The Value of International Research and Learning in Graduate Medical Education

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Globalization has facilitated the movement of patients, health professionals, educators, and trainees across borders; yet significant health disparities between regions remain, and the global health workforce shortage is predicted to worsen in the coming decades.[1] In response, many countries are restructuring their medical health professions' training to increase capacity, enhance quality, and respond to evolving population health needs. These forces have driven historic transformations in medical education around the globe. Within the past decade, in the countries of professional practice represented by the authors (Singapore and the United Arab Emirates), we have personally witnessed a massive, unprecedented overhaul of graduate medical education (GME) from traditional time-based models to competency-based training, rooted in the framework of the Accreditation Council for Graduate Medical Education International (ACGME-I).[2,3]

These developments have spurred improvements and innovations in health professions education[4,5] and represent timely opportunities for evaluative research of educational outcomes. Yet the medical education literature lags behind and continues to focus on Western pedagogy and paradigms.[6] In 2013, the World Health Organization published recommendations for transforming and scaling up health professionals' education and training.[7] Despite a major call to action, the quality of the evidence supporting the recommendations was at best modest—highlighting a gap in high-quality international studies.[8,9]

International educators and researchers face personal, institutional, and system-wide barriers to publication. The dearth of experienced mentors in many settings can be a barrier to well-developed research programs. In addition, academic writing can be a major challenge, particularly when English is not the author's primary language. International educators may also not have access to the support systems that facilitate research productivity, such as funding or statistical support. Many emerging education systems have small numbers of learners, which reduces the statistical significance of interventions and limits the generalizability of findings. Manuscripts from some regions of the globe may also have to overcome publication bias, with editors and reviewers reluctant to look beyond a study's immediate relevance to domestic readers to find the inherent value to an international audience. However, there is value in disseminating research from new and emerging GME settings.

In this supplement, we bring together original research, educational innovations, and other novel ideas from a wide range of countries. Articles highlight successes and challenges in the progress toward "global excellence coupled with local relevance."[10] Themes that emerge from this literature encompass global health priorities, such as greater alignment between education and health delivery services. Vus and Alekseiev draw attention to the shortage of primary care in Ukraine and efforts to align GME curricula through the development of core competencies based on local needs.[11] Reviews by Miller et al[12] and Talib et al[13] summarize the history and current state of international workforce development, and 3 studies describe novel models to build capacity in key workforce areas important for access to health care in low and lower-middle income countries (Tuyishime et al,[14] Khan et al,[15] Crouch and Williams[16]).

Beyond strengthening clinical skills, there is growing international recognition of the need for broader nonclinical competencies required in 21st century health services. A multinational survey of designated institutional officials by Abdel-Razig and Ibrahim found that professionalism and interpersonal skills were perceived to be most important to job success.[17] Several authors present educational innovations, tools, and recommendations for teaching and assessing competencies relevant to the health professionals of tomorrow. These include leadership and managerial skills for trainees (Yap et al,[18] Teo et al[19]);

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communication and decision-making (Goba et al,[20] Ritter et al[21]); assessment of emotional intelligence (Al Huseini et al[22]); and teaching (Feltes et al[23]) and research skills (Al-Busaidi et al,[24] Onguka and Wechuli,[25] Stadler et al[26]).

Ensuring the quality and sustainability of such educational reforms requires investment in the professional development and retention of dedicated faculty. A scoping review confirms that despite a growing number of publications in international faculty development within the past decade, this is still an evolving field that needs to focus on outcomes that are higher in Kirkpatrick's result hierarchy, as well as on addressing common needs expressed by faculty (Philibert et al[27]).

The global movement to competency-based medical education has created demand and opportunities for medical education research. This supplement contributes a number of articles that reflect on the history and successes and challenges of ACGME-I accreditation (Day and Nasca[28]) and on the experience of accredited institutions and programs (Elghul,[29] Al-Bualy et al[30]). More emphasis is being placed on the clinical learning environment, and several studies explored the impact of this change on learners (Ong et al,[31] Kannan et al,[32] Sum et al,[33] Al Ramsi and Gami[34]). These studies primarily focused on this transformation at a single institution or single specialty. In contrast, a multiyear analysis of the cross-national ACGME-I Resident and Fellow Survey used big data analytics to validate program-level improvements (Holt et al[35]).

With increasing global mobility of populations and physicians, countries are faced with the challenge of integrating migrant health care professionals into local health systems, and Kureshi and colleagues offer interesting insights on organizations, academic institutions, and government entities assisting refugee and asylum-seeking physicians in the United States.[36]

International collaborations in medical education also present unique opportunities for learners. Lauden and colleagues describe how US trainees rotating to unfamiliar learning environments are challenged by different cultural contexts and resource constraints, and how this stimulates reflection on learning and professional growth.[37] Hayton et al explore how these collaborations can benefit US onshore institutions and in-country sites.[38]

Despite these major advances in international GME, discourse on the impact of globalization on learners and educators has been less than expected, and it remains unclear whether globalization will lead to a flattening of the world, as postulated by Friedman, whereby "international standards" for medical education are developed and applied worldwide.[39] With this comes concerns that Western educational systems might dominate and overwhelm local cultures and norms. We are reassured by the many articles in this supplement that emphasize the importance of local context and cultural adaptation. Yet large-scale, cross-cultural, and comparative studies in medical education are lacking. More international collaborative studies are needed to aggregate data in meaningful ways, as well as to study the local, cultural consequences of international medical education and accreditation. Although the concept of a global physician is debatable, there are commonalities in expectations, perceptions, and experiences. One country's solution to a problem may encourage others in similar situations. We hope that this issue will help bring together the international GME community. We encourage researchers, educators, and institutional leaders to reach out to each other for networking, support, and research collaborations.

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