

A global census of physician assistants and physician associates

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ABSTRACT

The physician assistant or physician associate (PA) profession is being adopted in many countries. At a time of improved communication and international exchange of educational methods, no central repository of PA numbers exists. The authors set out to consolidate basic information on PAs. The purpose of the project was to support efforts underway that include the global development of PAs. The prevalence of PAs in each country was obtained using an informant methodology strategy and supplemented with reports and internet validation. Eighteen countries have a PA (similar healthcare professionals with different titles were not included), for an estimated total of more than 132,000 clinically active PAs and 366 training programs. In most countries, PA expansion was reported as being underway.

Keywords: physician assistant, physician associate, PA, global, census, workforce

The physician assistant/associate (PA) movement is in various stages of development in many countries. Literature on the role of PAs in contemporary medicine is growing; plentiful in some countries and absent in others. We communicated with various scholars and leaders across the globe to advance information that improves the international awareness of PAs. The intent was to centralize information that can serve as a springboard for more research exchange. This project builds on two international PA observations published to date and is presented as a brief report.^{1,2}

METHOD

In mid-year 2020, an international assessment of PAs was undertaken using an informant survey technique developed by Maetas and colleagues.³ The technique relied on networking to gather information about PAs in 18 countries.

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Literature and government reports were supplements to the effort and internet for validation. We included the roles of clinical associates in South Africa and Medex in Guyana. Although they do not share the same PA title, they were modeled after PAs in North America.⁴

The aim of this project was to estimate the number of clinically active PAs, the number of PA programs, and the year of first graduation for each country. We acknowledge that similar healthcare professionals with different titles were not included in this particular survey. This broad category includes clinical officers, assistant medical officers, and others.⁵ The literature on these healthcare professionals is not as robust as it is for PAs and communication with host nationals not as well established as it has been with PA clinicians, academics, and scholars.

RESULTS

Eighteen countries recognize a PA by the described criteria (which is not to dismiss the variety of healthcare professionals around the world who are trained as well as PAs

and produce similar outcomes but with different titles) (Table 1). Our data collection included 120,000 clinically active PAs as reported by the US Bureau of Labor Statistics.⁶ By our calculation, at least 12,526 PAs are in 17 other countries, with a median of 750 PAs per country and an interquartile range of 60 to 1,400. India had at least 30 PA programs and an estimated 1,500 PAs filling a wide range of clinical roles.^{7,8} The United States had 260 accredited PA programs and at least 106 programs were reported outside of the United States. New Zealand, the only country in this survey that lacks a PA program, instead recruits PAs from the United States.⁹

The first PA programs originated in Liberia (1965) and the United States (1965) and the most recent country with PA development was Poland in 2018.¹⁰ The number of programs per country ranged from zero to 260, with a median of 3 programs per country (outside the United States) and an interquartile range of 1 to 5. Based on our correspondence, some countries such as Germany and Great Britain have experienced program growth spurts. Australia, Israel, Ireland, Guyana, Saudi Arabia, and Switzerland each have one program as of 2020. Colleagues in this survey mentioned that plans were underway to expand PA education in their country. Taiwan was the only country to have officially ceased its PA development.¹¹ The status of PAs in Saudi Arabia was unknown and local contacts were unreachable after several efforts.¹²

DISCUSSION

The growth and success of the PA role in each nation can be recognized through various lenses of observation. As of 2020, all countries are dealing with the SARS coronavirus-2 pandemic and the healthcare workforce supply and demand is in flux. How PAs compare across nations in their roles and responsibilities remains to be reported. We were encouraged to learn that in this era of public health distress, some lines of communication were opening up and PA experiences were being shared.

The expectation is that this brief report will foster more detailed information on PAs across the globe. Some colleagues mentioned that sharing and networking among educators, researchers, and government officials across nations was underway. The European development of PAs is an example of this sharing of experience in education and research.¹³

Although this work is based on at least one knowledgeable informant per country, and supplemented with documentation when available, we followed established informant gathering methodology.³ Such limitations in fact-finding strategies are well known to investigative journalists and we are aware that single-source information can be subject to reporting error. Unfortunately, the circumstances of a worldwide public health crisis and the need to publish timely information for delivery to the public is a limitation of this project. The next step is to

TABLE 1. An estimated global PA census as of mid 2020

Country	PAs	Year of first PA graduation	Number of PA programs
Australia	30	2011	1
Bulgaria	100	2017	3
Canada	750	2012	4
Germany	1,000	2005	13
Ghana	3,000	1971	3
Guyana	75	1978	1
India	1,500	1994	30
Ireland	28	2017	1
Israel	70	2017	1
Liberia	1,200	1967	3
Netherlands	1,400	2003	5
New Zealand	10	0	0
Poland	3	2019	1
Saudi Arabia	--	2008	1
South Africa*	1,300	2010	3
Switzerland	60	2007	1
United Kingdom**	2,000	2004	35
United States***	120,000	1967	260
Total (estimated)	132,526		366

*Clinical associates

**England, Scotland, Wales, and Northern Ireland

***50 States; Washington, DC; and five territories: Puerto Rico, US Virgin Islands, Guam, Northern Mariana Islands, and American Samoa

provide more details about the status of each country's PA experience from host nationals.

CONCLUSION

The intent of this brief report about PAs was to serve as a platform for more granular information from health workforce scholars in each country. Over the past decade, many informal interest groups have emerged through social media as well as collaborations between national PA associations and international PA groups. By undertaking descriptive studies on the distribution of PAs in each country, the groundwork is laid for better understanding their adaptation, development, and economic benefit. Comparative country descriptive research is encouraged as each has advanced valuable techniques in education, research, and deployment that could be shared. This project was a small step toward facilitating cross country communication. Our information joins the efforts of various scholars and associations such as the International Academy of Physician Associate Educators (<https://iapaec.com>), Physician Assistants for Global Health (www.pasforglobalhealth.com), Global Association of Clinical Officers and Physician Associates (<https://gacopa.org>), and

EuroPA-C (www.europa-c.info). We invite the WHO, in its periodic health workforce reports, to produce more granular information on how such diverse healthcare professionals provide similar outcomes of care when compared with that of physicians.⁵ **JAAPA**

REFERENCES

1. Ballweg RM, Hooker RS. Observations on the global spread of physician assistant education. *J Physician Assist Educ.* 2017; 28(suppl 1):S75-S80.
2. Cawley JF, Hooker RS. Determinants of the physician assistant/associate concept in global health systems. *Int J Healthc.* 2018;4(1): 50-60.
3. Maestas CD, Buttice MK, Stone WJ. Extracting wisdom from experts and small crowds: strategies for improving informant-based measures of political concepts. *Political Anal.* 2014;22(3):354-373.
4. Haynes D. Medex: simple title, huge responsibility. <https://dpi.gov/medex-simple-title-huge-responsibility/#gsc.tab=0>. Accessed September 3, 2020.
5. World Health Organization. Global strategy on human resources for health: workforce 2030. Geneva, Switzerland, 2016.
6. US Bureau of Labor Statistics. Physician assistants. www.bls.gov/oes/current/oes291071.htm. Accessed September 3, 2020.
7. Sundar G. *Physician Assistant Education in India—An Exploratory Study* [thesis]. Vijayawada, India: Dr. NTR University of Health Sciences; 2017.
8. Dharaniprasad G, Srikanth L, Ballweg R, et al. The journey of physician assistants in India: specialty areas to primary care. *J Physician Assist Educ.* 2019;30(3):184-187.
9. Accreditation Review Commission on Education for the Physician Assistant. www.arc-pa.org. Accessed September 3, 2020.
10. Bareja S. Poland and physician assistants. *JAAPA.* 2020;33(11): 47-49.
11. Chou L-P, Hu SC. Physician assistants in Taiwan. *JAAPA.* 2015;28(3):1-3.
12. Nondo HS, Jebakumar AZ, Fernandez JB. Physician assistant education in the kingdom of Saudi Arabia. *J Physician Assist Educ.* 2013;24(4):22-25.
13. Berkowitz O, Hoffmann M. Development of the European physician assistant/associate collaboration and the first EuroPA-C conference. *J Physician Assist Educ.* 2020;31(3):172-176.