

# International Medical Graduates' Contributions to the United States Health Workforce

Sarah Williams Leng, MA<sup>1</sup>, and Amy Opalek, MS<sup>1</sup>

<sup>1</sup> Foundation for Advancement of International Medical Education and Research, Philadelphia, Pennsylvania

Corresponding Author:

Sarah Williams Leng, MA

Research Associate

Foundation for Advancement of International Medical Education and Research (FAIMER)

3624 Market Street, Philadelphia, PA 19104

Phone: 215-823-2243

Fax: 215-386-3309

Email: [sleng@faimer.org](mailto:sleng@faimer.org)

## Introduction

Almost one-quarter of physicians in graduate training and practice in the United States (U.S.) are graduates of international medical schools (IMGs).<sup>1,2</sup> In addition to their ongoing contribution to the U.S. physician workforce, IMGs are also employed in many other health professions. Their previous employment experience may also benefit IMGs in their health workforce careers. Our research explores the available employment data reported by IMGs applying for Educational Commission for Foreign Medical Graduates (ECFMG®) Certification from January 2007 to December 2015. These findings will contribute to the existing research related to the U.S. health workforce supply.

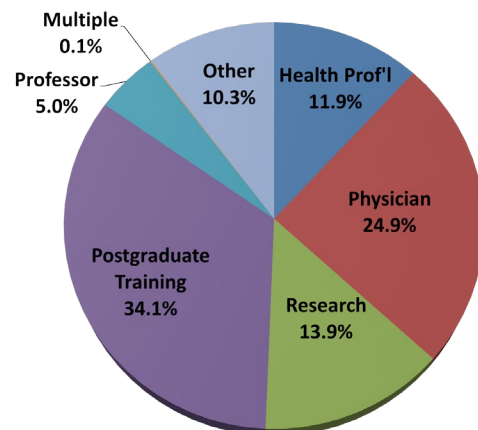
## Methods

IMGs interested in applying for residency and pursuing licensure in the U.S. must obtain ECFMG Certification. Included in these analyses are IMGs who applied to ECFMG and took at least one USMLE examination between January 2007 and December 2015. The application includes questions pertaining to current employment, including job title and specialty (where applicable), job category, employer, and location of employment. Beginning in September 2013, applicants categorized their jobs into the following list of preselected job types: Resident/Fellow, Physician, Research, Non-physician Health Professional, University Professor, or Other. Before this point, the applications captured only the applicants' open-ended entries of position and place of employment. For analysis purposes, these open-ended answers (n=28,248) were manually coded by the authors into the preselected job categories.

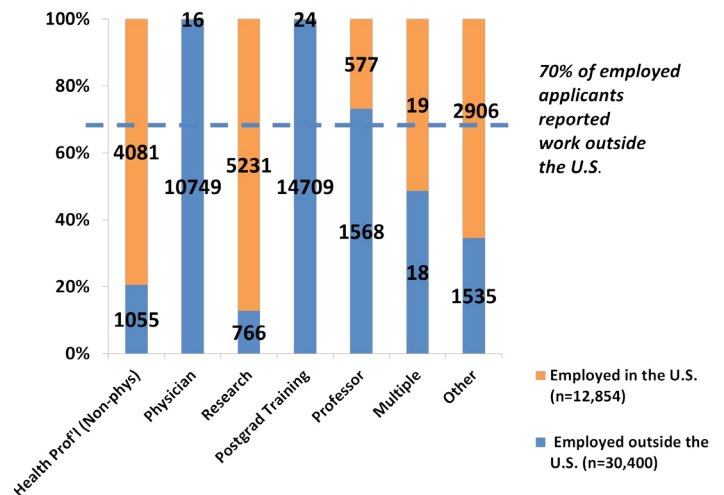
44,029 (31.0%) of the 142,185 IMGs who applied to ECFMG between January 2007 and December 2015 and took at least one USMLE examination reported their current place of employment and employment position. After manual coding and exclusion of missing or unknown entries, a total of 43,254 (30.4%) of the IMG employment responses were categorized and have been included in the analysis.

## Key Findings

Overall Employment by Job Type (n=43,254)



Job Type by U.S. Employment Status



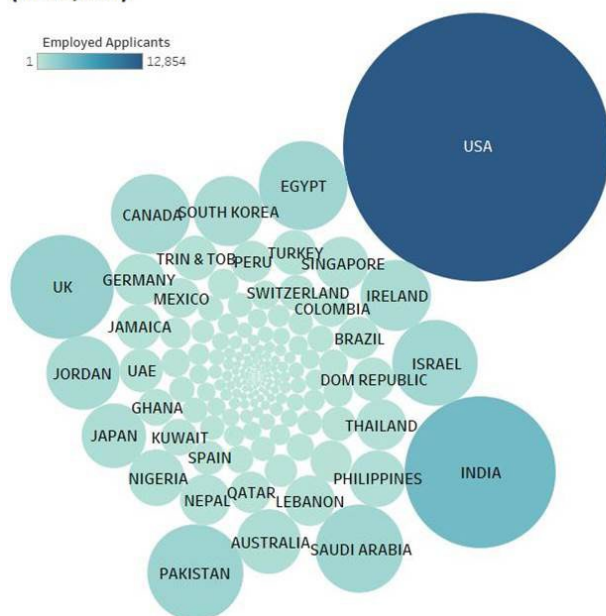
### Postgraduate Training

- 34.1% of those employed reported they were in postgraduate training at the time of application.
- Most reported being employed outside of the U.S.

### Physician

- 24.9% of those reporting employment were working as a physician.
- The majority were employed outside of the U.S.
- Employed in a total of 161 countries, the highest numbers worked in India (n=1,412), South Korea (n=594), Saudi Arabia (n=504), Egypt (n=492), Pakistan (n=461), Thailand (n=337), the United Kingdom (n=320), and the Philippines (n=312).

## IMG Applicants' Reported Country of Employment (n=43,254)



### ***Non-physician Health Professional***

- 11.9% of those employed reported working as a non-physician health professional.
- This job category included allied health care, health administration, nurses, physician assistants, medical technicians, etc.
- The majority were employed in the U.S.

### ***Research***

- Those employed in research made up over one-tenth of the employed cohort (13.9%).
- This job category was mainly held by those working within the United States.

### ***Professor***

- A small portion (5.0%) of those employed were working as a professor, at a medical college within a university or in a clinical hospital setting.
- More professors worked outside the U.S.

### ***Other***

- 10.3% of those reporting employment worked in a job outside of the health industry.
- This job category included counselors, linguists, non-health professions educators, accountants, attorneys, sales representatives, architects, etc.

## **Conclusion**

The majority of IMGs applying for ECFMG Certification and USMLE examinations did not report employment. Many IMGs applying for U.S. licensure exams may be in medical school, and therefore may not be employed.

Of the 31% who were employed at the time of application, over half (59.0%) reported employment experience as either a physician or in postgraduate training. The remaining bulk were employed as a non-physician health professional, researcher, or some other job type. 29.7% of those employed reported working in the U.S.

Physicians and postgraduates were the most common job types of those employed outside the U.S. Health professionals and research positions were much more common among those employed in the U.S., where applicants are not yet eligible to pursue U.S. graduate medical education (GME) or practice medicine.

## **Implications**

When considering IMGs' contributions to the U.S. health workforce, it is important to capture both physician and non-physician employment. Overall, a sizeable proportion of IMGs were employed at the time of their application and had experience as a health professional. Many IMGs contribute to the U.S. health workforce in roles other than physician including non-physician health professionals, researchers, and professors. Previous experience in the health care field can be of benefit to IMGs pursuing GME and practice in the U.S., and may provide added perspective for physicians in their future team-based care.

In the future we hope to study how successful IMGs within this cohort are in obtaining a GME position in the U.S. We would consider examining correlations between their prior employment experience and their future success in the U.S. It would also be interesting to see if those physicians who were involved in teaching or research return to those professions.

## References

1. Brotherton SE, Etzel SI. Graduate medical education, 2015-2016. *JAMA*. 2016 Dec 6;316(21):2291–310.
2. Educational Commission for Foreign Medical Graduates (ECFMG). 2015 Annual Report. Philadelphia, PA: ECFMG.