

LETTER TO THE EDITORS

International medical graduates and unfilled positions in abdominal transplant surgery fellowships in the United States

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Dear Editors,

The United States (US) is facing a serious shortage in its healthcare workforce [1]. Specifically, the United States could anticipate an increasing demand for transplant surgeons due to growth in the donor population and attrition of older surgeons. International medical graduates (IMGs) are a potential solution to the impending shortage. Therefore, we aimed to compare the composition of abdominal transplant surgical fellowships with other surgical fellowships programs, with special focus on trends in the proportion of IMGs and unfilled positions.

We obtained fellowship match data from 2008 to 2016 from the National Resident Matching Program (NRMP). NRMP comprises data obtained from applications and successful matches for fellowship positions each year. Reports are available at the NRMP website [2]. US graduates are those who graduated from a school of medicine in the United States, and IMGs are those who graduated from a medical school abroad. We compared the proportion of IMGs and unfilled positions in abdominal transplant surgery positions with other three fellowships: colorectal surgery, thoracic surgery and vascular surgery.

During the study period, the percentage of IMGs was significantly different among the programmes: 53.9% in abdominal transplant, 22.4% in vascular, 20.5% in thoracic and 18.3% in colorectal. In addition, while the trend of IMGs remained stable for vascular, thoracic and colorectal surgery, the percentage of IMGs raised

from 47.6% in 2008 to 60.3% in 2016 for abdominal transplant surgery fellowships (Fig. 1). The percentage of unfilled positions decreased in all the analysed fellowship programmes. However, in 2016, still 24.7% of the positions were vacant in abdominal transplant surgery, as compared to 5.0% in vascular, 3.2% in colorectal and 0% in thoracic surgery (Fig. 2).

We aimed to compare the composition of abdominal transplant surgical fellowships with other surgical fellowships programmes, and we found a significant increase of IMGs and a high percentage of unfilled positions in abdominal transplant surgical fellowships, as compared to colorectal, thoracic and vascular fellowship programmes.

A survey conducted among transplant programme directors showed that 96% of the US medical school graduates located transplant positions after completing their training [3]. However, American physicians may be reluctant to undertake transplant surgery careers because of the demanding lifestyle related to the specialty. A previous study compared transplant surgeons to 13 other surgical specialties and found that transplant surgeons reported a high workload, with a mean workweek of 68.8 h/week and an average of 4.3 nights on call per week (rank 1st) [4]. In addition, transplant surgery is associated with considerable levels of burnout, high levels of emotional exhaustion and low levels of personal accomplishment [5]. IMGs, on the other hand, find in transplant surgery an attractive door to enter into the American healthcare workforce. Interestingly, whether an IMG stays in the US as a transplant surgeon upon completion of the fellowship relies largely in where they did their surgical training. As previously reported, while 73% of the IMG with US/Canadian surgical training obtained a job in transplantation in the US immediately after their fellowship training, this percentage drops to 28% for those with surgical training abroad. In this latter group, 50% found a transplant surgery position abroad [3]. Overall, the proportion of IMGs is higher among transplant surgery (32%) than among all physicians (27%) or general surgeons (17%) [6].

Figure 1 Percentage of positions filled by international medical graduates (IMGs) in fellowship programmes.

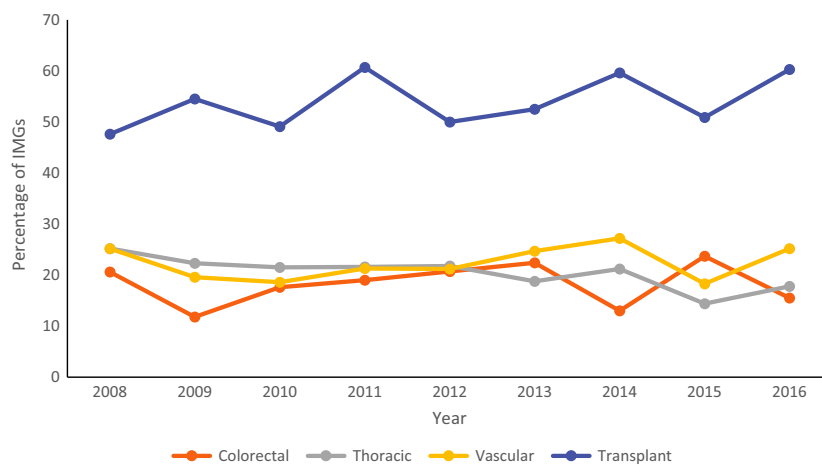
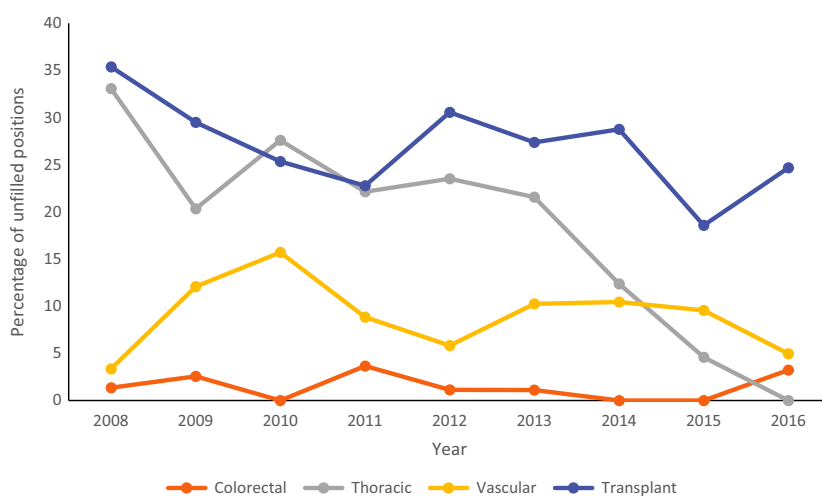


Figure 2 Percentage of unfilled positions in fellowship programs.



In conclusion, transplant surgery fellowship positions are mostly filled by IMGs, and an elevated number of positions remain unfilled every year. Our findings suggest that the dependence on IMGs among transplant surgery programmes could be even more critical in the future. Efforts are needed to attract surgical residents to the specialty of transplantation.

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Conflicts of interest

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