

SECOND
DECLARATION OF
MITRA AKHTARI

**UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON**

STATE OF WASHINGTON; STATE OF CALIFORNIA; STATE OF MARYLAND; COMMONWEALTH OF MASSACHUSETTS; STATE OF NEW YORK; and STATE OF OREGON,

CIVIL ACTION NO. 2:17-cv-00141-JLR

Plaintiffs,

v.

DONALD TRUMP, in his official capacity as President of the United States; U.S. DEPARTMENT OF HOMELAND SECURITY; ELAINE C. DUKE, in her official capacity as Acting Secretary of the Department of Homeland Security; REX TILLERSON, in his official capacity as Secretary of State; and the UNITED STATES OF AMERICA,

Defendants.

Pursuant to 28 U.S.C. § 1746(2), I, Mitra Akhtari, hereby declare as follows:

1. I am a graduate of Harvard University's economics PhD program and received my B.A. in applied mathematics and economics from the University of California, Berkeley. My teaching and research fields are labor economics, political economy, development economics, and public finance.
2. At Harvard, I was an affiliate of the Weatherhead Center for International Affairs, the largest international science center within Harvard's Faculty of Arts and Sciences. I was also

1 affiliated with the Institute for Quantitative Social Science, Harvard’s largest social science
2 research center.

3 3. I am currently working as a data scientist at Airbnb.

4 4. I have personal knowledge of the facts set forth in this declaration, and I am competent to
5 testify about them.
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7 5. I am one of the founding members of the Immigrant Doctors Project, as well as one of its
8 researchers. The Project consists of ten economists and doctoral candidates in economics at
9 Harvard, the Massachusetts Institute of Technology, and the University of Chicago.

10 6. The Immigrant Doctors Project (“IDP”) was formed in February of 2017 to analyze the
11 impact of the President’s Executive Orders on the provision of health care in the United
12 States.
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14 7. I have reviewed the Proclamation titled “Enhancing Vetting Capabilities and Processes for
15 Detecting Attempted Entry Into the United States by Terrorists or Other Public-Safety
16 Threats,” issued by the President on September 24, 2017 (hereinafter, “the Third Executive
17 Order”). I am aware that the Third Executive Order purports to bar entry into this country
18 by nationals from Syria and North Korea, and restricts the issuance of certain visas to
19 nationals of Chad, Libya, Iran, and Yemen (collectively, “designated countries”).
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21 8. IDP’s work shows that the Third Executive Order is likely to hurt the health of millions of
22 Americans—including New Yorkers—who rely on physicians trained in the affected
23 countries.

24 9. The data underlying our results comes from Doximity, an online networking site for doctors.
25 Doximity assembles data from a variety of sources, including the American Board of
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1 Medical Specialties, specialty societies, state licensing boards, and collaborating hospitals
2 and medical schools. Doximity data has been verified as being highly reliable and has been
3 used in research published in leading peer-reviewed journals, such as the Journal of the
4 American Medical Association.¹

5
6 10. The Doximity data also is comprehensive, covering 1,005,419 physicians—virtually all
7 practicing physicians in the United States. (Every doctor assigned a National Provider
8 Identifier by the Centers for Medicare and Medicaid Services is included.)

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10 11. To evaluate the impact of the Third Executive Order, IDP restricts its analysis to the subset
11 of observations in the Doximity data with both current zip code and country of medical
12 school information, leaving us with a final sample of 827,522 doctors.

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14 12. Doctors are classified as immigrants from one of the countries designated in the Third
15 Executive Order based on the country in which they attended medical school. Although this
16 is not a perfect measure of national origin, it is a useful—and even conservative—estimate
17 for the total number of affected doctors.

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19 13. We count approximately 7,000 doctors presently working in America who attended medical
20 school in one of the designated countries. There are two important reasons why this count
21 likely understates the total number of affected doctors. First, the Doximity data covers
22 1,005,419 physicians, but we restrict our analysis to the 827,522 physicians with both
23 current zip code and country of medical school information. We do not adjust for the fact
24 that 18% of doctors in the United States are excluded from our analysis. Second, we do

25 ¹ See, e.g., Anumpam B. Jena, M.D., Ph.D. et al., *Sex Differences in Academic Rank in US Medical Schools*
26 *in 2014*, *Journal of the Am. Med. Ass'n*, 314(11):1149-1158 (Sept. 15, 2015).

1 not count citizens of designated countries who did their medical training in the United
2 States or in other non-designated countries.

3 14. While there may be some doctors who will be incorrectly included in our counts—for
4 example, doctors who attended medical school in the designated countries, moved to the
5 United States, and became naturalized U.S. citizens—the number of doctors who are
6 among the 18% excluded from our sample or who trained in the United States likely
7 exceeds the number incorrectly included in our count. We therefore believe that 7,000
8 doctors is a conservative estimate of the total number of doctors directly affected by the
9 Second Executive Order.
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11 15. Doximity contains data on the address of a doctor's practice. We group doctors based on
12 the commuting zone of their practice address. Commuting zones are groups of adjacent
13 counties that have close economic ties; for instance, seven counties in the eastern part of
14 Massachusetts make up the Boston commuting zone.
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16 16. To estimate the number of appointments provided to patients each year by doctors from the
17 designated countries, we multiply the number of doctors by 2,000. This estimate is based
18 on research by Hannah Neprash, who finds that an average doctor serves just over 40
19 appointments per week (40 appointments/week x 50 weeks worked = 2,000
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1 appointments/year).² Estimates from other sources, such as the 2016 Survey of America's
2 Physicians, generate similar estimates.³

3 17. We characterize commuting zones as having a shortage of doctors if the population of the
4 commuting zone is more than 3,500 times the number of doctors with an internal medicine
5 specialty in the commuting zone. This definition corresponds closely with one of the main
6 criteria used in the federal Health Professional Shortage Area (HPSA) designation: whether
7 the ratio of the population to primary care providers exceeds 3,500. Population information
8 is obtained from the 2015 American Community Survey, conducted by the U.S. Census
9 Bureau.
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11 18. In New York State, approximately 500 doctors trained in the designated countries, including
12 200 from Syria alone, offer 1.1 million medical appointments each year. In New York City,
13 there are about 300 doctors who trained in the designated countries; they offer about
14 600,000 appointments each year.
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16 19. There are 741 commuting zones in the United States. Three of New York's commuting
17 zones—Syracuse, Poughkeepsie, and Buffalo—are among the top 20 commuting zones in
18 terms of the percentage of doctors who trained in the designated countries: the number of
19 doctors trained in the designated countries is above average compared to the rest of the
20 country:
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23 ² See Hannah T. Neprash, *Better Late than Never? Physician Response to Schedule Disruptions* (Nov.
24 15, 2016), available at http://scholar.harvard.edu/files/hannahneprash/files/neprash_jmp_november2016.pdf.

25 ³ See The Physicians Foundation, *2016 Survey of America's Physicians: Practice Patterns &*
26 *Perspectives* (Sept. 2016), available at http://www.physiciansfoundation.org/uploads/default/Biennial_Physician_Survey_2016.pdf.

1 a. In Buffalo, doctors trained in the designated countries offer about 120,000
2 appointments each year.

3 b. In Syracuse, doctors who trained in the designated countries offer about 60,000
4 appointments each year.

5 c. In Poughkeepsie, doctors trained in the designated countries offer about 60,000
6 appointments each year.
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8 20. Even smaller commuting zones are affected by the Third Executive Order. For example, the
9 city of Olean in Cattaraugus County in western New York is a medically underserved
10 commuting zone. Although it has less than ten physicians from the designated countries, it
11 stands to lose as many as 20,000 appointments each year.
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13 21. In a rural and medically underserved area like Olean, the shortage of doctors can have a
14 devastating impact on the health of residents. Cardiology and neurology are two of the three
15 specialties with the highest share of doctors from the designated countries. Proximity to
16 cardiologists and neurologists is critical to the survival and recovery of patients suffering
17 from heart attacks and strokes. In these cases, there is a short window—the so-called
18 “golden hour”—during which immediate treatment can prevent permanent damage to the
19 heart or brain. Longer drives to the nearest specialist mean higher rates of permanent
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