

DECLARATION OF MITRA AKHTARI

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

STATE OF WASHINGTON and
STATE OF MINNESOTA,

Plaintiffs,

v.

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

DONALD TRUMP, in his official
capacity as President of the United
States; U.S. DEPARTMENT OF
HOMELAND SECURITY; JOHN F.
KELLY, in his official capacity as
Secretary of the Department of
Homeland Security; REX W.
TILLERSON, in his official capacity
as Acting 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 6th year Ph.D. candidate in economics at Harvard University. I 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. I am an affiliate of the Weatherhead Center for International Affairs, the largest international science center within Harvard’s Faculty of Arts and Sciences. I am also affiliated with the Institute for Quantitative Social Science, Harvard’s largest social science research center. I have personal knowledge of the facts set forth in this declaration, and I am competent to testify about them.
2. I am one of the founding members of the Immigrant Doctors Project, as well one of the researchers. The Project comprises ten economists and doctoral candidates in economics

1 at Harvard, the Massachusetts Institute of Technology, and the University of Chicago.

2 3. I have reviewed the Executive Order titled “Protecting the Nation from Foreign Terrorist
3 Entry Into the United States,” signed by the President on March 6, 2017 (hereinafter, “the
4 Second Executive Order”). I am aware that the Order purports to temporarily bar entry
5 into this country by nationals from Iran, Libya, Somalia, Sudan, Syria, and Yemen.
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7 4. The Immigrant Doctors Project was formed to analyze the impact of the President’s
8 Executive Orders on the provision of health care in the United States.

9 5. Our work shows that the Second Executive Order is likely to hurt the health of millions of
10 Americans—including New Yorkers—who rely on physicians trained in Iran, Libya,
11 Somalia, Sudan, Syria, and Yemen.

12 6. The data underlying our results comes from Doximity, an online networking site for
13 doctors. Doximity assembles the data from a variety of sources, including the American
14 Board of Medical Specialties, specialty societies, state licensing boards, and collaborating
15 hospitals and medical schools. Doximity data has been verified to be highly reliable and
16 has been used in research published in leading peer-reviewed journals, such as the Journal
17 of the American Medical Association.¹
18

19 7. The Doximity data is comprehensive, covering 1,005,419 physicians—virtually all
20 practicing physicians in the United States. (It includes every doctor assigned a National
21 Provider Identifier by the Centers for Medicare and Medicaid Services.) We restrict our
22 analysis to the subset of observations in the Doximity data with both current zip code and
23 country of medical school information, leaving us with a final sample of 827,522 doctors.
24

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 8. Doctors are classified as immigrants from one of the six designated countries based on the
2 country in which they attended medical school. Although this is not a perfect measure of
3 citizenship, it is a useful—and even conservative—estimate for the total number of
4 affected doctors.
- 5
6 9. We count 7,000 doctors presently working in America who attended medical school in
7 one of the designated countries. We believe that our count underestimates the total number
8 of doctors who immigrated to the United States from the six countries named in the
9 Second Executive Order. In practice, many citizens of these countries attend medical
10 school in the United States or other non-designated countries. Others are among the 18%
11 of doctors excluded from our counts because they we do not know their up-to-date zip
12 code or the country in which they attended medical school. These factors would cause us
13 to undercount the number of affected doctors.
- 14
15 10. One factor that could cause us to overcount the number of affected doctors would be if a
16 citizen of a non-designated country (e.g., Egypt) attended medical school in a designated
17 country (e.g., Syria). Since we observe only the country in which the doctor attended
18 medical school we would be counting that person as affected. However, we believe that
19 this number is likely exceeded by the number of doctors we exclude from our count (e.g.,
20 doctors from the designated countries who trained in the United States). An analysis by
21 Medicus using country-of-birth information contained in licensing data supports this
22 conclusion.
- 23
24 11. Doximity contains data on the address of a doctor’s practice. We group doctors based on
25 the commuting zone of their practice address. Commuting zones are groups of adjacent
26

1 counties that have close economic ties; for instance, seven counties in the eastern part of
2 Massachusetts make up the Boston commuting zone.

3 12. To estimate the number of appointments provided to patients each year by doctors from
4 the designated countries, we multiply the number of doctors by 2,000. This estimate is
5 based on research by Hannah Neprash, who finds that an average doctor serves just over
6 40 appointments per week (40 appointments/week x 50 weeks worked = 2,000
7 appointments/year).² Estimates from other sources, such as the 2016 Survey of America's
8 Physicians, generate similar estimates.³

9 13. We characterize commuting zones as having a shortage of doctors if the population of the
10 commuting zone is more than 3,500 times the number of doctors with an internal medicine
11 specialty in the commuting zone. This definition corresponds closely with one of the main
12 criteria used in the federal Health Professional Shortage Area (HPSA) designation:
13 whether the ratio of the population to primary care providers exceeds 3,500. Population
14 information is obtained from the 2015 American Community Survey, conducted by the
15 U.S. Census Bureau.

16 14. In New York State, about 550 doctors trained in the six designated countries offer 1.1
17 million medical appointments each year. In New York City alone, there are about 400
18 doctors who trained in the six designated countries; they offer about 800,000
19 appointments each year.

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 15. There are 741 commuting zones in the United States. Three of New York’s commuting
2 zones—Syracuse, Poughkeepsie, and Buffalo—are among the top 20 commuting zones in
3 in terms of the percentage of doctors who trained in the six designated countries:

4 a. In Buffalo, there are about 60 doctors who trained in the six designated countries;
5 they offer about 120,000 appointments each year.
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7 b. In Syracuse, there are about 30 doctors who trained in the six designated countries;
8 they offer about 60,000 appointments each year.

9 c. In Poughkeepsie, there are about 30 doctors who trained in the six designated
10 countries; they offer about 60,000 appointments each year.

11 16. Even smaller commuting zones are affected by the Second Executive Order. For example,
12 both Olean and Watertown, NY are medically underserved commuting zones. Although
13 they each have less than ten physicians from the designated countries, they stand to lose as
14 many as 20,000 appointments each year.
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16 17. In rural and medically underserved areas like Olean and Watertown, the shortage of
17 doctors can have a devastating impact on the health of residents. Cardiology and
18 neurology are two of the three specialties with the highest share of doctors from the six
19 designated countries. Proximity to cardiologists and neurologists is critical to the survival
20 and recovery of patients suffering from heart attacks and strokes. In these cases, there is a
21 short window—the so-called “golden hour”—during which immediate treatment can
22 prevent permanent damage to the heart or brain. Longer drives to the nearest specialist
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1 mean higher rates of permanent disability and death.⁴ Beyond emergency situations, long
2 distances can prevent patients from seeking routine, but essential care.⁵
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5 I declare under penalty of perjury that the foregoing is true and correct.

6 Executed on this _11th_ day of March, 2017
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Mitra Akhtari
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⁴ A 2002 survey found that increased distances from medical care in rural areas contributed to higher
22 fatalities from car accidents. *See* U.S. Dep't of Agriculture, *Health Care Status and Health Care Access of Farm
and Rural Populations* 31 (Aug. 2009), https://www.ers.usda.gov/webdocs/publications/eib57/9371_eib57_1_.pdf
(footnote omitted).

23 ⁵ *See, e.g.*, William F. Rayburn M.D. et al., *Drive Times to Hospitals with Perinatal Care in the United*
24 *States*, *Obstetrics & Gynecology*, 119(3):611-616 (March 2012) (evaluating driving times to hospitals offering
perinatal services in the United States); Laura-Mae Baldwin, M.D. MPH et al., *Low Birth Weight Rates in the*
25 *Rural United States, 2005*, Rural Health Research Center, Univ. of Wash. (Oct. 2013),
26 http://depts.washington.edu/uwrhrc/uploads/RHRC_PB138_Baldwin.pdf (explaining that barriers to low-birth weight
prevention include insufficient provider supply and longer distances to provider offices).