

Program Director Retention and Attrition Rates in International Graduate Medical Education

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ABSTRACT

Background Program directors (PDs) are integral to the education of the next generation of physicians. Yet, administrative burdens, substantial patient care responsibilities, and lack of protected time for teaching may contribute to work-life imbalance and physician burnout, leading to high rates of attrition. Data on international residency program leadership turnover are lacking.

Objective This study aimed to quantify PD turnover in Accreditation Council for Graduate Medical Education-International (ACGME-I) accredited programs in Singapore, United Arab Emirates (UAE), and Qatar, and to compare to US PD attrition rates.

Methods Data on PD turnover in international programs was extracted from the ACGME-I Accreditation Data System for academic years 2010–2011 through 2018–2019 for Singapore and 2013–2014 through 2018–2019 for UAE and Qatar. Rates of PD turnover were calculated by country and by ACGME-I medical-, surgical-, and hospital-based specialty groupings and compared using χ^2 test. Annual US PD turnover data was extracted from the ACGME's Data Resource Book.

Results Seventy programs met inclusion criteria. International PD attrition was high, with 56 programs (80%) changing PDs since program inception, and 16 programs (29%) having 2 or more PD turnovers. There was no significant difference between PD turnover rates in hospital (83%), medical (79%), or surgical (78%) specialties. International PD attrition rates varied from 7% to 20% annually and were comparable to PD turnover in US programs (range 12%–15%).

Conclusions High PD turnover rates in newly accredited international residency programs were noted, although annual attrition rates were comparable to US residency programs.

Introduction

Program directors (PDs) play a critical role in the education of future generations of physicians, but can face many challenges, including heavy workloads with excessive administrative burden, loss of autonomy and control, substantial patient care responsibilities with lack of protected time for teaching, and institutional cultures that do not value education.^{1,2} These can lead to work-life imbalance, decreased empathy, and physician burnout.^{3,4} PD retention in the United States has long been a concern. While mean length of tenure for US PDs has been 6.9 years over the last decade,⁵ 40% of surgery PDs did not meet the 6-year minimum recommended tenure length,⁶ and 53% of PDs in the Association of Program Directors in Internal Medicine 2018 annual survey considered resigning from their position.⁷ Although literature is limited, some evidence also indicates that PD attrition is associated with negative educational impact.⁶

There is a paucity of data on PD satisfaction and retention in non-Western training programs. Since

2010, several countries, including Singapore, Qatar, and the United Arab Emirates (UAE), have successfully transitioned their postgraduate training to the competency-based framework of the Accreditation Council for Graduate Medical Education-International (ACGME-I), resulting in the emergence of new clinician educator and educational leadership roles.^{8,9} While earlier studies of clinician educators in these countries revealed high overall levels of career satisfaction, with 77% of faculty surveyed reporting intent to remain in academic medicine, there was a negative correlation with retention and being a PD or associate PD.^{10,11} As the ACGME-I completes its first decade of accreditation,¹² it is important to examine whether retention of academic leadership is also an international concern.

This study aimed to quantify PD turnover in residency programs in these first 3 countries that successfully attained ACGME-I accreditation. We also sought to compare international to US PD turnover rates.

Methods

We conducted online searches for PD turnover data in countries that have successfully adopted competency-

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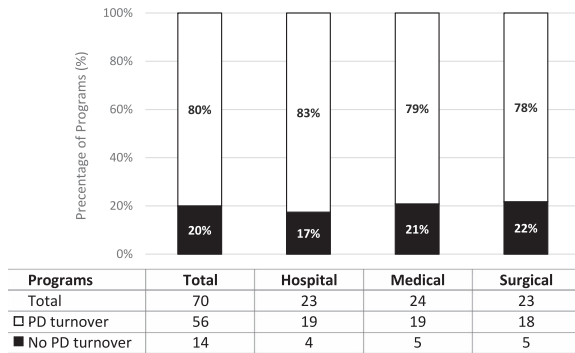


FIGURE 1
International Residency Programs With and Without Program Director (PD) Turnover: Overall and By Specialty Group (2010/11–2018/19)

based medical education and achieved ACGME-I accreditation. We included all residency programs that have been accredited for at least 5 years (started on or before academic year 2014–2015). Fellowship (subspecialty) programs, which are generally newer and smaller in these international institutions, were excluded. Data for international programs was extracted from ACGME-I's Accreditation Data System Public¹³ from the academic year (AY) of initial accreditation to the last AY for which data are available (AY 2018–2019). Domestic US data were extracted from the ACGME's Data Resource Book¹⁴ from AY 2010–2011 to 2018–2019.

Rates of PD turnover were calculated by country and by ACGME-I's medical-, surgical-, and hospital-based specialty groupings. Rates were compared using χ^2 test. Data from Qatar and UAE were analyzed in aggregate (as Middle East) to preserve institutional anonymity.

The Johns Hopkins University School of Medicine Institutional Review Board deemed this study exempt, as all data analyzed were publicly available.

Results

Seventy international programs met inclusion criteria. All specialties were represented in both regions, except for pathology and preventive medicine (only in Singapore) and urology (only in Middle East). PD turnover was high overall, with 56 programs (80%) having at least one PD transition since program inception. The highest turnover (83%) was found among hospital specialties. However, this was not significantly different when compared to turnover rates in medical (difference, 4% [95% CI –18.9–26.2%]; $P = .73$) or surgical PDs (difference, 5% [95% CI –18.2–27.6%]; $P = .67$; FIGURE 1). Among the 56 programs reporting PD turnover, there were 74 distinct PD changes with 16 programs (29%) having

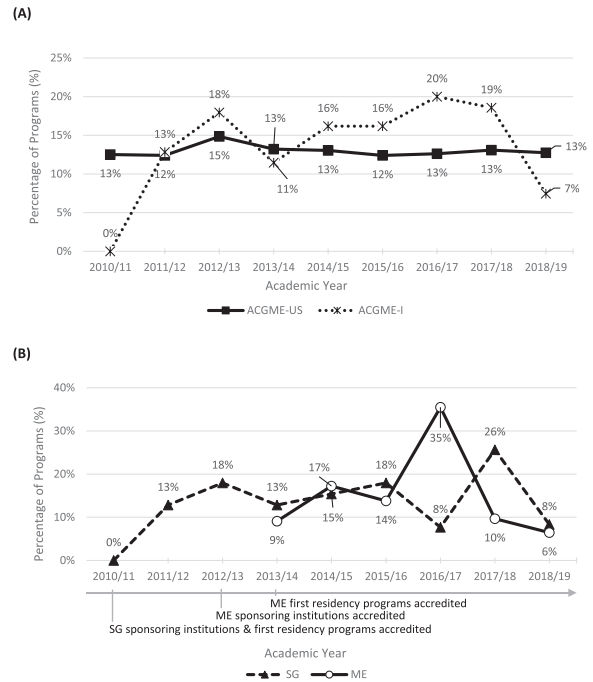


FIGURE 2
Annual Rates of Program Director Turnover
(A) ACGME-United States (ACGME-US) and ACGME-International (ACGME-I);
(B) Singapore (SG) and Middle East (ME)

2 or more PD turnovers during the study period. The highest rate of turnover was found in Singapore medical specialties, where 100% of programs changed PDs at least once since their accreditation (data not shown). Annual rates of PD turnover comparing international with US programs and international rates broken down by geographic region are shown in FIGURE 2.

Discussion

Our study of PD attrition in international graduate medical education (GME) found a high degree of overall attrition, which was similar to US annual rates.

Leadership continuity is an ACGME common program requirement, as well as a revised ACGME-I foundational requirement to ensure program stability.¹⁵ As leadership and management skills of PDs are unique and may take several years to master,¹⁶ high turnover rates may negatively affect the educational outcomes of residents. Educational quality, role modeling, and mentorship are critical in these international institutions.

Our attrition findings confirm a previous study of international clinician educators, which found a strong negative correlation (aOR 0.42, 95% CI 0.22–0.80) between holding an educational leadership role (PD or assistant PD) and the likelihood of

staying in academic medicine in the next 5 years.¹¹ In studies of US PDs, levels of burnout and distress did not correlate with PD tenure or program characteristics.^{4,17} The same appears to be true for international PDs, as there were no statistically significant differences in attrition rates across medical-, surgical-, and hospital-based specialties. The finding of 100% medical specialty PD turnover in Singapore requires further exploration. Previous work noted that clinician educators in Singapore were significantly less likely to view the transition to ACGME-I accreditation as worthwhile,¹⁰ when compared to their Middle East colleagues. US studies have shown increased distress among PDs reporting greater weekly work hours.⁴ Clinician educators in Singapore who transitioned to the PD roles likely required substantial time investment because Singapore was the first international site to obtain ACGME-I accreditation. This may have contributed to dissatisfaction and attrition. It is also possible that countries in the Middle East were able to learn from Singapore's experience to avoid similar initial hardships.

The annual turnover rates internationally were more variable than the United States. This may be due to US programs being more established or to the smaller sample size of international programs studied and may change over time. There are likely additional explanations for the high turnover rates in ACGME-I programs. As the role of PD is relatively new internationally, there are fewer established PD specialty societies or communities of practice to offer support. These countries also have large expatriate populations; it is possible that personal or family factors not related to career satisfaction contributed to the high turnover rates. Finally, individuals who hold educational leadership roles may have a specific skill set and qualities. The PD role may, thereby, be a stepping-stone to promotion to other educational and clinical leadership positions.

Limitations to this study included that Singapore programs were accredited 3 years prior to Middle East program accreditation, which may skew comparisons. We also did not explore programs currently undergoing ACGME-I accreditation. In this retrospective study, potential benefits to PD turnover, such as new ideas and energy, as well as negative sequela could not be ascertained.

The Middle East and Singapore may have different institutional cultures, such as the role of PD in academic advancement, which were not explored in this study. Qualitative studies, currently underway, offering thematic insights into factors contributing to international PD attrition are necessary to be able to implement interventions to promote job satisfaction and retention.

Conclusions

Similar to the United States, there is high turnover of PDs in newly accredited international competency-based medical education programs, regardless of location or specialty.

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