Perspective Piece

Physician Assistants and the Expanding Global Health-Care Workforce

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Abstract. The physician assistant and other types of medical providers with accelerated and focused training were developed to serve the specific health-care needs of individual countries. They have an important role in providing care globally in response to physician shortages. Working in over 50 nations, these clinicians increase access to team-based health care. This perspective explores the successes and challenges of these professionals as an international community. Steps are proposed to increase global awareness and acceptance of these professionals including platforms to increase discussion, scholarly activity, and collaboration.

In 2015, the World Health Organization reported that 1 billion people were without access to health care worldwide and it is estimated that there is a shortage of 4.3 million health-care personnel to care for the world's population.^{1,2} This situation is projected to worsen; by 2035, the global health personnel shortage is estimated to reach nearly 13 million.¹ Strategies for this shortage are growing and replacements for the global health-care workforce are emerging.

Physician assistant (PA) and similar health-care professions are increasingly used in response to physician shortages. What these various professions have in common is that they are trained under the medical model (or advanced nursing model in the case of nurse practitioners and nurse clinicians) in an accelerated, efficient, and cost-effective time frame to deliver quality, team-based health care tailored to need. The concept is not new. Before the emergence of the PA profession in the United States and Liberia in the 1960s, there were similar models of health workers in countries such as in Fiji, Papua New Guinea, Ceylon (Sri Lanka), Iran, Ethiopia, Kenya, China, France, Ghana, and the former Soviet Union.³

Today, PAs and similar professionals are used in both high- and low-health-care resource settings and encompass many professions with variation in education, scope, accreditation, and regulation.⁴ These providers have different titles such as clinical officer, assistant medical officer, medical licentiates practitioner, physician associate, health officer, clinical associate, and many others. For PAs specifically, the workforce has expanded to over 100,000 globally through the adoption (adaption) in several other countries such as Canada, the Netherlands, Germany, the UK, South Africa, Australia, and India.³ The PA profession has recognized standards of education with various types of accreditation, certification, and practice regulations depending on the country. A majority of sub-Saharan African countries use types of physician-associated clinician; clinical officer, assistant medical officer, and others. All these professions are in place with the intention to bridge health-care shortages, especially in rural communities.⁵ The Global Health Workforce Alliance recognizes the role these health professionals are providing and suggests that more studies are needed to strengthen the evidence that outcomes provided by physician associated clinicians is

comparable to that of physicians in the countries in which they work.⁶ In addition, training costs, time spent training, and salaries are generally less than physicians in each country. The observation is that these clinicians are helping to close the medical provider gap.⁵

International collaborations between PAs and other health care professionals have been successful in the past by working together to strengthen education. For example, in 2007, the Ministry of Health in Mozambique partnered with the International Training and Education Center for Health to revise its *Técnicos de Medicina* curriculum, where PA educators from Duke University and the University of Washington advised and implemented a new competency-based approach.⁷ There have also been multiple examples of “twinning” between United States and international PA programs to enhance PA education. In another example, a coalition of PA students and a PA educator from St. Catherine University in Minnesota partnered with community health-care workers in Tanzania to provide basic oncology training.⁸ Interestingly, the majority of the health-care providers at the training reported to never have received any prior cervical cancer training, despite cervical cancer causing the highest cancer-related mortality in Tanzania.⁸ These examples highlight how PAs can work with other health-care providers internationally to strengthen education with the goal of improving patient care.

Despite the growing role of physician-associated clinicians globally, there are challenges of professional visibility both in practice and academics. In practice, it is difficult for PAs (and similar professions) to work interchangeably in other countries. This is partly related to the fragmentation of health policy acknowledgment. The designations of “doctor” and “nurse” are universally recognized and after providing proof of education, credentials, and language skills, they often can practice in countries other than those in which they trained. In contrast, the International Labor Office does not have a classification to link the PA and similar cadres. For example, the Ministries of Health in many sub-Saharan African countries do not recognize the PA profession, making it difficult for these providers to work as PAs in countries struggling with medical provider shortages. Behind some of these difficulties, there is concern that mobility from country to country may result in further “brain drain,” which has already decimated the health workforce for much of Africa.² In 2016, at the biennial meeting of the International Association of Medical Regulatory

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Agencies in Melbourne, the first presentation about PAs was offered to medical licensing bodies attendees representing countries on every continent. The discussion centered on experiences with similar types of clinicians across various countries and how this will be an ongoing topic in other meetings. The PA is not the same profession as a medical or clinical officer in sub-Saharan Africa in regard to level of expertise or training, but the knowledge and scope of a doctor or nurse is not necessarily the same from country to country. There has been an overall absence of a broad assessment and acknowledgment of the complex process necessary to carry out universal designation.

Another challenge of this expanding health-care workforce is the lack of visibility in academic platforms and research. At academic global health meetings, it is infrequent to encounter lectures or dissertations given by PAs and similar professionals. Several international meetings provide platforms for interaction of physician trainees, but it is rare to find a platform within these meetings for other types of health-care providers to meet and discuss ways to facilitate collaborations for education and research. In addition, most research grants are available to more visible members of the health-care team such as MDs and RNs. Often PAs are excluded from grants and research that they are qualified in participating.

There are three priority items to increase the visibility of the different cadres of health-care providers globally. First, complex discussions between each group of health-care providers and international agencies such as the World Health Organization need to continue regarding whether universal designation is possible. Better international understanding and recognition would help facilitate optimal utilization; create better health-care access; and minimize the variation of education, accreditation, and regulation of the various health-care professions. This addition of oversight and focus on team-based care permits health-care providers to work at higher capacity, increases the quality of care, and expands access to health care globally. Second, more research needs to be performed by these clinicians, not only to increase professional awareness, evaluate effectiveness, and maximize utilization, but also to participate in the advancement of biomedical science. Third, PAs and other health-care professionals need to increase their participation and leadership in academic meetings. Giving lectures, submitting research abstracts, and proposing symposia by members of the expanding global workforce within large international multidisciplinary health-care meetings such as American Society for Tropical Medicine and Hygiene can help achieve this. The different provider groups should support and encourage other groups to join their platforms. For example, a foundation-funded global health symposium led by leaders of the international health-care workforce could welcome all different

types of clinicians. These three examples are the first steps to bolster visibility and promote professional progress of different types of health-care provider that are increasing access to global health care.

Meeting the health-care needs of nations is a challenge, especially in resource-limited countries. PAs and other groups of health-care providers appear to be making an impact on reducing the health-care gap by increasing access to care and by working collaboratively with other members of the health care team. There are examples of how these groups have successfully partnered internationally to improve health education. Despite successes and their expanding role in health care in over 50 countries, these health-care professionals have challenges as an international community with visibility in practice and academics. These challenges hinder progress and there are initial steps that can be taken to mitigate these difficulties with the goal of increased awareness and acceptance.

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