

## The NEW ENGLAND JOURNAL of MEDICINE

## Perspective

## **International Exchange and American Medicine**

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n January 27, 2017, President Donald Trump issued an executive order suspending "entry into the United States, as immigrants and nonimmigrants" of aliens from Iraq, Iran, Libya,

Somalia, Sudan, Syria, and Yemen for 90 days, suspending the U.S. Refugee Admissions Program for 120 days, and suspending the Visa Interview Waiver Program.1 In addition, the order specifies that "at any point, . . . the Secretary of State or the Secretary of Homeland Security may submit to the President the names of any additional countries recommended for similar treatment." The stated purpose of these orders is to "protect the American people from terrorist attacks by foreign nationals admitted to the United States." Although all medical specialties share the goal of preventing violence, including terrorist attacks, we — chairs of major academic departments of medicine - are concerned that the consequences of this approach for U.S. health care, and our field of internal medicine, are far reaching and damaging.

The free exchange of ideas, experience, and perspectives is fundamental to patient care, training, and research. Patient care depends on good decision making, a process that can be derailed by bias and strengthened by diverse teams. Training in internal medicine, in particular, requires the ability to manage complex and often conflicting information and to incorporate disparate viewpoints. Furthermore, there is little controversy that the greatest hope of preventing and curing human disease has long depended on bringing together the best ideas and talent to take on complex problems.

This "medical exchange" occurs

across diverse geographies and backgrounds in the United States. Of potentially even greater importance, this exchange of ideas, experience, and people now extends far beyond U.S. borders. Over the past 50 years, the U.S. biomedical research enterprise has benefited greatly from the ideas, creativity, ingenuity, and drive of international medical graduates and other non-U.S. nationals engaged in biomedical research. It is well known that a large proportion of the most talented and productive research trainees come from abroad.

Before the mid-20th century, professors from U.S. medical schools often traveled to Europe to gain new knowledge that they could bring back to their students. Today, international collaborations are the bedrock of many of our most important scientific endeavors, from genomics to drug development. Given the access to global talent, it is perhaps not surprising that internal medicine faculty in the top U.S. departments now

come from many countries. These faculty members make major contributions across the missions of scientific discovery, education, and patient care. As one example, of the 46 faculty members promoted to associate or full professor at Harvard Medical School in the Massachusetts General Hospital Department of Medicine over the past 3 years, 40% were born in a country other than the United States — a percentage not dissimilar from those in the other institutions we represent. Foreignnational, permanent-resident, and international medical graduates have ascended to the top tiers of science in academia and the pharmaceutical industry. Many of these faculty members also contribute to the global health and disasterrelief work of U.S. health care organizations, which sends important messages to the world about American values.

A similar picture emerges for residency training in internal medicine. In 2016, more than 50% of the 7024 internal medicine positions in the U.S. residency match were filled by international medical graduates.2 Though most of these trainees came from countries other than the seven affected by the 90-day ban, a recent report citing the Association of American Medical Colleges indicates that 260 international medical graduates are currently applying to U.S. residency training from those countries.3 International medical graduates fill access gaps in underserved communities, including rural and Native American communities, as well as caring for American veterans in the Veterans Health Administration system. Moreover, many internal medicine trainees now spend time in developing countries during their residency. These experiences provide

insight into the delivery of health care with limited resources and strengthen many trainees' commitment to serving vulnerable populations.

Although the scope of the current executive order is limited to seven countries, the numbers of individuals touched in academic medicine are not small. Within Partners Healthcare (primarily Massachusetts General Hospital and Brigham and Women's Hospital), for example, more than 100 personnel are affected. At least 20 people were in the process of either applying for a visa at a U.S. consulate abroad or preparing to travel to the United States. Two were not allowed to board their flights on the day the executive order was issued. Seventy-eight people with active visas from these seven countries have been identified so far. The numbers are even larger when we include green-card holders who are citizens of the designated countries and foreign graduates of U.S. schools holding student-visa work permits.

The suspension of the Visa Interview Waiver Program risks creating substantial backlogs in the processing of new and renewal visas for trainees from any foreign country — delays that create substantial problems for residency programs with trainees on visas and that could interfere with the residency match process this year. As significant as these immediate concerns are, however, the greater threat arises from the broader context in which these orders were made.

Patient care, training, and research in internal medicine in the United States are based on a fundamental commitment to the free exchange of ideas and respect for differences. That commitment is driven by the values of academic

medicine and of our democracy. But it is reinforced by the growing evidence that these principles also lead to the best outcomes, including an extraordinary scientific and health care enterprise. Whether we are concerned about the competence of the physicians who will care for us when we are ill, the biomedical enterprise that represents one sixth of our economy, the jobs created by academic medical centers, or our global leadership position in health and health care, immigration policy that blocks the best from coming to train and work in the United States and blocks our trainees and faculty from safely traveling to other countries is a step backward, one that will harm our patients, colleagues, and America's position as a world leader in health care and innovation.

Disclosure forms provided by the authors are available at NEJM.org.

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This article was published on February 1, 2017, at NEJM.org.

- 1. The White House. Protecting the nation from foreign terrorist entry into the United States. January 2017 (https://assets.document cloud.org/documents/3431047/Extreme -Vetting-EO.pdf).
- 2. National Resident Matching Program. Results of 2016 NRMP main residency match largest on record as match continues to grow. March 2016 (http://www.nrmp.org/press-release-results-of-2016-nrmp-main-residency-match-largest-on-record-as-match-continues-to-grow/).
- 3. Japsen B. How Trump's travel ban worsens doctor shortage. Forbes. January 29, 2017 (http://www.forbes.com/sites/brucejapsen/2017/01/29/how-trumps-travel-ban-worsens-doctor-shortage/#51ba19246c42).

DOI: 10.1056/NEJMp1701339
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