Organizer MBI (the Mathematical Biosciences Institute at Ohio State) Emphasis Semester on Dynamics of Biologically Inspired Networks
2014	ARO grant proposal reviewer
2013- 2016	Member of Scientific Advisory Board for MBI (the Mathematical Biosciences Institute at Ohio State)
2013	NIH grant proposal reviewer
2013-2016	Co-Organizer NIMBioS Working Group on Climate Change and Vector-borne Diseases
2013-2019	Invited Participant Joint NIMBioS-SESYNC Working Group on Human Risk Perception and Climate Change
2012	Invited Grant Proposal Reviewer for the United States – Israel Binational Science Foundation
2012	US Environmental Protection Agency FIFRA Scientific Advisory Panel (SAP) on Pollinator Risk Assessment Framework
2011	Invited Participant - External Expert Review Panel for Bioscience Research and Development at Los Alamos National Laboratory
2011	Program Committee Member, The Third International UKVAC Workshop on Visual Analytics (VAW 2011)
2011	NSF grant proposal reviewer
2011	Co-Organizer DIMACS/MBI US - African BioMathematics Initiative: Advanced Study Institute and Workshop on Genetics and Disease Control
2010	Organizer of the DIMACS Mini-Workshop on 'Emergent Properties of Dynamic Biological Networks'
2010	Lecturer at DIMACS/MBI US - African BioMathematics Initiative: Workshop and Advanced Study Institute on Conservation Biology
2010	Organizer of the DIMACS Mini-Workshop on 'Game-theoretic Approaches to Medical Prognosis'
2010	NSF grant reviewer/panel participant
2010	Invited International Reviewer for Centre of Excellence Grants for the Australian Research Council
2010	Co-Organizer of the DIMACS Workshop on Modeling and Mitigation of the Impacts of Extreme Weather Events to Human Health Risks
2009	Co-Organizer DIMACS Workshop on Economic Epidemiology, Makerere Univ., Kampala, Uganda
2009	NSF grant reviewer/panel participant
2009	Co-Organizer/ Program Co-Chair Workshop on Economic Epidemiology, Makerere Univ., Kampala, Uganda
2009	Co-Organizer Mosquito Modeling Made Easy Day at the N.J. Center for Vector Biology
2008-2010	Member Chief Editorial Committee for the DIMACS Book Series
2008-2010	Member Editorial Board of DIMACS Educational Modules Series

2008	Invited organizer SIAM mini-symposium on Network Models of Infectious Disease
2008	Ran the Reconnect Program on Biosurveillance at DIMACS – a week long short course for teaching faculty at liberal arts institutions on an advanced topic to expand their own and their students research opportunities
2007	Mentor to two teams of researchers for Department of Homeland Security funded Research Experience for those at Minority Serving Institutions
2006-2016	Advisory/Editorial Board Member for the journal *Annales Zoologici Fennici*
2004	Subject Matter Expert on Innate Immunity and Biodefense, National Defense University
2004	Research Consultant, DARPA (via Strategic Analysis, INC.)
2003	Developed algorithm for Managing Endangered Species Habitat in Hawaii - MESHH software package (Reed, J.M., N.H. Fefferman, C.S. Elphick, and M. Silbernagle. 2004)
2000-2002	Technical Editor (Cryptography) to MacMillan Press
1999	Invited Reviewer of AES submission to the National Institute of Standards and Technology, later published as The Twofish Encryption Algorithm, Schneier, et al, 1999, John Wiley & Sons Inc.

Service (internal to Home Institution)

2020	Advisor to the COVID-19 Re-Imagining Fall Task Force
2019-cont.	Head of Graduate Admissions, Program in Ecology and Evolutionary Biology
2019	Research Mentor for the NIMBioS Summer Research Experiences (SRE) for Undergraduates
2019	Co-Organizer Tutorial on Networks at NIMBioS
2018	Serve on departmental Promotion and Tenure Committee for Prof. O'Meara
2018-cont.	Serve on Faculty Mentoring Committee for Prof. Kivlin
2017-cont.	Served as Departmental Coordinator for University Future Faculty Program
2017	Research Mentor for the NIMBioS Summer Research Experiences (SRE) for Undergraduates
2017	Lecturer for Joint 2017 MBI-NIMBioS-CAMBAM Summer Graduate Program
2016-2017	University of Tennessee, Knoxville Department of Ecology and Evolutionary Biology Search Committee Member and Diversity Advocate (Ecosystem Ecology Search)
2016-2017	University of Tennessee, Knoxville Department of Mathematics Search Committee Member (Mathematical Biology Search)
2016-cont.	University of Tennessee, Knoxville Program in Ecology and Evolutionary Biology Graduate Affairs Committee Member
2015-2016	Rutgers University Biological Sciences Area Committee Member
2014	Rutgers University EENR Department Wildlife Biology Faculty Search Committee Member
2010	Co-Mentor to a team of researchers for Department of Homeland Security funded Research Experience for those at Minority Serving Institutions
2009-2010	Organizer of the EENR seminar series
2009	Organizer of the DIMACS Workshop on Behavioral Epidemiology
2009-2010	Member E&E Executive Committee
2008-2012	Member of EENR Curriculum Committee
2008-2010	Member Chief Editorial Committee for the DIMACS Book Series
2008-2010	Member Editorial Board of DIMACS Educational Modules Series
2007-2009	Member of the Rutgers University Advisory Board to the Office for the Promotion of Women in Science, Engineering and Mathematics

2006-2015 Research Advisor for Rutgers Univ. DIMACS REU
2005-2007 Co-organizer DIMACS seminar series Mathematical and Computational Epidemiology

UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF INDIANA

DALE HARTKEMEYER (AKA SEIGEN) Plaintiff, v. WILLIAM P. BARR, ET AL, Defendants.	Case No. 2:20-cv-00336-JMS-MJD

DECLARATION OF RICK WINTER

I, Rick Winter, do hereby declare and state as follows:

1. I am employed by the United States Department of Justice, Federal Bureau of Prisons ("BOP"), as Regional Counsel for the BOP's North Central Region. I have held this position since October 2016. I have been employed by the BOP since 1994.

2. The statements I make hereinafter are made on the basis of my review of the official files and records of the BOP, my own personal knowledge, or on the basis of information acquired by me through the performance of my official duties.

3. I previously provided a declaration in this matter stating that "as of July 2, 2020, ninety two staff members at FCC Terre Haute have been tested for COVID-19. Of those, one staff member at the FCI previously tested positive but has recovered. At the USP, no staff members have tested positive for COVID-19. No FCC staff members are currently positive for COVID-19." See ECF No. 33, Ex. A ¶ 7.

4. On the morning of July 8, a BOP staff member at FCI Terre Haute learned that individuals with whom he visited the prior weekend tested positive for COVID-19. The staff member

immediately left work, which was at 11:30 a.m., and entered self-quarantine (i.e., he has not returned to FCI Terre Haute since departing on July 8).

5. On the evening of July 11, the staff member informed BOP that he received a positive COVID-19 test result earlier that day.

6. Between the staff member's potential exposure and his departure on July 8, he, among other things, attended the law enforcement meeting with outside law enforcement in preparation for the scheduled executions; attended a meeting regarding the handling of demonstrators at the scheduled executions; and attended to an issue at the SCU.

7. Although the staff member did not wear a mask at all times during this period, he did not come into contact with the BOP execution protocol team, which arrived the afternoon of July 8 (i.e., after the staff member had departed), nor does he recall coming into contact with any members of the Crisis Support Team (CST), who are involved in victim witness transportation and logistics.

8. During this period, the staff member did not visit the execution facility or the adjacent command center, nor does he recall being in the witness staging area or any of the vehicles that will transport witnesses for the executions.

9. BOP is taking steps to determine with whom the staff member was in contact, and will follow guidelines issued by the Centers for Disease Control and Prevention. For the duration of the execution or until a negative test is obtained, BOP will ensure that those staff members identified as having had contact with the infected staff member do not have contact with the inmates scheduled for execution, ministers of record, witnesses of the execution, attorneys, or press.

10. BOP will continue to perform the mitigation measures identified in my prior declaration dated July 6, including temperature check and symptom screen all individuals arriving at

FCC Terre Haute and disinfecting all areas that will be visited by ministers of record, witnesses of the execution, attorneys, and press.

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

Executed this 12th day of July 2020.

Rick Winter (RC)

Rick Winter
Federal Bureau of Prisons