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STATE OF MINNESOTA | DISTRICT COURT

COUNTY OF HENNEPIN | FOURTH JUDICIAL DISTRICT

State of Minnesota,

Plaintiff,

v.

Derek Michael Chauvin,

J. Alexander Kueng,

Thomas Kiernan Lane,

Tou Thao,

Defendants.

AFFIDAVIT OF MICHAEL T. OSTERHOLM, Ph.D., MPH

Court File No.: 27-CR-20-12646

Court File No.: 27-CR-20-12953

Court File No.: 27-CR-20-12951

Court File No.: 27-CR-20-12949

TO: The Honorable Peter Cahill, Judge of District Court, and counsel for Defendants; Eric J. Nelson, Halberg Criminal Defense, 7900 Xerxes Avenue South, Suite 1700, Bloomington, MN 55431; Robert Paule, 920 Second Avenue South, Suite 975, Minneapolis, MN 55402; Earl Gray, 1st Bank Building, 332 Minnesota Street, Suite W1610, St. Paul, MN 55101; Thomas Plunkett, U.S. Bank Center, 101 East Fifth Street, Suite 1500, St. Paul, MN 55101.

MICHAEL T. OSTERHOLM, being duly sworn under oath, states as follows:

Background and Qualifications

1. My name is Michael Osterholm, and I am an epidemiologist and the director of the Center for Infectious Disease Research and Policy at the University of Minnesota.

2. I am currently a Regents Professor, McKnight Presidential Endowed Chair in Public Health, Distinguished Teaching Professor in the Division of Environmental Health Sciences in the School of Public Health, a professor in the Technological Leadership Institute, and an adjunct professor in the Medical School, all at the University of Minnesota.

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3. On November 9, 2020, President-elect Joseph Biden named me to be one of the sixteen members of his Coronavirus Advisory Board.

4. I earned a Bachelor of Arts in biology and political science from Luther College in 1975, a Master of Science from the University of Minnesota in 1976, a Master of Public Health in epidemiology from the University of Minnesota in 1978, and a Ph.D. in environmental health from the University of Minnesota in 1980.

5. From 1975 to 1999, I served in various roles at the Minnesota Department of Health. Between 1984 and 1999, I was a state epidemiologist.

6. From 2001 through early 2005 I served as a Special Advisor to Tommy G. Thompson, then-Secretary of the Department of Health and Human Services (HHS), on issues related to bioterrorism and public health preparedness. I was also appointed to the Secretary's Advisory Council on Public Health Preparedness.

7. From April 1, 2002 to July 3, 2002, I served on the interim management team to lead the Centers for Disease Control and Prevention (CDC).

8. In June 2005, I was appointed by Michael Leavitt, then-Secretary of HHS, to the newly established National Science Advisory Board on Biosecurity.

9. Between 2007-2014, I was the principal investigator and director of the National Institutes of Health-supported Minnesota Center of Excellence for Influenza Research and Surveillance and chaired the Executive Committee of the Centers of Excellence Influenza Research and Surveillance.

10. In October of 2008, I was appointed to the World Economic Forum Working Group on Pandemics.

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11. From June 2018 through May 2019, I served as a Science Envoy for Health Security on behalf of the United States Department of State.

12. As a member of the American Society for Microbiology, I have served on the Committee on Biomedical Research of the Public and Scientific Affairs Board, the Task Force on Biological Weapons, and the Task Force on Antibiotic Resistance.

13. I am a frequent consultant to the World Health Organization, the National Institutes of Health, the Food and Drug Administration, the Department of Defense, and the CDC. I am also a fellow of the American College of Epidemiology and the Infectious Diseases Society of America.

14. I have authored more than 315 papers and abstracts, including 21 book chapters on the topic of epidemiology of infectious diseases.

15. I am submitting this affidavit in connection with the State's Motion for Reconsideration.

COVID-19 Public Health Risks and Estimated Vaccine Timeline

16. I have reviewed the affidavit submitted by Dr. Ezekiel Jonathan Emanuel in connection with the State's Motion for Continuance, which was filed with the Court on December 31, 2020. Dr. Emanuel's estimates of the likely timeline for COVID-19 vaccinations accord with my own best estimates of the timeline for vaccinations. I also agree with Dr. Emanuel's evaluation of the serious public health risks of holding a trial in this case in March 2021.

17. As of January 2021, more than 21 million Americans have had laboratory confirmed cases of COVID-19, and the death toll has exceeded 384,000 people. Minnesota alone has had more than 440,000 laboratory confirmed cases of COVID-19 and 5,800 deaths.

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18. Since January 1, 2021, Minnesota has reported more than 25,000 cases of COVID-19 and more than 450 deaths from COVID-19.

19. As Dr. Emanuel explained, the likelihood of COVID-19 transmission is increased by (1) being indoors; (2) being in large crowds; (3) prolonged periods of interaction; and (4) forced exhalations such as public speaking, shouting, singing, and coughing. These risks are particularly high at large in-person, indoor gatherings.

20. Such gatherings can become "superspreader" events, as with the Biogen conference, a two-day meeting of 175 people that led to an estimated 200,000-300,000 cases of COVID-19 cases worldwide. Jacob E. Lemieux et al., *Phylogenetic analysis of SARS-CoV-2 in Boston highlights the impact of superspreading events*, Science Magazine, Dec. 10, 2020, https://science.sciencemag.org/content/early/2020/12/09/science.abe3261.full; Kate Sheridan, Adam Feuerstein & Matthew Herper, *Top Biogen execs were present at meeting where attendees had Covid-19*, STAT, https://www.statnews.com/2020/03/06/biogen-workers-test-positive-for-coronavirus-transmission-linked-to-leadership-meeting/

21. As the number of Minnesotans who receive a COVID-19 vaccine increases, the numbers of new COVID-19 infections and severe COVID-19 cases requiring hospitalization are likely to decrease. As Dr. Emanuel explained, as more people gain immunity through a vaccine, it becomes less likely that COVID-19 will be transmitted, both to people who have received the vaccine and to people who have not yet received the vaccine.

22. On January 8, 2021, the Minnesota Department of Health COVID-19 Vaccine Allocation Advisory Group announced new guidance for allocating vaccines to what the Minnesota Department of Health has designated as "Phase 1a" groups. *See Minnesota Guidance for Allocating and Prioritizing COVID-19 Vaccine—Phase 1a*, Minn. Dep't of Health,

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https://www.health.state.mn.us/diseases/coronavirus/vaccine/phase1aguide.pdf (last visited Jan. 15, 2021). The Minnesota Department of Health has indicated that "Phase 1a" includes health care personnel and residents of long-term care facilities. *See COVID-19 Vaccine Phases and Planning*, Minn. Dep't of Health, https://www.health.state.mn.us/diseases/coronavirus/vaccine/plan.html (last visited Jan. 15, 2021).

23. The Minnesota Department of Health has indicated that "Phase 1b" in Minnesota will include frontline essential workers and adults 75 years and older.

24. The Minnesota Department of Health has indicated that "Phase 1c" in Minnesota will include adults between 65 and 74 years old, people ages 16 to 64 years with high-risk medical conditions, and other essential workers.

25. According to the Minnesota Department of Health, "Phase 2" will include a larger number of doses for people who are in "Phase 1" and adults in communities who, according to the Social Vulnerability Index, have been hit particularly hard by COVID-19.

26. Finally, the Minnesota Department of Health has indicated that anyone who wishes to be vaccinated will be able to get the vaccine in "Phase 3."

27. Based on current estimates, few members of the general public will have had the opportunity to be vaccinated by the beginning of March 2021.

28. Based on current estimates, it is likely that the COVID-19 vaccine will begin to be available to some individuals in the general population starting in the late spring 2021.

29. Based on current estimates, it is likely that millions of Americans in the general population will receive a COVID-19 vaccination between March 2021 and June 2021.

30. Based on current estimates, it is likely that over one hundred million Americans will receive a COVID-19 vaccination between March 2021 and August 2021. By August 2021,

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current best estimates suggest that over 50% of the population will have been vaccinated. These are conservative estimates, and it is likely that these estimates would hold true even if there are some delays in vaccine rollouts in parts of the country.

The New, More Transmissible Strain of COVID-19

31. The presence of a new variant strain of the SARS-CoV-2 virus, first detected in the United Kingdom, further exacerbates the public health risks associated with the virus.

32. Some estimates suggest that this new variant, known as B-117, may be up to 70% more transmissible than the most common strain of the virus currently in the United States. This means that the new variant will spread from person to person much more easily. See Summer E. Galloway et al., *Emergence of SARS-CoV-2 B.1.1.7 Lineage—United States, December 29, 2020—January 12, 2021*, Centers for Disease Control and Prevention, https://www.cdc.gov/mmwr/volumes/70/wr/mm7003e2.htm?s_cid=mm7003e2_w (last visited January 15, 2021).

33. According to the Minnesota Department of Health, as of January 9, 2021, at least five people in the Twin Cities metro area have already been infected with this new strain of the virus. *See COVID-19 variant found in Minnesota*, Minn. Dep't of Health (Jan. 9, 2021), https://www.health.state.mn.us/news/pressrel/2021/covid010921.html.

34. The prevalence of this new strain of the virus is likely to rapidly increase in the United States. Based on current best estimates, this new strain of the virus may become the predominant form of the virus in the United States by March 2021. In light of the increased transmissibility of this variant of the virus, and in light of the fact that the vaccine will not yet be widely available by March 2021, I anticipate that there will be a significant spike in coronavirus cases in Minnesota by March 2021 as a result of this new strain.

35. Because this new strain is more infectious, and because the coronavirus vaccine will not yet be widely available to the general public, March 2021 will be an especially dangerous time to hold large gatherings or indoor events. Such gatherings are substantially more likely than they are now to result in coronavirus transmission among participants.

36. To control the spread of this variant of the virus, it is critical that residents and visitors continue to limit social gatherings and follow social distancing and mask protocols, and it is critical that the State quickly vaccinate members of the general public.

37. In light of the increased transmissibility of this new variant of the coronavirus, Minnesota should generally discourage visitors from traveling to the State, and encourage residents to avoid indoor events and follow social distancing protocols. These precautions will be especially important in March 2021, when the new variant of the virus will be prevalent and case numbers may be substantially higher than they are now.

38. Even with rigorous enforcement of social distancing and mask protocols, by March 2021, Minnesota may substantially exceed the numbers of cases, hospitalizations, and deaths reported during the most recent spike in November to December, when Minnesota averaged 6,000 to 7,000 reported cases per day, 1,500 to 1,800 hospitalizations per day, and 60 to 90 deaths per day.

39. Researchers have found that, after the United Kingdom tightened its stay-at-home restrictions in late 2020, infections from the original coronavirus strain remained flat, but infections from the new variant increased about ten-fold every three weeks. *See* Kevin M. Esvelt & Marc Lipsitch, *We lost to SARS-CoV-2 in 2020. We can defeat B-117 in 2021*, STAT (Jan. 9, 2021), https://www.statnews.com/2021/01/09/we-lost-to-sars-cov-2-in-2020-we-can-defeat-b-117-in-2021/; Erik Volz et al., *Transmission of SARS-CoV-2*

Lineage B.1.1.7 in England: Insights from linking epidemiological and genetic data, Imperial College London (Dec. 31, 2020), https://www.imperial.ac.uk/media/imperial-college/medicine/mrc-gida/2020-12-31-COVID19-Report-42-Preprint-VOC.pdf.

40. If the same rate of increase holds in Minnesota, I anticipate that there could be more than 5,000 to 8,000 new cases of the new strain of coronavirus in Minnesota per day in March 2021, and substantially more than that by the end of March 2021. These estimates do not include cases attributable to the original COVID-19 strain, which would likely continue to exist.

41. Thus, even with social distancing and mask protocols in place, indoor events and large public gatherings held during the spring of 2021 will pose a high risk of coronavirus transmission among participants. Such gatherings could become "superspreader" events, placing a significant burden on the Minnesota health system at a time when coronavirus cases and hospitalizations due to the virus are likely to be rising.

Risk of Coronavirus Transmission During a March 2021 Trial

42. It could be extremely dangerous to hold a trial for Mr. Chauvin in March 2021. Doing so could have potentially catastrophic consequences for public health. This is so not simply because of the (relatively small) number of people who would be inside the courtroom, but also because of the large numbers of people likely to be convened outside the courthouse, including demonstrators.

43. As Dr. Emanuel explained, by March 2021, most members of the general public will not have had the opportunity to receive a COVID-19 vaccine. Consequently, even with social distancing measures and mask protocols, an in-person trial in March 2021 that attracts a large number of people who are indoors for prolonged periods of time with public speaking

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is likely to create a substantial risk of COVID-19 transmission. This would risk the safety of court staff, lawyers, witnesses, jurors, media, and members of the public assembled at the courthouse. The trial could even become a superspreader event. That is true no matter whether the trial involves one defendant or four, as even a trial for a single defendant would involve dozens of witnesses and jurors congregating in and around the courtroom.

44. If a trial takes place in March 2021 and there are large public demonstrations during or after the trial, these large public gatherings would pose a significant risk to public health. There is a high risk of COVID-19 transmission within the community at any large public demonstrations—indoors or outdoors—held without social distancing. Moreover, any public gatherings related to this case that occur in March 2021 would likely occur in cold weather, which in turn often forces people to come inside for heat, and those indoor spaces can easily become sites for significant virus transmission.

45. Holding a trial in this case in March 2021 will be particularly dangerous because the new, more contagious variant of the coronavirus will likely be prevalent at that time.

46. If any trial participant contracts the coronavirus during a March 2021 trial, the prevalence of the new strain of coronavirus by March 2021 means that it is substantially more likely that the virus could be transmitted to other trial participants. The same is true with respect to any members of the public who participate in public demonstrations or large gatherings during the trial: It will be substantially more likely that any person who contracts the new strain of the coronavirus and attends a large public gathering will transmit the virus to others. This further increases the odds that the trial will become a superspreader event.

47. In light of the increased transmissibility of the new variant, the fact that the vaccine will not yet be available to most of the public in March 2021, the length of the trial, and the

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number of people expected to be present at the trial, it is extremely likely that one or more of the dozens of participants in this trial—lawyers, witnesses, jurors or court staff—will contract the coronavirus during a trial held in March 2021. These trial participants may be exposed to the coronavirus in the courtroom. They may be exposed to the coronavirus in the courthouse while the trial is not in session. Or they may be exposed to the coronavirus outside of the courthouse, in their homes or in their daily routines.

48. In the event that a trial participant contracts the coronavirus during the trial, it often will not be sufficient simply to quarantine that individual and proceed with the trial.

49. For one thing, any person who was in close contact with the infected individual—within six feet for longer than 15 minutes—will likely also need to quarantine for least 10 days. Moreover, being indoors for an extended period of time with someone who is infected may pose a high risk of coronavirus transmission, even if the infected individual was wearing a mask and seated six feet or more from other trial participants during the trial. *See* Minn. Dep't of Health, Close Contacts and Tracing: COVID-19, https://www.health.state.mn.us/diseases/ coronavirus/close.html (last visited January 15, 2021) ("The longer someone is close to the person who has COVID-19, . . . the greater the chance the virus can spread."). The new variant of the coronavirus may also increase the need to quarantine other trial participants when one trial participant has been infected, as this new variant can be transmitted more easily to others than the strain of the virus that is currently prevalent in the United States.

50. In the event the Court holds a trial in this case in March 2021, the high risk of a potential superspreader event—whether based on the trial itself or the large public demonstrations surrounding it—could significantly increase the burdens on the health care system at a time

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when cases, hospitalizations, and deaths are likely to be on the rise. From a public health perspective, it is therefore extremely unwise to hold a trial in this case in March 2021.

Risk of COVID-19 Transmission From Separate Trials

51. Holding two separate trials in this case also endangers public health. From a public health perspective, it is far more dangerous to hold multiple trials—one in March 2021, and one in August 2021—than it would be to hold a single trial in the summer of 2021.

52. Two trials means roughly twice the number of trial dates, and so twice the risk and twice the potential exposure to COVID-19, both for in-court participants as well as people outside the courtroom, including safety personnel, media, and demonstrators. To the extent that some trial participants, such as witnesses and court personnel, will need to be part of both trials, the likelihood that these individuals will contract the coronavirus is substantially higher with two trials than one. That is because multiple indoor, in-person trials increases the risk of exposure to the virus. This risk is especially high in light of the new, more transmissible variant of the coronavirus. Two trials may also increase the raw number of individuals who may be exposed to COVID-19, as two trials would likely mean a larger total number of jurors, members of the media, and other trial participants than if there were just a single joint trial.

53. If there are large public demonstrations during or after each of the two trials, having two separate trials will also substantially increase the risk of COVID-19 transmission within the community and among members of the general public. Two separate sets of public demonstrations could increase the number of opportunities for community spread of the virus. The risk of community spread is especially high because one trial is scheduled for

March 2021, when few people in the general public will have been vaccinated, the weather is still cold, and the more transmissible variant will likely be prevalent.

54. From a public health perspective, the fact that the two trials each might have slightly fewer participants than a single joint trial will not make holding separate trials substantially safer than holding a joint trial. Each of the two trials would still have a large number of participants and be conducted indoors. And each of the two trials would likely attract large public demonstrations that may not be conducted with proper social distancing.

55. From a public health perspective, it would be substantially safer to hold one combined trial in the summer of 2021 than two separate trials in March 2021 and August 2021. Based on current estimates, it is likely than over 100 million Americans will receive a vaccination between March 2021 and August 2021. Although this will not eliminate the risk that COVID-19 could be transmitted during the trial, it is expected that the risk of COVID-19 transmission in the summer of 2021 will be substantially lower than in March 2021.

56. Holding one combined trial in the summer of 2021 would reduce the public's overall level of exposure to an outbreak, whether within the courtroom or at large public gatherings outside the courtroom. It would decrease the number of days on which this case could create a risk of community spread of the virus. And it would ensure that a single trial occurs after many Minnesotans have had the opportunity to receive a COVID-19 vaccine—a critical precaution in light of the fact that the new, more transmissible variant of the coronavirus is likely to be prevalent by the early spring of 2021.

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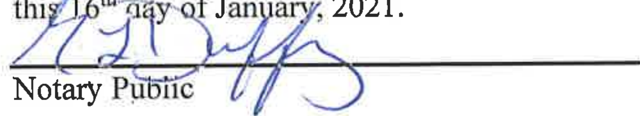
FURTHER AFFIANT SAYETH NAUGHT.

Dated: January 16, 2021

MICHAEL T. OSTERHOLM

Subscribed and sworn to before me
this 16th day of January, 2021.



Notary Public